

GENS

SUSTAINABILITY ≠ IMPOSSIBILITY

Not Equals

Annual Registration Statements/ Annual Report 2024

(Form 56-1 One Report)

PTT Global Chemical Public Company Limited

THE GLOBAL COMPACT
WE SUPPORT

S&P Global
PTT Global Chemical Public Company Limited
Chemicals
Top 1%
Corporate Sustainability Assessment (CSA) 2024 Score
87/100

Water
CDP
A List
2024

SET AWARDS 2024

We are all

GENS

Yes, we can...

GEN S = A New Generation that is Sustainable at Heart





GEN S (Generation Sustainability), stepping up with innovations to create a better, more sustainable world for future generations.

GC is committed to achieving the goal of becoming a model organization for sustainable operations on a global scale. We are raising the bar on plastic and chemical innovations to usher in profound change and provide solutions to a more sustainable world by inviting the new generation with a sustainable mindset, or GEN S, to lead a Net Zero Lifestyle to mitigate global warming and advocate new concepts and initiatives to foster GEN S Business approach in collaboration with players in all sectors, along with participation of members of the public through the concept of a circular economy for efficient use of resources.



Sustainability is the key to our planet's survival. And anyone can take the first step—it's easier than you think.

#SustainabilityIsPossible



SUSTAINABILITY ≠ IMPOSSIBILITY

Not Equals

GC leverages innovations to develop new products and solutions in line with lifestyle trends across all generations with a sustainable aspiration to accelerate the transition to a low-carbon society while mitigating global warming.

Because we believe in endless possibilities of creative minds that bring fresh opportunities and next levels of successes that put Thailand and the entire world on track towards achieving true sustainability.

GC


UPCYCLING
UPCYCLING



www.pttgcgroup.com

Sustainable Lifestyle

Sustainable = Compostable packaging

Bioplastic packaging emits greenhouse gases lower than fossil-based plastic packaging.

Sustainable = Easy to recycle to reduce waste

Tethered Cap attached to the bottle for ease of recycling to reduce waste.



Sustainable = Fashion that is good for us and the planet

Solutions to eco-friendly lifestyle in the form of innovative Revife Fiber by GC UPCYCLING, made from 100% used plastic bottles, adding value from plastic waste to elegant fashion products.

Sustainable = Fashion that is good for us and the planet

Jeans made from 17 used plastic bottles with the perfect blend of innovative rPET fibers transformed into pair rPET Jeans.

#SustainabilityIsPossible

Sustainable Lifestyle = All Hands on Desk

Every detail of daily life, in harmony with people and the planet—powered by plastic and chemical innovations that drive endless sustainability, enriching every moment.



Sustainable = Lightweight but strong

Kayak made from rotomolding process, lightweight, strong, durable, and environmentally friendly.

Sustainable = Fun life filled with creativity

Pet playground equipment made from 50% used Multilayer plastic film and 50% LDPE.

Sustainable = Using resources efficiently

100% recyclable liquid separation bag with GC's innovative Recyclable Solution using the same type of plastic in the entire packaging item (Mono Material) so as to be 100% recyclable.

Sustainable = Clean, safe, recyclable

- Vegetable oil bottles made from rPET plastic: clean, safe, and meets high standards.
- Clear plastic beverage bottles made from 100% rPET are certified for Food Contact from Thai FDA, US FDA, EFSA.

Sustainable = Fashion that is good for us and the planet

The River of Life collection of shoulder bags, made from used plastic bottles collected from the Chao Phraya River, is part of GC's great project, "Bok Rak Chao Phraya Bok La Khaya Maenam."

SUSTAINABILITY ≠ IMPOSSIBILITY

Sustainable Business



Sustainable = Creating value from used cooking oil

Sustainable Aviation Fuel (SAF) derived from used cooking oil can reduce carbon dioxide emissions by up 80% compared to conventional aviation fuel (according to ISCC CORSIA certification).
GC became the first in the country to successfully produce SAF from used cooking oil.



Sustainable = Reduce waste generation avoid releasing VOCs

Innovative Coating Resins from allnex, part of GC Group, are automotive surface coatings that are safe for both people and the environment. These coatings are beautiful, durable, and utilize technology that meets sustainability requirements, while being environmentally friendly. allnex is one of the world's leading manufacturers of surface coatings, serving cutting-edge industries on a global scale.

Sustainable = Production of recycled fibers from used plastics

Revife Fiber, an innovative recycled fiber made from 100% used plastic bottles, can be made to order as required, enabling every business to take part in supporting and delivering eco-friendly fashion.

#SustainabilityIsPossible

Sustainable Business = Success

Unlock growth and opportunity through 3D innovations, partnering to drive sustainability for our planet.



Sustainable = Separate, Dispose, Turn Value-added pathway towards Net Zero

Each year, over 71,000 tons of used plastics are collected and passed on to ENVICCO, GC's high-quality recycled plastic pellet producer, for recycling into PCR resin, reducing greenhouse gas emissions by more than 178,000 tCO_2e/year* and expanding business opportunities towards sustainability.

* Accumulated volume from 2022-2024
Calculations based on T-VER standards of the Thailand Greenhouse Gas Management Organization (Public Organization)



Sustainable = Production of alternative packaging

GC's bioplastics are derived from plants and compostable under suitable conditions (temperature, humidity, and microorganisms) without leaving residue in the environment, making them an effective solution for reducing single-use plastic waste. Packaging produced with these materials can be labelled as "GC Compostable."

SUSTAINABILITY ≠ IMPOSSIBILITY

GC Highlights in 2024



GC's Vision for Sustainable Growth



Mr. Narongsak Jivakanun, Chief Executive Officer, and Mr. Toasaporn Boonyapipat, President, joined in the presentation of GC's vision to ensure sustainable growth by maintaining a strong base, increase strength, improve competitiveness, create synergy, and the rebalance the portfolio, aiming for High value - low carbon business. They discussed the expansion businesses both domestically and internationally, spearheaded by allnex and NatureWorks, creation opportunities for growth at Map Ta Phut, and the development of Strategic Partnership to meet megatrends of the future industries towards becoming a hub in Southeast Asia.

GC No.1 on DJSI and the world's first and only top-ranked for 6 consecutive years

GC is ranked No. 1 in the Chemicals Sector of the Dow Jones Sustainability Indices (DJSI) in the World Index category for the 6th consecutive year by S&P Global, the first and only in the world. This bolsters its status as a model organization for sustainability, reflecting GC's world-class standards in conducting sustainable business on the basis of concerns for the Environmental, Social, and Governance (ESG).



GC reaffirms great business potential High value – low carbon business

GC reaffirms its potential as a High value - low carbon business as well as advancing its investment strategy focusing on MTP Specialty Hub to become a Regional Hub in Southeast Asia to investors and partners on the global stage, 18th GPCA (The Gulf Petrochemicals and Chemicals Association) under the theme "Towards Sustainable Horizons: Looking at Chemical Industry with a New Lens for Sustainability" in Oman.



GC and BIG sign MOU to drive hydrogen economy

GC and Bangkok Industrial Gas Co., Ltd. (BIG), signed an MOU to drive Hydrogen Economy in a shift towards becoming a low-carbon organization by jointly developing innovations and promoting the use of hydrogen to reduce greenhouse gas emissions. This collaboration will help expand the low-carbon hydrogen business to support the demand for carbon-free fuel energy in the future.

GC successfully offered 17-billion-baht debentures

GC announced success in offering subordinated debentures with equity-like characteristics, the first and largest of its kind in Thailand, at 17 billion baht, with investors subscribing to debentures exceeding the target set by GC, reaffirming investor confidence in GC and the PTT Group.



COP29
Baku
Azerbaijan



GC demonstrates commitment to addressing the global climate change crisis through our Net Zero target at COP29

GC joined the international conference as one of the representatives of Thailand's private sector to present the results of its climate actions at the Thailand Pavilion during the 29th Conference of the Parties to the United Nations Framework Convention on Climate Change (COP29) in Baku, Azerbaijan.



WHA GC Logistics Co., Ltd. (WGCL) Taking crucial step, reinforcing Logistics business strength

GC Logistics Solutions Co., Ltd. (GCL) announced name change to WHA GC Logistics Co., Ltd., along with a new company name and logo "WGCL", reflecting a partnership between GC and WHA following status change from being a subsidiary of GC to a joint venture company on December 21, 2023. This joint venture aims to strengthen WGCL and its leadership position in the logistics and petrochemical markets of both companies.

ENVICCO

ENVICCO's first launch! Gaysorn brand of vegetable oil with eco-friendly bottles made from high-quality recycled plastic pellets, rPET

First launch! Gaysorn brand vegetable oil with rPET eco-friendly bottles made from high-quality recycled plastic pellets (rPET), the first in Thailand from ENVICCO under the InnoEco by GC brand, certified by the Thai FDA and US FDA, to preserve taste and smell effectively and safely, help reduce plastic waste and cut back on the use of new plastic in production. This is another quality rPET packaging product from ENVICCO for eco-friendly consumer goods.



GC Highlights in 2024

GC joins the Anti-Corruption Day

GC declared its commitment to transparent corruption-free business practices.





GC in collaboration with OR, piloting a sustainable waste management model in the Chao Phraya River



GC, in collaboration with OR, Bang Nam Phueng Community and relevant agencies, are piloting a sustainable waste management model in the Chao Phraya River at Wat Bang Nam Phueng Nok, Samut Prakan Province, by collecting waste, separating used plastics, and bringing them into the recycling and upcycling process under the **"GC YOUTURN Platform"** to be further developed into Upcycling products.



Green University Dispose and Turn for All the World to See with Upvel 2

GC X AIS mobilizes the new generation with the green project. "Dispose, Turn for All the World to See Upvel 2" seeks to engage members of the younger generation in driving solutions for environmental issues with participation of students from 42 universities nationwide. A total of 1,058,634 items of waste were collected within 2 months of the campaign through GC YOUTURN platform, and electronic waste via the AIS e-Waste+ application.



Partnership to push for Sustainable Aviation Fuel (SAF)

GC signs MOU with OR and Thai Airways to promote the use of Sustainable Aviation Fuel (SAF) as part of their joint mission to curb greenhouse gas emissions.

GC is the first Thai producer of SAF, using used cooking oil as the main raw material, with the aim to promote Thailand as a low-carbon aviation hub in ASEAN and support the renewable energy needs of the aviation industry.



“We are GEN S” wins Bronze at PR Awards

“We are GEN S” Brand Campaign from GC, or GEN S (Generation Sustainability) wins Bronze award in Corporate Branding. The award of honor for outstanding PR campaigns in supporting and creating corporate branding is given by PR Awards Asia-Pacific 2024.

GC Sustainable Living Symposium 2024

GC organizes GC Sustainable Living Symposium 2024: GEN S GATHERING under the concept of **“Sustainability is Possible”** uniting people with planet-loving hearts, or GEN S (Generation Sustainability), with participation from all sectors, including the government, business and civil society to jointly drive Thailand towards Low-Carbon Society, as well as to organize an exhibition to showcase the potential and production technology of High value-low carbon, environmentally friendly chemicals. This event represents an important step in igniting creative energy and joining forces with all GEN S to bring about change necessary to achieve sustainability goals for Thailand and the entire world.







LUFFALA receives the award for the best beauty product of the year, The Best of Daily Beauty 2024 by DAILYNEWS

LUFFALA is one of GC’s landmark projects that helps improve livelihood and generate income for housewives in Nong Fab community, Rayong province. This is a model community that has been granted the opportunity to learn and develop entrepreneurial skills to strengthen the community with the use of local herbs from Rayong in combination with high-quality ingredients from GC Group.

GC unites to provide relief for flood victims

GC Group joins hands with PTT Group to help flood victims in the northern region by delivering more than 10,000 relief bags, 10,800 bottles of drinking water, blankets, medicines and essential items to urgently alleviate the suffering of flood victims. This is part of PTT Group’s social missions to consistently provide assistance during crisis situations.



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Corporate Strategies, Vision, and Mission

Vision

To be a Leading Global Chemical Company for Better Living

The terms are defined as follows:

“Leading Global”
refers to GC Group as a world-class chemical company.

“Chemical Company”
refers to GC Group as a producer of petrochemicals and chemicals with an integrated value chain that grows businesses through domestic and international investments, with a focus on high value-added products and alignment with megatrends.

“Better Living”
refers to GC Group as a producer that strives to deliver value and elevate the quality of life through chemical products that meet consumer needs that is guided by social and environmental responsibility and seeks to contribute to the mitigation of global warming.





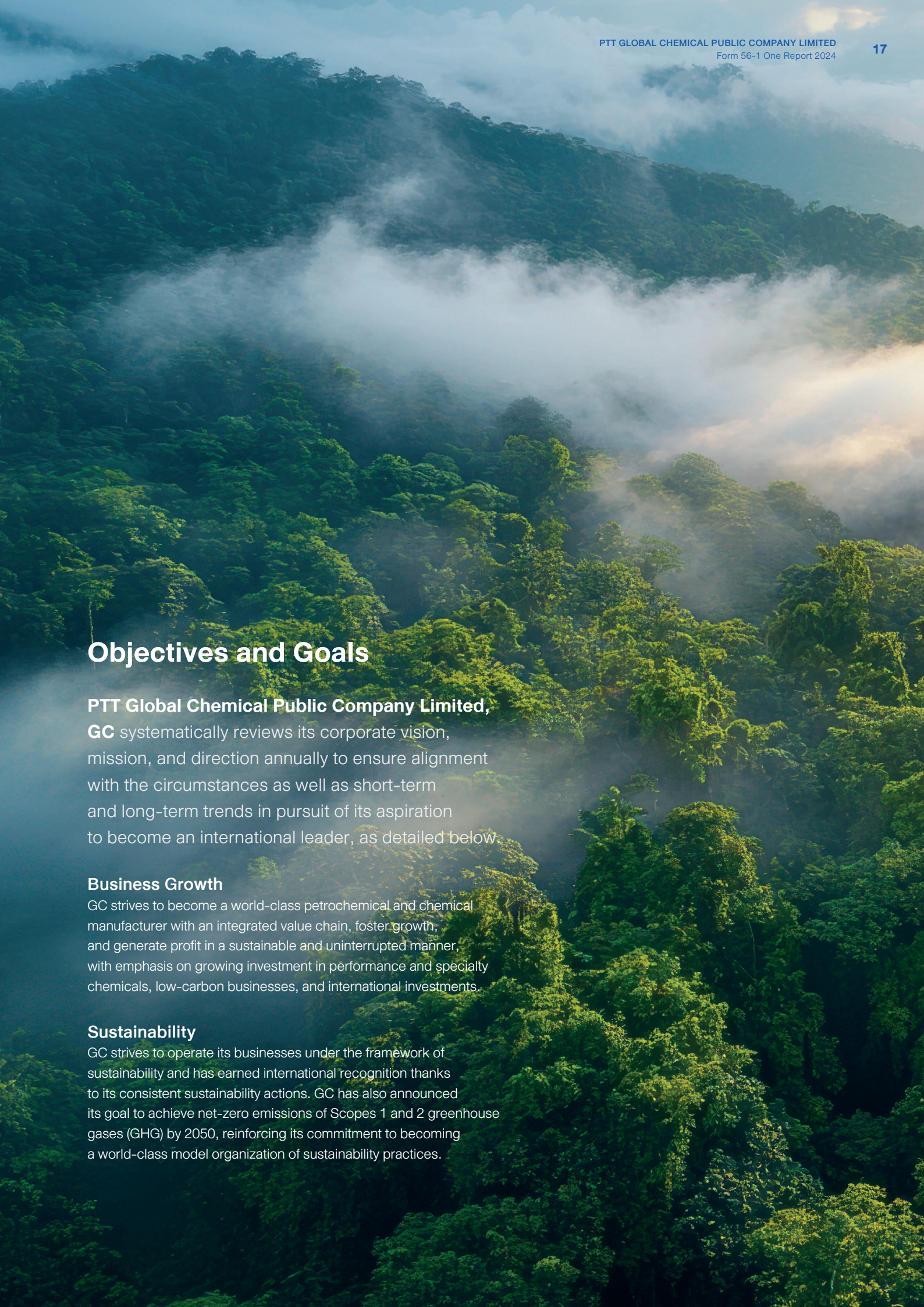
Mission

Shareholder
We deliver fair and sustainable returns for shareholders through excellent and trustworthy performance management.

Society
We integrate social and environmental responsibility into our business practices to achieve sustainable development.

Business Partner
We provide the best solutions to business partners through innovative products and services.

Employee
We build an adaptable organization that promotes learning through a happy work environment and actively develop its employees’ capabilities so as to equip them for new challenges, foster their dedication to and engagement with the organization, and achieve professional excellence.



Objectives and Goals

PTT Global Chemical Public Company Limited, GC systematically reviews its corporate vision, mission, and direction annually to ensure alignment with the circumstances as well as short-term and long-term trends in pursuit of its aspiration to become an international leader, as detailed below.

Business Growth

GC strives to become a world-class petrochemical and chemical manufacturer with an integrated value chain, foster growth, and generate profit in a sustainable and uninterrupted manner, with emphasis on growing investment in performance and specialty chemicals, low-carbon businesses, and international investments.

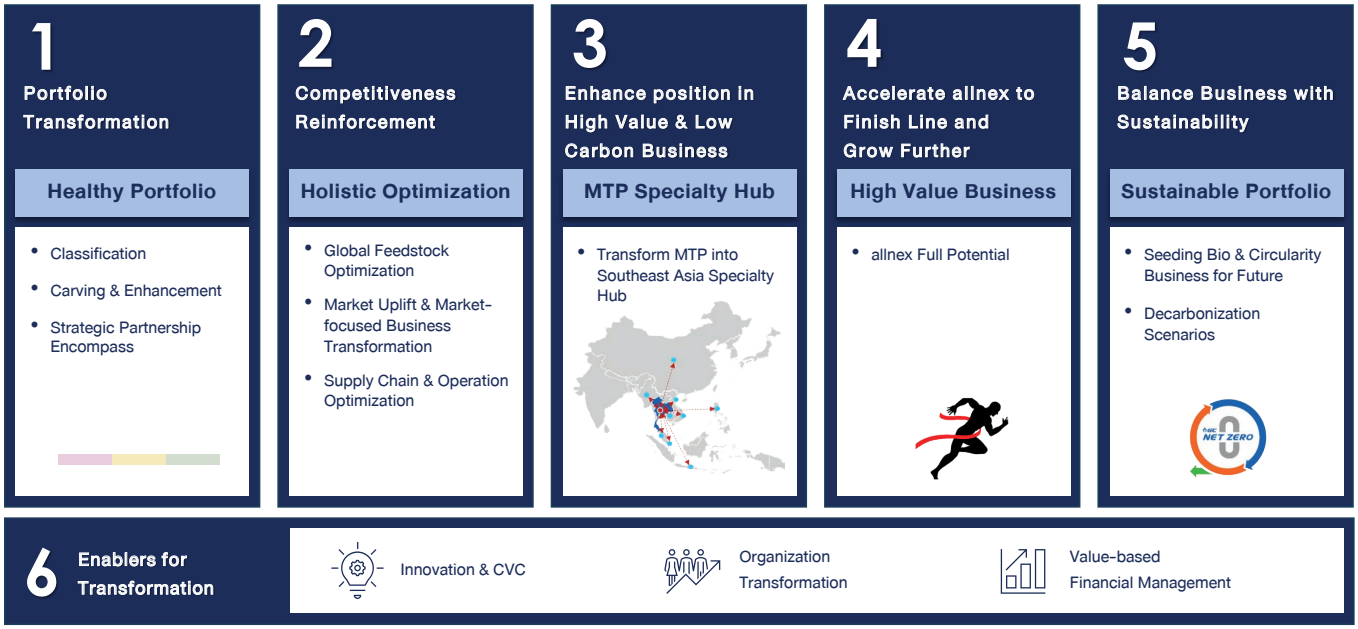
Sustainability

GC strives to operate its businesses under the framework of sustainability and has earned international recognition thanks to its consistent sustainability actions. GC has also announced its goal to achieve net-zero emissions of Scopes 1 and 2 greenhouse gases (GHG) by 2050, reinforcing its commitment to becoming a world-class model organization of sustainability practices.

Corporate Strategies

In 2024, the petrochemical industry continued to grapple with challenges posed by external factors, such as geopolitical conflicts, demand slowdown, and economic recession. On the supply side, substantial new production capacity emerged from both low-cost producers and crude oil to chemicals (COTC) technology, while China's self-sufficiency policy led to high production capacity expansion. This, when coupled with China's sluggish economic recovery, put the overall petrochemical market in an oversupply situation, affecting competitiveness and transforming the industry landscape. In addition, an energy transition was accelerated by a surge in environmental consciousness and the climate policies implemented by various countries across the globe, impacting the competitiveness of the industry in the long-term. GC has been closely monitoring these trends and analyzing short-term impacts in order to promptly adjust its operation plans in line with the challenging business condition while also advancing its long-term plan to achieve sustainable growth and respond to megatrends. As a result, GC has been able to accomplish its goals in different areas as planned and maintain its sustainability leadership, as demonstrated by its being ranked among the top 10 in the petrochemical industry by the Dow Jones Sustainability Indices (DJSI) for 12 consecutive years.

As the challenges facing GC and the other players in the petrochemical industry are likely to continue and intensify, GC has identified strategic priorities for additional implementation in order to maintain its competitiveness in the evolving landscape of the industry both in the short and long term and foster sustainable growth over the long term in alignment with its available resources. Five Strategic pillars and a foundation are as follows:



1 Portfolio Transformation

The challenging business circumstances and landscape have affected the different business units of the petrochemical industry at varying degrees across the value chain, depending on both market and cost competition. While GC has thus far undertaken various initiatives to boost its operating results, GC has experienced such severe impact that it has become necessary for the Company to quickly transform its portfolio as an additional measure. To this end, GC has been conducting in-depth analysis not only to classify businesses into groups to enable them to establish operational strategies but also to appropriately allocate resources to those showing signs of growing and seeking business opportunities to maintain competitiveness through restructuring in collaboration with partners, especially in businesses likely to be seriously impacted in order to minimize risks and foster long-term competitive capabilities for GC.

2 Competitiveness Reinforcement

Thanks to its continued efforts to optimize its operations, streamline various processes, adopt cost-saving digital technologies, and develop high-value markets and products, GC has been able to strengthen the organization, increase profitability, and reduce expenses when faced with challenging industry conditions. In response to the current situation, GC has initiated holistic optimization, expanding the scope in pursuit of all opportunities from both within and outside GC Group. This includes (1) increasing competitiveness through global feedstock optimization; (2) enhancing operations through market uplift & market-focused business transformation to create added value and maintain domestic and target market bases, while also developing strategic market intelligence by utilizing market data from across GC Group with maximum efficiency to develop market leadership strategies; and (3) elevating operational excellence to become a center of excellence equipped to support both domestic and international business operations through supply chain and operation optimization.

3 Enhance Position in High Value and Low Carbon Business

Amid the challenges, GC recognizes the potential to drive and transform Map Ta Phut into Southeast Asia's specialty hub (MTP Specialty Hub) to create added value and promote national development. To this end, GC aims to create growth in the specialty business in Map Ta Phut by seeking opportunities in collaboration with strategic partners and leveraging its advantages in terms of feedstock, utilities, and innovation networks. This initiative will expand GC's portfolio further towards high-value and low-carbon businesses in line with its strategic direction to capture opportunities as trade and investment are increasingly shifting to Southeast Asia.

4 Accelerate allnex to Finish Line and Grow Further

GC plans to foster long-term growth in high-value and low-carbon businesses by driving allnex to achieve its full potential in order to strengthen the coating and adhesive platform using a long-term growth strategy aligned with driving trends. To this end, four engines are being implemented in allnex's current business: (1) expanding production capacity to increase profits in each region, (2) enhancing operational excellence, (3) advancing innovation and sustainability, and (4) accessing new technologies and markets through mergers and acquisitions (M&A) and exploring potential collaborations with strategic partners to create opportunities that maximize business value beyond allnex's business plan.

5 Balance Business with Sustainability

GC has integrated sustainability into the foundation of its business operations and has made tangible progress in implementing planned initiatives. However, the economic recession has impacted GC's Bio & Circularity businesses, encompassing recycling, bioplastics, oleochemicals, and biofuel/polymers, to varying degrees. Therefore, GC is actively strengthening the competitiveness of its current businesses while also seeking opportunities to create additional value through synergies to maintain its market position for long-term growth and expand its sustainable product portfolio. With respect to decarbonization, GC has continued to carry out its (1) efficiency-driven, (2) portfolio-driven, and (3) compensation-driven strategies and plans as well as review its carbon emissions targets in alignment with its business portfolio management strategies and growth plans. If all initiatives are executed according to plan, GC is expected to be able to meet its target of 20% greenhouse gas reduction by 2030 and will still be able to establish additional measures to achieve its net zero target by 2050 as previously announced.

6 Enablers for Transformation

GC has elevated the operations of its key enablers to support the advancement of its strategies in accordance with future directions. These include (1) elevating its Innovation Hub both in terms of personnel and infrastructure to develop innovations that add value to current products and promote future business expansion in order to support Map Ta Phut's development as Southeast Asia's hub while also fostering an innovation culture within the organization; (2) managing personnel affected by portfolio Transformation through resource allocation, taking into account both domestic and international businesses as well as within PTT Group, while also developing employee capabilities, strengthening organizational culture, managing diversity, and promoting employee well-being; and (3) strengthening financial discipline through strict OPEX and CAPEX control, along with debt and debt service management, to maintain a strong financial position ready for future growth, while exploring various funding approaches for support.

GC also strives to strengthen supporting units and lay down the foundation for effective governance, risk management and internal control, and compliance (GRC), so as to assure GC's stakeholders of its transparency, accountability, and corporate governance.

Background and Significant Developments

PTT Global Chemical Public Company Limited (GC) was founded through the amalgamation of PTT Chemical Public Company Limited (PTTCH) and PTT Aromatics and Refining Public Company Limited (PTTAR). It was registered on October 19, 2011 to be PTT Group's Chemical Flagship. GC's registered and paid-up capital is Baht 45,088,491,170 comprising 4,508,849,117 ordinary shares at a par value of Baht 10 per share.



GC's registered
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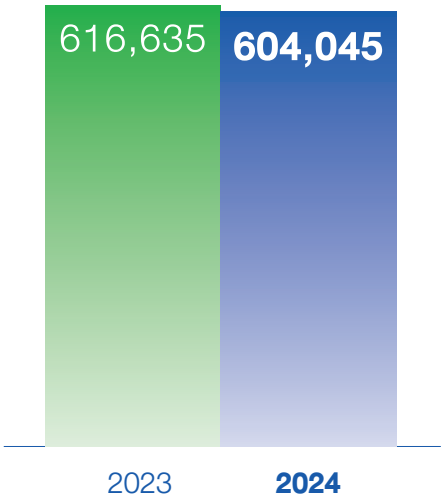
At a par value of Baht
10
per share



Financial Highlights

Sales Revenues

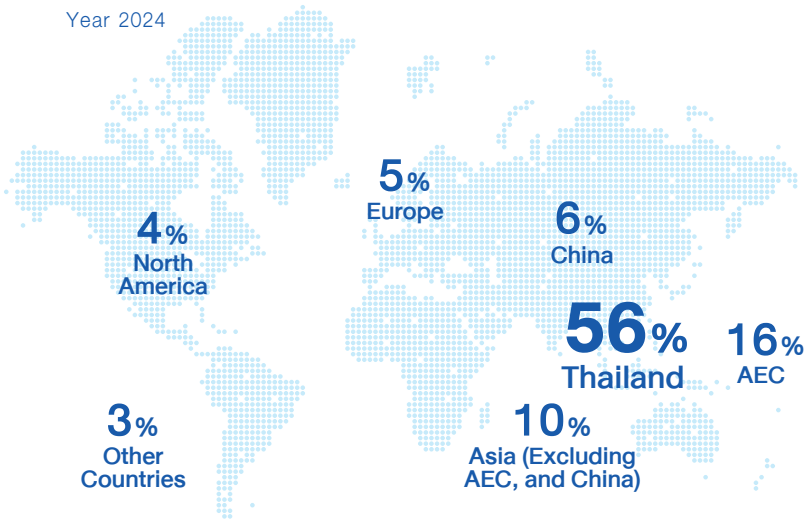
Unit: Baht Million



Sales Revenues

Breakdown by Geography

Year 2024

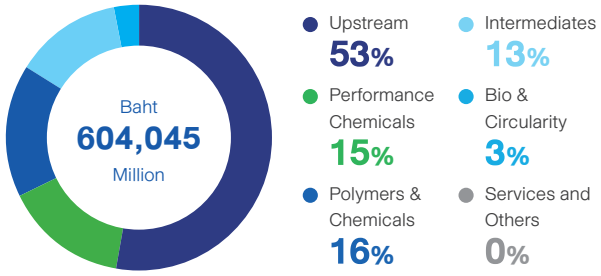


Remark: Represent the sales revenue based on the geographical location of customers

Sales Revenues

Breakdown by Business group

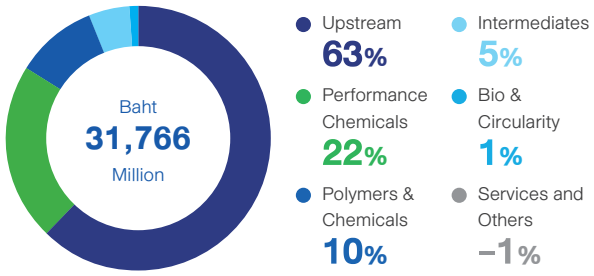
Year 2024: **Baht 604,045 Million**



Adjusted EBITDA*

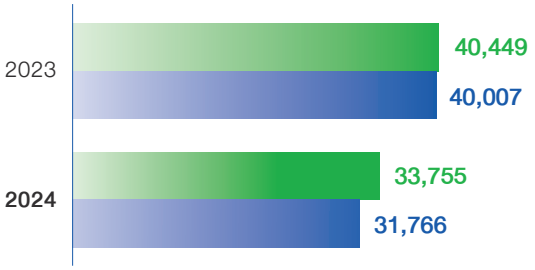
Breakdown by Business group

Year 2024: **Baht 31,766 Million**



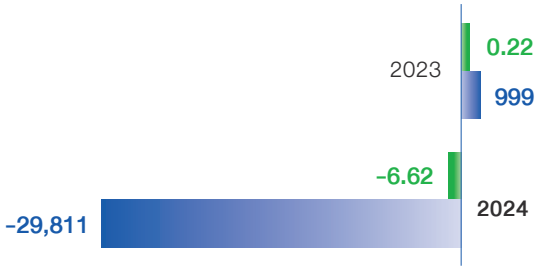
EBITDA & Adjusted EBITDA*

Unit: Baht Million



- EBITDA
- Adjusted EBITDA*

Net Profit / (Loss)



- Earning per share (Baht per share)
- Net Profit/(Loss) (Baht Million)

Remark: * Adjusted EBITDA refers to EBITDA excluding Stock gain/(loss), NRV, Gain / (loss) from commodity hedging, and Extra item.

Statements of Financial Position (Baht Million)	2022	2023	2024
Total Assets	**719,965**	**719,005**	**645,844**
Cash and Cash Equivalents + Current Investments in Financial Assets	31,963	46,249	33,110
Other Current Assets	140,046	140,625	123,024
Property, Plant and Equipment	296,321	285,860	267,769
Non-Current Assets	251,635	246,272	221,941
Total Liabilities	**421,138**	**422,824**	**377,251**
Interest Bearing Debt (IBD)	301,854	290,103	257,931
Other Liabilities	119,284	132,721	119,320
Total Equity	**298,828**	**296,181**	**268,593**

Key Financial Ratios	2022	2023	2024
Current Ratio (Times)	1.65	1.48	1.37
EBITDA to Sales Revenues (%)	3.31	6.56	5.59
Net Profit on Sales Revenues (%)	-1.29	0.16	-4.94
Return on Total Assets (%)	-0.01	1.94	-2.79
Return on Equity (%)	-2.87	0.34	-10.83
Interest Bearing Debt to Equity (Times)	1.01	0.98	0.96
Net Interest Bearing Debt to Equity (Times)	0.90	0.82	0.84
Interest Bearing Debt to EBITDA (Times)	13.46	7.17	7.64
Net Interest Bearing Debt to EBITDA (Times)	12.04	6.03	6.66

Dividend payment (Baht / Share)	2022	2023	2024
1st Half	0.75	0.00	0.00
2nd Half	0.25	0.75	0.50
Full year	1.00	0.75	0.50*
Earning per Share (Baht/Share)	-1.94	0.22	-6.62
Dividend Payout Ratio (%)	N/A	>200%	N/A

Remark:

* At the Board of Directors' meeting held on February 17, 2025, the Board approved to submit for approval at the Annual General Meeting of the Shareholders, a full year 2024 dividend payment at the rate of Baht 0.50 per share, amounting to Baht 2,254 million to the shareholders entitled to receive dividends. This dividend payment is subject to the approval of the Shareholders at the Annual General Meeting to be held on April 8, 2025.

Awards and Recognitions

Confirmation of company's performance excellence in economic, social and environmental aspects in 2024 can be demonstrated by being recognized both national and international level.



1

Dow Jones Sustainability Indices (DJSI)

GC has secured the No. 1 ranking in the Chemicals Sector of the 2024 Dow Jones Sustainability Indices (DJSI) for six successive years and placed among the Top 10 of the DJSI World and Emerging Markets lists for the 12th consecutive year. GC has also been selected for inclusion in "The Sustainability Yearbook 2024" with the Top 1% S&P Global ESG Score.

2

Carbon Disclosure Project

GC was rated "B" for Climate Change and "A" (Leadership Level) for Water Security by the Carbon Disclosure Project (CDP). The "A" rating is the highest level of evaluation by CDP.

3

Ecovadis Sustainability Rating

GC has achieved a Gold Medal from EcoVadis with "Advance" level scoring in Labor & Human Rights, Ethics, Sustainable Procurement, and Environment, thus placing the company in the Top 5% of the global basic chemical manufacturing industry.

4

FTSE4Good Index Series

GC has maintained membership in FTSE4Good Index Series Top "X" and FTSE4Good Index Series for the ninth consecutive year (2016-2024). This is a testament of GC's awareness and focus on Environmental, Social and Governance (ESG) factors in our business operations.



International Level



5

MSCI ESG Rating

GC received "BBB" rating from MSCI ESG Ratings in the Commodity & Diversified Chemical industry, conducted by Morgan Stanley Capital International (MSCI). The assessment provides investors with the assurance that GC's operations are in compliance with ESG principles.

6

Asian Excellence Award

GC received six awards from the 14th Asian Excellence Award, presented by the Corporate Governance Asia magazine. This achievement is a reflection of GC's leadership and excellence in sustainable business operations under good corporate governance as well as our efforts to carry out social activities at the international level.

7

PR Awards Asia-Pacific 2024

GC received a Bronze Award for Best PR Campaign in the Corporate Brand category from PR Awards Asia-Pacific. The awarded campaign, "We are GEN S", is a signature initiative to inspire and simplify the understanding and implementation of sustainability. The campaign also highlights GC's continuous dedication to sustainability.

8

International Sustainability & Carbon Certificate

GC has obtained "ISCC PLUS", an international certification that validates sustainability and decarbonization, established by the International Sustainability & Carbon Certification, in five categories, namely REF, OLE2, ARO1, LLDPE and LDPE, HDPE. This certification demonstrates GC's readiness and commitment to support bio-economy and circular economy.



1

SET Sustainability Awards of Honor

GC has been the proud recipient of the SET Sustainability Award of Honor from the Stock Exchange of Thailand (SET) in the SET Sustainability Excellence category for seven consecutive years. Such accomplishment reflects the remarkable alignment of GC's business operations with sustainable development practices as well as the comprehensive and transparent disclosures on our operations.

2

SET ESG Rating 2024

GC has obtained AAA level assessment from the SET ESG Ratings 2024 and maintained our position on the Thailand Sustainability Investment (THSI) list for the 10th consecutive year (2015-2024). This validates GC's endeavors to create benefit for both internal and external stakeholders in the environmental, social and corporate governance aspects while complying with international standards.

3

Leadership Excellence Award 2023

GC has been honored with the Leadership Excellence Award 2023 from the Thailand Productivity Institute. This prestigious award recognizes top executives who have applied the Thailand Quality Award (TQA) criteria in organizational management, resulting in outstanding performance that meets internationally recognized world-class standards.

4

Investors' Choice Awards 2024

GC has received the Investors' Choice Awards 2024 for the 13th from Thai Investors Association, consecutive year as a listed company that achieved a perfect score of 100 in the quality assessment of its Annual General Meeting of Shareholders.

5

IAA Awards for Listed Companies 2024

GC has received the Outstanding CEO, Best CFO, and Outstanding IR awards in the Industrial Products category from the Investment Analysts Association (IAA). These awards recognize the excellence and expertise of the company's executives in driving sustainable growth and success for the organization.



National Level



6

CSR-DIW Continuous Award

21 plants under GC Group have received the CSR-DIW Continuous Award for the 17th consecutive year, attesting GC's commitment to develop community economy and manage urban environment in a sustainable manner.

7

Sustainability Disclosure Award

GC received the Sustainability Disclosure Award from Thaipat Institute, reflecting the company's disclosure of beneficial information regarding sustainability to stakeholders and our response to the Sustainable Development Goals (SDGs).

8

Environmental Governance and Safety Award

8 plants under GC Group received the White Flag - Gold Star Award while 13 plants received the White Flag - Green Star Award, along with certificates o honor. These awards reflect GC's capability to constantly maintain environmental and safety management standards at an excellent level.

9

The Prime Minister's Industry Award

GC has received the Prime Minister's Industry Award in three categories, namely Energy Management (LDPE plant), Logistics, and Safety Management (Aromatics Tank Farm). The Prime Minister's Industry Award supports, promotes and develops entrepreneurs in the Thai industrial sector to meet standard quality while continuously developing themselves and strengthening their readiness to compete internationally.

Major Events and Activities in 2024

February 16, 2024

GC announced the 2023 performance results, with a net profit turnaround of 999 million baht. As for its operational direction for 2024, GC revealed it would focus on continuing its proactive strategies to build a strong foundation during the global economic slowdown and expand into low-carbon business to create differentiation and business returns in pursuit of the net zero goal. GC also invited all to become part of “GEN S...Generation Sustainability”, fostering a net zero lifestyle movement to drive the world towards a better and sustainable future together.



February 20, 2024

allnex, a subsidiary of GC Group and a leading global producer of specialty polymers with commitment to sustainable business practices, announced its plan to reduce Scope 3.1 GHG emissions by 30% by 2030 as part of its broader strategy to achieve net zero by 2050.



February 23, 2024

GC partnered with Siemens Energy to sign a memorandum of understanding to study and develop the Future Hydrogen Society, a project for hydrogen-powered electricity production, as part of its efforts to mitigate and slow down global warming and achieve its net-zero target by 2050. GC established clear action plans and continuously evaluated their outcomes. One of these plans involved using clean and low-carbon energy to reduce GHG emissions in line with GC’s operational approach of driving robust and sustainable business growth while maintaining customer care, guided by the “Together to Net Zero” concept.



February 28, 2024

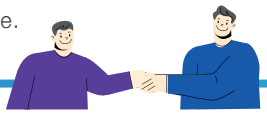
GC implemented its YOUTURN Platform at Suan 50 Suk Park to create a closed-loop waste management system and encourage communities to recognize the benefits of resource recirculation through proper waste segregation. As a leading chemical company focused on sustainable business practices and the application of circular economy principles, GC promotes efficient resource utilization in line with its strategic plan to achieve net-zero emissions by 2050. To help address Thailand’s waste management challenges, GC expanded its circularity-driven YOUTURN Platform the social sector, which not only facilitates proper waste management and promotes correct waste sorting but also ensures recyclable and upcyclable materials are circulated back into production cycles, effectively reducing waste destined for landfills.





March 1, 2024

GC partnered with Siam Commercial Bank (SCB) to advance sustainability in Thailand, starting with transforming the bank's internal operations and delivering sustainable solutions to their customers and business partners, in line with GC's 2030 net-zero commitment. As part of this collaboration, SCB announced its readiness to switch to 100% recycled plastic or rPET bottles for corporate activities, amounting to over 1.3 million bottles annually, making it Thailand's first bank to use bottles made from recycled plastic resins certified by the Thai FDA and the U.S. FDA for their safety and hygiene and by the European Food Safety Authority (EFSA) for their food safety. SCB also had plans to build on this initiative and deepen its partnership with GC through a comprehensive bottle collection and recycling program in order to transform used plastic bottles into new ones, thus breathing new life into plastic waste in line with circular economy principles and contributing holistically to an eco-friendly future.





March 4, 2024

GC, in collaboration with TPBI Public Company Limited (TPBI), Srithai Superware Public Company Limited (Srithai), and GC Logistics Solutions Company Limited (GCL)*, jointly announced their success in developing Thailand's first-ever innovative warehouse pallets made from post-consumer resin (PCR) derived from used household plastic bags. These circular pallets have been in actual use within the automated warehouse operations at GCL since the end of 2023.

* Changed the company's name to WHA GC Logistic Company Limited (WGCL) on September 5, 2024.



March 23, 2024



GC granted funding to the For Friends Foundation in support of the 31st For Hopeful Children Project, aimed at nurturing and empowering young people's potential. The program centered around a three-day, two-night camp experience designed to promote physical and mental development and cultivate positive life values, determination, and optimism, along with healthy self-expression skills. The project brought together about 900 disadvantaged children and youth from more than 20 organizations nationwide and over 600 GC Group employee volunteers. The event took place at Toey Ngam Beach in the Naval Base in Sattahip, Chonburi.



May 8, 2024

GC and Bangkok Industrial Gas Co., Ltd. (BIG), a climate tech company and a pioneer in energy transition, signed a memorandum of understanding outlining their strategy for advancing the hydrogen economy, a clean and environmentally friendly fuel. This initiative resonated with GC's strategies to address evolving trends in the petrochemical industry and foster long-term competitiveness by capitalizing on strengths and expertise in the hydrogen and carbon business to explore both GC and BGI's necessities and opportunities in the new landscape. The collaboration primarily focused on developing and expanding infrastructure as well as stimulating both demand and supply across the hydrogen business chain in Thailand.





May 9, 2024

GC signed an agreement with WHA Utilities and Power Public Company Limited (WHAUP) worth over 1.5 billion baht for the purchase of 3.5 million cubic meters of high-quality industrial water per year for use within its facilities in the WHA Eastern Seaboard Industrial Estate (Map Ta Phut) as part of its premium clarified water production project. Over 60% of the water used for producing this high-quality industrial water, or 2.0 million cubic meters per year, is reclaimed water. The initiative underscores GC's awareness of the importance of natural resources, sustainable water management through efficient water use, and the reduction of freshwater extractions.



May 13, 2024

The Board Meeting passed a resolution to appoint Mr. Narongsak Jivakanun as the Chief Executive Officer and Mr. Toasaporn Boonyapipat as the President of GC, effective May 13, 2024. Under their leadership, GC would continue its strategy and enhance its capabilities to compete internationally while also seeking new growth opportunities, focusing on the high value & low Carbon businesses and maintaining its position as a global sustainability leader in the chemical industry in pursuit of its vision to be a leading global chemical company for better living and promote sustainable growth.



May 13, 2024

GC held a ceremony to officially appoint Mr. Narongsak Jivakanun as the Chief Executive Officer (CEO) and Mr. Toasaporn Boonyapipat as the President. Both assumed their roles in place of Dr. Kongkrapan Intarajang, who now serves as the CEO and President of PTT Public Company Limited.



May 16, 2024

In an effort to jointly advance the Bio-Circular-Green (BCG) economic model, Krungthai Bank granted financial support to NatureWorks for the construction of a bioplastic manufacturing facility, marking one of the largest loans in the bank's decades-long history. NatureWorks, a leading manufacturer of polylactic acid (PLA) biopolymers made from renewable resources, announced the historic financial support from Krungthai Bank Public Company Limited for the construction of the new fully-integrated Ingeo™ PLA manufacturing facility in Thailand. The financing from Krungthai Bank, Thailand's third largest bank, amounting to 350 million US dollars (equivalent to 12,600 million baht), is one of the largest bilateral loans in the bank's decades-long history and shows confidence in NatureWorks' market leadership.





YOUเทิร์น

May 24, 2024

GC YOUTURN, a comprehensive platform for used plastics management, and PTT Station, hubs of happiness for people, communities, and the environment, invited all GEN S to participate in the 2nd year "YOUTURN" waste segregation campaign, where they could redeemed plastic bottles for various prizes worth over 600,000 baht in total at any of the six participating service stations: PTT Station Vibhavadee 62, PTT Station Vibhavadee (1st Infantry Regiment), PTT Station Prachauthit-Ladprao Intersection, PTT Station Bangna (Outbound), PTT Station Suksawad (Outbound), and PTT Station Nong Khaem.



June 18, 2024

Mr. Narongsak Jivakanun, Chief Executive Officer, and Mr. Toasaporn Boonyapipat, President of GC, who were officially appointed in May 2024, shared their vision to continue the 3 Steps Plus strategy for GC's sustainable growth. GC's strategy focuses on maintaining its strong fundamentals, strengthening its competitiveness, creating new synergies, and optimizing its business portfolio by growing its high-value and low-carbon businesses in local and international markets through allnex and NatureWorks. Meanwhile, GC sought to build growth opportunities for the Map Ta Phut Industrial Estate and develop new strategic partnerships to accommodate the industry's future megatrends in order to position Map Ta Phut as Southeast Asia's hub, while also collaborating with PTT Group in carbon capture and storage (CCS) projects and developing them into businesses of the future.



May 24, 2024

GC joined forces with PTT Oil and Retail Business Public Company Limited (OR) and the Marine and Coastal Resources in Northern Gulf of Thailand Research and Development Center to inaugurate the Love Chao Phraya, Goodbye River Waste project at Wat Bang Nam Phueng Nok in Samut Prakan. This project was an extension from a previously signed memorandum of intent on marine waste management, initiated by the Ministry of Natural Resources and Environment, which focused on collaborative efforts among stakeholders in estuary regions. GC and OR were tasked with implementing marine waste management activities along the Chao Phraya River, which studies by the Department of Marine and Coastal Resources identified as the waterway with the highest concentration of floating debris, with the neighborhood around Wat Bang Nam Phueng Nok and the Bang Nam Phueng community in Samut Prakan chosen as the first area of focus.

May 27, 2024

GC joined in the signing of a Memorandum of Understanding between the Department of Marine and Coastal Resources and the Thailand Mangrove Alliance. The signing ceremony was presided over by Dr. Pinsak Suraswadi, Director-General of the Department of Marine and Coastal Resources, and attended by executives and representatives from more than 33 private companies. The objective was to integrate cooperation from all sectors to drive the conservation and restoration of mangrove resources through the Thailand Mangrove Alliance network in a tangible way.



June 20, 2024

GC organized a mid-year seminar entitled “Sustainable Business in Dynamic Market” at the Peninsula Bangkok. The event attracted approximately 250 customers and suppliers from various industries. The objective was to share insights into market trends in both upstream and downstream sectors, strengthen relationships with domestic customers and suppliers, and promote GC’s products, particularly those focused on sustainability.



June 27, 2024

GC, in collaboration with the Royal Thai Army Radio and Television Station (RTA Channel 5), launched the “Sanam Pao We Clean, Together We Can” project to promote proper waste separation, raise awareness of global warming, and set a societal goal of achieving net-zero greenhouse gas emissions by 2050. This internal project aimed to instill waste separation awareness among RTA Channel 5 personnel and foster proper waste management. This initiative was part of the ongoing “We are GEN S” or “Generation Sustainability” campaign, which promotes net-zero lifestyles to tackle the climate crisis and further sustainability-focused collaborations in a tangible manner.





June 27, 2024

GC and Sabina Public Company Limited (SABINA) partnered to provide support to breast cancer patients and reduce their financial burden of purchasing prosthetic breasts. GC supplied pure, contaminant-free LLDPE resin as the primary raw material for producing prosthetic breasts and supplied upcycled fabrics made from used plastic bottles, which volunteers sewed into fabric bags for a total of 20,000 sets of prosthetic breast sewing kits. Established in 2007, this project has been running for 18 years, with over 257,100 prosthetic breasts distributed nationwide.

July 25-26, 2024

Mr. Narongsak Jivakanun, Chief Executive Officer of GC, and Mrs. Rattiya Chandavasu, Senior Executive Vice President of International Business, extended their congratulations to Mr. Ruben Mannien, Senior Executive Vice President of Asia Pacific, and Mr. Siva Iyer, Vice President of Commercial India and Subcontinent, on the launch of allnex’s new manufacturing hub in Mahad. Located at Mahad MIDC (Maharashtra Industrial Development Corporation) in Raigad District, Maharashtra, this new facility marks a significant milestone for allnex following its 2022 acquisition of a local company. With construction commencing in January 2024, this expansion aims to meet the rising demand in the Indian market.





August 9, 2024

GC partnered with AIS for the second year to empower eco-conscious universities through the Green University Project: Discard, Turn, Make History Upvel 2. The program maintained its robust approach this year, featuring dual waste collection tracks: electronic waste through the smart AIS e-Waste+ application platform, and used plastics through the GC YOUTURN platform for comprehensive plastic waste management. Beyond raising environmental awareness among university students, personnel, and local communities, the project fostered participation through two competitions: the "Discard, Turn, Green U-Style" photography contest and the "Green Creator: Discard, Turn, Make History" short video competition, in which participants had the chance to win scholarships and trophies crafted from upcycled plastic and electronic waste.



August 20, 2024

GC joined hands with the Faculty of Science, Chulalongkorn University, to launch the "Fun Science Lab" at Ban Nong Faeb School in Rayong to promote science education through active learning, with emphasis on hands-on experience and youth creativity development. Equipped with modern technology, including 3D printers and chemistry lab equipment, the classroom encourages students to learn about everyday chemicals and create new products without limitations.

The Fun Science Lab was designed and built with the goal of supporting science education using the active learning approach, which prioritizes practical experience and learning through enjoyment and creativity. The lab was also aimed at continuously developing young people's scientific knowledge and capabilities, laying the foundation for further studies or careers in scientific fields, which are in demand in the area.



August 27, 2024

PTT Group executives and employees took part in packing survival kits and dispatching a convoy to deliver aid to flood victims in the northern provinces of Phrae and Nan after reliefs were sent to Chiang Rai and Phayao in the previous week. In total, PTT Group delivered over 10,000 survival kits, 10,800 bottles of drinking water, along with blankets, medicines, and essential items, totaling more than 4.6 million baht in value, to provide relief to flood victims. GC also deployed the PTT Group SEALs operations unit, comprising volunteer employees with special rescue and disaster relief skills from all PTT Group companies, including PTT Public Company Limited, PTT Exploration and Production Public Company Limited, Thai Oil Public Company Limited, IRPC Public Company Limited, PTT Global Chemical Public Company Limited, Global Power Synergy Public Company Limited, PTT Oil and Retail Business Public Company Limited, and NPC Safety and Environmental Service Company Limited. The team mobilized a full range of equipment, including drones, flat-bottom and V-bottom aluminum boats, patrol vehicles, ten-wheeled trucks, and various rescue equipment to distribute survival kits to those affected, particularly focusing on vulnerable groups like the elderly and children in hard-to-reach areas. The relief effort was part of PTT Group's ongoing mission to support society during crises, continuing its track record of assistance during floods in various communities, the major floods of 2011, and the COVID-19 pandemic.







September 3, 2024

GC joined forces with Ban Chang Town Municipality and local business operators to launch a community recycling waste management center as part of the Ban Chang Community Waste Model project. The initiative aimed to promote efficient waste management within the community, with a goal to systematically collect and manage recyclable waste across all sectors, including shops, department stores, hotels, and markets in the Ban Chang Municipal area, and establish an effective waste management network to reduce environmental impact and foster eco-friendliness. Additionally, the waste management center helps create jobs, generate income for the community, and strengthen self-sustainability and forms part of GC's broader plan to achieve net-zero greenhouse gas emissions by 2050.

September 6, 2024

Vencorex France and Vencorex TDI filed a petition with the Commercial Court in Lyon, France, to enter into a court-supervised business restructuring process under Book VI of the French Commercial Code. On September 10, 2024, the petition was accepted, with the restructuring process estimated to take approximately 3-4 months. Subsequently, on November 7, 2024, the court extended the process timeline to March 2025. At present, Vencorex is in the process of seeking potential buyers of the assets in Thailand and the United States. This process is expected to reach completion within the first half of 2025.

September 24, 2024

GC appointed 12 underwriters for the issuance of subordinated perpetual debentures payable upon dissolution with the issuer's right to early redemption and unconditional interest deferral, to be offered through a public offering. This objective was to strengthen GC Group's financial structure, enhance its businesses, and expand future growth. This marked not only GC's first issuance of subordinated perpetual debentures and PTT Group's first such bond issuance in Thailand in 10 years but also a significant milestone for GC's sustainable growth as the debentures expanded its retail debenture holder base and provided stable, valuable investment opportunities for general investors.







September 30, 2024

GC signed a memorandum of understanding with PTT Oil and Retail Business Public Company Limited (OR) to study market opportunities and sales strategies for sustainable aviation fuels (SAF), with the ultimate goal of strengthening GC's position in the petrochemical industry and fuel business and supporting Thailand's sustainable aviation industry.



October 18, 2024

GC organized the 5th GC Sustainable Living Symposium 2024: GEN S GATHERING, themed "Sustainability Imposibility." The event brought together eco-conscious individuals, or GEN S (Generation Sustainability), from across all sectors, including government, business, and civil society, to collaboratively drive Thailand towards a low-carbon society. At the event, Mr. Prasert Chantararuangthong, Deputy Prime Minister and Minister of Digital Economy and Society, delivered a special keynote address. Held in a hybrid format, the event took place at Paragon Hall, Siam Paragon, with GC Group executives and employees hosting the participants. The symposium was organized as a carbon-neutral event.

GC aspires to be a global role model in sustainability under the vision "To be a leading global chemical company for better living." For more than 10 years, GC has been committed to achieving sustainability balance through the application of circular economy principles across three dimensions: environmental, social, and economic/governance. In 2021, GC set a target to achieve net-zero greenhouse gas emissions by 2050 and to become a low-carbon organization through well-defined action plans, measurements, and verification processes.



November 15, 2024

The Extraordinary General Meeting of Shareholders of PTT Asahi Chemical Company Limited (PTTAC), a joint venture in the acrylonitrile and methyl methacrylate business unit in which GC holds a 50% stake, approved the plan to terminate PTTAC's operations. Following this approval, PTTAC proceeded with the plan and discontinued product sales and deliveries to customers, starting from January 1, 2025, onward. The process is expected to be completed by 2028. As a result,As a result, in 2024, the Company recognized a total loss of Baht 11,773 million from asset impairment losses through equity method from PTTAC and provision for restructuring expenses.

November 5, 2024

GC signed a memorandum of understanding with Toray Industries, Inc. (Toray) to jointly conduct a feasibility study and explore opportunities for developing technology for producing muconic acid and adipic acid from agricultural waste materials, with a target of achieving several thousand tons of commercial-scale production of bio-based muconic acid and adipic acid by 2030. This project was supported by the Global South Future-Oriented Co-Creation Project under Japan's Ministry of Economic, Trade and Industry (METI).



November 18-21, 2024



GC represented Thailand's private sector at the Thailand Pavilion during the 29th Conference of the Parties (COP29) in Baku, Azerbaijan, presenting its climate change initiatives. At the event, GC reaffirmed its commitment as well as highlighted its performance in becoming a low-carbon organization, integrating cooperation across all sectors both domestically and globally, and contributing to the collective effort to climate change challenges in Thailand and worldwide. At this event, Mr. Krit Treenutchakorn, Senior Vice President, Corporate Governance and Legal, participated as a speaker in a side event at the Thailand Pavilion in a panel titled "Sustainable Growth: Key to Thailand's Net Zero Success," alongside senior executives from the Department of Climate Change and Environment, Thailand Greenhouse Gas Management Organization (Public Organization), and PTT Public Company Limited. Mr. Krit Treenutchakorn presented GC's vision, goals, operational approaches, and examples of successful decarbonization initiatives toward reaching the net zero target by 2050, as well as perspectives and success factors in collaborating with all sectors, both financial and non-financial, to guide Thailand toward a stable and sustainable low-carbon society.

November 19, 2024

GC signed a memorandum of understanding with PTT Oil and Retail Business Public Company Limited (OR) and Thai Airways International Public Company Limited (TG) to promote the use of sustainable aviation fuels (SAF). This collaboration was part of their shared mission to reduce GHG emissions, promote a sustainable future for the aviation industry in line with global standards set by the International Civil Aviation Organization (ICAO), and drive Thailand's transition to a low-carbon country.



December 3, 2024

GC joined forces with PTT Retail Management Co., Ltd. (PTTRM), the operator of Jiffy convenience stores and Jiffy mineral water, and BG Container Glass Public Company Limited (BGC), an integrated packaging service provider, to launch a limited edition of Jiffy mineral water in eco-friendly 500ml bottles. The bottle is produced using 100% high-quality recycled PET plastic (rPET), catering to eco-conscious consumers seeking refreshment. The product is now available at Jiffy stores nationwide.

December 11, 2024



GC signed a memorandum of understanding to study and develop technologies for carbon capture and utilization to achieve maximum cost benefits, focusing on the feasibility of implementing Honeywell's carbon capture and storage (CCS) technology at GC Group's facilities and carbon capture utilization (CCU), in support of achieving the net-zero greenhouse gas emissions target by 2050.

November 22, 2024

GC and Patum Vegetable Oil Company Limited jointly launched Thailand's first vegetable oil bottle made from recycled PET plastic (rPET). This achievement represents a collaborative milestone between two industry leaders: Patum Vegetable Oil Company Limited, a leader in the cooking oil, biodiesel, and vegetable oil derivative industry and producer of the Gaysorn brand, and GC, a leading global chemical company for better living. For this collaborative project, GC leveraged its green innovations and technologies to produce high-quality recycled plastic resin under InnoEco by GC brand and develop Thailand's first-ever vegetable oil bottles that offer superior properties for flavor and aroma preservation and ensure product safety and hygiene, in line with the motto "Gaysorn, Tasty and Eco-friendly."



December 4, 2024

GC signed a memorandum of understanding under The Intelligent Digital Technology Collaboration Program with KBC Advanced Technology Pte Ltd (KBC), a leading Yokogawa-based technology consulting firm specializing in the energy and petrochemical sectors, and announced a strategic collaboration to accelerate GC's digital transformation.

This partnership will leverage advanced process simulation technologies and the combined expertise of GC and KBC to optimize GC's entire value chain, starting with the supply chain and production efficiency. By integrating advanced analytics and artificial intelligence (AI) with process simulations technologies, GC and KBC will gain better decision-making tools, drive innovation, and unlock new business opportunities.

In addition, this collaboration will enable GC to strengthen its competitiveness and meet the evolving needs of the petrochemical market, while building a more sustainable and prosperous future in line with its corporate strategy.



December 12, 2024

GC participated in WE CYCLE DAY 2024 under the WeCYCLE project led by WHA Corporation Public Company Limited (WHA) in collaboration with the Industrial Estate Authority of Thailand (IEAT). The initiative brought together leading organizations including GC, SCG Packaging Public Company Limited (SCGP), and BSGF Company Limited (BSGF) to manage and add value to waste materials, such as plastic bottles, paper, and used cooking oil through recycling and upcycling processes, with the goal of reducing environmental impact and supporting organizational targets to achieve net zero emissions by 2050 and improve the quality of life for communities around WHA's warehouses and industrial estates. The project demonstrated a commitment to transforming environmental challenges into opportunities for creating sustainable value for both communities and the economy. Held at the Convention Hall of Pattana Sports Resort in Chonburi, the event included the presentation of WeCYCLE certificates and awards to outstanding partners, along with an exhibition of upcycled products to inspire participants.



December 13, 2024

GC announced the successful issuance of its first and Thailand's largest subordinated perpetual debentures, with a total value of 17,000 million baht, marking Thailand's largest issuance of subordinated perpetual debentures. GC's debentures, which achieved the highest credit rating in their category, carry an initial fixed interest rate of 5.25% per annum for the first 5 years and 6 months, with interest paid every 6 months. The public offering was conducted through 12 leading financial institutions from December 4-12, 2024. The issuance attracted overwhelming investor interest, with subscriptions exceeding GC's target, reflecting strong investor confidence in both GC and PTT Group.



December 20, 2024

Her Royal Highness Princess Maha Chakri Sirindhorn made a royal visit to monitor the progress of the OUR Khung BangKachao project (2018-2023). Present to receive Her Royal Highness were Dr. Sumet Tantivejkul, Committee Member and Secretary-General of the Chaipattana Foundation and the Khung BangKachao Development for Sustainability Supervisory Committee; Mr. Chatchai Phromlert, Chairman of PTT Public Company Limited (PTT); Dr. Kongkrapan Intarajang, Chief Executive Officer and President of PTT; and Mr. Narongsak Jivakanun, Chief Executive Officer of PTT Global Chemical Public Company Limited (GC) in his capacity as Chairman of the Waste Management Working Group, along with executives from PTT Group, government officials, employees, public and private sector representatives, and local residents. The event took place at Khung Bang Kachao, Phra Pradaeng District, Samut Prakan.



Message of the Chairman



Dear Shareholders,

In 2024, the petrochemical industry continued to grapple with persistent pressure from various inevitable factors, keeping the situation highly volatile, with increasingly severe impacts. In addition, the economic landscape remained fragile, while downstream industry consumption and consumer demand had yet to recover. This was compounded by the ongoing global and regional oversupply of petrochemicals, which intensified market pressures, resulting in consistently low operating rates for producers worldwide and significantly diminishing their profitability relative to the previous year.

While this crisis has admittedly been one of the most trying to date, GC remains unwavering in its commitment to overcoming these obstacles and challenges by promptly enhancing its competitiveness and maintaining its industry leadership. As such, GC continues to prioritize agile adaptation and careful strategic planning while also continuously assessing market conditions and expediting critical short-term and long-term initiatives to effectively mitigate impacts on its performance and maintain liquidity with optimal efficiency.

In the short term, we have implemented proactive measures in conjunction with intensive and continuous monitoring across various dimensions. These include enhancing production and sales efficiency throughout the supply chain, implementing corporate-wide expense control measures for both operating expenses (OPEX) and capital expenditures (CAPEX), reducing costs and increasing feedstock flexibility, and working with subsidiaries and joint ventures to foster cooperation and collaboratively improve efficiency. In addition, we have successfully implemented various enhancement initiatives, such as non-core business restructuring, bond buyback, and other projects that significantly improved GC's performance last year.

In tandem, in response to the increasingly challenging circumstances and evolving business and industry landscape, we have reinforced our long-term competitiveness and conducted a comprehensive review of our strategy and strategic plans. As a result, our 3 Steps Plus strategy has been upgraded to a Strategic priorities, comprising "5 Pillars + 1 Foundation", designed to enhance competitive capabilities and drive sustainable business growth. These 5 Pillars and 1 Foundation consist of:

1. Portfolio Transformation
2. Competitiveness Reinforcement
3. Enhance Position in High Value and Low Carbon Business
4. Accelerate allnex to Finish Line and Grow Further
5. Balance Business with Sustainability
6. Enablers for Transformation

The Board of Directors has prioritized and provided support with respect to all of these dimensions and has implemented rigorous and appropriate management while also providing policy guidance to drive strategic and operational plans towards tangible and measurable outcomes. In 2024, we made portfolio management decisions in line with the aforementioned strategies, including the judicial reorganization proceeding for Vencorex France and Vencorex TDI, as well as the business withdrawal plan of PTT Asahi Chemical Company Limited (PTTAC). These decisions are expected to improve GC's profitability from 2025 onwards.

Furthermore, we have continued to implement other strategic plans, including the expansion of our specialty chemicals portfolio in the Map Ta Phut Industrial Estate to path forward the Map Ta Phut Specialty Hub. To this end, we have actively been seeking opportunities with strategic partners to further expand our portfolio into high-value and low-carbon businesses. Another key strategy is driving allnex to maximize its value creation potential for future growth by proactively expanding industrial coating resin markets in Asia. This expansion includes establishing regional hubs in high-growth markets, with two locations already completed: Dushan Port in Jiaxing Province, China, and Mahad in Maharashtra, India, and one more hub planned for Rayong, Thailand in the future. The objective of these initiatives is to enhance capabilities and growth in potential markets and capitalize on international trade and investment opportunities arising from the growing shift of production bases to Southeast Asia. As for green product development, we have successfully initiated the first commercial production of Sustainable Aviation Fuel (SAF) in Thailand, marking a milestone advancement of the energy and chemicals industry through biochemical innovations and reflecting our vision of creating "differentiation through sustainable innovation."

Given these achievements and other strategic initiatives over the past year, it is evident that we have made preparations to advance our "5 Pillars + 1 Foundation" to achieve our goals and establish a strong foundation for the organization, thereby equipping GC to overcome challenges and achieve sustainable growth as targeted.

Sustainability: Our commitment to the development of a balanced approach to Environmental, Social, and Governance (ESG) considerations in line with international benchmarks is reflected in numerous recognitions and certifications from leading institutes. GC has been ranked first in the chemical sector on the Dow Jones Sustainability Indices (DJSI) World and Emerging Markets and has maintained global sustainability leadership for the sixth consecutive year with the highest score in S&P Global Corporate Sustainability Assessment (CSA). Additionally, GC received a Gold Medal for supply chain sustainability from EcoVadis, with an Advanced score across multiple dimensions, including labor and human rights, business ethics, sustainable procurement, and environment, placing GC in the top 5% globally in the basic chemical manufacturing industry. Furthermore, GC achieved the highest AAA rating from the SET ESG Ratings and won the SET Awards of Honor for the seventh consecutive year – the most among Thai listed companies, which demonstrates our commitment to sustainability-focused operations.

Governance: We prioritize and continue to integrate our Corporate Governance, Risk Management, Internal Control, and Compliance (GRC) activities, which form the foundation of our operations and promote the effective achievement of our organizational goals. In addition, we recognize the significance of and give absolute priority to anti-fraud and anti-corruption efforts. Thanks to this commitment, GC received an "Excellent" rating in the Corporate Governance Report of Thai Listed Companies (CGR) for the 13th consecutive year from the Thai Institute of Directors (IOD) and achieved the perfect score of 100 on the Annual General Meeting (AGM) checklist for the 13th consecutive year from the Thai Investors Association (TIA). Moreover, GC has awarded the Collective Action Against Corruption (CAC) Change Agent symbol, demonstrating our effort to expand the anti-corruption network to our business partners.

On behalf of the Board of Directors, executives, and employees, I would like to express my sincerest gratitude to all shareholders, suppliers, business partners, public and private institutions and agencies, as well as stakeholders for the unwavering support and trust. Despite current challenges, we are confident that our commitment and enhanced adaptability will enable us to navigate these difficult times and achieve global leadership in the chemical business as we continue our governance-focused operations to enhance the quality of life, maximize shareholder benefits, and take into account the interests of all stakeholders, with the ultimate goal of fostering confidence and bolstering long-term competitiveness and sustainable mutual growth.



(Mr. Predee Daochai)
Chairman

The total amount
of managed plastic
Plastic

1,400 ton*

Proper sorting

1,443 tCO_2e**: The amount of emissions avoided by recycling plastics as feedstock substitutes instead of sending them to landfills, the equivalent to planting

151,936 trees***

* The total amount from 2020-2024
** Calculated using the LESS standard by the Thailand Greenhouse Gas Management Organization (Public Organization)
*** Based on data from 2020-2024 and the CO_2 storage capacity of a 10-year-old large tree in one year (Care the Bear)



GC

“เทิร์นชีวิตให้พลาสติกใช้แล้ว
กลับมาสร้างคุณค่า”

จุดรับขวดพลาสติกสะอาด
DROP POINT FOR CLEAN PLASTIC BOTTLE

1 PET

2 HDPE

พลาสติกใส PET
PET PLASTIC





GOING ZERO WASTE

Proper sorting and disposal for proper recycling

1 BUSINESS OPERATION AND PERFORMANCE

GC never stops innovating and developing new solutions to create eco-friendly products that meet the net-zero lifestyle needs of all generations because our ultimate goal is to enhance the quality of life and achieve an environmental balance for a better world.

Business Structure and Operation

Policy and Business Overview

Business Overview

PTT Global Chemical Public Company Limited (GC) has a combined chemical and petrochemical capacity of approximately 14.41 million tons per year and a combined crude oil and condensate distillation capacity of 280,000 barrels per day.



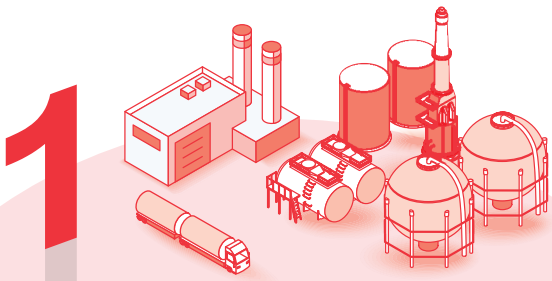
It is considered Thailand's largest integrated petrochemical and refining company, a leader in Asia-Pacific in terms of size and product variety. Its portfolio ranges from petrochemicals to bio-plastics, which sustainably contribute to the mitigation of global warming and greenhouse gas emissions in line with circular economy principles and pave the way for businesses in performance chemicals, which not only boast high value and high growth rates but also lend themselves to diverse downstream industries. This is in alignment with GC's strategic plans and business direction in strengthening its competitiveness as a premier international chemicals business as well as helps to shield GC from the intense competition in the petrochemical industry. Additionally, aware of the business landscape in the short and long term, GC continues to align its operations with global megatrends by fostering synergy to generate maximum value from its businesses, markets, and technology, leveraging its strength and expertise to further enhance operational efficiency, and developing High Value Products (HVPs), which will enable it to efficiently manufacture and develop products according to the market demand. GC consists of five core business groups:

1. Upstream
2. Intermediates
3. Polymers and Chemicals
4. Bio and Circularity
5. Performance Chemicals



Business Structure

In 2024, GC, as a Chemical Flagship of PTT Group with a combined chemical and petrochemical capacity of 14.41 million tons per year and crude oil and condensate distillation capacity of 280,000 barrels per day. GC consists of 5 business groups and has other businesses and services which GC invested for supporting, summarized in the diagram as follows:



1 Upstream

Refinery and Shared Facilities	Aromatics	Olefins
Important Product		
• Liquefied Petroleum Gas • Light Naphtha • Reformate • Jet Fuel • Diesel • Fuel Oil	• Benzene • Toluene(1) • Paraxylene • Orthoxylene • Mixed Xylene(1) • Cyclohexane	• Ethylene • Propylene • Butadiene • Butene-1
Capacity*		
Crude Oil Distillation 145,000 Barrels/Day	Condensate Distillation 135,000 Barrels/Day Aromatics 2,419 KTA	Ethylene/ Propylene 3,729 KTA Butadiene/ Butene-1 100 KTA



2 Intermediates

Ethylene Oxide and Derivatives	Phenols	Others Intermediates
Important Product		
• Mono Ethylene Glycol	• Phenol • Bisphenol A • Acetone	• Purified Terephthalic Acid • Propylene Oxide • Acrylonitrile(2) • Methyl Methacrylate(2)
Capacity*		
423 KTA	954 KTA	1,408 KTA

Remarks: * Production capacity as of 2024, including only companies in which GC held 25% or more shares, calculated proportionally to shareholding

(1) Used as feedstock in plant operations

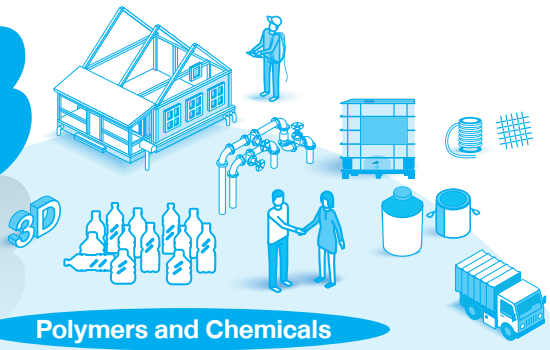
(2) Acrylonitrile and methyl methacrylate production under PTT Asahi Chemical Company Limited (PTTAC) was approved the business withdrawal plan of PTTAC as of November 15, 2024

(3) Hexamethylene diisocyanate (HDI) and HDI derivative production under Vencorex France and Vencorex TDI enter into the judicial reorganization proceedings under Book VI of the French Commercial Code as of September 10, 2024

Services and Others

- **Marketing and Sales of Products and Packaging Market Development**
  - Sales of Products across the region — Operated by Dealers authorized by GCM
  - Plastic Packaging Market Development — Operated by SPIG, TPBIMS
  - Upcycling Product Development & Sales — Operated by SUN
- **Logistics, Jetty, Utilities, and Infrastructure**
  - Logistics Services — Operated by WGCL
  - Jetty and Chemical Tank Farm — Operated by TTT
  - Pipeline Infrastructure Services — Operated by EFT
  - Utility Business — Operated by GPSC
  - Land and Property Management — Operated by GCEC
  - Information and Communication Technology Services — Operated by PTT Digital
- **Technical, Engineering, Plant Maintenance, Safety, Occupational Health, Environmental, and Security Businesses**
  - Plant Management and Engineering Design Service — Operated by GCME
  - Quality Safety, Occupational Health, Environmental, and Security Services — Operated by NPC and NPCSG
- **Social Enterprise**
  - Management Consultancy — Operated by PRS Rayong
  - Social Enterprise — Operated by SPSE
- **Others**
  - GC Group's Liquidity Management and Financing Vehicle Service — Operated by GCTC
  - Corporate Venture Capital Investment (CVC) — Operated by GCV and GCVA
  - Outsourcing Service — Operated by BSA

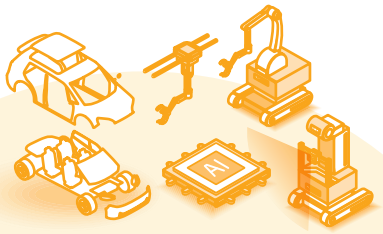
3



Polymers and Chemicals

Polymers	Chemicals
Important Product	
• High-Density Polyethylene • Linear Low-Density Polyethylene • Low-Density Polyethylene • Polypropylene • Polyvinyl Chloride • Polyethylene Terephthalate • Polystyrene • Rotomolding compound • Polypropylene compound (Hexene-1 is for internal use as feedstock with a capacity of 34 thousand tons per year)	• Ethanolamine • Polyether Polyols • Polymer Polyols • Premix Polyols
Capacity*	
2,855 KTA	198 KTA

5



Performance Chemicals

Performance Chemicals

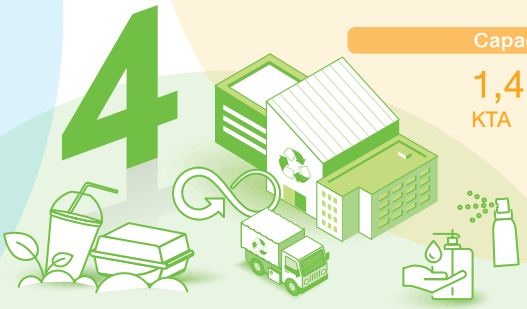
Important Product

- Coating Resins and Additives
- Hexamethylene Diisocyanate (HDI) and HDI Derivatives[3]
- Super Engineering Plastic Polyamide (PA9T) and Hydrogenated Styrenic Block Co-polymers (HSBC)

Capacity*

1,418 KTA

4



Bio and Circularity

Bioplastics and Biochemicals	Post-Consumer Recycled	Value Added Oleochemicals
Important Product		
• Polylactic Acid • Polybutylene Succinate	• Post-Consumer Recycled PET Post-Consumer Recycled HDPE	• Methyl Ester • Fatty Alcohol • Ethanol • Glycerin • Fatty Alcohol Ethoxylate • Oleochemicals
Capacity*		
905 KTA		

Business Value Chain



Crude Oil

Condensate

Natural Gas

Crude Palm Oil

Kernel Nut/
Crude Palm Kernel Nut

Agricultural
Products

Feedstock &
Basic Chemicals

Refinery

LPG
Reformate
Light Naptha
Jet Fuel
Diesel
Fuel Oil

Light Naphtha

Condensate
Residue

Heavy
Naphtha,
Reformate

Cracker bottom, H2

Aromatics

Paraxylene
Benzene
Toluene
Orthoxylene

Paraxylene

Benzene

C3, C4

Pygas

Olefins

Ethylene
Propylene
Butadiene
Butene-1

Ethylene

Propylene

Propane

Butadiene

Purified Terephthalic Acid (PTA)

Ethylene Oxide/Ethylene Glycol (EO/EG)

Propylene Oxide (PO)

Phenol/Acetone

Acrylonitrile (AN)[1]

Remarks:

(1) Acrylonitrile and methyl methacrylate production under PTT Asahi Chemical Company Limited (PTTAC) was approved the business withdrawal plan of PTTAC as of November 15, 2024

(2) Hexamethylene diisocyanate (HDI) and HDI derivative production under Vencorex France and Vencorex TDI enter into the judicial reorganization proceedings under Book VI of the French Commercial Code as of September 10, 2024

Upstream
Intermediates
Polymers and Chemicals
Bio and Circularity
Performance Chemicals



Downstream

Mono Ethylene Glycol (MEG)

Ethylene Oxide (EO)

Polyethylene Terephthalate (PET)

Ethanolamine (EA)

Polyethylene (PE)

PE Compounding

Polystyrene (PS)

Polyvinyl Chloride (PVC)

Polypropylene (PP)

Polyols

PP Compounding

Bisphenol A (BPA)

Methyl Methacrylate (MMA)[1]

Methyl Ester

Glycerin

Fatty Alcohol

Specialty Oleochemicals

Fatty Alcohol Ethoxylate

Ethanol

Polylactic Acid

Coating Resins and Additives

HDI and HDI Derivatives[2]

Super Engineering Plastic Polyamide Hydrogenated Styrenic Block Co-polymers



Transportation Fuel



Textile



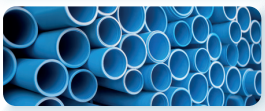
Home and Personal Care



Packaging



Electrical and Electronic Equipment



Construction





Automotive



Automotive Fuel



Pharmaceutical



Personal Care



Compostable Packaging



- Automotive Industry
- Industrial Coating Resins and Additives



- Automotive and Electronics Industry

Company Information

Name

PTT Global Chemical Public Company Limited

Initial
PTTGC

Website: www.pttgcgroup.com

Registered Number: 0107554000267

Registered Capital: As at December 31, 2023
the Company's registered share capital was of Baht 45,088,491,170
comprising of 4,508,849,117 common shares
at a par value of Baht 10 per share.
Paid-up capital was Baht 45,088,491,170

Establishment: October 19, 2011

First Day Trade on The SET: October 21, 2011

Business Structure


Upstream


Services
& Others


Intermediates


Performance
Chemicals


Polymers
and Chemicals


Bio
and Circularity

Number Of Employees: 11,058 as of December 31, 2024

Contact

Investor Relation Department
Tel: + 66 (0) 2265 8400
ext. 8670, 8665, 8533, 8534
e-Mail: ir@pttgcgroup.com

Corporate Governance Department
Tel: +66 (0) 2265-8400
e-Mail: cg@pttgcgroup.com

Head Office
555/1 Energy Complex, Building A, 18th Floor Vibhavadi Rangsit Road, Chatuchak Sub-District, Chatuchak District, Bangkok 10900
Tel: +66 (0) 2265-8400
Fax: +66 (0) 2265-8500

Branch 1 Rayong Office
59 Rat Niyom Road, Noen Phra Sub-District, Mueang Rayong District, Rayong Province 21150
Tel: +66 (0) 3899-4000
Fax: +66 (0) 3899-4111

Branch 2 Olefins 1
14 I-1 Road, Map Ta Phut Industrial Estate, Map Ta Phut Sub-District, Mueang Rayong District, Rayong Province 21150
Tel: +66 (0) 3899-4000
Fax: +66 (0) 3899-4111

Branch 3 Olefins 2
9 I-4 Road, Map Ta Phut Industrial Estate, Map Ta Phut Sub-District, Mueang Rayong District, Rayong Province 21150
Tel: +66 (0) 3899-4000
Fax: +66 (0) 3899-4111

Branch 4 Aromatics 1
4 I-2 Road, Map Ta Phut Industrial Estate, Map Ta Phut Sub-District, Mueang Rayong District, Rayong Province 21150
Tel: +66 (0) 3897-1000
Fax: +66 (0) 3899-4111

Branch 5 Aromatics 2
98/9 Rayong Highway Road 3191, RIL Industrial Estate, Map Ta Phut Sub-District, Mueang Rayong District, Rayong Province 21150
Tel: +66 (0) 3897-1000
Fax: +66 (0) 3899-4111

Branch 6 Refinery
8 I-8 Road, Map Ta Phut Industrial Estate, Map Ta Phut Sub-District, Mueang Rayong District, Rayong Province 21150
Tel: +66 (0) 3897-1000
Fax: +66 (0) 3899-4111

Branch 7 Jetty And Buffer Tank Farm
19 Rong Pui Road, Map Ta Phut Industrial Estate, Map Ta Phut Sub-District, Mueang Rayong District, Rayong Province 21150
Tel: +66 (0) 3899-4000
Fax: +66 (0) 3899-4111

Branch 8 Aromatics Tank Farm
11 I-4 Road, Map Ta Phut Industrial Estate, Map Ta Phut Sub-District, Mueang Rayong District, Rayong Province 21150
Tel: +66 (0) 3897-1000
Fax: +66 (0) 3899-4111

Branch 9 Lab Service Center Branch
24/9 Pakorn Songkrohraj Road, Map Ta Phut Sub-District, Mueang Rayong District, Rayong Province 21150
Tel: +66 (0) 3899-4000
Fax: +66 (0) 3899-4111

Branch 10 Customer Solution Center
555/1 Energy Complex, Building A, 1st, 9th, 14th, 16th-17th Floor Vibhavadi Rangsit Road, Chatuchak Sub-District, Chatuchak District, Bangkok 10900
Tel: +66 (0) 2265-8400
Fax: +66 (0) 2265-8500

Branch 11 Olefins 3
8 Pa Daeng Road, Map Ta Phut Sub-District, Mueang Rayong District, Rayong Province 21150
Tel: +66 (0) 3899-4000
Fax: +66 (0) 3897-6205

Branch 12 Polyethylene
8 I-10 Road, Map Ta Phut Industrial Estate, Map Ta Phut Sub-District, Mueang Rayong District, Rayong Province 21150
Tel: +66 (0) 3899-4000
Fax: +66 (0) 3897-6977

Branch 13 Innoplus Solution Center
83/9-10 Village No. 5, Tup Ma Sub-District, Mueang Rayong District, Rayong Province 21000
Tel: +66 (0) 3899-4526
Fax: +66 (0) 3899-4452

Branch 14 LLDPE Maintenance Office
32 Rong Pui Road, Map Ta Phut Sub-District, Mueang Rayong District, Rayong Province 21150
Tel: +66 (0) 3897-5000
Fax: +66 (0) 3899-4111

Branch 15 GC Thai Petrochemical Learning Center
66 Highway 363 Noen-Phra Sub-District, Mueang Rayong District, Rayong Province 21150
Tel: + 66 (0) 3899-0000
Fax: -

Branch 16 Glycol Plant
9-9/1 Soi G12, Pakorn Songkrohraj Road, Map Ta Phut Sub-District, Mueang Rayong District, Rayong Province 21150
Tel: + 66 (0) 3899-7000
Fax: -

Branch 17 Polystyrene Plant
7 I-1 Road, Map Ta Phut Industrial Estate, Map Ta Phut Sub-District, Mueang Rayong District, Rayong Province 21150
Tel: + 66 (0) 3897-6000
Fax: -

Branch 18 Phenol Plant
9 Soi G9 Pakorn Songkrohraj Road, Map Ta Phut Sub-District, Mueang Rayong District, Rayong Province 21150
Tel: + 66 (0) 3864-3000
Fax: -

Branch 19 Oxirane Plant
12 Soi G4 Pakorn Songkrohraj Road, Huai Pong Sub-District, Mueang Rayong District, Rayong Province 21150
Tel: + 66 (0) 3899-4000
Fax: -

Nature of Business



Revenue Structure of GC and Subsidiaries Categorized by Business Unit

Business Group	2022		2023		2024	
	Revenue (Baht Million)	%	Revenue (Baht Million)	%	Revenue (Baht Million)	%
Upstream						
Total	340,162	49.7	343,844	55.3	320,492	52.7
Intermediates						
Total	87,861	12.8	68,263	11.0	77,528	12.7
Polymers and Chemicals						
Total	111,542	16.3	95,800	15.4	98,750	16.2
Bio and Circularity						
Total	22,250	3.3	15,049	2.4	16,686	2.7
Performance Chemicals						
Total	118,201	17.3	94,703	15.2	91,395	15.0
Services and Others						
Total	3,939	0.6	3,972	0.6	3,699	0.6
Net Total after deduction from connected transaction	683,954	100.0	621,631	100.0	608,550	100.0



UPSTREAM

The Upstream Business Unit consists of three subcategories: Refinery and Shared Facilities, Aromatics, Olefins

Refinery and Shared Facilities

As Thailand's leading refiner and distributor of petroleum products, GC owns and operates a modern complex refinery equipped with hydrocracker and visbreaker units, capable of converting low-value fuel oil to more valuable middle-distillate products. GC's average refining capacity stands at 145,000 barrels per day of crude and 135,000 barrels per day of condensate. Additionally, GC's refining process is flexible and ready to be adjusted to accommodate customer demand and volatility in the market. Below is a summary of GC's refined products and their usage:

Petroleum Product		Usage
Light Distillate	Liquefied Petroleum Gas (LPG)	• Fuel • Petrochemical feedstock (Olefins plants)
	Light Naphtha	• Gasoline blending component • Petrochemical feedstock (Olefins plants)
	Reformate	• Gasoline blending component • Petrochemical feedstock (Aromatics plants)
Middle Distillate	Jet Fuel	• Aviation fuel
	Diesel	• Fuel for industrial and transport sectors
Heavy Distillate	Fuel Oil	• Fuel for industrial sector and maritime transport

Policy and Marketing

GC's strategy is to source low-cost feedstock from domestic and overseas sources, prioritizing domestic crude oil due to maximum cost benefits and new overseas sources that yield high economic returns, such as the United States, Brazil, Indonesia, and Vietnam. Petroleum products are sold primarily domestically and to high-value markets, such as the CLMV countries, which consist of Cambodia, Laos, Myanmar, and Vietnam. GC is also the first company in Thailand equipped to produce and distribute EURO 5 diesel, which meets the quality standards to be enforced by the government starting from 2024 onwards. In addition, GC collaborates with PTT Group to seek opportunities to source crude oil from new sources to reduce procurement costs, enhance its competitiveness, and distribute petroleum products at higher prices to satisfy the market demand.

In 2024, GC sold approximately 64 million barrels of petroleum products from its refinery, which increased from 2023, driven by the absence of major turnarounds. The primary product was diesel, which was primarily sold domestically, accounting for a 28% market share of the domestic sales. GC's main customer was PTT Oil and Retail Business Public Company Limited (OR), which has long-term purchase agreements with the Company. GC has plans to increase the domestic sales of distillates to accommodate rising demand and increase exports to CLMV to grow its marketing base continuously in the future.



Aromatics

GC produces and distributes aromatics products, namely paraxylene, benzene, toluene, orthoxylene, mixed xylene, and cyclohexane. These products are used as feedstock in various downstream industrial processes.

Aside from these products, GC's aromatics plants yield multiple by-products, including liquefied petroleum gas (LPG), light naphtha, heavy aromatics, and condensate residue. LPG and light naphtha are used as feedstock in GC's olefins plants, while heavy aromatics and condensate residue are used as feedstock in the refinery to produce jet fuel, diesel, and fuel oil. GC currently operates two aromatics plants with a combined capacity of 2,419 thousand tons per year. The table below details the nameplate capacity of each product:

Company	Product	Nameplate Capacity (thousand tons per year)
GC	Paraxylene	1,310
	Benzene	697
	Cyclohexane	200
	Orthoxylene	86
	Mixed xylene*	76
	Toluene*	50

Remark: * Toluene and mixed xylene are currently used as feedstock at both aromatics plants.

Policy and Marketing

In sourcing feedstock for its aromatics plants, GC's strategy focuses primarily on procuring domestic condensates, which are the most cost-effective, as well as condensates from new sources in the global market as alternatives in order to reduce production costs, such as from Australia, Indonesia, New Zealand. As for its distribution strategies, GC sells its aromatics chiefly to domestic customers, with the majority located in the Map Ta Phu Industrial Estate, while also fostering cooperation within PTT Group to boost global exports and promote collaboration, such as shared sales and transportation.

In 2024, approximately 81% of GC's aromatic products were sold to domestic customers, most of whom were customers with long-term agreements, accounting for around a 64% market share of total domestic sales. The remaining 19% of aromatic products were exported primarily to customers in Asia.

Olefins

Olefins products obtained from GC's olefins plants consist of ethylene, propylene, butadiene, and butene-1. Thanks to their feedstock flexibility, GC's olefins plants can make use of ethane, Propane LPG, and NGL, all of which are natural gas products, as well as LPG and light naphtha from refineries and aromatics plants.

The olefins plants also yield various by-products, such as pyrolysis gasoline, mixed C4, cracker bottom, and hydrogen. GC enriches the value of these by-products with the refinery and aromatics plants. For example, pyrolysis gasoline is turned into aromatics products; or hydrogen is used in the refinery as a substitute for hydrogen produced by the Hydrogen Manufacturing Unit (HMU), which otherwise requires a higher production cost; and mixed C4 is turned into butadiene and butene-1 at the by-product value-added plant.

GC also produces utilities (352.5 MW of electricity, 1,100 tons/hour of steam, and 3,240 cubic meters/hour of industrial water) for its own use to reduce production costs and for sale to external customers, consisting of neighboring petrochemical plants, to generate revenue. These utilities are also sold to Electricity Generating Authority of Thailand (EGAT) (under a 30 MW firm agreement and a 60 MW non-firm agreement).

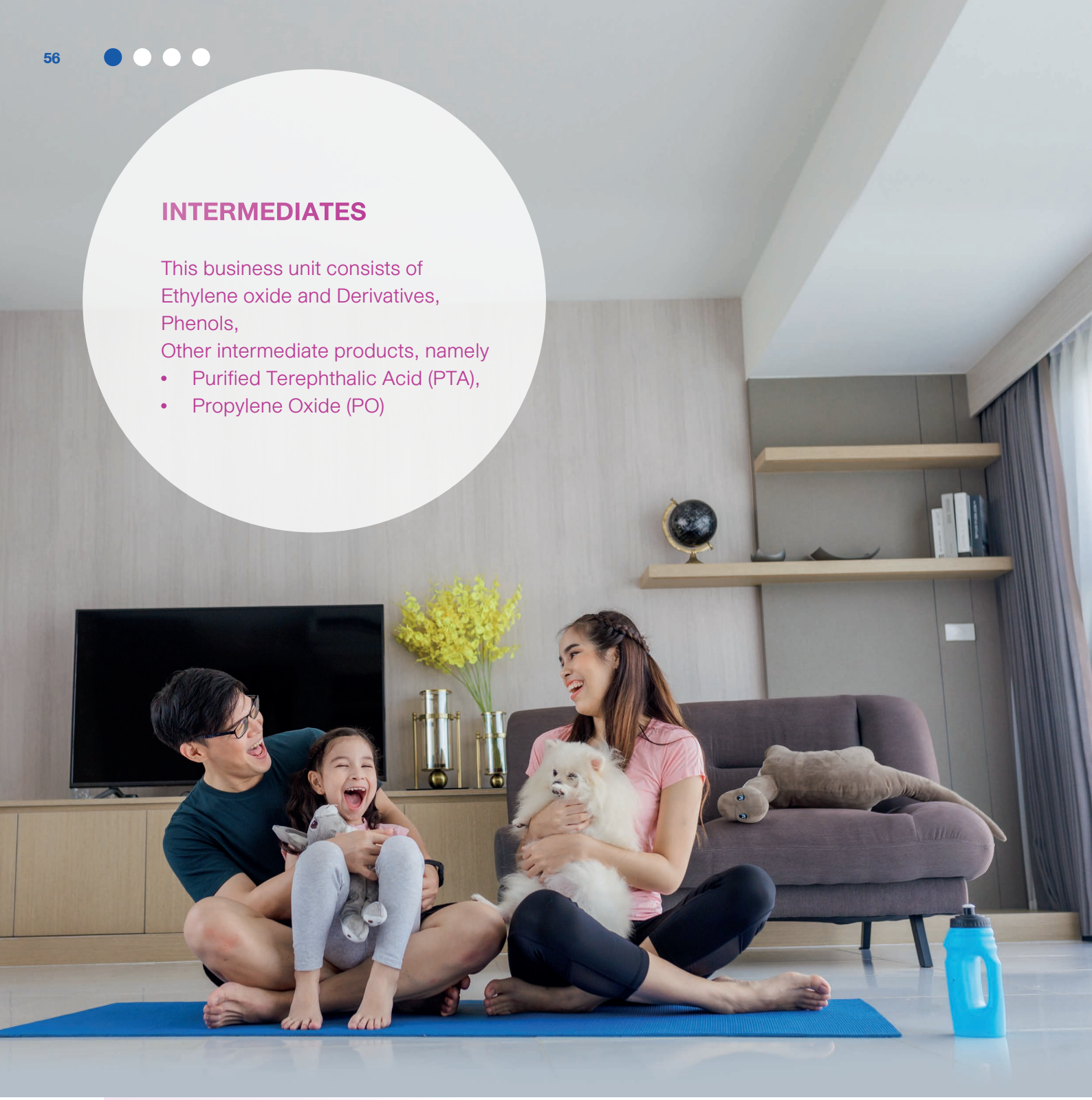
GC has five olefins plants, with a total nameplate installed capacity of 3,829 thousand tons per year, as shown in the table below:

Company	Product	Nameplate Capacity (thousand tons per year)
GC	Ethylene	2,827
	Propylene	902
	Butadiene	75
	Butene-1	25

Policy and Marketing

GC's policy is to build its competitiveness on par with international standards by using diverse feedstocks, controlling costs to a competitive level, and increasing business opportunities from upstream to downstream businesses to give GC stability and management options. GC's domestic and international competitive capabilities have allowed for more agile marketing policies and increased options in selling its products, especially during times of high volatility. In addition, GC seeks to foster cooperation with companies in PTT Group, such as by sourcing quality feedstock at competitive prices and exchanging knowledge to jointly develop best practices.

To give them added value, olefin products are primarily used to produce downstream petrochemical products, while the rest is sold to companies within PTT Group and domestic customers, such as HMC Polymers Co., Ltd. (HMC), AGC Vinythai Plc. (AVT), and other companies in Map Ta Phut Industrial Estate. GC's domestic market shares for ethylene and propylene are 18% and 26% respectively. The remaining products are exported. New opportunities are also sought through collaboration within PTT Group to boost global exports.



INTERMEDIATES

This business unit consists of
Ethylene oxide and Derivatives,
Phenols,
Other intermediate products, namely

- Purified Terephthalic Acid (PTA),
- Propylene Oxide (PO)

Ethylene Oxide (EO) and Derivatives

To supplement value to current olefins products and satisfy rising demand of the industrial sector and general consumers, GC recognizes the need to produce high-value products not yet manufactured in Thailand, not only to replace imports but also to raise Thailand's petrochemical competitiveness. To this end, GC has expanded its businesses towards ethylene oxide products and derivatives.

As a downstream product of ethylene, ethylene Oxide (EO) is used as feedstock for ethylene glycol (EG) and other downstream products, namely mono ethylene glycol (MEG), diethylene glycol (DEG), triethylene glycol (TEG), and polyethylene glycol (PEG). Among these products, MEG is the main feedstock and is used in combination with purified terephthalic acid (PTA) for the production of polyester textiles or PET bottles.

In 2024, for the production of ethylene oxide (EO) and derivatives, GC commercially operated one plant located in WHA Eastern Industrial Estate, Rayong. The production capacity is detailed in the table below:

Company	Product	Nameplate Capacity (thousand tons per year)
GC	Mono Ethylene Glycol (MEG)	423

Policy and Marketing

For ethylene oxide and downstream products, the policy is to sell to domestic business owners at prices and under trade conditions that are competitive with other manufacturers. As Thailand's first and only producer, GC uses its strengths and business advantages in marketing, such as its position as a domestic producer of high-purity products, faster response and delivery time compared to other producers, and the ability to deliver products continuously from its storage tanks. In 2024, approximately 93% of the ethylene glycol produced was sold domestically, accounting for a 51% domestic market share, while the remaining amount was sold in international markets where it would yield maximum benefits, such as ASEAN, Northeast Asia, and Australia.

Phenols

Phenol is used as feedstock for the production of other downstream products, such as engineering plastics. These products are in high demand in high-growth industries, including automotive, electrical appliance and electronics, and construction. The key products are listed below:

Phenol

Phenol, an intermediate petrochemical derived from benzene and propylene, is a key feedstock for bisphenol A (BPA), phenolic resin, and various derivatives for the plastic, pharmaceutical, and chemical industries.

Acetone

Acetone, a by-product from phenol production, is a very common solvent in various industries, such as chemical, cosmetics, and medical industries. Acetone is also used as feedstock for bisphenol A and methyl methacrylate, used in plastics and coating industries, among others.

Bisphenol A

Bisphenol A is an intermediate petrochemical and feedstock for polycarbonate (PC), an engineering plastic used in various industries, such as the automotive industry, electrical appliance and electronics industry, and construction industry. BPA is also a key feedstock for epoxy resin, which is used in composite materials, coatings, and the paint industry.

In 2024, GC operated three commercial plants located in WHA Eastern Industrial Estate, Rayong. The nameplate capacities are as detailed below:

Company	Product	Nameplate Capacity (thousand tons per year)
GC	Phenol	492
	Acetone	304
	Bisphenol A	158

Policy and Marketing

For phenols, GC's policy is to sell products to both domestic and overseas customers, focusing on boosting the sale of phenol, acetone, and bisphenol A in the domestic market to enhance competitiveness and expand overseas markets, particularly niche markets, leveraging its strengths and business advantages, such as its high-quality products, trade partners with marketing networks across every region, stable sources of feedstock, and consistent customer relations activities. In 2024, the domestic market accounted for approximately 39% of the total sales volume, equivalent to a domestic market share of around 65%. The remaining volume was exported to India, China, South Korea, Taiwan, and other countries in Southeast Asia.

Other Intermediates

Purified Terephthalic Acid (PTA)

PTA is an intermediate petroleum product used as the primary feedstock for the manufacturing of polyester fibers for textiles and clothing as well as PET (polyethylene terephthalate) resin for the forming of packagings such as water bottles, gallon bottles, and clear plastic boxes for food storage. In addition, PTA is employed as an auxiliary material in the production of powder colors for coating in the automotive and electronic appliance industries as well as in oil colors for use in the construction industry. PTA is produced by GC-M PTA Co., Ltd. (GC-M PTA), located in WHA Eastern Industrial Estate in Rayong, with the nameplate capacity as shown in the table:

Company	Product	Nameplate Capacity (thousand tons per year)
GC-M PTA	Purified Terephthalic Acid (PTA)	1,440

Policy and Marketing

GC-M PTA Co., Ltd. has been manufacturing and distributing PTA for over 25 years and has benefitted from technology transfer from its joint venture partner Mitsui Chemicals Inc. in Japan. It has continued to enhance the quality of its products to meet the needs of domestic and international customers at a competitive cost.

With respect to marketing and sales, the products are sold both directly to customers and through agents who have been its business partners since its establishment. The current sales volume is split into 50% domestic and 50% international. For exports, emphasis is placed on markets where it enjoys geographical advantages, such as Southeast Asian countries such as Vietnam, as well as Japan, India and other countries in the Middle East and Africa with demand. Prices are negotiated based on market prices, which are subject to change in accordance with production volumes and regional demand at each specific period of time.

Propylene Oxide (PO)

PO is an intermediate petrochemical used as feedstock primarily used in the production of polyols, followed by the production of propylene glycol. GC's plant is located in WHA Eastern Industrial Estate, with the nameplate capacity as shown in the table below:

Company	Product	Nameplate Capacity (thousand tons per year)
GC	Propylene Oxide (PO)	200

Policy and Marketing

As a policy, PO is manufactured and distributed primarily to GC Polyols Co. Ltd. to generate added value for propylene products as well as to other domestic customers. Thus far, GC has strengths and competitive advantages in product delivery. In 2024, approximately 71% of the product was distributed domestically, accounting for a 43% domestic market share, while the remaining volume was exported to China, India, Malaysia, South Korea, and Taiwan.





POLYMERS & CHEMICALS

This business unit comprises
Polyethylene (PE),
Polypropylene (PP),
Polyvinyl chloride (PVC),
Polyethylene terephthalate (PET),
Polystyrene (PS),
Rotomolding compound,
PP Compound,
Ethanolamine (EA),
Polyols

Polymers

Polymers are downstream petrochemicals primarily used as feedstock for the production of components in other downstream industries, such as construction, packaging, agriculture, automotive, and electrical appliances. GC's key polymer products are as follows:

- High-density polyethylene (HDPE)
- Linear low-density polyethylene (LLDPE)
- Low-density polyethylene (LDPE)
- Polypropylene (PP)
- Polyvinyl chloride (PVC)
- Polyethylene terephthalate (PET)
- Polystyrene (PS)
- Rotomolding compound
- PP compound

GC Group currently operates 20 commercial polymer plants in Map Ta Phut Industrial Estate, Pha Daeng Industrial Estate, and WHA Industrial Estate (Map Ta Phut) Rayong. Rotomolding compound plants operate in the UK, Poland, Australia, New Zealand, Malaysia, and Thailand. The PP compounding plant is located in the Amata City Industrial Estate, Chonburi. GC Group produces and sells its polymers under trademarks through its subsidiaries and joint ventures. The capacities of major polymer products are shown in the table below:

Company	Product	Trademark	Nameplate Capacity (thousand tons per year)
PTT Global Chemical Public Company Limited (GC)	High-density polyethylene (HDPE)	InnoPlus by GC	850
	Linear low-density polyethylene (LLDPE)		800
	Low-density polyethylene (LDPE)		300
	Polystyrene (PS)	DIAREX by GC	90
HMC Polymers Company Limited (HMC)	Polypropylene (PP)	Moplen, Purell, Clyrell, Adstif, Adsyl	1,060
AGC Vinythai Company Limited (AVT)	Polyvinyl chloride (PVC)	Siamvic	450
Thai PET Resin Company Limited (TPRC)	Polyethylene terephthalate (PET)	InnoPlus by GC	210
Revolve Group Limited (RGL)	Rotomolding compound	Revolve	76
Dynachisso Thai Co. Ltd. (DYCT)	PP compound	Polypro	30

Remark: Hexene-1 is for internal use as feedstock for LLDPE (metallocene), with a capacity of 34 thousand tons per year.

Policy and Marketing

The Polymers Business Unit operates an integrated production, marketing, distribution, and customer service business. GC enjoys a competitive advantage due to lower costs per unit and high-quality products thanks to effective production control as well as consistent technology transfer from and knowledge exchange with technology proprietors as well as continuous production technology research and development. GC also consistently develops its products according to the requirements of its customers and end markets so as to ensure its production efficiency and ability to meet such needs.

With respect to marketing, GC implements integrated marketing under a market-focused business framework, under which market and customer needs are analyzed to determine the future direction through strategic marketing plans and action plans. GC also conducts competitor and customer analysis, revises marketing competitiveness enhancement plans in a comprehensive manner, and seeks collaboration for new technology development in order to develop products that align with its marketing strategies.

With respect to services, to successfully deliver value to customers through products and services and meet expectations, GC has put in place integrated voice-of-customer-and-market systems and processes to receive suggestions, requests, and complaints in order to further improve its product and service quality and closely monitor changes in market trends and demand.

Additionally, GC carries out sales and marketing in every region across the world through GC Marketing Solutions Company Limited (GCM), which has four overseas subsidiaries in (1) Ho Chi Minh City, Vietnam; (2) Jakarta, Indonesia, (3) Yangon, Myanmar, and (4) Shanghai, China; as well as a dealership office in Guangzhou in China. The management under GCM aims to enable GC to adequately cater to the international demand for GC's products and services and maximize its trade opportunity.

In terms of warehousing and transportation, GC has assigned WHA GC Logistics Company Limited (WGCL), a joint venture of GC Group, to handle warehouse, storage, and transportation management for all its polymer products to ensure agility in the integrated logistics management as well as to enable GC to manage distribution and transportation costs to competitive levels and efficiently distribute its products as expected by customers, which consist of over 1,100 plastic forming manufacturers nationwide and overseas customers in over 80 countries across the world.

In 2024, approximately 55% of PE products and 36% of PS products were exported. The focus was on markets in countries where GC enjoyed geographical and competitive advantages. GC also focused on developing products that catered to end users in four major industries, namely flexible packaging, rigid packaging, construction products, and emerging products, as well as improved and developed commodity products to retain its domestic and overseas customer bases and expand towards new customer bases according to its marketing plans.

The prices of polymers and by-products are based on market prices. Domestic prices are based on the announced prices in Thailand, while prices for products sold in Southeast Asia are based on the reference market prices in Southeast Asia under the international CFR Southeast Asia trade conditions, which vary according to economic and political circumstances as well as the demand and supply of the markets in the region. On the other hand, overseas prices for other countries are based on the reference market prices of each specific region or country.

Furthermore, GC has built upon and added value to its linear low-density polyethylene (LLDPE) by developing rotomolding compounds through Revolve Group Limited (RGL), a rotomolding compound producer with production bases in the UK, Poland, Austria, New Zealand, Malaysia, and Thailand. In Thailand, production is carried out under the name Matrix Polymers Thai Co., Ltd. (MTP) to develop products in close collaboration with customers, including rotomolders and end-users, in order to meet specific needs.

GC also offers PP compounds to create added value for products and PP customers, thus enabling an expansion towards the automotive, electrical appliance, and electronic industries, while also seeking to foster business growth through other downstream industries to accommodate expansion in four major target industries: construction, packaging, agriculture, and automotive.



Chemicals

Ethanolamine (EA)

Derived from EO, EA primarily comes in the form of either monoethanolamine (MEA), diethanolamine (DEA), or triethanolamine (TEA). EA products are used as ingredients for the production of shampoos, hair conditioners, fabric softeners, and cosmetic products, as well as in pharmaceutical and cement industries, among others. GC's EA plant is located in WHA Eastern Industrial Estate in Rayong. The nameplate capacity is shown in the table below:

Company	Product	Nameplate Capacity (thousand tons per year)
GC	Ethanolamine (EA)	50

Policy and Marketing

For EA, the policy is to sell its products primarily to domestic business owners at prices and under trade conditions that are competitive with other manufacturers, focusing on creating maximum added value from EO products. In 2024, approximately 40% of the EA products were sold domestically, accounting for around a 31% share in the domestic market. The remaining volume was exported to markets in countries yielding maximum benefits in each region, such as Southeast Asia, Northeast Asia, and Australia.

Polyols

Polyols are downstream petrochemicals used as feedstock for the production of polyurethane (PU). They are sold both in the form of feedstock and as Premix Polyols—a mixture of various polyols and additives co-developed with customers to achieve desired properties, such as the density of PU foam during molding. GC produces polyols through GC Polyols Co. Ltd. (GCP), a joint venture between GC, Sanyo Chemical Industries, and Toyota Tsusho Corporation. The main strategy is to become an integrated manufacturer of feedstock for PU and cater to the rising demand in the market.

In 2024, GC commercially operated a plant located in WHA Eastern Industrial Estate, Rayong. The nameplate capacity is shown in the table below:

Company	Product	Nameplate Capacity (thousand tons per year)
GCP	Polyether Polyols (PPG)	130
	Polymer Polyols (POP)	30
	Premix Polyols (PM)	20

Policy and Marketing

GCP is a polyol producer that has received production technology and formulation from Sanyo Chemical Industries, a joint venture partner. It seeks to create customer bases both domestically and internationally through the sale of standard-grade products and high-grade R&D products. GC has exported its polyols to over 20 countries worldwide, namely India, Vietnam, Indonesia, Malaysia, China, Bangladesh, the Philippines, Türkiye, Singapore, Sri Lanka, Nepal, Pakistan, Taiwan, Japan, the United Arab Emirates, Peru, Brazil, Nigeria, and Australia, with plans to further expand towards markets in other regions beyond Southeast Asia through both direct distribution to end-users and dealerships.

BIO & CIRCULARITY

The Bio & Circularity Business Unit consists of products manufactured from natural feedstocks such as palm oil, palm kernel oil, vegetable oil, animal fat, corn, sugar made from sugarcane, and cassava. These products can be used in various downstream industries, such as personal care, pharmaceuticals, food, biochemicals, and bioplastics industries. These products are divided into three key categories as follows:



Bioplastics and Biochemicals

Bioplastics and biochemicals are derived from natural feedstock, including sugar from sugarcane, cassava, and corn. The feedstock is fermented to produce chemicals, such as lactic and succinic acids. These two chemicals are used in the production of bioplastics, such as polylactic acid (PLA), and polyesters, such as polybutylene succinate (PBS), respectively.

GC operates its PLA business through NatureWorks LLC (NatureWorks), a joint venture between GC's GC International Corporation ("GCI") and Cargill, Incorporated ("Cargill") of the U.S., and the proprietor of the polylactic acid (PLA) production technology with a commercial capacity of 150,000 tons per year. To expand its production capacity, NatureWorks has decided to construct a second plant in Nakhonsawan Biocomplex in Thailand, which will be an integrated lactic acid, lactide, and PLA manufacturing plant with a PLA capacity of 75,000 tons per year. Construction of the plant has begun, with the commencement of commercial operation scheduled for 2025. As for PBS, GC operates its business through PTTMCC Biochem Co., Ltd. (PTTMCC), a joint venture with Mitsubishi Chemical Corporation (MCC), established for the production and distribution of bioPBS, an environment-friendly product composable in ambient temperature. PTTMCC operates a plant in the Asia Industrial Estate in Rayong with a Thailand-based capacity of 20,000 tons per year.

Company	Product	Nameplate Capacity (thousand tons per year)
NatureWorks	Polylactic acid (PLA)	150
PTTMCC	Polybutylene succinate (PBS)	20

Policy and Marketing

Bioplastic and biochemical markets have seen significant growth in line with a surge in environmental conservation, plastic ban and reduction measures, and public awareness of plastic waste issues, and there has been a significant rise in global demand for bioplastics and compostable plastics as substitutes for single-use plastics.

IngeoTM-branded PLA by NatureWorks can be used to produce various food-grade products, such as cold drink cups, spoons, forks, coffee capsules, rigid and flexible food packaging, and tea bags. It is also used to manufacture products in the computer industry, such as 3D printing filaments and powders. With respect to sales and marketing strategies, NatureWorks focuses on catering to specialized needs by researching and developing products in collaboration with major international manufacturers with production bases and customers in various regions whose policy is to use bioplastics in their products. As such, NatureWorks has been successful in responding to specific needs. In addition, NatureWorks collaborates with other proprietors of bioplastic production technology to enhance the quality of its products, grow customer bases, expand the range of applications, and accommodate the steady growth of global bioplastic demand.

On the other hand, PBS under PTTMCC's BioPBS™ brand is used as a coating in paper for food containers, cups for hot and cold drinks, as well as cling films and food packaging films. It is also mixed with PLA or other bioplastics to enhance the properties and functionalities for use in the production of coffee capsules, filaments, and mulch films. PBS is sold directly to customers and through dealers, with the major markets being mostly in Europe, the U.S., and Japan.



Post-Consumer Recycled (PCR)

PCR resin is produced from used plastic packaging from households that has been recycled with cutting-edge technology. The properties and functional safety of GC's high-quality PCR are on par with virgin resin, allowing it to be formed into products for food-contact applications as well as into packaging for home and personal care products. GC operates its PCR business through ENVICCO Limited (ENVICCO), a joint venture between GC and ALPHA, and offers two types of products:

PCR PET

This food-grade resin has mechanical properties comparable to virgin PET and has been certified to international safety standards for food and drink packaging. It has been certified to meet international safety standards, such as the European Food Safety Authority (EFSA) and the U.S. Food and Drug Administration (US-FDA), and approved by the Thai Food and Drug Administration for use in the production of food-contact containers, making it suitable for being molded into food and beverage packaging.

PCR HDPE

This packaging-grade resin has mechanical properties comparable to virgin HDPE. Thanks to its strength and durability, it is well-suited for molding into containers of home and personal care products, such as washing detergent, shampoo, soap bottles, lubricant bottles, and water pipes.

Company	Product	Nameplate Capacity (thousand tons per year)
ENVICCO	PCR PET	30
	PCR HDPE	15

Policy and Marketing

GC conducts its business with environmental stewardship in adherence to circular economy principles, with the goal of serving as a role model of resource efficiency by developing products with recyclability in mind and through sustainable systemic plastic waste management. To achieve this, GC has implemented various projects to raise awareness among the general public and its stakeholders across all sectors. These include the Community Waste Model, which promotes efficient waste management in communities; the ThinkCycle Bank, a school initiative providing education on proper waste segregation; the GC YOUTURN Platform, in which drop-off points are set up to receive plastic bottles from the general public; and many other initiatives that GC has carried out in collaboration with its customers, suppliers, and business partners.

With respect to PCR marketing, PCR adoption and demand development in Southeast Asia is only in the initial phase. The primary market is manufacturers of commodity goods with sustainability policies and targets. It is expected that the global market for it will expand significantly in the next 2-7 years in accordance with the sustainability targets of manufacturers and national targets.

In terms of sales and marketing, its PCR is distributed through GC to be sold to customers and partly directly distributed to ALPLA for the production of plastic packaging within its own business group. Its main strategy is to drive market demand through major domestic and international manufacturers in the food and beverage and household product industries that have sustainability policies and clear targets to increase the use of PCR. PCR products are also exported to countries where manufacturers are required to use PCR, such as those in the European Union and the U.S.

Value Added Oleochemicals (VAO)

Basic Oleochemicals

Basic oleochemicals are used as key feedstocks in production processes to add value to end products across various industries, from automotive fuels, cleaning agents, and hygiene products all the way to food and drugs. Primary eco-friendly basic oleochemicals consist of methyl ester, fatty alcohols, ethanol, and by-products such as purified glycerin, as well as an ethylene oxide product, namely fatty alcohol ethoxylate. Highly safe, basic oleochemicals play a key role in green production and align well with sustainable development practices.

Methyl Ester

Methyl ester is a basic oleochemical. Also known as B100, it can be blended into diesel to make biodiesel that meets EN14214 European standards for diesel engines. Methyl ester helps augment the efficiency of diesel, for both lubrication and combustion. It also increases an engine's lifespan and, more importantly, minimizes pollution and environmental impacts by reducing PM2.5 emissions. It is also considered a low-carbon biofuel compared to fossil fuels.

Fatty Alcohol

Fatty alcohol is a basic oleochemical used as a feedstock in a number of different processes in the personal care industry. It is also used as an ingredient or a component of many other products, including surfactants, plasticizers, solvents, aroma compounds for perfumes, detergents, foam stabilizers, lubricants, cosmetics, shampoos, as well as paints and coating products. They are also found in leatherwear and ink.



Ethanol

As a product from sugarcane, ethanol, or E100, can be blended with basic gasoline to produce gasohol, a clean fuel for gasoline engines that produces less pollution and environmental impacts. The product also supports farmers as it is produced from sugarcane, which is a natural feedstock.

Glycerin

Glycerin is a by-product from the production of methyl ester and fatty alcohols and is used in pharmaceutical, food, personal hygiene, and other industries

Fatty Alcohol Ethoxylate

Derived from fatty alcohol and EO, fatty alcohol ethoxylate is used as feedstock for shampoo, personal care, and home care products. In textiles, it is used as a scouring agent, which is part of the preparation process, and as a softener.

GC produces these products through Global Green Chemicals Public Company Limited (GGC). The production of methyl ester, fatty alcohols, glycerin, and fatty alcohol ethoxylate is based in the Map Ta Phut Industrial Estate in Rayong and the Thai Eastern Industrial Estate in Chonburi, while ethanol production is based in Ta Khli District, Nakhon Sawan and carried out as part of the Nakhonsawan Biocomplex.

Specialty Oleochemicals

Specialty oleochemicals are produced through a chemical process that involves treating basic oleochemicals obtained from a downstream process. These specialty products are used in multiple industries, including cleaning products, personal care products, plastic additives, construction, agriculture, and oil well drilling lubricants.

GC produces specialty oleochemicals through EMERY Oleochemicals UK Limited (EOUK or EMERY). A joint venture between PTTGC International Private Limited (GC Inter), which is a subsidiary of GC, and SD Guthrie Berhad (SDG), Malaysia, EMERY is headquartered in Britain and operates plants in two countries, namely Germany and the U.S. EMERY is a world-class producer and distributor of oleochemicals with a worldwide network to support trading and marketing. Its distribution agents are also present in all geographical regions.

The nameplate capacities for VAO are as shown in the table below:

Company	Product	Nameplate Capacity (thousand tons per year)
GGC	Methyl Ester	500
	Fatty Alcohol	100
	Ethanol	147
	Glycerin	51
	Fatty Alcohol Ethoxylate	200
EMERY	Basic Oleochemicals in the U.S.	291
	Specialty Oleochemicals in the U.S.	48

Policy and Marketing

The demand for eco-friendly products has been rising thanks to environmental conservation trends and growing awareness of personal health and hygiene products. It is expected that green technologies and chemicals will play a significant role in daily life and the industrial sector, with a shift towards alternative energy, reduced use of synthetic materials, and an increased focus on natural raw materials. As such, GC recognizes the significance of agricultural product value addition and the sustainable growth of the green chemical industry and strives to become a world-class green chemical operator that stands out in every market it operates in.

With respect to distribution, GGC's main product is methyl ester, which is sold almost entirely to domestic high-speed diesel manufacturers and blenders. Methyl ester is sold directly to customers through purchase agreements with clearly specified terms. Similarly, ethanol is sold mostly to gasoline manufacturers and blenders, who are largely the same customer group as methyl ester.

Fatty alcohols are sold both domestically and internationally, with customers being commodity product manufacturers, oleochemical operators, as well as traders and distributors who subsequently sell fatty alcohols to their customers. The principal domestic customer is Thai Ethoxylate Co., Ltd. (TEX), while international customers are based in various countries in Asia, Europe, South Africa, and South America.

Glycerin is sold to manufacturers and distributors of health and personal care products and in other industries both domestically and internationally, both via distributors and direct sales. Customers include multinational corporations (MNC) in the domestic medical supply and hygiene industry and large pharmaceutical companies in South Asia.

Products manufactured by EMERY, which has sales offices and production bases in various countries, are distributed both by its national sales offices directly to customers and through dealerships.





PERFORMANCE CHEMICALS

Performance chemicals are major components in burgeoning downstream industries, such as the automotive, construction, and engineering plastic industries. Products under the business unit consist of the following.

Coating Resins and Additives

These are polymers that bind all the other components of the coating to a surface into a film with desired properties. Various additives can also be added to give the film specific properties, such as erosion resistance and UV resistance, while crosslinking agents can be introduced to enhance the strength of the network between the resin molecules to strengthen the film. Utilized in various downstream industries, such as automotive, packaging, printing ink, electronic devices, industrial wood, metal production, construction, as well as ship and aircraft, these products impart different properties, such as durability, flexibility, color retention, resistance to scratches, chemical corrosion, water, and sunlight, and aesthetic quality.

Production is carried out through allnex Holding GmbH ("allnex"), a wholly owned subsidiary of PTTGC International (Netherlands) B.V. The products in this group can be divided into four major categories: 1) liquid resins and additives (LRA), 2) radcure (RAD), 3) crosslinkers (XLR), and 4) powder coating resins (PCR). allnex has 33 production bases across 18 countries worldwide.

Hexamethylene Diisocyanate (HDI) and HDI Derivatives

HDI is an intermediate petrochemical used in the production of PU coating, which plays a prominent role in construction and automotive industries. PU coating can also be applied to wood, metals, plastics, furniture, and vehicles to enhance their glossy and scratch-resistant properties. GC produces HDI and HDI derivatives through Vencorex Holding SAS (Vencorex), which is wholly owned by PTTGC International (Netherlands) B.V. and operates plants in three countries, namely France, the United States, and Thailand.

However, following a review of GC's long-term business plan, Vencorex's business operations have been restructured, with two subsidiaries, Vencorex France and Vencorex TDI in France, undergoing a court-supervised business restructuring process under Book VI of the French Commercial Code, while Vencorex operations in Thailand and the United States are currently seeking potential buyers (as of February 2025).

Super Engineering Plastic Polyamide (PA9T) and Hydrogenated Styrenic Block Co-polymers (HSBC)

PA9T is considered super engineering plastic and has outstanding physical properties, including superior strength, toughness, heat resistance, and chemical resistance compared to other plastics in the same category. It can also be molded into small products with intricate details, in line with the needs of the automotive industry for strong and lightweight materials to achieve fuel efficiency and the electronics industry's demand for plastic with high heat resistance and moldability.

HSBC's properties are a blend of those of rubber and thermoplastic. This means it can be molded into a product and reused similar to thermoplastics, while also providing rubber-like softness. Additionally, it boasts resistance to weather conditions and temperatures and is free from harmful additives. HSBC is produced into various end-products, such as household appliances, sports equipment, and automotive parts.

GC produces PA9T and HSBC through its joint venture Kuraray GC Advanced Materials Co., Ltd. (KGC), which has its production base in Thailand and is 33.4% owned by GC, while the remaining 66.6% stake is held by a joint venture between Kuraray Company Limited (Kuraray) and Sumitomo Corporation. The production of PA9T and HSBC utilizes Kuraray's manufacturing technology, which is the only such technology available worldwide. The nameplate production capacities for performance chemicals are as follows:

Company	Product	Nameplate Capacity (thousand tons per year)
allnex	Coating Resins and Additives	1,281
Vencorex*	Hexamethylene Diisocyanate (HDI) and HDI derivatives	127
KGC	KGC Super Engineering Plastic Polyamide (PA9T)	13
	Hydrogenated Styrenic Block Co-polymers (HSBC)	16

Remarks: * The nameplate capacity shown is that of Vencorex operations in France, Thailand, and the United States combined.

Policy and Marketing

allnex is the world's leading industrial coating producer widely recognized for its development of innovative products and technologies and access to customers and markets worldwide thanks to its 23 research and development centers across the world and over 1,500 patents on coatings. The company is also a technology leader in various areas, such as high-end waterborne, high-solid solventborne, powder coating resins, and UV-curable resins, focusing primarily on industrial coatings and ink resins. allnex's products are manufactured using environmentally friendly technology. allnex operates 33 plants worldwide across three regions, with 9 plants in Europe, 8 in the U.S., and 16 in Asia and the regional production capacities of 540,000, 242,000, and 499,000 tons per year, respectively. The company's customers are distributed across Europe, the U.S., and Asia.

Vencorex is a key global producer of aliphatic isocyanates. Its policy is to sell its products primarily to its key account customers and dealerships. Vencorex has customer bases in every region across the world. Its core marketing strategy is to leverage its strength of having production bases in three regions across the world to access customers and cater to their needs promptly. In addition, Vencorex places importance on customer relations and has a research and development unit that specializes in developing new products and applications. The company also strives to provide technical services that meet customer needs.

Vencorex's main customers are in Europe, Middle East, Africa, and the U.S. However, after the commercial operation of its Thai plant, Vencorex has expanded further to Asian markets in response to the rapidly growing demand in Asia, especially in China, India, and South Korea.

KGC manufactures and distributes PA9T as a neat resin in the initial phase, with plans to develop PA9T compound resins in the future. The primary target customers of PA9T are the automotive and electronics industries, while the main target customers of HSBC are global compounders, with plans to expand the markets towards Americas, Europe, and Asia. To access more customers, KGC can leverage the market networks of the two other shareholders, namely Kuraray and Sumitomo Corporation.



Feedstock Sourcing for the Five Business Units

GC prioritizes sourcing feedstocks that offer cost benefits and enhance its international competitiveness, focusing on creating added value across the value chain of its five core business units and optimizing the procurement process in support of all business operations from upstream to downstream industries.

For the Upstream Business Unit, the primary feedstock is crude oil. In 2024, GC used approximately 54 million barrels of imported crude oil and internally produced feedstock from its aromatics plants, equivalent to 100% of its refining capacity as there were turnarounds throughout the year. The aromatic plants used approximately 4.9 million tons of condensates as the primary feedstock for production of aromatics and by-products. For GC's olefins production, the primary feedstocks were ethane, propane, LPG, and NLG, which are natural gases. GC also used light naphtha and LPG, which were by-products of GC's refinery and aromatics plants. GC's feedstock flexibility has enabled it to maintain high production stability and capacity to meet the needs of downstream industries.

For the Intermediates and Polymers & Chemicals Business Units, by-products from GC's aromatics and olefins plants are used as primary feedstocks to add value to products and enhance business capabilities and competitive advantage in the market.

As for the Bio & Circularity Business Unit, feedstocks are mainly domestically sourced to promote domestic agriculture and related industries, thus fostering a sustainable supply chain and promoting local development.

For the Performance Chemicals Business Unit, allnex sources feedstocks from the market through a global procurement system to enhance its bargaining leverage over feedstock prices and reduce costs, while Vencorex sources feedstocks through short-term and long-term agreements, and KGC has chosen to source feedstocks from within GC Group, thus promoting efficient feedstock management.

GC's feedstock sourcing for all the core business units reflects its comprehensive strategies for optimizing operational efficiency in response to industrial trends and directions in the future.

The feedstock usage of the five business units is summarized in the following table:



Product Group	Feedstock	Sourcing
Upstream		
• Refinery and Shared Facilities	Crude oil	Sourced through PTT
• Aromatics	Condensates	Sourced through PTT
• Olefins	Ethane, Propane, LPG, NGL, Naphtha	Sourced through PTT / GC
Intermediates		
• Ethylene Oxide and Derivatives	Ethylene	GC
• Phenols	Benzene and Propylene	GC
• Other intermediates		
◦ Purified Terephthalic Acid (PTA)	Paraxylene	GC
◦ Propylene Oxide (PO)	Propylene / Cumene	GC
◦ Acrylonitrile	Propane Ammonia Aceton	Sourced through PTT / GC
◦ Methyl Methacrylate (MMA)	Acetone cyanohydrin / Methanol / Sulfuric Acid	Receive via pipeline transportation within the project area and import.
Polymers and Chemicals		
• Polyethylene	Ethylene	GC
• Polypropylene	Propylene	GC / Domestic
• Polyvinyl Chloride	Ethylene	GC
• Polyethylene Terephthalate	Purified Terephthalic Acid Monoethylene Glycol	GC-M PTA GC
• Polystyrene	Styrene Monomer	Domestic / Import
• Rotomolding Compound	Linear Low-Density Polyethylene	GC
• PP Compound	Polypropylene	GC
• Ethanolamine	Ethylene Oxide	GC
• Polyols	Propylene Oxide / Ethylene Oxide	GC
Bio & Circularity		
• Polylactic Acid (PLA)	Lactic Acid	Cargill
• Polybutylene Succinate (PBS)	Bio-Succinic Acid (BSA) and 1, 4 Butanediol (BDO)	Import
• Post-Consumer Recycled (PCR)	Used plastic packaging	Domestic
• Methyl Ester, Fatty Alcohol, Glycerin, and Ethanol	Palm oil and palm kernel oil	Domestic Producers
• Basic / Specialty Oleochemicals	Animal fat	Domestic Producers (UK)
Performance Chemicals		
• Coating Resins and Additives	Purified Terephthalic Acid (PTA), Neopentyl Glycol, Methyl Methacrylate (MMA), Acrylic Acid, Melamine	Producers under purchase agreements
• Hexamethylene Diisocyanate (HDI) and HDI Derivatives	Hexamethylenediamine (HMDA)	Producers under purchase agreements
• Super Engineering Plastic Polyamide (PA9T) and Hydrogenated Styrenic Block Co-polymers (HSBC)	Butadiene	GC

Services and Others

In addition to the five major groups, GC values businesses and activities that support business stability and the comprehensiveness of the business chain. Its key services are listed below:

Marketing and Sales of Products and Packaging Market Development

Upcycling GC produces and sells a comprehensive range of products and consistently develops products to meet customer needs, with dealers authorized by GC Marketing Solutions Co., Ltd. (GCM) in many regions to distribute products and provide services to customers. GC also develops plastic packaging markets through S.P. Petpack Inter Group Co., Ltd. (SPIG) and TPBI & Myanmar Star Company Limited (TPBIMS) as well as develops and distributes new upcycled products through Solution Creation Co., Ltd. (SUN).

Logistics, Jetty, Utilities, and Infrastructure

Logistics Services: WHA GC Logistics Co., Ltd. (WGCL) is charged with providing integrated logistics services for producers of polymers under GC Group.

Jetty and Chemical Tank Farm: Thai Tank Terminal Limited (TTT) provides terminals and liquid chemical storage for industrial customers in Map Ta Phut Industrial Estate as specified by its concession.

Pipeline Infrastructure Services: Eastern Fluid Transport Co., Ltd. (EFT) provides pipeline infrastructure services for petroleum and petrochemical operators in Map Ta Phut Industrial Estate and nearby areas.

Utility Business: GC makes investments in this business through its shareholding in Global Power Synergy Public Company Limited (GPSC). GPSC produces and supplies electricity, steam, and industrial water to companies under PTT Group and other industrial plants.

Land and Property Management: GC Estate Co., Ltd. (GCEC) manages land and other properties, such as pipe system structures, industrial water plants, office buildings, and reforestation areas, to support the investment of the Company, strategic joint ventures, and other suppliers.

Information and Communication Technology Services: PTT Digital Solutions Co., Ltd. (PTT Digital) provides integrated ICT and communication services, including the design, development, and maintenance of ICT systems as per corporate requirements.

Technical, Engineering, Plant Maintenance, Safety, Occupational Health, Environmental, and Security Businesses

Plant Management and Engineering Services: GC Maintenance and Engineering Co., Ltd. (GCME) provides multiple services, including plant maintenance, major plant repairs, equipment inspection, engineering, construction, and project management, to oil and gas, petrochemicals, and chemicals operators, as well as other industries both in Thailand and Asia.

Quality, Safety, Occupational Health, and Environmental Services: NPC Safety and Environmental Service Co., Ltd. (NPC) provides integrated services, including the training and development of quality, safety, occupational health, and environmental systems, legal compliance assessments, green product and corporate carbon footprint assessments, preventive hazardous goods transportation training, sales of products related to safety, occupational health, and the environment, emergency control center services in Map Ta Phut Industrial Estate, as well as industrial plant security services through NPC S&E Security Guard Co., Ltd. (NPCSG).

Social Enterprises

Management Consultancy: Pracharath Rak Samakkee Rayong (Social Enterprise) Co., Ltd. (PRS RAYONG) offers consultation on business administration in various areas, such as agriculture and trading.

Social Enterprise: Sarn Palang Social Enterprise Co., Ltd. (SPSE), produces, purchases, and sells products and/or provides services that benefit communities, society, and the environment.

Others

GC Group's Liquidity Management and Financing Vehicle Services: GC Treasury Center Co., Ltd. (GCTC) manages financial affairs and fund acquisition for companies under GC Group.

Corporate Venture Capital Investment (CVC): GC Ventures Co., Ltd. (GCV) and GC Ventures America Corporation (GCVA) invest both directly and indirectly in the form of corporate venture capital.

Outsourcing Service: Business Services Alliance Co., Ltd. (BSA) supplies manpower and contractors to PTT Group

Market and Competition

Economic Overview

The year 2024 saw the global economy continue to grapple with multiple challenges, including persistent worldwide inflation, ongoing geopolitical factors, and tight monetary policies implemented by central banks across various countries to control inflation, resulting in a continued economic slump from the previous year. Despite interest rate cuts by central banks, economic uncertainties continued to put pressure on and slow demand for petrochemical products.

For the year 2025, the global economy is expected to maintain stable growth, with the International Monetary Fund (IMF) projecting global economic growth to remain at 3.2 as in 2024 (IMF, October 2024). The economy has shown signs of gradual recovery, supported by declining inflation, recovery in manufacturing and transportation sectors in some regions, and economic stimulus measures in various countries worldwide. These factors are bolstering consumption and investment and alleviating strain on consumers and businesses, which will help sustain overall economic growth. However, several risk factors remain, both in terms of economics and international politics due to geopolitical uncertainties and increasing trade protectionism, which will continue to pose risks to global supply chains and exert pressure on the overall business sector.

Market Overview – Upstream

Refinery and Shared Facilities

Market Overview in 2024

During the first half of 2024, crude oil demand was suppressed by slower-than-expected global economic recovery, due to the Federal Reserve's continuation of high interest rates from 2023 and economic slowdown in China, the world's second-largest crude oil consumer. However, as geopolitical conflicts in the Middle East raised concerns about oil supply shortages, oil prices were kept elevated. In the second half of the year, crude oil prices continued to face pressure from the global economic slowdown, coupled with U.S. unemployment rising to a three-year high of 4.3%, sparking recession fears and reducing crude oil demand. Nevertheless, OPEC Plus' continued crude oil production control announcements helped maintain price levels. Persistent geopolitical tensions drove price volatility through year-end, resulting in an average Dubai crude oil price of US$ 79.6 per barrel in 2024, a US$ 2.5 decline per barrel compared to 2023.

For petroleum prices in 2024, demand was pressured by the global economic slowdown, particularly in Europe and the United States, which faced high interest rates, coupled with problems in China's real estate difficulties. However, demand was buoyed by seasonal factors and year-end cold weather conditions driven by La Niña, which boosted heating oil demand. On the supply side, the Asian markets experienced an oversupply, especially in gasoline and diesel markets, with many Asian exporters increasing their export volumes due to stronger-than-usual monsoon influence. However, higher transportation costs resulting from Red Sea conflicts limited their export capabilities to other regions. These factors combined led to a year-over-year decline in petroleum prices for 2024. The prices and spreads of each product are detailed below.

For the gasoline (ULG 95)-Dubai crude oil spread in 2024, gasoline demand was supported by various global events, such as sporting festivals in Europe and elections in multiple countries. However, U.S. summer gasoline demand declined due to La Niña-induced storms and flooding in many areas. Meanwhile, the market experienced an oversupply, with increased

gasoline exports from Asia due to monsoon season flooding. Additionally, in Q3, Nigeria reduced its gasoline imports following the start of operations at the Dangote refinery, which has a production capacity of 650,000 barrels per day. The gasoline-Dubai crude spread averaged US$ 13.4 per barrel, a US$ 3.3 per barrel decrease compared to 2023.

The jet fuel/kerosene-Dubai crude oil spread in 2024 was affected by continued global economic slowdown due to high inflation and interest rates. This was compounded by China's ongoing economic slump, which led to decreased Chinese tourism and spurred China to significantly increase its jet fuel exports. The jet fuel-Dubai crude spread averaged US$ 15.6 per barrel, sliding by US$ 7.0 per barrel from 2023.

The diesel 10 PPM-Dubai crude oil spread in 2024 reflected dampened global diesel demand, mirroring broader trends across petroleum products. Meanwhile, supply remained high, with major Asian diesel exporters, such as South Korea, India, and China, significantly increasing their export volumes. In addition, export capabilities to other regions were constrained by increased shipping costs due to unrest in the Red Sea. As a result, the average diesel-Dubai crude spread in 2024 fell by US$ 7.7 per barrel to US$ 16.7 per barrel compared to 2023.

For the low-sulfur fuel oil-Dubai crude oil spread in 2024, low-sulfur fuel oil demand in Asia saw a decline due to increased installation of sulfur scrubbers on transport vessels, which drove low-sulfur fuel oil bunker sales in Singapore down from 60% in 2023 to 55% in 2024. Meanwhile, Asian supply tightened due to elevated shipping costs, which reduced Western imports, while China reduced its low-sulfur fuel oil export quota from 14 million tons in 2023 to 13 million tons in 2024. In addition, Kuwait's Al Zour refinery, a major exporter, continued to use low-sulfur fuel oil for domestic power generation, further reducing global market supply. As a result, the average low-sulfur fuel oil-Dubai crude spread in 2024 stood at US$ 12.5 per barrel, a US$ 1.0 per barrel uptick compared to 2023.

Market Forecast for 2025

Crude oil prices in 2025 are expected to show a slight upswing from 2024, as the global economy gradually recovers due to economic stimulus measures and interest rate cuts by central banks worldwide, boosting oil demand. However, policies promoting alternative energy technology development and renewable energy adoption in many countries will likely continue to put downward pressure on crude oil prices. On the supply side, OPEC Plus is anticipated to maintain its production cut of 3.66 million barrels per day through the end of 2025 to preserve market balance, while expanding crude oil production capacity from non-OPEC countries, such as the United States, Canada, Brazil, and Guyana, will likely help ease market supply tightness, pointing to a slight dip in crude oil prices in 2025.

For petroleum prices and spreads in 2025, demand is expected to benefit from interest rate cuts by central banks worldwide, while China's economic stimulus measures will likely support the construction industry and increase oil demand. Meanwhile, petroleum supply is likely to be expanded due to new refining capacity in Asia, particularly in low-cost producer countries in Asia and India, which is expected to grow by 2.1 million barrels per day in 2025, up from 2024's 1.7 million barrel per day growth. As a result, Singapore's Gross Refining Margin (GRM) in 2025 is projected to remain similar to 2024 levels.

Aromatics

Market Overview in 2024

The aromatics market in 2024 saw overall demand decline across downstream industries, including textiles, electronics, construction, and automotive industries. Global paraxylene production capacity in 2024 remained stable at 80.5 million tons, similar to 2023 levels, due to the postponement of new capacity commercial operations from late 2024 to 2025. Global benzene production capacity in 2024 grew by approximately 2 million tons to 80.2 million tons compared to 2023, with the majority of capacity increase coming from low-cost producer countries in Asia.

In the first half of 2024, paraxylene and benzene demand was pressured from global economic slowdown, while supply was relatively constrained due to unplanned maintenance shutdowns by multiple producers, coupled with a decrease in aromatics feedstock availability driven by higher demand for reformate and mixed-xylene for gasoline blending, widening the paraxylene-naphtha and benzene-naphtha spreads.

In the second half of 2024, the paraxylene-naphtha spread decreased significantly due to economic pressures, particularly in China, which faced a severe slowdown. The benzene market continued to be buoyed up by limited feedstock availability, as Asian naphtha crackers controlled their production capacity, leading to tight supply. Consequently, the benzene-naphtha spread shrank slightly during the second half of the year.

As a result of these factors, the average paraxylene-naphtha spread stood at US$ 288 per ton in 2024, falling by US$ 101 per ton from 2023, while the average benzene-naphtha spread was US$ 309 per ton, a US$ 61 per ton increase from 2023.

Market Forecast for 2025

The aromatics market in 2025 is expected to see continued pressure on paraxylene and benzene demand due to ongoing global economic slowdown. However, China's economic recovery is anticipated due to stimulus measures, which may gradually bolster demand for aromatics products.

On the supply side, new production additions of approximately 1.6 million tons for paraxylene and 2.6 million tons for benzene are expected. As such, the paraxylene-naphtha spread is forecast to increase in 2025, while the benzene-naphtha spread is expected to decline compared to 2024 levels.

Olefins

Market Overview in 2024

For the ethylene and propylene markets in Q1/2024, demand continued to be pressured by global economic conditions, particularly due to China's slower-than-expected recovery. However, supply further tightened due to planned turnarounds and unplanned maintenance shutdowns as well as a decreased supply flow from other regions into Asia due to transportation constraints in the Middle East, leading to significant price increases for both ethylene and propylene. In Q2/2024, the ethylene market remained stable amid continued sluggish demand and limited supply due to maintenance shutdowns and controlled production. On the other hand, the propylene market saw capacity expansion of approximately 2.4 million tons from Asian producers, leading to significant price decreases by the end of Q2/2024.

In the second half of the year, both ethylene and propylene markets faced continued pressure from economic factors and new supply capacity coming online. However, as a result of controlled production by Asian naphtha crackers and limited supply from outside the region, the average ethylene price in 2024 rose to US$ 963 per ton, with the ethylene-naphtha spread widening to US$ 288 per ton, while the average Southeast Asian propylene price dropped to US$ 864 per ton in 2024 compared to 2023, with the propylene-naphtha spread shrinking to US$ 190 per ton.

Market Forecast for 2025

The ethylene and propylene markets in 2025 are projected to see limited demand recovery due to persistent global economic slowdown continuing from 2024. However, economic conditions are forecast to gradually lookup due to stimulus measures and global central bank interest rate reductions, which may positively impact the overall ethylene and propylene markets in 2025.

Ethylene production capacity in 2025 is projected to increase by 8.8 million tons per year, with 8.2 million tons from low-cost producer countries in Asia and 0.6 million tons from other countries, while propylene capacity is expected to grow by 6.3 million tons per year, with 5.1 million tons from low-cost producer countries in Asia and 1.2 million tons from other countries.

The overall olefins market will likely face pressure from a series of new capacity additions. However, many high-cost producers are expected to curb their output due to lack of competitiveness. With end-user demand gradually recovering, both ethylene-naphtha and propylene-naphtha spreads are forecast to increase relative to 2024 levels.

Market Overview – Intermediates

Ethylene Oxide and Derivatives

Market Overview in 2024

The mono ethylene glycol (MEG) market in 2024 continued to face pressure from limited demand, especially in China, the main market for the product, as uncertainties persisted due to the economic slowdown. However, the market enjoyed a positive effect from the supply side, as producers, particularly in the United States and the Middle East, which are major suppliers to China, reduced their output throughout the year. This resulted in decreased inventory levels in China and constituted a key factor buoying up prices. As a result, the average MEG price in the Chinese market for 2024 was at US$ 538 per ton, an increase of US$ 50 per ton.

Market Forecast for 2025

The MEG market will likely continue to face downward pressure. Demand is anticipated to see sluggish recovery due to the continued economic slowdown, while new production capacity of approximately 2.4 million tons per year will be added in 2025, which will be a key factor putting exerting pressure on prices. MEG prices in the Chinese market in 2025 are forecast to fall compared to 2024.

Phenols

Market Overview in 2024

The market for phenols, acetone (phenol by-product), and bisphenol A (BPA) faced continued pressure from constrained demand in 2024, coupled with the additional capacity, particularly in low-cost producer countries in Asia and South Korea, of 1.1 million tons per year for phenol and acetone, and 1.2 million tons per year for BPA, resulting in increased supply. However, producers in the United States, Europe, and Asia maintained controlled production levels throughout the year, which positively affected the prices. As a result, the average phenol price in 2024 stood at US$ 990 per ton, a US$ 12 per ton uptick compared to 2023, and the phenol-benzene spread was US$ 233 per ton, representing a US$ 18 per ton decrease from 2023. The average acetone price in 2024 was US$ 840 per ton, rising by US$ 78 per ton relative to 2023. The average BPA price in 2024 was US$ 1,289 per ton, a US$ 17 per ton increase compared to 2023, while the BPA-phenol spread was US$ 216 per ton, a US$ 14 per ton decline from 2023.

Market Forecast for 2025

As for the phenol market outlook, demand for phenol, acetone, and BPA will likely continue to face headwinds from the global economic slowdown early in the year, which is expected to gradually look up later due to economic stimulus package. On the supply side, there will continue to be new capacities from low-cost producer countries in Asia, with an additional 1.2 million tons per year for phenols, 0.8 million tons per year for acetone, and 0.8 million tons per year for BPA. However, BPA producers in Japan have announced the closure of facilities with a total capacity of 0.3 million tons per year due to competitive pressures. As a result, price spreads for phenol products in 2025 are expected to see a slight uptick compared to 2024.

Other Intermediates

Market Overview in 2024

Purified terephthalic acid (PTA)

The purified terephthalic acid (PTA) market in 2024 saw a recovery rate of 3-4%, lower than the expected 5% range. This could be attributed to China's economic condition, which experienced a continued slowdown, while exports to destination countries in Europe and the United States faced headwinds from both high interest rates aimed at curbing inflation and increasing economic fragmentation. With new PTA capacity additions exceeding 8 million tons per year, the average price settled at US$ 721 per ton, down US$ 58 per ton from 2023. The price spread slid by US$ 6 per ton to US$ 76 per ton compared to 2023.

Propylene oxide (PO)

The PO market in 2024 was adversely affected by sluggish end-product demand amid economic uncertainty, with no significant demand recovery. Supply expanded significantly, particularly in low-cost producer countries in Asia, which brought on an additional 1.2 million tons per year in output, or 7% of the world's total capacity, coupled with an additional capacity of 0.5 million tons per year from low-cost producer countries in Asia, coming online in late Q4. The resulting price pressure and narrow product spreads led Asian producers to maintain production controls throughout the year. As a result, the average PO price in Asia in 2024 declined to US$ 1,001 per ton.

Acrylonitrile (AN)

The AN market remained depressed in 2024, with demand standing at 6.5 million tons and showing a growth rate of 3.7%, similar to the 2023 level. This could be attributed to economic concerns, inflation, and the Russia-Ukraine conflict, which impacted the recovery of downstream products, such as acrylonitrile butadiene styrene (ABS), acrylic fiber (AF), and acrylonitrile butadiene rubber latex (NBL). Despite no new capacity additions in 2024, the market remained oversupplied due to expansions over the previous three years. The average AN price in 2024 was US$ 1,235 per ton, slightly down US$ 75 per ton from 2023.

Methyl methacrylate (MMA)

The MMA market saw a global demand of 3.6 million tons, a mere 0.1 million ton increase or 1.4% growth from 2023, dampened by the weak recovery of downstream industries, such as PMMA, T-plastic, cast sheets, and paints and emulsions. The market faced an oversupply from continued capacity expansions, particularly in low-cost producer countries in Asia, which added as much as 0.6 million tons.

In 2024. however, global supply chain disruptions due to raw material shortages and maintenance turnarounds led to an average MMA price of US$ 1,925 per ton in 2024, a spike of US$ 363 per ton from 2023.

Market Forecast for 2025

Purified terephthalic acid (PTA)

For the PTA market, demand rebound is projected to continue, driven by China's economic stimulus package and the anticipated interest rate cuts worldwide, which should restore economic activities to the usual level. The addition of new production capacity for PTA is projected to slow down to less than 6-7 million tons per year. As such, the price and spread are predicted to improve.

Propylene oxide (PO)

While global economic slowdown is expected to continue from 2024, gradual improvement in the PO market is anticipated due to economic measures, with PO demand forecast to increase by 0.3 million tons per year in 2025. However, a market oversupply will continue to exert pressure due to new capacity additions, with low-cost producer countries in Asia planning to add 1.3 million tons per year of PO capacity in 2025. As a result, a slight dip in PO prices relative to 2024 is expected.

Market Overview – Polymers & Chemicals

Polymers

Market Overview in 2024

The polymer market remained depressed as a result of the economic slowdown, which dampened purchasing power and product demand. Global polyethylene (PE) demand rose by only 3.4 million tons to 118.9 million tons, representing a 2.98% growth from 2023. Meanwhile, PE production capacity showed excess output, with new capacity additions of 3.3 million tons or a 2.22% increase from 2023, of which 1.9 million tons came from low-cost producer countries in Asia, putting the total capacity at 150.2 million tons. As a result of this oversupply, the HDPE-naphtha and LLDPE-naphtha spreads shrank by US$ 55 and US$ 12 per ton respectively, compared to 2023. However, in mid-2024, geopolitical tensions in the Middle East caused disruptions and delays in shipments to Asia, particularly affecting LDPE among the polymer products. This caused supply to tighten, leading to significant price increases in the first half of 2024 and driving the LDPE-to-naphtha spread up by US$ 115 per ton relative to 2023.

The polypropylene (PP) market continued to face challenges from economic uncertainties, with global demand showing an uptick of only 2 million tons, while capacity expanded by nearly 6 million tons. However, PP prices showed less volatility than in 2023, ranging between US$ 1,100-1,200 per ton, with the average PP reference price standing at approximately US$ 1,033 per ton in 2024. As a result, the average PP-to-naphtha spread slipped to US$ 359 per ton from US$ 358 per ton in 2023.

As for the polyethylene terephthalate (PET) market, demand grew by 3.8% or 1.1 million tons to 28.8 million tons per year, despite slower-than-expected global economic recovery. While PET remained a popular material in essential food and beverage packaging, the market faced significant oversupply pressures from the continued capacity expansion of low-cost producer countries in Asia, with new additions of approximately 4 million tons per year. This drove the spread down to US$ 74 per ton, a US$ 15 per ton decline from 2023, while the average PET price settled at US$ 877 per ton, dropping US$ 48 per ton the previous year.

The polystyrene (PS) market in 2024 saw demand relatively stabilized compared to 2023. General-purpose polystyrene (GPPS), used in food packaging, experienced a slight slowdown, while high-impact polystyrene (HIPS), used in electrical and electronic products, maintained strong growth. Overall global PS demand grew by 0.2 million tons to 10.76 million tons, up 2.1%, while production capacity rose by 1 million tons to 17.6 million tons, a 6% increase, causing an oversupply. As a result, the spread between PS and styrene monomer fell by US$ 14 per to US$ 144 per ton compared to 2023.

Market Forecast for 2025

The polymer market is expected to see demand recovery, driven by economic stimulus packages, particularly from major economies like the United States and China. However, market volatility is likely to persist due to recessionary pressures, geopolitical risks, and continued capacity additions.

PE demand is anticipated to trend upward by approximately 4.1 million tons to 123 million tons, representing a 3.4% growth, bolstered by various economic measures. Despite significant new capacity additions expected from low-cost producer countries in Asia, the average PE–naphtha spread will likely trend upward compared to 2024.

PP demand, which began rebounding in the second half of 2024, is expected to continue strengthening in 2025, gradually driving up regional demand and leading to better PP-to-naphtha spreads compared to late 2024.

PET demand is projected to grow by 0.6 million tons to 29.4 million tons per year. The market will likely face continued pressure due to supply-demand imbalances but will also enjoy a more positive outlook as there will be lower added capacity. In addition, despite increasing

environmental policies and recycling packaging targets, high recycled PET costs may result in lower-than-expected recycled packaging demand. As a result, the PET spread is expected to improve compared to 2024.

PS demand is projected to rise by 0.2 million tons to 10.96 million tons per year, while capacity growth will likely be more modest and settle at approximately 17.8 million tons per year. Supply-demand dynamics are expected to remain relatively stable. Product prices will continue to fluctuate with styrene monomer (SM) prices, similar to 2024, with GPPS and SM spreads projected to remain at comparable levels to 2024.

Chemicals

Market Overview in 2024

Ethanolamine (EA)

The EA market in 2024 continued to face significant headwinds due to a demand slump, attributable primarily to the broader economic slowdown and ongoing real estate sector difficulties in China, which particularly impacted demand from the construction sector—a key EA consumer. The supply landscape saw further expansion, with manufacturers of low-cost producer countries in Asia adding approximately 0.3 million tons of new capacity in 2024. These market dynamics resulted from low-cost producer countries in Asia EA prices settling at US$ 987 per ton in 2024, marking a US$ 9 per ton dip from 2023 levels.

Polyether polyols (PPG)

In 2024, global PPG demand stood at approximately 9.38 million tons. PPG serves as a raw material in the production of polyurethane products for downstream industries, including automotive, footwear, construction, bedding, and furniture. Due to global economic downturn and international conflict conditions, production cost and demand for polyols and polyurethane products experienced a slowdown. In addition, production capacity in 2024 increased by around 0.53 million tons per year to approximately 14.91 million tons in total. This led to continued oversupply in the market, which drove the average PPG price in 2024 down by US$ 89 per ton to approximately US$ 1,277 per ton compared to 2023.

Market Forecast for 2025

Ethanolamine (EA)

The EA market will likely face downward pressure from persistently weak demand, particularly from China's real estate sector, which is expected to require more time to recover. On the supply side, the market remains burdened by the excess capacity carried over from previous years, despite no new production units anticipated to come online in 2025. As a result, EA prices in the low-cost producer countries in Asia market are projected to decline further from 2024 levels.

Polyether polyols (PPG)

Market demand for polyether polyols (PPG) is expected to slow down in line with dampened demand due to global economic volatility, coupled with intensifying trade barriers between the United States and China, which are expected to reduce the competitiveness of Chinese PPG products in the U.S. market. This will likely be further compounded by increased output from low-cost producer countries in Asia, which is expected to lead to higher supply and result in continued outflow of excess products into Asian and Southeast Asian markets. PPG demand is projected to see an uptick of 0.36 million tons relative to 2024, while excess supply is expected to grow by 0.23 million tons. As a result, the average PPG price in 2025 is forecast to remain sluggish, at levels similar to 2024.

Market Overview – Bio & Circularity

Bioplastics and Biochemicals

Market Overview in 2024

Polylactic acid (PLA) and polybutylene succinate (PBS)

PLA demand continued to be depressed by the economic slowdown carried over from the previous year. However, the year 2024 saw a slight recovery, which particularly benefited PLA demand in the 3D printing filament and powder segment. Meanwhile, markets in countries with strong bioplastic support policies, notably low-cost producer countries in Asia, experienced rapid and continuous growth. This led to significant capacity expansion by players in low-cost producer countries in Asia during 2023-2025, resulting in increased competition and price pressure, especially in basic applications, such as rigid and flexible food packaging, which began to be commoditized. On the production cost side, U.S. corn prices dropped due to higher corn yields compared to the previous year.

The PBS market in 2024 experienced a slowdown due to economic conditions, causing brand owners to delay plans to use the product. This was compounded by increased competition from manufacturers and alternative products from low-cost producer countries in Asia entering the customer segment.

Market Forecast for 2025

Polylactic acid (PLA) and polybutylene succinate (PBS)

Both PLA and PBS markets are expected to show subdued growth due to economic factors and pending clarity on the European Union's Packaging and Packaging Waste Regulation (PPWR), which will promote the use of compostable plastics in various packaging applications, particularly permeable packaging such as tea or coffee bags, and encourage the use of bio-based plastics to as substitutes for petroleum-based plastics. Greater clarity on the regulation is expected within 1-2 years.

However, given increasing environmental awareness and consciousness, the market is expected to see positive long-term growth prospects as more manufacturers and brand owners will likely prioritize environmental responsibility and align their operations with sustainable waste management trends and global policies promoting bioplastic use, such as the U.S. Farm Bill, which promotes biomanufacturing, and China's 14th Five-Year Plan, which supported biodegradable plastics to reduce single-use plastic waste.

Post-Consumer Recycled (PCR)

Market Overview in 2024

The PCR market in 2024 continued to face headwinds due to economic slowdown and volatile feedstock prices, which particularly affected the PCR PET market expansion, especially in Southeast Asia, where regulations mandating PCR resin usage were still in early development stages.

The domestic PCR PET market for food and beverage packaging was affected by increased competition in the market, with more local manufacturers receiving Thai FDA safety certifications, while the PCR HDPE market for household and personal care packaging continued to lack clear regulations regarding recycled content requirements to replace virgin plastics.

However, GC was able to improve its sales compared to 2023, driven by clearer implementation plans from both domestic manufacturers and global brands operating in Thailand and Southeast Asia, such as Pepsi, Coca-Cola, and Nestlé, which had clearer plans on their PCR PET usage for food and beverage packaging. Local brands including Est Cola, Ichitan, BeNice, and Sprinkle also had plans to expand their PCR usage.

In addition, GC sought collaboration with businesses to drive PCR PET usage, particularly in drinking water bottles for internal applications. Notable partnerships included Siam Commercial Bank PCL, Bank of Ayudhya PCL, and Advanced Info Service PCL (AIS), which contributed to the sales growth.

Market Forecast for 2025

The PCR market in 2025 is expected to see a more positive outlook, with increased domestic demand in Thailand for both PCR PET and PCR HDPE, supported by heightened environmental awareness across all sectors, which will in turn drive a steady increase in demand for green products. The implementation of stricter plastic waste management regulations, backed by government policies, in the hope of reducing single-use plastic consumption, will also promote greater use of products made with PCR, including both PCR PET and PCR HDPE.

Furthermore, the development of infrastructure for systematic plastic waste management is expected to increase the availability of materials that can be recycled into raw materials for new production. Commitment to sustainable development practices among business operators will also help drive higher demand for PCR pellets.

Value Added Oleochemicals (VAO)

Market Overview in 2024

Methyl ester (ME)

The ME market in 2024 showed slight improvement from the previous year, with product demand rising to approximately 1.39 million tons per year, an increase of 0.01 million tons or 1, primarily driven by government economic stimulus policies, such as tourism promotion initiatives and energy price reduction measures designed to support the Oil Fund. In addition, the government extended the Fuel Oil Fund Act B.E. 2562 for an additional two years to September 2026 to support biofuel prices, though retail fuel prices at service stations may still be adjusted according to global crude oil prices. However, the market faced a setback late in the year when the government reduced the biodiesel blend requirement from B7 to B5 starting November 21, 2024, to address cooking oil shortages and rising prices, which immediately drove down overall ME demand by approximately 22% compared to the levels during the B7 policy. The industry also awaited clarity on the proposed new legislation for domestic oil price structure reform, expected to be completed by late 2024. On the production side, the capacity saw an increase due to other producers' expansion totaling approximately 0.53 million tons per year, which intensified market competition and put the industry average capacity utilization at approximately 35-40% in 2024. Meanwhile, domestic ME prices saw a 4.51 baht per kilogram uptick to approximately 43.73 baht per kilogram strengthening in line with domestic crude palm oil prices.

Fatty alcohols (FA)

The FA market in 2024 improved compared to the previous year, partly driven by concerns over shipping issues, including container limitations and steadily rising freight rates. These factors led buyers to make advance purchases to build their inventory, particularly in the European market during the late Q3, due to the anticipated implementation of the EU Deforestation Regulation (EUDR) scheduled for December 30, 2024. However, the European Union postponed the enforcement of the regulation by one year, causing slight deceleration in fatty alcohol demand towards the year-end.

The FA supply was relatively tight due to maintenance turnarounds by several producers. Customers of short-chain FAs were particularly affected as supply constraints were further exacerbated by production halts by major fatty acid manufacturers, reducing market availability.

The combination of heightened demand and limited supply led to higher average FA prices compared to the previous year, surging from approximately US$ 1,467 per ton to US$ 1,850 per ton, a hike of US$ 383 per ton or 26%. This price upswing was in line with strengthening crude palm kernel oil (CPKO) prices and improving market demand.

Ethanol

The ethanol market in 2024 saw a decline in demand from the previous year to approximately 3.41 million liters per day, a decrease of 0.12 million liters per day or 3%, attributable to persistently high crude oil prices and the expirations of various oil fund relief measures, such as the termination of excise tax reduction on gasoline fuels from January 31, 2024, onwards. These factors drove up retail prices for gasohol products, particularly alternative fuels like E20 and E85, prompting consumers to shift back to standard E10 gasohol or opt for public transportation to reduce expenses. While the tourism sector showed a steady recovery, it was not sufficient to offset the overall decrease in national ethanol demand.

The ethanol supply remained stable in 2024, with no capacity expansion from domestic producers, placing the national ethanol utilization rate at approximately 45-50%. Domestic ethanol prices rose to approximately 29.92 baht per liter, up 0.55 baht per liter or 2%, in line with the rising sugarcane and molasses prices due to droughts, as well as the surge in the prices of cassava, which is a primary feedstock for ethanol production. These factors contributed to higher production costs and overall average market prices for ethanol.

Fatty alcohol ethoxylate

The fatty alcohol ethoxylate market saw increased demand compared to the previous year. For H1/2024, demand was sluggish in Q1/2024 but improved in Q2/2024 due to concerns over feedstock costs and freight rate volatility. The demand growth continued into Q3/2024, influenced by the announcement of the impending enactment of EU Deforestation Regulation (EUDR) on December 30, 2024, driving up fatty alcohol prices. Fatty alcohol ethoxylate benefited impact from this feedstock price increase, with end customers showing increased interest in the product as it was not affected by EUDR measures.

Supply decreased in Q3/2024 due to announced annual maintenance turnarounds by some major fatty alcohol producers, contributing to steady price surges for fatty alcohol ethoxylate. However, the economic slowdown in low-cost producer countries in Asia led their manufacturers to increase exports of sodium lauryl ether sulfate (SLES) to expand sales channels. This resulted in price interference for these products and impacted upstream demand for fatty alcohol ethoxylate, as low-cost producer countries in Asia sold at prices contrary to market trends. As a result, the average price of fatty alcohol ethoxylate in 2024 rose to US$ 1,570 per ton, a US$ 80 per ton or 5% increase compared to the previous year's selling price, although this increase was not as significant as the rise in FA prices.

Oleochemicals

The oleochemicals market in 2024 rallied slightly from the latter half of the previous year, driven by economic recovery in Europe and the United States. Furthermore, prices of animal fat, a key raw material for the oleochemicals industry, fell, bringing them in line with stable palm oil prices and benefiting production costs for oleochemical manufacturers relying on animal fat as their primary raw material, both in basic oleochemicals and specialty oleochemicals segments.

Market Forecast for 2025

For the eco-friendly oleochemicals market, the overall demand is expected to stabilize with slight improvement relative to the previous year.

For ME and ethanol in the automotive fuel industry, despite continued support from government economic stimulus policies, such as tourism promotion, challenges persist due to uncertain biofuel blending policies and high energy price levels. Market supply is expected to stabilize as domestic producers have no expansion plans. As such, prices will likely trend downward in line with the prices of the feedstocks, such as crude palm oil, cassava, and molasses.

For FA and fatty alcohol ethoxylate products in the home and personal care (HPC) industry, demand is expected to continue growing as cleaning products such as laundry detergents and personal hygiene products like shampoos and body wash are seeing increased demand due to changing lifestyles and health standards. However, the market will likely face intensifying competition due to economic slowdown, with biochemical products becoming commoditized as consumers focus

more on price comparisons, forcing manufacturers to reduce costs to maintain competitiveness. Additional risk factors include production capacity expansion by major manufacturers seeking a larger market share and escalating trade barriers between China and the United States. As a result, biochemicals prices are expected to trend downward.

Market Overview – Performance Chemicals

Market Overview in 2024

Demand for coating resins rose slightly, driven by higher container demand from the transportation industry, which increased metal coating demand. However, the overall market demand for industrial coating products remained similar to 2023 levels due to global economic slowdown and China's demand not yet returning to normal levels.

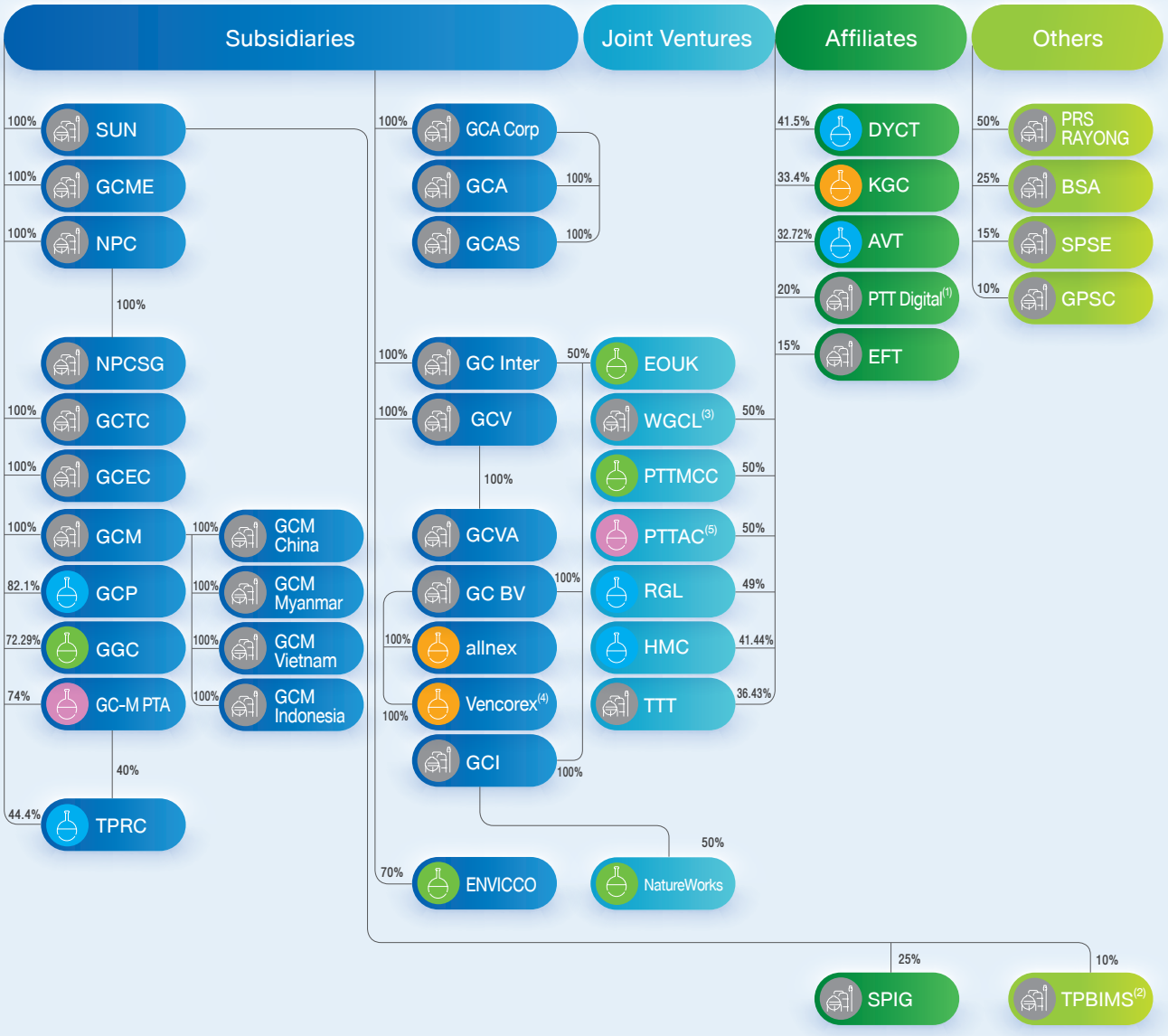
HDI and HDI Derivatives continued to face pricing pressures due to intense market competition and weak customer demand caused by the economic downturn.

The demand for specialty polyamide (PA9T) and hydrogenated styrenic block co-polymers (HSBC) in Q1/2024 remained stable at levels similar to Q4/2023, due to macroeconomic slowdown. While there was price pressure from added production capacity, downstream industries such as electronics and automotive continued to show strong growth, driven by the production of components for communication systems and electric vehicles.

Market Forecast for 2025

Global demand for coating resins is projected to rally due to signs of positive recovery in end-user industries, such as construction decoration, packaging, and automotive sectors. Likewise, specialty polyamide (PA9T) and hydrogenated styrenic block co-polymers (HSBC) are anticipated to show improvement compared to 2024, with demand growth expected to exceed overall GDP growth due to positive recovery signals in end-user industries, particularly the automotive sector. However, more intense price competition is expected for coating resins, PA9T, and HSBC, particularly driven by new production capacity and price competition from Asian manufacturers with lower production costs.

Shareholding Structure in Subsidiaries and Affiliates



Remarks : Significant change in the shareholding structure in subsidiaries and affiliates from January 1st, 2024 to December 31st, 2024

(1) June 25th, 2024 : GC sold 20% of shares in PTT Digital Solutions Company Limited (PTT Digital) to Modulus Venture Company Limited (Modulus). As a result, GC currently holds 20% of PTT Digital shares

(2) August 14th, 2024 : The TPBI & Myanmar Star Company Limited (TPBIMS) Extraordinary General Meeting of Shareholders approved the business withdrawal of TPBIMS

(3) September 5th, 2024 : GC Logistics Solutions Company Limited (GCL) changed the company's name to WHA GC Logistics Company Limited (WGCL)

(4) September 10th, 2024 : Vencorex France S.A.S.U (Vencorex France) and Vencorex TDI S.A.S.U (Vencorex TDI) entered into the judicial reorganization proceedings under the French Commercial Code.

(5) November 15th, 2024 : The PTT Asahi Chemical Company Limited (PTTAC) Extraordinary General Meeting of Shareholders approved the business withdrawal plan of PTTAC

Subsidiaries	
allnex	allnex Holding GmbH
Vencorex	Vencorex Holding
GCP	GC Polyols Company Limited
GC-M PTA	GC-M PTA Company Limited
TPRC	Thai PET Resin Company Limited
GGC	Global Green Chemicals Public Company Limited
ENVICCO	ENVICCO Limited
GCEC	GC Estate Company Limited
GCI	GC International Corporation
GCM	GC Marketing Solutions Company Limited
GCM China	GC Marketing Solutions (Shanghai) Company Limited
GCM Indonesia	PT GCM Marketing Solutions Indonesia
GCM Myanmar	GC Marketing Solutions Myanmar Company Limited
GCM Vietnam	GC Marketing Solutions Vietnam Company Limited
GCME	GC Maintenance and Engineering Company Limited
GCTC	GC Treasury Center Company Limited
NPC	NPC Safety and Environmental Service Company Limited
NPCSG	NPC S&E Security Guard Company Limited
GC BV	PTTGC International (Netherlands) B.V.
GC Inter	PTTGC International Private Limited
GCA	PTTGC America LLC
GCA Corp	PTTGC America Corporation
GCAS	GC America Sustainability Corporation
GCV	GC Ventures Company Limited
GCVA	GC Ventures America Corporation
SUN	Solution Creation Company Limited
Joint Ventures	
EOUK	Emery Oleochemicals UK Limited
HMC	HMC Polymers Company Limited
NatureWorks	NatureWorks LLC
PTTAC	PTT Asahi Chemical Company Limited
PTTMCC	PTT MCC Biochem Company Limited
RGL	Revolve Group Limited
TTT	Thai Tank Terminal Limited
WGCL	WHA GC Logistics Company Limited
Affiliates	
AVT	AGC Vinythai Public Company Limited
DYCT	Dynachisso Thai Co., Ltd.
EFT	Eastern Fluid Transport Company Limited
KGC	Kuraray GC Advanced Materials Company Limited
PTT Digital	PTT Digital Solutions Company Limited
SPIG	S. P. Petpack Inter Group Company Limited
Others	
BSA	Business Services Alliance Company Limited
GPSC	Global Power Synergy Public Company Limited
PRS RAYONG	Pracharath Rak Samakkee Rayong (Social Enterprise) Company Limited
SPSE	Sarn Palung Social Enterprise Company Limited
TPBIMS	TPBI & Myanmar Star Company Limited

Policy on Investment in Subsidiaries, Joint Ventures, Affiliates, and Others

As a policy, GC invests in subsidiaries, joint ventures, affiliates, and others to support and promote business growth. To ensure governance, GC appoints its Executives to the board of subsidiaries and assigns its representatives to serve as Directors in subsidiaries, Joint Ventures, affiliates, and others.

The presence of GC's representatives as Directors or Executives in subsidiaries, Joint Ventures, affiliates, and others enables it to participate in policy-making, stay informed, and periodically monitor performance. Any activity that may have a significant impact on GC must be approved by the Board of Directors first.

Relations with the Major Shareholder's Business Groups

GC is part of the Petrochemicals and Refining Business Group under the Downstream Petroleum Business Group of PTT Public Company Limited, as shown in the charts below, which show PTT's management structure, subsidiaries, and shareholding by business group respectively.

PTT's Management Structure



PTT is a fully integrated national petroleum and petrochemical company with the mission to ensure national energy security, economic prosperity, and organization sustainability in parallel with socio-environmental stewardship.

PTT operates its own businesses as well as operates through its subsidiaries. Its business structure and relations are as detailed below.

PTT Group's Subsidiaries and Shareholding by Business Unit

Upstream Petroleum and Gas Business Group

Gas Business

- Supply and Distribution
- Gas Separation Plant
- Distribution Pipeline
- NGV
- Commercial and Marketing Management

Gas Transmission Business

PTT LNG Co., Ltd. (PTTLNG)	100.00%
บจ. พีทีที เอ็นเนอร์ยี่ รีซอร์สเซส (PTTER)	100.00%
PTT Green Energy Pte. Ltd. (PTTGE)	100.00%
PTT Exploration and Production Plc. (PTTEP)[1]	63.79%
PTT Natural Gas Distribution Co., Ltd. (PTTNGD)[3]	58.00%
Trans Thai-Malaysia (Thailand) (TTM(T))[3]	50.00%
Trans Thai-Malaysia (Malaysia) Sdn. Bhd. (TTM(M))[3]	50.00%
Map Ta Phut Air Products Co., Ltd. (MAP)[3]	49.00%

Downstream Petroleum Business Group

International Trading Business

- Crude oil and condensate
- Refined oil product and LPG
- LNG and alternative products
- Petrochemical product, chemical and solvent
- Derivatives
- International Chartering

PTT International Trading Pte. Ltd. (PTTT)	100.00%
PTT International Trading London Ltd. (PTTT LDN)	100.00%
PTT International Trading USA Inc. (PTTT USA)	100.00%

Petrochemical and Refining Business

PTT Tank Terminal Co., Ltd. (PTT TANK)	100.00%
PTT Global Chemical Plc. (GC)[1]	45.18%
IRPC Plc. (IRPC)[1]	45.05%
Thai Oil Plc. (TOP)[1]	45.03%

Oil and Retail Business

PTT Oil and Retail Business Plc. (OR)[1]	75.00%

New Business and Sustainability

- Innovation and New Ventures
- Corporate Sustainability
- Innovation Insitutte

CHCJ EQ LLC. (CHCJ)	49.95%
Global Power Synergy Plc. (GPSC)[1]	47.27%
Congruent Opportunity Fund A, LLC (CongruentOppFundA)	42.17%
PTT Energy Solutions Co., Ltd. (PTTES)	40.00%
District Cooling System and Power Plant Co., Ltd. (DCAP)	35.00%
VISUP Company Limited (VISUP)	22.22%
InnoSpace (Thailand) Co., Ltd. (InnoSpace)	13.61%
NTG Holdings Pte. Ltd. (NT)	12.79%
Sunfolding, Inc. (Sunfolding)	5.81%
Shenzhen Immotor Technology Co., Ltd. (Immotor)	3.05%
Baania (Thailand) Co., Ltd. (Baania)	2.63%
Ample, Inc. (Ample)	1.13%
6K, Inc. (6K)	1.04%
HG Robotics Co., Ltd. (HG ROBOTICS)	0.60%
Luminar Technologies, Inc. (Luminar)	0.06%

Other Businesses

PTT Treasury Center Co., Ltd. (PTT TCC)	100.00%
PTT Global Management Co., Ltd. (PTTGM)	100.00%
Energy Complex Co., Ltd. (EnCo)	50.00%
Veolia Sustainable Solution (Thailand) Co., Ltd. (VSS)	40.00%
Business Services Alliance Co., Ltd. (BSA)[2]	25.00%
Sarn Palung Social Enterprise Co., Ltd. (SPSE)	20.00%
PTT Digital Solutions Co., Ltd. (PTT DIGITAL)	20.00%
Dhipaya Group Holdings Plc. (TIPH)[1]	13.46%

Own Operations

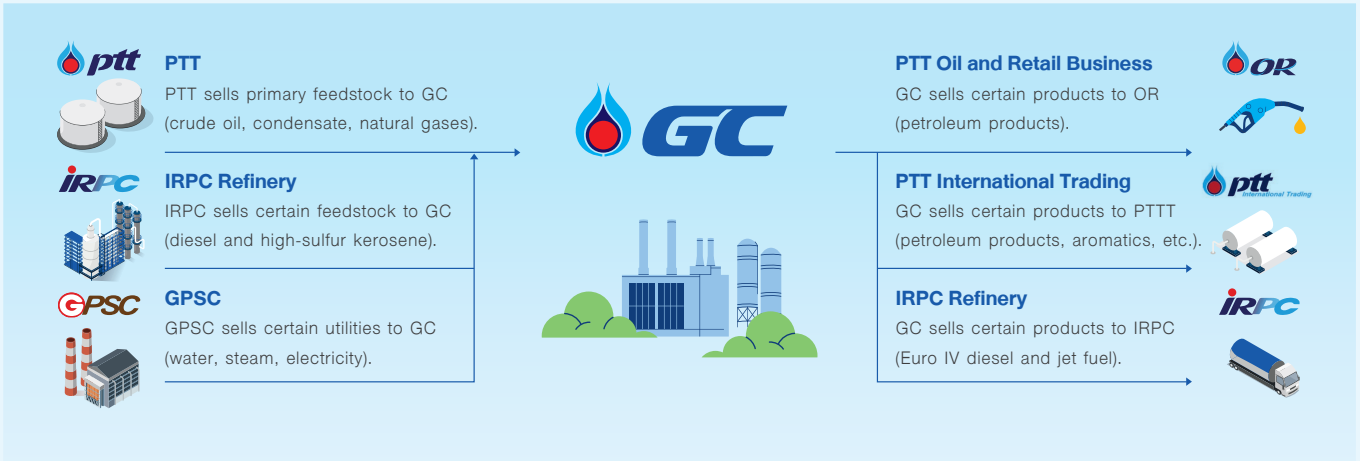
Investment in PTT Group

Remarks:

Information as of December 31, 2024. (All figures are presented by PTT's portion.)

1) These 7 listed companies registered in The Stock Exchange of Thailand.
2) BSA is a wholly owned subsidiary as PTT holds all common shares of BSA.
3) Shareholding in these subsidiaries is a joint investment in other businesses. Details are in Supplements to 56-1 One Report of PTT Public Company Limited for the year 2024.

The chart below shows major relations between GC and other companies under PTT Group with significant connection to GC's main businesses.



Shareholder Structure

(a) The list of top 10 major shareholders as at the book closure date of February 27, 2024 is as follows:

No.	Shareholder	Number of shares	Percentage
1.	PTT Public Company Limited[1]	2,037,220,915	45.18%
2.	Thai NVDR Company Limited[2]	216,065,386	4.79%
3.	Siam Management Holding Company Limited	135,240,000	3.00%
4.	SOUTH EAST ASIA UK (TYPE C) NOMINEES LIMITED	89,937,364	1.99%
5.	HMC Polymers Company Limited[3]	83,427,636	1.85%
6.	NORTRUST NOMINEES LIMITED-NT0 SEC LENDING THAILAND CL AC	79,234,900	1.76%
7.	STATE STREET EUROPE LIMITED	59,759,720	1.33%
8.	THE BANK OF NEW YORK MELLON	58,881,847	1.31%
9.	Social Security Office	58,641,851	1.30%
10.	BANGKOK SYNTHETICS Company Limited	43,420,625	0.96%

Remarks:

(1) Majority shareholder of PTT Public Company Limited is Ministry of Finance.

(2) Shareholders of Thai NVDR Company Limited holding Non-Voting Depository Receipt (NVDR) are ineligible to vote at shareholders' meetings except when exercising their voting right on delisting the Stock Exchange of Thailand.

(3) GC holds 41.44% of shares of HMC Polymers Company Limited.

(b) As of February 27, 2024, the major shareholders with significant influence on GC's policy establishment or operations are PTT Group, holding 45.18 of shares of GC.

(c) Foreign Shareholders

GC has a restriction on foreign shareholding as specified in Article 8 of GC's Articles of Association, which states that "GC's shares can be transferred without any restriction, except in the case where the said transfer would result in more than thirty-seven (37) precent of the Company's total paid-up shares being held by foreigners".



Debenture Issuance and Offering

In 2024, GC issued and offered Baht-denominated subordinated perpetual debentures payable upon dissolution with the issuer's right to early redemption and unconditional interest deferral, with the total issue amount of Baht 17,000 million, as detailed in the table below.

Symbol	Unredeemed amount (Million Baht)	Annual Coupon Rate (%)	Maturity Date	Maturity (Year)	Credit Rating (Fitch Ratings)
PTTGC24PA	17,000	5.25% (for the first 5 years and 6 months until June 12, 2030) 5-year yield + 3.01% (from June 13, 2030 to June 12, 2035) 5-year yield + 3.26% (June 13, 2035 to June 12, 2050) 5-year yield + 4.01% (from June 13, 2050 onwards)	Perpetual (payable upon dissolution with the issuer's right to early redemption as per terms of rights)	Perpetual (the earliest maturity date is 5 years and 6 months from the issue date)	A+(tha)

Securities

As of December 31, 2024, GC's registered capital totaled Baht 45,088,491,170, consisting of 4,508,849,117 common shares at the par value of Baht 10. GC's paid-up capital totaled Baht 45,088,491,170.

Issuance of Other Securities

Bonds

GC issued the following long-term bonds:

1. US Dollar Debentures

- On March 18, 2021, GC Treasury Center Co., Ltd., a subsidiary of GC, issued and offered unsubordinated and unsecured debentures in US dollar, consisting of:
  - 10-year debenture due March 18, 2031, with a fixed coupon rate of Baht 2.98 per year, paid every six months throughout the term, worth USD 700 million
  - 30-year debenture due March 18, 2051, with a fixed coupon rate of Baht 4.30 per year, paid every six months throughout the term, worth USD 550 million
- On March 30, 2022, GC Treasury Center Co., Ltd., a subsidiary of GC, issued and offered unsubordinated and unsecured debentures in US dollar, consisting of:
  - 10-year debenture due March 30, 2032, with a fixed coupon rate of Baht 4.40 per year, paid every six months throughout the term, worth USD 1,000 million
  - 30-year debenture due March 30, 2052, with a fixed coupon rate of Baht 5.20 per year, paid every six months throughout the term, worth USD 300 million

- In 2023 and 2024, GC Treasury Center Co., Ltd. conducted USD bond buybacks, as detailed below.

Unit: million USD

Debenture	Issue Date	Issue Amount	Buyback Amount in 2023	Buyback Amount in 2024	Outstanding Amount
1. 10-year debenture	March 18, 2021	700	70	-	630
2. 30-year debenture	March 18, 2021	550	24.837	150.832	374.331
3. 10-year debenture	March 30, 2022	1,000	200	461.372	338.628
4. 30-year debenture	March 30, 2022	300	60	137.02	102.98
Total		**2,550**	**354.837**	**749.224**	**1,445.939**

2. Baht Debentures

2.1 GC has 13 series of unredeemed, unsecured, unsubordinated domestic debentures, with the total issue amount of Baht 78,500 million, as detailed below.

Symbol	Unredeemed Amount (Million Baht)	Annual Coupon Rate (%)	Maturity Date	Maturity (Year)	Credit Rating (Fitch Ratings)
PTTGC269A II	7,000	2.43	September 5, 2026	7 years	AA(tha)
PTTGC299A II	1,500	2.75	September 5, 2029	10 years	AA(tha)
PTTGC274A II/HNW	1,530	2.60	April 8, 2027	7 years	AA(tha)
PTTGC304A II/HNW	3,310	2.99	April 8, 2030	10 years	AA(tha)
PTTGC324A II/HNW	4,360	3.29	April 8, 2032	12 years	AA(tha)
PTTGC354A II/HNW	5,800	3.50	April 8, 2035	15 years	AA(tha)
PTTGC271A II/HNW	14,000	2.13	January 25, 2027	5 years	AA(tha)
PTTGC291A II/HNW	2,000	2.65	January 25, 2029	7 years	AA(tha)
PTTGC321A II/HNW	2,000	3.05	January 25, 2032	10 years	AA(tha)
PTTGC341A II/HNW	12,000	3.29	January 25, 2034	12 years	AA(tha)
PTTGC276A II/HNW	5,000	3.21	June 15, 2027	5 years	AA(tha)
PTTGC346A II/HNW	3,000	4.00	June 15, 2034	12 years	AA(tha)
PTTGC296A PO	17,000	3.50	June 30, 2029	7 years	AA(tha)

2.2 GC has Baht-denominated subordinated perpetual debentures payable upon dissolution with the issuer's right to early redemption and unconditional interest deferral, with the total issue amount of Baht 17,000 million, as detailed below.

Symbol	Unredeemed amount (Million Baht)	Annual Coupon Rate (%)	Maturity Date	Maturity (Year)	Credit Rating (Fitch Ratings)
PTTGC24PA	17,000	5.25% (for the first 5 years and 6 months until June 12, 2030) 5-year yield + 3.01% (from June 13, 2030 to June 12, 2035) 5-year yield + 3.26% (June 13, 2035 to June 12, 2050) 5-year yield + 4.01% (from June 13, 2050 onwards)	Perpetual (payable upon dissolution with the issuer's right to early redemption as per terms of rights)	Perpetual (the earliest maturity date is 5 years and 6 months from the issue date)	A+(tha)

The following are ratings from various credit rating agencies.

Credit Rating Agency (International Rating)	Moody's	S&P Global	FitchRatings	FitchRatings
Credit Rating	Baa3	BBB	BBB	AA (tha)
Latest Date of Credit Rating Review	November 1, 2024	April 14, 2024	September 19, 2024	September 19, 2024



Dividend Payment Policy

PTT Global Chemical Public Company Limited

The Board of Directors Meeting No. 1/2011, held on October 19, 2011, resolved that the dividend payment policy of the Company is "to pay dividend at a rate of no less than 30% of net profit after tax and allocation to all reserve funds of the Company. Such dividend payment, however, is subject to the investment plan, other necessary and appropriate considerations in the future".

Subsidiaries' Dividend Payment Policy

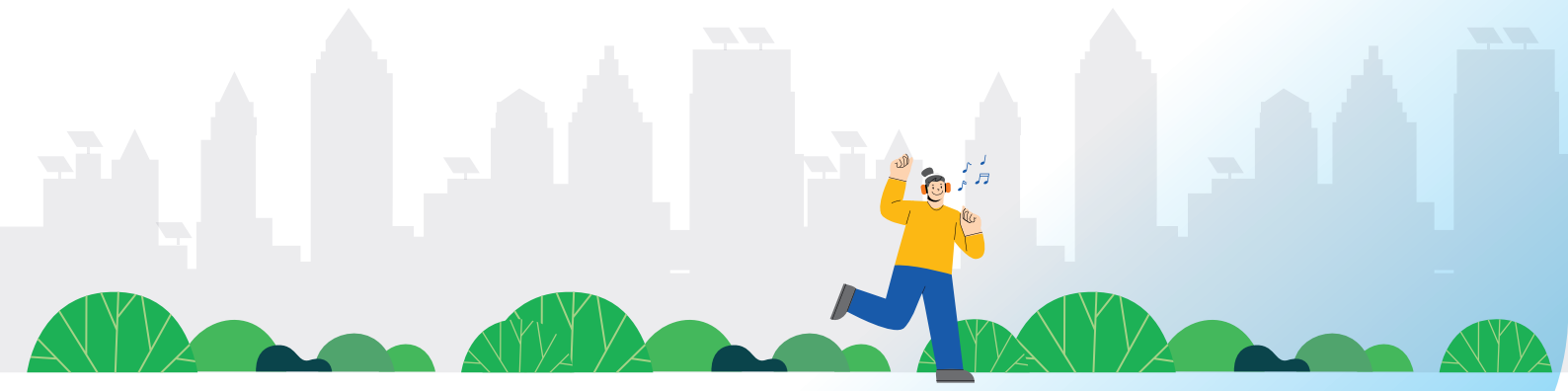
The dividend payment policy for GC's subsidiaries shall be considered and proposed by the Board of Directors of each subsidiary for approval at the Annual General Meeting of each subsidiary. The dividend payment of subsidiaries shall be calculated based on the investment plans and other requirements and considerations, such as the adequacy of cash flow of each subsidiary after deducting reserve funds in accordance with the law.

Dividend Payment

Year	Dividend Payout (Baht/Share)			Earnings per Share (Baht/Share)	Dividend Payout Ratio (%)
	1st half	2nd half	Full Year		
2024	-	0.50	0.50*	(6.62)	N/A
2023	-	0.75	0.75	0.22	>200%
2022	0.75	0.25	1.00	(1.94)	N/A
2021	2.00	1.75	3.75	10.01	37%
2020	-	1.00	1.00	0.04	>200%

Remark:

* At the Board of Directors' meeting held on February 17, 2025, the Board approved to submit for approval at the Annual General Meeting of the Shareholders, a full year 2024 dividend payment at the rate of Baht 0.50 per share, amounting to Baht 2,254 million to the shareholders entitled to receive dividends. This dividend payment is subject to the approval of the Shareholders at the Annual General Meeting to be held on April 8, 2025.



Risk Management

Risk Management and Risk Factors

Risk Management

In 2024, GC was faced with various challenges amid the rapidly changing circumstantial factors, particularly the intensifying geopolitical conflicts in many regions across the world, such as conflicts in the Middle East, the U.S.-China trade war, changes in economic policies in various countries holding leadership elections in 2024. This was further compounded by slowing demand and economic recession against a significant increase in new production capacity on the supply side, especially from Middle Eastern countries, which had feedstock cost advantages, as well as China's policies to increase reliance on domestic production, which led to production capacity expansion, and its sluggish economic recovery. As a result, the overall petrochemical market experienced an oversupply, pushing profit margins down further than in the past. As these challenges are likely to persist and even intensify moving forward, GC has identified six strategic issues where further action is needed in order to maintain short-term and long-term competitiveness in the evolving landscape of the industry and foster sustainable growth in the long term in line with available resources. The goal is to ensure that GC can respond to diverse challenges in an effective and timely manner, minimize potential damage from arising risks, and secure business opportunities.

GC places utmost emphasis on risk and crisis management, which formed the foundation for sustainable business growth in the current situation. GC's risk management is based on the Committee of Sponsoring Organizations of the Treadway Commission (COSO)'s Enterprise Risk Management Framework, or ERM COSO (2017), the International Organization for Standardization (ISO)'s guidelines, or ISO 31000:2018, the Thai Corporate Governance Code for Listed Companies 2017, and its anti-corruption guidelines and commitment as a certified member of the Private Sector Collective Action Against Corruption (CAC). Furthermore, GC integrates its enterprise risk management system with policies, laws, regulations, and operational standards, encompassing governance, risk management and internal control, and compliance, or GRC for short, to ensure that GC has suitable risk management as well as adequate and effective enterprise-wide control systems, thus enabling the organization to achieve its strategic goals and various key objectives.

Risk Management Structure

GC's risk management is organized into three levels: corporate, business units, and operations. At the corporate level, the Board-appointed Risk Management Committee (RMC) is responsible for defining the direction of risk management guided by the risk appetite, risk policy, and five risk management frameworks: corporate, foreign exchange, price-and-spread, subsidiaries, and investment. It is also tasked with monitoring and providing recommendations on the management of risks towards the achievement of GC's strategic and business goals. The Enterprise Risk Management Committee (ERMC) is comprised of executive officers from each function responsible for regularly monitoring risk management progress to ensure alignment with the policies and risk management frameworks approved by the Risk Management Committee. In addition, GC requires all units to perform self-assessment of the adequacy of the internal control system using the Control Self-Assessment (CSA) and Operational Risk Management (ORM) tools for operational or process risk management to ensure compliance with the policies, objectives, risk appetite, and risk management frameworks approved by the Risk Management Committee.

For business-specific risks, GC has instituted either risk management at the business unit/function level or appointed special purpose committees to facilitate direct management and close monitoring of situations, including:

- The Value Chain Management (VCM) Committee is responsible for closely monitoring the market situation on a weekly basis and providing guidelines for managing risks related to product price and spread as well as exchange rate volatility in accordance with the risk management framework approved by the Risk Management Committee.

- GC Group's Sustainable Development Committee (SDC) is responsible for monitoring GC's sustainable development performance and management to ensure that GC has in place sustainability risk management guidelines that are sufficient and appropriate for both current and future business operations to achieve the goal of net zero carbon emission in the short, medium, and long term by 2050.

- The Investment Committee (IC) is responsible for overseeing and reviewing investment projects to ensure strategic alignment as well as risk assessment and the establishment of measures to manage projects.

- PTTGC Group's Digital & IT Steering Committee (DISC) is responsible for prescribing technology direction, goals, and strategies in alignment with GC Group's policies, direction, and business strategies.

- Other key committees and working groups include the GC Operational Excellence Committee, the Safety, Health, and Environment Governance Committee, the ISMS Committee, and the Water Management Working Group.

Risk Management Tools

GC has applied a variety of risk management tools to perform risk analysis, assessment, and monitoring, such as risk appetite, risk map, mitigation plan, and Key Risk Indicators (KRI). Moreover, GC has applied the PESTEL Analysis Framework in monitoring the situation and trends of external factors as well as conducted scenario analysis to assess the impact of risks under various potential circumstances and establish response measures. GC also places importance on emerging risks that may affect the business in the short, medium, and long term so as to establish proactive risk management measures.

Risk Management Culture

GC strives to foster a risk management culture throughout the organization and expand outcomes towards integrated GRC management (Governance, Risk Management & Internal Control, and Compliance) through the following six components: governance, leadership, risk management structure, risk management techniques, and risk management communication and education. To this end, GC has developed a risk management structure that encompasses all levels and includes the monitoring and regular reporting of risk management performance to the management and the Board of Directors. Additionally, the roles and responsibilities and guidelines pertaining to the risk management activities of the Board of Directors, top executives, and employees are clearly determined to ensure suitability.

GC also seeks to promote a risk management culture across the organization by organizing activities and projects and by issuing communications on risk management and internal control systems, as well as GC Group's Business Code of Conduct and culture of good corporate governance through diverse channels, such as the intranet system, newsletters, short videos, and Hook Talk, which executives are required to regularly communicate to employees in internal meetings, and GC Group GBC Day.

GC places great emphasis on integrating its risk management system into its operations and educating personnel at all levels on risk management. In 2024, GC held training for employees at all levels to continuously enhance knowledge and foster a risk culture through lessons on its online learning platform, or UP Learning Platform. GC also employed digital technology to enhance communication through the GRC knowledge database (GRC Portal) and conducted risk assessments through the Enterprise Risk Management Portal on SharePoint to monitor risks on a quarterly basis. In addition, GC promoted good GRC behaviors through various initiatives, such as the GRC Culture Playbook and the GRC Pride Award, to raise awareness of governance and risk management in all work processes.

Risk Factors

GC is aware of both internal and external risk factors that may impact the business and has established risk management measures to mitigate potential effects and ensure that it is able to achieve its strategic goals. Corporate risk factors are categorized into three groups, as summarized in the table below.

Business-as-Usual Risk

Risk Factor	Key Risk Management Measures
 **Operational and Safety Risk** As GC's core business is in large-scale chemical plants and refineries, occupational health and safety, operational regulations and standards, a plant's production stability, as well as energy efficiency and production costs per unit are all key factors in its business operation that impact its competitiveness. GC is committed to fostering operational excellence, with the goal of placing itself in the 1st quartile in terms of the safety and production stability of its plants to ensure reliability and continuity and prevent unplanned shutdowns.	• Improve Process Safety Management (PSM) to meet international standards by requiring safety risk assessment using bow-tie assessment and bow-tie barrier validation; by monitoring PSM leading indicators on a regular basis to verify the readiness of major accident prevention and control systems in all plants; as well as by undertaking production safety management assessments by internal and external assessors. • Establish standards and encourage personnel to utilize Field Risk Assessment (FRA) tools to indicate dangers as well as assess and manage risks in work processes in accordance with the risk identification and risk treatment procedures; and monitor, examine, and oversee compliance with standards. • Utilize digital technology to enhance the management and monitoring of machine reliability and integrity. • Monitor the production stability of the plants, conduct benchmarking analysis, and implement production efficiency optimization projects, while ensuring regular monitoring of project progress. • Promote the B-CAREs safety culture and operational discipline among employees and contractors and emphasize strict and robust implementation of measures at the work site through operators, such as Effective Toolbox Talks, Management Safety Walks, and the Felt Leadership Program, which are aimed at encouraging managers and supervisors to serve as safety role models to ensure that employees at all levels can correctly follow the operating procedures, with the Total Recordable Injury Rate (TRIR) included in the corporate and individual KPIs of employees at all levels across the organization. • Monitor policy directions related to changes in laws, regulations, and standards that may impact plant operations, and implement mitigation measures accordingly, as well as participate in discussions with relevant agencies regarding the drafting of laws on controlling the release of volatile organic compounds from industrial plants as a representative of the Federation of Thai Industries. • Establish a Business Continuity Management System (BCMS) and regularly conduct the Business Continuity Plan (BCP) drills for emergencies and crises that may result in business interruption to mitigate the effects of such events and/or shorten the rehabilitation period, as well as establish pre-incident plans and consistently conduct drills both in the factories and for oil spills. • GC Group has necessary insurance in place to limit any potential damage from unforeseen circumstances.

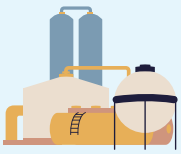
Risk Factor	Key Risk Management Measures
Market Volatility Risk GC is facing pressures from various external factors, such as geopolitical conflicts across multiple regions and risks of economic recession, which have caused demand for end products to be lower than anticipated. This is further compounded by increased production capacity and ensuing oversupply, particularly attributable to the self-sufficiency policies of low-cost producer countries in Asia, expansion into performance/specialty chemicals, and increased backward integration. Simultaneously, the direction of certain national-level policies continues to pose risk as it may affect product pricing and demand and GC's profitability, such as free trade and petrochemical trade flows from China, the United States, and the Middle East, which are expected to intensify competition in the Southeast Asian market in the future.	**Mitigation measures for impacts on markets** • Implement portfolio management to categorize businesses, thus making it possible to establish operational strategies and allocate resources properly and ultimately strengthen competitiveness and mitigate business volatility. • Enhance integrated competitiveness through holistic optimization, expanding operational scope to cover: (1) Enhancing competitiveness by sourcing low-cost feedstock from overseas and through group collaboration enhancement and strategic investment (2) Elevating market-focused business transformation initiatives to create added value and maintain domestic and target market bases, while also developing strategic market intelligence by fully utilizing market data within GC Group to formulate strategies for market leadership • Enhance the product portfolio towards High-Value Products (HVP) with lower price volatility, enhance the innovation portfolio, and develop product solutions that better cater to end markets. Closely monitor changes in market demand, supply, and price fluctuations, and evaluate the returns of each market on a weekly basis to adjust sales plans accordingly. • Foster cooperation within PTT Group across various dimensions, such as re-optimization, product exchange, and location swap/co-load, and optimize market development, particularly in high-potential markets, such as Australia and Japan. • Collaborate with the Petrochemical Industry Club of the Federation of Thai Industries to present an assessment of the impact of FTAs with various countries to the Department of Trade Negotiations



Risk Factor	Key Risk Management Measures
 **Cyber Threat** Cybercrime comes in the form of a variety of attacks and threats, and new methods or technologies are increasingly being used to launch attacks through various channels. Given the rapidly changing nature of the business and competition, it has become necessary for GC to adopt digital technology to enhance operational efficiency and competitiveness, which can pose a risk and increase GC's vulnerability to cyberattacks without awareness and understanding within the organization.	GC implements cyber risk management in adherence to the framework of the National Institute of Standards and Technology (NIST Framework), which consists of five components as follows. **1. Identify** • Monitor new threats, assess risks in both office and factory systems, test IT security measures, and perform system assessments and internal audits to ensure strict compliance with the relevant safety standards. • Establish measures for maintaining the security of both corporate and personal information, data protection, and information leakage monitoring, as well as measures for violations and personal information leakage. **2. Protect** • Enforce requirements, policies, and guidelines on the security of Information Technology (IT) and Operational Technology (OT) and data governance for use as guidance in GC Group. • Prepare work systems and increase IT security measures to support working from anywhere, as well as install various protection systems, such as firewalls, WAF, data protection systems, threat intelligence, and assess system vulnerabilities, such as through vulnerability assessment, web applications, penetration testing, compromise assessment, and two-factor authentication. • Foster cybersecurity awareness among employees at all levels, such as by providing information on guidelines and practices for IT management as well as relevant laws, and conducting phishing tests to assess employee knowledge and understanding on how to deal with threats. **3. Detect** • Utilize a cyberattack detection and monitoring system using deception technology and endpoint security protection. **4. Respond** • Conduct cyberattack response drills and IT and plant systems recovery drills on a regular basis and improve response plans to ensure suitability and mitigate any potential damage. **5. Recover** • Establish policies and follow data backup and emergency preparedness protocols to ensure the continuous availability and functionality of GC's data and information systems. • Establish disaster recovery plans and conduct regular reviews and drills.

Strategic Risk

The rapidly changing and complex business environment may affect the successful implementation of the business strategy. GC has, therefore, set the following measures to manage various risks related to the achievement of its business objectives.

Risk Factor	Key Risk Management Measures
 **Sustainable Feedstock Supply Risk** The volume of gas in the Gulf of Thailand is expected to decline, exerting pressure on both supply and pricing due to government policy directions, resulting in a decrease in the company's cost competitiveness.In addition to projects aimed at enhancing feedstock flexibility for olefins production, GC must also prepare guidelines or alternatives for guaranteeing its long-term feedstock security so as to ensure feedstock availability, which will enable it to generate added value throughout the production chain through quality and cost competitiveness.	**Mitigation measures for impacts on current business operations** • Closely monitor the quantity and quality of natural gases and relevant policies. • Perform analysis and optimization to assess the cost-effectiveness of each feedstock. **Measures for increasing alternatives and flexibility** • Source low-cost feedstock from overseas in the long term to enhance feedstock security. • Establish olefins feedstock flexibility strategies by looking into the import of low-cost ethane from the U.S. to strengthen competitiveness and feedstock security.



Risk Factor	Key Risk Management Measures


Financial and Investment Management Risk
In addition to the management of financial risks across various dimensions, risk factors that GC must monitor and manage closely include profitability and liquidity as well as its ability to finance investments while also maintaining its investment-grade credit rating. GC must also consider efficient management and allocation of investments budget to achieve future growth and increase returns in parallel with achieving balance with respect to sustainability.
	• Prudently conduct project analysis, review, and prioritization with a focus on critical aspects, such as reliability and safety and on growth and sustainability projects that require low investments and yield good returns; and seek investment approval according to the Corporate Investment Management (CIM) process by the Investment Committee.
	• For significant investment projects involving high capital budgets or encumbered securities which may significantly affect GC's reputation or stakeholders, the Risk Management Committee examines and comments on the risk assessment performed and the adequacy of the risk management measures to be implemented. This information is then submitted as part of the investment proposal for approval by the Board of Directors.
	• Manage financial risks, such as exchange rates, interest rates that may impact profitability, financial costs, and GC's liquidity through various financial tools, such as Cross Currency Swap (CCS) and P2F Hedging.
	• Ensure financing preparedness, maintain GC's liquidity, and reduce its liabilities to maintain the credit rating and fiscal discipline according to its financial policy to support future investments, such as by or through:
	  ◦ Reducing the holding of assets or investments that are not aligned with the core strategy
	  ◦ Bond buybacks
	  ◦ Perpetual bond issuance
	• Conduct look-back analysis to follow up on and evaluate completed projects in order to enhance GC's project management and increase the chances of success for future projects.

 **Business Restructuring and Impairment Risk** Following the strategic shift to "3 Steps Evolution," comprising 5 Pillars and 1 Foundation, to address the volatility in the petrochemical industry, GC is optimizing its portfolio by evaluating the long-term competitive capabilities of each business group and recognizes the necessity of restructuring the operations within GC Group to achieve alignment with its future strategic direction.	• Closely monitor the performance of GC Group and target business units by establishing a procedure and a dedicated task force to regularly track and report performance at both strategic and operational levels, so as to plan appropriate responses aligned with rapidly changing situations.

Risk Factor	Key Risk Management Measures
Decarbonization Implementation Risk To advance global leadership in sustainability, GC has announced its net zero goal, with the medium-term target of reducing 20% emissions by 2030 and achieving net-zero emissions by 2050. As such, the risks that must be managed in order to achieve these targets include the challenges of carrying out projects under GC's three decarbonization pathways: efficiency-driven, portfolio-driven, and compensation-driven; as well as the government's regulatory policies and efforts to align business operations to international climate regulations on matters such as alternative energy, renewable energy, third-party access, and economic tools.	In general, GC monitors and analyzes climate scenarios and incorporates them into the formulation of strategies and business plans. **Efficiency-Driven** • Establish performance indicators on greenhouse gas emissions and energy efficiency and incorporate them into the corporate KPIs, as well as monitor and track progress on a monthly basis. • Engage internal and external experts to analyze and report the energy consumption of various plants in depth, promote energy efficiency improvement in plants through the ISO 50001 CPI process and operational excellence frameworks, and organize workshops to develop additional quick-win initiatives for GHG reduction. • Establish plans and drive renewable energy procurement, monitor trends in clean energy technologies, and analyze their feasibility and suitability for practical applications. **Portfolio-Driven** • Forge business partnerships to carry out investment portfolio adjustment strategies, develop project execution plans, and conduct a thorough analysis of policies and trends in low-carbon business development to seek investment opportunities. • Study the feasibility of reducing the proportion of businesses with high carbon emissions. • Create added value for GC's existing products by leveraging the benefits derived from the reduced carbon footprint in accordance with the decarbonization pathway. **Compensation-Driven** • Study and expedite the readiness of carbon capture business development, monitor the development of a supportive ecosystem, clearly define roles in collaborating with associations/networks to advocate for policies, laws, and supporting guidelines, and formulate a roadmap in alignment with GC Group's action plans so as to ensure the successful development of projects within appropriate timeframes and costs. • Collaborate with the government and civil society and provide information to inform policy adjustment to achieve alignment with the context of the industry in Thailand and drive the development of the country's infrastructure and ecosystems. • Seek more efficient and cost-effective carbon capture technologies to apply within GC's plants. • Collaborate with the government to develop reforestation projects for carbon credits under an optimal cost structure.

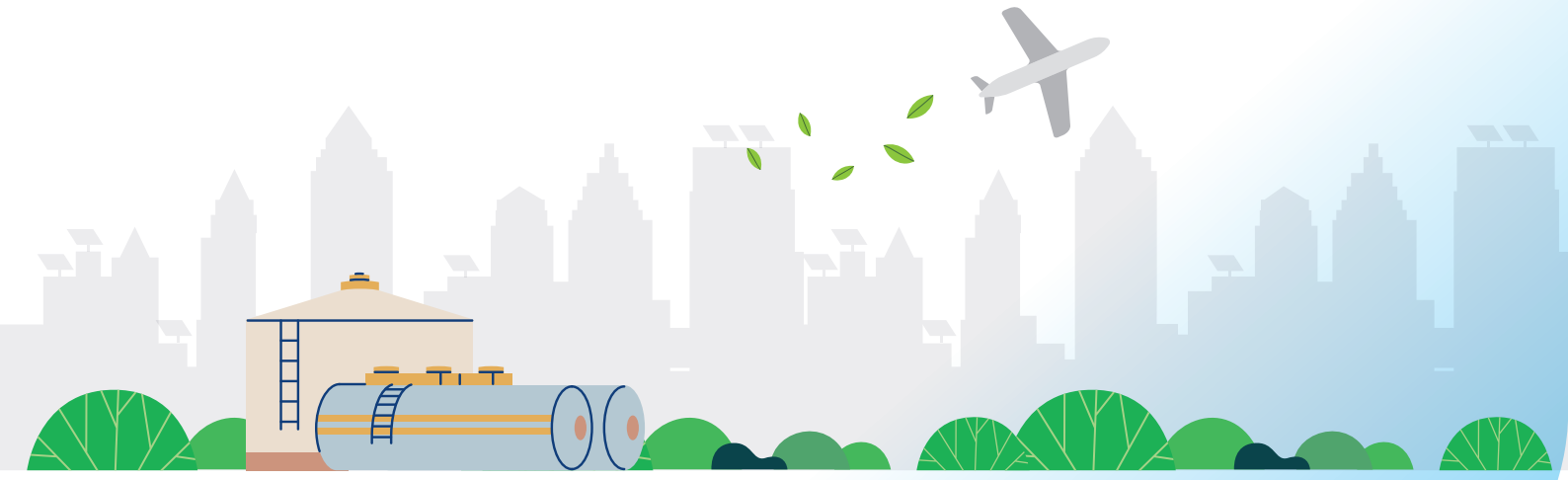
Risk Factor	Key Risk Management Measures
 **People and Organization Risk** GC must cope with challenges in ensuring preparedness with regard to its people, organization, and culture to support new business models in accordance with a shift in corporate strategies and develop employee competencies in key areas to ensure a suitable and sufficiently efficient working arrangement.	**People** • Provide support and care to personnel across every process, from recruitment and development to retention. • Develop five key capabilities essential for future business operations: digital, innovation, global acumen, sales & marketing, and sustainability, which will effectively drive the achievement of GC's strategies. • Optimize resource allocation and mobility management to enhance organizational efficiency and promote employee mobility and learning across GC Group both in the country and overseas. **Organization** • Enhance the flexibility, speed, and efficiency of the operations to keep up with the evolving business and situation, such as by encouraging cross function collaboration. • Implement Strategic Workforce Planning (SWP) to optimize workforce capacity and personnel costs across units within appropriate timeframes in alignment with business directions and objectives and strengthen organizational competitiveness. **Culture** • Organize activities that foster the corporate culture by promoting awareness, understanding, and implementation of GC SPIRIT values among employees at all levels, so that they consistently exhibit 4 Core Behaviors.



Emerging Risk

GC has analyzed emerging risks that could have significant impacts on business operations in the next three to five years and has established effective risk management measures to ensure responsiveness to emerging situations and enable GC to achieve its defined strategic goals and directions.

Risk Factor	Key Risk Management Measures
 **Geoeconomic Confrontations** The petrochemical industry is confronted with challenges in terms of economy and international politics due to geopolitical uncertainties and increasing trade protection policies, posing risks to the global supply chain and pressure on the business sector. As a result, economic growth slowdown is greater than anticipated, affecting GC's long-term profitability.	GC conducts scenario analysis on various raw material price levels to assess potential impacts on its business plan and long-term strategy. Relevant factors are regularly monitored and reviewed. • Monitor and analyze economic and political situations, product standards and trade protection measures to assess impact on the business. • Monitor and analyze the situation, including trade restriction measures imposed by various countries, to assess their impact on the business plans and long-term strategies. Additionally, evaluate new business opportunities by ensuring regular tracking, review, and updates on relevant situations and factors. • Establish measures to create flexibility and optionality in terms of markets, including exploring new markets that may emerge from trade shifts, to ensure revenue and profit stability. This approach will also enable the business to adapt swiftly in uncertain situations. • Develop Scenario Planning to anticipate and mitigate the impact of potential changes and uncertainties in the future in a timely manner. • Implement additional measures to enhance risk management (Hedging Gain/Loss) amid high volatility in the petrochemical market. • Execute supply chain management by collaborating with suppliers to analyze risks, building cooperation and increasing the number of potential regional suppliers.



Risk Factor	Key Risk Management Measures
Misuse and Abuse of AI/ Underutilization of Digital Technology & AI While advances in Generative AI and other digital technologies create opportunities in enhancing industrial efficiency, they also pose risks and challenges, especially in terms of inappropriate AI use, such as data falsification, dissemination of false information, content creation, AI DeepFake or other forms of fraud. These intensify the complexity and dangers of cybersecurity. In addition, if GC cannot adapt or apply new technologies in the organization's management, the company's competitiveness may be reduced. Therefore, GC must quickly adapt and utilize digital technology and AI to maximize benefit and increase work efficiency while building a strong defense system to maintain competitiveness.	• Disseminate knowledge on cybersecurity by conducting Cybersecurity e-Learning to build awareness and encourage employees to enhance their knowledge of cybersecurity. • Improve cybersecurity and partner diversity to create a resilient supply chain and reduce costs. • Regularly conduct Business Continuity Management (BCM), AI Deep Fake and Cyber Attack drills for relevant executives and employees. • Invest in Research and Development (R&D) and build business partnerships to increase competitive edge and new business opportunities. • Employ data analysis tools to increase operational efficiency and achieve effective decision-making, e.g., using AI to analyze market trends, as well as for forecasting and analysis purposes in order to optimize production process efficiency. • Develop a technology and digital transformation plan to enhance competitiveness and boost efficiency. • Formulate knowledge development plan regarding the use of AI for employees throughout the organization to increase work efficiency.

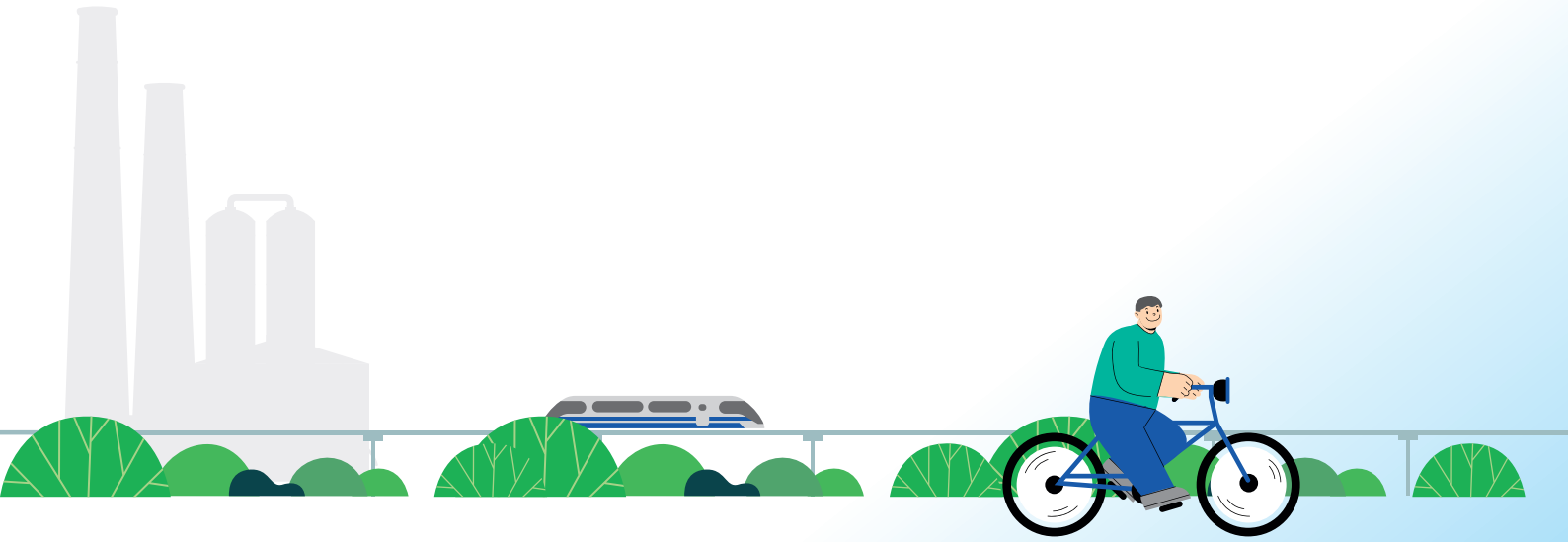


Risk Factor	Key Risk Management Measures
Changes in Regulations and Consumer Trends Domestic and international environmental policies and regulations are becoming increasingly stringent, such as Thailand's draft Climate Change Act and climate change policies in many countries. In addition, with regard to plastic management, various policies have been introduced to reduce plastic usage, ban single-use plastics, and promote eco-friendly plastics, while initiatives are carried out to raise public environmental awareness. Furthermore, there are several government policies that may be introduced in the future in Thailand, such as a strategic petroleum reserve rate increase and fuel pricing restructuring. These policies and measures result in higher operational costs for GC, while consumers are increasingly prioritizing eco-friendly products, which may impact profit margins in the long term.	• Apply energy-saving and decarbonization technologies to the production process, transition to renewable or low-carbon energy, and study the feasibility of new technologies, such as the use of hydrogen fuels in the production process to enhance competitiveness and decarbonize the production process in accordance with increasingly stringent environmental policies and measures. • Collaborate with global tech startups and Venture Capitals (VCs) to access emerging technologies and seek opportunities to invest in new technologies that can be introduced to the production process or utilize to advance new businesses and support megatrends. • Transform the long-term business structure towards High-Value Low-Carbon businesses, such as sustainability-focused products, bio-based products, sustainable aviation fuels, and specialty chemicals, to meet evolving consumer demands. • Advance a transition to a low-carbon economy in collaboration with the government, private sector, and civil society, while also maintaining the competitiveness of the petrochemical industry. • Work closely with the government and private sectors to promote understanding of the potential impacts of various policies on competitiveness.



Risk Factor	Key Risk Management Measures
 **Climate Change and Ensuing Environmental, Social, and Economic Crises** The failure of climate change management measures by both the public and private sectors has led to rising greenhouse gas levels in the atmosphere, jeopardizing the goal of limiting global temperature increase to 1.5 degrees Celsius above pre-industrial levels. This could escalate environmental, social, and economic crises, including severe droughts, floods, and extreme weather conditions.	• Assess future natural disaster risks in accordance with international standards under the IFRS S2 Climate-Related Disclosures framework, evaluating potential impacts on company assets and operations. Continuously develop business continuity plans to address various disaster scenarios. • Monitor drought conditions and manage water-related risks sustainably through the Water Management Taskforce. Implement initiatives to enhance water efficiency in production processes and secure alternative water sources to ensure sufficient supply for current operations and future projects, minimizing environmental impact and supporting long-term ecosystem sustainability.

GC is confident that the implementation of the above risk management measures can mitigate impacts from various risks and increase business opportunities for sustainable growth. It will also enable GC to achieve its business goals according to the established direction and strategies.



Driving Business Towards Sustainability

Sustainability Management Policy and Goals

GC holds a steadfast commitment to becoming "A leading global chemical company for better living" by conducting our business on the basis of sustainability. We have also contributed to supporting the United Nations Sustainable Development Goals (SDGs) and declared the intention to position ourselves as a global sustainability leader. Accordingly, the Sustainable Development Committee (SDC) was established to drive strategies and determine operational directions with consideration for the balance of three dimensions, namely E (Environmental), S (Social), and G (Governance & Economic), or ESG, across the business chain. Furthermore, GC has announced the Net Zero Target which aims to eleminate Scope 1 and 2 greenhouse gas emissions by 2050 such effort is driven by three approaches:

1

Approach 1 Efficiency-driven

Enhancing operational efficiency, shifting to renewable or low-carbon energy, and implementing energy reduction technologies to efficiently reduce greenhouse gas emissions from production processes.

2

Approach 2 Portfolio-driven

Implementing long-term business restructuring by expanding investment into high value - low carbon business through investment in technology and innovation in bio-plastics, recycled plastics and high value business. Furthermore, GC is in the process of reviewing strategies and management approaches related to sustainable products by building a sustainable product portfolio through the introduction of innovative processes and new products to the market to meet the demands of customers and consumers who have become increasingly concerned about the environment. Such action is aimed at creating business value for sustainable future growth. Additionally, GC has established an integrated used plastic management system through the GC YOUTURN Platform while developing a range of other projects to support the circularity of resources and products to enable reuse, recycle, and upcycle. GC has also been collaborating with business partners to promote sustainable packaging management.

3

Approach 3 Compensation-driven

Sequestering and offsetting carbon to manage residual greenhouse gases that remain after having executed Efficiency-driven and Portfolio-driven operations. Accordingly, GC has adopted the Carbon Capture and Storage (CCS) technology and Nature-based Solutions, such as reforestation, forest restoration, and carbon credit purchase, etc., in an effort to reach the Net Zero Target.

ESG Leadership: With unwavering commitment to sustainability in our business operations, GC has earned the world's number one ranking on the Dow Jones Sustainability Indices (DJSI) in the Chemicals Sector for six consecutive years. GC continues to focus on sustainable supply chain management by expanding ESG-based operations across our business chain while also monitoring, evaluating and managing ESG through the Rayong Integration Management (RIM) Committee to enhance competitiveness and become an essential player in driving Thailand's sustainable economic system. In this regard, GC has defined the following key courses of action:



E-Environmental

- Define policies, develop strategies, and formulate the Decarbonization Pathway in accordance with the Net Zero Target.
- Conduct business with consideration for impact on biodiversity in all operating sites.

S-Social

- Invest in human capital development, which is a critical component contributing to the organization's significant growth, by continuously promoting learning and development to uplift academic and practical skills and competencies.
- Increase the proportion of Social Enterprise (SE) operations, reduce inequality through Corporate Social Responsibility (CSR) projects to create shared value with societies and communities in a sustainable manner, as well as integrate such efforts with the Decarbonization Pathway and the efficient use of resources according to Circular Economy.
- Promote safety in operations and create well-being for employees, expand cooperation with business partners to enhance operations throughout the value chain and effectively generate social benefits.

G-Governance & Economics

- Promote good corporate governance, ethics and business ethics to stakeholders across the value chain, including employees, suppliers, customers and business partners, who are key players in business operations.
- Develop innovation, covering process innovation and product innovation, while supporting collaboration in the form of open innovation to create innovation that meets future business demands.
- Develop supplier capacity to uplift capabilities and create sustainable shared business value in the form of sustainable supply chain management.

The continuous integration and improvement of our sustainability management operations are a reflection of GC's leadership in sustainability. Consequently, GC has earned rankings from leading international and national sustainability assessment institutions, such as:

- Dow Jones Sustainability Indices (DJSI): GC is the world's first organization to have ranked number one on DJSI in the Chemicals Sector for six consecutive years.
- MSCI ESG Rating: GC received BBB rating from MSCI ESG Ratings in the Chemical Industry Sector.
- EcoVadis Sustainability Rating: GC won the Gold Medal from EcoVadis, which places the company in the Top 5% of the global basic chemical manufacturing industry.
- Carbon Disclosure Project (CDP): GC achieved 'B' rating in Climate Change and 'A' rating in Water Security.
- Stock Exchange of Thailand (SET): GC obtained 'AAA' level assessment from SET ESG Ratings, maintained our position on the list for the tenth consecutive year, and won the SET Sustainability Award of Honor for the seventh consecutive year.

Impact Management for Stakeholders

Stakeholder opinion plays a vital role in optimizing the efficiency of our performance. For this reason, GC has established stakeholder engagement channels to provide equal and transparent opportunities for all stakeholders to participate in expressing their opinions, which will be used for further improvement and addressed in an appropriate and effective manner. GC classifies our key stakeholders into four groups:

1) Shareholder

Expectation	Action and Response
• Conduct business in accordance with the principles of corporate governance, ethics, and business ethics while disclosing information with transparency. • Ability to manage short-term and long-term enterprise risks. • Prevent and reduce environmental impact from business operations while enhancing competitiveness. • Green investments and business activities that promote ESG in line with changing international and national trends.	• Comply with laws and regulations of relevant regulatory bodies, promote ethics, ensure communication of the Business Code of Conduct throughout the organization, and disclose performance transparently through relevant channels. • Analyze, monitor and observe enterprise risks in the short and long term (3-5 years), prepare risk management measures, review business performance to ensure readiness to cope with changes at all times. • Review business plans to ensure alignment with ESG principles, focusing on climate change management and GC's Net Zero Target. Regularly review sustainable development strategies. • Plan investment in high-value and low-carbon business, promote the development of sustainable products, and design products that are of high quality, safe and eco-friendly to add value to the products and boost business competitiveness.

2) Business Partner, Customer and Investor

Expectation	Action and Response
• Build cooperation with suppliers or business partners to develop sustainable and eco-friendly products to meet current market and future consumer demands. • Develop capacity and abilities of suppliers by providing necessary academic and practical skills training to enhance the ability to conduct business together. • Regularly communicate about the management and progress of ESG performance to suppliers and business partners. • Support digital technology in providing services to suppliers, business partners and all groups of customers to offer maximum convenience and satisfaction. • Implement standardized production and procurement processes that are environmentally and socially responsible throughout the value chain.	• Study, analyze and monitor customer/consumer demands and market situations, leverage technology in developing products, services and solutions, support the expansion of sustainable products, create customer engagement, and explore opportunities to conduct business with suppliers and partners to expand and grow business. • Conduct supplier capacity development projects, covering important academic and practical topics, such as training on ESG in the Supply Chain for Suppliers. • Regularly communicate ESG performance to suppliers, business partners and all stakeholders through meetings, webinars and other online platforms, such as Line Official Account, website, applications. • Establish the Vendor Management System (VMS), covering from registration, product and services data management through to supplier performance evaluation to ensure convenience and transparency. Adopt digital technology to optimize efficiency in sales, product delivery and service provision to meet customer demands. • Develop the Supplier Codes of Conduct, perform supplier ESG assessment as well as ESG Self-assessment, establish a procurement support system to control negative impacts on the economy, society and environment across the value chain.

3) Community, Society, Government, Non-Profit Organization and Press

Expectation	Action and Response
• Community and Society: Provide assistance to communities and promote occupation to revitalize grassroots economy, consider environmental and social impacts arising from GC's operations.	• Conduct business ethically and in strict compliance with laws, take part in resolving environmental issues, and conduct site visits to obtain feedback from communities in order to develop projects that truly respond to community needs with focus on creating career, generating income, strengthening communities, fostering relationships, jointly developing societies alongside the organization's growth. Determine performance indicators, such as Social Return on Investment (SROI), etc.

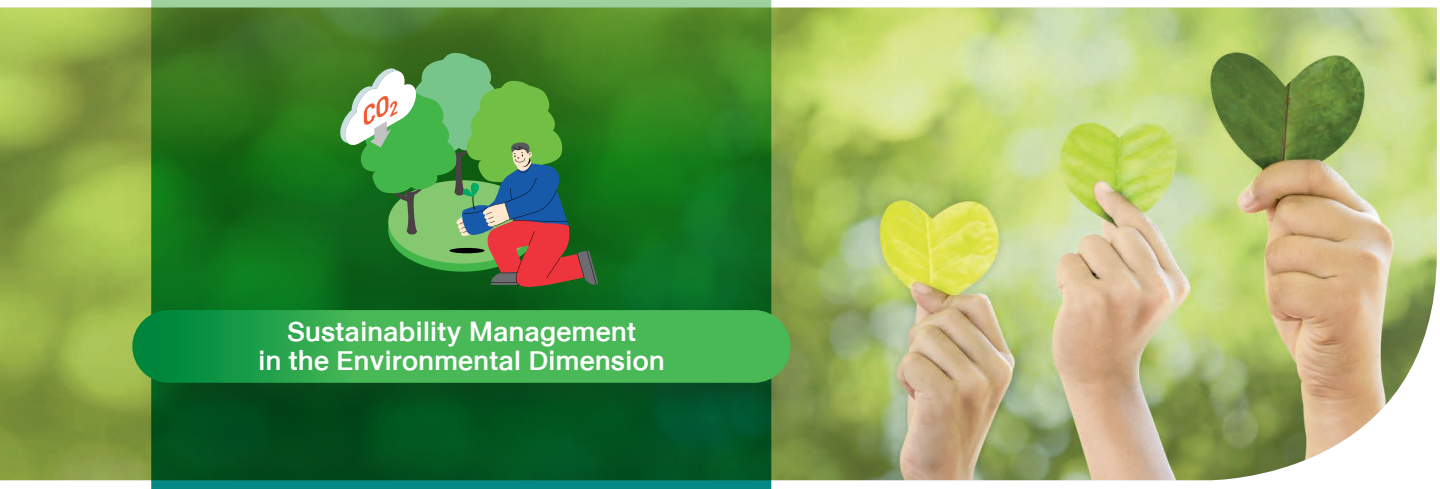
- Government/Regulatory Agency: Collaborate with the government sector to take part in the sustainable promotion of the national economic policy.
- Non-profit organization: Collaborate in business processes to develop products that create positive contributions to Thailand and the world.
- Press: Disclose information and performance accurately, transparently and in accordance with business ethics, create benefits for the society as a whole.

- Form a public-private-civil partnership network through third-party entities, i.e., the Joint Standing Committee on Commerce, Industry and Banking (JSCCIB), the Federation of Thai Industries (FTI), the Thai Chamber of Commerce (TCC), and the Thai Bankers' Association, to discuss key issues and comment on government policies related to governance that benefit the overall economy and industry. This plays a vital role in driving Thailand's economy.
- Integrate sustainability issues into the design of products that promote the economy, care for the environment and create value for society in line with the United Nations Sustainable Development Goals.
- Regularly monitor news and current situations, share updated information on the company's performance via GC's channels, provide two-way communication channels to obtain feedback and adopt them to improve the company's performance.



4) Employee

Expectation	Action and Response
• Provide physical and mental safety in the workplace to increase work efficiency and happiness. • Develop skills and abilities to promote continuous learning and development. • Promote fair and transparent welfare, remuneration, and working conditions to build organizational commitment. • Implement a flexible, hybrid work model and build cooperation between business units across the value chain.	• Define measures to care for employees, both in terms of physical and mental health, providing them with confidence and comfort in working. Organize health promotion activities and offer knowledge on financial planning and management for employees to ensure a stable quality of life. • Improve human resource management model, conduct employee skills development projects in line with current global trends, such as Digital Learning & In-house Training and AI application, etc., to accommodate future business growth and expansion. • Allow employees to express constructive opinions to improve welfare and working conditions to match current circumstances and the new normal way of working. • Foster corporate culture through GC SPIRIT and 4 Core Behaviors, comprising (1) Take initiative to create better results, (2) Keep improving self and inspiring teamwork, (3) Work proactively to serve customers' needs, and (4) Strive for the greater good.



Sustainability Management in the Environmental Dimension

Climate Change Management

GC is firmly committed to decarbonization and has thus set the goal to reduce greenhouse gas emissions (Scope 1 and 2) by 20 percent within 2030. We also aim to eliminate greenhouse gas emissions through the Net Zero Target by 2050. Accordingly, GC has defined short-term and long-term strategies related to energy management and climate change as well as disclosed relevant data in line with the International Financial Reporting Standards S2 (IFRS S2) (Climate-related Disclosures). Furthermore, GC has formulated clear-cut policies and action plans while targeting to halve Scope 3 emissions by 2050 in order to extend the scope of our greenhouse gas reduction efforts across the entire value chain. Our highlight performance in the three areas of operation include:

- **Efficiency-driven:** Optimizing operational efficiency by adopting technologies that reduce energy consumption and greenhouse gas emissions in production processes, switching to renewable or low-carbon energy to support greenhouse gas reduction efforts and maximize energy efficiency in production processes. In the past year, GC implemented 96 additional Energy Conservation Projects and Renewable Energy projects, such as Recovery Heat from Benzene Rundown, Heavy Aromatic Overhead, Optimization Compressor by Tuning Surge Control Line, Solar Energy, and Replacing Fossil Fuels with Biogas, etc.

- **Portfolio-driven:** Adjusting long-term business portfolio towards high-value, low carbon business with focus on investment in technology and innovation:
  - allnex, a global leader in the production of industrial coating resins using advanced eco-friendly technology and innovation with focus on high-growth industrial markets, such as automotive, construction and infrastructure, packaging, and consumer goods. The company plans to expand its production capacity in the Asian region, which is a high-growth market, through the establishment of production hubs in China, India, and Thailand's Rayong province.
  - ENVICCO's recycled plastic pellet factory has, since its launch, recycled more than 71,800 tons of plastic. It became the first company in Thailand to have acquired a carbon credit certification of 18,254 tons CO_2 equivalent through the Thailand Voluntary Emission Reduction Program (T-VER) in the Solid Waste Category from the Thailand Greenhouse Gas Management Organization (TGO) for its project called "Plastic Waste Sorting and Recovery from Solid Waste to Plastic Resin". ENVICCO aims to expand rPET and rHDPE-based product development to 18 brands and distribute them to seven countries worldwide.
  - GC has expanded investment in bioplastics through a joint investment with NatureWorks to establish a second Polylactic Acid (PLA) plant within the Nakhon Sawan Biocomplex. The project employs technology that transforms sugar from sugar cane into lactic acid for the production of PLA resin. The plant boasts an annual production capacity of 75,000 tons. It aims to convert Thailand into a production and export hub for sustainable materials to the Asian market as well as extend and add value to Thailand's agricultural products according to the specified plan. Its commercial production is expected to begin within the third quarter of 2025.

For more information on GC's ESG performance indicators is available at: Additional information is available in the 2024 Integrated Sustainability Report, Page 137

- GC has invested in the Bio Refinery Project to support the increasing global demand for low-carbon fuels and in compliance with CORSIA (Carbon Offsetting and Reduction Scheme for International Aviation), defined by the International Civil Aviation Organization (ICAO). This project focuses on upgrading GC's oil refinery into the first facility in Thailand to produce Sustainable Aviation Fuel (SAF) from used cooking oil, vegetable oil, and animal fat using the Co-Processing technique to support the aviation industry's effort to reduce greenhouse gas emissions. The project began its operations in December 2024 and commercial production was set to begin by January 2025.

- **Compensation-driven:** Sequestering and offsetting carbon with the objective to manage residual greenhouse gases by developing and harnessing the Carbon Capture and Storage (CCS) technology in tandem with other carbon compensation methods, such as nature-based solutions, by creating carbon credits through reforestation and forest care projects in collaboration with the government, private sector and communities. GC also purchased 3,232 tons CO_2 equivalent of carbon credits from GC Estate as inventory.

For more information on energy management goals is available at: Additional information is available in the 2024 Integrated Sustainability Report, Page 137

Environmental Management

GC has operated in accordance with the Quality, Security, Safety, Occupational Health, Environment, and Business Continuity (QSHEB) Policy by closely supervising and monitoring environmental, occupational health and safety performance. The company has also established an environmental management system that integrates energy, air, water, waste and efficient use of resources.

Sustainable Water Management

GC has formulated the One Water Strategy, which covers water management (Governance), sustainable water resources management (Water Stewardship), and water management network (Resilience). The company also promotes an integrated approach in water management by planning water consumption based on 3Rs (Reduce, Reuse, Recycle) to recirculate water (Renewable Water). This is in line with the target to minimize water consumption across the supply chain. Furthermore, GC places importance on empowering our employees through awareness-raising and training while promoting efficient water management and fostering a responsible water management culture across the organization. As part of the company's strategy, GC has also worked with communities to conserve and restore watershed areas.

In 2024, GC conducted water management projects, such as Recycling Treated Water using Wastewater Reverse Osmosis (WWRO). As a result, GC was able to reduce water consumption by up to 0.96 million cubic meters per year. Furthermore, GC participated in water planning and management at both local and national levels. We have established cooperation networks with various sectors to drive sustainable water management, e.g., Water and Environment Institute for Sustainability (WEIS), Federation of Thai Industries (FTI), Water War Room, Maptaphut Plant Manager Club (PMC). Accordingly, GC has collaborated with PTT Group Water Management Team (PTTWT) and tier 1 suppliers to formulate a business continuity plan to address drought, analyze impacts and monitor water level in main reservoirs in Rayong, Chonburi and Chanthaburi in order to maintain water level in these three main reservoirs at no less than 180 million cubic meters.

For more information on water resource management goals is available at: https://sustainability.pttgcgroup.com/en/environment/sustainable-water/sustainable-water-strategy-target-and-performance

Air Quality Control

GC has developed a proactive plan to manage air quality within our plants' boundary and in surrounding areas potentially affected by our activities. Accordingly, the company has optimized the efficiency of production processes, continuously improved the air quality control system, and formed a management plan to control air quality within the standard criteria during business as usual and turnaround activities. GC has also adopted eco-friendly innovation and advanced technology to optimize our air quality control system. In 2024, GC implemented projects related to air emissions performance, such as Air Quality Study through the Collection of Benzene and 1, 3 Butadiene along Plant Boundary, Development of Predictive Emission Monitoring System (PEMS), and Implementation of Pollution Online System (POMS) to Monitor and Report Pollution. As a result of the continuous implementation of air quality control projects, GC has achieved a continuous decline in air emissions per production unit. Meanwhile, there has been no cases of complaint regarding air pollution from surrounding communities.

For more information on management of greenhouse gas from production is available at: https://sustainability.pttgcgroup.com/en/environment/air-quality/emissions-reduction-target-and-performance

Waste Management

GC has applied the Circular Economy Concept in business operations to reduce resource consumption, waste, and environmental impacts across the value chain. In doing so, we have implemented the 5Rs principle, comprising Reduce, Reuse, Recycle, Refuse, and Renewable, in all procedures, starting from separation, storage, transportation, through to disposal, to ensure that waste is being managed according to international standards and in strict compliance with applicable laws.

In 2024, GC achieved the Zero Industrial Waste to Landfill and the Zero Waste to Landfill goals for the 10th consecutive year. This year, GC conducted a variety of waste management projects, including Management of Mercury Waste from Aromatics Plant and Refineries for use as raw material in medical device production, Adding Value to Mixed Heavy Oil (MHO) with OLE4's Hydrogenation Technology to convert into Pyrolysis Gasoline for feedstock in aromatics plant. GC has also organized waste management training for employees to raise awareness in waste management to reduce waste generation and minimize impact on the environment and biodiversity.

For more information on waste management goals is available at: https://sustainability.pttgcgroup.com/en/environment/waste-management/waste-management-target-and-performance





Sustainability Management in the Social Dimension

Organization Transformation

GC strives to become the chemical industry's leader in organizational efficiency as well as the Top Quartile Employer in Asia-Pacific (APAC). The company has developed the 2023-2027 Organization Transformation Strategy, which highlights the importance of four core aspects of management, namely 1) Skills & Competencies, 2) Resource Planning, 3) Great Well-being, and 4) Policy & System Transformation.

Skills & Competencies

GC has enhanced employee skills and ability training with contents that are more critical and specific to each business unit. The company has also improved the training method using an experiential learning approach through hands-on practice. Accordingly, each business unit considers and analyzes business strategies and formulate appropriate skills development approaches that are consistent with short-term, medium-term, and long-term strategies, with support and advice from internal and third-party experts.

Resource Planning

GC has developed the Strategic Workforce Planning Model by researching past and present situations regarding manpower and labor market in an effort to prepare a database and analyze different scenarios as well as formulate risk mitigation measures, such as improvement of employee recruitment guidelines, training related to skills demanded by the market, succession planning.

Great Well-being

GC promotes the quality of life and well-being of our employees, including their physical, mental and emotional health. We have switched from a One Size Fit All approach to a more group-specific format through people analytics based on various factors, such as generation, work site, line of work, job position, and gender, to create projects that appropriately meet demands, such as Flexible Benefit, financial knowledge projects, etc.

Policy & System Transformation

GC has improved our HR Policy to cover overseas operations. Accordingly, we have applied best practices from global organizations by listening to and engaging in discussions with both domestic and overseas executives, identifying touchpoints in an employee's development path, and improving the remuneration structure. We have also adopted platform technology and advanced data analytics to enhance various support systems.

Safety and Reliability

GC strives to become a Zero Incident, Zero Complaint, Zero Unplanned Shutdown (Zero ICU) organization by promoting the concepts of “Do it Right”, “Stop if Unsafe”, “Zero Compromise” and “Operational Excellence”. In this regard, GC has established the Quality, Security, Safety, Occupational Health, Environmental, and Business Continuity (QSHEB) Policy as well as adopted standards, such as ISO 45001 international safety standard, Process Safety Management (PSM), Contractor Safety Management (CSM), and proactive risk management to identify hazard and prevent recurrence while strengthening a safety culture for employees through B-CARES.

Process Safety Management (PSM)

GC has continuously raised safety standards in our production processes by applying technology and innovation in operations. Outstanding process safety projects in 2024 include Enhancing Plant PSM Committee Performance, Operation Risk Management (ORM) Risk Treatment to Prevent Loss of Primary Containament (LOPC), Align Field Risk Assessment (FRA) Good Practices.

Personal Safety and Safety Culture

GC operates in accordance with the B-CAREs safety culture. The company has adopted the concept of Operational Discipline (OD) to manage the entire supply chain. We have also created engagement with employees, contractors and suppliers through various forms of communication, such as PR signs, training, workshops, and VDOs, etc. In 2024, highlight projects include Onsite Supervision using Permit to Work through e-PTW, e-JSEA and e-LOTO, Early Detect Low-Performance Contractors, and Risk Management using Engineering Control.

Human Rights Management along Value Chain

GC adheres to and complies with human rights policies that are consistent with international principles, including the Universal Declaration of Human Rights (UDHR), the UN Guiding Principles on Business and Human Rights (UNGP), and the Declaration on Fundamental Principles and Rights at Work.

GC conducts Human Rights Due Diligence (HRDD) and assesses risks in all activities across the value chain, covering 8 aspects of human rights, namely working condition, health and safety, discrimination and harassment, illegal forms of labor, freedom of association and the right to collective bargaining, data privacy, security management/security forces, and communities’ rights. As a result, three salient issues were found in the operations of GC Group, tier 1 suppliers and contractors, including working condition, health and safety, and communities’ rights. GC has incorporated these three salient issues in the Human Rights Impact Assessment (HRIA), which found very low impact on rights holders. This reflects the efficiency our human rights management efforts. Nevertheless, GC has defined measures to rigorously control and mitigate impacts, such as formulating the Human Rights Policy and the Corporate Governance and Business Code of Conduct Handbook, establishing whistleblowing channels for human rights issues, and organizing projects and trainings that are in line with human rights issues to raise awareness and promote respect for human rights among employees and stakeholders. GC has also urged strict compliance from all sectors to prevent any forms of human rights violations across the value chain.

Contribution to Society

GC works in collaboration with communities and societies to create shared value by building relationships and engagement with all sectors. GC also enhances the capacity of communities through a group-wide strategy with focus on Creating Shared Value (CSV) in the form of Social Enterprise (SE), which contributes to solving social problems, the efficient use of existing resources according to Circular Economy (CE), and sustainable environmental management. GC has also set a target to become a partner of choice that creates sustainable value for society by 2025. The company continues to carry out Corporate Social Responsibility (CSR) projects by adopting the G-BEST approach, which consists of three main elements, namely:

1) Better Living: Promote well-being under the concept of self-sufficiency and self-sustainability. A highlight project includes the Community Waste Model, which focuses on GC's collaboration in establishing recycled waste management hubs with 11 communities in Rayong, Nakhon Pathom, Samut Prakan, and Prachin Buri. GC has collaborated with educational institutions and networks to collect used plastic bottles for recycling and upcycling. This project has created employment and generated more than 6 million baht of income for communities, equivalent to a Social Return on Investment (SROI) of 4.72.

2) Sharing: Share ideas and innovations to create value for communities through projects such as Smart Farming by GC, which is conducted in collaboration with the Digital Economy Promotion Agency (DEPA) to upgrade agriculture by combining innovation such as photoselective greenhouse films, shelf-life extension bags, in conjunction with the Internet of Things (IoTs). GC has also developed agricultural skills for youth and farmers in Rayong province. This project has generated an income of more than 688,250 baht for communities from January to December, representing a Social Return on Investment (SROI) of 5.29.

3) Ecology: Conduct business in tandem with creating a sustainable ecosystem by promoting and restoring the tourism image of Koh Samet and Rayong province following the 2013 oil spill incident to build confidence among tourists and generate income for local entrepreneurs. In 2024, GC implemented 14 projects in collaboration with 57 fishing groups along the 120-kilometer coastline, including Crab Bank Project, Dog Conch Bank Project, Seafood Processing Project, Fisheries Career Development Learning Center, Mangrove Reforestation, Squid Trapping Tools Development Project, Construction of Pier for Fishing Boats, etc.





Sustainability Management in the Economic Dimension

Innovation Management

GC places importance on the continuous management and development of innovation to support our efforts in research and innovation which enhances competitiveness and reduces environmental impacts. The company has defined the Innovation Management Strategy with focus on three aspects: 1) Strengthening the Core – upgrading technology to increase competitiveness, 2) Striving the Growth – continuously exploring new business opportunities and developing innovation, and 3) Sustaining the Future – seeking future business opportunities that meet market demands, such as sustainable composite materials and carbon capture, etc.

GC has developed an innovation mechanism to enhance the operational framework in five areas:1) Process Innovation, 2) Product Innovation, 3) Innovation Growth Platform, 4) Corporate Venture Capital (CVC), and 5) Enabler by promoting an innovation culture.

GC also promotes open innovation through long-term collaboration with third-party networks, organizations and experts, investing directly and indirectly in innovation. In 2024, GC conducted numerous projects related to innovation development, including the establishment of GC Ventures which focuses on expanding CVC investment in four technology groups, namely advanced materials, renewable energy and circular economy, decarbonization, and industrial digital, Collaboration on CO_2 Utilization Technologies with Delft University of Technology which features the reduction of CO_2 capture units and the efficient integration of energy to enable the production of diverse chemicals.

In the past year, GC has taken actions to improve product innovation to better serve customers. Meanwhile, the company has streamlined innovation management through projects such as Industrial Stretch Film New Resin, HDPE for Medium Tenacity Monofilament, and PCR PET & Virgin PET Dry-Blending.

Additionally, GC also holds the target to develop eco-friendly process innovation to optimize efficiency. In 2024, key projects include Advance Membrane Separation Technology to Streamline Separation Efficiency in Production Process, Upgrading LCB OLE to Raw Pygas/Pygas, Visbreaker Unit Optimization Model: Phase 3, and BPA Tar Cracking for Phenol Recovery Project.

For more information on innovation management goals is available at: Additional information is available in the 2024 Integrated Sustainability Report. Page 119

Additional information on GC's sustainable operations is available in the 2024 Integrated Sustainability Report.

Management Discussion and Analysis

Executive Summary

Performance Summary

(Unit: Million Baht)	2023[2]	2024	YoY % +/(-)
Sales Revenue	616,635	604,045	-2%
EBITDA	40,449	33,755	-17%
EBITDA Margin (%)	7%	6%	-1%
Share of profit/(loss) of investments in JV and Associates	(725)	(1,462)	-102%
Net Profit/(Loss) (exclude impairment/restructuring cost)	999	(8,009)	<-200%
Loss from Impairment in Business Restructuring (one-time)	-	(21,802)	100%
Net Profit/(Loss)	999	(29,811)	<-200%
EPS (Baht/Share)	0.22	(6.62)	<-200%
Adjusted EBITDA[1]	38,117	31,766	-17%
Adjusted EBITDA Margin (%)	6%	5%	-1%

Notes:

(1) Adjusted EBITDA refers to EBITDA excluding Stock gain/(loss), NRV, Gain/(loss) from commodity hedging, and Extra item.

(2) Retroactively Adjusted EBITDA by excluding gain from bond buy-back in 2023

In 2024, the Company had total sales revenue of Baht 604,045 million, decreased by 2% compared to the previous year. This decline was primarily due to lower revenues from Upstream business, driven by a decrease in the prices of petroleum products and Aromatics. This occurred despite an increase in petrochemical sales volume, particularly in Intermediate products, as there were planned maintenance shutdowns in 2023 at the Monoethylene Glycol (MEG) plant during the first half of the year and Phenol plant 2.

In 2024, the Company reported an Adjusted EBITDA of Baht 31,766 million, decreased by 17% from the previous year. This decline was primarily due to weaker performance in the Refinery business, driven by a lower Gross Refining Margin (GRM), mainly resulting from the narrowing Diesel spread. Additionally, the petrochemical business continued to face pressure from the sluggish economic recovery, leading to subdued demand and an increase in petrochemical supply throughout the year. Moreover, the Company recognized non-recurring items, including a loss of Baht 2,457 million from stock loss net NRV, net gain from foreign exchange and financial derivatives of Baht 383 million. The Company also reported a share of loss from investments of Baht 1,462 million for the year, higher than the previous year, mainly due to weaker performance in the petrochemical business, particularly in the Polyvinyl Chloride (PVC) business, which was affected by a decline in PVC product price spreads.

In 2024, the Company progressed on its portfolio transformation strategy to strengthen its business, aiming to mitigate risks and enhance long-term competitiveness. As part of this initiative, the Company restructured two entities, 1) Vencorex Group, a producer of HDI and HDI derivatives, in which the Company holds 100% shares, and 2) PTT Asahi Chemical Company

Limited (PTTAC), a joint venture in the Acrylonitrile and Methyl Methacrylate business, in which the Company holds 50% shares.

- On September 6, 2024, Vencorex France and Vencorex TDI filed a petition to enter into the judicial reorganization proceedings with the Commercial Court in Lyon, France. On September 10, 2024, the Commercial Court accepted the petition, with the proceedings initially expected to take approximately 3-4 months. On November 7, 2024, the court extended the process until March 2025. Nonetheless, in 2024, the Company has fully recognized the estimated provisions related to the entire business restructuring process. This includes impairment losses on Vencorex Group's assets and provision for restructuring expenses, totalling Baht 10,028 million.

  Additionally, Vencorex's operations in France, Thailand and the United States are in the process of bidders selection, with the transaction expected to be completed in the first half of 2025.

- On November 15, 2024, the extraordinary general meeting of PTTAC's shareholders approved PTTAC's business withdrawal plan. As a result, in 2024, the Company recognized a total loss of Baht 11,773 million from asset impairment losses through equity method from PTTAC and provision for restructuring expenses.

Taking these impacts into account, the Company reported net loss of Baht 29,811 million in 2024 (Baht -6.62/share).

For the overall Adjusted EBITDA performance this year, the Upstream business performance experienced a decline, mainly due to lower performance in petroleum products. This was driven by a sharp decrease in the Gross Refining Margin (GRM), which fell by more than half from 9.4 USD/barrel in 2023 to 4.7 USD/barrel in 2024, primarily due to the narrowing Diesel spread. While the Aromatics business remained stable. However, the performance of Olefins significantly improved compared to the previous year, driven by a higher spread between Ethylene and Naphtha, mainly due to a partial supply cut in the market in the first half of the year. Despite this, the market faced continued pressure from new production capacity and weak downstream demand. Additionally, the performance was offset by the impact of the retrospective adjustment of the Ethane feedstock purchase agreement with PTT Public Company Limited, effective in 2024 as the higher natural gas price. This year, the Upstream petrochemical business also experienced planned maintenance shutdowns, particularly at Olefins Plant 2/2 during the first and third quarters.

Intermediates business performance significantly improved compared to the previous year, primarily due to an increase in total sales volume following planned maintenance shutdowns in 2023 at the Monoethylene Glycol (MEG) plant during the first half of the year and Phenol plant 2. The overall product spread for the Intermediate petrochemical business slightly decreased, except for MEG, which showed an increase in spread. In 2024, the Company had fewer planned maintenance shutdowns in the Intermediate petrochemical business compared to 2023, with maintenance activities scheduled between February and April 2024 at the MEG plant.

Polymers & Chemicals business reported a decline in performance compared to the previous year, primarily due to the weakening of polymers spreads, driven by an increase in Ethylene feedstock prices. This occurred despite a slight 4% increase in the average price of Polyethylene (PE) and a 2% rise in total sales volume compared to the previous year.

Bio & Circularity business performance decreased compared to the previous year, due to a 10% decrease in Methyl Ester sales volume. Additionally, the government's policy adjustment to reduce the biodiesel blend from B7 to B5, effective from November 21, 2024, led to a decline in overall Methyl Ester demand. Furthermore, Fatty Alcohol (FA) faced pressure from rising Crude Palm Kernel Oil (CPKO) prices as most buyers accelerated their inventory stocking in advance, although FA demand improved.

Performance Chemicals business experienced a decline in performance compared to the previous year, primarily due to the performance of Vencorex, a producer of HDI derivatives, which continued to face pressure from intense price competition in the market and weakened customer demand amid the economic downturn. Additionally, Vencorex's sales volume in 2024 declined by 19% compared to the previous year. However, allnex reported a 10% increase in performance in 2024 compared to the previous year, driven by higher sales volumes, primarily supported by growth in the Asian market.

Adjusted EBITDA by Business Unit

Adjusted EBITDA[1] Margin by Business Unit	2023[2]	2024	YoY % +/(-)
Adjusted EBITDA (Million Baht)			
Upstream	24,364	20,154	-17%
Intermediates	(359)	1,523	>200%
Polymers & Chemicals	6,178	3,300	-47%
Bio & Circularity	673	352	-48%
Performance Chemicals	7,006	6,945	-1%
Service and Others	255	(508)	<-200%
Total	**38,117**	**31,766**	**-17%**
Adjusted EBITDA margin (%)			
Upstream	7	6	(1)
Intermediates	(1)	2	3
Polymers & Chemicals	6	3	(3)
Bio & Circularity	4	2	(2)
Performance Chemicals	7	8	1
Total	**6**	**5**	**(1)**

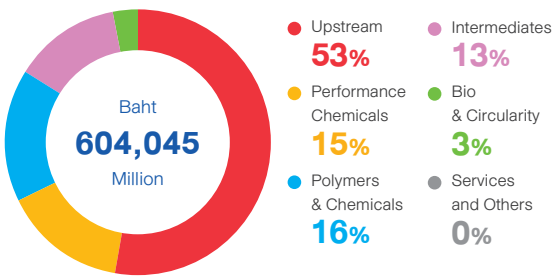
Notes:

(1) Adjusted EBITDA refers to EBITDA excluding Stock gain/(loss), NRV, Gain/(loss) from commodity hedging, and Extra item.

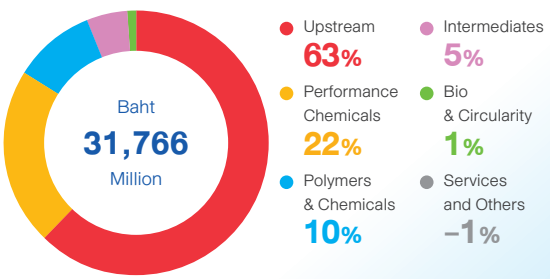
(2) Retroactively Adjusted EBITDA by excluding gain from bond buy-back in 2023

2024

Sales Revenues



Adjusted EBITDA



Performance Analysis by Business Unit

Upstream

Price, Product Spreads and Performance of Upstream

	2023	2024	YoY % +/(-)
Dubai Crude Oil ($/bbl)	82.1	79.6	-3%
Diesel 500 ppm-Dubai ($/bbl)[1]	21.9	15.7	-28%
Diesel 10 ppm-Dubai ($/bbl)[2]	24.3	16.7	-32%
LSFO-Dubai ($/bbl)	11.5	12.5	8%
Gasoline-Dubai ($/bbl)	16.7	13.4	-20%
Jet-Dubai ($/bbl)	22.5	15.6	-31%
Market GRM ($/bbl)	**9.4**	**4.7**	-50%
Condensate ($/ton)	679	660	-3%
Paraxylene (FECP)-Condensate ($/ton)	359	304	-15%
Benzene-Condensate ($/ton)	218	324	49%
BTX P2F ($/ton)[3]	**259**	**239**	-8%
Naphtha (MOPJ) ($/ton)	649	674	4%
Ethylene (SEA) ($/ton)	889	963	8%
Propylene (SEA) ($/ton)	858	864	1%
Hedging Gain/(Loss) (MB)	(626)	1,467	>200%
Stock Gain/(Loss) และ NRV (MB)	(2,584)	(2,624)	-2%
Adjusted EBITDA[4] (MB)	**24,364**	**20,154**	-17%
Adjusted EBITDA (%)	**7%**	**6%**	-1%
Petroleum Product Sales Volume (million bbl)	64.8	64.0	-1%
Petrochemical Product Sales Volume (million ton)	5.1	5.3	4%

Notes:

(1) Diesel 500 ppm market price is based on EURO4 standard

(2) Diesel 10 ppm market price is based on EURO5 standard stipulated since January 1, 2024

(3) There was a reclassification of natural gas expenses, which are fuel costs in the refinery business segment and the aromatics business segment, from feedstock costs to variable costs. This led to a retrospective adjustment of BTX P2F for comparative analysis purposes, but it did not affect the Market GRM and Adjusted EBITDA as reported by the company.

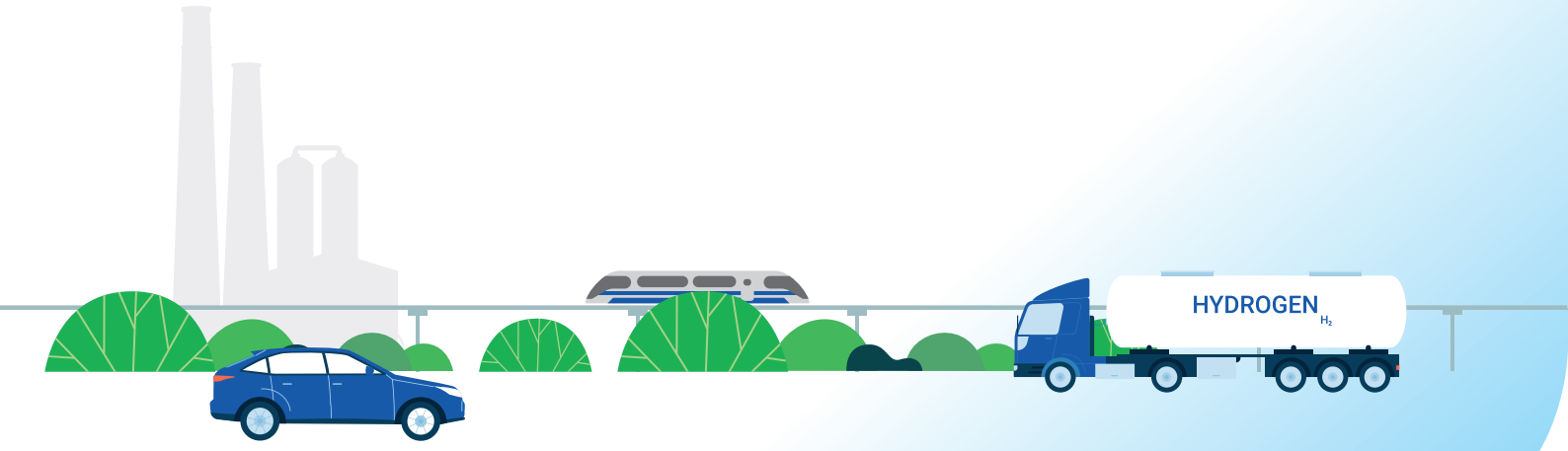
(4) Adjusted EBITDA refers to EBITDA excluding Stock gain/(loss),NRV, Gain/(loss) from commodity hedging, and Extra item

For Upstream Business in 2024, the Adjusted EBITDA was Baht 20,154 million, which decreased from the previous year by 17%, and the Adjusted EBITDA Margin was at 6%. The Company's petroleum product sales volume declined to 64.0 million barrels due to the preventive shutdown of some refinery units in Q4/2024. The Petrochemical product sales volume increased to 5.3 million tons, in line with the increased utilization rates of Aromatics and Olefins at 88% and 82%, respectively. In 2023, there were planned maintenance shutdown of Aromatics Plant 2 in Q3/2023, Olefins Plant 2/2 in Q1/2023, and Olefins Plant 1 in Q4/2023. In 2024, the Company only had planned maintenance shutdowns for Olefins Plant 2/2 in the first and third quarters. The performance decreased as a result of the following:

1. For the Refinery business in 2024, the performance decreased from 2023 resulting from economic recession. Especially in China, where full reopening began early in the year, economic indicators reveal a contraction in activity, signaling a slower than expected recovery. Despite cut run by OPEC, Saudi Arabia and Russia, petroleum product spreads, including Diesel, Jet, and Gasoline, declined from 2023 as the economic recession pressured demand in many countries. However, Low Sulfur Fuel Oil spreads increased from 2023 due to higher energy consumption in the Middle East in Q3/2024. The Company's Market GRM in 2024 decreased to 4.7 USD/barrel.

2. For the Aromatics business in 2024, the performance decreased from the previous year resulting from a decrease in Paraxylene over Condensate spread caused by the economic recession and a slow recovery in demand, particularly in the polyester and textile markets throughout the year. Despite the increase in Benzene over Condensate spread due to several plants on planned maintenance turnaround in 1H2024, along with the increase in by-products spreads, the Market P2F in 2024 decreased to 239 USD/ton.

3. For the Olefins business in 2024, the performance increased from 2023 resulting from an increase in the Ethylene over Naphtha spread, driven by a decline in Naphtha prices in line with crude oil prices. Also, new capacity additions in Asia were lower than in 2023, and Asian Ethylene producers maintained production controls. However, the downstream market remained weak due to a slower-than-expected demand recovery in China amid the economic recession. In Q1/2024, supply was tight due to maintenance shutdowns and reduced supply from other regions, impacted by geopolitical tensions in the Middle-East, leading to an increase in Ethylene prices. Meanwhile, Propylene prices declined in Q2 and 2H/2024 due to the expansion of Propylene capacity and continued economic recession. The utilization rate for Olefins in 2024 was 82%.



Intermediates

Price, Product Spreads and Performance of Intermediates

(Unit : USD per ton)	2023	2024	YoY % +/(-)
Mono-ethylene glycol (MEG-ASP)	488	538	10%
MEG-0.53 Ethylene	18	29	61%
Phenol	977	990	1%
Phenol spread*	252	233	-7%
Bisphenol A (BPA)	1,272	1,289	1%
BPA spread**	230	216	-6%
Propylene Oxide (PO)	1,053	1,001	-5%
Purified Terephthalic Acid (PTA)	779	721	-7%
PTA-0.67PX	83	76	-9%
Acrylonitrile (AN)	1,310	1,235	-6%
AN-Propylene	452	371	-18%
Methyl Methacrylate (MMA)	1,562	1,925	23%
MMA-Naphtha	912	1,251	37%
Adjusted EBITDA (MB)	**(359)**	**1,523**	>200%
Adjusted EBITDA margin (%)	**-1%**	**2%**	3%
Sales Volume (Kton)	2,602	2,952	13%
Share of gain/(loss) from investment (MB)	(1,014)	(512)	49%

Notes :

* Phenol spread derives from Phenol-0.878 BZ-0.474 Propylene+0.616 Acetone

** BPA spread derives from BPA-0.853 Phenol-0.273 Acetone

For Intermediates business in 2024, the Adjusted EBITDA was Baht 1,523 million, which increased from the previous year more than 200%, and the Adjusted EBITDA Margin was at 2%. The overall product sales volume was approximately 2.95 million tons which increased from 2023 by 13%. In 2023, there was planned maintenance shutdown of MEG plant in the first half of the year and Phenol plant 2, while there was less planned maintenance shutdown in 2024 of MEG plant from February to April 2024.

The overall market of Intermediates product in 2024 continued to face weakened demand due to the global economic slowdown and the addition of new production capacities for phenol, BPA, and Purified Terephthalic acid (PTA) from Chinese producers.

Polymers & Chemicals

Price, Product Spreads and Performance of Polymers & Chemicals

(Unit : USD per ton)	2023	2024	YoY % +/(-)
Average Polyethylene (PE)	1,033	1,074	4%
High-Density Polyethylene (HDPE)	1,044	1,014	-3%
HDPE-Ethylene	155	51	-67%
Linear Low-Density Polyethylene (LLDPE)	1,013	1,026	1%
LLDPE-Ethylene	124	63	-49%
Low-Density Polyethylene (LDPE)	1,041	1,182	13%
LDPE-Ethylene	152	219	44%
Polyethylene Terephthalate (PET)	925	877	-5%
Polypropylene (PP)	1,008	1,033	3%
PP-Naphtha	358	359	0%
Polyvinyl chloride (PVC)	814	766	-6%
PVC-0.5Ethylene	370	285	-23%
Polyols	1,366	1,277	-7%
Polyols-0.92PO	397	357	-10%
Adjusted EBITDA (MB)	**6,178**	**3,300**	-47%
Adjusted EBITDA margin (%)	**6%**	**3%**	-3%
Sales Volume (Kton)	2,331	2,385	2%
Share of gain/(loss) from investment (MB)	(553)	(273)	51%

For the full year 2024, Polymers and Chemicals Business reported Adjusted EBITDA of Baht 3,300 million, a decrease of 47% from the previous year, with Adjusted EBITDA Margin of 3%. The decline was mainly driven by weaker product spreads due to rising ethylene feedstock costs, despite total sales volume increasing by 2% from last year to approximately 2.39 million tons.

The overall market situation for the Polymers and Chemicals Business in 2024 continued to face pressure from the economic slowdown, which limited consumption and product demand. The supply additions, particularly from China, also entered the market in 2024. By mid-2024, geopolitical conflicts in the Middle East caused shipping delays to Asia, with LDPE being the most affected polymer product. The supply constraints led to a significant increase in LDPE prices in Asia during the first half of 2024. The average price of polyethylene increased by 4% from last year.

Bio & Circularity

Price, Product Spreads and Performance of Bio & Circularity

(Unit : USD per ton)	2023	2024	YoY % +/(-)
Methyl Ester (ME) P2F (THB per Kilogram)	4.3	4.3	-1%
Fatty Alcohol (FA) P2F	434	341	-21%
Adjusted EBITDA (MB)	**673**	**352**	-48%
Adjusted EBITDA margin (%)	**4%**	**2%**	-2%
ME Sales Volume (Kton)	320	289	-10%
FA Sales Volume (Kton)	97	104	6%
Share of gain/(loss) from investment (MB)	(204)	(1,368)	<-200%

For Bio and Circularity Business in FY2024, the Adjusted EBITDA was Baht 352 million, which decreased from the previous year by 48%, and the Adjusted EBITDA Margin was at 2%. This was impacted by the decrease in methyl ester sales volume due to the biodiesel mandatory reduction from B7 to B5 effective from November 21, 2024 which led to weakened demand despite government support through tourism and energy policies. Additionally, fatty alcohol P2F decreased due to crude palm kennel oil (CPKO) price increased, despite a recovery in demand as buyers stockpiled towards the end of 2024 over concerns about potential trade barriers.

Performance Chemicals

Performance of Performance Chemicals

	2023	2024	YoY % +/(-)
Adjusted EBITDA (MB)	**7,006**	**6,945**	-1%
Adjusted EBITDA margin (%)	**7%**	**8%**	1%
Sales Volume (Kton)	788	808	3%
Share of gain/(loss) from investment (MB)	(205)	(107)	48%

For Performance Chemicals Business in 2024, the Adjusted EBITDA was Baht 6,945 million, which decreased from the previous year by 1%, and the Adjusted EBITDA Margin was at 8%. Vencorex, a producer of HDI derivatives, continued to face pricing pressures due to intense market competition and weak customer demand caused by the economic downturn. In addition, sales volumes for 2024 declined by 19% year-over-year, following the restructuring of Vencorex France and Vencorex TDI in Q4/2024. However, allnex's Adjusted EBITDA increased by 10% from the previous year, driven by a 4% rise in sales volume. This growth was mainly supported by higher sales in Asia, particularly in China and India, as well as in Europe. Moreover, allnex maintained a stable profit margin per unit compared to the previous year.

Operating Performance

Unit : MB	2023[1]	2024	YoY % + /(-)
1. Sales Revenue	616,635	604,045	-2%
2. Feedstock cost	(470,770)	(467,275)	1%
3. Product to Feed Margin	**145,865**	**136,770**	**-6%**
4. Variable Cost	(55,475)	(49,994)	10%
5. Fixed OH	(33,666)	(32,591)	3%
6. Stock Gain/(Loss) and NRV	(2,756)	(2,457)	11%
7. Gain/(Loss) on Commodity Hedging	(627)	1,467	>200%
8. Other Revenue	13,931	9,286	-33%
9. SG&A Expenses	(26,823)	(28,726)	-7%
10. EBITDA	**40,449**	**33,755**	**-17%**
11. Depreciation & Amortization	(27,504)	(30,995)	-13%
12. Extra items	(86)	-	100%
13. EBIT	**12,859**	**2,760**	**-79%**
14. Net financial expense	(10,707)	(10,863)	-1%
15. FX Gain (Loss)	790	383	-52%
16. Share of gain/(loss) from investment	(725)	(1,462)	-102%
17. Corporate Income Tax	(1,352)	969	172%
18. Net Profit/(Loss) after Tax (exclude impairment/restructuring cost)	**865**	**(8,213)**	**<-200%**
19. Net Profit/(loss) attributable to: Non-controlling interests	(134)	(204)	-52%
20. Net Profit/(Loss) after Tax (exclude impairment/restructuring cost)	**999**	**(8,009)**	**<-200%**
21. Loss from impairment of assets (Vencorex)	-	(7,898)	-100%
22. Provision for business restructuring (Vencorex)	-	(2,130)	-100%
23. Share of loss from JV from impairment of assets (PTTAC)	-	(8,937)	-100%
24. Provision for business restructuring (PTTAC)	-	(2,836)	-100%
25. Net Profit/(Loss) after Tax to Owners of the Company (include impairment/resturcuring cost)	**999**	**(29,811)**	**<-200%**
26. Adjusted EBITDA[2]	**38,117**	**31,766**	**-17%**

Notes:

(1) Starting 2024, there was a reclassification of natural gas expenses, which are fuel costs in the refinery business segment and the aromatics business segment, from feedstock costs to variable costs. This led to a retrospective adjustment of the aforementioned items for comparative analysis purposes, without impacting other items and net profit as reported by the company.

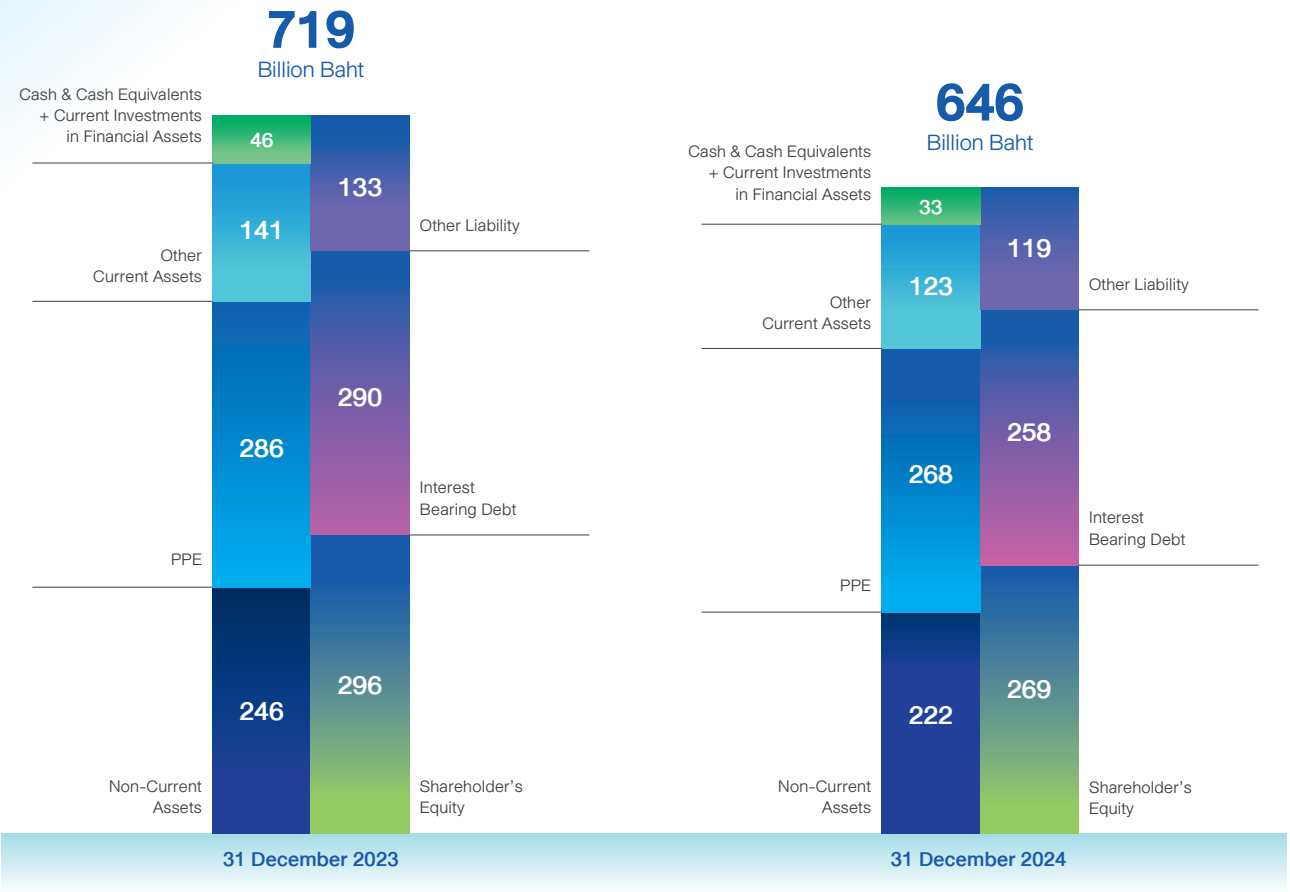
(2) Adjusted EBITDA refers to EBITDA excluding Stock gain/(loss), NRV, Gain/(loss) from commodity hedging, and Extra item. and Adjusted EBITDA in 2023 was retroactively adjusted by excluding gain from bond buy-back in 2023.

In 2024, the Company had total sales revenue of Baht 604,045 million, decreased by 2% compared to the previous year. This decline was primarily due to lower revenues from Upstream petrochemical products, driven by a decrease in the prices of petroleum products and Aromatics. This occurred despite an increase in petrochemical sales volume, particularly in Intermediate products, as there were planned maintenance shutdowns in 2023 at the MEG plant during the first half of the year and Phenol plant 2. Variable costs decreased from the previous year, mainly due to lower utility costs, while fixed overhead and SG&A expenses remained stable, supported by ongoing fixed cost-control measures. In addition, the Company recorded stock loss net NRV totaling Baht 2,457 million, partially offset by Baht 1,467 million gain from commodity hedging. Depreciation expenses in 2024 were higher than in 2023, primarily due to a one-time accelerated depreciation charge of approximately Baht 399 million at allnex in 2024, related to its European plant efficiency enhancement plan (Footprint Optimization). On the contrary, there were reversals of depreciation in 2023, including: (1) asset management initiatives involving sale-and-leaseback transactions of some production facilities and (2) the sale of obsolete polyethylene products that had been previously written off due to a warehouse incident in 2022. Beyond cost-control efforts, the Company remained committed to its strategic portfolio transformation plan. As part of this, the Company recognized impairment losses and provisions for restructuring expenses for Vencorex and PTTAC, totaling Baht 21,802 million in 2024.



Statements of Financial Position

Balance sheet



Assets

As of December 31, 2024, the Company had total assets of Baht 645,844 million, decreased by Baht 73,161 million or 10% from December 31, 2023 and variance of the assets are described as follows:

Total current assets decreased by Baht 30,740 million mainly due to decrease in cash and cash equivalents, and current financial assets by Baht 13,139 million (refer to cash flows analysis). There was a decrease in account receivables by Baht 10,008 million, driven by a decline in petroleum sales volume as the preventive shutdown of some refinery units in Q4/2024 as well as a lower product price in line with the decline in Dubai crude prices. Inventories decreased by Baht 3,295 million as lower Refinery and Performance Chemical inventories, primarily driven by a decline in HDI products as Vencorex entered judicial reorganization proceedings, leading to reduced production and sales volume. Other current assets decreased by Baht 4,298 million mainly due to other accounts receivable.

Property, plant and equipment decreased by Baht 18,090 million mainly due to higher accumulated depreciation by Baht 19,463 million and impairment for Vencorex, despite the completion of projects by Baht 10,266 million, including maintenance shutdown and allnex's China hub.

Non-current assets decreased by Baht 24,331 million from the loss on impairment for Vencorex and PTTAC, as well as decreased in shares of PTT Digital Solutions Company Limited. Additionally, the fair value measurements of the investment in Global Power Synergy Public Company Limited (GPSC) declined, aligned with the lower share price.

Liabilities

As of December 31, 2024, the Company had total liabilities of Baht 377,251 million, decreased by Baht 45,573 million from December 31, 2023 and movements of liabilities were as follows:

Interest-bearing debt (including Lease liabilities) decreased by Baht 32,171 million from bond repayments of Baht 11,500 million, bond buybacks of USD 749 million, and the repayments of long-term loans by Baht 6,036 million and EUR 186 million. Meanwhile, the Company made drawdown of the long-term borrowings of Baht 15,000 million, EUR 13 million, and USD 100 million. Lease liabilities increased by Baht 3,692 million.

Trade accounts payable decreased by Baht 9,009 million mainly due to lower Refinery sale volume from the preventive shutdown of some refinery units in Q4/2024 and lower propane purchases.

Other current liabilities decreased by Baht 4,233 million due to decline in other payable and payables to contractors.

Shareholder's Equity

As of December 31, 2024, the Company had total shareholder's equity of Baht 268,593 million, which decreased by Baht 27,588 million from December 31, 2023 as a result from change in Other components of equity, which included the loss from fair value measurements in financial assets and the fair value measurements of GPSC, net of the issuance of a subordinated perpetual bond.

Cashflow Statement

Cashflow (Unit: Million Baht)	For the year Ended December 31, 2024
Net cash flows provided by operating activities	32,322
Net cash flows used in investing activities	(3,889)
Net cash flows used in financing activities	(33,737)
Net increase (decrease) in cash and cash equivalents, before effect from foreign exchange rate	**(5,305)**
Effects of exchange rates on cash and cash equivalents	731
Net decrease in cash and cash equivalents during the period	**(4,574)**
Cash and cash equivalents at the beginning of the period	37,319
Cash and cash equivalents at the end of the period	**32,745**
Current investments in financial assets at the end of the period	365
Net cash and cash equivalent and investment at the end of the period	**33,110**

For the period ended December 31, 2024, the Company had cash flow activities as follows:

- Cash flows received from operating activities of Baht 32,322 million due to operating activities and change in net working capital.
- Cash flow used in investing activities of Baht 3,889 million. The Company had cash paid for property, plant, and equipment, and intangible assets amounting to Baht 15,760 million. The Company had cash received from investment in debt instruments of Baht 9,063 million, interest received of Baht 1,419 million and dividends received of Baht 1,314 million.
- Cash flow used in financing activities of Baht 33,737 million mainly due to cash paid for the bond buybacks by Baht 23,318 million, the repayment of bond by Baht 11,500 million, the repayment of borrowings from financial institutions by Baht 27,177 million, cash paid for lease liabilities and finance costs by Baht 15,282 million and cash paid for dividend payment by Baht 3,503 million. Meanwhile, the Company had cash received from borrowings from financial institutions of Baht 29,994 million and the issuance of a subordinated perpetual bond of Baht 16,927 million.

As a result, as of December 31, 2024, the Company had total cash and cash equivalents of Baht 32,745 million, along with current investments in financial assets of Baht 365 million. Hence, the Company had total cash and cash equivalent and investment of Baht 33,110 million. The Company had Net interest-bearing debt to equity at 0.84 times and Net interest-bearing debt to EBITDA at 6.66 times.

Key Financial Ratios

Liquidity Ratio	2022	2023	2024
Liquidity Ratio			
Current Ratios (Times)	1.65	1.48	1.37
Quick Ratio (Times)	0.74	0.83	0.71
Operating Cash Flow Ratio (Times)	-0.03	0.42	0.27
Account Receivables Turnover (Times)	14.22	12.02	11.49
Account Receivables Days (Days)	25.66	30.37	31.86
Inventory Turnover (Times)	8.53	8.05	8.61
Days Sales in Inventory (Days)	42.81	45.33	42.49
Account Payables Turnover (Times)	9.89	9.08	8.64
Account Payables Days (Days)	36.90	40.22	42.36
Cash Cycle (Days)	31.57	35.48	31.99
Profitability Ratios			
Gross Margin Ratio	7.64%	5.99%	5.36%
EBIT/Sales Revenue	0.00%	2.24%	-3.13%
Cashflow from Operation/EBIT	>200%	>200%	-169.90%
Net Profits to Sales Revenue	-1.28%	0.16%	-4.90%
Return on Equity	-2.9%	0.3%	-10.83%
Efficiency Ratios			
Return on Total Assets (%)	-0.01%	1.9%	-2.79%
Return on Fixed Asesets (%)	5.99%	9.79%	0.43%
Total Asset Turnover (Times)	0.93	0.86	0.89
Leverage Ratios			
Interest Bearing Debt to Equity (Times)	1.01	0.98	0.96
Interest Coverage Ratio (Times)	-0.07	4.24	2.81
Dividend Payout Ratio (%)	N/A	>200%	N/A

Projects Progress

Estimated Annual CAPEX of GC Group for the next 5 years

CAPEX of PTTGC group*	Total 2025-2029	Estimated Annual CAPEX (M.USD)				
		2025	2026	2027	2028	2029
1) GC group excluding allnex	183	163	20	-	-	-
2) allnex expansion & growth Capex	657	126	141	160	138	92
Total	**840**	**288**	**161**	**160**	**138**	**92**

Notes:

* 1. Group annual maintenance ~ 400 M.USD (including allnex Holding GmbH) are excluded from the table.
2. Other projects such as IT & digital, new office facility, operational excellence etc.
3. allnex expansion & growth Capex based on capex plan, including committed and uncommitted projects but excludes any large M&A projects.
4. FX assumption for USD/EURO is 1.12 for allnex CAPEX plan.

Market and Business Outlook in 2025

The global economic outlook for 2025 is expected to grow at a stable rate, with the International Monetary Fund (IMF) projecting global growth at 3.2%, the same as in 2024 (IMF, October 2024). The recovery is anticipated to be gradual, supported by factors such as declining inflation, recovery in manufacturing and transportation in certain regions, and economic stimulus measures from various countries worldwide. These factors are expected to boost consumption and investment, alleviating pressure on consumers and businesses, which will, in turn, support steady growth across the overall economy. However, there remain several risk factors, including economic, geopolitics, and President Trump's policies, which may lead to increased trade protectionism, posing risks to the global supply chain and adding pressure on the overall business sector.

Upstream Business Unit

The Company forecasts that the price of Dubai crude oil in 2025 will be between 73-78 USD/barrel. The demand for crude oil is expected to increase slightly from 2024, as the global economy gradually recovers due to economic stimulus measures and interest rate cuts by central banks worldwide, leading to higher oil demand. However, policies accelerating the development of alternative energy technologies and the use of renewable energy in many countries remain a factor putting pressure on crude oil prices. On the supply side, OPEC Plus is expected to manage production to maintain market balance, while increasing crude oil production from non-OPEC countries such as the United States, Canada, Brazil, and Guyana will help ease supply constraints in the market.

For petroleum products from its refinery, the Company expects product prices and margins in 2025 to slightly weaken compared to 2024. This is largely due to an anticipated increase in petroleum product supply as new refineries come online in Asia, particularly in China and India. On the demand side, economic factors are expected to provide some support, especially with China's economic stimulus measures likely boosting the construction industry and driving up oil demand. Economic pressures, including high policy interest rates, will, however, dampen demand growth. In terms of product spreads, the Company forecasts that the Diesel-Dubai crude spread (10 ppm) will average between 14-17 USD/barrel. The low sulfur fuel oil (LSFO)-Dubai crude spread is projected to range from 9-12 USD/barrel, while the Gasoline-Dubai crude spread is expected to average 11-15 USD/barrel. The Company continues to manage production planning and sales contracts to align with market conditions, closely monitoring market trends to optimize crude sourcing and product margins. Refinery utilization for 2025 is forecasted to be around 91%.

For petrochemical products from its aromatics plant, the Company expects the paraxylene-naphtha spread in 2025 to decrease to around 240-260 USD/ton, pressured by the ongoing global economic slowdown. However, China's economic outlook is expected to improve with the support of stimulus measures, which may gradually boost demand for aromatics products. On the supply side, new production capacities for paraxylene and benzene are anticipated to come online. The benzene-naphtha spread is forecasted to be around 270-290 USD/ton, down from 2024, partly due to lower-than-average inventory levels seen in 2024. The Company estimates that the utilization rate of its aromatics plant in 2025 will be approximately 84%.

The outlook for Olefins products, the Company anticipates ethylene prices in 2025 to range between 900-930 USD/ton, and propylene prices between 820-850 USD/ton, similar to 2024 levels. Demand recovery is expected to remain limited due to the global economic slowdown. However, gradual improvements in economic conditions may provide some support to the ethylene and propylene markets. Meanwhile, the market will continue to face pressure from additional production capacity, especially for propylene, primarily driven by new output from China. The Company estimates the utilization rate of its olefins plant in 2025 to be around 91%.

Intermediates Business Unit

For phenol market, The Company anticipates that the phenol (P2F) product spread in 2025 will be between 230-250 USD/ton, similar to 2024 levels. Demand for phenol, acetone, and BPA is expected to remain under pressure due to the global economic slowdown, though there may be gradual improvement. On the supply side, new production capacity in China continues to increase, despite the recent closure of the BPA manufacturer in Japan.

For the monoethylene glycol (MEG) market outlook, the Company projects MEG prices at 510-540 USD/ton, with pressure likely to persist due to sluggish demand recovery and additional production units coming online in 2025, both of which are key factors weighing on prices. For purified terephthalic acid (PTA), the Company expects the PTA spread to improve from 2024 levels as demand begins to normalize with recovering economic activity, though new capacity will also continue entering the market.

Polymers & Chemicals Business Unit

The Company anticipates that the average polyethylene price in 2025 is expected to be around 980-1,010 USD/ton, a slight increase from 2024. Demand for the product is expected to recover due to economic stimulus measures, particularly from major economies like the United States and China. However, the market remains volatile, facing pressures from economic recession risks, geopolitical uncertainties, and continued growth in production capacity, especially in China. Demand is expected to increase, supported by various economic measures. The Company projects the polyethylene plant's utilization rate in 2025 to be approximately 107%.

Performance Chemicals Business Unit

The demand for industrial coating resins is expected to improve in 2025 compared to 2024, with growth in this product segment projected to outpace overall GDP growth. This positive trend is supported by recovery signals from end-use industries, such as the automotive sector. However, increased price competition is anticipated, especially with new production capacity coming online.

Sustainability Management

GC strives to operate for the organization's growth as well as the balance of the three dimensions, namely Environment, Social, Governance and Economic (ESG). Our success has been reflected throughout the recognitions both national and international. The Company has implemented sustainability strategies and achieved the objectives as our goals. We have also attained outstanding results under sustainability strategy (Step up):

Sustainability Management in the Environmental Dimension

Efficiency-driven: The Company is implementing projects to improve energy efficiency in the production process and transition to renewable or low-carbon energy. The Company has successfully executed projects to reduce Scope 1 and 2 greenhouse gas emissions according to set targets. Additionally, the Company is exploring the feasibility of using new technologies to find further opportunities for action. For example, the Heat Exchanger installation project to transfer energy from hot condensate to preheat feed, and the project to improve the efficiency of the propylene oxide production unit to reduce steam energy consumption.

Portfolio-driven: The Company is moving forward to shift its business towards low-carbon operations by investing in High Value Business (HVB) and businesses aligned with circular economy principles. It is also seeking opportunities to create Synergy (Leverage Synergy) and maximize value from its operations. For example, the Plastics Waste Management project in collaboration with brand owners who plan to use products made from recycled PET plastic bottles (PCR PET or Post Consumer Recycled Resin PET) and recycled HDPE plastic bottles (PCR HDPE or Post Consumer Recycled Resin HDPE) through the GC YOUTURN platform.

Compensation-driven: The Company is continuously implementing projects to restore and balance forest ecosystems in collaboration with government agencies, the private sector, social sectors, and various communities. Examples include the Carbon Credit Management in Forests for Sustainable Development Project by the Mae Fah Luang Foundation under Royal Patronage, the Mangrove Reforestation and Care Project for Carbon Credits in collaboration with the Department of Marine and Coastal Resources, and currently, the Company is studying the technological feasibility and investment assessment for carbon capture technology in collaboration with PTT Group. Moreover, the Company is engaging in discussions and coordination with government agencies, regulatory bodies, associations, the private sector, and relevant industries to promote the development of carbon capture projects as a national initiative, supporting Thailand's Net Zero target.

Sustainability Management in the Social Dimension

The Company carries out social responsibility initiatives according to its resource efficiency improvement plan, aligned with the Company's strategy. These initiatives aim to elevate CSR projects by adding value to communities and society. Notable projects include the development of the On Nut Urban Forest Park (Flagship Project) on 55 rai (approximately 21.74 acres) in collaboration with the Australian Embassy and partner networks. This project extends to developing a resilient urban center and surrounding areas (Resilient Urban Centre and Surrounds: RUCAS). Another significant project is Upcycling Social Enterprise (Impact Driven Project), which adds value to the Ban Bon community sewing group by producing upcycled survival bags for the Friends in Need (of "Pa") Volunteers Foundation and the Thai Red Cross Society. The Our Khung Bangkachao project (Strategic Fit Project) aims to create a knowledge management platform for waste segregation through various activities, such as the Recycle Market. Additionally, the Company is developing community products that reflect the unique identity of Rayong Province in collaboration with partners. The Company also reviews community support measures for emergencies to minimize impacts on the community, society, and the Company, as well as related organizations.

Sustainability Management in the Governance & Economic Dimension

The Company is committed to sustainability efforts that align with national guidelines and international standards. The Company discloses sustainability information related to its operational strategies, management systems, processes, and sustainability performance on key business issues and stakeholder expectations under the sustainability management framework, which includes:

- International sustainability disclosure principles (Global Reporting Initiative Standards 2021: GRI 2021)
- International Financial Reporting Standards (IFRS), including IFRS S1, which provides general guidelines for companies on sustainability-related financial disclosures, and IFRS S2, which outlines the disclosure of climate change-related opportunities and risks, including industry-based metrics
- European Sustainability Reporting Standards (ESRS)
- Stakeholder Engagement Standard (AA1000)
- Dow Jones Sustainability Indices (DJSI)
- Carbon Disclosure Project (CDP Worldwide: CDP)
- Morgan Stanley Capital International (MSCI) sustainability performance benchmarks
- United Nations Sustainable Development Goals (SDGs)

The Company analyzes data to improve and review operations in accordance with the Dow Jones Sustainability Indices (DJSI) and Carbon Disclosure Project (CDP) criteria, particularly in climate change management and water security. Given the increasingly stringent assessment criteria, preliminary score evaluations are conducted to accelerate operational improvements and maintain exemplary global sustainability standards.

The Company has participated in the 2024 DJSI evaluation, expecting to maintain its leadership in global sustainability within the Top 3 ranks. Additionally, the Company has participated in the EcoVadis assessment, an international sustainability index focused on supply chain collaboration, and is currently awaiting the evaluation results.

Company Information and Other Important Information

Company Information

References

Securities Registrar
Thailand Securities Depository Company Limited
93, 14th Floor, Ratchadaphisek Road, Din Daeng Sub-District, Din Daeng District, Bangkok 10400
Tel: +66 (0) 2009-9999
Fax: +66 (0) 2009-9991
Website: www.set.or.th/tsd

Registrar and Debenture Holders Representative
Bank of Ayudhya Public Company Limited
1222 Rama III Road, Bang Phongphang Sub-District, Yan Nawa District, Bangkok 10120
Tel: +66 (0) 2296-2030, 4808, 5557
Fax: +66 (0) 2683-1298
Website: www.krungsri.com

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Legal Proceeding

Oil spill incident legal case

During the third quarter of 2014, a number of people in Rayong filed several lawsuits with the Civil Court and the Rayong Provincial Court against the Company to claim extra compensation from an oil spill incident and to perform the rehabilitation of the sea and natural environmental recovery. Some cases have been dismissed and some cases have been passed a judgement by the Civil Court on 25 August 2016 which ordered the Company to compensate for damages including interest and rehabilitation of approximately Baht 11.26 million. The Company has appealed on 17 February 2017. Subsequently, on 11 May 2018, the Company made compromise agreements with the majority of plaintiffs at the Civil Court. On 20 December 2018, the Court of Appeal has passed the judgement according to the compromise agreements for which the Company has already paid compensation in full amount. For the remaining plaintiffs, the Court of Appeal ordered the Company to pay compensation with interest according to the judgement of the Court of First Instance and reduced the amount of interest. The Company has paid the compensation to all plaintiffs completely and no petition is submitted to Supreme Court by any plaintiffs. This case has become final.

For the case at Rayong Provincial Court, on 28 September 2018, the Court has made a judgement ordering the Company to pay damage costs with interest of approximately Baht 38 million by deducting the remedy payment paid to the plaintiffs of Baht 24 million. The Company deposited the remaining damage costs with interest with the Rayong Provincial Court on 25 February 2019. Some plaintiffs filed an appeal with the Rayong Provincial Court and the Company has filed an answer to the appeal with the Rayong Provincial Court on 2 October 2019. Subsequently, on September 1, 2020, the Court of Appeal Region 2 passes the judgement ordering the Company to pay additional damages including interest to the plaintiffs. The Company deposited the additional amount of Baht 25 million to the Rayong Provincial Court on 30 September 2020, which is to cover the additional damages ordered under the judgement. Afterwards, on 14 October 2020, the Rayong Provincial Court set an appointment to hear the judgement or the order of the Court of Appeal Region 2 on 26 November 2020. Then, the plaintiffs have filed the Dika appeal period on 1 March 2021. The Supreme Court has issued an order accepting the Dika appeal of the plaintiffs on 2 March 2022 and sent a copy of Dika appeal to the Company on 19 March 2022. The Company filed an answer to the Dika appeal on 13 September 2022. The case is currently under the trial by the Supreme Court.

Thereafter, on 28 July 2023, the Company received a related summons and a copy of the civil plaint which the Department of National Parks, Wildlife and Plant Conservation filed against the Company to Rayong Provincial Court regarding tort causing damage to natural resources and claim for damages. The plaintiff claimed that the oil spill incident in 2013 caused damage to the plaintiff. The Company and legal advisor of the Company considered relevant facts, evidence and laws and are of the opinion that the Company had remedied and compensated for the damage and the natural resources and environment had been restored after the incident, therefore, the Company should not have liability as claimed. Accordingly, the Company has not recorded any provision for any losses resulting from such case.

Oil spill incident legal case in 2022

On 8 April 2023, the Company has received a summons and a copy of the civil plaint which the Local Fisheries Association, fishermen and merchants (“Plaintiffs”) filed against Star Petroleum Refining Public Company Limited as the first defendant and the Company as the second defendant to Rayong Provincial Court regarding tort, claim for damages and request for marine resources restoration. The Plaintiffs claimed that the oil spill incident caused the Plaintiffs’ loss of income. The Company and legal advisor of the Company considered relevant facts, evidence and laws and are of the opinion that the Company did not commit a wrongful act against the Plaintiffs as claimed and, therefore, it should have no liability as claimed. The Company submitted the statement of defense to the Rayong Provincial Court on 8 June 2023 and the case is under the trial by the Rayong Provincial Court. Accordingly, the Company has not recorded any provision for any losses resulting from such case.

Frequently Contacted Financial Institutions

(In case the company issues bonds)

Bangkok Bank Public Company Limited
Address : 333 Silom Rd., Silom, Bang Rak, Bangkok 10500
Tel : 0-2230-2328, 0-2230-2295, 0-2626-3646, and 0-2353-5421

Krungthai Bank Public Company Limited
Address : 35 Sukhumvit Rd., Klong Toey Nua, Wattana, Bangkok 10110
Tel : 0-2208-4845-47

Bank of Ayudhya Public Company Limited
Address : 1222 Rama III Rd., Bang Phongphang, Yan Nawa, Bangkok 10120
Contact location : 550 Phloenchit Rd., Lumphini, Pathum Wan, Bangkok 10330
Tel : 0-2296-3999 and 0-2296-4776

Kasikornbank Public Company Limited
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Care for others
and the environment

2 CORPORATE GOVERNANCE

We believe that sustainable organizational growth must be founded on good corporate governance and business ethics.

As such, GC strictly prioritizes responsible, transparent, accountable, and fair business practices and takes a zero-tolerance stance on all forms of corruption to build confidence among shareholders, investors, and all stakeholders.

Corporate Governance Policy

GC, under the supervision of the Board of Directors, is committed to maintaining its corporate governance standard in conformity with international standards since its establishment in 2011. To this end, the Board of Directors has established a Corporate Governance Policy as part of the Business Operations Policy. The Corporate Governance and Sustainability Committee has been assigned to oversee relevant matters and ensure that GC's corporate governance practices meet international standards, align with the Company's business strategies and directions, and comply with any other requirements, laws and guidelines. The committee is also tasked with monitoring and assessing the effectiveness of corporate governance implementation on a yearly basis through meetings of each subcommittee. The assessment results are also regularly reported to the Board of Directors.

Overview of Corporate Governance Policy and Practices

The Board of Directors has established a fair management structure that governs the relationship of the Board of Directors, the management, and shareholders. The Board of Directors also plays an important role in formulating visions, strategies, policies, and important action plans, ensuring that there are effective performance monitoring/assessing and risk management systems, in addition to maintaining its independence and accountability for the outcomes of its performance of duties pursuant to good corporate governance principles. The objectives are as follows:

- Strengthening the management system so that it is transparent and fair to all groups of stakeholders, complies with the applicable laws, regulations, rules, and requirements of the government agencies, and meets international and distinct standards, which will help enhance GC's competitiveness adaptability and enable it to prevent and eliminate any potential conflicts of interest.

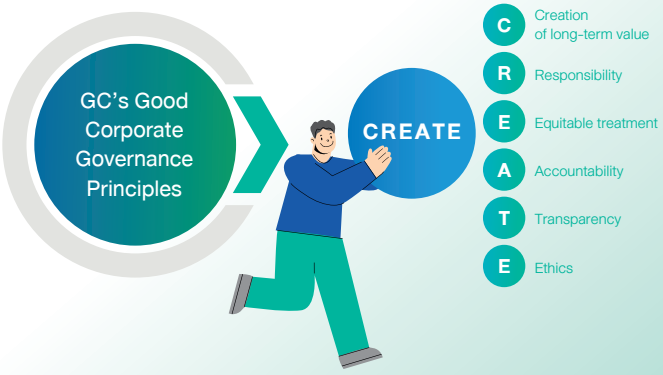
- Building confidence among investors and the general public both in Thailand and overseas and taking part in increasing the value of GC's shares in order to protect its interests while taking into consideration the interests, rights, and equality of the shareholders and relevant stakeholders.

- Monitoring GC's performance assessment and inspecting the operation in order to improve and rectify, a more effective operation.

- Establishing the scope of responsibilities of the Board of Directors and Executives towards all stakeholders, to ensure that the management exercises its authority within the defined scope.

In this connection, the Board of Directors has established a Corporate Governance Policy as operational guidelines for all of GC Group's Directors, Executives and employees in adherence to both domestic and international practices, such as guidelines of the Stock Exchange of Thailand (SET), the Corporate Governance Code for Listed Companies of the Securities and Exchange Commission (CG Code), the ASEAN Corporate Governance Scorecard, the Dow Jones Sustainability Indices (DJSI). Moreover, the Board of Directors is determined to continuously improve the Company's corporate governance to meet international standards, which include taking into consideration the shareholder's rights, equitable treatment of shareholders, emphasis on the roles of stakeholders, information disclosure and transparency, and the accountability of the Board of Directors.

GC's good corporate governance principles consist of Creation of long-term value, Responsibility, Equitable treatment, Accountability, Transparency, and Ethics (C R E A T E). These principles have been adopted by the Company as guidelines to ensure that its operation complies with the applicable laws and regulations of every country in which it operates. The Board of Directors and Executives serve as ethical leaders and role models for compliance with the Corporate Governance Policy, Anti-Fraud and Anti-Corruption Policy, Corporate Governance and Business Code of



Conduct Handbook of GC Group. They also promote good corporate governance culture, attend to the stakeholders, and promote practices and business operations which take into account human rights, consumer rights, and fair labor practices. In addition, they shall put in place the auditing, monitoring, assessment, and revision systems in order to ensure that all employees adhere to and follow the Corporate Governance Policy fully and sustainably. Details of the corporate governance performance can be found under "Ensure Compliance with Corporate Governance policy and practices" on page 203.

Policy and Practices for the Board of Directors

Board of Directors

The Board of Directors shall be appointed by the Annual General Meeting of Shareholders, elected directors to replace those retiring by rotation on a yearly basis. All Directors shall be qualified and possess no prohibited characteristics stipulated by relevant laws and regulations. A board diversity policy has also been established as part of the Director nomination and selection process to ensure a suitable and diverse board composition in line with the Corporate Governance and Business Code of Conduct Handbook. Under this policy, the nomination takes into consideration the range of knowledge, competency, and expertise in various fields beneficial to the Company according to the Board Skills Matrix in alignment with the stratetgic direction and business approaches, such as engineering, energy, material industry, petrochemical and chemical, economics and finance, business administration, risk management, accounting, law national, security, sustainability, information technology, cybersecurity, and international business, and takes into account the diversity of gender, ethnicity, and nationality as well as the suitable proportion of independent director in accordance with good corporate governance principles, without discrimination on the grounds of ethnicity, nationality, skin color, race, or religion, in order to achieve a diverse range of expertise and perspectives necessary for and beneficial to GC's business operations.

The current Board of Directors consists of 15 members, consisting of 1 Executive Director and 14 Non-executive Directors. Among these, 9 are Independent Directors, which is considered suitable for the size and nature of the Company's business and its strategic direction and allows for an effective delegation of duties. Board duties and responsibilities are clearly defined in compliance with applicable laws, regulations and articles of association, shareholder resolutions, and good corporate governance principles. The Chairman of the Board oversees its discharge of duties to ensure efficiency and independence from the management.

Further details appear under "The Board of Directors" on page 159.

Sub-committees

The Board of Directors has appointed 4 Sub-committees, namely the Audit Committee, the Nomination and Remuneration Committee, the Corporate Governance and Sustainability Committee, and the Risk Management Committee, helps in screening the operation in different aspects as assigned as well as specifies the qualifications, term of office, and scope of duties according to the charter of each specific committee. The Directors of the sub-committees are qualified for their knowledge and capability with appropriate and adequate experience sufficient to perform in the sub-committee for each specific field according to the stipulation of the relevant laws, rules, regulations, and the Company's Articles of Association. Each sub-committee regularly reports its performance to the Board of Directors at Board meetings and disclose its annual performance in the past year to regulatory agencies, shareholders, and the general public in Form 56-1 One Report on a yearly basis.

Nomination and Appointment of Directors, Independent Directors, and Chief Executive Officer

The Board of Directors has appointed and entrusted the Nomination and Remuneration Committee with the authority to nominate and select qualified candidates to take directorship to replace resigning directors or directors due to retire by rotation in accordance with the Company's fair and transparent nomination criteria and procedures, as well as to nominate and select candidates for the Chief Executive Officer from a list of qualified Directors and propose such candidates to the Meeting of the Board of Directors and/or the General Meeting of Shareholders for consideration and approval. Such candidates shall have all qualifications and shall not hold any of the prohibited characteristics as stipulated by the applicable laws and regulations, including the Public Limited Company Act B.E. 2535 (1992), the Securities and Exchange Act B.E. 2535 (1992), the Organic Act on Counter Corruption B.E. 2561 (2018), Notifications of the Capital Market Supervisory Board, Notifications of the Bank of Thailand,

CG Code, rules and regulations of the Office of the Securities and Exchange Commission (SEC) and the Stock Exchange of Thailand (SET), GC's articles of association and Corporate Governance and Business Code of Conduct Handbook, and the independence and conflicts of interest of the Directors shall be also be taken into consideration with due circumspection. Every Director shall perform their duties with accountability, upholding the duty of care and the duty of loyalty. In addition, the Nomination and Remuneration Committee may consider candidates from the directors' pool of GC and directors' pool of creditable organizations, such as that of the State Enterprise Policy Office (SEPO) and the list of directors of the Thai Institute of Directors Association (IOD), which compile a list of knowledgeable and competent persons with diverse areas of specialization beneficial to the strategic direction and business approaches of the Company. The committee shall also take into consideration the Board diversity, including the proportion of female directors (gender diversity), the diversity of ethnicity and nationality, and Independent Directors. The diversity of skills of the existing directors, including knowledge, skills, expertise, experience, and specialization that will benefit the Company and correspond with its strategic direction and business approaches according to the Board Skills Matrix of the Company, in order to ensure that the Board composition is diverse, suitable, and in line with the Board Diversity Policy and that the Board of Directors can effectively responds to GC's existing and future strategic directions and goals, as detailed below.

Nomination and appointment of Directors to replace Directors retiring by rotation: The Company gives opportunities for shareholders to nominate qualified persons for directorship of the Company in advance of the Annual General Meeting of Shareholders every year. The Nomination and Remuneration Committee is responsible for nominating and selecting qualified candidates in accordance with the director nomination and appointment criteria and procedures and proposing the candidates to the Meeting of the Board of Directors for consideration and approval before proposing the list of such candidates to the General Meeting of Shareholders for consideration and approval. The approval of the General Meeting of Shareholders shall be by a majority of votes of shareholders who attend the meeting and are entitled to vote. In compliance with the corporate governance principles, the shareholders shall vote on each candidate on an individual basis. In the case of the nomination of former directors for re-appointment, the performance in the previous years, the ability to dedicate time to their duties, and their participation of each such candidate shall be taken into consideration.

Nomination and appointment of Directors to fill vacancies in cases other than retiring by rotation: In accordance with the articles of association of the Company, the Nomination and Remuneration Committee is responsible for nominating and selecting qualified candidates according to the director nomination and appointment criteria and procedures and proposing such candidates to the Meeting of the Board of Directors for consideration to be appointed as director to fill a vacancy, except in the case that the remaining term of the vacant seat is less than 2 months, in which case the director who is appointed to the seat shall remain in office for the remaining term. The approval for such appointment shall be by at least three quarters of the votes of the number of the remaining directors.

Nomination and appointment of members of Sub-committees: The Nomination and Remuneration Committee is responsible for nominating and selecting qualified Directors of the Company in accordance with the sub-committee nomination and appointment criteria and procedures, which include the charter of each Sub-Committee, and for proposing the candidates to the Meeting of the Board of Directors for consideration for appointment as members of the Sub-committee. A sub-committee member shall hold office for 3 years per term. The approval for such appointment shall be by a majority of votes of the Meeting of Board of Directors. A sub-committee member retiring by rotation may be re-appointed for another term by the Board of Directors. In case of vacancy other than by rotation, the replacing sub-committee member shall remain in office for the remaining period of the one that has been replaced.

Consideration of qualifications of Independent Directors: The performance of Independent Director's duties is a key mechanism in the oversight of the Company's business operations to ensure that the decisions of the Board of Directors will prioritize the interests of shareholders as a whole and comply with corporate governance principles. To this end, the qualifications of Independent Directors have been specified in the Corporate Governance and Business Code of Conduct Handbook and on the Company's website. The qualifications of Independent Directors established by the Company are more stringent than those prescribed by the Notification of the Capital Market Supervisory Board No. TorJor. 39/2559 Re: Application for Approval and Granting of Approval for Offering of Newly Issued Shares by the Securities Exchange Commission with respect to the shareholding of no more than 0.5% of total shares with voting rights of the Company, parent company, subsidiaries and affiliates, major shareholders

or persons with controlling power over the Company, including the shareholding of their related persons (while the Notification of the Capital Market Supervisory Board requires only shareholding of no more than 1%). In addition, the Company requires that the Independent Directors may remain in office for no more than 9 consecutive years from the date of initial appointment. This requirement is included in the charter of Independent Directors, which has been published on the Company's website.

Nomination and appointment of the Chief Executive Officer (CEO): In case of vacancy, the Nomination and Remuneration Committee is responsible for nominating and selecting a candidate for the position from the list of Directors of the Company who possesses necessary and suitable skills, professional experience, and specific qualifications for the business operation in accordance with the Board Skills Matrix, which includes business administration knowledge and capability and experience in relevant fields, such as, energy, petroleum, and petrochemical. Furthermore, the candidate must demonstrate leadership, have experience as a leader of a company, and be well-regarded by relevant business organizations. The committee shall also take into account any potential conflicts of interest with GC and other companies in GC Group and propose the candidate to the Meeting of the Board of Directors for consideration and appointment.

Details of the nomination and appointment of Directors, Independent Directors, and Chief Executive Officer can be found under "Nomination, Development, and Performance Assessment of the Board of Directors" on page 194.

Remuneration of the Board and Executives

The Board of Directors: Details of the remuneration of the Board of Directors can be found under "Meeting Attendance and Remuneration of Individual Directors" on pages 200-201.

Executives: Details of remuneration of the Executives can be found under "Executives" on page 173.

Development of Directors and Executives

The Board of Directors places great importance on seminar attendance as a way to enhance Directors' knowledge and competence, enable them to discharge their duties more effectively, and prepare Executives for internal rotations and for succession to the Chief Executive Officer position and a role in the top management. The Board of Directors has also prescribed the potential assessment of top Executives to enhance their preparedness for Executive-level duties. Key development initiatives are summarized under "Development of Directors, Executives, and Company Secretary" on page 195.

Assessment of Directors' Performance

The Board of Directors has prescribed annual Board performance assessments to enable Directors to review their performance and review problems and obstacles during the year. Three types of performance assessment are performed, namely group assessment, self-assessment, and cross-assessment (assessing another Director). Furthermore, Board KPIs have established according to the CG Code and Dow Jones Sustainability Index (DJSI) comprising 4 aspects, which are Corporate KPIs, the Board performance group assessment results, Directors' meeting attendance, and Directors' engagement during Board meetings. Additionally, group assessment and self-assessment have been prescribed for the Company's sub-committees, namely the Audit Committee, the Nomination and Remuneration Committee, the Corporate Governance and Sustainability Committee, and the Risk Management Committee. The assessment results and suggestions are subsequently presented to the Board of Directors and used to develop guidelines for optimizing the Board's performance in a tangible way. The assessment results are also disclosed in Form 56-1 One Report and used by the Nomination and Remuneration Committee as a factor in the determination of The Board of directors annual remuneration.

Further details are provided under "Nomination, Development, and Performance Assessment of the Board of Directors" on pages 196-197.

Governance of GC Group

The Company grows in the petrochemical and chemical industry and engages in investment and joint venture expansion in various countries both by itself and through its subsidiaries, joint ventures, affiliates and others, as detailed under "Business Operation and Performance" on page 42. The Board of Directors has approved the implementation of governance guidelines and management which are in line with GC Business Principle, as described in detail under "Governance of Subsidiaries and Affiliates" on page 202.

Policy and Practices for Shareholders and Stakeholders

GC's business operation involves various groups of stakeholders, ranging from shareholders, customers, business partners, creditors, competitors, government sectors and employees to communities, society, and the environment. As each stakeholder group has different needs, the Board of Directors has established policies and guidelines for responsible engagement of each stakeholder group in line with their specific needs as part of the Corporate Governance and Business Code of Conduct Handbook and disclosed them on the Company's website.



Shareholder Rights

GC prioritizes shareholder right protection and has included it as part of the Corporate Governance and Business Code of Conduct Handbook to ensure full compliance.

Provision of Important and Pertinent Information to Shareholders

GC provides shareholders with clear, up-to-date information of importance and pertinence on its business operations. To this end, it also discloses information deemed necessary, albeit not legally required, on its website and via the portal of the Stock Exchange of Thailand (SET).

The 2024 Annual General Meeting of Shareholders

GC held the 2024 Annual General Meeting of Shareholders via electronic Means (E-AGM) at 9:00 a.m. on Tuesday, April 9, 2024, in compliance with the Emergency Decree on Electronic Meetings B.E. 2563 (2020) as well as other applicable laws and regulations. GC also ensured convenience for the attending shareholders as detailed below.

Prior to the Meeting

- GC clearly notified shareholders of the rules and procedures relating to rights of shareholders to propose matters to be included in the agenda of the Annual General Meeting of Shareholders and to nominate qualified persons for consideration and election as Directors in advance of the Annual General Meeting of Shareholders from September 15 to December 31, 2023 via SET Portal and the Company's website. The nominated persons or proposed matters will be considered in accordance with the prescribed criteria. The Nomination and Remuneration Committee will be in charge of considering the qualifications of such nominated persons, and the Corporate Governance and Sustainability Committee will consider the proposed matter deemed beneficial and which should be proposed as an agenda item of the meeting, which are then proposed to the Board of Directors for further consideration. The Board of Directors will inform the shareholders of its decision and rational at the 2024 Annual General Meeting of Shareholders. For the year 2024, none of the shareholders proposed agenda items or nominated any person to be considered for appointment to directorship.

- According to the resolutions of the Board of Directors' meeting held on February 12, 2024, GC instantly notified SET after the meeting to disseminate the news to its shareholders that the 2024 E-AGM would be held on April 9, 2024, and the record date was set for February 27, 2024, to accommodate shareholders with the rights to attend the 2024 E-AGM and receive dividend payment. This information was also published on GC's website.

- GC published the invitation letter on GC's website, comprising the agenda items with the Board's opinions on each agenda item as well as the attachments, proxy forms, and measures and guidelines for registration and attending the 2024 E-AGM in both Thai and English, on March 7, 2024, over 28 days in advance to the meeting. In addition, GC sent an invitation letter, along with QR codes for downloading the digital versions of Form 56-1 One Report for the year 2023 and the 2023 Integrated Sustainability Report.

- If a shareholder would like to assign a proxy to attend and vote at the E-AGM on their behalf or if they were unable to attend the E-AGM in person, GC provided them with a proxy statement that allowed them to specify their "Approval," "Objection," or "Abstention" vote for each agenda item. Independent Directors' profiles were also included for their consideration. Details of the proxy assignment process and documents required to facilitate the procedure were enclosed with the invitation letter. All of the documents were available in both Thai and English.

- The invitation letter was mailed to its shareholders on March 14, 2024, over 21 days ahead of the meeting.

- Shareholders were given an opportunity to submit advance inquiries on the meeting agenda to GC via corporatesecretary@pttgcgroup.com, ir@pttgcgroup. com, or cg@pttgcgroup.com.

- GC opened an E-AGM registration system for shareholders and proxies from March 27, 2024 to the date of the meeting and provided a call center to address any inquiries from shareholders regarding the registration and attendance of the meeting.

On the Day of the Meeting

- The E-AGM was conducted in adherence to safety, occupational health, and environmental measures, which all Directors, Executives, and employees were required to follow strictly. These measures included appropriate spacing between tables and seats, suitable walkway distances, and the provision of alcohol hand sanitizers at the venue.

- GC appointed call center and system administration staffs to ensure the convenience of the shareholders and proxies in accessing the E-AGM system and address questions regarding its use. Shareholders and proxies were allowed to access the E-AGM system over 2 hours ahead of the meeting to ensure that they were given accurate and complete information about the meeting and were able to submit inquiries and vote in accordance with the objectives of the meeting.

- The 2024 E-AGM was attended by 15 Directors. Also present were top management, auditors, legal advisors, a lawyer who was a witness for vote counting, and shareholders' right protection volunteers from the Thai Investors Association responsible for evaluating the quality of the 2024 Annual General Meeting of Shareholders.

- Before the meeting began, shareholders were explicitly informed of the voting and vote-counting procedure for each agenda item. Shareholders and proxies can cast a vote for "Approval," "Objection," or "Abstention" on all agenda items.

- At the meeting, the Chairman proceeded with all agenda items in order and afforded all shareholders equal rights to submit inquiries and express their opinions. For each agenda item, shareholders or proxies could submit inquiries in advance by typing their questions or by VDO conference. The Subcommittee chairpersons, Chief Executive Officer, and any relevant top management were assigned to answer shareholders' questions. All expressed questions and opinions were fully and accurately recorded in the minutes of the meeting.

After the Meeting

- GC disclosed its resolutions of the 2024 E-AGM through the SET Portal once the meeting was finished. The disclosed resolutions included a complete set of the "Approval," "Objection," "Abstention," of each agenda item.

- The minutes of the E-AGM were prepared in Thai and English, specifying the names of Directors and Executives attending the meeting, as well as other relevant attendees, key explanations, a list of questions and answers and a summary of opinions expressed. The minutes were submitted to SET and other relevant organizational authorities within 14 days after the meeting. They were also made available on www.pttgcgroup.com for shareholders inspection and mailed the minute of meeting shareholders. GC allowed the shareholders to object to the minute of E-AGM within 30 days.

GC's 2024 E-AGM was ranked "Excellent" with a perfect score of 100 for the 13th consecutive year from 2012-2024 by the Thai Investors Association.

Equitable Treatment of Shareholders

GC ensures equitable treatment of all shareholders, whether majority or minority, Thai or foreign. GC's equitable treatment of shareholders is summarized as follows:

- GC values all shareholders and has put in place measures to fairly and equitably safeguard the fundamental rights of every shareholder. These measures are aimed at fostering investors' trust and confidence in the Company and ensuring continuous and suitable returns.

- Minority shareholders are given the opportunity to express their opinion, provide suggestions, and submit complaints to the Board of Directors, Chairman of the Corporate Governance and Sustainability Committee (an Independent Director) and the Company Secretary via GC website under Corporate Governance Section or e-Mail at cg@pttgcgroup.com. The Corporate Governance and Sustainability Committee will review the complaints or suggestions submitted for take appropriate actions. Institutional investors can request information or express their opinions via e-Mail at ir@pttgcgroup.com under the care of the Investor Relations Department.

Roles of Stakeholders

GC places importance on the rights of all stakeholders. Based on principles related to the rights and impacts on stakeholders, the written good practice guidelines have been formulated and published on GC's website. Stakeholders are also provided with channels to express their opinions, to the Company. Stakeholder-related policies, guidelines, and actions in 2024 are summarized below:

Shareholders

GC respects the fundamental rights of shareholders and treats every shareholder equitably for their utmost satisfaction. These rights include the right to participate in the Annual General Meeting of Shareholders, the rights to vote, to propose meeting agenda items, and to nominate candidates for directorship. GC also listens to their opinions and suggestions and has provided them with contact channels via www.pttgcgroup.com and e-Mail addresses at ir@pttgcgroup.com and cg@pttgcgroup.com.

With regard to the treatment of institutional and retail investors, GC held quarterly performance review meetings both in person and online via Microsoft Teams as well as organized virtual roadshows, for which online booking channels were made available to enable interested institutional investors to directly make an appointment with GC.

In addition, GC took part in the quarterly Opportunity Day as well as SET Digital Roadshow, an online meeting held in collaboration with the Stock Exchange of Thailand (SET) to provide retail and foreign investors with access to information sources and an opportunity to communicate with listed companies. To comply with the Code of Conduct for Investor Relations, GC refrained from meeting with investors for 14 calendar days prior to the disclosure of its operating results to protect and safeguard GC's confidential information not yet publicly disclosed.

For debenture holders, GC complied with legal requirements and notifications of the Securities and Exchange Commission (SEC) and operated in strict adherence to the Company's policies and objectives and shareholder resolutions. In the same veins as with its shareholders, GC regularly organized activities to foster relations with debenture holders, such as meetings with domestic and overseas investors and site visits for debenture holders.

Customers

To achieve customer satisfaction and confidence, GC has continued to develop the quality of its products and services and elevate its product and service development standards through systematic voice of customer management. In addition, GC seeks to identify and gain insights into the needs of customers and end markets to inform its product and service development in order that GC can promptly meet such needs and provide useful business suggestions to a comprehensive range of customers and end markets. GC also strives to develop green products and services through collaboration with customers and business partners and consistently certify products to various international quality standards to enhance customer and market confidence.

Furthermore, GC regularly introduces information and digital technology as tools to continuously optimize sales management and the delivery of products and services to customers to meet targets as well as customer and market demand. In addition, technology is employed to monitor shifts in external factors that may affect the market in order to plan sales, marketing, and product delivery in alignment with customer needs.

In addition, GC implements systematic and comprehensive whistleblowing management to handle complaints, track progress, and report solutions to customers across every business unit. In addition,

customer satisfaction surveys are conducted annually on the products and services delivered to customers to continuously improve product and service quality and internal processes. This data is considered crucial as it provides deeper insights into customer and market needs.

GC also engages in customer and partner relationship management through various marketing activities. These include seminars on current topics of interest in the industry, trends and situations of the industry and market, and relevant trade measures as well as joint promotional events in both online and onsite formats. Additionally, GC regularly issues communications and hosts training sessions to provide knowledge on its products and services to its customers, thus ensuring optimal customer experience throughout the customer journey experience, which fosters trust, understanding, and customer loyalty and ultimately strengthens business partnerships the Company and customers, with the goal of encouraging repeat purchases and service usage to maintain long-term customer relationships.

Furthermore, GC treats all customers equitably and protects its confidential data using a Data Lost Protection (DLP) system and a privacy notice and has established a personal data management and protection policy and measures in accordance with the Personal Data Protection Act (PDPA). The Company also supervises its operation to ensure the absence of profiteering and unfair trade conditions.

Suppliers

With regard to vender oversight, GC has established supplier management strategies encompassing supplier selection, relations management, and supplier capability assessment. Suppliers are required to comply with the Supplier Code of Conduct (SCOC) with respect to manufacturing, procurement of products and feedstocks, and service provision as well as to affix their signature to the SCOC before entering into transactions with the Company as part of the Company's vendor management system (VMS), which was applied to systematize new vendor registration, the management of data of approved vendors' products and services, and vendor performance assessment. The VMS helps expedite data searches and ensure that vendor registration is transparent, fair, and compliant with relevant criteria and standards without unfair advantage for any specific vendor. Additionally, the Company has implemented its sustainable procurement action plans, as detailed below.

1. GC encourages suppliers to demonstrate Environmental, Social, and Governance (ESG) responsibility. In 2024, ESG assessments were conducted across 54 product and service categories, and 71 suppliers underwent ESG self-assessment. The results showed no violation of labor rights or human rights, good corporate governance principles, business code of conduct, or applicable laws, rules, and regulations, and that the safety and legal management was up to standards.

2. GC has established procurement strategies for decarbonization, with action plans and targets aligned with the corporate targets to reduce Scope 3 greenhouse gas (GHG) emissions from the waste disposal division and the transportation and service division of the polymer unit by 50% by the year 2050. The 2022-2023 action plan focused on educating procurement personnel and target suppliers and familiarizing them with GC's decarbonization roadmap through various workshops and activities to enable them to develop action plans and operate in alignment with GC's targets. In 2024, decarbonization was added as another selection criterion for target supplier categories.

3. GC promotes green procurement. The Company has actively fostered a green network as well as encouraged suppliers to join the Green Industry (GI) Program and offered recommendations on how to apply for the program. In 2024, a total of 344 suppliers became GI-certified, up by 24 suppliers from the previous year.

   In addition, GC has defined the specifications of green products and services, promoted the use of products with green labels, and procured products and services certified to the Green Industry and ISO 14001 standards. In 2024, green procurement accounted for 47.27% of the total procurement.

4. GC has consistently procured products and services from suppliers in communities across 4 municipalities around Map Ta Phut Industrial Estate to promote employment, generate revenue, enhance the quality of life for the local residents, and to contribute to Rayong's economic development. The services sourced from these communities include cleaning, shuttle buses for employees, landscape maintenance, and waste disposal. GC also develops their capabilities to ensure the local communities can grow alongside the Company.

5. Furthermore, GC has encouraged its suppliers to declare their intent to join the Thai Private Sector Collective Action Against Corruption (CAC) and paid visits to strategic suppliers with high transaction value to open up opportunities to further develop business and enhance relations with them. In 2024, 5 suppliers participated in the program, and GC was named a CAC Change Agent for a third consecutive year, having successfully invited a total of 26 suppliers to join CAC.

6. GC has communicated and reiterated its Business Code of Conduct, No-Gift policy, Anti-Fraud and Anti-Corruption policy, and the reception of comments and complaints from internal and external parties through its whistleblower system to its suppliers at the annual supplier conference. The Company also underscored the significance of sustainable business practices and the benefits they would receive as suppliers as well as recommended various digital procurement systems.

Additionally, GC has continuously improved its internal work processes, developed the skills and capabilities of its employees, and organized training sessions for procurement staff and suppliers on ESG in the supply chain in order to collaboratively drive sustainable value. These efforts combined ensure that GC will have strong and supportive suppliers who enable the Company to operate with transparency and efficiently manage costs to maximize benefits, which will in turn lead to sustainable procurement.

Business Competitors

To ensure that treatment of business competitors is consistent with international standards and within the scope of the laws on trade competition, GC has established its Business Code of Conduct on the Treatment of Business Competitors in conformity to those principles to ensure fair and transparent competition by neither seeking confidential information of business competitors through fraudulent or inappropriate means nor tarnishing their reputation with slanders or give a negative review.

Creditors

GC treats its creditors fairly and responsibly and strictly complies with contractual terms and conditions. A Payment Tracking System (PTS) has been set up to enable creditors to conveniently track and check payment statuses by themselves. GC, in collaboration with financial institutes, has introduced an e-Mail Advice System, which is based on GC's Outsourced Payment System, to inform its creditors of necessary information in advance. An additional system has also been introduced to issue invoices, tax invoices, and receipts electronically. Accounts payable aging reports are also prepared for the benefit of tracking the resolution of overdue transactions. In the event that GC is unable to fulfill contractual obligations or terms, it will notify its creditors in advance to seek mutual resolutions.

In collaboration with banking institutions, GC has introduced blockchain to the management of letters of guarantee and implemented strict measures for the verification of changes in creditor data to prevent cybersecurity risks and ensure that all transactions are correct and appropriate. GC has also coordinated with banking institutions to introducing the e-Withholding tax system to enable creditors to review data through the Revenue Department's system by themselves as well as enforced a standard for companies in GC Group requiring that they comply with the conditions between GC and its creditors to ensure adherence to defined procedures, prudence, and accountability.

For financial institutions and debenture holders, GC gives equal opportunities for all financial institutes to propose transactions. GC treats creditors as equals, fairly manages loan agreements, and complies with legal requirements and notifications of the Securities and Exchange Commission in issuing and offering debentures for sale. It also maintains independence in decision making and acts on the basis of integrity without requesting, accepting, or offering any undue benefits in its contact with financial institutions and debenture holders. All information of events related to GC's businesses is also regularly disclosed to creditors, debenture holders, and institutional investors. For this year, GC engaged a new credit rating agency to provide additional opinions on the Company's credit rating. The Company maintains regular communication with credit rating agencies and investors and continues to build strong relations with creditors through various activities every year.

GC has also established a Personal Data Privacy Policy for the oversight and management of personal data, including the storage, collection, use, and disclosure. To ensure that GC's operation is in compliance with the Personal Data Protection Act (PDPA) and relevant laws in accordance with GC's corporate governance policy.

Public Sector

Recognizing the significance of the public sector as one of GC Group's stakeholders, GC has established guidelines on the treatment of the public sector in the countries in which it invests so as to avoid adverse consequences. The treatment of the public sector policy has been included in the Corporate Governance and Business Code of Conduct Handbook. GC is committed to complying with laws, rules, and governmental regulations in obtaining support for its business activities, which includes:

(1) support for GC's strategies, such as the advancement of requirements, regulations, and standards, and the undertaking of joint projects to support national policies and bring benefits to GC's activities;

(2) support for GC's regulatory monitoring and proper compliance with governmental regulations, such as permits, benefits, and concessions according to applicable laws, rules, and regulations as well as established procedures, processes and practices. All contacts and communication with the public sector, including local authorities and state enterprises, must be transparent, with full disclosure of accurate information as per governmental requirements. To this end, GC has adopted the Online Permits & Privilege Licenses System in the planning and monitoring of operation progress to ensure compliance with governmental rules, regulations, and conditions.

Other activities carried out by GC are as follows:

- Establishing an emergency communication center, which is connected to Rayong's local communication centers, and publicly disclosing the name of the officers assigned to communicate with government agencies so as to make known information communicated to relevant government agencies and local communities as well as create an accurate understanding of situations.
- Organizing activities to foster relations with relevant government agencies, such as anti-corruption activities that fostered understanding and reaffirmed mutual commitment to transparency and anti-corruption efforts.
- Providing support to government activities to enhance work systems, such as exchanges of knowledge on new laws, as well as improving work processes, such as introducing more online systems and eliminating unnecessary steps.
- Keeping track of measures introduced in Rayong and Thailand to ensure that relevant communications and preparations are made and that they are implemented correctly.

Employees

GC ensures that its employee care is in line with good corporate governance principles and business ethics by fostering positive experience for employees at every part of the employee life cycle, accommodating diversity in terms of gender, generation, job levels, and professional groups. GC also focuses on employee development through various forms of learning in order to promote practical applications, which include a 24/7 digital learning platform where employees could learn anywhere and anytime. GC also ensures the well-being of its employees and a safe work environment and conducts employee surveys on various topics to understand their issues and true needs and make improvements accordingly. Additionally, GC has instituted working from anywhere (WFA) as another normal mode of work for its office employees to enhance the flexibility, agility, and adaptability of its processes in response to the new normal of work, while also making improvements to its Smart Office to accommodate employees who are required to come and work at the office, thus ensuring a modern work environment suitable for the current modes of work. In addition, as a policy, GC determines employee remuneration based on their performance, provides competitive welfare for its employees and their families compared to other leading companies in similar businesses, and takes care of its retiring employees to ensure a happy retirement.

In addition, it is GC's policy to employ and promote career advancement for people with disabilities, in line with the Empowerment of Persons with Disabilities Act, B.E. 2550 (2007). Details of GC's employee treatment with respect to human rights appear under "Employees" on page 174.

Society, Communities, and the Environment

Under the Sustainability Management Policy of GC Group, GC strives to efficiently preserve an economic, social, and environmental balance alongside its pursuit of growth through corporate social responsibility (CSR) initiatives, which are aimed at creating sustainable value in collaboration with communities and society and are integrated into the Company's decarbonization roadmap and efficient circularity-driven resource utilization.

In addition, GC seeks to enhance business value for society through social enterprises (SE), such as Sarn Palung Social Enterprise Company Limited, which develops upcycled products from recycled plastic fibers with participation from communities and disadvantaged groups; and Pracharath Rak Samakkee Rayong (Social Enterprise) Company Limited, which operates the Rak Rayong store, selling quality local products from communities across Rayong's 8 districts. Both enterprises return a portion of their revenue to communities and society. Additionally, GC has elevated economic projects to stimulate employment and create a stable source of income, such as the community product and career development project in 4 municipal areas and a partnership with Huaypong Open Institution to open a noodle shop called Kin Tiao Liao Lae Kwai. These operations generated over Baht 17 million in income for local communities over the past year.

GC has also continued its mangrove forest planting projects for carbon credits in various areas in collaboration with the Department of Marine and Coastal Resources. In Rayong, beyond mangrove planting activities, GC organized activities in which students from 8 schools across Rayong's 8 districts were brought into the mangrove forests to study the areas, which further developed the Rayong Youth Environmental Protection Network. The project not only aligned with one of GC's key objectives of achieving net-zero greenhouse gas emissions but also educated local youth.

In tandem, GC has continued to carry out circular economy initiatives, including the construction of community waste hubs in communities surrounding its manufacturing plants in Rayong. The project has also been scaled up to other provinces with preparedness and led to the establishment of 3 new recycle hubs, which manage and process as much as 242.52 tons of PET/HDPE waste for ENVICCO's recycling facility, generating over Baht 5 million in revenue for communities through waste sales.

GC has maintained strong community relations by continuously managing community expectations and implementing CSR projects across various dimensions to build confidence in its business operations as a responsible community partner. In 2024, the community satisfaction rate with GC's social projects was as high as 92.72%.

Compensation for Violations of Rights

GC has established guidelines to protect the rights of stakeholders in case of violations resulting from the business operation of GC Group, whereby the compensation offered shall not be lower than the legally mandated rate.

Prevention of Internal Information Usage

GC's Internal Information Usage Policy and guidelines have been included in the Corporate Governance and Business Code of Conduct Handbook and published on the Company's website for shareholders' ready access and acknowledgment. Directors, Executives, and employees are constantly reminded to comply with the policy, under which they are prohibited from using material internal information not yet publicly disclosed for personal gain or the benefit of others, including for trading GC's securities. The essence of the policy is summarized below:

(1) Directors and Executives under SEC's definition must report to SEC changes in their holding of the Company's shares within 3 business days as required by SEC. Moreover, the Company has established a policy requiring Directors and Executives to notify the Company Secretary of their intention to trade the Company's shares at least 1 business day before the transaction is made.

(2) The Board of Directors monitors each individual's compliance with GC's Business Code of Conduct on internal information usage every month. The Company Secretary, who receives information from SEC via email on changes to Directors and Executives' shareholding when their shares are traded or transferred, will report such changes to the Board of Directors. Their shareholding at the beginning and the end of each fiscal year and any changes during the year are disclosed.

(3) GC notifies Directors and Executives in writing that they are prohibited from trading the Company's shares 30 days ahead of the disclosure of the quarterly and annual financial statements or that of other information that may affect the prices of the Company's shares. They are also prohibited from trading the Company's shares within 24 hours after the said disclosure.

(4) All Executives and employees are required to comply with the Company's guidelines on confidentiality of information and safeguard its information, customers'/supplier information, and personal information of related parties. They are also required to adhere to the Company's measures on the safeguarding of confidential information or information that is not yet publicly disclosed.

(5) GC's Directors, Executives, and employees are regularly kept up to date on regulations and policies regarding internal information to ensure their acknowledgement and compliance. The Company has clearly prescribed disciplinary sanctions in case of violation of the inside trading policy.

Details on the results of internal information usage appear under "Ensuring Compliance with Corporate Governance Policy and Practices" on page 212.

Prevention of Conflicts of Interest

The Board of Directors has included a policy and guidelines for considering transactions that involve or may involve a conflict of interest in the Corporate Governance and Business Code of Conduct Handbook, to which all Directors, Executives and employees must adhere. They must also carefully follow the guidelines for related party transactions and refrain from violating the regulations of SEC and SET. Directors and Executives under SEC's definition must report their interests and those of their related parties to the Company. In addition, the related party transactions manual and guidelines and material transaction (RPT & MT) have been revised for use in governing, monitoring, and reviewing related party transactions and material transactions within the Company and GC Group. Lists of individuals with connections to the Company and information on such transactions have been recorded in a database retrievable by relevant departments for reference so as to ensure full and proper compliance with relevant criteria and prevent errors.

GC has also put in place measures to prevent conflicts of interest, under which Directors, Executives, and all employees are required to annually report potential conflicts of interest. When a conflict of interest arises, the person with vested interests must immediately report such a conflict to GC, using the Conflict of Interest Form (for the Directors) or report via the intranet (for Executives and employees), to their supervisors for acknowledgement so that they can take suitable action.

Details on the results of the prevention of conflicts of interest appear under "Ensure Compliance with Corporate Governance policy and practices" on page 213.

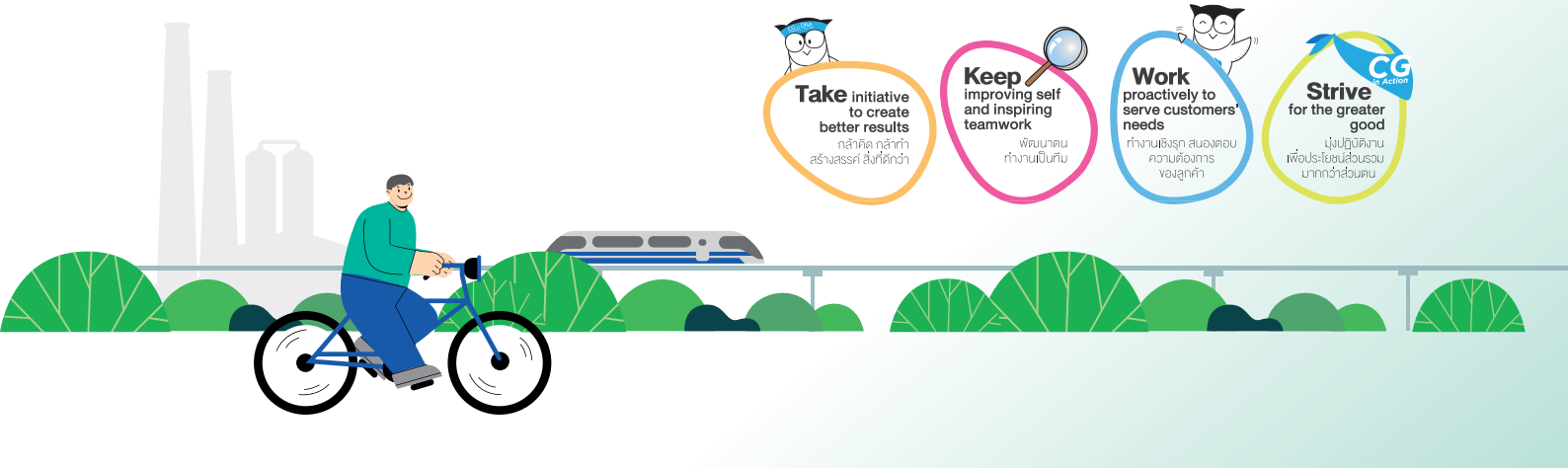
Anti-Fraud and Anti-Corruption

GC has revised its Anti-Fraud and Anti-Corruption Policy to align with the current scope of corruption as well as with national and international practices. The updated policy establishes clear roles and responsibilities and includes the addition of organization-level corruption risk identification and assessment and written anti-fraud measures explicitly prohibiting soliciting, accepting, or paying bribes, and banning business dealings with individuals or juristic persons involved in corruption. The revised policy, which also addresses political neutrality, has been approved and overseen by the Board of Directors and includes clear disciplinary actions for non-compliance. The communication of the policy has been extended to representatives, consultants, external stakeholders who act on behalf of and/or are associated with GC Group, and the general public. The policy has also been incorporated into the Corporate Governance and Business Code of Conduct Handbook for Directors, Executives, and employees to follow. In addition, the Company is a member of Thai Private Sector Collective Action Against Corruption (CAC) as well as a CAC Change Agent and encourages its suppliers to join CAC as a member. Further details can be found under "Ensure Compliance with Corporate Governance Policy and Practices" on page 214.

Business Code of Conduct

Corporate Governance and Business Code of Conduct Handbook

The Board of Directors approved the compilation of the Corporate Governance and Business Code of Conduct Handbook, comprising 2 parts. The first part is the corporate governance structure, and the second part is the principles according to corporate governance



policy and business code of conduct, consisting of principles and best practices for ethical business operations, such as observance of laws, rules, and regulations; anti-fraud and anti-corruption measures; responsibility towards stakeholders; human rights; and fair labor. The handbook was distributed to all Directors, Executives and employees and required them to sign a compliance statement to pledge their adoption of the handbook as guidance in their performance of duties according to corporate governance policy. The Business Code of Conduct Handbook has also been distributed to GC's joint ventures and business partners and published on the Company's website (www.pttgcgroup.com) under "Corporate Governance and Business Code of Conduct Handbook" for ready access for stakeholders, regulatory agencies, and those interested. The details of the Business Code of Conduct are shown in Attachment 5 under "GC Policy and Practices of Corporate Governance and Business Code of Conduct" on page 414.

Additionally, the Board of Directors has implemented an annual review of the Corporate Governance and Business Code of Conduct Handbook to ensure its consistency with criteria and practices issued by regulators and assessment agencies, both domestic and international. In 2024, GC revised its Corporate Governance and Business Code of Conduct Handbook to ensure consistency with laws, good corporate governance principles, and GC's requirements. The revision included updates to the prevention of money laundering and terrorism financing sections, adding the topic sanctions measures to Business Code of Conduct Handbook to ensure the guidelines covered and aligned with relevant international standards and regulations.

In addition, the Board of Directors and Executives, who serve a crucial role in fostering and driving an ethical organizational culture, have also formulated and cultivated GC SPIRIT 4 Core Behaviors, an organizational value that places importance on integrity and ethics. GC SPIRIT: 4 Core Behaviors, along with the topics of corporate governance, risk management and internal control, and compliance (GRC), have been communicated to all employees across the organization through various activities and integrated into the work process in order to cultivate them into GC's corporate culture.

Corporate Compliance

GC recognizes the significance of compliance with laws and strives to surpass the requirements stipulated by laws, criteria, and standards. To this end, GC promotes compliance awareness on a regular basis to ensure compliance with domestic and international laws and criteria as well as relevant standards and standard systems. In 2024, GC improved its compliance process as well as guidelines and steps for legal and regulatory compliance management to ensure alignment with international standard as well as carried out other compliance-related activities that promoted the effective management of compliance-related risks according to its obligations through GC's compliance framework, which consists of 4 steps: Plan, Do, Check, and Act, and its compliance management system, which comprised 6 steps: (1) Establish; (2) Develop; (3) Implement; (4) Evaluate; (5) Maintain; and (6) Improve. In addition, GC established a compliance process, which consisted of (1) Assessment - to identify major non-compliance risks, (2) Prevention - to ensure compliance control, and (3) Correction and Improvement- to appropriately manage matters that deviate from relevant laws and regulations and to regularly review and improve monitoring.

Furthermore, GC has established a compliance monitoring process internal units and defined the objectives and the scope of laws, rules, and regulations to adhere to. In addition, they are required to produce summaries, provide recommendations, and report the findings from the monitoring to the responsible executives of each unit for their acknowledgment as well as submit reports on the compliance performance and present the action plan to the Corporate Governance and Sustainability Committee on a yearly basis for acknowledgment and comments so as to ensure efficient governance and compliance with laws and international criteria.

In addition, GC regularly builds compliance awareness among the personnel within the Company and across GC Group through a wide range of activities as appropriate, including:

- Creating content on compliance, such as copyright, intellectual property, sanctions, and complaint handling, which is communicated to employees through the tone at the top.

- Developing an e-Learning course on the Company's compliance management system for VP-level executives in which they can learn and understand the relevant principles and use them as guidance in managing compliance within the unit under their supervision.

- Organizing workshops and courses on complaint investigation techniques for vice presidents across GC Group.

- Organizing a compulsory online training course entitled Mandatory Compliance for New Managers for division managers.

Dissemination of Good Corporate Governance Principles

GC communicates its key corporate governance principle entitled "C R E A T E," comprising 6 elements: the Creation of long-term value for the organization; Responsibility; Equitable treatment of all stakeholders; Accountability for decisions made and being able to offer justification for such decisions; Transparency, which entails full, accurate, equitable and timely disclosure through appropriate channels; and Ethics in business conduct, to its employees for their acknowledgement from the first day of work. GC also continuously underlines and instills corporate governance principles in its employees through training programs, seminars, and other activities. For example, GC offers a mandatory e-Learning program on its "Hook Acknowledgment and Learning" system, through which Executives and employees can sign the acknowledgement of the Corporate Governance and Business Code of Conduct Handbook and take a test. "PTT Group CG Day 2024: CG Citizen Sustainability Connect" was also organized to foster an understanding among employees, suppliers, customers, and relevant agencies of the role of corporate governance in driving the organization towards a sustainable future. Additionally, GC's corporate governance practices are assessed by domestic regulatory authorities and international standards, such as the Thai Institute of Directors Association (IOD), the Thai Investors Association (TIA), and the Dow Jones Sustainability Indices (DJSI) in order to gauge GC's corporate governance performance and keep its corporate governance practices in line with international standards.

Furthermore, Executives have communicated the principles of corporate governance, risk management, and internal control as well as corporate compliance to employees through Hook Talk videos in key meetings of each business unit and in internal meetings of each department to encourage them to behave ethically, be mindful of risks and internal control, and perform their duties in strict compliance with good corporate governance principles, the Company's regulations, laws and rules in addition to regularly improves its best practices.

Major Changes and Developments in Corporate Governance Policy, Practices, and Systems

For the year 2024, GC's major changes and developments in its corporate governance policy, practices, and systems for the optimization of corporate governance and the enhancement of GC's corporate governance standards in line with CG Code's principles and practices can be summarized as follows:

1. Awareness of the Board's roles and responsibilities as the leader and creator of sustainable value

- Strategic issues were instituted as an agenda item in every management committee meeting to keep track of key strategic issues, with emphasis on discussion to determine solutions and actions and on escalating key issues to the Board of Directors for consideration.

- Strategic workforce planning (SWP) was expanded to the organization level in line with GC's business strategies to ensure that the organization had a suitable plan, that its personnel were equipped with the necessary skills and capabilities to keep pace with business changes, and that the plan was connected with the Company's critical current and long-term (2-5 years) business plans.

- Executives were encouraged to serve as role models of GC SPIRIT 4 Core Behaviors through GC SPIRIT Day 2024.

- The development of COSO Focus Points was reviewed to take into account the best practices of the Board of Directors and the Audit Committee. Additional steps were also established to scrutinize and monitor material transactions (MT) and related party transactions in order to prevent and deter inappropriate behavior by listed companies regarding MT and RPT as prescribed by the SEC.

- The appointment order of the Investment Committee (IC) was reviewed to align with organizational restructuring.

- The Corporate Governance and Business Code of Conduct Handbook was revised, presented to the management committee and the Corporate Governance and Sustainability Committee for approval, and submitted to the Board of Directors for final approval.

- The scope of duty in the Charter of the Audit Committee was revised to align with the SEC's best practices for preventing and deterring inappropriate behavior by listed companies and comply with the revised Global Internal Audit Standards, which would come into effect on January 1, 2025.

- The Charter of Independent Directors were revised to improve the comprehensiveness and currency of the wording.

2. Establishing the organization's core objectives and targets for sustainability

- GRC Character was incorporated as part of corporate governance value cultivation through the GC Culture Playbook 2nd Edition.

- Risk management processes were enhanced through strategy planning and the use of scenarios and signpost monitoring that comprehensively considered internal and external factors, with the goal of achieving strategic and business goals.

- Predictive AI technology was introduced across various areas, namely maintenance operations, product quality control, production efficiency optimization in plants, and people productivity enhancement.

3. Strengthening board effectiveness

- Director appointment guidelines for GC Group companies were revised for inclusion in the director manuals of GC Group companies.

- The scope of authority and the roles of the Board of Directors of GC's subsidiaries were revised to align with laws and the Corporate Governance and Business Code of Conduct Handbook.

- Operational guidance, customized for each group company, including internal control gap remediation based on GC Way of Conduct assessment results, was given to group companies.

- The Audit Committee reviewed internal audit reports, consulting services for subsidiaries, and GC's internal units relevant to the governance of subsidiaries under the Internal Audit Function, namely the internal audits of HMC allnex and ENVICCO. The Internal Audit Function planned to offer additional consulting services for allnex's projects and review subsidiary governance units in projects related to subsidiary governance or corporate portfolio and investment management.

- The administering of the Internal Control Questionnaire (ICQ) based on COSO principles was expanded to 6 additional companies: GC Estate Co., Ltd., NPC Safety and Environmental Service Co., Ltd., GC Maintenance and Engineering Co., Ltd., Solution Creation Co., Ltd., ENVICCO Co., Ltd., and WHA GC Logistics Co., Ltd. Key processes were also expanded from 6 to 7: Compliance, Order to Cash, Procure to Pay, Fixed Assets, Information Technology, Inventory & Delivery, and Record to Report.

4. Senior executive and nomination and personnel management

- The appointment policy was included in the Company's document control system for clarity and verifiability.

- GC planned to intensify employee capability development to address future challenges and changes, focusing on 5 essential competencies: sales & marketing, digital, innovation, global acumen, and sustainability,

- GC Leadership Competency was reviewed to better align with GC's business direction and international standards, while key behaviors and expectations for leaders at each level were clearly defined. The updated GC Leadership Competency was approved by the Leadership Expert House, which was responsible for overseeing leader development, and used to inform succession planning for all executive positions.

5. Promoting innovation and responsible business practices

- Cross Functional Initiatives 2024 were launched to allow employees to bring to life new initiatives beneficial to the Company, design processes, and drive the implementation of cross-functional initiatives at department levels, with department heads serving as role models and directly recognizing the achievements of the team members involved.

- The announcements of the Technology Committee (TC), Innovation Process and Base Chemicals Committee (IPBC), Innovation Value-added Product Committee (IVPC), Long Term Innovation Committee

(LTIC), and New Business Development (CNB IC) were reviewed to ensure alignment with GC's current strategies and structure.

- Resource allocation across all areas was reviewed and assessed to ensure optimal resource efficiency and alignment with external uncertainties and business trends across short, medium, and long term. This was achieved through, for instance, resource alignment, project prioritization, integrated holistic optimization, and portfolio/asset optimization.

- The work processes of units under marketing, commercial, and production planning departments were revised, with all the procedures updated to better align with current business operations.

- The Approved Customers/Suppliers List (ACL/ASL) process was revised to put in place fair and transparent customer qualification evaluation standards. GC also tracked the improvement of the approval system on the ACL/ASL system.

- The vendor evaluation process was revised to establish evaluation standards, encompassing surveyor shipping vessels and containers/ISO tanks for fair and transparent raw material procurement and product distribution.

- The GC Management System (GCMS) was implemented to enhance customer and market management. Relevant customer and market management systems were improved, such as product communication through social media, product branding, and product sample approval processes.

- GC's Decarbonization Roadmap (Scope 3) was communicated to suppliers to enable them to develop and align their own roadmap with that of GC.

- The CSR Portfolio was revised. Resource utilization in CSR operations was also realigned with the CSR Portfolio to ensure suitability, maximize utility, and create positive, sustainable impacts for communities and society.

- The community satisfaction survey methodology for GC Group's social responsibility initiatives was improved to better align with CSR strategy and operations.

- Fraud risk management was carried out, including the review of GC's anti-fraud and anti-corruption policy and fraud risk management handbook, and fraud risk assessment. In addition, control self-assessment (CSA) was enhanced and integrated with corporate risk management tools, while risk perspectives were expanded to include fraud and corruption in key processes under the Integrated Fraud Risk Management & Enhanced Control Self-Assessment Project in collaboration with EY Corporate Services Limited.

- Corporate-level crisis management and business continuity plan drills focusing on deep fake AI and OT system cyber-attacks were conducted. Reports on cyber-attack risks were included in quarterly risk management progress reports and submitted to the Risk Management Committee.

6. Ensuring appropriate risk management and internal control

- The efficiency and integration of risk management and internal control systems was optimized in the following areas: risk and internal control champion, risk deployment to process, risk management assurance, ERM and CSA visualization, and IFRM & Enhanced CSA Project.

- The Internal Audit Function conducted a material transaction and connected transaction review and jointly developed an RPT Monitoring Dashboard to track transactions that met the SEC's criteria on material transactions (MT) and related party transactions (RPT). Additionally, related party transactions (RPT) and material transactions (MT) as defined by the SEC were presented to the Audit Committee for review during quarterly financial statement reviews to ensure that all transactions were conducted in compliance with relevant laws and criteria.



7. Maintaining financial credibility and disclosure

- The Chief Financial Officer, accountants, internal auditors, company secretary, employees at all levels, and relevant stakeholders undertook development activities in alignment with the personnel development strategies of their business unit and the organization, as detailed below.
  1. Learning objectives were linked to core competencies essential to business unit/ professional group and organizational strategies.
  2. Learning journeys with essential courses mapped to job positions and required competencies were made available.
  3. Training programs were developed and delivered by GC's course designers and internal instructors.
  4. Employees had ready access to course content, learning materials, and personal development reports at all times through the Learning Management System (LMS) and could search for specific knowledge in the Knowledge Base System (KBS).

8. Promoting shareholder participation and communication

- GC oversaw and encouraged shareholder participation in key company decisions, such as by allowing shareholders to propose meeting agendas and submit questions in advance, facilitating shareholder meeting attendance, and ensuring accurate and complete preparation and publication of meeting invitations, resolutions, and minutes.

The Board of Directors recognizes its role as a governing body of the Company. To this end, the Board has prescribed a review of the application of the Corporate Governance Code for Listed Company 2017 (CG Code) to GC's business context at least once a year as well as an assessment of CG Code compliance to ensure that the outcome is appropriate and that the development plans suitable for the business are consistently formulated. Based on the item-by-item review and assessment results of CG Code compliance in 2024, it was found that GC successfully applied most of the items of CG Code in accordance with the Apply and Explain principle. For any item of the CG Code that GC was unable to or had yet to apply to its business, explanations were recorded as part of the Board's resolution. The summary is as follows:

Practice/Guideline	GC's practice
Item 3.1.2 The Board of Directors should determine the appropriate number of Directors to allow the efficient performance of duties, whereby the number of directors shall be no less than 5 and not exceeding 12 Directors, depending on the size, types, and complexity of the business.	• The Corporate Governance and Business Code of Conduct Handbook stipulates that the Board of Directors shall consist of no fewer than 5 Directors but no more than 15 Directors. The Meeting No.13/2018 of the Board of Directors dated December 20, 2018, resolved that the aforesaid number of Directors was appropriate for GC's complexity and the diversity of its business types. • GC's article of association No. 12 prescribes that the Board of Directors shall consist of no fewer than 5 Directors but no more than 15 Directors.
Item 4.2.1 (1) The Board of Directors should ensure that a compensation structure is in place and takes into consideration the appropriate ratio of salary, short-term operation results, such as bonuses, and long-term operation results, such as employee stock ownership plans.	• The Company is in the process of considering the appropriate compensation structure and the connection of compensation to long-term operation results, and the stock exchange conditions that would facilitate such undertakings.

Compliance with Corporate Governance Principles in Other Areas

GC consistently complies with corporate governance standards. Relevant activities in 2024 are summarized below.

Board KPIs

The Board of Directors reviewed the Board KPIs for the year 2024 to ensure their alignment with the best practices stipulated in CG Code and DJSI.

Data Governance

GC implemented a data governance procedure and standard and developed a data platform, bringing together technologies that encompassed a wide range of duties and functionalities, from data ingestion and collection, big data storage, data management, and data preparation, all the way to data analytics and visualization. These technologies were adopted as vital tools to continuously drive GC's digital transformation. These technologies were also utilized to develop data products as well as control and track their quality. A total of 22 data product sets were developed.

In addition, GC appointed a data governance working team, consisting of data governance officers (DGO), responsible for controlling and monitoring data to ensure its quality in collaboration with business data stewards and for inspecting the use of data products in every digital project to prevent violations of GC's regulations and the Personal Data Protection Act B.E. 2562 (2019).

GC implemented data governance as well as controlled and monitored its data products to continuously maintain their quality. In addition, GC prescribed work processes for data quality control, data compliance management, and data security and integrated them as essential steps throughout the digital investment lifecycle.

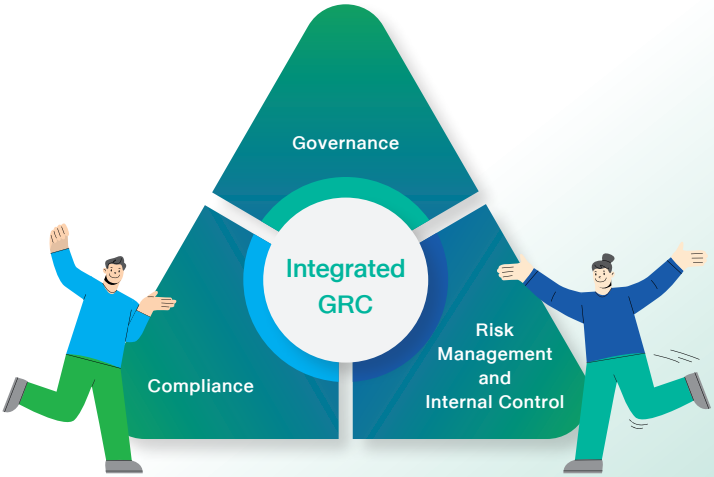
A data quality index was established in collaboration with data owners, encompassing data on materials, vendors, customers, equipment, plant maintenance, ready-made assets, and lab operations. The required data quality rate for such data was a minimum of 95%.

A summary of data governance activities in 2024 is given below.

- An additional 41 data product sets were developed.
- The data quality index was updated, with a total of 31 data quality rules covering materials, vendors, customers, equipment, plant maintenance, ready-made assets, and lab operations revised to align with a shift in business needs.
- Data quality was maintained above 95% due to continuous data quality control.
- An additional data governance working team was appointed to cover all data groups and to collaboratively oversee and monitor data quality.

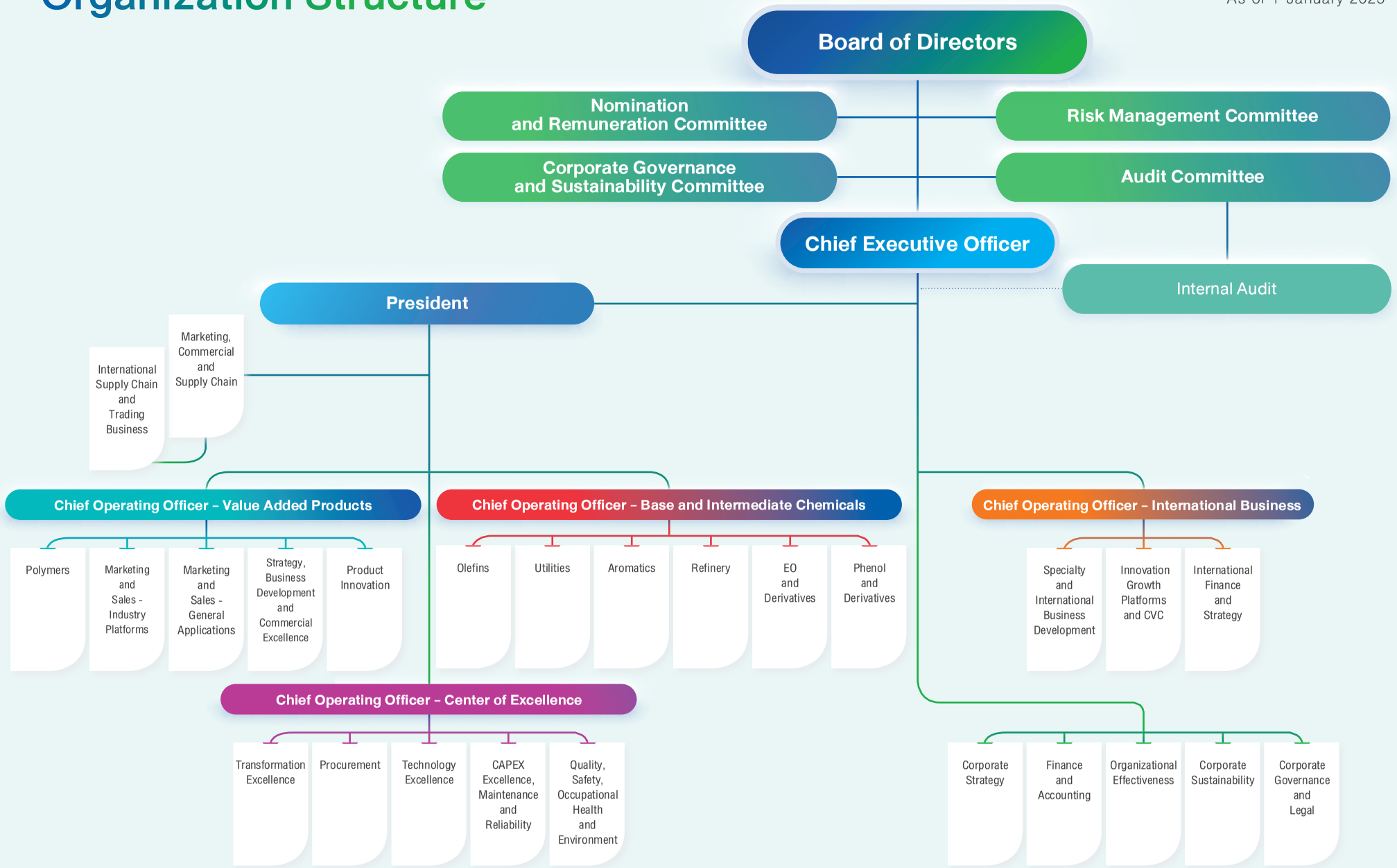
Integrated Governance, Risk Management and Internal Control, and Compliance (Integrated GRC)

GC places importance on the integration of Governance, Risk management and internal control, and Compliance (GRC), to enable the organization to achieve its business goals with efficiency, transparency, and accountability and minimize risks that may affect its business. Further details of GRC operations appear under "Internal Control." on page 233.



Organization Structure

As of 1 January 2025



Board of Directors

The Board of Directors as of Febuary 28, 2025, comprises the following members:

Name	Position	Date of appointment
1. Mr. Predee Daochai	Chairman/Chairman of the Independent Director	Nov 15, 2023
2. Mr. Thanwa Laohasiriwong	Independent Director/Chairman of the Audit Committee	Nov 1, 2023
3. Mr. Pakorn Nilprapunt	Independent Director/Chairman of the Nomination & Remuneration Committee and Director to the Audit Committee	April 9, 2018
4. General Nimit Suwannarat	Independent Director/Chairman of the Corporate Governance and Sustainability Committee, and Director to the Audit Committee	Jan 1, 2023
5. Mr. Grisada Boonrach	Independent Director/Chairman of the Risk Management Committee	June 2, 2020
6. Mr. Somkiat Prajamwong	Independent Director/Director to the Nomination & Remuneration Committee	April 4, 2022
7. Mr. Surachai Achalaboon	Independent Director/Director to the Nomination & Remuneration Committee	May 22, 2023
8. Police Colonel Dusadee Aryawuit	Independent Director/Director to the Corporate Governance and Sustainability Committee	Nov 1, 2023
9. Mr. Wim Rungwattanajinda(1)	Independent Director/Director to the Corporate Governance and Sustainability Committee	April 9, 2024
10. Mr. Patchara Anuntasilpa	Director/Director to the Corporate Governance and Sustainability Committee	April 7, 2023
11. Mrs. Nivadee Jaroensitipun(2)	Director/Director to the Corporate Governance and Sustainability Committee	Aug 26, 2024
12. Mr. Petai Mudtham(3)	Director/Director to the Risk Management Committee	Feb 12, 2024
13. Mr. Pongpun Amornvivat(4)	Director/Director to the Risk Management Committee	Feb 17, 2025
14. Mr. Kongkrapan Intarajang	Director	Oct 1, 2019
15. Mr. Narongsak Jivakanun(5)	Director/Secretary to the Board of Directors/ Director to the Risk Management Committee and Chief Executive Officer	May 13, 2024

Remarks:

(1) Mr. Wim Rungwattanajinda, Independent Director, replaced Professor Somkit Lertpaithoon, effective April 9, 2024.
(2) Mrs. Nivadee Jaroensitipun, Director, replaced Mr.Cherdchai Boonchoochauy, effective August 26, 2024.
(3) Mr. Petai Mudtham, Director, replaced Mr.Sarawut Kaewtatip, effective February 12, 2024.
(4) Mr. Pongpun Amornvivat, Director, replaced M.L. Peekthong Thongyai, effective February 17, 2025.
(5) Mr. Narongsak Jivakanun, Director, replaced Mr. Chadil Chavanalikikorn, effective May 13, 2024.

Directors who resigned during the period from January 1, 2024 to January 31, 2025:

Name	Position	Term of appointment
1. Mr.Sarawut Kaewtatip	Director/Director to the Risk Management Committee	July 20, 2020 - Jan 3, 2024
2. *Professor Somkit Lertpaithoon*	Independent Director/Chairman of the Corporate Governance and Sustainability Committee	April 9, 2018 - April 9, 2024
3. Mr.Chadil Chavannalikikorn	Director/Director to the Corporate Governance and Sustainability Committee	Dec 19, 2022 - May 11, 2024
4. Mr.Cherdchai Boonchoochauy	Director/Director to the Risk Management Committee	Dec 19, 2022 - Aug 18, 2024
5. Mr. Noppadol Pinsupa	Director/Director to the Risk Management Committee	Jan 23, 2023 - Sep 30, 2024
6. M.L. Peekthong Thongyai*	Director/Director to the Risk Management Committee	Oct 21, 2024 - Dec 11, 2024

Remark: * M.L. Peekthong Thongyai, Director, replaced Mr. Noppadol Pinsupa, during October 21 - December 11, 2024.

Shares held by the Board of Directors, their spouses, and their minors as of December 31, 2024

Name	Number of Shares		
	As of January 1, 2024	As of December 31, 2024	Increase/(Decrease) of Shares during the Year (Shares)
1. Mr. Predee Daochai	-None-	-None-	-No change-
2. Mr. Thanwa Laohasiriwong	-None-	-None-	-No change-
3. Mr. Pakorn Nilprapunt	-None-	-None-	-No change-
4. General Nimit Suwannarat	-None-	-None-	-No change-
5. Mr. Grisada Boonrach	-None-	-None-	-No change-
6. Mr. Somkiat Prajamwong	-None-	-None-	-No change-
7. Mr. Surachai Achalaboon	-None-	-None-	-No change-
8. Police Colonel Dusadee Aryawuit	-None-	-None-	-No change-
9. Mr. Wim Rungwattanajinda	N/A	-None-	-No change-
10. Mr. Patchara Anuntasilpa	-None-	-None-	-No change-
11. Mrs. Nivadee Jaroensitipun	N/A	-None-	-No change-
12. Mr. Petai Mudtham	N/A	-None-	-No change-
13. Mr. Kongkrapan Intarajang	-None-	-None-	-No change-
14. Mr. Narongsak Jivakanun	-None-	-None-	-No change-

Remark: Mr. Pongpun Amornvivat was appointed director on February 17, 2025.

Composition of the Board of Directors

GC's Articles of Association mandate that the Board of Directors be composed of no fewer than 5 but no more than 15 Directors. Each Director is to serve a three-year term. At least one-third and no fewer than 3 Directors on the entire Board must be Independent Directors. According to good corporate governance principles, more than half of the Board of Directors must be Independent Directors. Furthermore, GC's good corporate governance principles prescribe that at least half of the Board of Directors must be residents of the Kingdom of Thailand. These Directors must also have the legally required qualifications, not possess any attributes prohibited by law and not be over the age of 70.

The composition of the Board of Directors and its members' qualifications comply with its Articles of Association, good corporate governance principles, and legal regulations. In addition, the Company's policy protects Directors from any form of gender discrimination. The Board of Directors comprises individuals from diverse fields of knowledge, skills, expertise, and professional experience which are beneficial to the Company's strategic direction and business practices. Furthermore, each Director may hold a directorship at no more than 5 companies listed with the Stock Exchange of Thailand (SET) and at no more than three state enterprises or juristic persons whose shares are held by state enterprises, according to a resolution passed by the cabinet. As of February 27, 2025, the Company's Board of Directors comprises a total of 15 Directors, which is a number appropriate for its business size and type. These Directors are divided into the following categories:

(1) 14 Non-Executive Directors
(2) 1 Executive Director, namely the Chief Executive Office.
(3) 9 Independent Directors (over half the number of the Board's total)

Authority and Responsibilities of the Board of Directors

The Board of Directors governs the Company's operations and ensures strict compliance with applicable laws, GC's objectives and Articles of Association, and shareholder resolutions, as well as good corporate governance principles and the Code of Best Practices of Directors of Listed Companies set forth by SET. All Directors possess the knowledge and capability needed to perform their duties for the benefit of the Company and its shareholders. The Board's authority and responsibilities are summarized below:

1) Discharge its duties and oversee the Company's operations to ensure strict compliance with applicable laws, GC's objectives and Articles of Association, and shareholder resolutions, as well as the Code of Best Practices of Directors of Listed Companies set forth by SET.

2) Dedicate its time and attention to establishing the Company's vision, mission, directions, and strategies as well as freely express opinions and seek useful information to determine the direction of the Company.

3) Review and approve key strategies and policies as well as objectives, financial goals, and corporate plans, as well as supervise and monitor the management's implementation of the Company's strategic plans in compliance with the defined directions and strategies to ensure that the management is able to achieve the Company's vision, directions and strategies with efficiency.

4) Establish Corporate Governance Policy and Business Code of Conduct, which appropriately outline principles and good practices for the Board, the management, and staff members, and cultivate responsibility awareness in all related person to promote an understanding of and strict compliance with these principles and guidelines, in addition to the Company's rules and regulations, to assure all stakeholders of fairness.

5) Exercise approval authority on various matters beyond the authority granted to the Chief Executive Officer in the Company's provision, namely GC Group's budget, investment, project implementation, as well as key contract entry, the appointment of Directors to replace those resigning during the year or to Sub-committee, naming of authorized Directors, and the appointment of the dates for the annual general meeting of shareholders and interim dividend payment.

6) Ensure that the corporate accounting system, financial reporting and auditing are credible, supervise the assessment of internal control's adequacy, and ensure that internal audits are performed efficiently and effectively.

7) Consider all relevant risk factors and devise comprehensive risk management guidelines, ensure that the Company's Executives are equipped with an efficient risk management system or process to mitigate risks as well as to explore business opportunities that may arise from these risks, and ensure that adequate and effective internal control is in place.

8) Monitor and manage all conflicts of interest as well as all connected transactions that may arise and value key transactions to maximize the benefit of shareholders and other stakeholders.

9) Provide appropriate channels of communication to each group of shareholders and ensure that the disclosure of information is accurate, clear, transparent, reliable, and of the highest standard.

10) Regularly conduct assessments and reviews of its own performance and that of the Chief Executive Officer.

11) Provide a suitable compensation system or mechanism for the Company's Executives relative to the performance of the Company to induce short-term and long-term motivation.

12) Act as leaders and role models in line with the Company's Corporate Governance Policy.

13) Assess corporate adherence to the Company's Corporate Governance Policy and Business Code of Conduct at least once a year.

14) Provide an appropriate, transparent, and fair nomination system for all key managerial positions. Top executives, from Executive Vice Presidents to the Chief Executive Officer, are appointed by the Board's majority votes.

15) Report to the Company any conflict of interest that its members or their affiliates may have with the management of the Company or its subsidiaries.

16) Attend every Board meeting, as well as every shareholders' meeting. If, under any circumstance, attendance is impossible, the Chairman of the Board must be notified in writing.

17) Value corporate social and environmental responsibility and promote a better quality of life for Thai people sustainably, starting with improving the standard of living of communities around the Company's plants to foster an environment where its plants and these communities co-exist in a sustainable manner.

18) Provide support to all anti-fraud and anti-corruption initiatives for the purpose of progress and sustainable growth.

Moreover, the Board of Directors must obtain permission from the shareholders' meeting before acting on the following issues:

- Related Parties Transaction (RPT) or Material Transaction (MT) as prescribed by laws and the Capital Market Supervisory Board.

- Sale or transfer of the Company's entire enterprise or its essential components to other entities.
- Acquisition or transfer of an enterprise to the Company.
- Initiation, modification, or termination of all or some key lease contracts of the Company, including the assignment of lease contracts to other individuals or entry into a partnership with another entity to share profits or losses.
- Adding or Modification to the Company's Memorandum of Association or Articles of Association.
- Increasing or decreasing the registered capital.
- Issuance of debentures for sale to the public.
- Dissolution of the Company or merging it with another company.
- Announcing annual dividends.
- Other activities that require approval from the shareholders' meeting as mandated by law or the Company's Articles of Association.

This is to ensure that GC, by means of the Board of Directors, has defined its vision, missions, directions, and strategies as well as established effective systems for the monitoring, assessment, and supervision of the management of the Executives, and that the Board of Directors is independent from the Management and is accountable to the outcome of their performance in accordance with good corporate governance principles in the following matters:

Transactions Involving Potential Conflicts of Interest

(1) The Board of Directors shall establish policies and guidelines for reviewing transactions that involve or may involve a conflict of interest between shareholders, Directors, Executives, and other persons, both directly and indirectly. Related-party transactions under the approval authority of shareholders must be reviewed by the Audit Committee to ensure their fairness, rationality, and benefits to the shareholders as well as their compliance with laws and SEC's regulations.

(2) The Board of Directors ensures that the defined procedure is followed with due care on the basis of rationality and independence and that the transaction approval process is transparent and takes into account the best and full interests of the Company in compliance with SEC's regulations.

(3) Stakeholders may not take part in the approval of such transactions. In every meeting of the Board of Directors, the Chairman of the Board of Directors shall request for the cooperation of the Company's Directors in following the policy on reviewing transactions that may involve a conflict of interest, whereby the Directors inform the meeting of their stake in order to abstain from voting or giving opinions or to leave the meeting while the agenda item related to them or involving their stake is being considered.

(4) The Board of Directors ensures the accurate and complete disclosure of all transactions that may involve conflicts of interest in Form 56-1 One Report.

Risk Management

(1) The Board of Directors strives to create added value and sustainability for the business in accordance with the principles of good corporate governance. To this end, the Risk Management Committee has been appointed to formulate risk management and compliance policies and ensure that the Company's risk management system and process enable the effective achievement of its objectives and comply with relevant laws and standards both domestically and internationally to minimize potential impacts on the Company's business operations in a suitable manner.

(2) The Board of Directors inspects and reviews the operation to ensure compliance with the corporate risk management framework throughout the organization as well as monitors and provides recommendations on the management of key risks. The Board's duties also include reviewing risk management reports and risk management effectiveness on a regular basis to ensure appropriate and adequate risk management.

Internal Control and Internal Audit

(1) The Board of Directors values the significance of internal control and has thus established an internal control system to provide assurance in the efficiency and effectiveness of the Company's operations as well as the reliability of its financial reports and compliance with relevant laws, rules, regulations, and anti-fraud and anti-corruption principles. The Board of Directors has also established an internal control policy to serve as operational guidance for the Board itself, Executives, and all employees across GC Group as well as appointed an internal audit unit, which evaluates the adequacy and effectiveness of the Company's internal control system in response to risks independently and reports its findings to the Audit Committee and the Board of Directors.

(2) The Board of Directors reviews the adequacy of the five components of the Company's internal control system in accordance with the COSO Standard, namely Control Environment, Risk Assessment, Control Activities, the Information and Communication, and Monitoring Activities, on a yearly basis in order

to ensure the achievement of the Company's objectives and goals and the continual improvement of the internal control system.

(3) The Board of Directors puts in place a formal and transparent system to maintain relationships with external and internal auditors. The Audit Committee is tasked with supporting their performance of duties in accordance with the Board of Directors' responsibilities in adequately evaluate the operations of GC and other companies in GC Group as well as offering independent and objectively opinions on the internal control system and risk management.

(4) External auditors are required to annually affirm their independence to the Audit Committee, present a non-assurance service (NAS) report to the Audit Committee for approval before providing the service, and report on all reporting methods utilized in their audit firm to ensure their independence.

(5) External auditors have the right to review reports or other financial reports issued by the Board of Directors in conjunction with their audited financial statements and have the right to include in their reports any anomalies inconsistent with the audited financial statements.

(6) Audit fees and other fees paid to external auditors are disclosed in Form 56-1 One Report to increase the transparency regarding the auditors' independence.

Appointment to and Termination from the Board of Directors

GC's Articles of Association provide the following guidelines for the appointment to and termination from the Board of Directors:

Appointment

- The Board of Directors shall be elected annually (for replacements of directors retiring by rotations). Shareholders at a shareholders' meeting shall vote to appoint Director(s) according to the following guidelines:

(1) Each shareholder shall have one vote per share held.

(2) In the event that the number of nominees for the election does not exceed the number of vacant positions, shareholders shall vote on these eligible nominees. Shareholders shall allocate all of their votes per (1) to one nominee without dividing their votes.

(3) In the event that the number of nominees exceeds the number of vacant positions, shareholders shall still allocate all of their votes per (1) to one nominee without dividing their votes. Nominees receiving the majority of the votes shall be appointed to the Board until there are no vacancies left. Additionally, in the event that the number of nominees with equal votes exceed the number of available positions, The Chairman of the meeting shall cast the deciding vote.

- The Board of Directors shall nominate one Director as Chairman of the Board of Directors. Decisions made during a Board meeting are based on majority votes. The Chairman shall vote only when a deciding vote is needed. In the event that a Director's position becomes vacant for any reason other than retirement by rotation, the Board may appoint an individual who is fully qualified and does not possess any attributes prohibited by law as Director to attend the next Board meeting, unless the remaining term is less than two months. The new Director shall serve only the remaining term of his or her predecessor. This decision shall be made only with the agreement of at least three quarters of the remaining Directors.

- In the event that vacancies cause the number of Directors to fall below the quorum, the remaining Directors shall have the only authority to call for a shareholders' meeting in which shareholders shall vote to appoint new Directors to fill these vacancies only. This process must be completed within one month of the date on which the number of Directors no longer constitutes the quorum. These newly appointed Directors shall serve only the remaining terms of their predecessors.

Termination

- At each Annual General Meeting of Shareholders, one-third of the serving Directors shall retire by rotation. In the event that the number of serving Directors is not equally divisible by three, the number of Directors retiring shall be as close to one-third as possible. Directors to retire in the first and second years after Company registration shall be randomly selected; however, in later years, Directors serving the longest terms shall retire. Directors who retire by rotation may be re-elected to the Board.

- In addition to retirement by rotation, other causes for directorship termination include death, resignation, disqualification, and prohibition by law. Additionally, Directors can be terminated by a shareholders' meeting resolution or a court order.

- Resigning Directors must submit their resignation notice to the Company. Resignation is effective from the day the Company receives such notice. In addition, Directors may submit their resignation notice through the registrar. At a shareholders' meeting, shareholders may pass a resolution to force the termination of a Director before his or her term ends with three quarters of the attending and eligible shareholders' votes. Additionally, these majority votes must constitute at least half of the shares held by attending and eligible shareholders.

Independent Directors

According to the Company's corporate governance principles, more than half of the Board of Directors must be Independent Directors. Each Independent Director may serve up to nine years, with the term beginning from the date of first appointment as Independent Director. These Independent Directors must be experienced and independent as per the Capital Market Supervisory Board's requirements. Additionally, they must hold no more than 0.5% of the Company's shares (a stricter regulation than the Securities and Exchange Commission's limit of 1%). The definition of Independent Directors is disclosed in the Company's Corporate Governance Handbook and on the Company website.

Independent Directors must attend meetings regularly. They are allowed to freely express their opinions during these meetings and, to this end, are entitled to adequate access to company financial and business information. They are also tasked with protecting stakeholders' interests and preventing conflicts of interest among the Company, its executives, Board of Directors, and major shareholders.

Currently, the Company has a total of 9 Independent Directors, constituting more than one-third of the Board and exceeding the legal requirement. In addition, this number is in line with the Company's corporate governance principles, which stipulate that more than half of the Board members must be Independent Directors. Moreover, the Charter of Independent Directors has been established to clearly outline their duties. Under the Charter recently amended to suit the current situation, the duties and responsibilities of Independent Directors are as follows:

- Advise and provide recommendations to the Board of Directors on key issues that the Company should act upon or issues that could be beneficial to the Company, its shareholders, and other relevant stakeholders.
- Ensure the Company's full compliance with its Anti-Fraud and Anti-Corruption measures.
- Regularly and continuous monitor and ensure GC's social and environmental responsibility.
- Seek consultation from external, independent consultants if necessary.
- Ensure that the Company operates according to the regulations and requirements relevant to Independent Directors issued by regulatory bodies for listed companies and review the definition of an Independent Director to make sure that it is appropriate and complete according to legal requirements.
- Review the adequacy of their charter annually and propose recommended amendments, if any, to the Board of Directors for approval.
- Perform other duties as assigned by the Board of Directors, provided that these duties do not interfere with the independent nature required of Independent Directors.

Authorized Directors

According to GC's Articles of Association and Certification of Incorporation from the Department of Business Development of the Ministry of Commerce, as of February 27, 2025, the authorized signatory Directors of GC specifies that : (1) Mr. Narongsak Jivakanun Chief Executive Officer, can sign and affix the Company's seal on behalf of GC; or (2) Mrs. Nivadee Jaroensitipun and Mr. Pongpun Amornvivat, two directors, can jointly sign and affix the Company's seal on behalf of GC.

Roles of the Chairman and the Chief Executive Officer

The Chairman of the Board of Directors and the Chief Executive Officer (CEO) shall not be the same person. Their duties and responsibilities are distinct and separate, as described below:

The Chairman of the Board of Directors is an Independent Director whose main role is to ensure that the Board of Directors efficiently performs its duties and in compliance with the Company's good corporate governance principles and the business code of conduct, being independent from the management. In addition, the Chairman works with CEO to determine meeting agenda but refrains from participate in day-to-day business management. The Chairman of the Board of Directors will be the chairman of both Board meetings and shareholders' meetings and is prohibited from serving on any Sub-committee as explicitly prescribed in the scope of responsibilities of the Board of Directors and Sub-committees to ensure a clear and suitable separation of duties as well as independent judgment.

The Chief Executive Officer is the highest-ranking executive officer whom the Board of Directors chooses and appoints from one of the Directors under the GC's Articles of Association to oversee the Company under Board-assigned policies and directions in accordance with the scope of authority set forth in GC's Articles of Association and regulations. The CEO also serves as Secretary to the Board of Directors. Furthermore, GC's Articles of Association state that the CEO is entitled to compensation and benefits for his role as the highest-ranking executive officer in addition to what he or she receives as a Director. The CEO's roles, duties, and responsibilities, as well as compensation, are published on the Company website in Thai and English.

Sub-committees

The Board of Directors at Meeting No. 1/2011, held on October 19, 2011, appointed four Sub-committees, namely the Audit Committee, the Nomination and Remuneration Committee, the Corporate Governance and Sustainability Committee, and the Risk Management Committee. Directors serving on these sub-committees possess the expertise and knowledge required to oversee specific issues that each is tasked with according to GC's Articles of Association. The charter of each Sub-committee prescribes its members' desired qualifications, terms in office, and scope of duties and responsibilities. The names of Sub-committee members, their duties and responsibilities, the number of their meetings and attendance in these meetings are detailed below.

Serving a three-year term, Directors appointed to these Sub-committees are to perform their specific tasks with diligence and efficiency. All Sub-committees report their performance to the Board of Directors at Board meetings regularly as well as disclose their annual performance to shareholders in Form 56-1 One Report. The names and duties of each Sub-committee as of December 31, 2024, are listed below.

Audit Committee

Name	Position	Appointment
Mr. Thanwa Laohasiriwong	Chairman of the Audit Committee (Independent Director)	Nov 1, 2023
Mr. Pakorn Nilprapunt	Director to the Audit Committee (Independent Director)	April 23, 2018
General Nimit Suwannarat	Director to the Audit Committee (Independent Director)	Sep 25, 2023

Mr. Chatchawalit Dhammasaroj was appointed Senior Vice President of Internal Audit and serves as Secretary to the Audit Committee.

Remark Mr. Thanwa Laohasiriwong possesses sufficient knowledge and work experience in accounting and finance to review the credibility of financial statements.

The Audit Committee shall be comprised of no fewer than 3 but no more than 5 Independent Directors. Each term lasts three years or until the termination of directorship, resignation, or dismissal. Members of the Audit Committee who retire by rotation may be re-appointed by the Board of Directors. Independent Directors may serve no more than nine consecutive years in office from the date of appointment. They shall also have qualifications and perform all duties in accordance with the Notification of the Securities and Exchange Commission and the scope of work prescribed by the announcement of the Capital Market Supervisory Board.

The Board of Directors has approved the Charter of the Audit Committee, which stipulates the composition, qualifications, terms of office, and scopes of duties according to good corporate governance principles. Details of the charter are disclosed in the Company's Corporate Governance and Business Code of Conduct Handbook and on the Company website.

The Audit Committee consists solely of Independent Directors, with at least 1 of whom being a recognized expert with experience in finance and accounting. The Board believes that the Directors can carry out their duties independently and have continuously undergone training to enhance their expertise for the benefit of ensuring the credibility of the Company's financial and auditing reports, including their adherence to accounting standards, applicable laws, and other relevant standardized practices. Furthermore, the Audit Committee ensures adequate and effective internal control and risk management systems while also overseeing internal processes regarding whistleblowers and complaint submissions. The Audit Committee nominates auditors and submits dismissal recommendations to the Board in the event that the independent auditor fails or neglects to perform their duties or wrongfully performs their duties. It also reviews the suitability and effectiveness of the Company's internal audit Function and oversees Internal Audit to ensure compliance with Global Internal Audit Standards.

The Audit Committee reviews the Company's compliance with securities and exchange laws, regulations of the Stock Exchange of Thailand (SET), and other applicable laws. It also reviews related party transactions or conflicts of interest and Material Transaction to achieve compliance with applicable laws and the requirements of the Stock Exchange of Thailand (SET) and Securities and Exchange Commission (SEC) and ensure their sensibility, the utmost benefit of the Company, and full disclosure.

In 2024, the Audit Committee convened a total of 10 meetings and 1 additional meeting with the external auditor, fulfilling its role according to the scope of authority and responsibilities stipulated by the Charter of the Audit Committee and as assigned by the Board of Directors. The Committee also reported its performance outcomes to the Board on a regular basis and subsequently disclosed its performance summary to shareholders in Form 56-1 One Report.

Nomination and Remuneration Committee

Name	Position	Date of Appointment
Mr. Pakorn Nilprapunt[1]	Chairman of the Nomination and Remuneration Committee (Independent Director)	Jan 1, 2023
Mr. Somkiat Prajamwong	Director to the Nomination and Remuneration Committee (Independent Director)	April 4, 2022
Mr. Surachai Achalaboon[2]	Director to the Nomination and Remuneration Committee (Independent Director)	April 9, 2024

Mr. Krit Treenutchakorn, Senior Vice President of Corporate Governance and Legal and serves as Secretary to the Nomination and Remuneration Committee.

Remarks:

(1) Mr. Pakorn Nilprapunt served as Director to the Nomination and Remuneration Committee from November 22, 2021 - December 31, 2022.

(2) Mr. Surachai Achalaboon was appointed Director to the Nomination and Remuneration Committee, replacing General Nimit Suwannarat on April 9, 2024.

The Nomination and Remuneration Committee is composed of at least 3 Directors of the Board, all of whom shall be Independent Directors in line with good corporate governance principles. These Directors serve a three-year term unless their terms on the Board end or they resign or are removed from their positions.

The Board of Directors has approved the Charter of the Nomination and Remuneration Committee, which stipulates the composition, qualifications, terms of office, and scopes of duties according to good corporate governance principles. Details of the charter are disclosed in the Company's Corporate Governance Handbook and on the Company website.

The Nomination and Remuneration Committee is responsible for nominating qualified candidates for directorship to replace Directors retiring by rotation or fill vacancies due to other reasons as well as nominating candidates to be appointed as the Chief Executive Officer (CEO) and candidates qualified for directorship in sub-committees in accordance with clearly defined criteria or a transparent nomination process. In this process, the Committee shall take into consideration experiences, profession, skills (the Board Skills Matrix) and specific qualifications necessary for the Company's business operation to achieve a balanced array of expertise and maximum benefits as well as its own Director Pool as well as those of authoritative external agencies when nominating candidates to the Board of Directors and/or the shareholders' meeting for appointment. The Committee is also charged with reviewing and determining remuneration for the Directors, Directors to Sub-committees, and CEO, which adheres to fair and reasonable criteria or methods, and proposing it to the Board of Directors and/or the shareholders' meeting for approval. The Committee also establishes criteria for the annual performance assessment of the Board of Directors and CEO and assesses the performance of CEO to determine appropriate remuneration, which is then proposed to the Board of Directors for approval. Further details appear in the Charter of the Nomination and Remuneration Committee.

In 2024, the Nomination and Remuneration Committee convened a total of 8 meetings to fulfill its role according to the scope of authority and responsibilities stipulated by the Charter of the Nomination and Remuneration Committee and as assigned by the Board of Directors. The Committee also reported its performance outcomes to the Board and subsequently disclosed its performance summary to shareholders in Form 56-1 One Report.

Corporate Governance and Sustainability Committee

Name	Position	Date of Appointment
General Nimit Suwannarat(1)	Chairman of the Corporate Governance and Sustainability Committee (Independent Director)	April 9, 2024
Mr. Wim Rungwattanajinda(2)	Director to the Corporate Governance and Sustainability Committee (Independent Director)	April 9, 2024
Police Colonel Dusadee Aryawuit	Director to the Corporate Governance and Sustainability Committee (Independent Director)	Nov 1, 2023
Mr. Patchara Anuntasilpa	Director to the Corporate Governance and Sustainability Committee (Director)	April 7, 2023
Mrs. Nivadee Jaroensitipun(3)	Director to the Corporate Governance and Sustainability Committee (Director)	Oct 21, 2024

Mr. Krit Treenutchakorn, Senior Vice President of Corporate Governance and Legal and serves as Secretary to the Corporate Governance and Sustainability Committee.

Remarks:

(1) General Nimit Suwannarat was appointed Chairman of the Corporate Governance and Sustainability Committee, replacing Professor Somkit Lertpaithoon on April 9, 2024.

(2) Mr. Wim Rungwattanajinda was appointed Director to the Corporate Governance and Sustainability Committee, replacing Mr. Surachai Achalaboon on April 9, 2024.

(3) Mrs. Nivadee Jaroensitipun was appointed Director to the Corporate Governance and Sustainability Committee, replacing Mr.Chadil Chavannalikikorn on October 21, 2024.

The Corporate Governance and Sustainability Committee is composed of at least 3 Directors of the Board, more than half of whom shall be Independent Directors. Its Chairman shall also be an Independent Director. These Directors serve a three-year term unless their terms on the Board end or they resign or are removed from their positions.

The Corporate Governance and Sustainability Committee is responsible for establishing policies as well as supervising and promoting the implementation of sustainable development. The committee is also tasked with offering consultation and drawing up suitable and transparent operational guidelines in line with GC's good corporate governance and sustainable development principles in order to achieve an environmental, social and governance (ESG) balance, which in turn benefits the creation of value and sustainable business growth and helps foster confidence and credibility among stakeholders.

In 2024, the Corporate Governance Sustainability Committee convened a total of 7 meetings, with an offsite meeting at Rayong Office on September 24, 2024, during which the Committee paid a visit to a mangrove plantation developed for carbon credits, planted mangrove trees for carbon dioxide absorption, and released mangrove crabs in a mangrove crab conservation area in Klaeng District, Rayong. In addition, the Corporate Governance Sustainability Committee held 2 meetings with the Risk Management Committee to fulfill its role according to the scope of authority and responsibilities stipulated by the Charter of the Corporate Governance and Sustainability Committee and as assigned by the Board of Directors. The Committee also reported its performance outcomes to the Board and subsequently disclosed its performance summary to shareholders in Form 56-1 One Report.

Risk Management Committee

Name	Position	Date of Appointment
Mr. Grisada Boonrach	Chairman of the Risk Management Committee (Independent Director)	June 22, 2020
Mr. Petai Mudtham[1]	Director to the Risk Management Committee	Feb 12, 2024
Mr. Pongpun Amornvivat[2]	Director to the Risk Management Committee	Feb 17, 2025
Mr. Narongsak Jivakanun[3]	Director to the Risk Management Committee	May 13, 2024

Mr. Sarit Chotchakornpant, Acting Vice President of Corporate Risk Management and Internal Control System, serves as Secretary to the Risk Management Committee.

Remarks:

(1) Mr. Petai Mudtham was appointed Director to the Risk Management Committee, replacing Mr.Sarawut Kaewtatip on February 12, 2024.

(2) Mr. Pongpun Amornvivat was appointed Director to the Risk Management Committee, replacing M.L. Peekthong Thongyai on February 17, 2025.

(3) Mr. Narongsak Jivakanun was appointed Director to the Risk Management Committee, replacing Mr. Kongkrapan Intarajang on May 13, 2024.
M.L. Peekthong Thongyai was appointed Director to the Risk Management Committee Mr.Noppadol Pinsupa on October 21, 2024 and tendered his resignation on December 12, 2024.
Mr.Cherdchai Boonchoochauy resigned on August 19, 2024.

The Risk Management Committee is composed of at least 3 Directors of the Board, at least 1 of whom shall be an Independent Director. These Directors serve a three-year term unless their terms on the Board end or they resign or are removed from their positions.

The Risk Management Committee is responsible for reviewing and approving risk management policies in alignment with the Company's objectives, core targets, strategies, risk appetite to provide a unified risk management framework within which the entire GC Group operates. The Committee is also charged with establishing a framework for the management of key risks, with a particular focus on early warning signs and emerging risks that may impact GC's business operations, and overseeing the identification and prioritizing of risks by impact and likelihood. In connection to this, the Committee is tasked with establishing appropriate risk mitigation measures and monitoring and assessing the effectiveness of the Company's risk management. Furthermore, the Committee offers its opinions and recommendations on possible risk issues regarding an investment project or a legally binding agenda item that is complex in nature or will impact the Company's reputation in a significant manner. It also ensures that the Company's business operations comply with relevant laws and standards.

In 2024, the Risk Management Committee convened a total of 7 meetings and held 2 meetings with the Corporate Governance and Sustainability Committee to fulfill its role according to the scope of authority and responsibilities stipulated by the Charter of the Risk Management Committee and as assigned by the Board of Directors. The Committee also reported its quarterly performance outcomes to the Board and subsequently disclosed its performance summary to shareholders in Form 56-1 One Report.



Executives

To ensure efficient organizational management and operations that adhere to the policies and directions established by the Board of Directors, the Chief Executive Officer, exercising the power vested in him by GC's Articles of Association, has formed the Management Committee (MC) and the Group Management Committee (GMC). Both committees are composed of top management from Senior Vice President upwards, under the CEO's direct supervision. The CEO, as head of the Company's employees, has the authority and duties to ensure that the Company operates according to the policies, plans, and budgets approved by the Board.

The MC is responsible for devising and aligning company's operational directions and guidelines with the Board's established policies. It reviews and offers suggestions on the Company's policies and operational guidelines in relation to marketing, commercial and supply; risk management, capital allocation and management; human resources management and development; quality, safety, occupational health, and environmental management; social responsibility; sustainable development; initiatives in pursuit of net-zero goals; as well as matters that may cause significant changes to its GC and Group Performance Centers. The MC also reviews and offers suggestions on Board meeting agenda prior to presenting them to the Board at the meeting. Additionally, the MC oversees the Company's compliance with the law and regulations of external regulatory authorities as well as its own rules and regulations and the Company's relevant legal actions to ensure that the conduct of GC's business is in compliance with good corporate governance principles and in conformity to international standards. The MC also follows up on and implements the Board's resolutions, suggestions, and opinions given at Board meetings as well as oversees and monitors diverse aspects of GC's progress as a whole and internationally.

Meanwhile, the GMC is tasked with reviewing and offering opinions and recommendations on the alignment of Company policies with those of its Group Performance Centers in relation to the operational guidelines for Group Performance Centers' production management, marketing, commercial and supply, and risk management, including human resource management and development; quality, safety, occupational health, and environmental management; and social responsibility. It also monitors the performance of Group Performance Centers and progress on innovation and technology initiatives as well as projects that contribute to the efficiency of their operations.

The MC holds at least three meetings monthly, while the GMC holds at least one monthly meeting. In 2024, the MC convened a total of 38 meetings, and GMC convened a total of 12 meetings. The Senior Vice President of Corporate Governance and Legal serves as Secretary to both committees.



Executives under the Organizational Structure as of January 1, 2025

Name	Position
1. Mr. Narongsak Jivakanun	Chief Executive Officer Acting Chief Operating Officer - International Business
2. Mr. Toasaporn Boonyapipat	President
3. Mr. Pirun Krimwongrut	Chief Operating Officer - Base and Intermediate Chemicals
4. Mr. Saroj Putthammawong	Chief Operating Officer - Value Added Products
5. Mr. Pornsak Mongkoltrirat	Chief Operating Officer - Center of Excellence
6. Mr. Thitipong Jurapornsiridee	Executive Vice President - Finance and Accounting
7. Mr. Anutin Chuaypen	Executive Vice President - Organizational Effectiveness
8. Mrs. Chananchida Wiboonkanarak	Executive Vice President - Corporate Strategy Acting Senior Vice President - Corporate Sustainability
9. Mr. Siridech Kumvongdee	Executive Vice President - Marketing, Commercial and Supply Chain
10. Mr. Pukpong Wungrattanasopon	Executive Vice President - Olefins
11. Mr. Kamel Ramdani	Executive Vice President - Product Innovation Acting Senior Vice President - Innovation Growth Platforms and CVC
12. Mr. Krit Treenutchakorn	Senior Vice President - Corporate Governance and Legal
13. Mr. Chatchawalit Dhammasaroj	Senior Vice President - Internal Audit
14. Mr. Panod Awaiwanond	Senior Vice President - International Supply Chain and Trading Business
15. Mr. Pisit Fusiripong	Senior Vice President - Technology Excellence
16. Mr. Sakesiri Piyavej	Senior Vice President - Quality, Safety & Occupational Health and Environment
17. Mrs. Chatsuda Kanjanarat	Senior Vice President - Transformation Excellence
18. Mr. Rachean Chanthaweekul	Senior Vice President - Procurement
19. Mr. Krit Kumpabooth	Senior Vice President - CAPEX Excellence, Maintenance and Reliability
20. Mr. Sombat Silsangwon	Senior Vice President - EO and Derivatives
21. Mr. Sawat Trongdilokrat	Senior Vice President - Phenol and Derivatives
22. Mr. Ratchada Sawasdirak	Senior Vice President - Refinery
23. Mr. Panchoak Auetanapa	Senior Vice President - Polymers
24. Mr. Thitipol Artsanchorn	Senior Vice President - Marketing and Sales - General Applications
25. Ms. Kornkamol Korpaisarn	Senior Vice President - Strategy, Business Development and Commercial Excellence
26. Ms. Wanlapa Sophiskhuankhant	Senior Vice President - International Finance and Strategy
27. Mr. Meata Moleechat	Acting Senior Vice President - Aromatics
28. Mr. Pichet Phannachet	Acting Senior Vice President - Utilities
29. Mr. Kitchai Chalermsuksant	Acting Senior Vice President - Marketing and Sales - Industry Platforms
30. Mr. Andy Ting	Acting Senior Vice President - Specialty and International Business Development

Remark: Executives in numbers 1-6 are executives as per SEC's Notification Re: Determination of Definitions in Notifications relating to Issuance and Offer for Sale of Securities.

Changes in Executives from January 1, 2024 – January 1, 2025

1) Mrs. Chananchida Wiboonkanarak was appointed Executive Vice President - Corporate Strategy, effective January 1, 2024, and Acting Senior Vice President - Sustainability, effective October 1, 2024.

2) Mr. Kamel Ramdani was appointed Executive Vice President - Product Innovation and Acting Senior Vice President - Innovation Growth Platforms and CVC, effective January 1, 2024.

3) Mr. Kridsada Prasertsuko was appointed Executive Vice President under Value Added Products, effective January 1, 2024.

4) Mr. Chatchawalit Dhammasaroj was appointed Senior Vice President - Internal Audit, effective January 1, 2024.

5) Mr. Rachean Chanthaweekul was appointed Senior Vice President - Procurement, effective January 1, 2024

6) Mr. Krit Kumpabooth was appointed Senior Vice President - CAPEX Excellence, Maintenance and Reliability, effective January 1, 2024

7) Ms. Kornkamol Korpaisarn was appointed Senior Vice President - Strategy, Business Development and Commercial Excellence, effective January 1, 2024

8) Ms. Wanlapa Sophiskhuankhant was appointed Senior Vice President - International Finance and Strategy, effective January 1, 2024

9) Mrs. Panida Chinayone was transferred to the position of Senior Vice President under Value Added Products and was seconded to GC Logistics Solutions Company Limited as Managing Director, effective January 1, 2024.

10) Mr. Sarawuth Nuntavadeepisarn was appointed Senior Vice President under Center of Excellence and seconded GC Maintenance and Engineering Company Limited as Managing Director, effective January 1, 2024.

11) Mrs. Kamolwan Wongkolkitsilp was appointed Acting Senior Vice President under Value Added Products and seconded to GC Polyols Company Limited as Managing Director, effective January 1, 2024. She was appointed Senior Vice President under Value Added Products, effective January 1, 2025.

12) Mr. Panchoak Auetanapa was appointed Senior Vice President - Utilities under Base and Intermediate Chemicals, effective January 1, 2024, and was transferred to the position of Senior Vice President - Polymers, effective May 13, 2024.

13) Mr. Kasem Leewongjaroen was appointed Senior Vice President under Base and Intermediate Chemicals and was seconded to GC-M PTA Co., Ltd. and Thai PET Resin Co., Ltd. as President on January 1, 2024.

14) Mr. Narongsak Jivakanun was appointed Chief Executive Officer and Acting Chief Operating Officer - International Business, effective May 13, 2024.

15) Mr.Toasaporn Boonyapipat was appointed President, effective May 13, 2024.

16) Mr. Pirun Krimwongrut was transferred to the position of Chief Operating Officer - Base and Intermediate Chemicals, effective May 13, 2024.

17) Mr. Pornsak Mongkoltrirat was appointed Chief Operating Officer – Center of Excellence, effective May 13, 2024.

18) Mr. Thitipong Jurapornsiridee was appointed Executive Vice President - Finance and Accounting, effective October 1, 2024.

19) Ms. Pattaralada Sa-ngasang served as Executive Vice President - Finance and Accounting until September 30, 2024.

20) Mrs. Rattiya Chandavasu was transferred to the position of Senior Vice President - International Business and seconded to allnex, effective February 16, 2024.

21) Mr. Kitchai Chalermsuksant was appointed Acting Senior Vice President - Marketing and Sales - Industry Platforms, effective May 1, 2024.

22) Mr. Pichet Phannachet was appointed Acting Senior Vice President - Utilities, effective May 13, 2024.

23) Mr. Krit Treenutchakorn was appointed Senior Vice President - Corporate Governance and Legal, effective May 16, 2024.

24) Mr. Andy Ting was appointed Acting Senior Vice President - Specialty and International Business Development, effective July 1, 2024.

25) Mr. Chaya Chandavasu resigned as Executive Vice President - Sustainability, effective September 30, 2024.

26) Mrs. Jeeranee Pimthanothai retired on December 31, 2024.

27) Mr. Paisarn Sarapee retired on December 31, 2024.

28) Mr. Theerapol Muenpakdee retired on December 31, 2024.

29) Mr. Teerasak Na Chiangmai retired on December 31, 2024.

30) Mr. Sombat Silsangwon was transferred to the position of Senior Vice President - EO and Derivatives, effective January 1, 2025.

31) Mr. Pisit Fusiripong was appointed Senior Vice President - Technology Execllence, effective January 1, 2025.

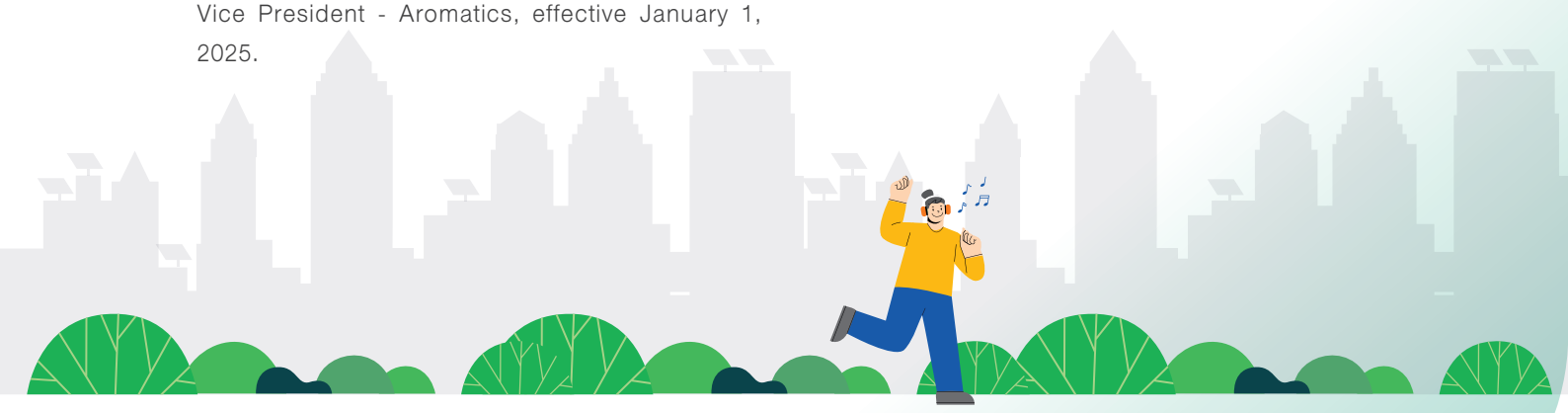
32) Mr. Meata Moleechat was appointed Acting Senior Vice President - Aromatics, effective January 1, 2025.

Remuneration Policy for Executive Directors and Executives

The Company evaluates the performance of its Executives annually against the pre-determined Key Performance Indicators (KPIs). These include financial performance, implementation of long-term strategic goals, personal performance, the Company's performance and practices of other listed companies of a similar size in the same industry. The evaluation also takes into account their responsibilities, management development and overall economic conditions.

Total Remuneration for Executive Directors and Executives from the Company and its Subsidiaries

The remuneration for the Chief Executive Officer is appropriately determined using transparent, fair, and reasonable criteria. The position's duties and responsibilities are also taken into account in conjunction with personal performance. The Nomination and Remuneration Committee is charged with reviewing and proposing the remuneration of the Chief Executive Officer to the Board of Directors for approval. It should be noted that, at the highest level of the Company's management hierarchy, the Chief Executive Officer is awarded compensation and other benefits in addition to those received as a Director on the Board of Directors.



Total remuneration of GC and GC's Subsidiaries paid to the Executives under SEC's definition serving in 2024 (Including those who retired and resigned in 2024) as of December 31, 2024.

Type of Remuneration	Number of Executives	Total (Million Baht)		
		GC	Subsidiaries	Total
Total Combined Salaries	8	54	-	54
Total Combined Special Bonuses	6	18	-	18
Provident Fund Contributions	8	7	-	7
Total		**79**	**0**	**79**

Shares held by the Executives under SEC's definition, their spouses, and their minors as of December 31, 2024

Name	Number of Shares		
	As of January 1, 2024	As of December 31, 2024	Increase / (Decrease) of Shares during the Year (Shares)
1. Mr. Narongsak Jivakanun	-None-	-None-	-No change-
2. Mr.Toasaporn Boonyapipat	-None-	-None-	-No change-
3. Mr. Pirun Krimwongrut	27,033	27,033	-No change-
4. Mr. Pornsak Mongkoltrirat[1]	N/A	15,258	-No change-
Spouse	N/A	16,158	-No change-
5. Mr. Saroj Putthammawong[2]	4,900	4,900	-No change-
6. Mr. Thitipong Jurapornsiridee[3]	N/A	20,000	-No change-

Remarks:

(1) Mr. Pornsak Mongkoltrirat was appointed Chief Operating Officer - Center of Excellence on May 13, 2024.

(2) Mr. Saroj Putthammawong was appointed Chief Operating Officer - Value Added Products on January 1, 2024.

(3) Mr. Thitipong Jurapornsiridee was appointed Executive Vice President - Finance and Accounting, replacing Ms. Pattaralada Sa-ngasang on October 1, 2024.



Employees

People Management and Development Policy

A management approach that strengthens both the organization and its people is a key mechanism for enhancing GC's competitiveness as well as its ability to operate its business effectively and accommodate domestic and international investment expansion, enabling the Company to grow sustainably and attain its aspiration "To be a Leading Global Chemical Company for Better Living."

GC strives to foster the organization's and its people' readiness to meet future business needs and achieve outcomes as planned. To this end, GC has developed human resource strategies to keep its human resource management consistent with its strategic directions and business goals so as to ensure effectiveness and efficiency. The three core focuses are: organization, people, and culture, and the actions taken are as follows:

1. People

GC strives to enhance the efficiency of employees as well as their competitiveness for business today and in the future in order to bolster their productivity for the company. Key activities in 2024 can be summarized as follows.

1.1 Manpower Plan Strategy

1.1.1 GC improved its work processes, focusing on end-to-end lean process improvement through the FiT project to enhance process efficiency, productivity, and agility, all of which contribute to efficient manpower optimization. The expected results of the FiT project are:

- Efficient work process managements and operating models
- Organization-wide data connectivity and greater data analysis efficiency
- Accurate, fast, and efficient decision-making process
- Skilled and knowledgeable personnel with the ability to keep pace with changes.

In addition, GC adopted digital technology as a strategic driver of digitalization across various projects to reap added values as well as initiated technology transformation to improve and modernize its infrastructure in support of its business units. These initiatives enhanced operational efficiency and optimized manpower control and utilization, enabling GC to complete a digital transformation.

1.1.2 GC conducted manpower planning and established an appropriate manpower framework. To this end, GC carried out Strategic Workforce Planning (SWP) to determine the suitable manpower for each unit, making it possible to plan recruitment and development of skills and competencies among employees within an appropriate timeframe in line with GC's business direction and goals, thus enhancing the organization's competitiveness. In addition, GC planned and controlled its manpower ratio by reviewing the recruitment of new hires to replace resigned and retired employees to ensure suitability and adequacy for GC's business continuity and alignment with GC's situation, visions, and strategies as well as foster GC's competitiveness in the short and long term.



1.2 Skill and Competency Development

With regard to employees development and growth, GC has since 2021 implemented long-term strategies to steer its learning culture towards self-directed learning, in which each learner can design their own learning path, analyze and determine their areas of development, set their own learning goals, and select their own learning resources, with an option to consult their coaches or mentors during this process. Within this learning culture, GC believes that its employees will be able to enhance their skills and capabilities rapidly and in time for changes in its business operations.

In 2024, GC launched initiatives to develop five key capabilities, namely Digital, Innovation, Global acumen, Sales and marketing, and Sustainability, which are essential to future business operations, with plans to elevate the five capabilities across the organization within five years.

In addition, GC has defined three groups of essential knowledge and skills for its employees:

1) Corporate Course: Courses on laws and GC's fundamental policies

2) Leadership Learning Solution: Courses for leadership skill development

3) Functional Learning Solution: Courses for the development of specific skills for the roles and responsibilities of each job position

GC prioritizes multimodal learning to enable practical applications through Individual Development Plans (IDP). In order to develop personnel knowledge and capabilities, various learning initiatives have been developed, such as "Anywhere, Anytime Learning," in which employees can engage in self-learning 24/7 through a digital system, and experiential learning, which consists of three learning formats:

1) On The Job Training (OJT): Developing skills through hands-on experience with guidance from supervisors or senior colleagues

2) Global Mobility Program: Learning through rotational assignments in companies under GC Group both domestically and internationally

3) Partnership with External Experts: Gaining new learning experiences through partnerships with public and private organizations both domestically and globally

GC focuses on applying technology as a tool to promote lifelong learning through its integrated All-in-one Learning Platform and enable employees to engage in self-learning as well as upskill and reskill themselves anywhere, anytime. In 2024, GC enhanced its Learning Management System by implementing SAP Success Factors, which allows seamless integration of learning management with other HR functions. This upgrade has also made it possible to offer a larger and more diverse range of courses that better align with the competency development needs according to IDPs jointly designed by employees and their supervisors, enabling employees to plan and manage their learning and achieve their development goals in expected skills and career paths. With this system, employees are also empowered to design their own learning plans and easily select relevant courses for self-development at any time, representing a cultural shift where employees are responsible for planning, managing, and conducting their own learning.

To support self-directed learning, GC has created an ecosystem of development and growth for its employees, consisting of three major components:

1) Success Profile and Job to be Done: This component enables employees to compare their progress against GC's expectations, identify room for improvement, and establish their own self-development targets.

2) Development Roadmap and Blended Learning Solution. Designed by the Expert House, this component allows employees to conveniently select learning modules to design their own learning trajectory.

3) Outcome Management: This component tracks whether employees who have undergone self-development can apply their acquired skills and capabilities to their work and produce expected deliverables, thus enabling them to see the progress of their self-development and plan the next stage of development.

Expert Houses have also been initiated to design learning journeys, blended learning programs, and specialized course content on technical/functional skills for each job family. Each Expert House consists of subject matter experts and instructors from both internal and external sources. The expected outcomes include an increased number of subject matter experts, enhanced employee proficiency, quantifiable learning outcomes, and business outcomes measured in terms of both financial returns on investment (ROI) and non-financial forms, such as increased plant safety and reliability and leaner processes. To date, a number of Expert Houses have been established for different job families, including Engineering and Plant Operation Expert House, Digital Expert House, Financial and Accounting Expert House, and Leadership Expert House, whose deliverables collectively yielded an ROI of 96 million Baht.

Leadership development is another area where GC places strong emphasis, focusing on developing employee skills and preparing them for future growth and leadership roles. In collaboration with leading institutions both domestically and internationally, GC has created a Leadership Development Solutions Catalog, which compiles leadership competency development courses for employees at all levels in both classroom and online formats, allowing employees to choose development paths based on their interests. In addition, GC has launched a Master Trainer Program to develop internal trainers and experts capable of transferring knowledge and teaching various courses to fellow employees, thus driving GC toward becoming a learning organization. This initiative reduces external training costs by 2 million Baht per year and has resulted in the certification of at least 40 courses.

In 2024, with regard to talent development, GC reviewed its talent grouping criteria and designed skill development courses to match global leading companies. In addition, several key employees development initiatives were undertaken, including the dEX I SPARK - Data Science and Engineering Program, Productivity Improvement and Innovative Creation Training by Learning Concept of Chemical Engineering Practice School (PI-ChEPS), GC Inspirational Leadership Development Program (ILP), GC Gen S Onboarding Camp 2024, and English language skills development program by VOXY, a language institute recognized by leading global educational institutions.

1.3 Recruitment Strategy

To drive its strategies towards success and operate in accordance with its Anti-Corruption Policy, GC does not employ government officials* currently in office or civil servants as regular employees. Additionally, GC focuses on recruiting and hiring employees who are equipped with new knowledge and skills in job categories essential to the business and seeks to expand hiring modes and apply technology to work processes to increase efficiency. The introduction of SAP Success Factors in 2024 has also standardized the operations of the recruitment team and reduced steps and time in the recruitment process, saving more than 1,100 work hours per year for those involved in recruitment and enhancing the user experience for both job applicants and employers, resulting in an overall recruitment satisfaction rate of 89%, a 3% increase from the previous year. Furthermore, GC continued the employee referral program to encourage employees to recommend qualified candidates suitable for the organization, while various projects were undertaken to enhance the corporate image among external applicants who were target groups through social media, including:

1.3.1 The GC Brand Ambassador Recruitment program selects employees demonstrate GC SPIRIT 4 Core Behaviors and exemplify “Gen S” characteristic of prioritizing sustainability as part of an effort to convey the corporate values that all GC employees uphold. GC Brand Ambassadors play a crucial role in communicating and conveying the employee value proposition to both internal employees and external stakeholders, leading to increased employee engagement and attracting more individuals who share the same values. In 2024, 14 GC Brand Ambassadors were appointed from across all departments, including Operation & Engineering, Research & Development, IT Digital, Sales & Marketing, Human Resources, Finance & Accounting, Supply Chain, Corporate Social Responsibility, and Business Analysis.

Remark: * The definition of government officials is based on the Anti-Corruption Policy of GC Group.

1.3.2 The GC Open House was held both on-site and online to increase company recognition as well as provide guidance and motivate participants through success stories shared by GC's executives. The event featured various panels and activities, held at both Bangkok and Rayong offices, including GC Business Sharing, GC & Sustainability Mission, GC Innovations, Career Talk Show by GC Management Team, Life at GC Sharing by GC Brand Ambassador, and Office & GC Museum Touring. These activities successfully drew a total of 271 external participants and achieved a high satisfaction rate of 91%.

1.3.3 The "GC: Hot Job of the Month" monthly campaign was held to pool vacant positions together and increase awareness of the job openings in order to attract and recruit candidates with required skills for the job vacancies. A total of 123 job positions were announced via Facebook, LinkedIn, and Line Official Account at the beginning of each month from January to December 2024, and over 2,447 applications were submitted.

Furthermore, GC continued to produce and publish content on social media, such as Facebook and LinkedIn, to educate and inspire the external audience and communicate interesting facts on welfare at GC as well as portray the working atmosphere at GC. In 2024, GC created a TikTok account as an additional platform and successfully increased the number of followers on Facebook by more than 5% on average compared to 2024 – an indication of increased public attention towards GC.



1.4 Other support for employees

GC provides suitable comprehensive employee care throughout their life cycles to create a positive work experience and ensure their well-being at work, as detailed below:

1.4.1 Performance Management System

To ensure that performance assessment enhances the achievement of GC's goals, supports the learning and development and the performance improvement of individual employees, and promotes rewards and recognition, GC has integrated its performance assessment policies, beginning with establishing annual goals, performance monitoring during the year, and year-end assessment. Also, to make certain that the corporate goals are reflected on individual levels, Key Performance Indicators (KPIs) are cascaded from the company's goals to the top executives and further down to the subsequent levels, while KPI alignment is conducted within each function, and a review performance alignment is carried out internally to ensure the function is assessed to the same standard. Moreover, to ensure fairness and transparency, the company policy requires that employees and their supervisors meet for a performance check-in periodically to allow them to monitor their performance and obtain assistance regularly. This practice not only supports working from anywhere (WFA), which is one of GC's working modes, but also encourages supervisors to perform coaching duties, such as through words of appreciation, prioritization, fostering of confidence, and words of encouragement, in order to enhance employees capabilities and performance.

After the year-end assessment is conducted, supervisors compare the outcome with the results of the peer review to identify disparity, which affects the annual salary adjustment and the bonus according to the company's remuneration policy and operating results. GC has updated and improved its performance assessment system to be more user-friendly and enable assessment via mobile phones or tablets in addition to personal computers (PCs) or notebooks. GC has introduced a policy enabling employees and supervisors to review and revise the KPIs during the year to make them more dynamic and prescribed a performance assessment for

employees entrusted with special assignments, with project leaders/ project managers allowed to take part in the assessment with the operators in the system. The goal is to promote rewards and recognition, boost morale, and encourage better performance as well as to promote agile and cross-function working. Furthermore, to ensure that these assessments truly lead to continuous development, GC has integrated individual development planning into the employee performance assessment system, in which employees can express their own wishes regarding their career in the next 1-3 years. Their wishes are then taken into account in the consideration of job rotations, people development, and future recruitment. In addition, the assessment system has been linked to employees skill and competency evaluation, making it possible promptly develop employee development plans.

1.4.2 Remuneration

As a policy, GC offers competitive remuneration and benefits to its employees compared to leading companies in the same industry. The Company participates in the remuneration survey specifically for the oil and gas industry, which is GC's benchmark, conducted by the benefit and compensation consultants every year, to obtain information and maintain competitiveness. In addition, the appropriate remuneration is determined in accordance with the performance and duties to create utmost efficiency and effectiveness for both the Company and the employees. The salary structure is determined according to job level and position, taking into account fair remuneration regardless of gender. The remuneration ratio between male and female employees in GC and its subsidiaries is 75% to 25%.

GC also provides other legally mandated welfare as well as welfare not required by the law. In addition, to ensure a positive life experience in the organization for all employee groups, who may have different needs, GC has revised its welfare and benefits, such as flexible benefits, flexible OPD, and healthcare benefits for parents for single employees. Furthermore, GC has determined remuneration and benefits for employees assigned overseas in comparison with leading companies both in Thailand and aboard to support GC's strategies of work scope expansion, co-investment, and investment.

To support the operations of companies under GC Group, GC provides them with data on their salary structures as well as benefit and welfare structures in order to ensure their competitiveness within their industry and uniform practice across GC Group.

1.4.3 Employee Relations

To give employees a happy working life, foster employee engagement, and promote work-life balance, GC has since 2018 been carrying out various well-being projects to take care of its employees in terms of health, wealth, and mindfulness. Such activities, along with relevant communications, have also been adjusted to cater to employee needs and accommodate working from anywhere (WFA), with on-site activities included to encourage employees to meet and bond with each other in person, as detailed below.

Health and Mindfulness

- GC organized a meeting to give a refresher on GC's existing medical welfare (ER ma Share).
- GC held quarterly meetings of the Welfare Committee to foster relationships and understanding between the Company and its employees; activities fostering relationships between the Welfare Committee and the Company, such as VPs Meet Welfare Committee; training sessions of the roles and responsibilities of the Welfare Committee; as well as CSR activities.
- GC offered virtual consultation with doctors through MyDoc Telemedicine application provided by Allianz Partners and worked with MyDoc Simplify Healthcare to provide sessions with virtual teleconsultants.
- GC organized various physical and mental health promotion activities. Physical health promotion activities were namely the Heart Care Program, aimed at educating employees at risk of cardiovascular disease, and the GC Staff Wellness Program, which provided knowledge and encouraged proper regular exercise habits. Additionally, GC provided a mental health hotline for employees and their families as well as offerred services, such as stress and depression testing and work adjustment assessments. GC also held a Growth Mindset for Success activity,

in which employees were encouraged to be more open to others' ideas, view changes as challenges, and manage their own stress effectively.

Wealth Management

- GC organized online activities to promote financial management knowledge, such as educational sessions on generation-specific investment portfolio management, savings and investment practices for Generations X and Y, financial planning for baby boomers, a debt management education session titled "Debt Reduction for a Better Life" by SAM Institute, risk management through insurance products, member benefits and welfare education by the Gas/Oil Cooperatives, and a financial mentorship program.

- To prioritize employee security and benefits, GC provides diverse investment options in the provident fund, including fixed income policies, equity policies, foreign investment policies, and gold investment policies. In addition to 12 standard investment plans, GC also offers a DIY plan in which employees can determine their own investment allocation according to their risk tolerance. As a result, this year, GC received three outstanding provident fund awards from the Association of Provident Funds:
  1) Outstanding Development Fund Award in the Single Fund category for private organizations with fund size over 1,000 million baht
  2) Outstanding Employer Promotion Award in the Single Fund or Pooled Fund category for private organizations
  3) Outstanding Fund Committee Promotion Award in the Single Fund or Pooled Fund category for private organizations

These awards demonstrate that GC's provident fund effectively promotes and supports long-term wealth creation and sustainable retirement savings for employees, meeting the needs of all employee groups in line with today's rapidly changing economic conditions for maximum employee benefit.

Additionally, GC boosts the morale of long-serving employees by giving long service awards for employees at each specific year of service and carrying out initiatives that will promote a happy retirement, as detailed below.

1) In 2024, GC Group's turnover rate was 6.4% (GC's turnover rate was 1.3%). Exit interviews were conducted on resigning employees to further improve GC's employee care, welfare, and other matters and analyze their reasons for resigning in order to improve employee retention planning.

2) GC organized educational activities for employees preparing for early retirement and regular retirement. These included seminars, such as "Peace of Mind in Retirement," "Physical Health in Retirement," "Preparation for Early Retirement," "Happy Money Happy Retirement (For All Employees)," "Tax Knowledge for Retirees," "Social Security in Retirement," and retirement career workshops. In 2024, to help retiring employees plan happy post-retirement careers that aligned with their interests, GC conducted a survey and found that employees were most interested in mixed farming and hydroponic vegetable cultivation. In response, GC organized practical training workshops to help employees plan their cultivation, marketing strategies, and branding development. The program received a high satisfaction rating of 92%.

3) For certain employees, especially those with health issues, the Mutual Separation Program (MSP) was conducted to equip them with useful knowledge, such as healthcare, finance management, and outplacement programs.



In addition, GC places great emphasis on enhancing the quality of life of people with disabilities and giving them opportunities to demonstrate their capabilities, earn a sustainable livelihood, develop self-reliance, depend less on families and society at large. Thus, GC strives to empower them to become a vital force in earning income for their families and driving the economy of the country, especially for people with disabilities in the working age range as defined by the Persons with Disabilities Empowerment Act, B.E. 2550 (2007). In 2024, GC hired three people with disabilities as stipulated in Section 33 as full-time employees and promoted the livelihoods of 41 people with disabilities in accordance with Section 35 of the Act, thus supporting a total of 44 people. For the latter group, GC selected 21 individuals from five municipalities to participate in the initiative and subsequently assessed their income level and engaged experts to give them knowledge that would enable them to earn a livelihood. Thanks to this initiative, their income increased 60% compared to the level before they joined the program. In addition, GC worked with 15 people with disabilities from Vulcan Coalition Co., Ltd., with 8 people assigned to help develop audiobooks for donation to the Benjalai Library and 7 people assigned to assist in various departments within GC, helping reduce staff workload by 365 hours per month. GC also collaborated with the Alumni Association of the Vocational Training and Capability Development Center for the Blind to provide five visually impaired massage therapists to offer Thai massage services (neck, shoulders, and back) to employees at both Bangkok and Rayong offices at no cost. This service contributed to improved physical health among employees and received a high overall satisfaction rating of 97.5%.

Furthermore, GC has engaged external consultants with specialized expertise to conduct annual employee engagement surveys to listen to employees' opinions on various matters. For the year 2024, GC's employee engagement rate was 77%, a 12% increase from 2023, which was in the moderate zone (65%-82%) compared to the global benchmark, and the Company aimed to elevate the engagement rate into the top quartile in the future. In addition, in 2024, GC adjusted enterprise-level action plans in four major areas: career opportunity, motivating culture, performing, and leading, under the guideline detailed below:

1. Career Opportunity

- Optimizing the level advancement process, such as by delegating authority to level advancement committees composed of supervisors one level above.
- Revising English proficiency criteria for level advancement and appointments, with emphasis on workplace English skill development rather than test scores, such as in IDP formulation.
- Improving career paths for high-performing employees through, for instance, internal job rotation to prepare for higher positions when available and more opportunities for strategic positions within GC group companies.
- Expanding senior-level growth opportunities by increasing senior seat allocation from 30% to 50% of staffing in departments with designated senior seats to align with employee capabilities and the value they create for the organization.

2. Motivating Culture: GC promotes a positive collaborative work culture through various activities, including:

- Implementing GC SPIRIT 4 Core Behaviors promotion plans across all departments with Change Agents as key drivers of the organizational culture.
- Inspiring and motivating employees to apply GC SPIRIT 4 Core Behaviors in their work life through showcase activities at GC SPIRIT Day: GC Culture Film Festival 2024 – Based on TRUE STORY.
- Establishing Open Space for employee collaboration and value creation through cross-functional initiatives
- Improving effective meeting practices to help employees better balance work and personal life.

3. Enhancing Performance: This was achieved through the development of an employee value proposition (EVP) project to create guidelines for employee retention and attracting external talent. GC also actively worked to optimize work methods through effective meeting practices to continuously promote and improve meeting effectiveness.

4. Leadership Communication & Actions: Recognizing the importance of communication, GC's executives focused on clear, direct, and continuous communication with employees at all levels to keep employees informed of the GC's situation as well as the direction and organizational goals. The leadership also served as a crucial role model in motivating employees.

After implementing the enterprise-level action plans to elevate employee engagement rates, GC communicated with employees across the organization to ensure they understood the significance of participating employee engagement surveys and providing recommendations beneficial to the Company. In addition, to make employees aware that GC valued their voice, action plans were devised to address their needs and further foster their engagement to the organization.

2. Organization

GC strives to cultivate a Fit, Fast, Flexible & Effective approach to work and has thus established its "Ideal Organization" goals in line with its business strategies both at present and in the future. Key activities in this regard in 2024 can be summarized as follows.

2.1 Organizational Restructuring in Alignment with Long-term Strategies

GC has restructured itself into an "Ideal Organization" in alignment with its long-term strategies. As GC has significantly expanded its scope of operation to foster and maintain its competitiveness, supported international business expansion, and pursued operations and maintenance excellence, it has researched and designed a new organizational structure that would be on par with global leading companies in the industry to optimize its processes, better cater to customer needs in each business unit, enhance operational efficiency and efficacy, as well as reduce short- and long-term costs. In support of this restructuring and ensuing shifts, change management has been implemented to create a smooth transition, minimize risks and potential impacts, and foster personnel preparedness, thus ensuring that the executives and employees can take on new duties efficiently.

2.2 Work from Anywhere (WFA)

GC has instituted working from anywhere (WFA) as a standard mode of work for office employees, starting from 2023 onwards. This is to ensure that GC's work practices are flexible, agile, and adaptable to changing circumstances and accommodate the new normal and that GC can attract new generations who prioritize work flexibility and the ability to achieve work-life balance. Furthermore, GC regularly conducts surveys to gather employees' feedback on various aspects of work, well-being, and self-development, so that employees can work from anywhere efficiently and achieve a work-life balance, while employees who come to work in the office are encouraged to interact with each other.

3. Culture

GC drives GC SPIRIT 4 Core Behaviors through communication, day-to-day activities, and fundamental systems in order to foster an understanding among employees and enable them to adopt the behaviors as part of their daily life and propel the Company towards its goal: "To be a Leading Global Chemical Company for Better Living."

In 2024, GC continued to strengthen its efforts to drive the organizational culture among employees at all levels, with all the executives serving as role models and inspirational leaders through various activities. For instance, action plans were developed so that GMC-level executives could engage in "Walk the Talk," where they shared their stories to cultivate GC SPIRIT 4 Core Behaviors based on the theme "Conviction to Change: Speed to Global Mindset" within their functions. Other examples include a high-level executive panel during the GC SPIRIT Day 2024 to communicate GC's vision, missions, and business direction to educate and inspire employees and effect tangible changes; and a GMC-level executive workshop to review the implementation of GC SPIRIT 4 Core Behaviors and the theme for driving organizational culture in 2025, which will place emphasis on innovation, diversity and inclusion, and agility as drivers of success in achieving business goals in a continuous and sustainable manner.

In addition to the executives, who served as role models to ensure the continuous and efficient advancement of the organizational culture, GC also had a robust GC SPIRIT Committee and Change Agents, who joined hands to carry out various activities, such as Change Agent Onsite Outing, in which Change Agents familiarized themselves with each other, exchanged their experience, and acknowledged the policy for advancing the organizational culture and the culture theme for the year 2024. They were also given guidelines on planning and conducting initiatives for driving GC SPIRIT 4 Core Behaviors in their departments and functions. Another series of activities was Change Agent Chit-Chats, in which Change Agents gathered and exchanged their perspectives, opinions, as well as approaches and examples from each function that could be applied to produce tangible changes in their departments and functions.

In terms of communication with employees at all levels, GC organized GC SPIRIT Day: GC Culture Film Festival 2024 – Based on TRUE STORY to underscore the importance of GC SPIRIT 4 Core Behaviors. The GC Culture Film Festival 2024 included a video contest featuring video clips by employees telling true stories of how GC SPIRIT 4 Core Behaviors and the Conviction to Change: Speed to Global Mindset were applied to foster behavioral change in the world place and drive GC's business operations towards success in a continuous and sustainable way. At the event, Change Agents were also recognized for their contribution in effecting behavioral change in the organization, and panel talks were organized to promote executives' roles as organizational culture drivers, sources of inspiration, and role models of the organization's core behaviors.

Furthermore, to gauge the success of its organizational culture advancement initiatives and ensure that the cultivation of its organizational culture was in accordance with the defined roadmap and produced tangible organization-wide results, GC conducted a culture survey and a 360-degree 4 Core Behaviors assessment, which involved supervisors, direct subordinates, coworkers, and external stakeholders, in order to reflect perspectives and behaviors related to the adoption of GC SPIRIT 4 Core Behaviors more clearly and accurately through those in contact with the individuals assessed. The results were analyzed to identify room for improvement and inform employee development. In addition, GC organized cross functional initiatives for a fifth consecutive year to create a space where employees from different functions could develop projects together, take advantage of the diverse backgrounds and expertise of their teammates to propose new ideas to promptly meet the needs of internal and external customers, and put the Global Mindset to practice in their work. The cross functional initiatives proposed by employees also helped reduce costs for GC.

GC strives to promote a happy work life, better living, as well as safety and occupational health for its employees and has always been committed to improving and enhancing its organizational and personnel management capabilities as people are the most valuable resources for GC's strong and sustainable growth.



Employees

As of December 31, 2024, GC Group hired a total of 11,058 employees, which can be divided by function as follows:

1. Direct reports to Chief Executive Officer	15
2. Internal Audit	28
3. Corporate Sustainability	19
4. Corporate Governance and Legal	94
5. Corporate Strategy	49
6. Finance and Accounting	191
7. Organizational Effectiveness	174
8. Direct reports to President	2
9. Marketing, Commercial and Supply Chain	144
10. International Supply Chain and Trading Business	6
11. Direct reports to Chief Operating Officer - Center of Excellence	1,157
12. Transformation Excellence	63
13. Procurement	89
14. Technology Execllence	455
15. CAPEX Excellence, Maintenance and Reliability	130
16. Quality, Safety & Occupational Health and Environment	162
17. Direct reports to Chief Operating Officer - Base and Intermediate Chemicals	364
18. Olefins	689
19. Utilities	231
20. Aromatics	297
21. Refinery	282
22. EO and Derivatives	155
23. Phenol and Derivatives	190
24. Direct reports to Chief Operating Officer – Value Added Products	758
25. Polymers	419
26. Marketing and Sales - Industry Platforms	135
27. Marketing and Sales - General Applications	44
28. Strategy, Business Development and Commercial Excellence	56
29. Product Innovation	104
30. Direct reports to Chief Operating Officer - International Business	4,490
31. Specialty and International Business Development	9
32. Innovation Growth Platforms and CVC	47
33. International Finance and Strategy	10

Total remuneration paid to employee in 2024

Type of Remuneration	Total (Million Baht)
Salaried, Bonus, Wages, and Other Welfares	28,521
Provident fund Contributions	1,045
Post-Employee Benefits	433
Other Long-Term Employee Benefits	21
Total	**30,020**

The number of employees joining the provident fund scheme accounts for 85 % of all employees. Through its provident fund committee, GC selects a provident fund manager who is a signatory of the Investment Governance Code for Institutional Investors (I Code) and takes into consideration past investment performance.

Other Important Information

Company Secretary, Chief Accountant, Head of Internal Audit, and Head of Corporate Compliance

Company Secretary

In pursuant to the Securities and Exchange Act (No. 4) B.E. 2551 (2008), Sections 89/15 and 89/16, the Board of Directors at Meeting No. 4/2024 held on April 9, 2024, appointed Mr. Krit Treenutchakorn, Senior Vice President of Corporate Governance and Legal, as Company Secretary, replacing Mrs. Pilasphan Udomjarumanee. By law, the responsibilities of Company Secretary include the preparation and safekeeping of important company documents, including the register of directors, Board and shareholders' meeting notice and minutes, Form 56-1 One Report, and conflicts of interest forms filled by Directors and Executives. The Company Secretary is in charge of organizing Board and shareholders' meetings and submitting copies of reports on Directors and Executives interests to the Chairman of the Board of Directors and the Chairman of the Audit Committee. The Company Secretary also advises the Board and Executives on the rules and regulations they should familiarize themselves with, organizes training and orientation for current and new Directors, as well as provides them with information essential to their performance of duties as Directors. Moreover, the Company Secretary oversees compliance with laws, regulations and resolutions passed in Board and shareholders' meetings, as well as collaborates with relevant agencies on compliance. The Company Secretary has undergone training courses necessary for him to duly perform his roles. The qualifications of the Company Secretary are disclosed in Attachment 1 "Details of Directors, Executives, Controllers, and Company Secretary." on page 390.

Chief Accountant

GC assigned Mrs. Ratana Warinpramote, Vice President – Financial Accounting 1 as of August 1, 2023, to oversee the Company's accounting and ensure its compliance with relevant standards, laws, and regulations. The qualifications of the Chief Accountants are disclosed in Attachment 1 "Details of Directors, Executives, Controllers, and Company Secretary." on page 401.

Head of Internal Audit

The Audit Committee Meeting (special meeting) No. 1/2023 convened on September 17, 2023 resolved to approve the appointment of Mr. Chatchawalit Dhammasaroj as Senior Vice President of Internal Audit, effective January 1, 2024, responsible for evaluating and enhancing the internal control effectiveness, supervising the operations of the internal audit function to be in accordance with the objectives and the Global Internal Audit Standards, including objective and independent advisory on the Company's operations and report directly to the Audit Committee. The qualifications of the Head of Internal Audit are disclosed in Attachment 3 "Details of Heads of the Internal Audit and Compliance Units." on page 406.

Head of Corporate Compliance

GC appointed Miss Darawadee Denpaibul as Acting Vice President of Corporate Governance, effective February 16, 2024, replacing Mrs. Pilasphan Udomjarumanee. The responsibilities include overseeing corporate compliance, promoting corporate governance in business practices, and ensuring that the Executives and employees of GC Group comply with laws, rules, and regulations in countries where GC operates. The qualifications of the Head of Corporate Compliance are disclosed in Attachment 3 "Details of Heads of the Internal Audit and Compliance Units." on page 406.

Heads of Investor Relations and Contact Information

Vice President – Corporate Finance & Investor Relations

Miss Pornsook Limsathit
Tel : 02-265-8670
e-Mail : pornsook.l@pttgcgroup.com

Division Manager – Investor Relation

Mr. Paween Chiasakul
Tel : 02-265-8665
e-Mail : paween.c@pttgcgroup.com

Audit Fee and Non-Audit Fee

Audit Fee

GC and its subsidiaries paid the audit fee to:

- KPMG Phoomchai Audit Ltd., the auditor of GC and its subsidiaries, for the fiscal year of 2024 totalling Baht 9,995,740. Of this amount, GC paid Baht 3,789,800 and its subsidiaries paid Baht 6,205,940.
- The audit firm where the auditor was affiliated, including the persons or entities related to the auditors and the audit firm, for the fiscal year of 2024 totalling Baht 122,499,767.

Non-audit fee

GC and its subsidiaries paid the non-audit fee for performing agreed-upon procedures in connection with the requirements of the Board of Investment (BOI), transfer pricing services, tax and business consulting services and other audits by agreed-upon procedures to:

- KPMG Phoomchai Audit Ltd., the auditor of GC and its subsidiaries, for the fiscal year of 2024 totalling Baht 750,000 plus a total of Baht 920,000 to be paid for incomplete services in the fiscal year of 2024.
- The audit firm where the auditor was affiliated, including the persons or entities related to the auditors and the audit firm, for the fiscal year of 2024 totalling Baht 38,823,674 plus a total of Baht 14,087,679 to be paid for incomplete services in the fiscal year of 2024.

Board of Directors



1. **Mr. Predee Daochai**
   Chairman
   and Chairman of
   the Independent Director

2. **Mr. Thanwa Laohasiriwong**
   Independent Director
   and Chairman of the Audit
   Committee

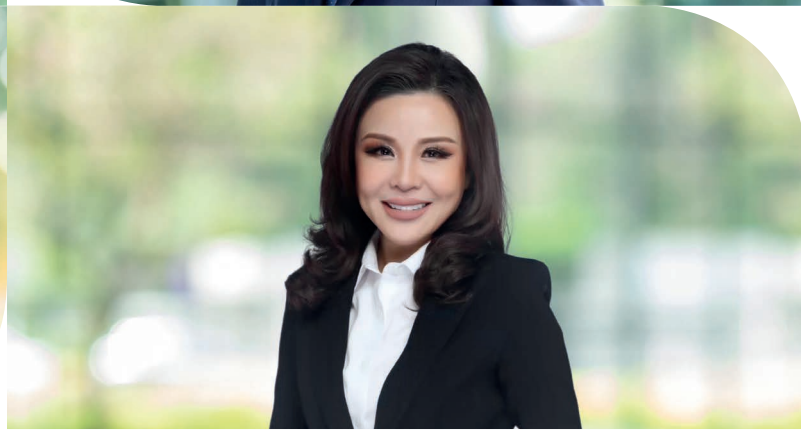
3. **Mr. Pakorn Nilprapunt**
   Independent Director,
   Chairman of
   the Nomination & Remuneration
   Committee, and Director
   to the Audit Committee

4. **General Nimit Suwannarat**
   Independent Director,
   Chairman of
   the Corporate Governance
   and Sustainability Committee,
   and Director to the Audit Committee

5. **Mr. Grisada Boonrach**
   Independent Director
   and Chairman of the Risk
   Management Committee





6.	7.
8.	9.
10.	11.

6. Mr. Somkiat Prajamwong
Independent Director
and Director to the Nomination
& Remuneration Committee

7. Mr. Surachai Achalaboon
Independent Director
and Director to the Nomination
& Remuneration Committee

8. Police Colonel Dusadee Aryawuit
Independent Director
and Director to
the Corporate Governance
and Sustainability Committee

9. Mr. Wim Rungwattanajinda
Independent Director
and Director to
the Corporate Governance
and Sustainability Committee

10. Mr. Patchara Anuntasilpa
Director
and Director to
the Corporate Governance
and Sustainability Committee

11. Mrs. Nivadee Jaroensitipun
Director
and Director to
the Corporate Governance
and Sustainability Committee

Board of Directors






12. 13.
14. 15.

12. Mr. Petai Mudtham
Director
and Director to the Risk
Management Committee

13. Mr. Pongpun Amornvivat
Director
and Director to the Risk
Management Committee

14. Mr. Kongkrapan Intarajang
Director

15. Mr. Narongsak Jivakanun
Director,
Secretary to the Board of Directors,
Director to the Risk
Management Committee,
and Chief Executive Officer

GC Executives











1. **Mr. Narongsak Jivakanun**
   Chief Executive Officer
   Acting Chief Operating Officer - International Business

2. **Mr. Toasaporn Boonyapipat**
   President

3. **Mr. Pirun Krimwongrut**
   Chief Operating Officer - Base and Intermediate Chemicals

4. **Mr. Saroj Putthammawong**
   Chief Operating Officer - Value Added Products

5. **Mr. Pornsak Mongkoltrirat**
   Chief Operating Officer - Center of Excellence

GC Executives

Reporting to Chief Executive Officer







Reporting to President




6. **Mr. Thitipong Jurapornsiridee**
   Executive Vice President -
   Finance and Accounting

7. **Mr. Anutin Chuaypen**
   Executive Vice President -
   Organizational Effectiveness

8. **Mrs. Chananchida Wiboonkanarak**
   Executive Vice President -
   Corporate Strategy
   Acting Senior Vice President,
   Corporate Sustainability

9. **Mr. Krit Treenutchakorn**
   Senior Vice President -
   Corporate Governance
   and Legal

10. **Mr. Chatchawalit Dhammasaroj**
    Senior Vice President -
    Internal Audit

11. **Mr. Siridech Kumvongdee**
    Executive Vice President -
    Marketing, Commercial
    and Supply Chain

12. **Mr. Panod Awaiwanond**
    Senior Vice President -
    International Supply Chain
    and Trading Business

6. 7. 8.
9. 10.
11. 12.

Reporting to Chief Operating Officer – Base and Intermediate Chemicals



13. Mr. Pukpong Wungrattanasopon
Executive Vice President - Olefins

14. Mr. Ratchada Sawasdirak
Senior Vice President - Refinery

15. Mr. Sombat Silsangwon
Senior Vice President - EO and Derivatives

16. Mr. Sawat Trongdilokrat
Senior Vice President - Phenol and Derivatives

17. Mr. Pichet Phannachet
Acting Senior Vice President - Utilities

18. Mr. Meata Moleechat
Acting Senior Vice President - Aromatics

19. Mr. Kasem Leewongjaroen
Senior Vice President,
Base and Intermediate Chemicals
Secondment as President,
GC-M PTA Company Limited
and Thai PET Resin Company Limited

20. Miss Varanyanan Inthatathon
Acting Senior Vice President,
Base and Intermediate Chemicals
Secondment as Managing Director,
Thai Tank Terminal Limited

13. 14. 15.
16. 17. 18.
19. 20.

GC Executives

Reporting to Chief Operating Officer – Value Added Products



21. Mr. Panchoak Auetanapa
Senior Vice President -
Polymers

22. Mr. Thitipol Artsanchorn
Senior Vice President -
Marketing and Sales -
General Applications

23. Miss Kornkamol Korpaisarn
Senior Vice President -
Strategy, Business Development and
Commercial Excellence

24. Mr. Kitchai Chalermsuksant
Acting Senior Vice President -
Marketing and Sales -
Industry Platforms

25. Mr. Kamel Ramdani
Executive Vice President -
Product Innovation

26. Mr. Kridsada Prasertsuko
Executive Vice President,
Value Added Products
Secondment as Managing Director,
Global Green Chemicals Public
Company Limited

27. Mrs. Panida Chinayone
Senior Vice President,
Value Added Products
Secondment as Co-Managing Director,
WHA GC Logistics Company Limited

28. Miss Kamolwan Wongkolkitsilp
Senior Vice President,
Value Added Products
Secondment as Managing Director,
GC Polyols Company Limited

21. 22. 23.
24. 25. 26.
27. 28.

Reporting to Chief Operating Officer – International Business





Reporting to Chief Operating Officer – Cennter of Excellence









29. 30. 31.
32. 33. 34.
35. 36. 37.
38.

29. Mr. Kamel Ramdani
Acting Senior Vice President - Innovation Growth Platforms and CVC

30. Miss Wanlapa Sophiskhuankhant
Senior Vice President - International Finance and Strategy

31. Mr. Andy Ting
Acting Senior Vice President - Specialty and International Business Development

32. Mr. Pisit Fusiripong
Senior Vice President - Technology Excellence

33. Mrs. Chatsuda Kanjanarat
Senior Vice President - Transformation Excellence

34. Mr. Rachean Chanthaweekul
Senior Vice President - Procurement

35. Mr. Sakesiri Piyavej
Senior Vice President - Quality, Safety & Occupational Health and Environment

36. Mr. Krit Kumpabooth
Senior Vice President - CAPEX Excellence, Maintenance and Reliability

37. Mr. Prakart Buttamart
Senior Vice President, Center of Excellence
Secondment as Managing Director, NPC Safety and Environmental Service Company Limited

38. Mr. Sarawuth Nuntavadeepisarn
Senior Vice President, Center of Excellence
Secondment as Managing Director, GC Maintenance and Engineering Company Limited

Corporate Governance Report

Summary of the Board of Director's Performance for the Year 2024

Nomination, Development, and Performance Assessment of the Board of Directors

Nomination and appointment of Directors, Independent Directors, and the Chief Executive Officer (CEO)

The Nomination and Remuneration Committee, consisting of 3 Independent Directors, as prescribed in its Charter, is responsible for nominating and selecting qualified candidates with no prohibited characteristics as stipulated by applicable laws and regulations in accordance with the Director nomination and appointment criteria and procedure and proposing the list of candidates to the Meeting of the Board of Directors and/or the General Meeting of Shareholders (details of the criteria, procedures, and guidelines for the nomination and appointment of Directors, Independent Directors, and the Chief Executive Officer appear under "Policy and Practices for the Board of Directors"). In 2024, the Nomination and Remuneration Committee performed its duties in nominating and appointing Directors, Independent Directors, and Sub-committee as detailed below:

Nomination and appointment of Directors to replace Directors retiring by rotation: At the 2024 Annual General Meeting of Shareholders, held on April 9, 2024, 5 Directors were due to retire by rotation, namely Professor Somkit Lertpaithoon, Mr. Pakorn Nilprapunt, General Nimit Suwannarat, Police Colonel Dusadee Aryawuit, and Mr. Noppadol Pinsupa. Shareholders were given an opportunity to nominate qualified candidates for the vacant positions prior to the AGM from September 15 to December 31, 2023. However, there were no submissions of candidates from shareholders. The Nomination and Remuneration Committee, excluding members with a conflict of interest, thus nominated and selected qualified candidates in accordance with the Director nomination and appointment criteria and procedure and resolved to nominate Mr. Wim Rungwattanajinda to replace the Director retiring by rotation and nominate Mr. Pakorn Nilprapunt, General Nimit Suwannarat, Police Colonel Dusadee Aryawuit, and Mr. Noppadol Pinsupa to be re-elected as Directors for another term. The Board of Directors and the AGM resolved to approve the appointment of these candidates as Directors as instructed by the Nomination and Remuneration Committee.

The provisions in GC's Articles of Association regarding shareholders' meetings and voting state that shareholders shall cast all of their votes for one nominated director candidate at a time in compliance with corporate governance principles.

Nomination and appointment of Directors to fill vacancies in cases other than retiring by rotation: 5 Directors resigned/vacated office during the year 2024, namely Mr. Sarawut Kaewtathip, Mr. Chadil Chavanalikikorn, Mr. Cherdchai Boonchoochauy, Mr. Noppadol Pinsupa, and M.L. Peekthong Thongyai. To ensure the Board's uninterrupted discharge of duties according to the roles and responsibilities assigned, the Nomination and Remuneration Committee nominated and selected qualified candidates in accordance with the Director nomination and appointment criteria and procedure, taking into consideration qualifications in compliance with applicable laws, regulations, GC's articles of association and corporate governance principles, as well as the candidates' knowledge and expertise and the Board Skills Matrix. The Committee also considered GC's Director Pool as well as those of reliable external agencies, such as the State Enterprise Policy Office (SEPO) and the Thai Institute of Directors Association (IOD). The Committee nominated candidates to replace Directors who had resigned, namely Mr. Petai Mudtham, Mr. Narongsak Jivakanun, Mrs. Nivadee Jaroensitipun, and M.L. Peekthong Thongyai. The Board of Directors resolved to approve the appointment of these candidates as Directors as instructed by the Nomination and Remuneration Committee.

Nomination and appointment of members of Subcommittees: The Nomination and Remuneration Committee reviewed and nominated qualified Directors in accordance with the Director nomination and appointment criteria and procedure as well as the charter of each Sub-Committee to propose at the

meeting of the Board of Directors for appointment as members of Sub-committees, namely the Corporate Governance and Sustainability Committee, the Nomination and Remuneration Committee, and the Risk Management Committee. The Board of Directors resolved to approve the appointment of the candidates as Directors as instructed by the Nomination and Remuneration Committee.

Review of Independent Director qualifications: GC's 15 Directors, a total of 9 were Independent Directors exceeding the requirement set forth in Notification of the Capital Market Supervisory Board No. Tor Jor. 39/2559 Re: Application for Approval and Granting of Approval for Offering of Newly Issued Shares under the Securities Exchange Commission (SEC), which stipulated that the number of Independent Directors shall be at least one-third of the total number of Directors but shall not be lower than 3. All Independent Directors were fully qualified as defined by GC's Independent Director qualification requirements, the charter of Independent Directors, and the notification of the Capital Market Supervisory Board, and were able to express opinion independently in compliance with relevant criteria and corporate governance principles.

Development of Directors, Executives, and Company Secretary

Development and Training for Directors

GC has put in place a process to support the consistent development of its Directors. In 2024, the Company carried out the following activities:

- Orientation for new Directors: Newly appointed Directors were required to attend the board orientation, which included a presentation on GC's nature of business, business data and practices, as well as applicable rules and regulations, corporate governance principles and the business code of conduct, and useful information for the position. Additionally, the Company prepared handbooks and other documents required to perform their roles, namely the strategic plan, the Company's Articles of Association, Memorandum of Association, Form 56-1 One Report, related rules and regulations, and GC's Corporate Governance and Business Code of Conduct Handbook.
- GC encouraged Directors to participate in the following programs/seminars required for their duties:

Director	Program/Institute
1. Mr. Somkiat Prajamwong	• Board Nomination and Compensation Program (BNCP), Class 19/2024 Thai Institute of Directors Association (IOD)
2. Mr. Surachai Achalaboon	• Director Accreditation Program (DAP), Class 215/2024 Thai Institute of Directors Association (IOD)
3. Mr. Patchara Anuntasilpa	• Director Leadership Certification Program (DLCP), Class 14/2024 Thai Institute of Directors Association (IOD)
4. Police Colonel Dusadee Aryawuit	• Director Certification Program (DCP), Class 353/2024 Thai Institute of Directors Association (IOD)
5. Mr. Petai Mudtham	• Director Leadership Certification Program (DLCP), Class 14/2024 Thai Institute of Directors Association (IOD)

- GC organized an annual training session for the year 2024 for the Board of Directors as a whole on the topic of "Petrochemical Market Landscape," hosted by the consulting firm Bain & Company, in order to inform the Board of the trends in the petrochemical and chemical industries and markets as well as the assessment and formulation of measures to address risks that may impact the business operation for use in establishing GC's strategic direction and action plans, supervising the operation, and seeking opportunities for business expansion to ensure GC's competitiveness.
- GC hosted a total of three KM sharing sessions for the Board of Directors. The topics were namely: 1) Global Decarbonization Update & Implication (COP28), 2) Global Decarbonization Update & Implications to GC's Roadmap, and 3) An Overview on the Direction of Decarbonization. Led by GC's senior executives, the sessions were aimed at keeping the Directors informed of GC's decarbonization guidelines and targets according to its Decarbonization Pathways for use in supplementing the formulation of GC's strategic plans for sustainability.

Training for Executives and Company Secretary

GC consistently encourages its Executives and the Company Secretary to pursue further education and participate in training programs to acquire knowledge beneficial to their duties as well as their roles in supporting GC and the Board of Directors, as detailed below.

- GC conducted training programs for Executives from the Senior Vice President level upward and Executives serving as Directors and Executive Directors of companies under GC Group. The topics were as follows:
    - Topic 1: Financial Statements for Directors by EY Corporate Advisory Services Co. Ltd. The objective was to foster an understanding of accounting principles, enable the participants to read and understand financial statements as well as raise questions and provide more beneficial insights to the Board of Directors regarding the accounting reports in the financial statements, and identify potential risk issues based on analysis in the financial statements in accordance with their fiduciary duties in safeguarding the interests of GC and its shareholders.
    - Topic 2: Risk Management for Directors by EY Corporate Advisory Services Co. Ltd. The objective was to foster an understanding of the principles of risk management and the analysis of key issues from the perspective of the Board of Directors as well as a good risk management framework and appropriate methods for overseeing each type of risk so that the participants could apply them in supervising GC's risk management alongside business management.

In addition to the aforementioned training programs, GC has developed training programs for Executives at all levels. Further details appear under "Employees." on page 174.

- GC encouraged the Company Secretary to attend training programs to support the Board of Directors. In 2024, the Company Secretary attended programs offered by the Thai Institute of Directors Association (IOD), namely the Anti-Corruption Practical Guide (ACPG), Class 64/2023 and the Board Nomination & Compensation Program (BNCP), Class 16/2023; and other in-house programs, namely Financial Statements for Directors and Risk Management for Directors, hosted by EY Corporate Advisory Services Co. Ltd.

Board Performance Assessment

Board of Directors

GC has prescribed annual board performance assessments, conducted through an online system to allow the Board of Directors to participate in the review of their annual performance and obtain guidelines for auditing their performance according to good corporate governance principles. Three assessment forms are utilized: group assessment, self-assessment, and cross-assessment (individual assessment of other directors). The Board of Directors may engage external consultants to establish guidelines and provide suggestions on board performance assessment every three years to ensure compliance with the CG Code and the Dow Jones Sustainability Index (DJSI) criteria. In 2024, 15 Directors underwent performance assessments. A summary of the outcomes is given below.

Group Assessment: The group assessment form comprised six main sections: 1) Board policy, 2) Board performance, 3) Board structure (composition and qualifications), 4) Board style, 5) Board meeting, and 6) Board development. The average group assessment score was **98.6%**.

Self-assessment (Assessment of Individual Directors): The assessment form comprised three main sections: 1) Directors' knowledge and expertise, self-development, and teamwork, 2) Board performance of duties, and 3) dedication of time to meetings and essential company activities. The average self-assessment score was **98.2%**.

Cross-assessment (Individual Assessment of Other Directors): The assessment form comprised three main sections: 1) the Director's knowledge and expertise, self-development, and teamwork, 2) Board performance of duties, and 3) dedication of time to meetings and essential company activities. The average cross-assessment score was **97.1%**.

Sub-committees

Annual performance assessments, both at committee (group) and individual levels, have been prescribed for all four Sub-committees. In 2024, every Sub-committee reviewed and/or revised the assessment questionnaires and criteria to ensure alignment with good corporate governance practices.

Audit Committee

The group assessment of the Audit Committee comprised two parts. The first part pertained to its composition, covering the topics of the Audit Committee's Charter, qualifications, meetings, learning, and data access; and the second part pertained to its performance of duties, covering the topics of roles and responsibilities and performance reporting to the Board.

The individual assessment comprised the following topics: knowledge and expertise, discharge of duties, and meeting attendance.

The average score of the group assessment was **100%**, and the average score of the individual assessment was **98.9%**.

Nomination and Remuneration Committee

The group assessment comprised the following topics: composition and qualifications, performance of duties, guidelines for Directors, meeting attendance, reporting and performance evaluation.

The individual assessment comprised the following topics: knowledge and expertise, performance of duties, guidelines for Directors, and dedication of time and meeting attendance.

The average score of the group assessment was **99.6%**, and the average score of the individual assessment was **100%**.

Corporate Governance and Sustainability Committee

The group assessment comprised the following topics: composition and qualifications, performance of duties, guidelines for Directors, meeting attendance, reporting and performance evaluation.

The individual assessment comprised the following topics: knowledge and expertise, performance of duties, guidelines for Directors, and dedication of time and meeting attendance.

The average score of the group assessment was **100%**, and the average score of the individual assessment was **99.4%**.

Risk Management Committee

The group assessment comprised the following topics: composition and qualifications, roles and responsibilities, and meeting attendance.

The individual assessment comprised the following topics: responsibilities, adherence to business ethics and code of conduct, and dedication of time to duties and self-development.

The average score of the group assessment is **100%**, and the average score of the individual assessment is **99.2%**.

Meeting Attendance and Remuneration of Individual Directors

Board of Directors' Meetings

The date and time of the Meetings of the Board of Directors are scheduled in advance for the entire year, with the agenda items of each meeting clearly established. The Meeting of the Board of Directors is scheduled for the fourth Monday of every month. Special meetings of the Board of Directors may be held as appropriate and necessary. Members of the Board of Directors will receive a meeting invitation, a draft of the minutes of the previous meeting, and supplementary information for the agenda of the meeting for consideration at least 7 days prior to the date of the meeting. For convenience and reduced paper usage, such documents are delivered to each Director via the D-Join system (Digital Join Application), which a data security system put in place. In 2024, the Board of Directors convened a total of 17 meetings, consisting of 14 pre-scheduled meetings and 3 special meetings. Directors who had other engagements and could not be in attendance were required to notify the Chairman of the Board of Directors and the Corporate Secretary, specifying the necessity for the absence. The Chairman informed the meeting of such matter at the beginning of each meeting.

The Chairman of the Board of Directors presides over the meeting and gives all Directors an opportunity to participate in the meeting and express their opinions independently. At each meeting, at least two-thirds of the total number of Directors must be present to form a quorum, and the quorum must be maintained while votes are cast. The Chairman may allow Directors to attend the meeting via electronic means, whereby the meeting must be carried out in accordance with the security criteria and standards for electronic meetings pursuant to applicable laws and regulations issued by relevant government agencies. In casting votes, each Director shall have one vote, and a resolution of the meeting shall require a simple majority of votes. The Chairman of the Meeting shall have a casting vote in case of an equality of votes. The Board of Directors manages any conflicts of interest of the relevant persons with due circumspection, fairness, and transparency and discloses such information in full. In the event that a Director has a conflict of interest in the matter being considered, the Director shall not take part in any decision-making on the matter.

When the meeting is concluded, the Company Secretary is responsible for preparing the minutes of the meeting to be approved in the next meeting and signed by the Chairman of the Board of Directors for verification. The approved minutes, along with supplement documents, are stored systematically both as hard copies and in an electronic format in accordance with the Company's confidentiality level for ease of reference.

Furthermore, in accordance with corporate governance principles, the Board of Directors prescribes meetings of non-Executive Directors to allow them to provide opinions and guidelines for the management and business operation of the Company as well as meetings of Independent Directors, where they can exchange opinions and review their roles and discharge of duties every year. In 2024, 1 meeting of non-Executive Directors (July 23, 2024) and 1 meeting of Independent Directors (November 25, 2024) were convened. Summaries of such meetings are submitted to the Board of Directors for acknowledgment.

The number of the Meetings of the Board of Directors, Independent Directors, Non-executive Directors and Sub-committee held in 2024 and Director's attendance are shown in the table below.



Director's Meetings (As of January 1 – December 31, 2024)

Name	Meetings in 2024										
	Board of Directors			Independent Directors	Non-Executive Directors	Audit Committee	Nomination and Remuneration Committee	Corporate Governance and Sustainability Committee	Risk Management Committee	Corporate Governance and Sustainability Committee and Risk Management Committee	2024 Annual General Meeting of Shareholders
	17 Times	Physical Meetings	e-Meetings	1 Time	1 Time	10 Times	8 Times	7 Times	7 Times	2 Times	1 Time
1. Mr. Predee Daochai	17/17	15	2	1/1	1/1	-	-	-	-	-	1/1
2. Mr. Thanwa Laohasiriwong	17/17	12	5	1/1	1/1	10/10	-	-	-	-	1/1
3. Mr. Pakorn Nilprapunt	17/17	8	9	1/1	1/1	10/10	8/8	-	-	-	1/1
4. General Nimit Suwannarat	16/17	11	5	1/1	1/1	10/10	3/3	5/5	-	2/2	1/1
5. Mr. Grisada Boonrach	17/17	5	6	1/1	1/1	-	-	-	7/7	2/2	1/1
6. Mr. Somkiat Prajamwong	17/17	15	2	1/1	1/1	-	8/8	-	-	-	1/1
7. Mr. Surachai Achalaboon	17/17	3	14	1/1	1/1	-	5/5	2/2	-	-	1/1
8. Police Colonel Dusadee Aryawuit	17/17	15	2	1/1	1/1	-	-	7/7	-	2/2	1/1
9. Mr. Wim Rungwattanajinda	13/13	7	6	1/1	1/1	-	-	5/5	-	2/2	-
10. Mr. Patchara Anuntasilpa	17/17	10	7	-	1/1	-	-	7/7	-	2/2	1/1
11. Mrs. Nivadee Jaroensitipun	5/6	3	2	-	-	-	-	2/2	-	-	-
12. Mr. Petai Mudtham	15/15	7	8	-	1/1	-	-	-	6/6	2/2	1/1
13. Mr. Kongkrapan Intarajang	17/17	13	4	-	1/1	-	-	-	1/1	1/1	1/1
14. Mr. Narongsak Jivakanun	11/11	11	0	-	-	-	-	-	6/6	1/1	-
Directors who resigned in 2023-2024											
1. Mr.Sarawut Kaewtatip	0/0	0	0	-	-	-	-	-	-	-	-
2. Professor Somkit Lertpaithoon	3/3	2	1	-	-	-	-	2/2	-	-	1/1
3. Mr.Chadil Chavannalikikorn	5/5	5	0	-	-	-	-	2/2	-	1/1	1/1
4. Mr.Cherdchai Boonchoochauy	9/10	5	4	-	1/1	-	-	-	3/3	2/2	1/1
5. Mr.Noppadol Pinsupa	12/12	8	4	-	1/1	-	-	-	2/2	2/2	1/1
6. M.L. Peekthong Thongyai	3/3	2	1	-	-	-	-	-	1/1	-	-

Remark: Directors who could not attend meetings due to other engagements had notified the Chairman of the Board of Directors in advance of such meetings.

Remuneration of Directors

The Board of Directors has set up a fair and reasonable remuneration policy for its Directors in accordance with good corporate governance principles. The Nomination and Remuneration Committee determines suitable remuneration for Directors based on the Company's financial standing, the economic circumstances relevant to the Company's business, the principles and policies approved by shareholders, the responsibilities of the Board of Directors, the annual board performance assessment results, and the practices of other SET-listed companies of a similar size in the same industry and of PTT Group. Directors appointed to Sub-Committees are entitled to additional remuneration due to their additional responsibilities.

Directors' remuneration must be approved by the shareholders. At the 2024 Annual General Meeting of Shareholders, held on April 9, 2024, the shareholders passed a resolution approving the remuneration of Directors and Directors to Sub-Committees and their bonus for the year 2024 as follows:

(1) Remuneration for the Board of Directors and Sub-committees

Type of Remuneration	Remuneration Rate
1. Board of Directors	Monthly Remuneration • Chairman Baht 62,500 /Month • Director Baht 50,000 /Month/Director Remuneration for Meeting Attendance • Chairman Baht 50,000 /Meeting • Director Baht 40,000 /Meeting/Director
2. Sub-committees • Audit Committee • Nomination and Remuneration Committee • Corporate Governance and Sustainability Committee • Risk Management Committee	Remuneration for Meeting Attendance • Chairman Baht 56,250 /Meeting • Director Baht 45,000 /Meeting/Director
3. Others	-No other benefits-

(2) With regard to the bonus for the year 2023, in accordance with the resolution of the 2024 Annual General Meeting of Shareholders, held on April 9, 2024, the Board of Directors as a group was to be awarded a bonus for the year when a dividend payment was made to the shareholders. The total sum of this bonus equaled 0.30% of the year's net profit and up to Baht 60 million. The bonus was calculated based on each director's term of service in 2023, with the Chairman receiving 25% more than other directors. In 2024, the Company's board of directors received a total bonus of Baht 2,997,386.17.



Remuneration for Individual Directors for 2024

Name	Monthly Remuneration for GC Directors (Baht)	Remuneration for Meeting Attendance (Baht)	Remuneration for Sub-Committees Meeting Attendance (Baht)				2023 Bonus paid in 2024 (Baht)*	Total (Baht)
			Audit Committee	Nomination and Remuneration Committee	Corporate Governance and Sustainability Committee	Risk Management Committee		
1. Mr. Predee Daochai	750,000.00	850,000.00	-	-	-	-	33,696.22	1,633,696.22
2. Mr. Thanwa Laohasiriwong	600,000.00	680,000.00	506,250.00	-	-	-	34,986.71	1,821,236.71
3. Mr. Pakorn Nilprapunt	600,000.00	680,000.00	405,000.00	450,000.00	-	-	209,346.72	2,344,346.72
4. General Nimit Suwannarat	600,000.00	640,000.00	405,000.00	135,000.00	393,750.00	-	209,346.72	2,383,096.72
5. Mr. Grisada Boonrach	600,000.00	680,000.00	-	-	-	506,250.00	209,346.72	1,995,596.72
6. Mr. Somkiat Prajamwong	600,000.00	680,000.00	-	360,000.00	-	-	209,346.72	1,849,346.72
7. Mr. Surachai Achalaboon	600,000.00	680,000.00	-	225,000.00	90,000.00	-	153,712.11	1,748,712.11
8. Police Colonel Dusadee Aryawuit	600,000.00	680,000.00	-	-	405,000.00	-	34,986.71	1,719,986.71
9. Mr. Wim Rungwattanajinda	435,000.00	480,000.00	-	-	315,000.00	-	-	1,230,000.00
10. Mr. Patchara Anuntasilpa	600,000.00	680,000.00	-	-	405,000.00	-	128,475.79	1,813,475.79
11. Mrs. Nivadee Jaroensitipun	209,677.42	200,000.00	-	-	90,000.00	-	-	499,677.42
12. Mr. Petai Mudtham	531,034.48	560,000.00	-	-	-	360,000.00	-	1,451,034.48
13. Mr. Kongkrapan Intarajang	600,000.00	680,000.00	-	-	-	90,000.00	209,346.72	1,579,346.72
14. Mr. Narongsak Jivakanun*	380,645.16	400,000.00	-	-	-	315,000.00	-	1,095,645.16
Directors who resigned and retired by rotation in 2024-2025 and earned remuneration in 2024								
1. Mr. Sarawut Kaewtathip**	4,838.71	40,000.00	-	-	-	-	209,346.72	254,185.43
2. Mr. Somkit Lertpaithoon***	165,000.00	160,000.00	-	-	112,500.00	-	209,346.72	646,846.72
3. Mr. Chadil Chavanalikikorn**	219,354.84	240,000.00	-	-	135,000.00	-	209,346.72	803,701.56
4. Mr. Cherdchai Boonchoochauy**	379,032.26	400,000.00	-	-	-	225,000.00	209,346.72	1,213,378.98
5. Mr. Noppadol Pinsupa**	450,000.00	520,000.00	-	-	-	270,000.00	196,728.56	1,436,728.56
6. M.L.Peekthong Thongyai**	85,483.88	120,000.00	-	-	-	90,000.00	-	295,483.88
7. Mrs. Watanan Petersik****	-	-	-	-	-	-	151,991.45	151,991.45
8. Mr. Apisak Tantivorawong****	-	-	-	-	-	-	138,226.19	138,226.19
9. Mr. Piyasvasti Amranand****	-	-	-	-	-	-	138,369.58	138,369.58
10. Mrs. Pantip Sripimol*****	-	-	-	-	-	-	55,634.61	55,634.61
11. M.L. Chayotid Kridakon****	-	-	-	-	-	-	46,457.76	46,457.76
Grand Total	**9,010,066.75**	**10,050,000.00**	**1,316,250.00**	**1,170,000.00**	**1,946,250.00**	**1,856,250.00**	**2,997,386.17**	**28,346,202.92**

Remarks:

(1) The Company provides a corporate vehicle for the Chairman throughout his term for corporate-related activities only.

* Remuneration for directorship only; Executive remuneration is not included.

** Five Directors resigned in 2024, namely Mr. Sarawut Kaewtathip, who resigned as a Director, effective January 4, 2024; Mr. Chadil Chavanalikikorn, who resigned as a Director, effective May 12, 2024; Mr. Cherdchai Boonchoochauy, who resigned a Director, effective August 19, 2024; Mr. Noppadol Pinsupa, who resigned as a Director, effective October 1, 2024; and M.L. Peekthong Thongyai, who resigned as a Director, effective December 12, 2024.

*** One Director was due to retire by rotation at the 2024 Annual General Meeting of Shareholders, namely Professor Somkit Lertpaithoon, who retired on April 9, 2024.

**** Four Directors resigned/vacated office in 2023, namely Mrs. Watanan Petersik, who resigned as an Independent Director, effective September 22, 2023; Mr. Apisak Tantivorawong, who resigned as an Independent Director, effective August 29, 2023; Mr. Piyasvasti Amranand, who vacated office as an Independent Director, effective July 12, 2023; and M.L. Chayotid Kridakon, who resigned as an Independent Director, effective March 22, 2023.

***** One Director was due to retire by rotation at the 2023 Annual General Meeting of Shareholders, namely Mrs. Pantip Sripimol, who retired on April 7, 2023.

Directors' Remuneration for Directorship at Major Subsidiaries

The Company's Directors hold directorships at subsidiaries to ensure that their businesses are operated in compliance with GC Group's policies.

Name	Position	Total Remuneration
PTTGC International Private Limited (GC Inter) (100% owned subsidiary)		
Mr. Narongsak Jivakanun	Chairman	Baht 348,461.16
Global Green Chemicals Public Company Limited (GGC) (GC holds a shareholding of 72.29%)		
Mr. Narongsak Jivakanun	Chairman	Baht 283,064.56

Governance of Subsidiaries and Affiliates

The Board of Directors has implemented the following governance mechanisms for overseeing the management and operation of GC's subsidiaries and affiliates to protect the Company's interests and investments.

1) The Chief Executive Officer shall be an authorized person in accordance with GC's regulations on human resources management, whereby the CEO is authorized to nominate Executives or other persons for consideration to serve as Directors in companies under GC Group as stipulated in GC's subsidiaries Articles of Association, joint venture agreements, or shareholders' agreements. The qualifications of the candidates that are taken into consideration include roles and responsibilities, experience, and expertise. The candidates must be fully qualified and must not possess any prohibited characteristics stipulated by any laws, regulations, or requirements relevant to directorship.

2) GC enriches the knowledge and capabilities of the Executives in GC Group and those assigned to take directorship in other companies under GC Group by organizing annual training programs so as to ensure that their preparedness and capacity to apply GC's policies to companies in GC Group in a manner that is suitable, compliant with laws, rules and regulations, and in accordance with potential changes in situations and trends.

3) GC oversees and ensures that any major policies of companies under GC, such as Corporate Governance Policy, Corporate Compliance Policy, Finance, Accounting, Tax, Budget and insurance Policy, Quality, Security, Safety, Occupational Health, Environment and Business Continuity Policy, Human Resources Management Policy, Sustainability Management Policy, Risk Management Policy and Internal Control System Policy, as well as any another relevant policies, are in compliance with regulations of The Securities and Exchange Commission of Thailand, The Stock Exchange of Thailand and any other relevant laws.

4) GC has established GC Way of Conduct to serve as guidelines for the operation and governance of companies in which GC holds shares through personnel assigned to serve as Directors or Executives or assigned to supervise such companies, including GC's internal units which are responsible for supervising companies under GC Group, so as to ensure that the operation of such companies is consistent with that of GC, has the same standard, transparency and good governance system that keeps the business operation across GC Group and drives the business towards sustainability.

5) GC has implemented multi-level governance, in which companies under GC Group are required to establish their Way of Conduct guidelines in line with those of GC for use in governing companies in which they hold shares, so as to establish a uniform operational standard across GC Group.

6) In 2024, GC promoted and enhanced the implementation of GC Way of Conduct as detailed below.

   - GC reviewed and improved GC Way of Conduct by applying various international standards, GC's operational standards, and best practices to the governance of companies under GC Group. GC also reviewed the group-level management of key activities as well as governance to ensure suitability for the risks, types of business,

business models, and locations of such companies to maintain alignment with GC Group's investment objectives and business strategies.

- GC established and communicated GC Way of Conduct 2024 to units which are responsible for the management and governance of companies under GC Group and coordinators for the implementation of GC Way of Conduct among such companies in order to advance the adoption of GC's operational standards among them, both domestically and internationally.
- GC prescribed GC Way of Conduct implementation assessments in order to monitor compliance and establish operational standards in different areas for GC Group, both domestically and internationally.
- GC organized GC Way of Conduct Workshops for companies under GC and governance functions to summarize guidelines for enhancing and aligning the implementation of GC Way of Conduct to the governance approaches and types of business of companies under GC, with emphasis on practical implementation and maximum efficiency.
- Example evidence was prepared to enhance understanding and serve as guidance for implementing GC Way of Conduct, which subsidiaries could adapt to suit their own use.
- GC organized "GC Way of Conduct Communication to New MD/GC Representative" training sessions, encompassing essential topics for GC representatives assigned to serve as Directors or Managing Directors in subsidiary companies or oversee group companies. The training aimed to provide them the understanding of subsidiary governance principles from GC Way of Conduct and emphasize their role in driving the implementation.
- GC prescribed that GC Way of Conduct implementation progress be monitored and reported to Executives on a yearly basis.
- GC Way of Conduct Webpage was developed on the SharePoint system. The GC Way of Conduct Handbook was also published both in Thai and English in e-Book and VDO formats to serve as a learning tool that offers an overview of GC Way of Conduct to every relevant party in GC. In addition, GC Way of Conduct Communication Newsletters were also distributed to foster awareness and understanding and strengthen GC Group's management approach.

Ensuring Compliance with Corporate Governance Policy and Practices

GC considers good corporate governance a priority and has thus established and included relevant policies and practices in its Corporate Governance and Business Code of Conduct Handbook. The Company also promotes its adoption to foster confidence among GC's stakeholders.

In 2024, GC conducted various activities to ensure compliance with the corporate governance practices of GC Group, and based on monitoring, it was found that GC fully complied with the practices, as summarized below.

Disclosure of Information and Transparency

GC is committed to transparent and timely disclosure of accurate and complete information, financial and non-financial, to stakeholders in conformity to applicable laws, rules, and regulations via the SET Link and the Company's website at www.pttgcgroup.com. Its Investors Relations (IR) and Corporate Secretary (CS) are in charge of information disclosure and addressing inquiries. GC carried out the following:

- Disclosure of Material Information in Form 56-1 One Report
- Financial Information: GC's financial statements are audited by a professional auditor for the accuracy of their material information and conformance to financial auditing standards. Each set of financial statements has been approved by the Audit Committee and the Board of Directors before their disclosure to shareholders and the public. The Board of Directors' statement on the accountability of its financial reports is disclosed alongside the auditor's report in Form 56-1 One Report.
- Non-financial Information: Non-financial information includes the operating structure of GC Group, risk management, business operations for sustainability, corporate governance, and material information about the Board of Directors, Sub-committees, Executives, and employees.

- Channels for the Disclosure of Material Information in Thai and English
    - The SET Link
    - GC's regularly updated website, www.pttgcgroup. com, where channels for contacting the Board and other divisions are also fully and clearly displayed.
    - Information and updates were disclosed to stakeholders via e-Mail, exhibitions, press releases, and other activities, such as newspapers, television, and social media.
- The Investor Relations Department serves as the center of communication, where essential information is made known to shareholders, institutional and minor investors, analysts, and relevant regulatory authorities. It also oversees the quality of financial reporting processes and essential information that could affect the price of its securities, such as financial statements, performance results, earnings reports and quarterly and annual Management Discussion and Analysis (MD&A). These are all indicators of the Company's financial standing, performance, and future trends. The Investor Relations Department also manages the disclosure of information via the SET Community Portal to foreign and domestic investors. Furthermore, an Investor Relations Code of Conduct has been established to determine the roles and best practices that enable investor relations officers to treat all shareholders equitably.

In 2024, GC's Executives met with shareholders, financial analysts, investors, and employees through activities, including both virtual and in-person meetings, in order to present GC's performance. These activities included analyst meetings, domestic and international roadshows, and retail-investor events. GC also welcomed investors who visited the Company. Below is a summary of these events:

Investor Meetings	
Domestic meetings	7 times
Meetings aboard	5 times
Investor meetings through virtual roadshows / conferences	11 times
Meetings at the Company	8 times
Meetings with financial analysts	5 times
Telephone conferences	35 times
Information Disclosure	
Disclosure via SET Portal and Company Website	18 times
Activities	
Basic training with financial analysts	2 times
Analysts / Fund site visits	2 times

Investors or interested persons may contact the Company via the following 5 channels for more information:

(1) Mail : Investor Relations Department, PTT Global Chemical Public Company Limited
555/1 Energy Complex, Building A, Floor 18, Vibhavadi Rangsit Road
Chatuchak, Bangkok 10900
(2) Phone : 66 (0) 2265-8400 ext. 8172, 8665, 8513, 8533, and 8534
(3) e-Mail : ir@pttgcgroup.com
(4) Fax : 66 (0) 2265-8500
(5) Website : www.pttgcgroup.com

In addition, the Company offers swift and convenient communication via e-Mail. The e-Mail address is displayed on the Company website under "Corporate Governance." Shareholders, investors, and the public may contact the Board of Directors or the Chairman of the Corporate Governance and Sustainability Committee directly. They may also contact the Company Secretary for company information at cg@pttgcgroup.com.

Environmental, Occupational Health, and Safety Management

PTT Global Chemicals Public Company Limited has set a clear vision for safety, occupational health, and environmental management in order to drive safety and excellence everywhere across GC. To this end, the following targets have been established:

- Safety: Personal safety statistics are in the first quartile of the International Association of Oil & Gas Producers (IOGP), which consists of the world's leading oil and gas producers, with zero severe process safety events (Tier 1 PSEs) in plants.
- Occupational health: Employees are in good health in accordance with IOGP's Health Performance Index (HPI).
- Environment: GC operates green plants, achieves net-zero emissions, and is ranked among the top 5 on the Dow Jones Sustainability Index (DJSI).

In pursuit of these targets, GC has established a Quality, Security, Safety, Occupational Health, Environment, and Business Continuity Policy (QSHEB Policy) in alignment with international standards (ISO 45001, ISO 14001, ISO 22301, Process Safety Management: PSM) and the operational framework of the Global Reporting Initiative (GRI Standard) to demonstrate its commitment to safety, occupational health, and the environment. The policy consists of six items as detailed below.

Quality, Security, Safety, Occupational Health, Environment, and Business Continuity Policy

GC strives to become a world-class chemical industry leader that incorporates green innovation and technology into its business operations so as to serve as a model for sustainable development that takes into account the economy, society, and the environment. GC is also committed to improving the effectiveness of its performance in terms of quality, security, safety, occupational health, environment, and business continuity. The policy applies to all operations of GC which involves its Executives, employees, related persons, suppliers, and contractors, as detailed below:

1. Comply with laws and international practices related to quality, security, safety, occupational health, environment, and business continuity.
2. Implement total quality management (TQM) with quality, knowledge, and productivity management tools to satisfy customers and develop green innovations.
3. Implement risk management to prevent danger, work-related illnesses, accidental losses, injuries, and property damage, while fostering the B-CAREs safety culture and exercising Process Safety Management (PSM) to ensure the safety of everyone.
4. Be aware of security threats and prescribe emergency management guidelines so as to protect lives, assets, data, and business continuity.
5. Focus on good occupational health and working environment and promote good health and a happy workplace.
6. Indicate, assess, and prioritize environmental issues and formulate action plans to prevent impacts on the environment and ecosystems; preserve biodiversity by putting in place an integrated environmental management system for the management of energy, air, water, and waste; maximize resource efficiency and sustainability in accordance with the principle of circular economy, which stresses resource maximization across the value chain; continuously enhance the efficiency of its greenhouse gas emission reduction efforts and adaptability in the face of climate change; strive towards net-zero emissions by 2050; and foster an environmental culture by raising awareness and encouraging employees and stakeholders to participate in the corporate environmental culture.

All Executives, employees, related persons, suppliers, and contractors take part in the implementation of this policy through training and through communications to foster cooperation both internally and between organizations to ensure GC's sustainability.

In 2024, GC established the following strategies for environmental, occupational health, and safety management to achieve its defined targets.

Quality, Security, Safety, Occupational Health, Environment, and Business Continuity Policy (QSHEB Policy)
For more information
https://sustainability.pttgcgroup.com/storage/document/policies/20200408-pttgc-QSHEB-policy-en.pdf

1. Safety Management is categorized into two levels.

1.1) Personal Safety

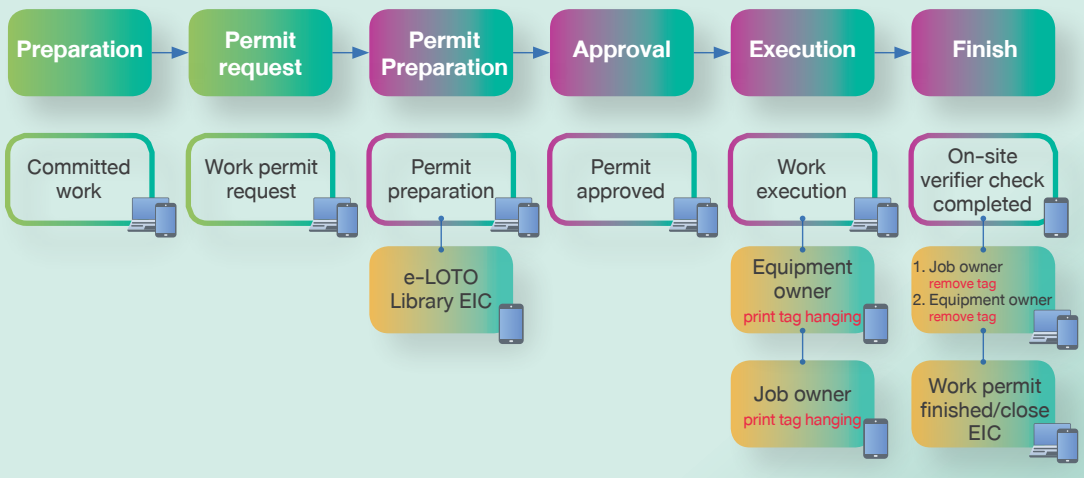
GC has continued to elevate its safety culture. In 2024, GC's safety performance was ranked in the first quartile among members of the International Association of Oil & Gas Producers (IOGP), which consists of the world's leading oil and gas producers. This achievement was realized through three strategies that elevated safety culture, along with the continuous adoption of technology, as detailed below.

- **Reshaping B-CAREs: "Follow the rules and uphold discipline. If it's not safe, we don't do it."** GC enhanced its safety culture (B-CAREs) as well as improved the organization's Operational Discipline (OD) and developed the Inspirational Leadership Program (ILP) in order to achieve Zero ICU (Zero Incidents, Zero Complaints, and Zero Unplanned Shutdowns).



- **Enhancing On-site Work Permit Supervision through e-PTW, e-JSEA, and e-LOTO**

  GC strengthened its on-site execution with a permit-to-work process. In addition, digital systems were expanded to the lock out/tag out (LOTO) system and job safety environment analysis (JSEA) to improve the efficiency of hazard isolation control and monitoring processes.



- **Risk Management Through Engineering Control**
  GC improved the separation of workers from hazards by developing special tools and equipment for maintenance operations. In addition, high-risk work was divided into seven equipment groups: flange assembly/disassembly equipment, hydraulic flange spreader equipment, flange alignment tools, pipe handling equipment, grating lifting equipment, and automated high-pressure water jet (HPWJ) systems. GC also enhanced oversight of the procurement process and strengthened contractor selection criteria and evaluation.

- **Early Detection of Low-Performance Contractors**
  GC enhanced its contractor safety management by establishing a process for early detection of low-performance contractors to prevent accidents. In addition, GC raised contractor safety standards through on-site control and monitoring of contractor operations and through a feedback and coaching system for contractor management teams whose safety performance fell below standards.

1.2) Process Safety

GC has continuously elevated its process safety standards and implemented an Operational Discipline (OD) program, with guidance from DuPont, a leading safety consultant, to achieve sustainable safety excellence. process safety management is crucial in preventing major accident events (MAEs) and production disruptions that could impact stakeholders throughout the supply chain as well as in maintaining the license to operate in a sustainable way. In 2024, GC introduced the following three proactive process safety-related strategies to prevent Major Accident Event:

- **Plant PSM Committee Enhancement**
  GC developed its Plant Process Safety Management Committee to ensure its understanding of IEAT PSM regulations, which would lead to effective PSM system implementation and the establishment of appropriate leading and lagging indicators for each area.



- **Operation Risk Management (ORM) Enhancement**
  GC elevated risk treatment measures in the ORM process by integrating insurance recommendations, PSM audit recommendations, and measures from Loss Of Primary Containment (LOPC) Tier 1 and 2 incident investigations. GC also conducted knowledge sharing on ORM risk treatment implementation among plants across GC Group.

- **Field Risk Assessment (FRA) Good Practices**
  GC shared best practices and enhanced the field risk assessment development process to develop operator competency in identifying and evaluating deviations in production processes and initiate proactive rectification to prevent major accident events (MAEs).

2. Occupational Health

GC places great importance on the health of its employees and strives to continuously advance towards international standards. To this end, it has adopted the Health Performance Index (HPI) by the International Association of Oil & Gas Producers (IPIECA-IOGP), which is a system for assessing occupational health management. Following the 2023 strategy of developing personalized health monitoring technology, GC employees showed a consistent decline in health issues. As such, in 2024, the focus was shifted to promoting personal health awareness, identifying root causes of health issues, and implementing preventive measures through various healthcare programs, as detailed below.

- NCDs Health Cares Activity
  GC focused on raising personal health awareness, identifying causes, and developing preventive approaches for non-communicable diseases (NCDs), such as heart disease, diabetes, and hypertension, through various health programs, including the Heart Care Project, the Diabetes Recovery Project, and other initiatives.

- Health Risk Assessment Program
  GC conducted health risk assessments and reviewed preventive measures against occupational diseases, particularly for production workers. The assessment results were used to inform the revision of employee health screening programs to ensure proactive monitoring as well as the revision of industrial hygiene measures in work areas to improve workplace safety conditions.

- Hearing Conservation Program
  GC cares about employee health, particularly for workers in production areas at risk from noise exposure as they face potential hearing issues. To this end, GC has developed risk assessment guidelines and preventive measures to raise awareness about noise exposure among employees in compliance with legal requirements.

3. Environmental Management is divided into two components.

3.1) Maintaining Environmental Leadership According to DJSI Assessment Criteria

GC prioritizes minimizing impact on the environment and biodiversity in its business operations to maintain environmental leadership according to the assessment criteria of DJSI. Therefore, it has applied the 5Rs (Reduce, Reuse, Recycle, Refuse, Renewable), which are its strategies for fostering the organizational culture, to environmental management, while also creating a balance between resource management and sustainable business operations. Operational eco-efficiency initiatives undertaken by GC include the following.

- Resource and Waste Management
  GC strives to optimize its resource and waste management, covering every process from product development to manufacturing, in order to maximize efficiency and benefits, minimize any waste and pollutants generated, and recover used and discarded materials for utilization in production processes and office spaces through the following initiatives:

  - Green Turnarounds: GC focused on efficient resource utilization and waste reduction for both hazardous and non-hazardous waste produced during a turnaround. Using circular economy concepts, GC reduced waste at its source and repurposed materials to decrease disposal burden. Key activities included preserving the quality of insulation materials for reuse through careful management and operations. In 2024, over 50% of GC's insulation materials were successfully reused. Furthermore, GC reduced wastewater disposal by evaluating wastewater concentration and composition prior to each turnaround to prepare appropriate segregation tanks at the source, thus enabling wastewater to be processed through the plant's treatment system to be within specified control parameters. As a result, in 2024, external wastewater disposal was reduced by over 5,000 cubic meters, a 90% reduction compared to years with similar work lists, saving approximately 3.5 million baht in waste disposal costs.

  - Zero Industrial Waste to Landfill: This project has been carried out since 2015 and has since been expanded into an initiative to reduce and divert office waste from landfills to refuse derived fuel (RDF) production.

Waste Management
For More Information
https://sustainability.pttgcgroup.com/en/environment/waste-management/waste-management-target-and-performance

- **Air Quality Control**

  GC has carried out projects to control air pollution within both operation areas and fence lines to comply with legal requirements, regulations, and international standards. The Company also works with the government sector as a representative of the petrochemical industry to establish environmental management guidelines as well as applies innovation through an environmental taskforce to maximize effectiveness, with the ultimate goal of establishing a strong environmental management network. Relevant initiatives undertaken are as follows.

  - **Benzene and 1,3-Butadiene Control Measures:** GC followed the Code of Practice established jointly with the Industrial Estate Authority of Thailand and the petrochemical industry group in the Map Ta Phut Complex, which encompassed five industrial estates and a port.

  - **Predictive Emission Monitoring System (PEMs):** GC joined the environmental taskforce of the Petrochemical Group under the Federation of Thai Industries to study alternative methods for monitoring pollution emissions using chemical engineering calculations, without drilling into the exhaust stack resulting from combustion to install fuel gas flow measurement instruments.

  - **GC took part in the development of the Pollution Online Monitoring System (POMs)** that aligned with the draft Notification of the Ministry of Industry Re: Mandatory Installation of Special Tools or Equipment for Reporting Industrial Stack Emissions (No. 2) B.E. 2567. GC also cooperated in connecting its POMS Application to the POMS Box developed by the Department of Industrial Works and the Industrial Estate Authority of Thailand to facilitate signal transmission from an industrial business to the Environmental Monitoring and Control Center of the Industrial Estate Authority of Thailand, thus demonstrating transparency in reporting stack emissions and indicators of industrial wastewater quality.

- **Water Management**

  GC has ensured its preparedness for potential drought brought on by climate change and strives to contribute to the achievement of the UNSDG 6: Clean Water and Sanitation. To this end, it focuses on sustainable management of water and water crises, both internally and externally as detailed below.

  - **Internal:** GC appointed a Water Management Taskforce to oversee water management and prepare measures to address drought in an efficient and timely manner both in the short and long term. In addition, GC carried out projects to optimize water efficiency in production, such as the reduction of raw water consumption by recovering and treating wastewater for reuse in the manufacturing process using wastewater reverse osmosis (WWRO) technology. In addition, GC increased water circulation cycles in its water cooling systems, resulting in reduced wastewater discharge.

  - **External:** GC joined the Keyman Water War Room, which consisted of the Royal Irrigation Department, the Industrial Estate Authority of Thailand, the Provincial Waterworks Authority, the Federation of Thai Industries, and business owners, to track the water situation in source water reservoirs as well as establish and implement plans to achieve sustainable water management measures in the eastern region. In addition, GC joined the academic subcommittee for water management in the eastern coastal area as a member along with relevant government agencies and organizations to drive, monitor, and evaluate the management of water resources.

Air Quality Control
For More Information
https://sustainability.pttgcgroup.com/en/environment/air-quality/emissions-reduction-target-and-performance

Water Management
For More Information
https://sustainability.pttgcgroup.com/en/environment/sustainable-water/sustainable-water-strategy-target-and-performance

3.2) Greenhouse Gas Emissions Management Towards Net-Zero

GC places emphasis on addressing and mitigating climate change impacts and has set the goal of achieving net-zero Scopes 1-2 emissions by 2050 to maintain its climate leadership in accordance with the assessment criteria of the Carbon Disclosure Project (CDP). The Company also seeks to apply data from environmental impact assessments across product life cycles to its proactive environmental management, which is implemented through the following initiatives to produce tangible results.

- **Enhancing GC's GHG inventory**

  GC maintained its ISO 14064-1:2018 certification for its greenhouse gas (GHG) inventory as well as for its GHG emission and reduction reporting for the 12th consecutive year, which made it possible to track GHG emissions by business unit and compare them against targets. GC also monitored and established the following measures.

  - Expand the scope and format of GC's GHG inventory reporting to cover all sites under both Operational Control and Equity Share approaches. This included direct emissions (Scope 1) and indirect emissions from energy consumption (Scope 2).
  - Expand the reporting of other indirect emissions (Scope 3) to cover all significant activities from its business operations.

- **Product Stewardship**

  GC implements sustainable product portfolio management focusing on creating products that align with circular economy and product stewardship principles through a product life cycle strategy and life-cycle assessments (LCA). As such, its products across all categories have been certified with various environmental labels, such as the Carbon Footprint of Products (CFP), Carbon Footprint Reduction (CFR), and the Carbon Footprint of Circular Economy Product (CE-CFP) labels by the Thailand Greenhouse Gas Management Organization (Public Organization). GC also evaluates direct and indirect water usage and efficiency throughout product life cycles in accordance with the ISO 14046 standard across all product categories, which enhances the competitiveness of the Thai industrial sector in the global market and prepares for ASEAN and international trade measures in the long term.

Thanks to its initiatives aimed at expanding and integrating its sustainable environmental management across its networks across all sectors, GC has earned the top score for environmental management in the Dow Jones Sustainability Indices (DJSI) in the chemical business category for a sixth consecutive year. GC has also been placed on the A-list in climate change and water security assessments based on the Carbon Disclosure Project's (CDP) assessment framework in pursuit of its 2050 net-zero goal.







Net Zero
For More Information
https://sustainability.pttgcgroup.com/storage/document/net-zero/20211119-pttgc-gc-s-decarbonization-pathways.pdf

IT Governance and Cybersecurity

GC has adopted COBIT 5 (IT Framework) and ISO standards, namely ISO 27001 and ISO 27701, as guidelines for its information technology (IT) and cybersecurity management, with relevant policies and operational manuals incorporated into the GC Management System (GCMS). In addition, GC has been establishing GC Group's IT operational framework through GC Way of Conduct. The implementation consists of two components as follows:

- **Management Levels:** The management is divided into three levels:

1. Governance Level

- The Audit Committee is responsible for overseeing and auditing IT and cybersecurity to ensure the suitability and adequacy of the operation.
- GC Group's Digital and IT Steering Committee (DISC) is responsible for defining the group's digital and IT direction, policies, and goals to ensure uniformity and the level of international standard comparable to that of leading companies in the same industry, with the Chief Executive Officer serving as the chairman of DISC.
- The Digital & IT Investment Management Committee (DIM) is responsible for reviewing the objectives of investment projects, technology selection, and returns on investment.
- The Enterprise Risk Management Committee (ERM) is responsible for overseeing the identification and management of risks to keep them within the organization's risk appetite.
- The Information Security Management System Committee (ISMS Committee) is responsible for ensuring that GC's information security, cybersecurity, and personal data privacy are consistent with the international standards and keeping risks within the risk appetite.

2. Management Level

- The Enterprise Architecture Committee (EA Committee) is responsible for the management of the Company's IT structure to ensure its alignment with usage requirements and currency as well as maximum utilization.
- The Management Level undertakes its oversight duties through data and information management policies, such as policies on Information Security (IS), Cybersecurity, Cloud Security, Service Level Agreement (SLA), Secure System Development Life Cycle (SSDLC), and Data Protection.

3. Operation Level

- Establishing systems, procedures, and services for users; publishing and storing them on the internet as reference for users; and sending out IT updates via email.
- Assessing IT resource risk every year to ensure the resources are sufficient to protect the accuracy, integrity, reliability, and currency of data and information.
- Monitoring performance both internally and externally to validate the work processes; using the results to further improve the Company's IT management and services and keep IT security up to date; and reporting progress to Executives and responsible Sub-committees regularly.

- **Management Processes:** The management processes are divided into three categories.

1. Information Security and Cybersecurity Governance

To establish clear operational directions and ensure transparent management from policy to operation levels, GC has appointed Senior Vice President – Transformation Excellence as the Chief Information Security Officer (CISO) and Chairman of the Information Security Management System Committee, responsible for establishing IT security and personal data management targets and policies in line with GC's strategic plans in compliance with the ISO/IEC 27001:2022 and ISO/IEC 27701:2019 standards and the cybersecurity framework developed by the U.S. National Institute of Standards and Technology (NIST), covering five areas of operation, namely identification, protection, detection, response, and recovery.

2. Information Security and Cybersecurity Control

GC has established information security, cybersecurity, and personal data management policies and measures in line with the ISO/IEC 27001:2022 and ISO/IEC 27701:2019 standards to bolster the security and stability of its information security and cybersecurity management system as well as prevent misuse in violation of the Computer-related Crime Act and the Personal Data Protection Act.

3. Information Security and Cybersecurity Auditing and Monitoring

GC regularly conducts reviews and audits of its information security and personal data management systems and practices as well as seeks recertification by external auditing bodies for its information security management under the ISO/IEC 27001:2022 standard and for its personal information security management under the ISO/IEC 27701:2019 standard annually.

GC's key IT and cybersecurity management activities in 2024 can be summarized as follows:

- Data and Information Availability: GC conducted drills for system and data recovery from the Data Recovery site (DR site) in preparation for emergencies affecting critical information systems. GC also carried out crisis management and business continuity drills, simulating Information Technology (IT) & Operational Technology (OT) Security attacks at the corporate crisis level. Additionally, GC reviewed and updated its Cybersecurity Incident Response Plan to effectively respond to and mitigate potential incidents.

- Standard Control and Specifications of Hardware and Software: GC established policies and audit procedures to control software license violations.

- Information Security and Cybersecurity System Optimization: GC installed a Web Application Firewall (WAF) to protect both on-premise and cloud environments from attacks. An attack surface management system was also installed to detect and analyze potential internet-based attacks. In addition, GC conducted system vulnerability assessments, including vulnerability assessments and penetration testing, and initiated cybersecurity insurance coverage.

- Expansion of ISO 27001:2022 and ISO 27701:2019 Certification Scopes: GC received information security management certification ISO 27001:2022 for its Platform as a Service (PaaS) – Cloud services, and Personal data security management certification ISO 27701:2019 for its hiring process.

- Raising Cybersecurity Awareness among Employees: GC updated and improved its e-Learning content and conducted phishing exercises to prepare staff for potential cyber threats.

In 2024, as a result of these initiatives, GC was able to efficiently safeguard its data and that of its business partners, as reflected through the indicators: (1) Total number of information security breach (2) Total number of clients, customers and employees affected by the information security breach. During the entire year of 2024, both indices indicated that there were no incidents or adverse effects reported.

Internal Information

An internal Information Policy has been established and included in the Corporate Governance and Business Code of Conduct Handbook. It has also been published on the Company's website for shareholders' ready access. Directors, Executives, and employees are constantly reminded to comply with the policy, under which they are prohibited from using material internal information not yet publicly disclosed for personal gain or the benefit of others, for trading GC's securities, or in a manner that either directly or indirectly harms the interests of GC. The details of the policy appear under "Policy and Practices Related to Shareholders and Stakeholders." on page 150.

In 2024, GC oversaw and monitored the compliance of its use of internal information with relevant laws as well as its policies and practices. In addition, GC communicated the matter to all Executives and employees via Hook Talk video clips, and all Executives and employees (100%) were required to learn about GC's internal information policies and practices as well as sign an acknowledgment pledging to follow GC's principles, policies, and business code of conduct through the Hook Acknowledgement & Learning System. Furthermore, 100% of the Director was informed of the GC's internal information policies and practices through e-Mails sent by the Company Secretary, and no Directors were found to have violated such policies and practices. In addition, 100% of the

Directors have signed an acknowledgment document in GC's Corporate Governance and Business Code of Conduct Handbook pledging to follow GC's principles, policies, business code of conduct and internal information policy and practice. In 2024, it was not found that any Directors or Executives traded securities during GC's blackout period. Changes in the shareholding of the Board of Directors, Executives, their spouses, and their minors appear under "Board of Directors" on pages 159 and "Executives." on page 169.

Prevention of Conflicts of Interest

GC prioritizes the interests of the Company and its stakeholders in its business operation as an important policy and has thus established best practices to demonstrate its commitment to transparency and accountability. Under these practices, it is the duty of GC's Directors, Executives, and employees at all levels, including related persons and people with business relations, to avoid involving in a conflict of interest or acting in such a manner that may bring about a conflict of interest. In case such avoidance is impossible, responsible units must supervise the transaction to ensure its transparency for the best interests of the Company.

GC has established standards and guidelines for delivery of duties and engagement in activities that may involve stake or conflicts of interest, as follows:

1. Refrain from any action that will cause one to have stake or conflicts of interest with the Company, such as by contacting with trade partners of the Company, exploiting an opportunity or information received in one's capacity as an employee for personal benefits, operating a business which competes with the Company, and engaging in external work in a manner that affects the work in their purview.

2. In case the Company's employee or its related person must enter a transaction with the Company for the benefit of the Company, the undertaking of such a transaction must be on an arm's-length basis with normal commercial terms.

3. The consideration and disclosure of any stakes, connected transactions, or conflicts of interest must be carried out strictly and carefully in accordance with applicable laws and regulations of the Security and Exchange Commission and the Stock Exchange of Thailand, whereby the Director, Executive and/or employee having conflicts of interests must be excluded from the review of the transaction. If it is necessary for such a person to provide information and details to supplement the review, such person shall not vote nor give any opinion in the consideration for the approval of such transaction for the sake of the independence of the review.

4. A business transaction must be carried out with honesty, integrity, reasonableness, and independence within the scope of corporate governance and in the best interest of the Company.

5. In the event of an undertaking or circumstance that may cause or deem to give rise to conflicts of interest with the Company, the aforesaid transaction must be reported using the form specified by the Company and filed to the supervisor through the chain of command and send to the Corporate Governance Department of PTT Global Chemical Public Company Limited or must be reported through the electronic system designated by Corporate Governance Department without delay in order to initiate a review process to determine whether conflicts of interest against the Company are involved and what further process should involve.

In addition, GC places importance on reporting, regardless of the possibility of the incidents leaning towards involving conflicts of interest, and has required the submission of annual reports as well as reports of any conflicts of interest arising during the year.

GC's activities for the prevention of conflicts of interests in 2024 are summarized below:

- GC conducted follow-ups and successfully achieved 100% submission of annual disclosure reports of potential conflicts of interest by GC Groups' Executives and employees through its intranet system.

- GC conducted follow-ups and successfully achieved 100% submission of annual conflict of interest disclosure reports by its directors using its conflict of interest reporting form.

- Ensuring that the Directors and Executives under the definitions prescribed in the Notification of the Capital Market Supervisory Board declare their record of conflict of interest upon taking office for the first time. Such a record of conflict of interest is also to be reviewed annually or whenever there is any amendment to the record during the year.

- GC conducted follow-ups and successfully had 100% of its Directors, Executives, and employees learn about policies and practices on the prevention of conflicts of interest and sign a statement acknowledging their obligations on its Hook Acknowledgement & Learning System or an acknowledgment document in GC's Corporate Governance and Business Code of Conduct Handbook.

- The Internal Audit Function conducted audits on GC's procedures and communications as well as random audits on transactions that may involve conflicts of interest on a quarterly basis and found that they were in compliance with relevant practices.

- GC reviewed and improved the Related Party Transaction and Material Transaction Manual (RPT&MT Manual) to ensure completeness and compliance with the Company's current guidelines.

- GC organized training sessions on related-party transactions and material transaction for GC Group's business coordinators in order to communicate the criteria, steps, and procedures for carrying out a related-party transaction between GC or a company in GC Group and a person with relations to GC or material transaction according to GC's Related Party Transaction and Material Transaction Manual.

- GC created an RPT Monitoring Dashboard and recorded related-party transactions in order to oversee, monitor, and review internal transactions considered related-party transactions as well as compile a list of coordinators in different units within GC with related-party transaction risks in order to put in place appropriate internal control procedures and measures. The list of GC's related parties must be taken into consideration before transactions are carried out in order to ensure correct and full compliance with GC's criteria and Related Party Transaction and Material Transaction Manual.

Anti-Fraud and Anti-Corruption

GC Group is committed to conducting business with integrity, fairness, and transparency, placing a strong emphasis on anti-fraud and anti-corruption practices. In addition, it actively instills fraud and corruption prevention as part of its organizational culture and cultivates awareness among all GC Group personnel against all forms of fraud and corruption. GC Group requires its Directors, Executives, employees, and every individual acting on its behalf to comply with applicable laws and regulations across every area it operates it and to not solicit, engage in, or accept any form of fraud and corruption, whether directly or indirectly.

The Board of Directors has established an Anti-Fraud and Anti-Corruption Policy as part of GC Group's Corporate Governance Policy as well as prescribed risk and internal control assessment for preventing and detecting fraud and corruption, investigation procedures and management protocols, and monitoring and reporting systems for fraud and corruption risk management. This ensures that all subsidiaries, Directors, Executives, employees, and any individuals acting on behalf of GC Group adhere to this policy as their operational standard. Any non-compliance with group policies will result in disciplinary action and legal penalties as applicable. The Anti-Fraud and Anti-Corruption Policy applies to all Directors, Executives, and employees across all levels of GC Group, as well as individuals associated with GC Group.

Anti-Fraud and Anti-Corruption Practices and Measures

1. GC has appointed an Anti-Fraud and Anti-Corruption working group, responsible for ensuring that GC's anti-fraud measures are implemented efficiently in accordance with the Company's commitment as a member of the Thai Private Sector Collective Action Against Corruption (CAC).

2. The implementation of this policy must follow GC's best practices outlined in the Corporate Governance and Business Code of Conduct Handbook, including all related regulations, policies, and guidelines. All personnel across GC Group must perform their duties with transparency, avoid any actions indicating intent of fraud or corruption, and avoid any involvement in fraud or corruption, whether direct or indirect.

3. GC Group's personnel at all levels are prohibited from giving or receiving bribes or any similar benefits to or from government officials and representatives of a private organization, whether directly or indirectly, to influence or gain undue and illicit advantages.

4. GC Group's personnel at all levels must exercise caution regarding giving or receiving gifts, entertainment, hospitality, and related expenses and must follow guidelines in the Corporate Governance and Business Code of Conduct Handbook and the No Gift Policy.

5. Charitable donations and sponsorships must be made in GC's name to benefit society or promote GC Group's business or image. Such donations and sponsorships must be conducted with transparency without opening up a channel for fraud or corruption and must follow procedures specified in the donation and sponsorship manual of GC and GC Group.

6. As a policy, GC maintains political neutrality and does not provide financial support, resources, or other assets either directly or indirectly to politicians or political parties or other political groups. While GC Group's personnel have legal political rights and freedoms, they must not engage in an action or an activity or use GC Group's resources to engage in an action or an activity that could compromise GC Group's political neutrality or damage GC Group as a result of political involvement or assistance.

7. GC Group's personnel at all levels must avoid conflicts of interest with GC Group. Any action must be carried out reasonably, on the basis of GC Group's interests, and without violating any relevant laws, rules, or regulations. Any potential conflicts of interest with GC Group must be reported through designated channels in accordance with GC Group's guidelines.

8. As a policy, GC does not make any facilitation payment to ease its business activity either directly or indirectly and does not engage in or accept any act in exchange for business facilitation.

9. GC has established suitable and clear criteria for the hiring of government officers in order to prevent such hiring to be in exchange for undue benefits and has established measures to disclose information related to such hiring to the general public for transparency.

10. Business relationships and procurement with public or private sectors, including dealings with government officials, representatives of a private organization, or individuals whose duties are related to business operations of GC and its subsidiaries, both domestic and international, must be conducted with transparency and integrity and in compliance with applicable laws.

11. When engaging third parties to act on behalf or in the name of GC, relevant personnel must inform them of GC's business code of conduct regarding anti-fraud and anti-corruption practices and ensure that the engagement terms are transparent, appropriate, and legal and do not involve fraud or corruption.

12. GC regularly reviews, audits, and updates anti-fraud and anti-corruption measures and reports annually to the Corporate Governance and Sustainability Committee to measure and improve their effectiveness and improve their alignment with changing fraud and corruption risks.

13. GC has implemented risk prevention measures in relation to operation control, environment control, financial control, and record keeping.

14. GC has put in place internal control systems for financial reporting, accounting, data disclosure and retention, and internal control assessment reporting, along with procedures for reporting audit findings to senior management and the Board of Directors.

15. GC has established human resource management policies and procedures regarding nomination and selection for GC Group, performance evaluation, remuneration, and promotion that reflect its anti-fraud and anti-corruption commitment.

16. GC shall not demote, discipline, or cause any adverse effect on GC Group's personnel who refuse to be involved in fraud or corruption, even though such refusal may cause GC Group to lose business opportunities. This policy is clearly communicated to all personnel.

17. GC consistently organizes training on anti-fraud and anti-corruption actions and awareness for its personnel.

18. GC communicates its anti-fraud and anti-corruption policy to its subsidiaries, affiliates, other companies in which GC has controlling power, customers, suppliers, business partners, representatives, consultants, and stakeholders, external parties acting on behalf of and/or associated with GC Group, as well as to the general public through various communication channels in order to keep them informed and enable them to adopt the anti-fraud and anti-corruption measures.

Complaint Filing and Investigation

1. GC has established whistleblowing policy that outlines procedures and channels for receiving complaints, investigating facts, and determining disciplinary actions. All personnel must not ignore or disregard any suspected instances of fraud or corruption involving GC Group and are required by duty to report such incidents to their supervisors or responsible persons or through complaint channels as well as cooperate with fact-finding investigations.

2. GC ensures fair treatment and protection for any employees or individuals who report evidence of fraud or corruption involving GC or its subsidiaries as well as employees who refuse to engage in fraud or corruption. GC maintains the strictest confidentiality of the identity of the whistleblower and those who cooperate in reporting fraud and corruption, as specified in whistleblowing policy.

Disciplinary Actions

GC has put in place disciplinary actions for Directors, Executives, or employees who do not comply with its aniti-fraud and anti-corruption measures. These include the discharge of Directors from office and other disciplinary actions in accordance with the rules on disciplinary actions for Executives and employees; and legal actions in accordance to the applicable laws, rules, regulations, and corporate governance practices related to such act.

In the event that a person related to GC Group, or any customer, supplier, or business partner does not comply with the anti-fraud and anti-corruption measures, GC Group may consider terminating any transaction with such person.

GC declared its intention to join the Thai Private Sector Collective Action Against Corruption (CAC) on July 18, 2012 and was first certified as a member on July 4, 2014. It was recertified for the third time on June 30, 2023.

In 2024, GC carried out activities that demonstrated its commitment to anti-fraud and anti-corruption efforts. A summary is provided below:

- GC reviewed and updated its Anti-Fraud and Anti-corruption Policy in collaboration with the consulting firm EY Corporate Services Limited to ensure alignment with international standards and coverage of all forms of corruption.

- GC developed a fraud risk management manual and a fraud risk management framework to serve as guidelines for integrated fraud risk management and enhance control self-assessment.

- GC organized two FRM & CSA Workshops in collaboration with EY Corporate Services to enhance the comprehensiveness of fraud risk assessment and establish appropriate control measures through the CSA system. The workshops covered maintenance processes for the Aromatic Maintenance Division and addressed product portfolio processes for the Flexible Packaging Platform Division and the Product Line Management unit, Flexible Packaging Application Development unit, and Catalyst and Polymerization Unit.

- GC developed and deployed the Automated CAC Checklist to improve the work process and optimize the development of a database of GC's implementation of anti-corruption measures as well as monitor, process, analyze, and verify data and provide recommendations on the CAC Checklist through an online system.

- GC prescribed the quarterly auditing of items or transactions with the government sector with potential corruption risks (transaction monitoring), conducted by the corporate governance management unit as the second line. In 2024, no transaction involving corruption risks was detected.

Anti-Fraud and Anti-Corruption Policy
The full Anti-Fraud and Anti-Corruption Policy can be accessed on GC's website at: https://www.pttgcgroup.com/storage/document/cg-anti-corruption/pttgc-anti-corruption-policy-en.pdf

- GC supported its subsidiaries in applying as a member of CAC by providing assistance and recommendations in their declaration of intention in becoming CAC members, organizing training on execution of an anti-corruption self-assessment procedures, and offering recommendations on CAC recertification.

- GC consistently provided training and issued communications.

Internal Activities

- GC organized a training program entitled "Corruption and Controls: A Guide to Organizational Transparency" for target employees involved in CAC operations, fraud risk assessors, CAC working groups, and GRC units from both GC and its subsidiaries. This training was aimed at enhancing employees' understanding of fraud and corruption, cultivating a strong corporate governance culture against all forms of corruption, as well as enabling participants to effectively establish policies and guidelines, evaluate anti-corruption performance according to CAC guidelines, fully understand corruption risk assessment procedures, and establish rigorous anti-corruption measures. The satisfaction score for the training was 100%.

- GC organized a Fraud Risk Assessment Workshop for the anti-fraud and anti-corruption working group, GRC units, and risk and internal control coordinators. The workshop was aimed at fostering their understanding of the importance, origins, types, and components of fraud as well as fraud risk assessment as well as enabling them to establish effective fraud prevention and mitigation systems within the organization, analyze fraud cases across multiple work scenarios, develop preventive approaches, and implement control measures for efficient fraud management. The awareness and comprehension rate for the workshop was 95%.

- GC held a mandatory program entitled "Hook Acknowledgment and Learning" through its e-Learning system for employees at all levels across GC Group for them to learn about good corporate governance and compliance with laws, rules, regulations, and GC's business code of conduct. The awareness and comprehension rate for the program was 100%.

- Monthly tone-at-the-top communications about GC's business code of conduct were delivered through Hook Talk video clips at the Town Halls and before various internal meetings, with the goal of fostering an understanding of Governance, Risk Management and Internal Control, and Compliance (GRC) and the GRC Character as part of the organization's culture. Topics included employee code of conduct compliance, risk management, appropriate internal control systems, legal and regulatory compliance, anti-corruption measures, whistleblowing, and positive GRC employee behaviors.

Activities for External Stakeholders

- GC joined the CAC Change Agent Program to expand its network of business transparency to its suppliers. A total of five suppliers declared their intention to join the program in 2024, thus earning a CAC Change Agent Badge for a third consecutive year. GC also encouraged its suppliers to become CAC members and communicated its Anti-Fraud and Anti-Corruption Policy to them through annual supplier conferences, for which the assessment score for corporate governance and compliance communication was 93.7%.

- GC informed all business partners of GC Group's No-Gift Policy, under which GC would not request/receive any gift, reward, entertainment, or other forms of benefits from its business partners to avoid acts that might lead to discrimination or a conflict of interest and to jointly uphold operational transparency and efficiency.

- GC published on GC's website and put up signs across its headquarters in clearly accessible spots to communicate the No-Gift Policy to all visitors and the general public.

- GC provided channels for external parties to submit inquiries and recommendations regarding corporate governance and business code of conduct via e-Mail to the Corporate Governance Department at cg@pttgcgroup.com.

- GC Group's Executives and employees participated in the following activities with external agencies:

- GC participated in the 2024 Anti-corruption Day, held both on-site and online under the theme "Invisible Fraud and ESG" by the Anti-Corruption Organization of Thailand (ACT) on September 6, 2024, at Professor Sangvian Indaravijaya Auditorium at the Stock Exchange of Thailand to empower GC Group's Executives and employees in spearheading anti-corruption endeavors.

- GC participated in the 2024 International Anti-corruption Day (Thailand) entitled "Fight Against Corruption," held by the Office of the National Anti-Corruption Commission (NACC) virtually on December 9, 2024, to demonstrate the commitment of GC Group's Executives and employees to transparent and corruption-free business practices.

- GC participated in an anti-corruption charity run on the 2024 International Anti-corruption Day (Thailand), held by the Office of the National Anti-Corruption Commission (NACC) on December 8, 2024, to cultivate public awareness and encourage collective action against corruption while promoting health and wellness through walking and running activities.

- GC put in place whistleblowing channels for the reporting of policy violations or corruption, along with whistleblower protection measures.

- GC prepared the 2024 anti-fraud and anti-corruption performance report to track the implementation of its anti-corruption measures and plans for the year 2025, which was submitted to the Corporate Governance and Sustainability Committee, the Audit Committee, and the Board of Directors for acknowledgment.

In 2024, GC was awarded the Thai Chamber of Commerce Business Ethics Standard Test Club (TCC BEST Club) pin by the Thai Chamber of Commerce Anti-Corruption and Ethics Promotion Committee to encourage business operators to apply corporate governance principles to organizational management to ensure the prosperity and sustainability of the business. The accolade recognized organizations that adhered firmly to corporate governance principles and integrity, demonstrated honesty and transparency, served as a role example, and made positive contribution to society.

Whistleblowing

GC recognizes the important roles of all stakeholders in its Corporate Governance. Whenever they witness any violation of the Business Code of Conduct, any form of fraud and corruption, or any other case, all stakeholders may submit a report, notification, or complaint directly to either the Chairman of the Corporate Governance and Sustainability Committee, the head of Internal Audit, or the Company Secretary, or via the GC-provided complaint channels, or any other channels that they trust.

Chairman of the Corporate Governance and Sustainability Committee
Head of Internal Audit Company Secretary
: PTT Global Chemical Public Company Limited
555/1 Energy Complex, Building A, 18th Floor
Vibhavadi Rangsit Road, Chatuchak
Bangkok 10900

e-Mail : whistleblower@pttgcgroup.com

Website : www.pttgcgroup.com

Whistleblowing Policy Procedure

GC has formulated and announced the following Whistleblower Policy Procedure:

(1) Complaint Screening: The responsible department screens the essential information under the established policy. The complaints may be anonymously filed as long as clear reasons and sufficient evidence are provided. If the whistleblower has provided their name or contact information, they will be notified by the Company.

(2) Investigation: For valid complaints, Chief Executive Officer will appoint an investigation committee under the Company's work regulations to conduct an investigation and fact-finding as well as to determine disciplinary action according to GC's regulations so as to ensure fairness to all parties.

(3) Reporting: Once the complaint has been dealt with, the whistleblower will be notified of the outcome if the contact information is provided. The outcome will also be reported to the Corporate Governance and Sustainability Committee and the Audit Committee.

Whistleblower and Witness Protection

Whistleblowers or witnesses who collaborate in the investigation will be provided with the following protection under the Whistleblower Policy:

(1) Whistleblowers or informants may choose to file a complaint anonymously of their own volition as a whistleblower protection measure.

(2) A whistleblower, a stakeholder, or any person who cooperates in good faith in the investigation will be protected from retaliation (non-retaliation).

(3) Information of the whistleblower or of any person involved will be kept strictly confidential according to GC's regulations on information classification and security of confidential documents.

(4) The Company will formulate suitable mitigation measures for the whistleblower or the affected party.

Complaint Statistics

In 2024, the Company received a total of 54 complaints*, divided into ten categories as follows:

Category	Number of complaints	Progress on corrective action
Business Code of Conduct	3	• 2 cases of no violation • 1 case of disciplinary action
Non-compliance	9	• 8 cases of no violation • 1 case is in process
Fraud or Corruption	1	• 1 case of disciplinary action
Use of Internal Information	None	
Conflicts of Interest	None	
Voice of Customer	39	• 34 cases resolved • 5 cases are in process
Voice of Customer concerning customers' personal data	None	
Voice from Community	1	• 1 case resolved
Employee	1	• 1 case of disciplinary action
Safety, Occupational Health, and Environment	None	

Remark : * Data as of December 31, 2024

Audit Committee Report

The Audit Committee has held the meetings, the details of which are as set out in "Meeting Attendance and Remuneration of Individual Directors." on page 199.

Details of the performance of the Audit Committee in 2024 are as set out in "Audit Committee Report." on page 220.

Summary of Other Sub-committees' Performance

The other Sub-committees of the Company consist of the Corporate Governance and Sustainability Committee, the Nomination and Remuneration Committee, and the Risk Management Committee. Details on the number of meetings of these Sub-committees and the meeting attendance of each individual member appear under "Meeting Attendance and Remuneration of Individual Directors." on pages 199-201.

Details on the performance of duties of these Subcommittees for the year 2024 appear under "Report of the Corporate Governance and Sustainability Committee," on page 224 "Report of the Nomination and Remuneration Committee," on page 228 and "Report of the Risk Management Committee." on page 231.

Report of the Audit Committee

PTT Global Chemical Public Company Limited (GC) has appointed the Audit Committee to support the Board of Directors in overseeing GC's operation and giving independent and appropriate opinions in accordance with Audit Committee Charter, with the Internal Audit Function assisting the Audit Committee in promoting GC's good corporate governance, effective risk management and internal control, and compliance with business-related laws and regulations, as well as ensuring the disclosure of information and the issuance of the Form 56-1 One Report to further enhance the trust and confidence of the stakeholders.

The Audit Committee consists of 3 independent directors with in-depth expertise and a wide range of experience in accounting, finance, law, etc. The Audit Committee independently and objectively executes its duties as prescribed by the Audit Committee Charter and as entrusted by the Board of Directors, in alignment with the announcements of the Stock Exchange of Thailand, the best practice guidelines for the Audit Committee, and the Corporate Governance Code for Listed Companies.

In 2024, the Audit Committee supported the Internal Audit Function in enhancing audit quality, developing auditor competencies, and implementing technologies in internal audit activities, with the goal of ensuring that Internal Audit Function could continuously provide reliable assurance on internal controls across GC and its subsidiaries. The Audit Committee also offered recommendations on risks to support business objectives and portfolio management while also fostering collaboration in GC and its subsidiaries to create value for the organization, considering the maximum benefits of stakeholders. A summary of the key activities of the Audit Committee in 2024 is provided below.

- Granting approval to the internal audit approach and principles through assurance and advisory services in the areas of good corporate governance, risk management, and internal control in order to support the achievement of domestic and international business objectives of GC and its subsidiaries.
- Supporting the Internal Audit Function in developing Internal Audit approaches that uplift the quality of the Internal Audit and add value to the organization, such as a strategy-based auditing approach, as part of the key drivers in supporting the business to achieve GC's sustainable growth in alignment with its strategic direction, and the adoption of Data Analytics techniques in support of operational audits to enhance their efficiency, speed, and comprehensiveness, open up opportunities to add value to the organization, and introduce analyzed data through analytics dashboards and visualized reports, which lead to beneficial internal control recommendations on the business operation.
- Supporting the Internal Audit Function in promoting and expanding the utilization of Advanced Analytics, such as process mining and machine learning, to analyze anomalies and develop Analytics Dashboards for monitoring internal controls or further establish detection rules, with the ultimate goal of developing an automated audit system in critical business processes, within GC and its subsidiaries, thus enabling the Internal Audit Function to promptly detect such anomalies and provide recommendations for internal control improvements in a timely manner.
- Promoting the continuous development of essential knowledge and skills for Internal Audit practices among the personnel in the Internal Audit Function and establishing a Competency Development Framework enabling the Internal Auditors to be expertise in specific areas, such as business acumen and digital & data acumen, and the development of other auditing skills for Internal Audit professional practices.
- Emphasizing the auditing of anti-corruption policies, guidelines, and measures as well as Self-Evaluation Forms for Anti-Corruption System Development to establish organizational guidelines.
- Highlighting the significance of governance and internal control across GC and its subsidiaries, both domestic and international, such as by encouraging GC's internal auditors to conduct audit activities on key internal controls in collaboration with GC Group's internal auditors from domestic and international companies and reporting to the Audit Committee regularly; encouraging the Internal Audit Function to develop

Internal Control Questionnaires (ICQ) for companies in GC Group to assess the adequacy of internal control to further augment the trust and confidence in their internal controls as well as to review anomalies and prevent potential frauds that may occur; and providing recommendations for improving and developing the internal controls to enhance effective implementation and comprehensive coverage of risks across companies in GC Group.

- Emphasizing the management of cybersecurity risks that may impact on the security, safety, and stability of GC's information systems, for both Information Technology (IT) and Operational Technology (OT); thus, monitoring and reviewing the appropriateness of various control measures and emergency response preparedness for potential cyber threats.
- Highlighting the significance of corporate sustainability governance covers all business facets across environmental, social, and governance dimensions; fostering confidence in GC's Sustainability Report; as well as emphasizing monitoring the pursuit of objectives and preparedness at both strategic and operational levels in accordance with new sustainability standards and regulations.

In 2024, the Audit Committee convened a total of 10 meetings and regularly reported its operational outcomes to the Board of Directors. The attendance of each committee member is detailed below.

Name - Surname	Position	Attendance
Mr. Thanwa Laohasiriwong	Chairman	10/10
Mr. Pakorn Nilprapunt	Director	10/10
General Nimit Suwannarat	Director	10/10

A summary of the key activities of the Audit Committee is given below.

1. Review of financial reports

The Audit Committee oversighted preparation of the management financial reports in a timely manner and conducted reviews of significant financial information, including quarterly and annual financial statements, items with potential conflicts of interest in and among various business groups, material issues, and special items. When suspicions are found in financial statements, the Audit Committee will conduct an examination into the causes and scope of the audit with relevant parties and regularly obtained clarifications from the Auditor and the Management on a regular basis to provide assurance that the financial reports were accurate, transparent, complete, and reliable, with adequate notes to financial statements. The Audit Committee also supervised and monitored financial statement preparation to ensure compliance with applicable reporting standards and laws and completion within appropriate timeframes and thus approved the financial report that had been reviewed, audited, and given unqualified opinions by the Auditor. Upon detecting any anomalies or any suspicious circumstances in the financial statements that may significantly affect the rights of shareholders, the Audit Committee will promptly conduct an investigation along with strengthening internal control systems as well as periodically report progress to the Securities and Exchange Commission (SEC) until the completion of the process.

In addition, the Audit Committee reviewed and approved the Non-Assurance Services (NAS) provided by the Auditor to assure that the scope of services would not impact on the auditor's independence. The Audit Committee also had an exclusive meeting with the Auditor without the presence of the Management to independently deliberate the reception and provision of information from the Management, review of significant information for the preparation of the financial report, Key Audit Matters, follow-up on on-time implementation of the new financial reporting standards and also related Sustainability Standards, as well as independence in carrying out their duties and responsibilities.

2. Review of risk management

The Audit Committee acknowledged information on the corporate risk management from the report presented to the Board of Directors meeting and reviewed the risk management from the report by the Internal Audit Function, so as to ensure that GC had efficiently identified significant risks issues that might impact the Company's operations and had put in place effective risk management, assigned corresponding responsible parties, with appropriate and sufficient risk management measures that comprehensively covered all short-term and long-term risks.

3. Review of internal control

The Audit Committee conducted a review of the internal control systems of GC and its subsidiaries both domestic and international from the Internal Audit reports, and the progress report by the Management on the Audit Committee's recommendations and a review of accounting and financial internal controls by the Auditor without any no significant issues or discrepancies that could have an impact on the financial statements. The Audit Committee also reviewed the adequacy and appropriateness of the internal control from the results of GC's internal control assessment conducted by the Management in accordance with the Securities and Exchange Commission's internal control assessment form. The results revealed no significant issues or discrepancies that could have an impact on the Company's main objectives. This provides reasonable assurance that the Company has adequate, effective, and appropriate internal control that can support the business operations to the achievement of the envisioned goals and objectives of the Company and its subsidiaries.

4. Review of corporate governance

The Audit Committee reviewed corporate governance practices of GC and its subsidiaries through summary report of complaints and inappropriate behavior report from whistleblower and other channels. In addition, GC shall have proper policies and procedures in place for dealing with complaints and protecting whistleblowers appropriately. The Audit Committee also reviewed the progress report on anti-fraud and anti-corruption measures, which information disclosed in accordance with the regulations of the Stock Exchange of Thailand, this ensures that the Company's business operations are complied with good corporate governance principles, creating sustainably value for the Company. Furthermore, the Audit Committee also promoted the participation of the Company's subsidiaries to join the Thai Private Sector Collective Action Against Corruption (CAC) and reviewed the Self-evaluation Form related to anti-corruption measures, as well as recommended that the Company undertake additional anti-corruption activities and serve as a role model in term of good corporate governance for listed companies in order to build trust among stakeholders.

5. Supervision of Internal Audit

The Audit Committee oversaw GC's Internal Audit Function to ensure that it is independence, objectivity, and adding value for GC and its subsidiaries through its activities, as well as encouraging the adoption of technology to uplift the quality of internal audits and continuously updating on any change in Global Internal Audit Standards. In addition, the Audit Committee encourages Internal Auditor Function to conduct a quality assessment of internal auditing in accordance with International Professional Practices Framework and the Internal Audit Maturity assessment on a regular basis by a qualified external assessor whom has no conflicts of interest to ensure the results of Quality Assessment Review (QAR). The Audit Committee also approved the internal audit strategies, goals and annual audit plan based on a risk-based approach together with supporting the development of internal audit's capabilities, working experiences, and business insights, besides consider sufficient and appropriate capital resources of the Internal Audit Function. Furthermore, the Audit Committee reviewed and acknowledged the findings of Internal Audit from Internal Audit reports, provided insights, recommendations, and monitored the resolution of significant findings on a regular basis.

6. Review of compliance with applicable laws

The Audit Committee reviewed the business operations of the Company to assure compliance with Securities and Exchange Act, Stock Exchange Commission regulations, and industry-related laws, the environmental, and personal data protection laws, and other domestic or international laws related to the operations of Company and its subsidiaries through the reports of the Internal Audit Function. The Audit Committee also directed the monitoring of new domestic and international laws that might become applicable and impact to the Company and its subsidiaries both domestic and international businesses in the future so as to comply the GC's operations with new international laws and standards.

7. Review of the appointment of the Auditors

The Audit Committee reviewed the appropriateness of Auditor selection criteria from the beginning of the selection process and monitored the progress through to Auditor nomination process. The Audit Committee scrutinized qualified auditors based on their qualifications, capabilities, auditing experience, auditing methodology, performance, and independence according to the Code of Ethics for Professional Accountants set by the Federation of Accounting Professions, in compliance with the regulations of the Securities and Exchange Commission, including appropriate remuneration fees. The Audit Committee then proposed the appointment of the Auditor to the Board of Directors with the proposed remuneration fees for their consideration and approval, to be submitted to approval in the Annual General Meeting of Shareholders.

In 2024, the Shareholders approved the appointment of KPMG Phoomchai Audit Company Limited (KPMG) as the Auditor of the Company for the year 2024.

8. Consideration of related-party transactions and transactions that may constitute conflicts of interest in adherence to laws and regulations of the Stock Exchange of Thailand

The Audit Committee reviewed and provided opinions on related-party transactions or transactions that may have significant conflicts of interest as well as material asset acquisitions or dispositions, by considering the reasonableness of the transactions, details, and the identification of the contract counterparty and relevant risks such as Legal Risks, Financial Risks that materially impact on the Company's financial position, Operational Risks; particularly International Business Transaction Risks, and New Business Expansion Risks. The Audit Committee also encouraged the Company to set up systems or processes for collecting related-party transactions or transactions that might constitute conflicts of interest in order to monitor anomalies or the transactions have been intentionally conducted to avoid the regulations, as well as to monitor transaction progress. Additionally, the Audit Committee ensured that information was disclosed completely, accurately and appropriately in accordance with the regulations of the Stock Exchange of Thailand to shareholders on a regular basis. In cases of suspected misconduct in transaction or stock-price manipulation, the Audit Committee will take promptly action to prevent and suspend such transactions and report to The Securities and Exchange Commission, Thailand without delay.

In 2024, no significant related-party transactions or transactions deviating from contractual obligations that required information disclosure in accordance with the regulations of the Stock Exchange of Thailand. A review of the audit report by the Internal Audit Function regarding material transactions and related-party transactions revealed no significant issues that could impact the achievement of the Company's major objectives. Additionally, the Audit Committee did not receive any report of discrepancies through the review of the disclosure of related-party transactions by the Auditor.

9. Others

The Audit Committee scrutinized financial reports on the Company's fundraising and investment activities, such as asset valuation and the issuance of debentures, etc. The Audit Committee also reviewed and oversaw the implementation of governance mechanisms to ensure that the utilization of raised funds is aligned with the objectives, and information is appropriately disclosed to shareholders.

The Audit Committee has continually reviewed accounting and financial knowledge and the Audit Committee Charter on an annual basis to ensure alignment with the principles, best practices and guidelines as prescribed by the Securities and Exchange Commission and has reported the Audit Committee's performance to the Board of Directors at regular intervals. Furthermore, the Audit Committee conducted both group and individual assessments of performance and reported the results to the Board of Directors to further uplifting and improving the performance of the Audit Committee.

The Audit Committee duly performed duties as prescribed by the Audit Committee Charter and as delegated from the Board of Directors in its entirety on the basis of objectivity, independence with consideration to the stakeholders on an equal basis.

The Audit Committee has thus concluded that the financial report prepared by the Company is accurate and reliable, with sufficient disclosure of information in accordance with generally accepted accounting and financial reporting standards, complying with related laws, rules, and regulations relevant to business operations; that the Company upholds good corporate governance, adequate and appropriate risk management, internal controls and Internal Audit activities. The Audit Committee also continues monitoring new regulations, new international standards, and emerging risks relevant to business operations and strategic goal for preparedness in handling potential short-term and long-term impacts.

The Audit Committee wishes to express gratefulness to the Board of Directors, Executives, the Auditor, and all related entities for the strong collaborative support throughout 2024.

On Behalf of the Audit Committee

(Signed) Thanwa Laohasiriwong

(Mr. Thanwa Laohasiriwong)
Chairman of the Audit Committee

Report of the Corporate Governance and Sustainability Committee

Dear Shareholders,

In 2024, the Corporate Governance and Sustainability Committee comprised 5 directors, over half of whom were independent directors, with the Chairman of the Committee being an independent director. The Committee is tasked with ensuring compliance with good corporate governance principles and sustainable development practices as well as continuously striving to achieve an environmental and social balance in line with international standards. The Corporate Governance and Sustainability Committee convened 7 meetings among themselves and held 2 additional meetings with the Risk Management Committee. The attendance of each Director is detailed in the table below.

Name - Surname	Position	Attendance	
		CGS meetings	CGS and RMC meetings
General Nimit Suwannarat	Chairman	5/5	2/2
Mr. Patchara Anuntasilpa	Director	7/7	2/2
Police Colonel Dusadee Aryawuit	Director	7/7	2/2
Mr. Wim Rungwattanajinda	Director	5/5	2/2
Mrs. Nivadee Jaroensitipun	Director	2/2	-
Directors who vacated their office / resigned during the year			
Professor Somkit Lertpaithoon	Director	2/2	-
Mr. Surachai Achalaboon	Director	2/2	-
Mr. Chadil Chavanalikikorn	Director	2/2	1/1

The Corporate Governance and Sustainability Committee fulfilled its duties in establishing guidelines, promoting initiatives, conducting reviews, and providing recommendations and comments on good corporate governance and sustainable development for GC as prescribed in the Charter of the Corporate Governance and Sustainability Committee and assigned by the Board of Directors. A summary of its activities is given below.

1. Corporate Governance

1.1 Ensuring Compliance with Requirements, Laws, Rules, Regulations, and Best Practices

- Overseeing and monitoring GC Group's corporate governance to ensure compliance with international standards and criteria set forth by domestic regulatory agencies.
  - Overseeing the organization of the 2024 Annual General Meeting of Shareholders via an electronic means (E-AGM) to ensure compliance with applicable AGM-related laws, corporate governance principles, and best practices. To this end, GC received the "Excellent" assessment score of 100 on the 2024 AGM checklist from the Thai Investors Association (TIA) for a 13th consecutive year.
  - Offering guidelines for establishing criteria for allowing shareholders to propose meeting agenda items and nominate candidates for election as Director of the Company in advance of the 2025 Annual General Meeting of Shareholders.

- Supervising GC's disclosures to ensure their timeliness and the completeness and accuracy of the material information disclosed in accordance with the criteria stipulated by regulators, i.e., Form 56-1 One Report, Integrated Sustainability Report, and other information published on the Company's website.
- Monitoring and providing recommendations on corporate governance assessments by external regulators, such as the Corporate Governance Report of Thai Listed Companies (CGR). As a result, in 2024, GC received an "Excellent" rating on the Corporate Governance Report of the Thai Listed Companies (CGR) of Thai Institute of Directors Association (IOD) for a 13th consecutive year.
- Reviewing the appropriateness of the adoption of the Corporate Governance Code for Listed Companies 2017 (CG Code), providing comments and suggestions to the Board of Directors to improve and develop their performance of duties in accordance with the business situation and context, and disclosing relevant information in Form 56-1 One Report.
- Successfully encouraging 5 suppliers to declare their intention to join the Thai Private Sector Collective Action Against Corruption (CAC) as part of the CAC Change Agent Program, thus earning GC a CAC Change Agent Award for a third consecutive year; and monitoring the progress of GC's subsidiaries in becoming CAC members.

- Ensuring the compliance of GC's operations with relevant laws, rules, and regulations.
  - Optimizing operational efficiency in compliance to establish practices that aligned with both GC's Compliance Management System Handbook and international standards, including improving guidelines for compliance monitoring and reporting to ensure that GC had clear operational criteria and procedures, which enabled employees to implement compliance practices correctly and ensured consistent implementation across the organization.
  - Overseeing and monitoring the handling of complaints received through the Whistleblower channel to ensure compliance with the Whistleblower Policy; monitoring complaints received through other channels in other areas, namely the environment, communities, business partner, customers, shareholders and investors, and employees through quarterly reports; and providing comments and recommendations to the management in addressing the causes of the complaints and formulating appropriate preventive measures.
- Promoting GRC (Governance, Risk Management and Internal Control, and Compliance) operations by encouraging comprehensive implementation of key GRC components to achieve higher GRC maturity levels through the following: (1) Maturity and Performance Management: improving the efficiency of GRC Health Check monitoring and analysis; (2) GRC Culture Build: organizing activities and communications to integrate GRC into the organizational culture; (3) GRC Communication: issuing GRC communications to build knowledge, understanding, and engagement in driving the organization through GRC principles; and (4) Proactive & Gap Closing: conducting assessments and providing recommendations to optimize core processes related to key corporate risks.

1.2 Ensuring Compliance with Corporate Governance Policy and Practice in GC Group

- Overseeing and monitoring the effectiveness of compliance with the Corporate Governance policy/ Corporate Governance & Business Code of Conduct Handbook and other relevant manuals, such as the Related Party Transaction and Material Transaction (RPT & MT) Manual.
- Promoting the continuous improvement and development of Corporate Governance management guidelines and practices, such as through the revision of the Related Party Transaction and Material Transaction (RPT & MT) Manual.

- Promoting consistent compliance management practices across GC Group by enhancing GC's compliance operations efficiency, such as by integrating data from the E-Legal Excellence system to create a primary database for monitoring legal compliance and supporting subsidiary oversight through GC Way of Conduct assessments to monitor and ensure consistent implementation of compliance management practices throughout GC Group.
- Providing recommendations and evaluating the performance of subsidiaries in accordance with GC Way of Conduct to inspect operational alignment and standardize good corporate governance practices across all GC Group.
- Providing consultation to domestic subsidiaries on developing their own whistleblowing policies and channels and complaint handling procedures to ensure management consistency across GC Group.
- Promoting the fostering of an ethical behavior standard and GRC Characters by supporting relevant training and communication for employees at all levels throughout the year.
- Promoting workshop training on fact-finding guidelines and practices as well as GC's regulations on employee disciplinary actions and penalties in order to foster knowledge and understanding on complaint handling among Vice President-level executives and division manager across GC Group to enhance trust and confidence in the Whistleblower system among personnel.
- Overseeing, monitoring, and advising on GC's stakeholder stewardship, requiring units and functions responsible for each group of stakeholders to report a summary of previous activities and a future plan that is consistent with GC's policies and practices.
- Reviewing policies and practices in the Corporate Governance and Business Code of Conduct Handbook to ensure that they are up to date, consistent with domestic and international standards, and appropriate for application across the Company; as well as revising the topic of sanctions under the topic of business ethics to ensure alignment with international standards and the current situation.
- Reviewing and revising the Anti-Fraud and Anti-Corruption Policy to cover the full scope of fraud and ensure alignment with relevant international best practices so as to apply them to the organization.
- Overseeing the outcomes of GC's anti-fraud and anti-corruption measures for 2024 and approving GC's anti-fraud and anti-corruption plan for 2025 to ensure its consistency with relevant regulations, such as the criteria issued by the CAC.
- Reviewing and approving GC's corporate governance plan for 2025 to serve as guidelines for executing, monitoring, and assessing GC Group's corporate governance performance in a tangible manner.

2. Sustainable Development

Supervising and monitoring GC's sustainable development to ensure alignment with both GC's business directions and international standards and achieve a balance among the Environmental, Social, and Governance (ESG) aspects.

- Overseeing GC's short-term and medium-term sustainable development operational plan to maintain alignment with its goals and strategies; establishing and monitoring sustainable development indicators to ensure consistency with its goals and an ESG balance; and driving GC Group to contribute to industry-wide efforts in achieving the Sustainable Development Goals (SDGs).
- Reviewing and providing comments on GC's strategic plans and short-term and medium-term decarbonization action plans for the year 2024; providing recommendations in reducing risks from internal and external factors and preparing contingency plans in the event that the implementation deviated from the established plans to be presented to the Board of Directors; and providing support in advancing relevant policies for efficient implementation in alignment with the Company's goals.
- Reviewing and providing comments on GC's strategic plans and action plans for fostering growth in new sustainability-focused businesses and products, such as sustainable products and hydrogen-carbon businesses, to ensure the efficient development of new businesses and products.

- Promoting the creation of added value to the business; driving market development and customer base expansion; and developing sustainable products in accordance with circular economy principles to drive GC's growth.
- Promoting the revision of double materiality as well as operational processes to achieve better alignment with the situation, stakeholder expectations, emerging global challenges, and international standards, such as by preparing a stakeholder engagement statement for public disclosure in 2024; and providing guidance to all units and subsidiaries on sustainability performance assessment in accordance with various international criteria.
- Providing comments and recommendations on sustainable development assessment and ranking by external agencies and proposing guidelines for improving sustainability operations to achieve alignment with assessment criteria and maximize benefits for GC and its stakeholders. As a result, GC was ranked number one in the Chemicals Sector on DJSI for a sixth consecutive year in 2024.

3. Reporting the Performance, Assessment, and Development of Directors

- Reporting the performance and assessment results (group assessment and self-assessment) of the Corporate Governance and Sustainability Committee for 2024 to the Board of Directors for acknowledgment.
- Reviewing the Corporate Governance and Sustainability Committee Charter to ensure alignment with the roles and responsibilities and any applicable criteria and practices.
- Reviewing the Corporate Governance and Sustainability Committee's assessment forms (group assessment and self-assessment) to ensure alignment with the Corporate Governance and Sustainability Committee Charter and compliance with the criteria and practices prescribed by international standards and domestic regulatory agencies.
- Considering and providing comments on the employment of former executives from the level of Chief Operating Officer (COO) upward.
- Continuously ensuring Director development under good corporate governance principles by encouraging Directors to attend training courses of the Thai Institute of Directors Association (IOD).
- Pre-setting the dates for its meetings for the entire year of 2025 to consider and acknowledge the Company's performance and report/provide any recommendations to the Board of Directors and the Management.

The Corporate Governance and Sustainability Committee places great importance on ensuring GC's strict compliance with the Corporate Governance Policy and Business Code of Conduct. The Corporate Governance and Sustainability Committee is also committed to continually enhancing corporate governance practices on par with international standards and believes that good corporate governance and sustainable development are vital factors in promoting operational efficiency and business sustainability, which will enable GC to earn the confidence of its stakeholders as well as international recognition.

On behalf of the Corporate Governance and Sustainability Committee

(Signed) Nimit Suwannarat

(General Nimit Suwannarat)
Chairman of the Corporate Governance
and Sustainability Committee

Report of the Nomination and Remuneration Committee

Dear Shareholders,

In 2024, the Nomination and Remuneration Committee comprised 3 independent directors to ensure the independent performance of duties as well as checks and balances in accordance with good corporate governance principles. The Committee convened a total of 8 meetings. The attendance of each Director is as detailed below.

Name - Surname	Position	Attendance
Mr. Pakorn Nilprapunt	Chairman	8/8
Mr. Somkiat Prajamwong	Director	8/8
Mr. Surachai Achalaboon	Director	5/5
Directors who vacated their office / resigned during the year		
General Nimit Suwannarat	Director	3/3

The Nomination and Remuneration Committee performed its duties and provided suggestions and comments on criteria and guidelines for the nomination and selection of Directors, Sub-committee members, and the Chief Executive Officer (CEO) as well as for the performance assessment and remuneration of GC's Directors and Chief Executive Officer in accordance with the roles and responsibilities stipulated in its charter. The Committee also executed its tasks fully as assigned by the Board of Directors. A summary of its activities is given below.

1. Nomination and Selection of Directors, Sub-committee Members, and the Chief Executive Officer

- Reviewing the criteria and procedures for the nomination and appointment of GC's Directors to ensure suitability and compliance with laws, regulations, and best practices for the selection and appointment of Directors and Sub-committee members.
- Reviewing the Board Skills Matrix and the definitions of the areas of expertise to ensure comprehensiveness and alignment with GC's strategic direction and business operations, the assessment criteria of SEC's Corporate Governance Code for Listed Companies 2017 (CG Code), the best practice for the Nomination Committee of the Thai Institute of Directors (IOD), the Dow Jones Sustainability Indices (DJSI), and the Global Industry Classification Standard (GICs), which will be taken into consideration in the selection of Directors and Sub-committee members to ensure board diversity with respect to knowledge, skills, and experience beneficial to strategic directions and business approach.
- Reviewing and creating GC Director Pool for use in nominating and comparing qualified candidates for GC's directorship.
- Nominating and selecting qualified candidates to replace Directors who are due to resign by rotation at the 2024 Annual General Meeting of Shareholders, to present to the Board of Directors and the Annual General Meeting of Shareholders for consideration and approval under the criteria and procedures for the nomination and appointment of GC's Directors. The Committee took into consideration the qualifications required by applicable laws and regulations, GC's Articles of Association, good corporate governance principles, and the Board Skills Matrix. The Committee also considered its own Director Pool as well as those of external agencies,

namely the State Enterprise Policy Office and the Thai Institute of Directors Association (IOD). Shareholders were also given over three months period prior to the AGM to nominate candidates for vacant positions. Since there were no submissions of candidates from minority shareholders, the Committee resolved to nominate Mr. Wim Rungwattanajinda to be elected in replacement of a retiring Director as well as nominate Mr. Pakorn Nilprapunt, General Nimit Suwannarat, Police Colonel Dusadee Aryawuit, and Mr. Noppadol Pinsupa to be re-elected for another term. The candidates possessed all the required qualifications and did not have any prohibited characteristics according to relevant laws and regulations. They also possessed knowledge, competency, and experience that aligned with GC's strategic directions and business approach. The Board of Directors and the 2024 AGM thus resolved to approve the appointment of these candidates as Directors as instructed by the Committee.

- Nominating and selecting qualified candidates to replace Directors who resigned during 2024, to present to the Board of Directors for consideration and approval under the criteria and procedures for the nomination and appointment of GC's Directors namely Mr. Petai Mudtham, Mr. Narongsak Jivakanun, Mrs. Nivadee Jaroensitipun, and M.L. Peekthong Thongyai, all of whom were fully qualified, did not possessed any forbidden characteristics as prescribed by relevant laws and regulations, and possessed expertise and experience that aligned with GC's strategic direction and business approach. The Board of Directors approved the appointment of the candidates as Directors as instructed by the Committee.
- Nominating Directors to fill vacant positions on three Sub-committees, namely the Nomination and Remuneration Committee, the Corporate Governance and Sustainability Committee, and the Risk Management Committee, and presenting a list of candidates to the Board of Directors for consideration and approval under the criteria and procedures for the nomination and appointment of GC's Directors. The Committee took into consideration the qualifications of each Directors in accordance with relevant laws and regulations of the Securities and Exchange Commission (SEC) and the Stock Exchange of Thailand (SET), GC's Articles of Association, and the charters of Sub-committees. The Board Skills Matrix and specialized experience that could benefit their role on the Sub-committees were also taken into account.
- Nominating and selecting qualified candidates to serve as the Chief Executive Officer, taking into consideration qualifications in compliance with applicable laws, regulations, GC's articles of association, and corporate governance principles, as well as the candidates' knowledge and expertise and the Board Skills Matrix.
- The Board of Directors approved the appointment of the candidates as the Chief Executive Officer as instructed by the Committee.

2. Performance Assessment of the Board of Directors and Chief Executive Officer

- Reviewing Board performance assessment forms, namely group assessment, self-assessment, and cross-assessment, for the year 2024 to ensure comprehensiveness, suitability, and alignment with DJSI's assessment criteria, the ASEAN Corporate Governance Scorecard, the Corporate Governance Code for Listed Companies (CG Code) 2017, as well as the current Board performance of duties.
- Monitoring the reporting of the Board performance for 2024 and establishing the Board's key performance indicators (Board KPIs) for 2025, ensuring their alignment with DJSI's assessment criteria and the Corporate Governance Code for Listed Companies (CG Code) 2017.
- Considering the 2024 performance assessment form of the Chief Executive Officer (CEO KPIs) and assessing his performance to determine suitable and fair remuneration.

3. Remuneration of Directors, Sub-committee Members, and Chief Executive Officer

- Determining and proposing the 2024 remuneration for the Directors and Sub-committee to the Board of Directors and the Annual General Meeting of Shareholders (AGM) for consideration and approval. The proposed remuneration was determined in accordance with good corporate governance principles, based on GC's operating results, the current economic situation relevant to GC's businesses, the principles and policies approved by shareholders, the duties and responsibilities of the Board of Directors, the results of Board performance assessment, compared to the remuneration of Directors working at other listed companies of a similar size in the same industry and the companies under the PTT Group. After careful consideration, the Nomination and Remuneration Committee deemed that the remuneration of the Directors and the Sub-committees was commensurate with their roles, responsibilities, and performance as well as with GC's operating results. The Board of Directors and the 2024 AGM resolved to approve the Board's remuneration as instructed by the Committee.
- Determining the remuneration of the Chief Executive Officer (CEO) for 2024 based on transparent, fair, and reasonable criteria, taking into account his annual performance pursuant to the assessment of CEO KPIs.

4. The Committee's Meetings, Assessment, and Reporting of Performance

- Pre-setting the dates for its meetings for 2025. In these meetings, the Committee will consider and acknowledge the Company's performance and reports as well as providing recommendations to the Board of Directors and the Management.
- Reviewing the Nomination and Remuneration Committee Charter to ensure completeness, suitability, and alignment with good corporate governance principles and the current performance of duties.
- Reviewing the Committee's performance assessment forms, namely group assessment and self-assessment, for 2024 to ensure their comprehensiveness, suitability, and alignment with good corporate governance principles, the Charter of the Nomination and Remuneration Committee, and the current performance of duties.
- Reporting the Committee's performance and assessment results for 2024 to the Board of Directors for acknowledgment and disclosing them in Form 56-1 One Report.

The Nomination and Remuneration Committee has performed its duties with accountability, ethics, and independence in accordance with good corporate governance principles in order to ensure that the procedures for the nomination and selection of Directors, Sub-committee members, and Chief Executive Officer as well as the performance assessment and remuneration of GC's Directors and Chief Executive Officer are transparent, accountable, fair, and compliant to applicable laws and regulations. This is to help optimize the effectiveness of the Board composition as well as the diversity and alignment of the Board's knowledge, skills, expertise and experience with GC's strategic directions and business approach for the purpose of steering GC's operation towards the established goals in a sustainable manner and fostering confidence among the shareholders, investors, and all stakeholders.

On behalf of the Nomination and Remuneration Committee

(Signed) Pakorn Nilprapunt

(Mr. Pakorn Nilprapunt)
Chairman of the Nomination and Remuneration Committee

Report of the Risk Management Committee

Dear Shareholders,

2024 marked another year in which the GC was faced with unpredictable and unavoidable business circumstances, including geopolitical conflicts in many regions across the world, such as the Russia-Ukraine conflict and the Israel-Palestine and Hezbollah conflict; increased capacity from low-cost producer countries in Asia and the Middle East; and concerns about an economic recession due to geopolitical conflicts. All of these factors contributed to high volatility in product prices and spreads between product price and raw materials.

In recognition of the significance of risk management, GC implements various measures to manage and mitigate potential risks in order to achieve organizational objectives and goals efficiently while creating sustainable growth and enhancing both competitiveness and the ability to respond promptly to future scenarios. To foster confidence among shareholders and all stakeholders, GC has appointed the Risk Management Committee, comprising 3 qualified Directors with diverse expertise and experience, with the Chairman of the Committee being an independent director. The Committee is tasked with establishing policies, risk appetite, and risk management frameworks, overseeing enterprise risk management to ensure alignment with organizational strategies and goals, as well as providing comments, recommendations, and guidance for effective risk management.

In 2024, the Risk Management Committee convened 7 meetings and 2 additional joint meetings with the Corporate Governance and Sustainability Committee. The attendance of each Director is as detailed in the table below.

Name - Surname	Position	Attendance	
		RMC meetings	CGS and RMC meetings
Mr. Grisada Boonrach	Chairman	7/7	2/2
Mr. Petai Mudtham	Director	6/6	2/2
Mr. Narongsak Jivakanun	Director	6/6	1/1
Directors who vacated their office / resigned during the year			
Mr. Noppadol Pinsupa	Director	4/4	2/2
Mr. Cherdchai Boonchoochauy	Director	3/3	2/2
M.L. Peekthong Thongyai	Director	2/2	-
Mr. Kongkrapan Intarajang	Director	1/1	1/1

Remarks: Mr. Pongpun Amornvivat was appointed Director to the Risk Management Committee, replacing M.L. Peekthong Thongyai on February 17, 2025.

Throughout 2024, the Risk Management Committee fully performed its duties according to the scope of roles and responsibilities as prescribed in its charter. The Committee also reviewed, provided comments and suggestions, and acknowledged various agenda items, as summarized below.

- Monitoring and providing comments and suggestions on the progress of GC's corporate risk management, which consisted of risk trends, progress on the management of risks against organizational objectives, the identification of additional risk factors, review of GC's corporate risks for the years 2024 and 2028, and risk management measures; and reporting the performance of the Risk Management Committee to the Board of Directors for acknowledgment on a regular basis to ensure the adequacy, suitability, and alignment of GC's measures with a shift in circumstances and gain opportunities to generate value for the business in a sustainable way.
- Reviewing, approving, providing recommendations, and monitoring the implementation of commodity hedging for price and spread risk management as well as FX hedging on a monthly basis to ensure that the measures were flexible and suitable for the situation.
- Providing comments and recommendations on the risk management measures of significant large-scale investment projects as supplementary data for the Board of Directors in their decision-making process.
- Reviewing the risks and corresponding management measures for the year 2025 to ensure GC's ability to maintain such risks within its risk appetite as well as alignment with the established risk management policy, economic circumstances, industrial trends, and sustainable business practices, with the ultimate goal of ensuring that GC's capability to achieve its strategic and business goals under volatile and uncertain circumstances.
- Reviewing data on risk management and risk factors in Form 56-1 One Report to instill confidence among shareholders in GC's risk management guidelines and analysis of significant risks that could impact the achievement of its strategic and business goals as well as the adequacy and suitability of its management measures.
- Reviewing the Risk Management Committee Charter, the risk management policy, the risk appetite, and the risk management frameworks and practices, consisting of management frameworks for corporate risks, price and spread risks, foreign exchange risks, subsidiaries risks, and investment risks, to ensure their applicability to the business circumstances and flexibility for proper implementation.

In addition, the Risk Management Committee held 2 meetings with the Corporate Governance and Sustainability Committee in 2024 to exchange opinions and suggestions on the strategic direction and track the progress of the Company's sustainability activities.

For the year 2025, the Committee will continue to monitor the business landscape, carry out risk identification and prioritization, and prescribe adequate risk management measures to ensure that GC has suitable and effective risk management and capability to maintain risks within the risk appetite, which will enable GC to achieve business goals and sustainable value in the long-term.

On behalf of the Risk Management Committee

(Signed) Grisada Boonrach

(Mr. Grisada Boonrach)
Chairman of the Risk Management Committee

Internal Control and Connected Transactions

PTT Global Chemical Public Company Limited (GC) implements an Internal Control System in accordance with the international standards of the Committee of Sponsoring Organizations of the Treadway Commission (COSO) to achieve internal control objectives relating to operations, reporting, and compliance with laws and regulations.

At the Board of Directors Meeting 2/2025 held on February 17, 2025, GC's system was evaluated based on an internal control assessment report prepared by executives following the Securities and Exchange Commission's (SEC) guidelines. Together with the results of the Audit Committee's internal control review, the Board of Directors viewed that GC's internal control was adequate and effective for its businesses. No significant problems or material shortcomings were detected that could interfere with the achievement of internal control objectives. GC's Internal Control System functioned properly in an adequate manner. The operation and process were efficiently managed with sufficient numbers of qualified and competent employees. In addition, GC implemented a monitoring system to ensure the achievement of business objectives with effective and efficient operations, reliable reporting, and compliance with applicable laws and regulations as well as the safeguarding of GC's assets against misuse or unauthorized use by the Board of Directors, executives, and employees.

GC's Internal Control System is continuously being updated and improved according to changing internal and external factors. In 2024, GC improved its internal control procedures and processes to increase efficiency, optimize resource utilization, and promote a sound internal control system that enhances the robustness and speed of risk identification. In accordance with COSO, GC's Internal Control System consists of five components as follows:

1. Control Environment



The Board of Directors and executives strive to promote a corporate culture that focuses on integrity and ethics. They also govern business conduct to ensure alignment with the organizational vision and mission along with a sufficient and appropriate control environment as detailed below.

- The Board of Directors establishes the Corporate Governance Policy, Business Code of Conduct, Corporate Compliance Policy, and Anti Fraud and Anti-Corruption Policy and Guidance, setting out preferred practices for the Board of Directors, executives, and employees. Executives and employees are required to provide their signatures in Hook Acknowledgement & Learning System to acknowledge the Corporate Governance and Business Code of Conduct Handbook and pledge their compliance with the policy, principles, and business ethics. The Company also places emphasis on communicating these policies, subsequent penalties and arranging an online system for reporting any potential conflict of interest annually to executives and employees. GC has also expanded the online system to subsidiaries to strengthen good corporate governance.
- GC continuously builds awareness of the Ethic and Business Code of Conduct among executives and

employees through training courses, orientation, e-Mail communications, video clips, and other activities. One of the key meetings is Management Talk (Hook Talk), conducted by top management in order to communicate the Ethics and Business Code of Conduct to employees and promote a good corporate governance culture. In addition, GC has published the corporate governance principles and code of conduct on the Company's website to communicate them to suppliers/vendors, joint-venture partners, and company representatives and encourage them to operate their businesses with integrity. In 2024, GC conducted "Smart Leader Smart Treatment" training program for supervisory-level employees. This training was designed to enhance the participants' understanding of good corporate governance, effective corporate complaint-handling practices, and the assessment of employee misconduct risk. It was launched to mitigate fraud and corruption risks while fostering transparency within the organization.

- The Board of Directors is independent from executives and responsible for supervising overall operations as well as expressing views on the direction of the formulation of business strategies and operating plans. Furthermore, the Board of Directors regularly monitors GC's performance and its sub-committees to ensure that GC achieves its objectives and goals. GC continually reviews its strategic goals and adjusts its business strategy in line with external factors and evolving market trends over the short and long term. To improve competitiveness in a dynamic business landscape and promote long-term, sustainable growth that is consistent with available resources, GC focuses on Five Strategic Pillars and a foundation: Portfolio Transformation, Competitiveness Reinforcement, Enhance Position in High Value & Low Carbon Business, Accelerate allnex to Finish Line and Grow Further, Balance Business with Sustainability, and Enablers for Transformation. In addition, GC remains committed to maintaining an environment, society, and corporate governance (ESG) balance in its business operations, in alignment with the United Nations Sustainable Development Goals (SDGs) as it transitions towards high-value chemicals and low-carbon businesses, with a defined strategy to achieve net zero greenhouse gas emissions by 2050.

- GC's corporate structure is grouped into business units and functions to ensure efficient business operations and good governance, with checks and balances put in place to ensure duties and responsibilities are delegated appropriately. Furthermore, all employees acknowledge their roles, authorities, responsibilities, and accountabilities.

- GC has established policies, strategies, and standardized processes to support human resource management. In 2024, GC extended the implementation of the SAP SuccessFactors system to encompass various HR management operations and enhanced the related processes, involved to ensure seamless integration across recruitment processes, competency evaluations, and performance reviews, thereby elevating employee capabilities and actively supporting the achievement of the Company's business goals. In addition, GC has clearly defined the qualifications for all positions, which form the foundation for recruitment and personnel development to ensure alignment between new recruits and the organization's values. Furthermore, GC aligns workforce management with its strategy and operational objectives, including the development of succession plans for key management positions to ensure business continuity. GC also prioritizes a performance management system that encourages regular communication and monitors performance targets on a quarterly basis, with the performance targets subject to revision to ensure fair rewards and motivate employees. GC has also utilized the 360-degree evaluation as a tool for evaluating employee performance against GC SPIRIT 4 Core Behaviors. As the Company aims to be an organization of learning, it encourages all employees to enhance their capabilities and knowledge through diverse learning programs. In 2024, GC introduced the "5 Key Capability Development Solution" program to strengthen its capabilities in becoming a leading global company, focusing on Digital Expert, Global Partnership, Market Focus, Sustainable Innovation, and Sustainability Leader. In addition, GC values the wellbeing, both physical and mental, of its employees and ensures that they have a good quality of life and a positive work experience by conducting employee engagement and satisfaction surveys to continuously design and improve a healthy work environment.

- GC has established the Internal Control Policy, stipulating that all employees shall be accountable for their internal control activities. The policy is consistently communicated to executives and employees through training courses, public communication, and other activities to ensure everyone has an accurate understanding of their roles and responsibilities in relation to the internal control system. In addition, GC has implemented the Three Lines Model, which is an international best practice, as a framework for governance. It defines the job owner's function as the first line of defense to ensure compliance with the policies and guidelines. The Internal Control, Corporate Risk Management, Corporate Governance, Corporate Compliance, and other support divisions serve as the second line of defense, responsible for managing and supporting other functions so as to bring their operations up to the established standard. Lastly, the Internal Audit, the third line of defense, is tasked with auditing other functions to ensure proper and suitable internal control implementation and strengthen corporate governance and risk management.

- GC applies Governance, Risk Management & Internal Control and Compliance principles (GRC) to its business processes to ensure efficient and effective operations. The Company has also appointed GRC personnel to work closely with major business units to strengthen and ensure GRC integration. In 2024, GRC personnel were promoted to "Business Partners," emphasizing collaboration across business units and functions to identify opportunities to improve and optimize GRC practices sustainably. The Company also communicates GRC content through various channels, emphasizing the use of tone at the top of senior executives to foster a strong organizational culture. Examples include the GRC Newsletter and GC Group GRC Day. To support continuous learning, the Company offers GRC self-learning programs on the 'UP' e-Learning Platform, conducts GRC Roadshows for employees, and provides the GRC Web Portal as a comprehensive resource hub, offering essential GRC information to support executives and employees across the organization. In addition, GC has defined the GRC character, which aligns with GC SPIRIT 4 Core Behaviors, with the goal of deepening employees' understanding of GRC attributes and integrating them into the organizational behavior and culture. In 2024, GC introduced the GRC Pride Award to recognize employees who served as role models in GRC within GC Group. The Company also continued to strengthen GRC effectiveness through the annual GRC Health Check, in which understanding and GRC practices were evaluated. The results of the assessment were analyzed to identify areas of improvement and ensure continuous GRC enhancement.

2. Risk Assessment



The Board of Directors and executives place great emphasis on risk management to ensure the achievement of both short-term and long-term goals. The Risk Management Committee is appointed by the Board of Directors, while the Enterprise Risk Management Committee and taskforces are appointed by the Chief Executive Officer & President to manage business risks and specific issues to directly enhance management agility and allow the close monitoring of various situations. GC's risk management is structured as such to ensure suitability, efficiency, and effectiveness.

GC has announced a Risk Management Policy and has implemented Integrated Enterprise Risk Management systematically and continuously throughout the organization according to such international risk management frameworks and guidelines as ISO 31000 and COSO ERM 2017. In 2024, GC strengthened its risk management process to more closely and efficiently correspond with the Company's long-term objectives, with emphasis on the comprehensive identification of challenges reflected in the strategic plan to increase the likelihood of achieving the Company's objectives

as well as the management of risks associated with decarbonization targets, which are an important aspect of the Company's sustainability goal. Risk assessment is also conducted across various aspects, including current business-related risk factors, future business-related risk factors, and emerging risk factors. This process involves analyzing potential events, monitoring key indicators that could impact the business, and assessing the likelihood of fraud and corruption. These efforts ensure that risks are managed and kept under acceptable levels (Risk Appetite). Risk factors and mitigation plans are reviewed and monitored regularly to ensure alignment with GC's short-term and long-term goals. GC has also developed key risk indicators (KRIs), which are linked to key performance indicators (KPIs), to evaluate the Company's short-term and long-term goals, monitor changes in risk factors, and efficiently manage risk in a timely manner.

In addition, GC has established a business continuity management system at both corporate and business unit levels, including within GC Group, in accordance with ISO 22301 international standard. GC has also defined guidelines consistent with the business continuity management policy and prescribed annual drills of the business continuity plan (BCP) at both business unit and corporate levels. Events that could disrupt business operations and affect business continuity are simulated to ensure that GC is well prepared to cope with such crises effectively. The results of the drills are utilized to improve preemptive plans. In 2024, GC conducted a BCP drill at the corporate level involving simulations of a raw material transport vessel grounding and blocking maritime routes, as well as a cyberattack involving deepfake AI technology on the investment process and GC's computer system that controlled plant operations.

Details are described under "Risk Management." on page 95.

3. Control Activities



GC has defined control activities to mitigate risks resulting from failure to achieve its goals and ensures that the residual risks are within an acceptable level, as described below.

- GC has prescribed preventive and detective control in alignment with internal control principles, such as segregation of duties and delegation of authority, to ensure checks and balances. GC has also established policies and guidelines for analyzing transactions that involve or may involve conflicts of interest as well as criteria and procedures for Related Party Transactions (RPT) and Material Transactions (MT) involving the acquisition or disposition of assets. These policies and guidelines ensure that transactions are conducted in accordance with proper procedures, approvals, and accurate disclosure of information, in compliance with applicable laws and regulations. The Company places emphasis on transparency, accountability, and fairness, prioritizing the best interests of the Company and its stakeholders.
- GC has established rules, regulations, policies, and manuals in writing as well as a clear scope of authority of the Chief Executive Officer & President, executives, and employees at each level, along with clearly defined operational procedures to serve as guidance. Furthermore, implementation is reviewed regularly to ensure compliance with such rules, regulations, policies, and manuals.
- GC has implemented SAP GRC – Access Control in crucial processes to ensure that SAP operating system access rights are in accordance with best practices on the segregation of duties. GC also uses automated audits to detect and track irregular transactions and notify designated officers to promptly rectify problematic transactions. Moreover, the Company has continuously introduced digital tools to enhance operational efficiency and effectiveness, ensuring accuracy, precision, and transparency. For instance, the implementation of Robotics Process Automation (RPA) in the

procurement process and blockchain technology in bank guarantees, accounts payable, and accounts receivable has significantly minimized time, work processes, and errors.

- GC has appointed the Information Security Management Committee (ISMSC) to supervise and support operations and ensure compliance with ISO/IEC 27001 and ISO/IEC 27701 standards or relevant standards, as well as to oversee the development of information security, cybersecurity, and cloud security frameworks that meet international standards. The committee is also tasked with establishing an Information Technology Security Policy and guidelines for both Information Technology (IT) and Operational Technology (OT) systems and prescribing suitable general IT controls for the development and alteration of significant computer systems, as well as data backup, data recovery, and regular testing. In addition, GC conducts assessment in adherence to the NIST Cybersecurity Framework (CSF), which assists organizations in planning timely threat prevention, detection, and response without interrupting the business operation. Furthermore, GC regularly organizes cyberthreat prevention training sessions and issues communications to all employees to update its data security standards in order to elevate GC's technological security standards in accordance with evolving situations. In 2024, the Company implemented a vulnerability test on Azure and AWS cloud platform to identify potential vulnerabilities arising from software and application development, which could expose the Company to cyberattacks.

- GC has developed the governance process "GC Way of Conduct," which is regularly communicated to and the implementation of which is regularly monitored among subsidiaries in GC Group, to ensure compliance with GC's policies, guidelines, and business strategies. Assessments are conducted to evaluate the effectiveness of the implementation and identify areas for further improvement. The progress of this program is regularly reported to top management for acknowledgment.

4. Information and Communication



GC values the quality of its information and communication systems, which play a vital role in supporting the effectiveness of its Internal Control System. GC's approach to information and communication management is detailed below.

- GC has established information classification and guidelines for the storage of vital and controlled documents, including operational information from both internal and external sources. This is to ensure the accuracy, completeness, adequacy, and prompt availability of GC's vital information.

- GC has implemented SAP ECC 6.0, Salesforce in key business data processing to eliminate a large number of legacy systems and enhance the efficiency of reporting to the management.

- GC has developed various programs to centralize data management, storage, and linkage in order to maximize data utilization and ensure data availability for further use or future reference. An example includes the compilation of data on various process improvement projects and GC's investments in the "Idea MANI" (Multi Access for New Initiatives). Another example is the retrieval and analysis of work-related data through an AI-powered mini application operating within the Company's secure information environment. This prevents data leaks to external parties, lowers the risk of internal data sharing, and improves work productivity.

- GC has announced a personal data protection policy and appointed a dedicated unit responsible for data protection. Additionally, the Company has implemented a personal data management system within GC Group and issued handbooks on personal information management in compliance with the Personal Data Protection Act B.E. 2562 (2019) to provide clear guidance for efficient implementation. In 2024, GC established a Data Loss Prevention (DLP) system to prevent the leakage of personal information to external parties. The system notifies personnel if it detects the transmission of personal data through unauthorized communication channels. The purpose is to raise awareness about the importance of data privacy and to prevent potential impact on the Company's reputation and compliance with regulatory requirements.

- GC has prescribed data governance to ensure the efficiency of data acquisition, utilization, availability, and management for confidentiality. The Company focuses on four components to ensure sustainable data governance and management, consisting of 1) defining and implementing data governance policies, standards, and management processes throughout the data life cycle; 2) developing technologies for big data management to support GC's growth; 3) delivering vital information to users for efficient utilization; and 4) fostering awareness and understanding of data governance among employees through various forms of communication.

- GC has developed and actively promoted the use of Advanced Analytics within the organization as well as the adoption of AI (Artificial Intelligence) technology for analysis, monitoring, and forecasting to produce efficient and accurate outcomes and encourage better data-driven decision-making. For example, to manage turnaround operations, the Company has established a data center leveraging cloud technology to store and analyze a large volume of data. The new function improves communication and data management across all stages of the process, from planning to performance evaluation. Furthermore, the collected data is used to enhance turnaround operations and inventory management for maintenance, enabling accurate forecasting of spare part demand and adjustments to inventory levels. These improvements optimize and systematize storage space and spare part management.

- GC has formed a working team entitled "GC EYE" to analyze external factors that may have business impacts and communicate them to executives and relevant parties through a mobile application platform. GC also organized GC EYE FORUM, where external experts were invited to give lectures on various topics.

- GC has put in place guidelines and steps for communicating information appropriately to the Board of Directors, executives, employees, and stakeholders to support efficient operations and internal controls.

- Key information on GC's operating results and documents for board meetings are delivered to Directors in advance to allow sufficient time for them to study and review the materials for decision making. When necessary, the Board of Directors may request additional information from the relevant management team. Furthermore, GC has employed the Digital Join system for easy and swift delivery of information and meeting documents to the Board of Directors, using communication devices equipped with a data security system.

- GC has established various channels for internal communication, including the organization's intranet and email. Vital information is communicated through online orientation, and communications from the top executives are conveyed to employees through various channels, such as CEO Town Halls, which are held in a hybrid format through meetings in a conference venue and Microsoft Teams Live Streaming. Other communication channels include regular meetings held in each business unit and line of work to drive and foster awareness of GC's key agenda among employees.

- GC communicates with external stakeholders through the Company's website, Facebook, Twitter, and official LINE account. In addition, designated units are responsible for disclosing important information to all stakeholders regularly. A Customer Solutions Center (CSC) was established as a one-stop service center to provide information relating to GC products and services to customers and interested parties.

- GC allows shareholders to propose agenda items for the Annual General Meeting of Shareholders (AGM) and nominate qualified candidates to be elected as Directors to enhance good corporate governance regarding the rights and equitable treatment of shareholders. GC arranged the 2024 Annual General Meeting of Shareholders via an electronic means in compliance with the Emergency Decree on Electronic Meeting B.E. 2563 (2020). GC also organized analyst meetings to announce the Company's quarterly performance.

- GC has established whistleblowing channels and clear whistleblower system management guidelines and consistently communicates and conducts training to assure employees and external individuals that every complaint will be handled with transparency, fairness, and confidentiality in a timely manner. Subsidiaries are also continuously encouraged to institute whistleblower policies and guidelines to enhance oversight mechanisms.

5. Monitoring Activities



GC continually monitors and evaluates the adequacy of its internal controls. Development and improvement plans are also in place to ensure efficient and effective internal controls as shown below.

- GC carries out corporate-level control assessments and process-level control self-assessments annually, using an online system. The Internal Control Unit is responsible for reviewing the adequacy and appropriateness of the assessments in coordination with GRC personnel and for providing recommendations for rectifying any internal control deficiencies. Any detected deficiencies must be reported to executives for acknowledgment in a timely manner, and the remediation progress is monitored to ensure that the issue is resolved within the specified timeframe. In 2024, GC developed an integrated and streamlined approach to identify risks and controls across relevant processes, ensuring alignment with the established corporate risks. The Company also improved control self-assessment reporting by leveraging a digital tool for improved functionality and data analysis capabilities.

- The Internal Audit Unit, an independent unit reporting directly to the Audit Committee, is in charged with conducting audits to ensure the adequacy and consistent implementation of GC's internal control and evaluating the effectiveness of the internal control in various activities according to the audit plan, which has been approved by the Audit Committee and is in line with GC's strategic direction and key risks that may affect the operation. The Internal Audit is also responsible for providing recommendations related to internal control to executives, who then prescribe rectification as instructed and report the audit results to the Audit Committee on a regular basis. Internal controls for financial reporting are reviewed by external auditors, who report to the Audit Committee quarterly and yearly. In 2024, GC utilized data from internal risk factor databases, such as Key Performance Indicators (KPIs), Key Risk Indicators (KRIs), and risks information from GRC units, to develop a risk dashboard, which enabled the monitoring of significant risks and supported effective audit planning.

- GC advocates the adoption of technology in monitoring and evaluating internal control, as well as in automated audit. For instance, GC has implemented detection rules in significant work processes to identify irregular transactions and inspect items for potential conflicts of interest. Additionally, the Company has organized expense data into a Visualized Dashboard and established monitoring processes for transactions that could be susceptible to fraud and corruption.

- GC has continuously monitored and reported compliance performance through a compliance management system that meets the ISO 37301 standard to ensure accurate, complete, and efficient compliance and management of relevant risks. In 2024, GC developed an e-Legal Excellence database system to consolidate legal information into a single, reliable source, ensuring the data is accurate, comprehensive, and regularly updated to reflect changes.

- GC has been certified as a member of the Thai Private Sector Collective Action Against Corruption (CAC) and has continuously been recertified every 3 years since 2014. GC has also appointed an anti-corruption working group to annually conduct anti-corruption self-assessment. In addition, GC actively encourages its group companies to undertake corruption risk assessment and establish policies as well as a sufficient and efficient internal control system. GC also supports its business partners in joining the declaration of intent to become members of CAC. The Company recognizes and places importance on strengthening a transparent and auditable business network.



Connected Transaction between Related Companies

For the 2024 accounting period, GC conducted significant business transactions with related companies with common shareholders and/or Directors. Connected transactions with other entities which may result in conflicts of interest are based on market or contractual prices - if there are no reference market prices. Details of the relationships with these companies are as follows:

(million baht)

Company	Relationship As at December 31st, 2024	Connected Transaction	2022	2023	2024
1. PTT Public Company Limited (PTT)	• Major shareholder holding 45.18% of the shares in GC • Directors who are PTT Executives: 1. Mr. Kongkrapan Intarajang 2. Mrs. Nivadee Jaroensitipun 3. Mr. Narongsak Jivakanun • Common Management: 1. Mr. Narongsak Jivakanun 2. Mr. Thitipong Jurapornsiridee • Sales/Purchase transaction of products and services	**Statement of Income Transactions**			
		Sales of goods or rendering of services	12,431	19,584	22,903
		Purchases of goods or receiving of services	377,709	343,693	348,848
		Other income	64	14	34
		Finance costs	20	20	21
		Other expenses	57	55	50
		Statement of Financial Position Balances			
		Trade accounts receivable - related parties	1,116	2,456	2,012
		Other current receivables - related parties	400	312	376
		Trade accounts payable - related parties	38,281	50,933	44,870
		Other current payables - related parties	191	401	365
		Lease liabilities - related parties	545	560	578
2. Global Power Synergy Public Company Limited (GPSC)	• Other related company (GC holds 10% of the shares) • Major shareholder (PTT) holds 47.27% of the shares • Executive who is Director of GPSC: Mr. Toasaporn Boonyapipat • Sales/Purchase transaction of products and services	**Statement of Income Transactions**			
		Sales of goods or rendering of services	105	102	96
		Purchases of goods or receiving of services	13,981	12,153	11,489
		Other income	10	10	9
		Finance costs	2	2	2
		Other expenses	2	7	18
		Statement of Financial Position Balances			
		Trade accounts receivable - related parties	22	17	17
		Other current receivables - related parties	121	151	195
		Trade accounts payable - related parties	1,217	1,996	1,006
		Other current payables - related parties	9	11	2
		Lease liabilities - related parties	71	60	54

Company	Relationship As at December 31st, 2024	Connected Transaction	2022	2023	2024
					(million baht)
3. PTT Digital Solutions Company Limited (PTT DIGITAL)	• Associate company (GC holds 20% of the shares) • Major shareholder (PTT) holds 20% of the shares • Executive who is Director of PTT DIGITAL: Mrs. Chatsuda Kanjanarat • Services transaction	**Statement of Income Transactions**			
		Purchases of goods or receiving of services	-	1	7
		Other income	50	47	39
		Other expenses	604	518	573
		Statement of Financial Position Balances			
		Other current receivables - related parties	15	20	53
		Trade accounts payable - related parties	1	-	-
		Other current payables - related parties	183	121	157
		Payables to contractors - related parties	34	31	25
4. PTT Energy Solutions Company Limited (PTTES)	• Associate company (GC holds 20% of the shares) • The Company was dissolved on December 29, 2022 and in process of liquidation • Major shareholder (PTT) holds 40% of the shares • Services transaction	**Statement of Income Transactions**			
		Sales of goods or rendering of services	5	-	-
		Purchases of goods or receiving of services	86	-	-
		Other income	1	-	-
5. TOPNEXT International Co., Ltd. (TX)	• Subsidiary of TOP • Sales/Purchase transaction of products	**Statement of Income Transactions**			
		Sales of goods or rendering of services	254	227	254
		Purchases of goods or receiving of services	330	261	215
		Other expenses	2	-	-
		Statement of Financial Position Balances			
		Trade accounts receivable - related parties	17	19	17
		Trade accounts payable - related parties	28	17	23
6. Thai Paraxylene Company Limited (TPX)	• Subsidiary of TOP • Sales/Purchase transaction of products	**Statement of Income Transactions**			
		Purchases of goods or receiving of services	3,719	5,462	3,980
		Statement of Financial Position Balances			
		Trade accounts payable - related parties	-	423	143

(million baht)

Company	Relationship As at December 31st, 2024	Connected Transaction	2022	2023	2024
7. Thai Oil Public Company Limited (TOP)	• Major shareholder (PTT) holds 45.03% of the shares • Sales/Purchase transaction of products and services	**Statement of Income Transactions**			
		Sales of goods or rendering of services	3,995	2,201	2,222
		Other income	-	2	3
		Other expenses	1	3	-
		Statement of Financial Position Balances			
		Trade accounts receivable - related parties	392	114	149
		Other current receivables - related parties	-	1	-
		Other current payables - related parties	-	2	2
8. Business Services Alliance Company Limited (BSA)	• GC holds 25% of the preference shares • Major shareholder (PTT) holds 100% of the shares • Director who is the Company's Director: Mrs. Nivadee Jaroensitipun • Services transaction	**Statement of Income Transactions**			
		Sales of goods or rendering of services	-	1	-
		Purchases of goods or receiving of services	94	115	124
		Other income	-	3	-
		Other expenses	117	135	124
		Statement of Financial Position Balances			
		Other current receivables - related parties	1	-	-
		Trade accounts payable - related parties	67	-	-
		Other current payables - related parties	38	43	65
		Payables to contractors - related parties	4	1	-
9. PTT Oil and Retail Business Public Company Limited (OR)	• Major shareholder (PTT) holds 75% of the shares • Sales/Purchase transaction of products and services	**Statement of Income Transactions**			
		Sales of goods or rendering of services	183,386	186,162	180,074
		Purchases of goods or receiving of services	147	154	147
		Other income	10	41	89
		Other expenses	3	19	6
		Statement of Financial Position Balances			
		Trade accounts receivable - related parties	9,800	13,576	10,476
		Other current receivables - related parties	79	55	147
		Trade accounts payable - related parties	13	12	3
		Other current payables - related parties	3	22	18

Company	Relationship As at December 31st, 2024	Connected Transaction	2022	2023	2024
					(million baht)
10. PTTEP Siam Limited (PTTEPS)	• Subsidiary of PTTEP • Sales/Purchase transaction of products and services	**Statement of Income Transactions**			
		Sales of goods or rendering of services	1	3	3
		Statement of Financial Position Balances			
		Trade accounts receivable - related parties	-	-	2
11. PTT Exploration and Production Public Company Limited (PTTEP)	• Major shareholder (PTT) holds 63.79% of the shares • Director who is the Company's Director: Mr. Kongkrapan Intarajang • Sales/Purchase transaction of products and services	**Statement of Income Transactions**			
		Sales of goods or rendering of services	45	5	3
		Statement of Financial Position Balances			
		Trade accounts receivable - related parties	15	1	3
		Other current payables - related parties	-	2	2
12. PTT Tank Terminal Company Limited (PTT TANK)	• Major shareholder (PTT) holds 100% of the shares • Sales/Purchase transaction of products and services	**Statement of Income Transactions**			
		Sales of goods or rendering of services	105	77	55
		Other expenses	5	3	7
		Statement of Financial Position Balances			
		Trade accounts receivable - related parties	12	8	8
		Other current payables - related parties	-	-	4
13. PTT International Trading Pte. (PTTT)	• Major shareholder (PTT) holds 100% of the shares • Sales/Purchase transaction of products and services	**Statement of Income Transactions**			
		Sales of goods or rendering of services	29,772	36,194	40,594
		Purchases of goods or receiving of services	4,354	3,233	2,504
		Other income	19	-	-
		Other expenses	5	5	34
		Statement of Financial Position Balances			
		Trade accounts receivable - related parties	1,854	5,083	3,462
		Other current receivables - related parties	203	361	264
		Trade accounts payable - related parties	268	148	62
		Other current payables - related parties	109	27	35

Company	Relationship As at December 31st, 2024	Connected Transaction	2022	2023	2024
					(million baht)
14. PTT LNG Company Limited (PTTLNG)	• Major shareholder (PTT) holds 100% of the shares • Sales/Purchase transaction of products and services	**Statement of Income Transactions**			
		Sales of goods or rendering of services	47	71	36
		Other income	10	1	32
		Statement of Financial Position Balances			
		Trade accounts receivable - related parties	38	25	15
		Other current payables - related parties	17	1	3
15. Sak Chaisidhi Co., Ltd. (SAKC)	• Subsidiary of TOP • Sales/Purchase transaction of products and services	**Statement of Income Transactions**			
		Sales of goods or rendering of services	227	1	47
		Purchases of goods or receiving of services	-	160	1,094
		Other income	-	13	1
		Statement of Financial Position Balances			
		Trade accounts payable - related parties	-	106	102
16. Sport Services Alliance Company Limited (SSS)	• Subsidiary of BSA • Services transaction	**Statement of Income Transactions**			
		Other expenses	12	12	12
17. UBE Chemicals (Asia) Public Co., Ltd. (UCHA)	• Associate of IRPC • Sales/Purchase transaction of products and services	**Statement of Income Transactions**			
		Sales of goods or rendering of services	3,468	3,017	3,403
		Statement of Financial Position Balances			
		Trade accounts receivable - related parties	97	304	196
18. Energy Complex Company Limited (ENCO)	• Major shareholder (PTT) holds 50% of the shares • Services transaction	**Statement of Income Transactions**			
		Sales of goods or rendering of services	52	55	55
		Purchases of goods or receiving of services	-	1	-
		Other income	-	1	-
		Finance costs	5	3	2
		Other expenses	127	124	110
		Statement of Financial Position Balances			
		Trade accounts receivable - related parties	22	15	14
		Other current receivables - related parties	3	-	41
		Other current payables - related parties	3	2	22
		Lease liabilities - related parties	123	50	171

Company	Relationship As at December 31st, 2024	Connected Transaction	2022	2023	2024
					(million baht)
19. IRPC Polyol Company Limited (IRPCP)	• Joint venture of IRPC • Sales/Purchase transaction of products and services	**Statement of Income Transactions**			
		Sales of goods or rendering of services	569	649	624
		Purchases of goods or receiving of services	-	-	4
		Statement of Financial Position Balances			
		Trade accounts receivable - related parties	5	100	86
20. IRPC Public Company Limited (IRPC)	• Major shareholder (PTT) holds 45.05% of the shares • Sales/Purchase transaction of products and services	**Statement of Income Transactions**			
		Sales of goods or rendering of services	30,940	30,866	15,966
		Purchases of goods or receiving of services	25,422	26,538	13,229
		Other income	45	30	17
		Other expenses	1	2	-
		Statement of Financial Position Balances			
		Trade accounts receivable - related parties	1,782	2,373	120
		Other current receivables - related parties	27	27	32
		Trade accounts payable - related parties	1,732	2,305	18
		Other current payables - related parties	-	1	-
21. TOP Solvent (Vietnam) LLC. (TSV)	• Subsidiary of TOP • Sales/Purchase transaction of products	**Statement of Income Transactions**			
		Sales of goods or rendering of services	189	115	272
		Purchases of goods or receiving of services	26	21	23
		Statement of Financial Position Balances			
		Trade accounts receivable - related parties	13	1	1
		Trade accounts payable - related parties	3	3	3
22. Sarn Palung Social Enterprise Company Limited (SPSE)	• Other related company (GC holds 15% of the shares) • Major shareholder (PTT) holds 20% of the shares • Executive who is Director of SPSE: Miss Choavanee Panpruke • Services transaction	**Statement of Income Transactions**			
		Other expenses	2	1	1
		Statement of Financial Position Balances			
		Other current payables - related parties	1	1	-

Company	Relationship As at December 31st, 2024	Connected Transaction	2022	2023	2024
					(million baht)
23. Glow Energy Public Company Limited (GEN)	• Subsidiary of GPSC • Sales/Purchase transaction of products and services	**Statement of Income Transactions**			
		Sales of goods or rendering of services	409	49	6
		Purchases of goods or receiving of services	4,294	4,760	4,160
		Other income	1	1	9
		Other expenses	4	-	-
		Statement of Financial Position Balances			
		Trade accounts receivable - related parties	26	3	2
		Other current receivables - related parties	2	52	98
		Trade accounts payable - related parties	383	755	599
		Other current payables - related parties	3	1	1
24. Glow SPP 2 Company Limited (GSPP2)	• Subsidiary of GPSC • Sales/Purchase transaction of products and services	**Statement of Income Transactions**			
		Sales of goods or rendering of services	11	11	10
		Purchases of goods or receiving of services	107	121	100
		Other income	1	1	1
		Other expenses	2	-	-
		Statement of Financial Position Balances			
		Trade accounts receivable - related parties	3	4	4
		Trade accounts payable - related parties	11	9	8
25. Glow SPP 3 Company Limited (GSPP3)	• Subsidiary of GPSC • Sales/Purchase transaction of products and services	**Statement of Income Transactions**			
		Sales of goods or rendering of services	9	10	10
		Other income	-	-	2
		Other expenses	-	3	-
		Statement of Financial Position Balances			
		Trade accounts receivable - related parties	2	2	3
		Other current payables - related parties	-	4	-
		Lease liabilities - related parties	-	4	-
26. Glow SPP 11 Company Limited (GSPP11)	• Subsidiary of GPSC • Sales/Purchase transaction of products and services	**Statement of Income Transactions**			
		Sales of goods or rendering of services	5	5	5
		Purchases of goods or receiving of services	-	-	1
		Statement of Financial Position Balances			
		Trade accounts receivable - related parties	1	1	2

Company	Relationship As at December 31st, 2024	Connected Transaction	2022	2023	2024
					(million baht)
27. Glow IPP Company Limited (GIPP)	• Subsidiary of GPSC • Sales/Purchase transaction of products and services	**Statement of Income Transactions**			
		Sales of goods or rendering of services	3	5	4
		Statement of Financial Position Balances			
		Trade accounts receivable - related parties	1	1	2
28. GHECO-One Company Limited (GHECO1)	• Subsidiary of GPSC • Sales/Purchase transaction of products and services	**Statement of Income Transactions**			
		Sales of goods or rendering of services	9	23	7
		Statement of Financial Position Balances			
		Trade accounts receivable - related parties	2	3	3
29. PTTEP SP Limited (PTTEPSP)	• Subsidiary of PTTEP • Sales/Purchase transaction of products and services	**Statement of Income Transactions**			
		Sales of goods or rendering of services	1	1	-
30. Combined Heat and Power Producing Co., Ltd. (CHPP)	• Subsidiary of GPSC • Sales/Purchase transaction of products and services	**Statement of Income Transactions**			
		Sales of goods or rendering of services	29	-	1
		Statement of Financial Position Balances			
		Trade accounts receivable - related parties	1	-	-
31. PTT International Trading USA Inc. (PTTTUSA)	• Major shareholder (PTT) holds 100% of the shares • Sales/Purchase transaction of products and services	**Statement of Income Transactions**			
		Sales of goods or rendering of services	-	1	27
		Other income	1	7	6
		Statement of Financial Position Balances			
		Trade accounts receivable - related parties	-	1	13
		Other current receivables - related parties	5	1	13
32. PT. Tirta Surya Raya (PTSR)	• Subsidiary of TOP • Sales/Purchase transaction of products	**Statement of Income Transactions**			
		Sales of goods or rendering of services	2	1	-
		Purchases of goods or receiving of services	4	10	81
		Statement of Financial Position Balances			
		Trade accounts receivable - related parties	-	1	-
		Trade accounts payable - related parties	1	7	42

Company	Relationship As at December 31st, 2024	Connected Transaction	2022	2023	2024
					(million baht)
33. PTT International Trading London Ltd (PTTTLDN)	• Major shareholder (PTT) holds 100% of the shares • Sales/Purchase transaction of products	**Statement of Income Transactions**			
		Sales of goods or rendering of services	8	16	37
		Other income	24	12	-
		Statement of Financial Position Balances			
		Trade accounts receivable - related parties	8	17	18
		Other current receivables - related parties	24	13	17
34. PTT Treasury Center Company Limited (PTTTCC)	• Major shareholder (PTT) holds 100% of the shares • Borrowing transaction	**Statement of Income Transactions**			
		Finance costs	202	-	-
35. Thai Petroleum Pipeline Co., Ltd. (THAPPLINE)	• Associate of OR • Services transaction	**Statement of Income Transactions**			
		Sales of goods or rendering of services	3	-	-
		Other income	2	2	2
36. Trans Thai-Malaysia (Thailand) Limited (TTMT)	• Major shareholder (PTT) holds 50% of the shares • Sales/Purchase transaction of products and services	**Statement of Income Transactions**			
		Sales of goods or rendering of services	1	1	75
		Statement of Financial Position Balances			
		Trade accounts receivable - related parties	-	-	12
		Other current payables - related parties	-	-	4
37. Carigali - PTTEPI Operating Company Sdn Bhd. (CPOC)	• Joint operation of PTTEP • Services transaction	**Statement of Income Transactions**			
		Sales of goods or rendering of services	1	-	-
		Statement of Financial Position Balances			
		Trade accounts receivable - related parties	1	-	-
38. LABIX Company Limited (LABIX)	• Subsidiary of TOP • Services transaction	**Statement of Income Transactions**			
		Sales of goods or rendering of services	6	-	-
39. PTTEP Energy Development Company Limited (PTTEPED)	• Subsidiary of PTTEP • Sales/Purchase transaction of products and services	**Statement of Income Transactions**			
		Sales of goods or rendering of services	11	28	41
		Statement of Financial Position Balances			
		Trade accounts receivable - related parties	3	6	6

Company	Relationship As at December 31st, 2024	Connected Transaction	2022	2023	2024
					(million baht)
40. PTT MEA Ltd. (PTTMEA)	• Subsidiary of PTTT • Sales/Purchase transaction of products	**Statement of Income Transactions**			
		Sales of goods or rendering of services	2	2	11
		Other Income	6	4	-
		Statement of Financial Position Balances			
		Trade accounts receivable - related parties	2	2	5
		Other current receivables - related parties	6	2	6
41. Nuovo Plus Co., Ltd. (NUOVOPLUS)	• Subsidiary of PTTGM • Sales/Purchase transaction of products and services	**Statement of Income Transactions**			
		Sales of goods or rendering of services	1	2	1
		Statement of Financial Position Balances			
		Trade accounts receivable - related parties	1	-	-
42. PTTEP International Limited (Yangon Branch) (PTTEPYAN)	• Subsidiary of PTTEP • Services transaction	**Statement of Income Transactions**			
		Sales of goods or rendering of services	-	1	11
		Statement of Financial Position Balances			
		Trade accounts receivable - related parties	-	1	7
43. Thai Lube Base Public Company Limited (TLB)	• Subsidiary of TOP • Sales/Purchase transaction of products and services	**Statement of Income Transactions**			
		Sales of goods or rendering of services	-	1	-
44. PTT RAISE Co., Ltd. (PTTRAISE)	• Joint venture of PTTGM • Services transaction	**Statement of Financial Position Balances**			
		Other current payables - related parties	-	4	-
45. Modulus Venture Company Limited (MODULUS)	• Subsidiary of OR • Sales transaction of investment	**Statement of Income Transactions**			
		Other Income	-	-	247



Measure and Procedure for Approval of Connected Transactions

The Company's Articles of Association state that a Director can acquire or dispose of GC assets or perform any business transaction involving GC either by himself/herself or on behalf of others only with the approval from the Audit Committee and the Board of Directors. However, any Director who personally gains from any acquisition or disposal of GC asset or any transaction of GC is not allowed to vote on that matter.

After receiving approval from the Audit Committee and the Board of Directors, GC or subsidiaries must perform any connected transactions or acquire or dispose of major assets in line with the announcement of the Stock Exchange of Thailand (SET) and the Securities and Exchange Commission (SEC) concerning connected transactions of listed companies as well as the buying and selling of registered company assets.

Necessity and Justification of Connected Transactions

The sales of products by GC to connected companies have been carried out mainly so that they may process its products into their own products for sale at prices corresponding to agreements or spot prices. Prices must prove mutually beneficial and be based on market prices without any undue transfer of interests or extraordinary items to both parties. Making services transaction to connected companies, has to be beneficial to transportation or product storage of connected companies. The charges for services are both market-based and benefit-based without any undue transfer of interests or extraordinary items.

For the product and feedstock supply and/or services as well as the volume of products, feedstock or services given by connected companies must meet the needs and business operation of GC. Prices of products trading or services are as agreed upon by GC and connected companies which generate commercial benefits to GC and connected companies without any undue transfer of interest or extraordinary items. In addition, GC is required to purchase feedstock from connected companies because the capacity and quality of such feedstock meet its needs. GC also saves on transportation expenses since the feedstock can be transferred safely by GC's pipeline systems from their plants in Map Ta Phut Industrial Estate, Rayong.

Opinion of Independent Directors

The Independent Directors agreed with the Board of Directors.

Policy and Trend on Future Connected Transactions

Future connected transactions between GC and connected companies will be conducted as part of the normal course of business with no special favors and no transfer of benefits. The pricing policy between GC and connected companies or persons will be set in normal terms as set for non-related companies or persons. The price of products or feedstock purchased by connected companies or persons will be set in agreement and or linked to market prices. In addition, service charges paid to connected companies will also be at arm's length. The price of products sold between GC and connected companies or persons will, as a rule, be linked to market prices.

Disclosure of the Company's connected transactions must be in compliance with the rules and regulations of the Securities and Exchange Commission (SEC) and the Stock Exchange of Thailand (SET). The audit standards for connected parties will be as specified by the Federation of Accounting Professions under The Royal Patronage of His Majesty the King.


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* Calculated using the T-VER and LESS standards by the Thailand Greenhouse Gas Management Organization (Public Organization)

3 FINANCIAL REPORTS AND FINANCIAL STATEMENTS

GC's financial strength, stability, and discipline are key factors in building investor confidence

In **2024**, **GC** issued its first and Thailand's largest subordinated hybrid debentures worth 17 billion baht, receiving the highest credit rating in the subordinated perpetual debenture category, with investor subscription exceeding the target, thus marking a new chapter in Thailand's financial markets.

Report of the Board of Directors' Accountability to Financial Report

The consolidated financial statements of PTT Global Chemical Public Company Limited and its subsidiaries were prepared in accordance with relevant laws and regulations of the Securities Exchange Commission as well as financial reporting standards prescribed by the Federation of Accounting Professions, accounting laws, and generally accepted accounting practices in Thailand.

The Company's Board of Directors is accountable for the financial report of PTT Global Chemical Public Company Limited and its subsidiaries, prepared to provide reasonable assurance that the financial report fairly presents the financial position, financial performance, and cash flows. The accounting data is sufficiently and accurately recorded to preserve the Company's assets and prevent fraud and irregularity. The financial report has been prepared according to appropriate accounting policy and consistent practices, and in compliance with the Thai Financial Reporting Standards. Material information has been sufficiently disclosed in notes to financial statements, and the auditor expressed an opinion on the financial statements of PTT Global Chemical Public Company Limited and its subsidiaries in the auditor's report.

(Signed) Mr. Predee Daochai

(Mr. Predee Daochai)
Chairman

(Signed) Mr. Narongsak Jivakanun

(Mr. Narongsak Jivakanun)
Chief Executive Officer

PTT Global Chemical Public Company Limited and its Subsidiaries

Financial statements for the year ended
31 December 2024
and Independent Auditor's Report

Independent Auditor's Report

To the Shareholders of PTT Global Chemical Public Company Limited

Opinion

I have audited the consolidated and separate financial statements of PTT Global Chemical Public Company Limited and its subsidiaries (the "Group") and of PTT Global Chemical Public Company Limited (the "Company"), respectively, which comprise the consolidated and separate statements of financial position as at 31 December 2024, the consolidated and separate statements of income and comprehensive income, changes in equity and cash flows for the year then ended, and notes, comprising a summary of material accounting policies and other explanatory information.

In my opinion, the accompanying consolidated and separate financial statements present fairly, in all material respects, the financial position of the Group and the Company, respectively, as at 31 December 2024 and their financial performance and cash flows for the year then ended in accordance with Thai Financial Reporting Standards (TFRSs).

Basis for Opinion

I conducted my audit in accordance with Thai Standards on Auditing (TSAs). My responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Consolidated and Separate Financial Statements section of my report. I am independent of the Group and the Company in accordance with the Code of Ethics for Professional Accountants including Independence Standards issued by the Federation of Accounting Professions (Code of Ethics for Professional Accountants) that is relevant to my audit of the consolidated and separate financial statements, and I have fulfilled my other ethical responsibilities in accordance with the Code of Ethics for Professional Accountants. I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my opinion.

Key Audit Matters

Key audit matters are those matters that, in my professional judgment, were of most significance in my audit of the consolidated and separate financial statements of the current period. These matters were addressed in the context of my audit of the consolidated and separate financial statements as a whole, and in forming my opinion thereon, and I do not provide a separate opinion on these matters.

Impairment testing of goodwill

Refer to Notes 3 (n) and 14 to the consolidated financial statements

The Key Audit Matter	How the matter was addressed in the audit
The Group has significant amounts of goodwill arising from business combinations in the past. Cash Generated Units (CGUs), in which goodwill is embedded is tested annually for impairment. The Group determines the recoverable amount of each CGU, in which goodwill is embedded by applying the value-in-use method (the discounted cash flow method). Loss on impairment shall be recognised when the recoverable amount is less than the carrying amount. As the amount is material and significant judgement is involved in the estimation of future cash flows attributable to each CGU, and evaluation of the appropriate discount rate, I considered the measurement of the recoverable amount to be a key audit matter.	Key audit procedures included: • Understanding management's processes in testing for impairment and estimating expected future cash flows and key assumptions used; • Evaluating the appropriateness of the forecasting of financial performances by comparing historical estimate to the actual operating results; • Testing management's key assumptions used in estimating present value of expected future cash flows by referring to market situations, operating environment, knowledge of the industry as well as other obtained information; • Evaluating the appropriateness of the valuation method and financial parameters used in setting out the discount rate, including testing the calculation; and • Evaluating the adequacy of the disclosures in accordance with relevant Thai Financial Reporting Standards.

The measurement of inventories valuation

Refer to Notes 3 (h) and 7 to the consolidated and separate financial statements

The Key Audit Matter	How the matter was addressed in the audit
Inventories of the Group and the Company are significant balances to the consolidated and separate financial statements. The raw materials and finished goods are commodities that contain significant price volatility which may cause the net realisable value to be lower than its cost resulting in an inventory write-down. I considered this as a key audit matter.	Key audit procedures included: • Gaining an understanding and performing tests of design and implementation as well as operating effectiveness of the relevant controls over the inventories valuation measurement process; • Assessing the appropriateness of the methodology used to calculate the net realisable value of inventories at the reporting period, considering the reasonableness of the market prices used by reference to expected selling price of commodity, and testing the accuracy of the calculation; and • Assessing the adequacy of the disclosure in relation to the estimation of allowance for diminution in value of inventories in notes to the financial statements.

Impairment of property, plant and equipment, investments in subsidiaries and investment in joint venture

Refer to Notes 3 (c), 3 (j), 3 (n), 8 Investments in subsidiaries, 9 Investments in joint ventures and 12 Property, plant and equipment to the consolidated and separate financial statements

The Key Audit Matter	How the matter was addressed in the audit
Due to the business factors arising from the economic recession, the market slowdown leading to long-term oversupply, and the highly competitive situation. The Group identified that the impairment indicators existed. In 2024, the Group has commenced a judicial reorganisation process for its indirect subsidiaries Vencorex France S.A.S.U. and Vencorex TDI S.A.S.U. with the court in France. Under this process, the businesses of these indirect subsidiaries will be disposed. The Group has recognised impairment losses for both companies and the Vencorex Group of Baht 7,898 million in the consolidated statements of income in respect of the property, plant and equipment and related assets of these businesses, based on the assessed fair value less cost of disposal for these assets. The Company has also recognised impairment losses of Baht 10,000 million in investments in subsidiaries in the separate statements of income. In addition, the Group has also decided to initiate a business withdrawal process in respect of its joint venture PTT Asahi Chemical Company Limited, the cessation of business has been announced. The Group has recognised its share of loss of joint ventures accounted for using equity method of Baht 9,449 million in the consolidated statements of income which consists of financial performance and impairment on joint venture's assets based on the assessed fair value less cost of disposal for these assets. The Company has also recognised impairment losses of Baht 996 million in investment in joint venture in the separate statements of income. Due to the significance of the impairment amounts and the judgements involved in identifying and measuring these impairments, I considered this as a key audit matter.	Key audit procedures included: • Understand the management's process of the indicators identification and impairment testing process; • Understand of the Group's strategic plan and detailed testing of recoverable amount of the related assets in accordance with the strategic plan; • Testing management's key assumptions used in estimating recoverable amount by referring to market situations, operating environment, knowledge of the industry, related contracts as well as other obtained information; • Evaluated the adequacy of the disclosures in accordance with the relevant Thai Financial Reporting Standards.

Other Information

Management is responsible for the other information. The other information comprises the information included in the annual report, but does not include the consolidated and separate financial statements and my auditor's report thereon.

My opinion on the consolidated and separate financial statements does not cover the other information and I will not express any form of assurance conclusion thereon.

In connection with my audit of the consolidated and separate financial statements, my responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the consolidated and separate financial statements or my knowledge obtained in the audit, or otherwise appears to be materially misstated. If, based on the work I have performed, I conclude that there is a material misstatement of this other information, I am required to report that fact. I have nothing to report in this regard.

Responsibilities of Management and Those Charged with Governance for the Consolidated and Separate Financial Statements

Management is responsible for the preparation and fair presentation of the consolidated and separate financial statements in accordance with TFRSs, and for such internal control as management determines is necessary to enable the preparation of consolidated and separate financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated and separate financial statements, management is responsible for assessing the Group's and the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Group and the Company or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Group's and the Company's financial reporting process.

Auditor's Responsibilities for the Audit of the Consolidated and Separate Financial Statements

My objectives are to obtain reasonable assurance about whether the consolidated and separate financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes my opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with TSAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated and separate financial statements.

As part of an audit in accordance with TSAs, I exercise professional judgment and maintain professional skepticism throughout the audit. I also:

- Identify and assess the risks of material misstatement of the consolidated and separate financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for my opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's and the Company's internal control.

- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.

- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's and the Company's ability to continue as a going concern. If I conclude that a material uncertainty exists, I am required to draw attention in my auditor's report to the related disclosures in the consolidated and separate financial statements or, if such disclosures are inadequate, to modify my opinion. My conclusions are based on the audit evidence obtained up to the date of my auditor's report. However, future events or conditions may cause the Group and the Company to cease to continue as a going concern.

- Evaluate the overall presentation, structure and content of the consolidated and separate financial statements, including the disclosures, and whether the consolidated and separate financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. I am responsible for the direction, supervision and performance of the group audit. I remain solely responsible for my audit opinion.

I communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that I identify during my audit.

I also provide those charged with governance with a statement that I have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on my independence, and where applicable, actions taken to eliminate threats or safeguards applied.

From the matters communicated with those charged with governance, I determine those matters that were of most significance in the audit of the consolidated and separate financial statements of the current period and are therefore the key audit matters. I describe these matters in my auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, I determine that a matter should not be communicated in my report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.



(Waiyawat Kosamarnchaiyakij)
Certified Public Accountant
Registration No. 6333

KPMG Phoomchai Audit Ltd.
Bangkok
17 February 2025

Statement of Financial Position

PTT Global Chemical Public Company Limited and its Subsidiaries

		Consolidated financial statements		Separate financial statements	
		31 December		31 December	
Assets	*Note*	2024	2023	2024	2023
			(in Baht)		
Current assets					
Cash and cash equivalents	*5*	32,745,130,103	37,318,746,909	12,716,706,437	17,274,340,137
Current financial assets	*10, 26*	364,925,326	8,930,327,195	353,165,877	4,884,536,471
Trade accounts receivable	*6*	47,753,142,824	57,760,700,706	36,923,482,604	44,206,059,061
Other current receivables		5,731,712,501	9,757,247,800	3,343,194,846	6,377,314,202
Short-term loans to related parties	*4*	-	-	1,823,596,806	3,293,885,279
Current portion of long-term loans to related parties	*4*	66,793,162	53,796,872	66,793,162	53,796,872
Inventories	*7*	65,221,848,259	68,517,097,604	41,548,663,410	44,048,588,616
Receivable from oil fuel fund		22,495,883	127,926,911	22,495,883	127,926,911
Value-added tax receivable		3,333,511,279	2,956,418,886	2,015,192,121	1,466,602,695
Current derivative assets	*26*	158,894,230	530,898,666	112,963,443	443,380,162
Other current assets		735,454,609	920,415,485	652,967,545	687,697,422
Total current assets		**156,133,908,176**	**186,873,577,034**	**99,579,222,134**	**122,864,127,828**
Non-current assets					
Investments in subsidiaries	*8*	-	-	133,924,922,442	141,243,252,566
Investments in joint ventures	*9*	24,988,594,179	37,135,965,288	16,830,805,674	17,826,805,674
Investments in associates	*9*	20,301,679,091	20,859,059,445	13,587,733,371	13,617,733,371
Non-current financial assets	*10, 26*	13,560,694,051	16,693,361,476	11,595,858,616	14,844,647,413
Long-term loans to related parties	*4*	880,151,795	147,941,397	49,170,994,948	51,044,148,095
Investment properties	*11*	6,237,300,601	6,073,246,998	1,384,817,640	1,296,270,302
Property, plant and equipment	*12*	267,769,487,771	285,859,670,159	204,607,589,667	212,155,933,873
Right-of-use assets	*13*	28,104,927,727	25,474,901,294	22,731,013,508	19,482,598,686
Goodwill	*14*	71,015,497,621	76,088,798,400	-	-
Intangible assets	*15*	52,382,615,822	59,024,221,280	6,489,424,297	6,832,003,099
Deferred tax assets	*22*	3,578,486,228	3,067,658,621	311,054,707	-
Non-current derivative assets	*26*	40,135,286	109,057,378	20,157,100	49,846,372
Other non-current assets		850,591,295	1,597,537,040	338,640,834	384,087,657
Total non-current assets		**489,710,161,467**	**532,131,418,776**	**460,993,012,804**	**478,777,327,108**
Total assets		**645,844,069,643**	**719,004,995,810**	**560,572,234,938**	**601,641,454,936**

The accompanying notes are an integral part of these financial statements.

Statement of Financial Position

PTT Global Chemical Public Company Limited and its Subsidiaries

Liabilities and equity	Note	Consolidated financial statements 31 December 2024	Consolidated financial statements 31 December 2023	Separate financial statements 31 December 2024	Separate financial statements 31 December 2023
			(in Baht)		
Current liabilities					
Short-term borrowings from financial institutions	*16*	1,115,294,748	2,203,233,750	-	-
Trade accounts payable		62,154,391,280	71,163,093,621	48,341,850,800	58,023,649,286
Other current payables		21,763,729,682	25,825,008,716	8,253,358,423	9,989,598,214
Payables to contractors		940,522,963	2,493,416,804	1,702,446,807	3,230,376,116
Current portion of long-term borrowings from financial institutions	*16*	20,871,426,366	7,376,403,093	19,356,735,347	5,997,810,796
Current portion of long-term borrowings from other parties	*16*	96,739,732	40,434,231	-	-
Current portion of long-term borrowings from related party	*4, 16*	-	-	834,820,863	-
Current portion of debentures	*16*	-	11,497,886,667	-	11,497,886,667
Current portion of lease liabilities	*16*	2,762,741,563	2,197,594,704	1,840,809,219	1,257,746,456
Short-term borrowings from related parties	*4, 16*	-	-	2,611,948,687	1,580,299,025
Corporate income tax payable		632,222,530	1,445,567,541	-	-
Current provisions	*8, 9*	3,471,268,979	1,506,860,894	600,000,000	-
Current derivative liabilities	*26*	112,494,456	73,718,986	55,529,948	24,627,268
Other current liabilities		210,033,957	18,267,773	-	-
Total current liabilities		**114,130,866,256**	**125,841,486,780**	**83,597,500,094**	**91,601,993,828**
Non-current liabilities					
Long-term borrowings from financial institutions	*16*	79,867,218,153	91,033,879,331	42,092,546,550	46,536,229,773
Long-term borrowings from other parties	*16*	201,618,171	209,645,621	-	-
Long-term borrowings from related party	*4, 16*	-	-	50,849,147,873	74,266,288,297
Debentures	*16*	127,036,653,153	152,690,815,742	78,455,780,502	78,445,563,632
Lease liabilities	*16*	25,979,431,735	22,853,048,544	22,123,172,312	18,809,315,342
Deferred tax liabilities	*22*	15,385,618,334	18,728,254,848	-	1,169,398,340
Non-current provisions for employee benefits	*17*	8,933,386,312	9,008,225,915	4,957,373,007	4,345,685,587
Other non-current provisions	*9*	4,059,277,787	1,712,010,828	2,435,000,000	-
Non-current derivative liabilities	*26*	77,789,497	79,386,037	40,130,897	36,469,243
Other non-current liabilities		1,579,239,364	667,135,908	555,848,459	439,874,962
Total non-current liabilities		**263,120,232,506**	**296,982,402,774**	**201,508,999,600**	**224,048,825,176**
Total liabilities		**377,251,098,762**	**422,823,889,554**	**285,106,499,694**	**315,650,819,004**

Statement of Financial Position

PTT Global Chemical Public Company Limited and its Subsidiaries

		Consolidated financial statements		Separate financial statements	
		31 December		31 December	
Liabilities and equity	*Note*	2024	2023	2024	2023
			(in Baht)		
Equity					
Share capital:					
Authorised share capital					
(4,508,849,117 ordinary shares, par value					
at Baht 10 per share)		45,088,491,170	45,088,491,170	45,088,491,170	45,088,491,170
Issued and paid-up share capital					
(4,508,849,117 ordinary shares, par value					
at Baht 10 per share)		45,088,491,170	45,088,491,170	45,088,491,170	45,088,491,170
Share premium		36,936,829,684	36,936,829,684	36,936,829,684	36,936,829,684
Share premium on treasury shares		1,553,065,959	1,553,065,959	1,553,065,959	1,553,065,959
Difference arising from business combination					
under common control		638,880,518	638,880,518	54,491,932	54,491,932
Difference arising from the change in the ownership					
interest in an investment		(913,304,188)	(913,304,188)	-	-
Retained earnings					
Appropriated					
Legal reserve	*18*	4,512,930,269	4,512,930,269	4,512,930,269	4,512,930,269
Loan repayment reserve		807,802,564	807,802,564	807,802,564	807,802,564
Projects expansion reserve		12,446,994,126	12,446,994,126	12,446,994,126	12,446,994,126
Unappropriated		161,362,684,548	194,876,673,887	166,314,362,580	191,466,545,565
Subordinated perpetual debentures	*19*	16,927,213,828	-	16,927,213,828	-
Other components of equity		(17,731,010,218)	(7,053,848,913)	(9,176,446,868)	(6,876,515,337)
Equity attributable to owners of the Company		**261,630,578,260**	**288,894,515,076**	**275,465,735,244**	**285,990,635,932**
Non-controlling interests		6,962,392,621	7,286,591,180	-	-
Total equity		**268,592,970,881**	**296,181,106,256**	**275,465,735,244**	**285,990,635,932**
Total liabilities and equity		**645,844,069,643**	**719,004,995,810**	**560,572,234,938**	**601,641,454,936**

The accompanying notes are an integral part of these financial statements.

Statement of Income

PTT Global Chemical Public Company Limited and its Subsidiaries

	Note	Consolidated financial statements For the year ended 31 December 2024	2023	Separate financial statements For the year ended 31 December 2024	2023
			(in Baht)		
Revenues from sale of goods and rendering of services	20, 23	608,549,796,891	621,631,091,660	487,481,677,773	495,401,561,037
Cost of sale of goods and rendering of services		(575,941,848,333)	(584,369,113,619)	(472,828,633,527)	(473,851,550,643)
Gross profit		**32,607,948,558**	**37,261,978,041**	**14,653,044,246**	**21,550,010,394**
Investment income		1,562,261,740	1,190,900,338	7,775,086,257	14,404,039,417
Gain from sale of investment in subsidiary	8	-	1,574,353,174	-	1,820,700,556
Gain from capital return of subsidiaries	8	-	-	-	31,265,087
Gain from change in ownership interest in subsidiary	8	-	2,443,353,174	-	-
Gain from sale of investment in associate	9	247,499,722	-	993,000,000	-
Other income		4,541,256,458	5,729,184,097	1,580,099,879	3,738,795,172
Selling and distribution costs		(16,354,366,988)	(14,730,235,806)	(4,734,270,595)	(4,273,135,908)
Administrative expenses	8, 9	(24,913,945,665)	(19,312,236,560)	(11,629,759,160)	(8,131,106,617)
Reverse (loss) on impairment of assets	8, 9, 12	(7,898,053,080)	917,603	(20,661,768,967)	(157,823,350)
Net derivative gain (loss)	26	1,702,959,686	(249,478,365)	1,791,852,959	(131,680,406)
Net foreign exchange gain (loss)		147,167,587	412,963,953	(2,870,419,894)	2,319,265,988
Profit (loss) from operating activities		**(8,357,271,982)**	**14,321,699,649**	**(13,103,135,275)**	**31,170,330,333**
Finance costs		(12,158,387,000)	(11,717,800,512)	(9,148,769,528)	(8,931,511,859)
Share of loss of joint ventures accounted for using equity method	9	(11,562,073,279)	(1,644,402,330)	-	-
Share of profit of associates accounted for using equity method	9	895,445,479	1,257,573,529	-	-
Profit (loss) before income tax expense		**(31,182,286,782)**	**2,217,070,336**	**(22,251,904,803)**	**22,238,818,474**
Tax income (expense)	22	1,167,866,230	(1,352,029,096)	914,999,968	(1,974,104,323)
Profit (loss) for the year		**(30,014,420,552)**	**865,041,240**	**(21,336,904,835)**	**20,264,714,151**
Profit (loss) attributable to:					
Owners of the Company		(29,810,547,814)	999,128,721	(21,336,904,835)	20,264,714,151
Non-controlling interests		(203,872,738)	(134,087,481)	-	-
		(30,014,420,552)	**865,041,240**	**(21,336,904,835)**	**20,264,714,151**
Earnings (loss) per share	24	**(6.62)**	**0.22**	**(4.74)**	**4.49**

The accompanying notes are an integral part of these financial statements.

Statement of Comprehensive Income

PTT Global Chemical Public Company Limited and its Subsidiaries

	Note	Consolidated financial statements For the year ended 31 December 2024	Consolidated financial statements For the year ended 31 December 2023	Separate financial statements For the year ended 31 December 2024	Separate financial statements For the year ended 31 December 2023
			(in Baht)		
Profit (loss) for the year		**(30,014,420,552)**	**865,041,240**	**(21,336,904,835)**	**20,264,714,151**
Other comprehensive income (loss)					
Items that may be reclassified subsequently to profit or loss					
Exchange differences on translating financial statements		(8,009,648,656)	3,486,098,465	-	-
Gain on measurement of financial assets		11,918,910	7,957,527	11,918,910	7,957,527
Gain (loss) on cash flow hedges		(27,059,562)	5,651,425	-	(21,408,136)
Share of other comprehensive income (loss) of joint ventures accounted for using equity method	9	159,387,673	(87,998,459)	-	-
Share of other comprehensive income (loss) of associates accounted for using equity method	9	(25,558,880)	(4,268,699)	-	-
Total items that may be reclassified subsequently to profit or loss		**(7,890,960,515)**	**3,407,440,259**	**11,918,910**	**(13,450,609)**
Items that will not be reclassified subsequently to profit or loss					
Gain (loss) on remeasurements of defined benefit plans		(409,292,127)	249,805,273	(434,090,293)	541,562,931
Loss on investments in equity instruments designated at FVOCI		(2,296,088,940)	(5,616,367,498)	(2,311,850,441)	(5,525,841,357)
Share of other comprehensive income (loss) of joint ventures accounted for using equity method	9	(397,011,589)	(326,520,511)	-	-
Share of other comprehensive income (loss) of associates accounted for using equity method	9	(4,927,989)	(12,049,615)	-	-
Total items that will not be reclassified subsequently to profit or loss		**(3,107,320,645)**	**(5,705,132,351)**	**(2,745,940,734)**	**(4,984,278,426)**
Other comprehensive income (loss) for the year, net of tax		**(10,998,281,160)**	**(2,297,692,092)**	**(2,734,021,824)**	**(4,997,729,035)**
Total comprehensive income (loss) for the year		**(41,012,701,712)**	**(1,432,650,852)**	**(24,070,926,659)**	**15,266,985,116**
Total comprehensive income (loss) attributable to:					
Owners of the Company		(40,809,962,787)	(1,283,051,340)	(24,070,926,659)	15,266,985,116
Non-controlling interests		(202,738,925)	(149,599,512)	-	-
		(41,012,701,712)	**(1,432,650,852)**	**(24,070,926,659)**	**15,266,985,116**

The accompanying notes are an integral part of these financial statements.

Statement of Changes in Equity

PTT Global Chemical Public Company Limited and its Subsidiaries

	Note	Issued and paid-up share capital	Share premium	Share premium on treasury shares	Difference arising from business combination under common control	Difference arising from the change in the ownership interest in investments	Retained earnings: Legal reserve	Retained earnings: Loans repayment reserve	Retained earnings: Projects expansion reserve
Year ended 31 December 2023									
Balance as at 1 January 2023		**45,088,491,170**	**36,936,829,684**	**1,553,065,959**	**636,103,835**	**(913,304,188)**	**4,512,930,269**	**807,802,564**	**12,446,994,126**
Transactions with owners, recorded directly in equity									
Distributions to owners									
Dividends	*25*	-	-	-	-	-	-	-	-
Total distributions to owners		-	-	-	-	-	-	-	-
Changes in ownership interests in subsidiaries									
Increase investment in subsidiary	*8*	-	-	-	-	-	-	-	-
Decrease investment in subsidiary	*8*	-	-	-	-	-	-	-	-
Changes in ownership interest in subsidiary and associate with a change in control	*8, 9*	-	-	-	2,776,683	-	-	-	-
Total changes in ownership interests in subsidiaries		-	-	-	**2,776,683**	-	-	-	-
Total transactions with owners, recorded directly in equity		-	-	-	**2,776,683**	-	-	-	-
Comprehensive income for the year									
Profit		-	-	-	-	-	-	-	-
Other comprehensive income (loss)		-	-	-	-	-	-	-	-
Total comprehensive income (loss) for the year		-	-	-	-	-	-	-	-
Transfer to retained earnings		-	-	-	-	-	-	-	-
Balance at 31 December 2023		**45,088,491,170**	**36,936,829,684**	**1,553,065,959**	**638,880,518**	**(913,304,188)**	**4,512,930,269**	**807,802,564**	**12,446,994,126**
Year ended 31 December 2024									
Balance as at 1 January 2024		**45,088,491,170**	**36,936,829,684**	**1,553,065,959**	**638,880,518**	**(913,304,188)**	**4,512,930,269**	**807,802,564**	**12,446,994,126**
Transactions with owners, recorded directly in equity									
Distributions to owners									
Dividends	*25*	-	-	-	-	-	-	-	-
Total distributions to owners		-	-	-	-	-	-	-	-
Total transactions with owners, recorded directly in equity		-	-	-	-	-	-	-	-
Comprehensive income for the year									
Loss		-	-	-	-	-	-	-	-
Other comprehensive income (loss)		-	-	-	-	-	-	-	-
Total comprehensive income (loss) for the year		-	-	-	-	-	-	-	-
Issuance of subordinated perpetual debentures	*19*	-	-	-	-	-	-	-	-
Transfer to retained earnings		-	-	-	-	-	-	-	-
Balance at 31 December 2024		**45,088,491,170**	**36,936,829,684**	**1,553,065,959**	**638,880,518**	**(913,304,188)**	**4,512,930,269**	**807,802,564**	**12,446,994,126**

The accompanying notes are an integral part of these financial statements.

Consolidated financial statements

		Other components of equity								
Unappropriated	Subordinated perpetual debentures	Translation reserve	Change in fair value of financial assets reserve	Cash flow hedge reserve	Share of other comprehensive income (loss) of joint ventures	Share of other comprehensive income (loss) of associates	Total other components of equity	Equity attributable to owners of the parent	Non-controlling interests	Total equity
	(in Baht)									
194,806,197,911	-	**(4,848,014,643)**	**(218,321,690)**	**21,408,136**	**440,254,690**	**29,575,012**	**(4,575,098,495)**	**291,300,012,835**	**7,527,690,245**	**298,827,703,080**
(1,127,205,239)	-	-	-	-	-	-	-	(1,127,205,239)	(141,734,483)	(1,268,939,722)
(1,127,205,239)	-	-	-	-	-	-	-	**(1,127,205,239)**	**(141,734,483)**	**(1,268,939,722)**
-	-	-	-	-	-	-	-	-	89,500,000	89,500,000
-	-	-	-	-	-	-	-	-	(39,265,070)	(39,265,070)
1,982,137	-	-	-	-	-	-	-	4,758,820	-	4,758,820
1,982,137	-	-	-	-	-	-	-	**4,758,820**	**50,234,930**	**54,993,750**
(1,125,223,102)	-	-	-	-	-	-	-	**(1,122,446,419)**	**(91,499,553)**	**(1,213,945,972)**
999,128,721	-	-	-	-	-	-	-	999,128,721	(134,087,481)	865,041,240
164,200,063	-	3,544,477,067	(5,608,409,971)	(1,846,779)	(402,912,737)	22,312,296	(2,446,380,124)	(2,282,180,061)	(15,512,031)	(2,297,692,092)
1,163,328,784	-	**3,544,477,067**	**(5,608,409,971)**	**(1,846,779)**	**(402,912,737)**	**22,312,296**	**(2,446,380,124)**	**(1,283,051,340)**	**(149,599,512)**	**(1,432,650,852)**
32,370,294	-	-	(32,370,294)	-	-	-	(32,370,294)	-	-	-
194,876,673,887	-	**(1,303,537,576)**	**(5,859,101,955)**	**19,561,357**	**37,341,953**	**51,887,308**	**(7,053,848,913)**	**288,894,515,076**	**7,286,591,180**	**296,181,106,256**
194,876,673,887	-	**(1,303,537,576)**	**(5,859,101,955)**	**19,561,357**	**37,341,953**	**51,887,308**	**(7,053,848,913)**	**288,894,515,076**	**7,286,591,180**	**296,181,106,256**
(3,381,187,857)	-	-	-	-	-	-	-	(3,381,187,857)	(121,459,634)	(3,502,647,491)
(3,381,187,857)	-	-	-	-	-	-	-	**(3,381,187,857)**	**(121,459,634)**	**(3,502,647,491)**
(3,381,187,857)	-	-	-	-	-	-	-	**(3,381,187,857)**	**(121,459,634)**	**(3,502,647,491)**
(29,810,547,814)	-	-	-	-	-	-	-	(29,810,547,814)	(203,872,738)	(30,014,420,552)
(345,112,861)	-	(8,028,977,373)	(2,284,170,030)	(19,561,357)	(296,131,405)	(25,461,947)	(10,654,302,112)	(10,999,414,973)	1,133,813	(10,998,281,160)
(30,155,660,675)	-	**(8,028,977,373)**	**(2,284,170,030)**	**(19,561,357)**	**(296,131,405)**	**(25,461,947)**	**(10,654,302,112)**	**(40,809,962,787)**	**(202,738,925)**	**(41,012,701,712)**
-	16,927,213,828	-	-	-	-	-	-	16,927,213,828	-	16,927,213,828
22,859,193	-	-	(22,859,193)	-	-	-	(22,859,193)	-	-	-
161,362,684,548	**16,927,213,828**	**(9,332,514,949)**	**(8,166,131,178)**	-	**(258,789,452)**	**26,425,361**	**(17,731,010,218)**	**261,630,578,260**	**6,962,392,621**	**268,592,970,881**

Statement of Changes in Equity

PTT Global Chemical Public Company Limited and its Subsidiaries

	Note	Issued and paid-up share capital	Share premium	Share premium on treasury share	Difference arising from business combination under common control	Legal reserve
Year ended 31 December 2023						
Balance as at 1 January 2023		**45,088,491,170**	**36,936,829,684**	**1,553,065,959**	**40,172,822**	**4,512,930,269**
Transactions with owners, recorded directly in equity						
Distributions to owners						
Dividends	*25*	-	-	-	-	-
Total distributions to owners		-	-	-	-	-
Changes in ownership interests in subsidiaries						
Changes in ownership interest in subsidiary with a change in control	*8*	-	-	-	14,319,110	-
Total changes in ownership interests in subsidiaries		-	-	-	**14,319,110**	-
Total transactions with owners, recorded directly in equity		-	-	-	**14,319,110**	-
Comprehensive income for the year						
Profit		-	-	-	-	-
Other comprehensive income (loss)		-	-	-	-	-
Total comprehensive income (loss) for the year		-	-	-	-	-
Balance at 31 December 2023		**45,088,491,170**	**36,936,829,684**	**1,553,065,959**	**54,491,932**	**4,512,930,269**
Year ended 31 December 2024						
Balance as at 1 January 2024		**45,088,491,170**	**36,936,829,684**	**1,553,065,959**	**54,491,932**	**4,512,930,269**
Transactions with owners, recorded directly in equity						
Distributions to owners						
Dividends	*25*	-	-	-	-	-
Total distributions to owners		-	-	-	-	-
Total transactions with owners, recorded directly in equity		-	-	-	-	-
Comprehensive income for the year						
Loss		-	-	-	-	-
Other comprehensive income (loss)		-	-	-	-	-
Total comprehensive income (loss) for the year		-	-	-	-	-
Issuance of subordinated perpetual debentures	*19*	-	-	-	-	-
Balance at 31 December 2024		**45,088,491,170**	**36,936,829,684**	**1,553,065,959**	**54,491,932**	**4,512,930,269**

The accompanying notes are an integral part of these financial statements.

Separate financial statements							
Retained earnings				Other components of equity			
Loans repayment reserve	Projects expansion reserve *(in Baht)*	Unappropriated	Subordinated perpetual debentures	Change in fair value of financial assets reserve	Cash flow hedge reserve	Total other components of equity	Total equity
807,802,564	**12,446,994,126**	**171,801,792,832**	-	**(363,811,007)**	**(973,412,364)**	**(1,337,223,371)**	**271,850,856,055**
-	-	(1,127,205,239)	-	-	-	-	(1,127,205,239)
-	-	**(1,127,205,239)**	-	-	-	-	**(1,127,205,239)**
-	-	(14,319,110)	-	-	-	-	-
-	-	**(14,319,110)**	-	-	-	-	-
-	-	**(1,141,524,349)**	-	-	-	-	**(1,127,205,239)**
-	-	20,264,714,151	-	-	-	-	20,264,714,151
-	-	541,562,931	-	(5,517,883,830)	(21,408,136)	(5,539,291,966)	(4,997,729,035)
-	-	**20,806,277,082**	-	**(5,517,883,830)**	**(21,408,136)**	**(5,539,291,966)**	**15,266,985,116**
807,802,564	**12,446,994,126**	**191,466,545,565**	-	**(5,881,694,837)**	**(994,820,500)**	**(6,876,515,337)**	**285,990,635,932**
807,802,564	**12,446,994,126**	**191,466,545,565**	-	**(5,881,694,837)**	**(994,820,500)**	**(6,876,515,337)**	**285,990,635,932**
-	-	(3,381,187,857)	-	-	-	-	(3,381,187,857)
-	-	**(3,381,187,857)**	-	-	-	-	**(3,381,187,857)**
-	-	**(3,381,187,857)**	-	-	-	-	**(3,381,187,857)**
-	-	(21,336,904,835)	-	-	-	-	(21,336,904,835)
-	-	(434,090,293)	-	(2,299,931,531)	-	(2,299,931,531)	(2,734,021,824)
-	-	**(21,770,995,128)**	-	**(2,299,931,531)**	-	**(2,299,931,531)**	**(24,070,926,659)**
-	-	-	16,927,213,828	-	-	-	16,927,213,828
807,802,564	**12,446,994,126**	**166,314,362,580**	**16,927,213,828**	**(8,181,626,368)**	**(994,820,500)**	**(9,176,446,868)**	**275,465,735,244**

Statement of Cash Flows

PTT Global Chemical Public Company Limited and its Subsidiaries

	Consolidated financial statements 31 December		Separate financial statements 31 December	
	2024	2023	2024	2023
		(in Baht)		
Cash flows from operating activities				
Profit (loss) for the year	(30,014,420,552)	865,041,240	(21,336,904,835)	20,264,714,151
Adjustments to reconcile profit (loss) to cash receipts (payments)				
Tax income (expense)	(1,167,866,230)	1,352,029,096	(914,999,968)	1,974,104,323
Depreciation and amortisation	29,476,469,305	28,487,252,496	17,803,562,333	17,292,981,527
Investment income	(1,602,554,102)	(1,304,679,822)	(7,815,378,619)	(14,471,119,018)
Gain from sale of investment in subsidiary	-	(1,574,353,174)	-	(1,820,700,556)
Gain from capital return of subsidiaries	-	-	-	(31,265,087)
Gain from change in ownership interest in subsidiaries	-	(2,443,353,174)	-	-
Gain from sale of investment in associate	(247,499,722)	-	(993,000,000)	-
Finance costs	12,158,387,000	11,717,800,512	9,148,769,528	8,931,511,859
Unrealised (gain) loss on derivatives	462,574,823	(1,854,877,276)	396,407,957	(1,867,055,983)
(Gain) loss on foreign exchange rates	(958,491,991)	(867,700,835)	4,002,063,206	(1,618,847,781)
Loss on fair value adjustment of financial assets	40,292,362	113,779,484	40,292,362	67,079,601
(Reversal of) impairment credit loss	23,689,785	(55,726,270)	(29,960)	29,960
(Reversal of) loss on obsolete and written-off inventories	319,964,966	(165,801,800)	142,572,974	(714,330,736)
(Reversal of) loss on inventories devaluation	2,236,185	(1,551,508,336)	(39,768,024)	(1,286,276,324)
Impairment loss on assets	7,995,309,389	13,700,382	9,665,771,031	-
(Reversal of) impairment loss on investment in subsidiaries and associate	-	(917,603)	10,995,997,936	157,823,350
(Gain) loss on disposal of property, plant and equipment, intangible assets and right-of-use assets	289,197,865	(670,758,412)	117,406,602	(749,354,327)
Non-current provisions for employee benefits	453,897,274	743,631,520	425,304,010	346,369,111
Gain from repurchase of undue debenture	(2,824,339,346)	(1,890,198,729)	-	-
Share of loss of joint ventures accounted for using equity method, net of tax	11,562,073,279	1,644,402,330	-	-
Share of profit of associates accounted for using equity method, net of tax	(895,445,479)	(1,257,573,529)	-	-
	25,073,474,811	31,300,188,100	21,638,066,533	26,475,664,070
Changes in operating assets and liabilities				
Trade accounts receivable	9,890,486,141	(12,640,965,024)	7,523,510,557	(9,824,251,983)
Other current receivables	3,234,514,012	(3,110,814,142)	2,748,828,634	(2,584,299,377)
Inventories	1,836,178,881	9,873,722,340	2,397,120,256	5,510,809,135
Value-added tax receivable	(625,362,915)	3,784,659,489	(548,589,426)	4,133,984,490
Other current assets	(72,969,878)	2,977,232,067	(74,966,451)	3,099,433,386
Other non-current assets	521,347,976	212,402,452	13,068,987	(13,031,025)
Trade accounts payable	(8,083,924,586)	13,489,360,736	(9,686,201,753)	12,039,459,467
Other current payables	(2,713,707,259)	2,955,467,529	(968,867,827)	1,661,741,512
Current provisions	2,002,935,819	1,002,999,454	600,000,000	-
Other current liabilities	206,388,598	(9,876,853)	-	-
Paid for provisions for employee benefits	(637,536,362)	(623,855,790)	(235,694,304)	(215,857,507)
Other non-current provisions	2,507,932,204	189,682,443	2,435,000,000	-
Other non-current liabilities	987,256,412	283,695,574	114,793,287	282,319,049
Net cash generated from operations	34,127,013,854	49,683,898,375	25,956,068,493	40,565,971,217
Taxes received (paid)	(1,804,947,456)	(1,450,279,655)	43,673,446	(4,501,411)
Net cash from operating activities	**32,322,066,398**	**48,233,618,720**	**25,999,741,939**	**40,561,469,806**

The accompanying notes are an integral part of these financial statements.

Statement of Cash Flows

PTT Global Chemical Public Company Limited and its Subsidiaries

	Consolidated financial statements 31 December		Separate financial statements 31 December	
	2024	2023	2024	2023
		(in Baht)		
Cash flows from investing activities				
Interest received	1,419,057,295	969,780,785	3,496,092,351	2,313,814,768
Dividends received	1,313,902,839	2,565,811,423	4,181,792,018	4,112,410,346
Acquisition of property, plant and equipment and intangible assets	(15,829,857,662)	(19,585,900,015)	(9,520,949,537)	(11,642,779,750)
Proceeds from sale of property, plant and equipment	69,440,192	4,503,445,264	61,595,548	1,171,637,455
(Increase) decrease of investment in debt instruments	9,063,110,210	(2,133,967,231)	4,982,088,008	276,743,142
Increase of investment in equity instruments	(97,792,379)	(126,062,404)	-	-
Acquisition of investments in subsidiaries, joint ventures and associates	(107,250,000)	(1,093,540,500)	(2,681,667,812)	(3,697,774,945)
Net cash payment from transfers of businesses	-	-	-	(15,459,414,953)
Proceeds from capital return of subsidiaries	-	-	-	20,629,701,212
Proceeds from sale of investment in subsidiary	-	2,500,000,000	-	2,500,000,000
Decrease in cash from loss of control in a subsidiaries	-	(334,168,185)	-	-
Proceeds from sale of investment in associate	1,023,000,000	-	1,023,000,000	-
Short-term loans to related parties	-	(295,879,730)	(2,360,337,220)	(2,757,397,025)
Proceeds from short-term loans to related parties	-	295,879,730	814,867,013	-
Long-term loans to related parties	(800,000,000)	-	(8,967,370,981)	(140,000,000)
Proceeds from long-term loans to related parties	57,152,720	587,037,200	57,152,720	587,037,200
Net cash used in investing activities	**(3,889,236,785)**	**(12,147,563,663)**	**(8,913,737,892)**	**(2,106,022,550)**
Cash flows from financing activities				
Finance costs paid	(11,689,642,218)	(10,860,835,021)	(8,872,774,281)	(8,148,741,995)
Dividends paid	(3,502,647,491)	(1,268,939,723)	(3,381,187,857)	(1,127,205,239)
Payment of lease liabilities	(3,592,199,508)	(3,186,004,258)	(2,081,357,395)	(1,756,801,169)
Proceeds from short-term borrowings from financial institutions	10,619,295,289	384,823,807	-	-
Proceeds from short-term borrowings from related parties	-	-	20,482,550,242	790,622,800
Proceeds from long-term borrowings from financial institutions	19,374,228,600	15,150,623,009	15,000,000,000	11,400,000,000
Proceeds from long-term borrowings from other parties	161,620,657	82,571,328	-	-
Proceeds from long-term borrowings from related parties	-	-	3,591,290,000	-
Repayment of short-term borrowings from financial institutions	(11,677,122,068)	(2,489,641,920)	-	(2,000,000,000)
Repayment of short-term borrowings from related parties	-	-	(18,121,150,580)	(1,363,951,058)
Repayment of long-term borrowings from financial institutions	(15,499,703,388)	(12,612,178,627)	(6,035,200,000)	(7,713,600,000)
Repayment of long-term borrowings from other parties	(40,569,662)	(43,238,719)	-	-
Repayment of long-term borrowings from related parties	-	-	(27,915,187,171)	(16,182,922,753)
Proceeds from increase in investment in subsidiaries from non-controlling interests	-	89,500,000	-	-
Payment of decrease in investment in subsidiary to non-controlling interests	-	(39,265,070)	-	-
Repayment of debentures	(34,817,935,017)	(10,330,194,913)	(11,500,000,000)	-
Proceeds from subordinated perpetual debentures, net of issuance cost	16,927,213,828	-	16,927,213,828	-
Net cash used in financing activities	**(33,737,460,978)**	**(25,122,780,107)**	**(21,905,803,214)**	**(26,102,599,414)**
Net increase (decrease) in cash and cash equivalents, before effect of exchange rate changes	(5,304,631,365)	10,963,274,950	(4,819,799,167)	12,352,847,842
Effect of exchange rate changes on cash and cash equivalents and effect from translation differences on financial statements	731,014,559	415,850,080	262,165,467	-264,477,060
Net increase (decrease) in cash and cash equivalents	**(4,573,616,806)**	**11,379,125,030**	**(4,557,633,700)**	**12,088,370,782**
Cash and cash equivalents at 1 January	37,318,746,909	25,939,621,879	17,274,340,137	5,185,969,355
Cash and cash equivalents at 31 December	**32,745,130,103**	**37,318,746,909**	**12,716,706,437**	**17,274,340,137**

The accompanying notes are an integral part of these financial statements.

PTT Global Chemical Public Company Limited and its Subsidiaries

Notes to the Financial Statements

For the year ended 31 December 2024

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These notes form an integral part of the financial statements.

The financial statements were approved and authorised for issue by the Board of Directors on 17 February 2025.

1 General information

PTT Global Chemical Public Company Limited, the "Company", is incorporated in Thailand and was listed on the Stock Exchange of Thailand on 19 October 2011. The Company's registered offices are as follows:

Head Office	:	555/1, Energy Complex, Building A, 18th Floor, Vibhavadi-Rangsit Road, Chatuchak, Chatuchak, Bangkok, Thailand
Branch 1 (Rayong office Branch)	:	59, Radniyom Road, Tambon Noenphra, Amphoe Mueang Rayong, Rayong, Thailand
Branch 2 (Olefin 1 Branch)	:	14, I-1 Road, Tambon Map Ta Phut, Amphoe Mueang Rayong, Rayong, Thailand
Branch 3 (Olefin 2 Branch)	:	9, I-4 Road, Tambon Map Ta Phut, Amphoe Mueang Rayong, Rayong, Thailand
Branch 4 (Aromatics 1 Branch)	:	4, I-2 Road, Tambon Map Ta Phut, Amphoe Mueang Rayong, Rayong, Thailand
Branch 5 (Aromatics 2 Branch)	:	98/9, Rayong 3191 Road, Tambon Map Ta Phut, Amphoe Mueang Rayong, Rayong, Thailand
Branch 6 (Refining Branch)	:	8, I-8 Road, Tambon Map Ta Phut, Amphoe Mueang Rayong, Rayong, Thailand
Branch 7 (Jetty and Buffer Tank Farm Branch)	:	19, Rong Pui Road, Tambon Map Ta Phut, Amphoe Mueang Rayong, Rayong, Thailand
Branch 8 (Aromatics reserve Branch)	:	11, I-4 Road, Tambon Map Ta Phut, Amphoe Mueang Rayong, Rayong, Thailand
Branch 9 (Lab Service Center Branch)	:	24/9, Pakorn Songkrao-Rat Road, Tambon Map Ta Phut, Amphoe Mueang Rayong, Rayong, Thailand
Branch 10 (GC 10 Branch)	:	555/1, Energy Complex, Building A, 1st, 9th, 14th and 16th - 17th Floor, Vibhavadi-Rangsit Road, Chatuchak, Chatuchak, Bangkok, Thailand
Branch 11 (Olefin 3 Branch)	:	8, Phadang Road, Tambon Map Ta Phut, Amphoe Mueang Rayong, Rayong, Thailand
Branch 12 (Polyethylene Branch)	:	8, Map Ta Phut Industrial Estate, I-10 Road, Tambon Map Ta Phut, Amphoe Mueang Rayong, Rayong, Thailand
Branch 13 (Innoplus Solution Center Branch)	:	83/9-10, Moo 5, Tambon Tabma, Amphoe Mueang Rayong, Rayong, Thailand
Branch 14 (GC 14 Branch)	:	32, Rong Pui Road, Tambon Map Ta Phut, Amphoe Mueang Rayong, Rayong, Thailand

Branch 15 (GC Chemical Experience Campus)	:	66, National highway 363 Road, Tambon Noenphra, Amphoe Mueang Rayong, Rayong, Thailand
Branch 16 (Glycol Plant)	:	9-9/1, Soi G12, Pakorn Songkrorat Road, Tambon Map Ta Phut, Amphoe Mueang Rayong, Rayong, Thailand
Branch 17 (Polystyrene Plant)	:	7, I-1 Road, Tambon Map Ta Phut, Amphoe Mueang Rayong, Rayong, Thailand
Branch 18 (Phenol Plant)	:	9, Soi G9, Pakorn Songkrorat Road, Tambon Map Ta Phut, Amphoe Mueang Rayong, Rayong, Thailand
Branch 19 (Oxirane Plant)	:	12, Soi G4, Pakorn Songkrorat Road, Tambon Huai Pong, Amphoe Mueang Rayong, Rayong, Thailand

The Company is a company in the PTT Public Company Limited ("PTT") group of companies. PTT is incorporated in Thailand and is the major shareholder of the Company, holding 45.18% of the Company's issued and paid-up share capital.

The principal activities of the Company are refining and provision of integrated petroleum products, production and distribution of aromatics products including aromatic derivatives and production and distribution of ethylene, propylene, polyethylene plastic pellets and biochemical products. By-products are mixed C4, cracker bottom and tail gas. Minor activities are production and distribution of electricity, water, steam and other utilities. In addition, the Company also operates production support facilities such as jetty and buffer tank farm services for liquid chemical, oil and gas. Details of the Company's subsidiaries as at 31 December 2024 and 2023 are given in note 8.

2 Basis of preparation of the financial statements

The financial statements are prepared in accordance with Thai Financial Reporting Standards ("TFRS"), guidelines promulgated by the Federation of Accounting Professions and applicable rules and regulations of the Thai Securities and Exchange Commission. The financial statements are presented in Thai Baht, which is the Company's functional currency. The accounting policies, described in note 3, have been applied consistently to all periods presented in these financial statements.

The preparation of financial statements in conformity with TFRS requires management to make judgements, estimates and assumptions that affect the application of the Group's accounting policies. Actual results may differ from these estimates. Estimates and underlying assumptions that are described in note 3 are reviewed on an ongoing basis. Revisions to accounting estimates are recognised prospectively.

The Group has not adopted the new and revised TFRS which will be effective for the financial statements for the periods beginning on or after 1 January 2025 onwards in preparing these financial statements. The Group is in the process of assessing the potential impact on the financial statements from the adoption of these new and revised TFRS.

3 Material accounting policies

(a) Financial reporting standards that became effective in current year

During the year, the Group has adopted the revised financial reporting standards that promulgated by the Federation of Accounting Professions which are effective for fiscal years beginning on or after 1 January 2024. These financial reporting standards were aimed at alignment with the corresponding International Financial Reporting Standards with most of the changes directed towards clarifying accounting treatment and providing accounting guidance for users of the standards.

The adoption of these financial reporting standards does not have any significant impact on the Group's financial statements.

(b) Basis of consolidation

The consolidated financial statements relate to the Company and its subsidiaries and the Group's interests in associates and joint ventures.

Subsidiaries
Subsidiaries are entities controlled by the Group. The Group controls an entity when it has rights to variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. The financial statements of subsidiaries are included in the consolidated financial statements from the date on which control commences until the date on which control ceases.

At the acquisition date, the Group measures any non-controlling interest at its proportionate interest in the identifiable net assets of the acquiree.

When there is a change in the Group's interest in a subsidiary that does not result in a loss of control, any difference between the amount by which the non-controlling interests are adjusted and the fair value of the consideration paid or received from the acquisition or disposal of the non-controlling interests with no change in control is accounted for as other surplus/deficit in shareholders' equity.

When the Group loses control over a subsidiary, it derecognises the assets and liabilities, any related non-controlling interests and other components of equity of the subsidiary. Any resulting gain or loss is recognised in profit or loss. Any interest retained in the former subsidiary is measured at fair value when control is lost.

Associates and joint ventures
Associates are those entities in which the Group has significant influence, but not control or joint control, over the financial and operating policies. A joint venture is an arrangement in which the Group has joint control, whereby the Group has rights to the net assets of the arrangement.

The Group recognised investments in associates and joint ventures using the equity method in the consolidated financial statements. They are initially recognised at cost, which includes transaction costs. Subsequent to initial recognition, the consolidated financial statements include the Group's dividend income and share of the profit or loss and other comprehensive income of equity–accounted investees, until the date on which significant influence or joint control ceases.

If an investment in an associate becomes an investment in a joint venture or vice versa, the retained interest is not remeasured. Instead, the investment continues to be accounted for under the equity method. In all other cases, when the group ceases to have significant influence over an associate or joint control over a joint venture, it is accounted for as a disposal of the entire interest in that investee, with a resulting gain or loss being recognised in profit or loss. Any interest retained in that former investee at the date when significant influence or joint control is lost is recognised at fair value and this amount is regarded as the fair value on initial recognition of a financial asset.

Intra-group balances and transactions, and any income or expenses arising from intra-group transactions, are eliminated on consolidation. Unrealised gains or losses arising from transactions with associates and joint ventures are eliminated against the investment to the extent of the Group's interest in the investee.

Business combinations

The Group applies the acquisition method when the Group assesses that the acquired set of activities and assets meets the definition of a business and control is transferred to the Group, other than business combinations with entities under common control. The Group elect to apply a 'concentration test' that permits a simplified assessment of whether an acquired set of activities and assets is not a business.

The consideration transferred in the acquisition is generally measured at fair value, as are the identifiable net assets acquired. Any goodwill that arises is tested annually for impairment (see note 3(n)). Any gain on bargain purchase is recognised in profit or loss immediately. Transaction costs are expensed as incurred, except if related to the issue of debt or equity securities.

Consideration transferred or any contingent consideration is measured at fair value at the date of acquisition, and remeasured at fair value at each reporting date. Subsequent changes in the fair value are recognised in profit or loss.

A contingent liability of the acquiree is assumed in a business combination only if such a liability represents a present obligation and arises from a past event, and its fair value can be measured reliably.

If the initial accounting for a business combination is incomplete by the end of the reporting period in which the combination occurs, the Group estimates provisional amounts for the items for which the accounting is incomplete. Those provisional amounts are adjusted during the measurement period, or additional assets or liabilities are recognised, to reflect new information obtained about facts and circumstances that existed at the acquisition date that, if known, would have affected the amounts recognised at that date.

When a business combination is achieved in stages, the Group's previously held equity interest in the acquiree is remeasured to its acquisition-date fair value and the resulting gain or loss, if any, is recognised in profit or loss. Amounts arising from interests in the acquiree prior to the acquisition date that have previously been recognised in other comprehensive income are reclassified to profit or loss where such treatment would be appropriate if that interest were disposed of.

Business combination under common control are accounted for using a method similar to the pooling of interest method, by recognising assets and liabilities of the acquired businesses at their carrying amounts in the consolidated financial statements of the ultimate parent company at the transaction date. The difference between the carrying amount of the acquired net assets and the consideration transferred is recognised as surplus or deficit from business combinations under common control in shareholder's equity. The surplus or deficit will be transferred to retained earnings upon divestment of the businesses acquired. The results from operations of the acquired businesses will be included in the consolidated financial statements of the acquirer from the beginning of the comparative period or the moment the businesses came under common control, whichever date is later, until control ceases.

(c) Investments in subsidiaries, associates and joint ventures

Investments in subsidiaries, associates and joint ventures in the separate financial statements are measured at cost less allowance for impairment losses. Dividend income is recognised in profit or loss on the date on which the Company right to receive payment is established. If the Company disposes of part of its investment, the deemed cost of the part sold is determined using the weighted average method. Gains and losses on disposal of the investments are recognised in profit or loss.

(d) Foreign currencies

Transactions in foreign currencies including non-monetary assets and liabilities denominated in foreign currencies are translated to the respective functional currencies of each entity in the Group at exchange rates at the dates of the transactions. Monetary assets and liabilities denominated in foreign currencies are translated at the exchange rate at the reporting date. Non-monetary assets and liabilities measured at fair value in foreign currencies are translated at the exchange rates at the dates that fair value was determined.

Foreign currency differences are generally recognised in profit or loss. However, foreign currency differences arising from the translation of the following items are recognised in other comprehensive income:

- an investment in equity securities designated as at FVOCI
- a financial liability designated as a hedge of the net investment in a foreign operation to the extent that the hedge is effective; and
- qualifying cash flow hedges to the extent the hedge is effective.

Foreign operations
The assets and liabilities of foreign operations, including goodwill and fair value adjustments arising on acquisition, are translated to Thai Baht at the exchange rates at the reporting date. The revenues and expenses of foreign operations are translated to Thai Baht at rates approximating the exchange rates at average rate during the year.

Foreign exchange differences are recognised in other comprehensive income and accumulated in the translation reserve until disposal of the investment, except to the extent that the translation difference is allocated to non-controlling interests.

When a foreign operation is disposed of in its entirety or partially such that control, significant influence or joint control is lost, the cumulative amount in the translation reserve related to that foreign operation is reclassified to profit or loss as part of the gain or loss on disposal.

When the settlement of a monetary item receivable from or payable to a foreign operation is neither planned nor likely in the foreseeable future, exchange gains and losses arising from such a monetary item are considered to form part of a net investment in a foreign operation and are recognised in other comprehensive income, and presented in the translation reserve in equity until disposal of the investment.

(e) Financial instruments

(e.1) Classification and measurement

Other financial assets and financial liabilities (except trade accounts receivable (see note 3(g))) are initially recognised when the Group becomes a party to the contractual provisions of the instrument, and measured at fair value plus or minus, for an item not at fair value through profit or loss (FVTPL), transaction costs that are directly attributable to its acquisition or issue.

Regular way of purchases and sales of financial assets are recognised on trade-date, the date on which the Group commits to purchase or sell the asset.

Initial recognition

Financial asset is classified as measured at: amortised cost; fair value through other comprehensive income (FVOCI); or FVTPL. Financial assets are not reclassified subsequent to their initial recognition unless the Group changes its business model for managing financial assets, in which case all affected financial assets are reclassified prospectively from the reclassification date.

Financial liabilities are classified as measured at amortised cost using the effective interest method or FVTPL. Interest expense, foreign exchange gains and losses are recognised in profit or loss.

Subsequently measured

Financial assets measured at amortised costs are subsequently measured at amortised cost using the effective interest method. The amortised cost is reduced by expected credit losses. Interest income, foreign exchange gains and losses, expected credit loss and any gain or loss on derecognition are recognised in profit or loss.

Debt investments measured at FVOCI are subsequently measured at fair value. Interest income, calculated using the effective interest method, foreign exchange gains and losses and expected credit loss are recognised in profit or loss. Other net gains and losses are recognised in OCI. On derecognition, gains and losses accumulated in OCI are reclassified to profit or loss.

Equity investments measured at FVOCI are subsequently measured at fair value. Dividend income is recognised as income in profit or loss on the date on which the Group's right to receive dividend is established, unless the dividend clearly represents a recovery of part of the cost of the investment. Other net gains and losses are recognised in OCI and are never reclassified to profit or loss.

(e.2) Derecognition and offset

The Group derecognises a financial asset when the contractual rights to receive the cash flows from the financial asset expire, or it transfers the rights to receive the contractual cash flows in a transaction in which substantially all of the risks and rewards of ownership of the financial asset are transferred or in which the Group neither transfers nor retains substantially all of the risks and rewards of ownership and it does not retain control of the financial asset.

The Group derecognises a financial liability when its contractual obligations are discharged or cancelled, or expire. The Group also derecognises a financial liability when its terms are modified and the cash flows of the modified liability are substantially different, in which case a new financial liability based on the modified terms is recognised at fair value.

The difference between the carrying amount extinguished and the consideration received or paid is recognised in profit or loss.

Financial assets and financial liabilities are offset and the net amount presented in the statement of financial position when, and only when, the Group currently has a legally enforceable right to set off the amounts and the Group intends either to settle them on a net basis or to realise the asset and settle the liability simultaneously.

(e.3) Derivatives

Derivative are recognised at fair value and remeasured at fair value at each reporting date. The gain or loss on remeasurement to fair value is recognised immediately in profit or loss, except when a derivative is designated as a hedging instrument for which recognition of any resultant gain or loss depends on the nature of the item being hedged.

(e.4) Hedging

Cash flow hedges

When a derivative is designated as a cash flow hedging instrument, the effective portion of changes in the fair value of the derivative is recognised in OCI and accumulated in the hedging reserve. The effective portion that is recognised in OCI is limited to the cumulative change in fair value of the hedge item, determined on a present value basis, from inception of the hedge. Any ineffective portion is recognised immediately in profit or loss.

When the hedged forecast transaction subsequently results in the recognition of a non-financial item such as inventory, the amount accumulated in the cash flow hedging reserve is included directly in the initial cost of the non-financial item when it is recognised.

For all other hedged forecast transactions, the amount accumulated in the cash flow hedging reserve is reclassified to profit or loss in the same period or periods during which the hedged expected future cash flows affect profit or loss.

If the hedge no longer meets the criteria for hedge accounting or the hedging instrument is sold, expires, is terminated or is exercised, then hedge accounting is discontinued prospectively. When hedge accounting for cash flow hedges is discontinued, the amount that has been accumulated in the cash flow hedging reserve remains in equity until, for a hedge of a transaction resulting in the recognition of a non-financial item, it is included in the non-financial item's cost on its initial recognition or, for other cash flow hedges, it is reclassified to profit or loss in the same period or periods as the hedged expected future cash flows affect profit or loss.

If the hedged future cash flows are no longer expected to occur, then the amounts that have been accumulated in the cash flow hedging reserve are immediately reclassified to profit or loss.

(e.5) Impairment of financial assets other than trade accounts receivable

The Group assesses ECLs by reviewing credit ratings of the financial assets unless there has been a significant increase in credit risk of the financial instrument since initial recognition or credit-impaired financial assets, the loss allowance is measured at an amount equal to lifetime ECLs.

In determining allowance of expected credit loss, if the financial asset is considered to have low credit risk and no significant incremental of credit risk since initial recognition, the Group will not recognise any allowance of expected credit loss.

(e.6) Write offs

The gross carrying amount of a financial asset is written off when the Group has no reasonable expectations of recovering. Subsequent recoveries of an asset that was previously written off, are recognised as a reversal of impairment in profit or loss in the period in which the recovery occurs.

(e.7) Interest

Interest income and expense is recognised in profit or loss using the effective interest method. In calculating interest income and expense, the effective interest rate is applied to the gross carrying amount of the asset (when the asset is not credit-impaired) or to the amortised cost of the liability.

(f) Cash and cash equivalents

Cash and cash equivalents are cash on hand and all types of deposits at bank and financial institutions with original maturity of three months or less from the date of acquisition, excluding deposits at banks used as collateral (if any).

(g) Trade accounts receivable

A trade receivable is recognised when the Group has an unconditional right to receive consideration. A trade receivable is measured at transaction price less allowance for expected credit loss. Bad debts are written off when incurred.

The Group estimates lifetime expected credit losses (ECLs), using a provision matrix to find the ECLs rates. This method groups the debtors based on shared credit risk characteristics and past due status, taking into account historical credit loss data, adjusted for factors that are specific to the debtors and an assessment of both current economic conditions and forward-looking general economic conditions at the reporting date.

(h) Inventories

Inventories are measured at the lower of cost and net realisable value. Cost is calculated using the weighted average cost principle. Cost includes direct costs incurred in acquiring the inventories. In the case of manufactured inventories and work-in-progress, cost includes an appropriate share of production overheads based on normal operating capacity. Net realisable value is the estimated selling price in the ordinary course of business less the estimated costs to complete and to make the sale.

Provision is made for obsolete and slow-moving finished goods, raw materials, factory supplies and spare parts based on the items that are obsoleted and expected to be unsalable.

(i) Investment properties

Investment properties are measured at cost less accumulated depreciation and accumulated impairment losses. Cost includes expenditure that is directly attributable to the acquisition of the investment property. The cost of self-constructed assets includes capitalised borrowing costs.

Depreciation is calculated on a straight-line basis over the estimated useful lives of buildings and buildings improvement of 10 - 30 years and recognised in profit or loss. No depreciation is charged on freehold land and assets under construction.

Differences between the proceeds from disposal and the carrying amount of investment property are recognised in profit or loss.

(j) Property, plant and equipment

Property, plant and equipment are measured at cost less accumulated depreciation and accumulated impairment losses.

Cost includes capitalised borrowing costs, and the costs of dismantling and removing the items and restoring the site on which they are located including transfers from other comprehensive income of any gain or loss on qualifying cash flow hedges of foreign currency purchases of property, plant and equipment.

Differences between the proceeds from disposal and the carrying amount of property, plant and equipment are recognised in profit or loss.

The cost of replacing a part of an item of property, plant and equipment is recognised in the carrying amount of the item when the future economic benefits embodied within the part will flow to the Group, and its cost can be measured reliably. The carrying amount of the replaced part is derecognised. The costs of the day-to-day servicing of property, plant and equipment are recognised in profit or loss as incurred.

Depreciation
Depreciation is calculated on a straight-line basis over the estimated useful lives of each component of an asset and recognised in profit or loss. No depreciation is provided on freehold land and assets under construction.

The estimated useful lives are as follows:

Land improvement	5 - 35	years
Buildings and buildings improvement	5 - 40	years
Plant, machinery, equipment and factory tools	5 - 50	years
Furniture, fixtures and equipment	3 - 30	years
Vehicles	5 - 25	years

(k) Goodwill

Goodwill is measured at cost less accumulated impairment losses. In respect of equity-accounted investee, the carrying amount of goodwill is included in the carrying amount of the investment.

(l) Intangible assets

Intangible assets are measured at cost less accumulated amortisation and accumulated impairment losses. Subsequent expenditure is capitalised only when it will generate future economic benefits. Amortisation is calculated on a straight-line basis over the estimated useful lives of intangible assets and recognised in profit or loss from the date that they are available for use.

The estimated useful lives are as follows:

Production licence fees	10 - 35	years
Computer software	3 - 20	years
Customer contracts and the related customer relationships	5 - 25	years
Right to use - others	10 - 23	years

(m) Leases

At inception of a contract, the Group assesses that a contract is, or contains, a lease when it conveys the right to control the use of an identified asset for a period of time in exchange for consideration.

The Group as lessee
At commencement or on modification of a contract, the Group allocates the consideration in the contract to each lease component on the basis of its relative stand-alone prices of each component.

The Group recognises a right-of-use asset and a lease liability at the lease commencement date, except for leases of low-value assets and short-term leases which are recognised as expenses on a straight-line basis over the respective lease terms.

Right-of-use asset is measured at cost, less any accumulated depreciation and accumulated impairment loss, and adjusted for any remeasurements of lease liability. The cost of right-of-use asset includes the initial amount of the lease liability adjusted for any prepaid lease payments, plus any initial direct costs incurred and an estimate of restoration costs, less any lease incentives received. Depreciation is charged to profit or loss on a straight-line method from the commencement date to the end of the lease term, unless the lease transfers ownership of the underlying asset to the Company by the end of the lease term or the Group will exercise a purchase option. In that case the right-of-use asset will be depreciated over the useful life of the underlying asset, which is determined on the same basis as those of property and equipment.

The lease liability is initially measured at the present value of all lease payments that shall be paid under the lease. The Group uses the interest rate implicit in the lease. If this rate cannot be readily determined, the Group uses its incremental borrowing rate to discount the lease payments to the present value.

The lease liability is measured at amortised cost using the effective interest method. It is remeasured when there is a lease modification. When the lease liability is remeasured, a corresponding adjustment is made to the carrying amount of the right-of-use asset or is recognised in profit or loss if the carrying amount of the right-of-use asset has been reduced to zero and the Group elected not to assess that the rent concessions are lease modification, the Group remeasured lease liabilities using the original discount rate and recognised the impact of the change in lease liability in profit or loss.

The Group as lessor
At lease inception, the Group considers to classify a lease that transfers substantially all of the risks and rewards incidental to ownership of the underlying asset to lessees as a finance lease. A lease that does not meet this criteria is classified as an operating lease.

The Group recognises lease payments received under operating leases in profit or loss on a straight-line basis over the lease term as part of other income. Initial direct costs incurred in arranging an operating lease are added to the carrying amount of the leased asset and recognised over the lease term on the same basis as rental income.

(n) Impairment of non-financial assets

The carrying amounts of the Group's assets are reviewed at each reporting date to determine whether there is any indication of impairment. If any such indication exists, the assets' recoverable amounts are estimated. For goodwill and intangible assets that have indefinite useful lives or are not yet available for use, the recoverable amount is estimated each year at the same time.

An impairment loss is recognised in profit or loss if the carrying amount of an asset or its cash-generating unit exceeds its recoverable amount.

The recoverable amount is the greater of the asset's value in use and fair value less costs to sell. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset.

An impairment loss of asset recognised in prior periods is reversed if there has been a change in the estimates used to determine the recoverable amount. An impairment loss in respect of goodwill is not reversed. An impairment loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of depreciation or amortisation, if no impairment loss had been recognised.

(o) Employee benefits

Defined contribution plan
Obligations for contributions to the Group's provident funds are expensed as the related service is provided.

Defined benefit plans
The Group's net obligation in respect of defined benefit plans is calculated by estimating the amount of future benefit that employees have earned in the current and prior periods. The defined benefit obligations is discounted to the present value, discounting that amount net with fair value of plan assets. The calculation of defined benefit obligations is performed every 3 years by a qualified actuary using the projected unit credit method.

Remeasurements of the net defined benefit liability, actuarial gain or loss are recognised immediately in OCI. The Group determines the interest expense on the net defined benefit liability for the period by applying the discount rate used to measure the defined benefit obligation, taking into account any changes in the net defined benefit liability as a result of contributions and benefit payments. Net interest expense and other expenses related to defined benefit plans are recognised in profit or loss.

When the benefits of a plan are changed or when a plan is curtailed, the resulting change in benefit that relates to past service or the gain or loss on curtailment is recognised immediately in profit or loss. The Group recognises gains and losses on the settlement of a defined benefit plan when the settlement occurs.

The Group's net obligation in respect of long-term employee benefits is the amount of future benefit that employees have earned in return for their service in the current and prior periods. That benefit is discounted to determine its present value. Remeasurements are recognised in profit or loss in the period in which they arise.

Termination benefits are expensed at the earlier of when the Group can no longer withdraw the offer of those benefits and when the Group recognizes costs for a restructuring. If benefits are not expected to be settled wholly within 12 months of the end of the reporting period, then they are discounted.

Short-term employee benefits are expensed as the related service is provided. A liability is recognised for the amount expected to be paid if the Group has a present legal or constructive obligation to pay this amount as a result of past service provided by the employee and the obligation can be estimated reliably.

(p) Provisions

Provisions are determined by discounting the expected future cash flows at a pre-tax rate that reflects current market assessments of the time value of money and the risks specific to the liability. The unwinding of the discount is recognised as a finance cost.

(q) Subordinated perpetual debentures

Subordinated perpetual debentures which are payable upon dissolution are recognised as equity as the Company has the sole right and discretion to early redemption as stipulated in terms and conditions of debentures, and the interest and cumulative interest payment can be unconditionally deferred without time and number limitation and payable at the Company's discretion. Accordingly, any interest payments are recognised similar as dividends and directly in equity when payment obligation arises. Interest payments are presented in the statement of cash flows at the same way as dividends paid to ordinary shareholders.

(r) Fair value measurement

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date in the principal or, in its absence, the most advantageous market to which the Group has access at that date. The fair value of a liability reflects its non-performance risk.

When measuring the fair value of an asset or a liability, the Group uses observable market data as far as possible. Fair values are categorised into different levels in a fair value hierarchy based on the inputs used in the valuation techniques as follows:

- Level 1: quoted prices in active markets for identical assets or liabilities that the entity can access at the measurement date.
- Level 2: inputs other than quoted prices included in Level 1 that are observable for the asset or liability, either directly or indirectly.
- Level 3: inputs for the asset or liability that are based on unobservable input.

If the inputs used to measure the fair value of an asset or liability might be categorised in different levels of the fair value hierarchy, then the fair value measurement is categorised in its entirety in the same level of the fair value hierarchy as the lowest level input that is significant to the entire measurement.

(s) Revenue from contracts with customers

(1) Revenue recognition

Revenue is recognised when a customer obtains control of the goods or services in an amount that reflects the consideration to which the Group expects to be entitled, excluding those amounts collected on behalf of third parties, value added tax or other sales taxes and is after deduction of any trade discounts and volume rebates.

Revenue from sales of goods is recognised on the date on which the goods are delivered to the customers.

Revenues from rendering of services is recognised as a performance obligation satisfied at a point in time when services underlying the particular performance obligation is transferred to the customer or is recognised over time based on the stage of completion of the contract.

(2) Contract balances

Contract assets are recognised when the Group has recognised revenue before it has an unconditional right to receive consideration. The contract assets are measured at the amount of consideration that the Group is entitled to, less allowance for expected credit loss. The contract assets are classified as trade receivables when the Group has an unconditional right to receive consideration.

Contract liabilities including advances received from customers are the obligation to transfer goods or services to the customer. The contract liabilities including advances received from customers are recognised when the Group receives or has an unconditional right to receive non-refundable consideration from the customer before the Group recognises the related revenue.

(t) Income tax

Income tax expense for the year comprises current and deferred tax, which is recognised in profit or loss except to the extent that it relates to a business combination, or items recognised directly in equity or in other comprehensive income.

The Group has determined that the global minimum top-up tax which it is required to pay under Pillar Two legislation is an income tax in the scope of TAS 12. The Group has applied a temporary mandatory relief from deferred tax accounting for the impacts for the top-up tax and accounts for it as a current tax when it is incurred.

Current tax is recognised in respect of the taxable income or loss for the year, using tax rates enacted or substantively enacted at the end of the reporting date, and any adjustment to tax payable in respect of previous years.

Deferred tax is recognised in respect of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for taxation purposes. Deferred tax is not recognised for the temporary differences: the initial recognition of goodwill; the initial recognition of assets or liabilities in a transaction that is not a business combination and that affects neither accounting nor taxable profit or loss; and differences relating to investments in subsidiaries and joint ventures to the extent that it is probable that they will not reverse in the foreseeable future.

The measurement of deferred tax reflects the tax consequences that would follow the manner in which the Group expects, at the end of the reporting period, to recover or settle the carrying amount of its assets and liabilities, using tax rates enacted or substantively enacted at the reporting date. Current deferred tax assets and liabilities are offset in the separate financial statements.

A deferred tax asset is recognised to the extent that it is probable that future taxable profits will be available against which the temporary differences can be utilised. Deferred tax assets are reviewed at each reporting date and reduced to the extent that it is no longer probable that the related tax benefit will be realised.

(u) Earnings (loss) per share

Basic earnings (loss) per share EPS is calculated by dividing the profit or loss attributable to ordinary shareholders of the Company less coupon payment for the year on Subordinated perpetual debentures whether it has been accrued or not, by the weighted average number of ordinary shares outstanding during the period.

4 Related parties

A related party is a person or entity that has direct or indirect control or joint control, or has significant influence over the financial and managerial decision-making of the Group; a person or entity that is under common control or under the same significant influence as the Group; or a person or entity over which the Group has direct or indirect control or joint control or has significant influence over the financial and managerial decision-making.

Relationships with parent of the Group, subsidiaries, associates and joint ventures are described in notes 1, 8 and 9. Other related parties which the Group had significant transactions with during the year were as follows:

Name of entities	Country of incorporation	Nature of relationships
Vencorex (Thailand) Co., Ltd.	Thailand	Indirect subsidiary, 100% shareholding by indirect subsidiary
NPC S&E Security Guard Co., Ltd.	Thailand	Indirect subsidiary, 100% shareholding by the Group
Allnex (Thailand) Ltd.	Thailand	Indirect subsidiary, 94.96% shareholding by the Group
Allnex Austria GmbH	Austria	Indirect subsidiary, 100% shareholding by the Group
Allnex Belgium SA/NV	Belgium	Indirect subsidiary, 100% shareholding by the Group
Allnex Management Gmbh	Germany	Indirect subsidiary, 100% shareholding by the Group
Allnex New Zealand Limited	New Zealand	Indirect subsidiary, 100% shareholding by the Group
Allnex Resins Australia Pty. Ltd.	Australia	Indirect subsidiary, 100% shareholding by the Group
GC America Sustainability Corporation (Formerly PTTGC Innovation America Corporation)	United States of America	Indirect subsidiary, 100% shareholding by the Group, common director and the Company's management as director
GC International Corporation	United States of America	Indirect subsidiary, 100% shareholding by the Group and the Company's management as director
GC Marketing Solutions (Shanghai) Co., Ltd.	China	Indirect subsidiary, 100% shareholding by the Group
GC Marketing Solutions Myanmar Co., Ltd.	Myanmar	Indirect subsidiary, 100% shareholding by the Group
GC Marketing Solutions Vietnam Co., Ltd.	Vietnam	Indirect subsidiary, 100% shareholding by the Group
Nuplex Resins (Vietnam) Pty Limited	Vietnam	Indirect subsidiary, 100% shareholding by the Group
PT GCM Marketing Solutions Indonesia	Indonesia	Indirect subsidiary, 100% shareholding by the Group
PTTGC America LLC	United States of America	Indirect subsidiary, 100% shareholding by the Group, common director and the Company's management as director
PTTGC International (Netherlands) B.V.	Netherlands	Indirect subsidiary, 100% shareholding by the Group, common director
Vencorex France S.A.S.	France	Indirect subsidiary, 100% shareholding by indirect subsidiary
Vencorex Holding	France	Indirect subsidiary, 100% shareholding by subsidiary, common director and the Company's management as director
GHECO-One Company Limited	Thailand	Other related party, indirect shareholding by parent company
Energy Complex Co., Ltd.	Thailand	Other related party, shareholding by parent company
Global Power Synergy Plc.	Thailand	Other related party, 10% shareholding, shareholding by parent company and the Company's management as director
Glow SPP 11 Company Limited	Thailand	Other related party, indirect shareholding by parent company
Glow SPP 2 Company Limited	Thailand	Other related party, indirect shareholding by parent company

Name of entities	Country of incorporation	Nature of relationships
Glow SPP 3 Company Limited	Thailand	Other related party, indirect shareholding by parent company
Glow IPP Company Limited	Thailand	Other related party, indirect shareholding by parent company
Glow Energy Public Company Limited	Thailand	Other related party, indirect shareholding by parent company
Thai Paraxylene Co., Ltd.	Thailand	Other related party, indirect shareholding by parent company
Thai Lube Base Public Company Limited	Thailand	Other related party, indirect shareholding by parent company
Thai Oil Plc.	Thailand	Other related party, shareholding by parent company
IRPC Polyol Co., Ltd.	Thailand	Other related party, indirect shareholding by parent company
IRPC Plc.	Thailand	Other related party, shareholding by parent company
Trans Thai-Malaysia (Thailand) Limited	Thailand	Other related party, shareholding by parent company
TOPNEXT International Company Limited	Thailand	Other related party, indirect shareholding by parent company
Thai Petroleum Pipeline Co., Ltd.	Thailand	Other related party, indirect shareholding by parent company
Nuovo Plus Co., Ltd.	Thailand	Other related party, indirect shareholding by parent company
Business Services Alliance Co., Ltd.	Thailand	Other related party, shareholding by parent company, the Company and a Company's associate, each of 25% shareholding of preferred stock
PTT Natural Gas Distribution Co., Ltd.	Thailand	Other related party, shareholding by parent company
PTT Oil and Retail Business Plc.	Thailand	Other related party, shareholding by parent company
PTTEP Energy Development Company Limited	Thailand	Other related party, indirect shareholding by parent company
PTTEP Siam Limited	Thailand	Other related party, indirect shareholding by parent company
PTTEP International Limited	Thailand	Other related party, indirect shareholding by parent company
PTTEP International Limited (Yangon Branch)	Thailand	Other related party, indirect shareholding by parent company
PTT Exploration and Production Plc.	Thailand	Other related party, shareholding by parent company, common director
Combined Heat and Power Producing Company Limited	Thailand	Other related party, indirect shareholding by parent company
PTT Tank Terminal Limited	Thailand	Other related party, shareholding by parent company
PTT LNG Co., Ltd.	Thailand	Other related party, shareholding by parent company, common director
Modulus Venture Company Limited	Thailand	Other related party, indirect shareholding by parent company
Sak Chaisidhi Co., Ltd.	Thailand	Other related party, indirect shareholding by parent company
Sport Services Alliance Co., Ltd.	Thailand	Other related party, indirect shareholding by parent company
Amata Natural Gas Distribution Co., Ltd.	Thailand	Other related party, indirect shareholding by parent company

Name of entities	Country of incorporation	Nature of relationships
UBE Chemicals (Asia) Plc.	Thailand	Other related party, indirect shareholding by parent company
PT.Tirta Surya Raya	Indonesia	Other related party, indirect shareholding by parent company
PTT International Trading London Ltd.	England	Other related party, shareholding by parent company
PTT International Trading Pte. Ltd.	Singapore	Other related party, shareholding by parent company
PTT International Trading USA Inc.	United States of America	Other related party, shareholding by parent company
PTT MEA Ltd.	United Arab Emirates	Other related party, indirect shareholding by parent company
PTTEP SP Limited	England	Other related party, indirect shareholding by parent company
TOP Solvent (Vietnam) LLC.	Vietnam	Other related party, indirect shareholding by parent company

Significant transactions with related parties	**Consolidated financial statements**		**Separate financial statements**	
Year ended 31 December	2024	2023	2024	2023
		(in million Baht)		
Parent of the Group				
Sales of goods or rendering of services	22,903	19,584	22,687	19,304
Purchases of goods or receiving of services	348,848	343,693	347,989	342,530
Other income	34	14	34	14
Finance costs	21	20	21	20
Other expenses	50	55	50	54
Expense capitalised to fixed assets	-	1	-	1
Subsidiaries				
Sales of goods or rendering of services	-	-	44,431	38,706
Purchases of goods or receiving of services	-	-	9,285	9,384
Interest income	-	-	2,908	1,884
Dividend income	-	-	2,921	9,443
Other income	-	-	735	2,270
Finance costs	-	-	3,713	4,191
Other expenses	-	-	163	1,966
Expense capitalised to fixed assets	-	-	1,371	3,073
Joint ventures				
Sales of goods or rendering of services	15,730	15,466	12,996	13,772
Purchases of goods or receiving of services	4,087	3,626	3,752	3,497
Interest income	13	66	13	48
Dividend income	-	-	350	1,002
Other income	173	115	141	91
Finance costs	397	406	352	353
Other expenses	2,408	251	2,086	245

Significant transactions with related parties	Consolidated financial statements		Separate financial statements	
Year ended 31 December	2024	2023	2024	2023
		(in million Baht)		
Associates				
Sales of goods or rendering of services	8,957	8,355	6,775	6,146
Purchases of goods or receiving of services	326	388	151	188
Dividend income	-	-	647	1,326
Other income	158	166	158	166
Other expenses	573	518	535	482
Expense capitalised to fixed assets	70	115	66	94
Other related parties				
Sales of goods or rendering of services	243,913	259,928	236,489	253,047
Purchases of goods or receiving of services	37,113	53,010	31,211	45,152
Net derivative gain (loss)	570	(594)	570	(594)
Dividend income	251	172	251	172
Other income	386	112	1,126	105
Finance costs	4	6	3	5
Other expenses	280	317	237	278
Expense capitalised to fixed assets	-	2	-	2
Key management personnel				
Key management personnel compensation				
Short-term employee benefit	431	502	192	169
Post-employment benefits and other long-term benefits	11	7	6	5
Total key management personnel compensation	**442**	**509**	**198**	**174**

Balances with related parties	Consolidated financial statements		Separate financial statements	
At 31 December	2024	2023	2024	2023
		(in million Baht)		
Trade accounts receivable				
Parent	2,012	2,456	1,954	2,386
Subsidiaries	-	-	6,195	4,915
Joint ventures	2,177	2,286	1,494	1,852
Associates	934	1,294	560	600
Other related parties	14,643	21,684	14,004	21,218
Total	**19,766**	**27,720**	**24,207**	**30,971**
Other current receivables				
Parent	376	312	376	310
Subsidiaries	-	-	335	260
Joint ventures	49	940	43	936
Associates	60	29	29	25
Other related parties	815	664	665	562
Total	**1,300**	**1,945**	**1,448**	**2,093**

Balances with related parties *At 31 December*	Consolidated financial statements		Separate financial statements	
	2024	2023	2024	2023
	(in million Baht)			
Derivatives - Current assets				
Other related parties	2	37	2	37
Total	**2**	**37**	**2**	**37**
Short-term loans to				
Subsidiaries	-	-	1,824	3,294
Total	**-**	**-**	**1,824**	**3,294**
Long-term loans to				
Subsidiaries	-	-	48,291	50,896
Joint ventures	947	202	947	202
Total	**947**	**202**	**49,238**	**51,098**
Less current portion	(67)	(54)	(67)	(54)
	880	**148**	**49,171**	**51,044**
Trade accounts payable				
Parent	44,870	50,933	44,802	50,874
Subsidiaries	-	-	407	451
Joint ventures	269	180	226	149
Associates	52	50	21	23
Other related parties	2,010	5,782	1,638	5,136
Total	**47,201**	**56,945**	**47,094**	**56,633**
Other current payables				
Parent	365	401	364	400
Subsidiaries	-	-	923	1,325
Joint ventures	739	787	623	650
Associates	168	253	139	113
Other related parties	160	123	141	96
Total	**1,432**	**1,564**	**2,190**	**2,584**
Derivatives - Current liabilities				
Other related parties	4	3	4	3
Total	**4**	**3**	**4**	**3**
Payables to contractors				
Subsidiaries	-	-	987	1,406
Associates	25	32	24	30
Other related parties	-	1	-	1
Total	**25**	**33**	**1,011**	**1,437**
Lease liabilities				
Parent	578	560	563	544
Subsidiaries	-	-	7	1
Joint ventures	13,469	14,053	12,145	12,629
Other related parties	225	143	198	120
Total	**14,272**	**14,756**	**12,913**	**13,294**

Balances with related parties	Consolidated financial statements		Separate financial statements	
At 31 December	2024	2023	2024	2023
	(in million Baht)			
Short-term loans from				
Subsidiaries	-	-	2,612	1,580
Total	**-**	**-**	**2,612**	**1,580**
Long-term loans from				
Subsidiaries	-	-	51,684	74,266
Total	**-**	**-**	**51,684**	**74,266**
Less current portion	-	-	(835)	-
	-	**-**	**50,849**	**74,266**

Significant agreements with related parties

As at 31 December 2024, significant agreements with related parties are as follows:

Sales and Purchase Agreements
The Company has 3 Ethylene sales and purchase agreements with 2 related parties. Selling prices are determined based on Ethylene price in the world market. Two agreements are for the period of 10 years and 15 years commencing from the effective date specified in each agreement and expiring in December 2031 and December 2037 and one agreement is for the period of 10 years, starting from the plant commercial operation date.

The Company has 3 Propylene sales and purchase agreements with a related party. Selling prices are determined based on Polypropylene plastic pellets and Propylene prices in the world market. These agreements are for the periods from 4 years to 15 years, commencing from the effective date specified in each agreement and expiring from December 2024 to December 2037.

The Company has a Butadiene sales and purchase agreement with a related party. Selling prices are determined based on Butadiene price in the world market. The agreement is for the period of 15 years, starting from the plant commercial operation date and will expire in January 2038.

The Company has 2 Ethylene Oxide sale and purchase agreements with 2 related parties. Selling price is determined based on Ethylene price prevailing in the world market. The agreements are for the period of 15 years, commencing from the date as specified in the agreement and will expire in March 2031 and August 2035, respectively. The agreements are automatically renewed and can be terminated by advance cancellation not less than 2 years through written notice to the counterparty.

The Company has a Monoethylene Glycol sale and purchase agreement with a related party. Selling prices are charged under the conditions as specified in the agreement. The agreement is for the period of 2 years, commencing from the date as specified in the agreement and will expire in December 2026.

The Company has a Propylene Oxide Purchase and Sale Agreement with a related company. Selling prices are determined based on reference price of Propylene Oxide announced in the market. The period of this agreement is 15 years and will expire in December 2035.

The Company has 2 Acetone purchase and sales agreements with a related party. Selling prices are determined in the agreements. These agreements are for the periods of 1 year, commencing from the effective date as specified in each agreement and will expire in December 2025.

By-Product Sales and Purchase Agreements
The Company has Hydrogen sales and purchase agreements with a related party. Selling price in the agreements are determined based on Natural Gas price for the industry. The agreement is for the period of 19 years 9 months and will expire in December 2028.

Utilities and Other Services Agreements
The Company has 2 Power Supply agreements with 2 related parties. Selling prices in these agreements are determined based on reference price from the Provincial Electricity Authority. These agreements are for the periods of 2 years and 15 years, commencing from the date as specified in each agreement and expiring in June 2027 and September 2029, respectively.

The Company has 8 Utilities agreements covering electricity, steam and demineralised water with a related party. These agreements are for the periods from 12 years to 19 years 9 months, commencing from the date as specified in each agreement and expiring from December 2028 to December 2038.

The Company and subsidiaries have many Utilities agreements for the industries covering electricity, steam, and water for industrial use with 2 related parties. These agreements are for the periods from 2 years 6 months to 25 years, commencing from the date as specified in each agreement and expiring from June 2025 to June 2045 and one agreement is automatically renewed except for a cancellation through written notice by either party.

The Company has Tank Farm Storage and Service Agreements with related parties covering utilities and transportation of product. These agreements are for the periods from 4 years to 20 years, commencing from the effective date as specified in the agreement and expiring from March 2028 to March 2039, with the service charge as stipulated in the agreement.

Feedstock and Fuel Gas Sales and Purchase Agreements
The Company and a subsidiary have various Natural Gas sales and purchase agreements with a parent company. The agreements are for the period from 3 years 9 months to 25 years, commencing from the date as specified in the agreement and expiring from December 2025 to December 2047.

The Company has an Ethane, Propane, LPG and NGL sales and purchase agreement with a parent company. Selling price in the agreement for Ethane is determined based on Polyethylene plastic pellets price. Selling price for Propane and LPG is determined based on Propane and Butane price in the world market and selling price for NGL is determined based on Naphtha price in the world market. The agreement is for the period of 11 years, commencing from the date as specified in the agreement and expiring in December 2030.

The Company has an Ethane Rich Gas sales and purchase agreement with a related party. The selling price is determined based on Polyethylene plastic pellets, Olefins, and Propane price in the world market and Natural gas price in Thailand. The agreement is for the period of 9 years 7 months, commencing from the date as specified in the agreement and expiring in December 2030.

The Company has an Ammonia sale and purchase agreement with a related party. Selling price is charged under the conditions as specified in the agreement. The agreement is for the period of 13 years 2 months, commencing from the date as specified in the agreement and will expire in March 2026. The agreement can be cancelled through written notice by each party.

Petroleum Product Offtake Agreement
The Company has a Petroleum Product sales and purchase agreement with a related party. The sales and purchase prices of product are based on the prices specified in the agreements. This agreement is for the period of 2 years and 11 months, commencing from the effective date as specified in each agreement and will expire in December 2025. The agreement is automatically renewed every 2 years except in the event of a cancellation through written notice by each party.

Long-term Crude Oil and Other Raw materials Supply Agreements
The Company has entered into 2 supply agreements for crude oil and other raw materials with a parent company, the reference price being based on market price of crude oil and other raw materials. One agreement is for the period of 18 years, was automatically renewed and will expire in February 2025 and another agreement is for the period of 20 years, was automatically renewed and will expire in December 2025. These agreements are automatically renewed except for advance cancellation through written notice by each party.

Crack Spread Swap Agreements
The Company has entered into many crack spread swap agreements with a related party to hedge the Company's oil refinery margin. The floating amount of the basket refinery margin (calculated crack spread based on the Singapore price of refined petroleum products, which are Naphtha, Gasoline, Gasoil, Kerosene and Fuel Oil, against the price of Dubai crude oil) is swapped for a fixed amount of the basket refinery margin for a fixed quantity per month. Under the agreements, the Company shall receive or make payment for the crack spread difference according to terms and conditions stipulated in the agreements.

Product Spread Swap Agreements
The Company has entered into many petrochemical product margin spread swap agreements with a related party to hedge the Company's petrochemical margin. The floating amount of the petrochemical margin (calculated margin spread based on the key markets petrochemical products, which are Paraxylene, Benzene and other products against the Brent price) is swapped for a fixed amount of the petrochemical margin for a fixed quantity per month. Under the agreements, the Company shall receive or make payment of the product spread difference according to terms and conditions stipulated in the agreements.

Sales and Purchase Aromatics Product Agreements
The Company has entered into many raw material and product sales and purchase agreements with certain related parties. The sales and purchase prices of raw material and product are based on the prices specified in the agreements. These agreements are for the periods of 1 year, commencing from the effective date as specified in each agreement. The agreements will expire from March 2025 to December 2025. Other agreements are automatically renewed except in the event of a cancellation through written notice by each party.

Lending and Borrowing Agreements
The Company has unsecured short-term lending agreements for the period of 3 years through Liquidity Management System ("LMS") with 7 related parties with the credit facilities between Baht 20 million to Baht 6,000 million. These loans bear interest based on market rates referenced to BIBOR O/N plus an interest rate spread.

The Company has a secured long-term lending agreement for the period of 7 years with a related party with a credit facility of USD 7.90 million. This loan bears interest at a fixed rate.

The Company has an unsecured long-term lending agreement for the period of 4 years minus 6 days with a related party with the credit facility of EUR 2,321 million. This loan bears interest at the fixed rate.

The Company has unsecured long-term lending agreements for the period of 7 years with a related party with the credit facilities of Baht 615.75 million. This loan bear interest at the fixed rate.

The Company has unsecured long-term lending agreements for the period of 1 year 9 months with a related party with the credit facilities of EUR 20 million. This loan bear interest at the fixed rate.

The Company has unsecured long-term lending agreements for the period of 1 year 6 months with a related party with the credit facilities of EUR 47 million. This loan bears interest at a fixed rate.

The Company has unsecured short-term lending agreements for the period of 10 months with a related party with the credit facilities of EUR 3 million. This loan bear interest at the fixed rate.

The Company has unsecured long-term lending agreements for the period of 9 years with a related party with the credit facilities of Baht 413 million. The loan bears interest based on market rate referenced to THOR plus interest rate spread.

The Company has unsecured long-term lending agreements for the period of 3 years with a related party with the credit facilities of THB 800 million. This loan bears interest at the fixed rate.

The Company has unsecured lending agreements with a related party with the credit facilities of EUR 206 million. This loan bears interest at the fixed rate and it consists of 3 loan facilities. These agreements are for the periods from 1 year, 2 years 6 months, 4 years 3 months, respectively.

The Company has unsecured short-term borrowing agreements for the period of 3 years through LMS with 7 related parties with the credit facilities between Baht 60 million to Baht 1,500 million. These loans bear interest based on a market rate referenced to BIBOR O/N minus interest rate spread.

The Company has an unsecured long-term borrowing agreement for the period of 10 years with a related party with the credit facility of USD 690.75 million. This loan bears interest at the fixed rate.

The Company has an unsecured long-term borrowing agreement for the period of 30 years with a related party with the credit facility of USD 541.25 million. This loan bears interest at the fixed rate.

The Company has an unsecured long-term lending agreement for the period of 10 years with a related party with a credit facility of USD 994.09 million. This loan bears interest at a fixed rate.

The Company has an unsecured long-term lending agreement for the period of 30 years with a related party with a credit facility of USD 298.28 million. This loan bears interest at a fixed rate.

The Company has an unsecured long-term lending agreement for the period of 7 years with a related party with a credit facility of USD 100 million. This facility bears interest based on market rate referenced to SOFR plus interest rate spread.

The Company has an uncommitted and unsecured short-term Inter-Company Borrowing & Lending agreement (ICBL) for the period of 1 year with the parent company with the borrowing credit facility of Baht 10,000 million and lending credit facility of Baht 2,000 million. The agreement expired on 19 December 2024 and has been extended for an additional period until 19 December 2025. This facility bears interest based on market rate referenced to BIBOR or SOFR plus interest rate plus the interest rate difference depending on the loan currency or other appropriate interest rates as determined by the lender if changes in market conditions spread by taking into account the return on short-term investment, short-term interest rate and the credit ratings of the Company or the borrowing company.

The Company has an uncommitted and unsecured short-term Inter-Company Borrowing & Lending agreement (ICBL) for the period of 3 years with a related party with a borrowing credit facility of Baht 300 million and a lending credit facility of Baht 300 million. The agreement will expire on 20 February 2025. This facility bears interest based on market rates referenced to BIBOR or SOFR plus interest rate spread by taking into account the return on short-term investment, short-term interest rate and the credit ratings of the Company or the borrowing company.

The Company has an uncommitted and unsecured short-term Inter-Company Borrowing & Lending agreement (ICBL) for the period of 1 year with a related party with a borrowing credit facility of Baht 200 million and a lending credit facility of Baht 1,000 million. The agreement will expire on 30 May 2025. This facility bears interest based on market rates referenced to BIBOR or other appropriate interest rates as determined by the lender if changes in market conditions spread by taking into account the return on short-term investment, short-term interest rate and the credit ratings of the Company or the borrowing company.

The Company has an uncommitted and unsecured short-term Inter-Company Borrowing & Lending agreement (ICBL) for the period of 3 years with a related party with a borrowing and lending credit facility of EUR 100 million (or equivalent to USD). The agreement will expire on 17 September 2026. This facility bears interest based on market rates spread by taking into account the return on short-term investment, short-term interest rate and the credit ratings of the Company or the borrowing company.

The Company has an uncommitted and unsecured short-term Inter-Company Borrowing & Lending agreement (ICBL) for the period of 1 year with a related party with a borrowing credit facility of USD 100 million. The agreement will expire on 20 May 2025. This facility bears interest based on market rates referenced to SOFR or other appropriate interest rates as determined by the lender if changes in market conditions spread by taking into account the return on short-term investment, short-term interest rate and the credit ratings of the Company or the borrowing company.

Service Agreements
The Company has Shared Service agreements with 27 related parties for the provision of general services. All of these agreements are effective from the date as specified in the agreements and the service charges will be agreed in the fourth quarter of each preceding year.

The Company has Management and Engineering agreement, Design, Supply, Construction and Installation agreement, Inspection of Construction, Equipment and Machinery agreement and Management and Maintenance Work agreement with a related party. These agreements are for the periods from 1 year 3 months to 2 years 8 months, commencing from the date as specified in the agreements and expiring from October 2025 to December 2025.

The Company has a Security Service agreement with a related party. Under which the related party agrees to provide security service to asset, employees and visitors in the location of the Company. The agreement is for the period of 2 years and will expire in December 2024.

The Company has a Safety Inspection Service agreement and an Emergency Control Center agreement with a related party. These agreements are for the period from 2 years to 3 years and will expire in December 2026 with service rate as stipulated in the agreements.

The Company has Warehouse Management agreements with a related party. The agreements are for the periods from 1 year to 30 years 9 months and expiring from December 2054.

The Company has a Logistics Services agreement with a related party. The agreement is for the period of 1 year and will expire in December 2025.

The Company has entered into Information and Communication Technology Service agreements with a related party. Under which the related party agrees to provide Information Technology system maintenance and support services, system structure and data centre management, system supporting and advisory, including system design and development as the Company's requirements. These agreements are for the periods from 1 year to 15 years, commencing from the date as specified in each agreement and expiring from December 2026 to December 2027.

Rental Agreements
The Company has various Land Lease agreements with related parties. These agreements are for the periods from 14 years to 30 years, commencing from the date as specified in the agreements, and expiring from February 2029 to June 2050 with land lease rate and condition as specified in the agreements.

A subsidiary has Land Lease and Office Rental agreements with 5 related parties. These agreements are for the periods from 3 years to 30 years, commencing from the date as specified in the agreements, and expiring from August 2026 to July 2043. The renewal of the contract will be subject to negotiation with the counter party.

5 Cash and cash equivalents

	Consolidated financial statements		Separate financial statements	
	2024	2023	2024	2023
	(in million Baht)			
Cash on hand	2	2	2	2
Cash at banks	22,124	29,767	8,298	17,193
Highly liquid short-term investments	10,619	7,550	4,417	79
Total	**32,745**	**37,319**	**12,717**	**17,274**

6 Trade accounts receivable

		Consolidated financial statements		Separate financial statements	
At 31 December	*Note*	2024	2023	2024	2023
		(in million Baht)			
Related parties	*4*	19,766	27,720	24,207	30,971
Other parties		28,201	30,252	12,735	13,254
Total		**47,967**	**57,972**	**36,942**	**44,225**
Less allowance for expected credit loss		(214)	(211)	(19)	(19)
Net		**47,753**	**57,761**	**36,923**	**44,206**
Related parties					
Within credit terms		19,694	26,829	23,461	29,014
Overdue:					
Less than 3 months		59	804	733	1,880
3 - 6 months		-	2	-	-
6 - 12 months		-	12	-	5
Over 12 months		13	73	13	72
Total		**19,766**	**27,720**	**24,207**	**30,971**
Other parties					
Within credit terms		26,830	28,241	12,381	12,480
Overdue:					
Less than 3 months		1,011	1,748	335	752
3 - 6 months		83	32	-	-
6 - 12 months		7	20	-	3
Over 12 months		270	211	19	19
Total		**28,201**	**30,252**	**12,735**	**13,254**
Less allowance for expected credit loss		(214)	(211)	(19)	(19)
Net		**47,753**	**57,761**	**36,923**	**44,206**

Allowance for expected credit loss	Consolidated financial statements		Separate financial statements	
	2024	2023	2024	2023
	(in million Baht)			
At 1 January	(211)	(233)	(19)	(19)
Addition	(28)	(29)	-	-
Reversal	10	14	-	-
Write-off	7	40	-	-
Foreign exchange gains and translation differences	8	(3)	-	-
At 31 December	**(214)**	**(211)**	**(19)**	**(19)**

The normal credit term granted by the Group ranges from 7 days to 135 days

7 Inventories

	Consolidated financial statements		Separate financial statements	
	2024	2023	2024	2023
	(in million Baht)			
Finished goods	29,843	28,753	15,847	14,489
Work in progress	3,441	2,807	2,688	2,398
Raw materials	13,660	16,835	8,714	11,301
Factory supplies and spare parts	15,249	15,169	12,778	12,580
Goods in transit	3,029	4,953	1,522	3,281
Total	**65,222**	**68,517**	**41,549**	**44,049**
Inventories recognised as an expense in cost of sales of goods				
- Cost of sales	572,130	581,684	472,650	474,920
- Write-down to net realisable value	2	(1,552)	(40)	(1,286)
Net	**572,132**	**580,132**	**472,610**	**473,634**

As at 31 December 2024 and 2023, the Company's inventories included petroleum legal reserve of 352 million liters with approximate value of Baht 5,989 million and 363 million liters with approximated value of Baht 7,055 million, respectively.

8 Investments in subsidiaries

			Separate financial statements											
	Type of business	Country of operation	Ownership Interest		Cost		Impairment		At cost - net		Fair value of listed securities		Dividend income	
			2024	2023	2024	2023	2024	2023	2024	2023	2024	2023	2024	2023
			(%)						*(in million Baht)*					
Subsidiaries														
Global Green Chemicals Plc.	Manufacturing, distributing and transporting oleochemicals products	Thailand	72	72	7,400	7,400	-	-	7,400	7,400	3,108	6,660	-	259
GC Glycol Co., Ltd. (In process of liquidation)	Manufacturing and distributing petrochemical products	Thailand	100	100	-	-	-	-	-	-	-	-	-	-
GC Polyols Co., Ltd.	Manufacturing and distributing petrochemical products	Thailand	82	82	3,696	3,696	-	-	3,696	3,696	-	-	-	-
GC Marketing Solutions Co., Ltd.	Holding international business	Thailand	100	100	467	467	-	-	467	467	-	-	-	-
GC Maintenance and Engineering Co., Ltd.	Factory maintenance and engineering services	Thailand	100	100	155	155	-	-	155	155	-	-	-	42
GC Ventures Co., Ltd	Invest in form of Corporate Venture Capital (CVC)	Thailand	100	100	1,805	1,805	(159)	(159)	1,646	1,646	-	-	-	-
GC Treasury Center Co., Ltd.	Financial service management for the group	Thailand	100	100	10	10	-	-	10	10	-	-	2,918	355

	Type of business	Country of operation	Separate financial statements											
			Ownership Interest		Cost		Impairment		At cost - net		Fair value of listed securities		Dividend income	
			2024	2023	2024	2023	2024	2023	2024	2023	2024	2023	2024	2023
			(%)		(in million Baht)									
GC Styrenics Co., Ltd. (In process of liquidation)	Manufacturing and distributing petrochemical products	Thailand	100	100	5	5	-	-	5	5	-	-	-	-
GC Oxirane Co., Ltd. (In process of liquidation)	Manufacturing and distributing petrochemical products	Thailand	100	100	-	-	-	-	-	-	-	-	-	718
GC-M PTA Co., Ltd.	Manufacturing and distributing petrochemical products	Thailand	74	74	4,384	4,384	-	-	4,384	4,384	-	-	-	-
GC Estate Co., Ltd.	Real estate development for rent and to invest and operating a water production plant for use in petrochemical and related industries	Thailand	100	100	7,200	7,200	-	-	7,200	7,200	-	-	-	-
Solution Creation Co., Ltd.	Distributing circular products	Thailand	100	100	180	180	-	-	180	180	-	-	-	-
Thai PET Resin Co., Ltd.	Manufacturing and distributing chemical products	Thailand	44*	44*	988	988	-	-	988	988	-	-	-	-
PTT Phenol Co., Ltd. (In process of liquidation)	Manufacturing and distributing petrochemical products	Thailand	100	100	126	126	(121)	(121)	5	5	-	-	-	8,061
NPC Safety and Environmental Service Co., Ltd.	Safety and environmental services	Thailand	100	100	165	165	-	-	165	165	-	-	3	8

	Type of business	Country of operation	Ownership Interest		Separate financial statements: Cost		Impairment		At cost - net		Fair value of listed securities		Dividend income	
			2024	2023	2024	2023	2024	2023	2024	2023	2024	2023	2024	2023
			(%)						*(in million Baht)*					
ENVICCO Limited	Manufacturing, distributing and developing recycled plastic and by-products	Thailand	70	70	756	756	-	-	756	756	-	-	-	-
PTTGC America Corporation	Holding and operating international business	United States of America	100	100	5,538	5,505	-	-	5,538	5,505	-	-	-	-
PTTGC International Private Limited	Holding and operating international business	Singapore	100	100	125,436	122,787	(24,106)	(14,106)	101,330	108,681	-	-	-	-
Total investments in subsidiaries					**158,311**	**155,629**	**(24,386)**	**(14,386)**	**133,925**	**141,243**	**3,108**	**6,660**	**2,921**	**9,443**

* Thai PET Resin Co., Ltd. was 44.4 percent held by the Company and 40 percent held by GC-M PTA Co., Ltd. (100% Subsidiary).

	Note	Separate financial statements	
		2024	2023
		(in million Baht)	
At 1 January		**141,243**	**160,847**
Additional share payments			
- GC Polyols Co., Ltd.		-	410
- GC Ventures Co., Ltd.		-	497
- PTTGC America Corporation		33	135
- PTTGC International Private Limited		2,649	1,750
Capital return of Solution Creation Co., Ltd.		-	(32)
Change in ownership interest in WHA GC Logistics Co., Ltd. (Formerly GC Logistics Solutions Co., Ltd.)	*9*	-	(820)
Dispose investment in WHA GC Logistics Co., Ltd. (Formerly GC Logistics Solutions Co., Ltd.)		-	(820)
Dissolution of GC Oxirane Co., Ltd.		-	(7,537)
Dissolution of PTT Phenol Co., Ltd.		-	(13,029)
Impairment losses			
- GC Ventures Co., Ltd.		-	(37)
- PTT Phenol Co., Ltd.		-	(121)
- PTTGC International Private Limited		(10,000)	-
At 31 December		**133,925**	**141,243**

Changes in investments in subsidiaries

GC Polyols Co., Ltd.
On 14 February 2023, GC Polyols Co., Ltd., a subsidiary of the Company, has called for an increase in paid-up capital approved in the 2023 Extraordinary Annual General Meeting of shareholders of the subsidiary held on 14 February 2023 for conducting a Polyols & PU System Project totalling Baht 410.50 million. The amount was fully paid in February 2023.

GC Ventures Co., Ltd.
On 27 February 2023, GC Ventures Co., Ltd., a subsidiary of the Company, has called for an increase in paid-up capital approved in the 2023 Extraordinary Annual General Meeting of shareholders of the subsidiary held on 26 January 2023 for investment in Corporate Venture Capital (CVC) totalling Baht 497 million. The amount was fully paid in March 2023.

PTTGC America Corporation
During the year ended 31 December 2024, PTTGC America Corporation ("GCA Corp."), a subsidiary of the Company, has called for an increase in paid-up capital approved in the Board of Directors' Meetings of the subsidiary held on 23 May 2024 and 29 November 2024 for investment in GC America Sustainability Corporation, a wholly owned subsidiary of GCA Corp., totalling USD 0.90 million or equivalent to Baht 32.87 million. The amount was fully paid during the year ended 31 December 2024.

During the year ended 31 December 2023, PTTGC America Corporation ("GCA Corp."), a subsidiary of the Company, has called for an increase in paid-up capital approved in the Board of Directors' Meetings of the subsidiary held on 9 May 2023 and 1 September 2023 totalling USD 3.84 million or equivalent to Baht 134.66 million. The amount was fully paid during the year ended 31 December 2023. The subsidiary has utilised the investment totalling USD 3.18 million or equivalent to Baht 111.17 million for the purpose of US Petrochemical Complex Project and utilised the investment totalling USD 0.66 million or equivalent to Baht 23.49 million for the acquisition of the 2,000,000 ordinary shares in GC America Sustainability Corporation ("GCAS") (Formerly PTTGC Innovation America Corp.) from PTTGC International Private Limited, a subsidiary and a previous shareholder. The acquisition of such

shares is a business combination under common control of the subsidiary. As a result, GCA Corp. holds 100% of the ordinary shares of GCAS. The investment is aligned with the business restructuring plan of GCAS for long-term structure of the investments in the United States of America to be efficient and maximise the benefits to the Group.

PTTGC International Private Limited
On 2 December 2024, PTTGC International Private Limited ("GC Inter"), a subsidiary of the Company, has called for an increase in paid-up capital approved in the Board of Directors' Meetings of the subsidiary held on 29 November 2024 for investment in PTTGC International (Netherlands) B.V., a subsidiary 100% shareholding by GC Inter, totalling EUR 72.98 million or equivalent to Baht 2,648.80 million. The amount was fully paid in December 2024.

On 4 December 2023, PTTGC International Private Limited ("GC Inter"), a subsidiary of the Company, has called for an increase in paid-up capital approved in the Board of Directors' Meetings of the subsidiary held on 30 November 2023 for investment in PTTGC International (Netherlands) B.V., a subsidiary 100% shareholding by GC Inter, totalling EUR 45.31 million or equivalent to Baht 1,749.58 million. The amount was fully paid in December 2023.

Solution Creation Co., Ltd.
On 23 January 2023, at the Extraordinary General Meeting of shareholders of Solution Creation Co., Ltd., a subsidiary of the Company, approved a reduction of the subsidiary's registered share capital and distributed capital to the Company amounting to Baht 31.87 million. The subsidiary completed the reduction of its registered share capital with Department of Business Development, Ministry of Commerce on 4 April 2023.

WHA GC Logistics Co., Ltd.
On 20 November 2023, at the Board of Directors' Meeting of the Company approved the Company to sell ordinary shares in WHA GC Logistics Co., Ltd. ("WGCL") (Formerly GC Logistics Solutions Co., Ltd.), a subsidiary of the Company, to WHA Venture Holding Company Limited ("WHAVH") in the proportion of 50% of the ordinary shares of WGCL or equivalent to Baht 2,640 million for the purpose of restructuring of shareholding interest in the logistics business for the Company's polymer business. The Company has entered into a share sale and purchase agreement and completed the sales of ordinary shares in WGCL to WHAVH on 20 December 2023, with gain from sale of investment in a subsidiary recognised in the consolidated and separate statements of income amounting to Baht 1,574.35 million and Baht 1,820.70 million, respectively. As a result, the Company's shareholding interest in WGCL decreased from 100% before the sale of shares to 50% after the sale of shares. The Company has reclassified the remaining investment in WGCL to investment in joint venture and recognised a gain from change in ownership interest in subsidiary in the consolidated statement of income amounting to Baht 2,443.35 million.

GC Oxirane Co., Ltd.
On 31 March 2023, GC Oxirane Co., Ltd., a subsidiary of the Company, registered to dissolve the business with Department of Business Development, Ministry of Commerce. The subsidiary distributed capital to the Company amounting to Baht 7,569.17 million. The Company recognised a gain from capital return from the subsidiary amounting to Baht 31.27 million in its separate statement of income. As at 31 December 2024, the subsidiary is in the liquidation process.

PTT Phenol Co., Ltd.
On 31 March 2023, PTT Phenol Co., Ltd., a subsidiary of the Company, registered to dissolve the business with Department of Business Development, Ministry of Commerce. The subsidiary distributed capital to the Company amounting to Baht 13,028.67 million. As at 31 December 2024, the subsidiary is in the liquidation process

Impairment losses on investments in subsidiaries

GC Ventures Co., Ltd.
During the year ended 31 December 2023, the Company recognised impairment loss on the investment in GC Ventures Co., Ltd., a subsidiary of the Company, totalling Baht 36.53 million in the separate statement of income as the recoverable amount of investment in NirvaMed Inc., an investment in financial asset at fair value through profit or loss of the Group, and Arevo Inc., an investment in financial asset at fair value through other comprehensive income of the Group, were less than their carrying amounts.

PTT Phenol Co., Ltd.
During the year ended 31 December 2023, the Company recognised impairment loss on the investment in PTT Phenol Co., Ltd., a subsidiary of the Company, totalling Baht 121.30 million in the separate statement of income as the recoverable amount of investment in subsidiary was less than its carrying amount due to the ongoing dissolution of the subsidiary.

PTTGC International Private Limited
During the year ended 31 December 2024, the Company recognised an impairment loss on the investment in PTTGC International Private Limited, a subsidiary of the Company, totalling Baht 10,000 million in the separate statement of income as the recoverable amount of investment in Vencorex Holding S.A.S., an indirect subsidiary of the Group, was less than its carrying amount.

The business restructuring of the Vencorex Group
On 6 September 2024, Vencorex France S.A.S.U. ("Vencorex France") and Vencorex TDI S.A.S.U. ("Vencorex TDI"), which are indirect wholly owned subsidiaries of the Group, filed petitions to enter into the judicial reorganisation proceedings under Book VI of the French Commercial Code with the Commercial Court in Lyon. On 10 September 2024, the Commercial Court in Lyon issued an order to accept the petition for consideration and to commence a judicial collective proceeding in respect of Vencorex France and Vencorex TDI. The judicial reorganisation proceedings are expected to be completed within 3 to 4 months. Subsequently, on 7 November 2024, the Commercial Court in Lyon issued an order to extend the judicial reorganisation proceedings to March 2025 as currently only some assets have been offered for purchase. The unsold parts require a reasonable period to clean up the plant and equipment to ensure a safe condition. However, the Group has completely recognised a provision for the business restructuring process. This indicates that the Group and the Company have indications of impairment as the recoverable amounts of the assets are less than their carrying amounts for both companies, including the impairment of Vencorex Group (the property, plant and equipment and related assets of these businesses are based on the assessed fair value less cost of disposal for these assets). Accordingly, the Group and the Company have recognised impairment losses on assets in the consolidated and separate statements of income for the year ended 31 December 2024, as follows:

	Note	**Consolidated financial statements**	**Separate financial statements**
		(in million Baht)	
Impairment losses			
Short-term loans to a related party		-	2,844
Other current receivables		340	181
Value-added tax receivable		181	-
Other current assets		32	-
Investment in a subsidiary	*8*	-	10,000
Long-term loans to a related party		-	6,641
Property, plant and equipment	*12*	6,691	-
Right-of-use assets	*13*	296	-
Intangible assets	*15*	219	-
Other non-current assets		139	-
Total		**7,898**	**19,666**

9 Investments in joint ventures and associates

	Type of business	Country of operation	Consolidated financial statements									
			Ownership Interest		Equity method		Impairment		Equity method - net		Dividend income	
			2024	2023	2024	2023	2024	2023	2024	2023	2024	2023
			(%)		(in million Baht)							
Direct joint ventures												
PTT Asahi Chemical Co., Ltd.	Manufacturing and distributing petrochemical products	Thailand	50	50	-	9,449	-	-	-	9,449	-	-
PTT MCC Biochem Co., Ltd.	Manufacturing and distributing bioplastic products	Thailand	50	50	631	840	-	-	631	840	-	-
HMC Polymers Co., Ltd.	Manufacturing and distributing petrochemical products	Thailand	41	41	8,125	9,681	-	-	8,125	9,681	-	-
Revolve Group Limited	Manufacturing and distributing chemical products	United Kingdom	49	49	199	270	-	-	199	270	-	-
Thai Tank Terminal Limited	Service for the storage and handling of liquid chemicals, oil and gas	Thailand	36	36	2,620	2,687	-	-	2,620	2,687	350	1,002
WHA GC Logistics Co., Ltd. (Formerly GC Logistics Solutions Co., Ltd.)	Transportation, warehouse management and bagging packing for chemical business	Thailand	50	50	4,063	3,973	-	-	4,063	3,973	-	-
					15,638	**26,900**	**-**	**-**	**15,638**	**26,900**	**350**	**1,002**

	Type of business	Country of operation	Consolidated financial statements									
			Ownership Interest		Equity method		Impairment		Equity method - net		Dividend income	
			2024	2023	2024	2023	2024	2023	2024	2023	2024	2023
			(%)		(in million Baht)							
Indirect joint ventures												
Thai Ethoxylate Co., Ltd.	Manufacturing and distributing fatty alcohol ethoxylates	Thailand	50	50	802	687	-	-	802	687	11	32
NatureWorks LLC	Manufacturing and distributing bioplastic products	United States of America	50	50	4,049	4,518	-	-	4,049	4,518	-	-
GGC KTIS Bioindustrial Co., Ltd.	Manufacturing and distributing electricity and ethanol from sugarcane	Thailand	50	50	678	1,266	-	-	678	1,266	-	-
Emery Oleochemicals UK Limited	Manufacturing and distributing biochemical products	United Kingdom	50	50	3,141	3,096	-	-	3,141	3,096	-	-
Entis Co., Ltd.	Manufacturing and distributing industrial coating resins and additives	South Korea	50	50	199	175	-	-	199	175	-	-
Synthese (Thailand) Co., Ltd.	Manufacturing and distributing industrial coating resins and additives	Thailand	48	48	482	494	-	-	482	494	47	29
					9,351	**10,236**	**-**	**-**	**9,351**	**10,236**	**58**	**61**
Total investments in joint ventures					**24,989**	**37,136**	**-**	**-**	**24,989**	**37,136**	**408**	**1,063**

	Type of business	Country of operation	Ownership Interest		Consolidated financial statements: Equity method		Impairment		Equity method - net		Dividend income	
			2024	2023	2024	2023	2024	2023	2024	2023	2024	2023
			(%)		(in million Baht)							
Direct associates												
Kuraray GC Advanced Materials Co., Ltd.	Manufacturing and distributing petrochemical products	Thailand	33	33	1,401	1,579	-	-	1,401	1,579	-	-
PTT Energy Solutions Co., Ltd. (In process of liquidation)	Engineering consultant services	Thailand	20	20	20	21	(2)	(2)	18	19	-	-
PTT Digital Solutions Co., Ltd.	Information and communication technology services	Thailand	20	40	826	1,535	-	-	826	1,535	74	60
Dynachisso Thai Co., Ltd.	Manufacturing and distributing chemical products	Thailand	42	42	265	271	-	-	265	271	2	-
AGC Vinythai Plc.	Manufacturing and distributing petrochemical products	Thailand	33	33	17,739	17,409	-	-	17,739	17,409	571	1,266
					20,251	**20,815**	**(2)**	**(2)**	**20,249**	**20,813**	**647**	**1,326**
Indirect associates												
S.P. Petpack Inter Group Co., Ltd.	Distributing general goods by receiving compensation or following a contract	Thailand	25	25	53	46	-	-	53	46	-	-
					53	**46**	**-**	**-**	**53**	**46**	**-**	**-**
Total investments in associates					**20,304**	**20,861**	**(2)**	**(2)**	**20,302**	**20,859**	**647**	**1,326**

	Type of business	Country of operation	Ownership Interest		Separate financial statements									
					Cost method		Impairment		Cost method - net		Fair value of listed securities		Dividend income	
			2024	2023	2024	2023	2024	2023	2024	2023	2024	2023	2024	2023
			(%)		(in million Baht)									
Joint ventures														
PTT Asahi Chemical Co., Ltd.	Manufacturing and distributing petrochemical products	Thailand	50	50	996	996	(996)	-	-	996	-	-	-	-
PTT MCC Biochem Co., Ltd.	Manufacturing and distributing bioplastic products	Thailand	50	50	1,066	1,066	-	-	1,066	1,066	-	-	-	-
HMC Polymers Co., Ltd.	Manufacturing and distributing petrochemical products	Thailand	41	41	14,217	14,217	-	-	14,217	14,217	-	-	-	-
Revolve Group Limited	Manufacturing and distributing chemical products	United Kingdom	49	49	269	269	-	-	269	269	-	-	-	-
Thai Tank Terminal Limited	Service for the storage and handling of liquid chemicals, oil and gas	Thailand	36	36	459	459	-	-	459	459	-	-	350	1,002
WHA GC Logistics Co., Ltd. (Formerly GC Logistics Solutions Co., Ltd.)	Transportation, warehouse management and bagging packing for chemical business	Thailand	50	50	820	820	-	-	820	820	-	-	-	-
Total investments in joint ventures					**17,827**	**17,827**	**(996)**	**-**	**16,831**	**17,827**	**-**	**-**	**350**	**1,002**

	Type of business	Country of operation	Ownership Interest		Separate financial statements									
					Cost method		Impairment		Cost method - net		Fair value of listed securities		Dividend income	
			2024	2023	2024	2023	2024	2023	2024	2023	2024	2023	2024	2023
			(%)						(in million Baht)					
Associates														
Kuraray GC Advanced Materials Co., Ltd.	Manufacturing and distributing petrochemical products	Thailand	33	33	1,870	1,870	-	-	1,870	1,870	-	-	-	-
PTT Energy Solutions Co., Ltd. (In process of liquidation)	Engineering consultant services	Thailand	20	20	30	30	(11)	(11)	19	19	-	-	-	-
PTT Digital Solutions Co., Ltd.	Information and communication technology services	Thailand	20	40	30	60	-	-	30	60	-	-	74	60
Dynachisso Thai Co., Ltd.	Manufacturing and distributing chemical products	Thailand	42	42	294	294	-	-	294	294	-	-	2	-
AGC Vinythai Plc.	Manufacturing and distributing petrochemical products	Thailand	33	33	11,375	11,375	-	-	11,375	11,375	-	-	571	1,266
Total investments in associates					**13,599**	**13,629**	**(11)**	**(11)**	**13,588**	**13,618**	**-**	**-**	**647**	**1,326**

Material movements for the years ended 31 December	*Note*	Consolidated financial statements 2024	2023	Separate financial statements 2024	2023
		(in million Baht)			
Joint Ventures					
Additional share payments					
- PTT MCC Biochem Co., Ltd.		-	906	-	906
- GGC KTIS Bioindustrial Co., Ltd.		107	188	-	-
Change in ownership interest in WHA GC Logistics Co., Ltd. (Formerly GC Logistics Solutions Co., Ltd.)	*8*	-	3,509	-	820
Impairment loss					
- PTT Asahi Chemical Co., Ltd.		-	-	(996)	-
Associates					
Disposal of investment in PTT Digital Solutions Co., Ltd.		(776)	-	(30)	-
Reversal of impairment					
- PTT Energy Solutions Co., Ltd.		-	1	-	-

Changes in investments in joint ventures and associates

PTT MCC Biochem Co., Ltd.
On 16 November 2023, PTT MCC Biochem Co., Ltd., a direct joint venture of the Group, has called for an increase in paid-up capital of 90,604,050 shares at Baht 10 per share, totalling Baht 906.04 million. The amount was fully paid in November 2023.

GGC KTIS Bioindustrial Co., Ltd.
During the year ended 31 December 2024, GGC KTIS Bioindustrial Co., Ltd., an indirect joint venture of the Group, has called for an increase in paid-up capital of 7,150,000 shares at Baht 15 per share, totalling Baht 107.25 million, from GGC Biochemicals Co., Ltd., an indirect subsidiary of the Group. The amount was fully paid during the year ended 31 December 2024.

During the year ended 31 December 2023, GGC KTIS Bioindustrial Co., Ltd., an indirect joint venture of the Group, has called for an increase in paid-up capital totalling Baht 187.50 million from GGC Biochemicals Co., Ltd., a subsidiary of the Company. The amount was fully paid during the year ended 31 December 2023.

PTT Digital Solutions Co., Ltd.
On 22 April 2024, the Board of Directors' Meeting of the Company approved the Company to sell ordinary shares in PTT Digital Solutions Co., Ltd. ("PTT Digital"), a direct associate of the Group, to Modulus Venture Company Limited ("Modulus") in the proportion of 20% of the ordinary shares of PTT Digital or equivalent to Baht 1,023 million for the purpose of adjusting of shareholding interest in the information technology services business of the Company. The Company has entered into a share sale and purchase agreement and completed the sales of ordinary shares in PTT Digital to Modulus on 25 June 2024, with gain from sale of investment in an associate recognised in the consolidated and separate statements of income amounting to Baht 247.50 million and Baht 993 million, respectively. As a result, the Company's shareholding interest in PTT Digital decreased from 40% before the sale of shares to 20% after the sale of shares, with the remaining investment in PTT Digital continuing to be recognised as an associate of the Group.

Impairment losses on investments in joint ventures and associates

PTT Asahi Chemical Co., Ltd.
During the year ended 31 December 2024, the Company recognised an impairment loss on the investment in PTT Asahi Chemical Co., Ltd. ("PTTAC"), a direct joint venture of the Group, totalling Baht 996 million in the separate statement of income and share of loss of joint venture accounted for using equity method of Baht 9,449.52 million in the consolidated statement of income which consist of its financial performance, impairment loss on assets of PTTAC and others (based on the assessed fair value less cost of disposal for these assets). The recoverable amounts were less than their carrying amounts, mainly due to market slowdown leading to long-term oversupply. The cessation of business has been announced. As at 31 December 2024, the Group and the Company have no outstanding investment balance in PTTAC. However, the Company has completely recognised a provision expenses of Baht 3,035 million.

PTT Energy Solutions Co., Ltd.
During the year ended 31 December 2023, the Company recognised a reversal of impairment loss on the investment in PTT Energy Solutions Co., Ltd. ("PTTES"), a direct associate of the Group, totalling Baht 0.92 million in the consolidated statement of income, as the Company considered that the value of such investment at equity method in the consolidated financial statements has increased.

Material joint ventures and associates

The following table summarises the financial information of the material joint ventures and associates as included in their own financial statements, adjusted for fair value adjustments at acquisition and differences in accounting policies. The table also reconciles the summarised financial information to the carrying amount of the Group's interest in these companies.

	PTT Asahi Chemical Co., Ltd.		HMC Polymers Co., Ltd.	
	2024	2023	2024	2023
		(in million Baht)		
For the years ended 31 December				
Statement of income				
Revenue	10,581	10,649	26,361	25,100
Loss from continuing operations	(1,115)	(2,028)	(2,691)	(4,332)
Loss from impairment on assets and others	(22,203)	-	-	-
Other comprehensive income (loss)	-	(7)	(1,063)	(761)
Total comprehensive income (loss) (100%)	**(23,318)**	**(2,035)**	**(3,754)**	**(5,093)**
As at 31 December				
Statement of financial position				
Current assets	2,985	4,802	8,308	7,617
Non-current assets	719	21,181	27,493	30,748
Current liabilities	(2,795)	(2,516)	(9,418)	(5,109)
Non-current liabilities	(5,328)	(4,568)	(14,107)	(17,226)
Net assets (100%)	**(4,419)**	**18,899**	**12,276**	**16,030**
Group's share of net assets	-	9,449	5,087	6,643
Goodwill	-	-	3,038	3,038
Carrying amount of interest in joint ventures	**-**	**9,449**	**8,125**	**9,681**
Share of losses exceeds the carrying amount of investment*	2,210	-	-	-

** The company has already recorded the related liabilities.*

	PTT Asahi Chemical Co., Ltd.		HMC Polymers Co., Ltd.	
	2024	2023	2024	2023
	(in million Baht)			
Remark:				
Cash and cash equivalents	1,361	994	281	1,103
Depreciation and amortisation	928	1,538	2,168	2,062

The reconciliation of the summarised financial information to the carrying amount of the Group's interest in these joint ventures.

	PTT Asahi Chemical Co., Ltd.		HMC Polymers Co., Ltd.	
	2024	2023	2024	2023
	(in million Baht)			
Group's interest in net assets of investee as at 1 January	9,449	10,467	9,681	11,791
Total comprehensive income (loss) attributable to the Group	(9,449)	(1,018)	(1,556)	(2,110)
Carrying amount of interest in investee as at 31 December	**-**	**9,449**	**8,125**	**9,681**

	AGC Vinythai Plc.	
	2024	2023
	(in million Baht)	
For the year ended 31 December		
Statement of income		
Revenue	33,809	34,370
Profit from continuing operations	2,789	3,718
Other comprehensive income (loss)	(35)	(23)
Total comprehensive income (100%)	2,754	3,695
As at 31 December		
Statement of financial position		
Current assets	14,084	22,485
Non-current assets	36,331	26,298
Current liabilities	(4,604)	(4,333)
Non-current liabilities	(2,430)	(2,519)
Net assets (100%)	**43,381**	**41,931**
Non-controlling interests	(326)	(337)
Total attributions to owners of the parents	**43,055**	**41,594**
Group's share of net assets	14,088	13,610
Elimination of unrealised profit on downstream sales	(11)	(16)
Purchase price allocation	2,810	2,963
Goodwill	852	852
Carrying amount of interest in associate	**17,739**	**17,409**
Remark:		
Cash and cash equivalents	5,921	14,055
Depreciation and amortisation	1,462	1,482

The reconciliation of the summarised financial information to the carrying amount of the Group's interest in this associate.

	AGC Vinythai Plc.	
	2024	2023
	(in million Baht)	
Group's interest in net assets of investee as at 1 January	17,409	17,466
Total comprehensive income attributable to the Group	901	1,209
Dividend received during the year	(571)	(1,266)
Carrying amount of interest in investee as at 31 December	**17,739**	**17,409**

Immaterial joint ventures and associates

The following is summarized financial information for the Group's interest in immaterial joint ventures and associates based on the amounts reported in the Group's consolidated financial statements:

	Immaterial Joint ventures		Immaterial Associates	
	2024	2023	2024	2023
	(in million Baht)			
For the years ended 31 December				
Carrying amount of interests in immaterial joint ventures and associates	16,864	18,006	2,563	3,450
Group's share of:				
- Profit (loss) from continuing operations	(998)	1,165	(17)	41
- Other comprehensive income (loss)	203	(96)	(19)	(8)
- Total comprehensive income (loss)	(795)	1,069	(36)	33

10 Marketable financial assets

	Consolidated financial statements					
Marketable equity and debt securities	At 1 January	Purchase	Disposal	Fair value adjustment	Currency translation	At 31 December
			(in million Baht)			
2024						
Current financial assets						
Debt securities measured at						
- FVOCI	797	-	(449)	5	-	353
Non-current financial assets						
Equity securities measured at						
- FVOCI	13,696	-	-	(2,903)	-	10,793
Debt securities measured at						
- FVPL	316	-	-	(41)	-	275
- FVOCI	842	-	(329)	10	-	523
Total	**14,854**	**-**	**(329)**	**(2,934)**	**-**	**11,591**

	Consolidated financial statements					
Marketable equity and debt securities	At 1 January	Purchase	Disposal	Fair value adjustment	Currency translation	At 31 December
	(in million Baht)					
2023						
Current financial assets						
Debt securities measured at						
- FVOCI	726	70	-	1	-	797
Non-current financial assets						
Equity securities measured at						
- FVOCI	20,767	-	(66)	(7,006)	1	13,696
Debt securities measured at						
- FVPL	383	-	-	(67)	-	316
- FVOCI	1,618	-	(785)	9	-	842
Total	**22,768**	**-**	**(851)**	**(7,064)**	**1**	**14,854**

	Separate financial statements				
Marketable equity and debt securities	At 1 January	Purchase	Disposal	Fair value adjustment	At 31 December
	(in million Baht)				
2024					
Current financial assets					
Debt securities measured at					
- FVOCI	797	-	(449)	5	353
Non-current financial assets					
Equity securities measured at					
- FVOCI	13,675	-	-	(2,889)	10,786
Debt securities measured at					
- FVPL	316	-	-	(41)	275
- FVOCI	842	-	(329)	10	523
Total	**14,833**	**-**	**(329)**	**(2,920)**	**11,584**
2023					
Current financial assets					
Debt securities measured at					
- FVOCI	726	70	-	1	797
Non-current financial assets					
Equity securities measured at					
- FVOCI	20,584	-	-	(6,909)	13,675
Debt securities measured at					
- FVPL	383	-	-	(67)	316
- FVOCI	1,618	-	(785)	9	842
Total	**22,585**	**-**	**(785)**	**(6,967)**	**14,833**

11 Investment properties

	Consolidated financial statements				Separate financial statements
	Land	Buildings and buildings improvement	Investment property under construction	Total	Land
			(in million Baht)		
Cost					
As at 1 January 2023	6,035	32	12	6,079	1,827
Additions	-	-	1	1	-
Transfers	-	12	(12)	-	(531)
As at 31 December 2023 and 1 January 2024	**6,035**	**44**	**1**	**6,080**	**1,296**
Additions	-	-	2	2	-
Transfers	163	-	-	163	89
As at 31 December 2024	**6,198**	**44**	**3**	**6,245**	**1,385**
Accumulated depreciation					
As at 1 January 2023	-	5	-	5	-
Depreciation charge for the year	-	3	-	3	-
Transfers	-	(1)	-	(1)	-
As at 31 December 2023 and 1 January 2024	**-**	**7**	**-**	**7**	**-**
Depreciation charge for the year	-	2	-	2	-
Transfers	-	(1)	-	(1)	-
As at 31 December 2024	**-**	**8**	**-**	**8**	**-**
Net book value					
As at 31 December 2023	**6,035**	**37**	**1**	**6,073**	**1,296**
As at 31 December 2024	**6,198**	**36**	**3**	**6,237**	**1,385**

The fair value of investment properties of the Group as at 31 December 2024 of Baht 8,005 million *(2023: Baht 8,090 million)* was determined at open market values on an existing use basis and income approach. The fair value measurement for investment properties has been mainly categorised as Levels 2.

The fair value of investment properties of the Company as at 31 December 2024 of Baht 2,626 million *(2023: Baht 2,396 million)* was determined at open market values on an existing use basis. The fair value measurement for investment properties has been categorised as a Level 2 fair value.

Measurement of fair value

Level 2 fair value
The fair value of investment properties for land was determined by independent property valuers at open market values by scoring and weighted other different factors.

	Consolidated financial statements		Separate financial statements	
Year ended 31 December	2024	2023	2024	2023
Amounts recognised in profit or loss		*(in million Baht)*		
Rental income	174	141	137	158

12 Property, plant and equipment

	Consolidated financial statements						
	Land and land improvement	Plant, machinery, equipment and factory tools	Buildings and buildings improvement	Furniture, fixtures and equipment	Vehicles	Assets under construction	Total
				(in million Baht)			
Cost							
As at 1 January 2023	19,816	471,553	33,319	4,343	905	27,796	557,732
Additions	566	1,517	100	152	9	14,982	17,326
Loss of control in subsidiary	(317)	(2,855)	(1,380)	(319)	(25)	(590)	(5,486)
Transfers	245	13,622	1,297	315	5	(15,896)	(412)
Disposals	(2,323)	(3,435)	(344)	(218)	(86)	(610)	(7,016)
Effect from exchange differences on translating financial statements	161	868	199	21	2	(136)	1,115
As at 31 December 2023 and 1 January 2024	**18,148**	**481,270**	**33,191**	**4,294**	**810**	**25,546**	**563,259**
Additions	2	3,056	25	171	9	10,041	13,304
Transfers	(122)	10,286	1,976	309	12	(12,706)	(245)
Disposals	(19)	(2,378)	(65)	(275)	(42)	(14)	(2,793)
Effect from exchange differences on translating financial statements	(339)	(3,153)	(875)	(134)	(7)	(240)	(4,748)
As at 31 December 2024	**17,670**	**489,081**	**34,252**	**4,365**	**782**	**22,627**	**568,777**

		Consolidated financial statements						
	Notes	Land and land improvement	Plant, machinery, equipment and factory tools	Buildings and buildings improvement	Furniture, fixtures and equipment	Vehicles	Assets under construction	Total
					(in million Baht)			
Accumulated depreciation and allowance for impairment								
As at 1 January 2023		1,341	240,172	13,686	3,294	753	2,165	261,411
Depreciation charge for the year		138	19,162	1,326	390	71	-	21,087
Loss of control in subsidiary		-	(1,434)	(576)	(273)	(23)	-	(2,306)
Transfers		(1)	22	(5)	-	2	-	18
Disposals		(7)	(2,773)	(144)	(207)	(84)	-	(3,215)
Reversal of impairment losses		-	(7)	(12)	-	-	-	(19)
Effect from exchange differences on translating financial statements		1	372	54	14	1	(19)	423
As at 31 December 2023 and 1 January 2024		**1,472**	**255,514**	**14,329**	**3,218**	**720**	**2,146**	**277,399**
Depreciation charge for the year		141	19,616	1,574	368	33	-	21,732
Transfers		-	1	(1)	-	12	-	12
Disposals		(4)	(1,997)	(42)	(274)	(40)	-	(2,357)
Impairment losses	*8*	395	4,636	1,091	6	-	639	6,767
Effect from exchange differences on translating financial statements		(31)	(1,967)	(392)	(92)	(5)	(58)	(2,545)
As at 31 December 2024		**1,973**	**275,803**	**16,559**	**3,226**	**720**	**2,727**	**301,008**
Net book value								
As at 31 December 2023								
Owned assets		16,676	225,756	18,862	1,076	90	23,400	285,860
As at 31 December 2024								
Owned assets		15,697	213,278	17,693	1,139	62	19,900	267,769

	Separate financial statements						
	Land and land improvement	Plant, machinery, equipment and factory tools	Buildings and buildings improvement	Furniture, fixtures and equipment	Vehicles	Assets under construction	Total
				(in million Baht)			
Cost							
As at 1 January 2023	5,768	347,021	12,038	1,778	550	14,020	381,175
Additions	562	1,271	5	42	-	9,015	10,895
Acquisition from transfers of businesses	564	42,544	2,736	116	1	275	46,236
Transfers	768	9,940	794	74	2	(11,310)	268
Disposals	-	(3,007)	(56)	(78)	(59)	-	(3,200)
As at 31 December 2023 and 1 January 2024	**7,662**	**397,769**	**15,517**	**1,932**	**494**	**12,000**	**435,374**
Additions	1	2,628	15	29	2	4,984	7,659
Transfers	(75)	4,734	56	72	9	(4,890)	(94)
Disposals	(12)	(1,742)	(4)	(219)	(11)	(7)	(1,995)
As at 31 December 2024	**7,576**	**403,389**	**15,584**	**1,814**	**494**	**12,087**	**440,944**

	Separate financial statements						
	Land and land improvement	Plant, machinery, equipment and factory tools	Buildings and buildings improvement	Furniture, fixtures and equipment	Vehicles	Assets under construction	Total
				(in million Baht)			
Accumulated depreciation							
As at 1 January 2023	819	186,239	6,141	1,457	453	270	195,379
Depreciation charge for the year	63	13,958	475	158	53	-	14,707
Acquisition from transfers of businesses	6	14,701	1,046	106	1	-	15,860
Transfers	-	5	-	-	1	-	6
Disposals	-	(2,548)	(51)	(77)	(58)	-	(2,734)
As at 31 December 2023 and 1 January 2024	**888**	**212,355**	**7,611**	**1,644**	**450**	**270**	**223,218**
Depreciation charge for the year	66	14,236	493	107	20	-	14,922
Transfers	-	-	-	-	9	-	9
Disposals	-	(1,581)	(3)	(218)	(11)	-	(1,813)
As at 31 December 2024	**954**	**225,010**	**8,101**	**1,533**	**468**	**270**	**236,336**
Net book value							
As at 31 December 2023							
Owned assets	6,774	185,414	7,906	288	44	11,730	212,156
As at 31 December 2024							
Owned assets	6,622	178,379	7,483	281	26	11,817	204,608

Security

As at 31 December 2024, property, plant and equipment of the Group with net book value of Baht 8,763 million *(2023: Baht 8,554 million)* were registered to secured a loans from financial institutions (see Note 16). In addition, a subsidiary pledged bank accounts and various rights to the financial institutions. Thus, bank deposits placed as collateral can be withdrawn in accordance with the objectives and conditions specified in the loan agreement.

Capitalised borrowing costs relating to the construction of a new factory for the Group amounted to Baht 103 million *(2023:the Group amounted to Baht 121 million and the Company amounted to Baht 30 million)*, with capitalisation rates of 3.38% to 6.25% per annum *(2023:the Group 2.90% to 7.00% per annum and the Company 3.50% per annum)*.

13 Leases

	Consolidated financial statements		Separate financial statements	
Right-of-use assets				
As at 31 December	2024	2023	2024	2023
	(in million Baht)			
Land and land improvement	11,788	8,243	9,863	5,873
Plant, machinery, equipment and factory tools	14,185	15,116	12,430	13,209
Buildings and buildings improvement	1,328	1,260	147	45
Furniture, fixtures and equipment	181	252	59	65
Vehicles	623	604	232	291
Total	**28,105**	**25,475**	**22,731**	**19,483**

In 2024, additions to the right-of-use assets of the Group and the Company were Baht 6,606 million and Baht 5,210 million, respectively *(2023: Baht 2,357 million and Baht 4,627 million, respectively)*.

The Group leases a number of plots of land and land improvement for 2 to 96 years.

Extension options

The Group has extension options on property leases exercisable up to one year before the end of the contract period. The Group assesses at lease commencement date whether it is reasonably certain to exercise the extension options and will regularly reassess so.

	Consolidated financial statements		Separate financial statements	
Year ended 31 December	2024	2023	2024	2023
	(in million Baht)			
Amounts recognised in profit or loss				
Depreciation of right-of-use assets:				
- Land and land improvement	781	571	596	432
- Plant, machinery, equipment and factory tools	1,533	1,509	1,061	1,024
- Buildings and buildings improvement	496	469	53	60
- Furniture, fixtures and equipment	135	145	53	61
- Vehicles	395	368	164	161
Interest expense on lease liabilities				
- Net of interest capitalised as part of asset under construction	1,039	821	810	611

	Consolidated financial statements		Separate financial statements	
Year ended 31 December	2024	2023	2024	2023
	(in million Baht)			
Expense relating to short-term leases	67	108	10	16
Expense relating to leases of low value assets	122	111	86	76
Expense relating to variable lease payments not included in the measurement of the lease liability	149	124	148	115

Security

As at 31 December 2024, net book value of right-of-use assets of the Group of CNY 44 million (equivalent to Baht 206 million) and 377 million *(2023: CNY 45 million (equivalent to Baht 217 million))* were registered to secured loans from financial institutions (see Note 16).

14 Goodwill

	Consolidated financial statements	
	2024	2023
	(in million Baht)	
Cost		
As at 1 January	76,089	74,463
Decrease	-	(717)
Effect of movements in exchange rates	(5,074)	2,343
As at 31 December	**71,015**	**76,089**
Allowance for impairment		
As at 1 January	-	(717)
Decrease	-	717
As at 31 December	**-**	**-**
Net book value		
As at 31 December	**71,015**	**76,089**

Impairment testing for CGUs containing goodwill

For the purposes of impairment testing, goodwill has been allocated to the Group's CGU which is substantially represented by Allnex Holding GmbH and its subsidiaries.

The recoverable amount was based on value in use, estimated using discounted cash flows. The fair value measurement was categorised as a Level 3 fair value.

The recoverable amount of CGU relating to goodwill arising from the cash flow projections included specific estimates for ten years and a terminal growth rate thereafter to aligned with long-term business plan of the Group. The terminal growth rate was determined based on management's estimate of the long-term annual EBITDA growth rate, consistent with the assumptions that a market participant would make.

The key assumptions used in the estimation of the recoverable amount

The discount rate was based on the weighted average cost of capital, derived using a risk free rate referencing a 10-year government bond, market risk premium and average company beta at a discount rate for the year 2024 of 7.5% *(2023: 7.7%)*.

The forecasted growth in EBITDA was derived based on the expectations of industry, regional and global macroeconomic information. With references to historical data, internal and external sources of information, applicable adjustments have been reflected to the increases in revenue and corresponding expenditures ranging from raw material and utilities prices, logistic costs to research, innovations and development to enhance product and services standards in satisfying diverse customer requirements and demands at a growth rate of 10%.

From the impairment assessment, the recoverable amount of CGU was higher than its carrying amount, therefore, no impairment loss was recognised in the consolidated financial statements.

Management is aware that if there were to be changes to two key assumptions, either an increase in discount rate of 17% of company weighted average cost of capital or a decrease in the forecasted EBITDA growth rate in excess of 19%, the calculated recoverable amount will approximately be equal to the carrying amount.

15 Intangible assets

	Consolidated financial statements					
	Production licence fees	Computer software	Customer contracts and the related customer relationships	Right to use Others	Intangible assets under development	Total
			(in million Baht)			
Cost						
As at 1 January 2023	9,038	10,033	21,073	41,259	735	82,138
Additions	25	60	-	275	806	1,166
Loss of control in subsidiary	-	(170)	-	-	(29)	(199)
Transfers	176	664	59	(34)	(714)	151
Disposals	(31)	(246)	-	(96)	(8)	(381)
Effect from exchange differences on translating financial statements	1	130	625	1,387	11	2,154
As at 31 December 2023 and 1 January 2024	**9,209**	**10,471**	**21,757**	**42,791**	**801**	**85,029**
Additions	7	21	-	316	725	1,069
Transfers	36	515	-	9	(630)	(70)
Disposals	(27)	(319)	-	(186)	-	(532)
Effect from exchange differences on translating financial statements	10	(340)	(1,481)	(2,921)	(17)	(4,749)
As at 31 December 2024	**9,235**	**10,348**	**20,276**	**40,009**	**879**	**80,747**

	Note	Consolidated financial statements					
		Production licence fees	Computer software	Customer contracts and the related customer relationships	Right to use Others	Intangible assets under development	Total
		(in million Baht)					
Accumulated amortisation and allowance for impairment							
As at 1 January 2023		4,035	6,408	4,810	6,631	22	21,906
Amortisation charge for the year		385	853	696	2,078	-	4,012
Loss of control in subsidiary		-	(83)	-	-	-	(83)
Transfer		(2)	2	24	(24)	-	-
Disposal		(21)	(232)	-	(51)	-	(304)
Effect from exchange differences on translating financial statements		1	84	136	253	-	474
As at 31 December 2023 and 1 January 2024		**4,398**	**7,032**	**5,666**	**8,887**	**22**	**26,005**
Amortisation charge for the year		378	892	707	2,039	-	4,016
Transfer		-	1	-	-	-	1
Disposal		(27)	(313)	-	(103)	-	(443)
Impairment losses	*8*	-	11	-	181	27	219
Effect from exchange differences on translating financial statements		13	(268)	(431)	(746)	(2)	(1,434)
As at 31 December 2024		**4,762**	**7,355**	**5,942**	**10,258**	**47**	**28,364**
Net book value							
As at 31 December 2023		**4,811**	**3,439**	**16,091**	**33,904**	**779**	**59,024**
As at 31 December 2024		**4,473**	**2,993**	**14,334**	**29,751**	**832**	**52,383**

	Separate financial statements				
	Production licence fees	Computer software	Right to use others	Intangible assets under development	Total
			(in million Baht)		
Cost					
As at 1 January 2023	6,363	4,735	61	208	11,367
Additions	18	17	-	410	445
Acquisition from transfers of businesses	1,995	190	-	101	2,286
Transfers	146	212	12	(227)	143
Disposal	(11)	(16)	-	-	(27)
As at 31 December 2023 and 1 January 2024	**8,511**	**5,138**	**73**	**492**	**14,214**
Additions	3	3	5	339	350
Transfers	-	249	6	(256)	(1)
Disposal	-	(6)	-	-	(6)
As at 31 December 2024	**8,514**	**5,384**	**84**	**575**	**14,557**
Accumulated amortisation					
As at 1 January 2023	3,022	2,994	35	22	6,073
Amortisation charge for the year	328	335	7	-	670
Acquisition from transfers of businesses	517	138	-	-	655
Disposal	(1)	(15)	-	-	(16)
As at 31 December 2023 and 1 January 2024	**3,866**	**3,452**	**42**	**22**	**7,382**
Amortisation charge for the year	337	340	9	-	686
As at 31 December 2024	**4,203**	**3,792**	**51**	**22**	**8,068**
Net book value					
As at 31 December 2023	**4,645**	**1,686**	**31**	**470**	**6,832**
As at 31 December 2024	**4,311**	**1,592**	**33**	**553**	**6,489**

16 Interest-bearing liabilities

Short-term borrowings

Short-term borrowings balances as at 31 December 2024 and 2023 were as follows:

		Consolidated financial statements		Separate financial statements	
	Note	2024	2023	2024	2023
		(in million Baht)			
Short-term borrowings from financial institutions					
- Secured		392	1,380	-	-
- Unsecured		723	823	-	-
Short-term borrowings from related parties					
- Unsecured	*4*	-	-	2,612	1,580
Total		**1,115**	**2,203**	**2,612**	**1,580**

Long-term borrowings

Long-term borrowings balances as at 31 December 2024 and 2023 were as follows:

		Consolidated financial statements		Separate financial statements	
	Note	2024	2023	2024	2023
		(in million Baht)			
Current					
Current portion of long-term borrowings from financial institutions					
- Secured		360	346	-	-
- Unsecured		20,511	7,030	19,357	5,998
Current portion of long-term borrowings from related parties					
- Unsecured	*4*	-	-	835	-
Current portion of long-term borrowings from other parties					
- Unsecured		97	40	-	-
Total current		**20,968**	**7,416**	**20,192**	**5,998**
Non-current					
Long-term borrowings from financial institutions					
- Secured		8,426	8,264	-	-
- Unsecured		71,441	82,770	42,092	46,536
Long-term borrowing from a related party					
- Unsecured	*4*	-	-	50,849	74,266
Long-term borrowings from other parties					
- Unsecured		202	210	-	-
Total non-current		**80,069**	**91,244**	**92,941**	**120,802**
Total		**101,037**	**98,660**	**113,133**	**126,800**

As at 31 December 2024, the Group had unutilised credit facilities totalling Baht 28,576 million *(2023: Baht 45,568 million)*.

As at 31 December 2024, the Group pledged some bank accounts, some of the property, plant and equipment and various rights as collateral as reported to financial institutions. However, the pledged bank accounts can be withdrawn with the objective and conditions stipulated in loan agreements (see Notes 12 and 13).

As at 31 December 2024, the Group and the Company had long-term and revolving long-term credit facility agreements with several financial institutions totalling Baht 100,739 million and Baht 61,449 million, respectively *(2023: Baht 98,410 million and Baht 52,534 million, respectively)* which bear different interest rates and repayment terms as specified in each agreement. The Group is required to comply with certain covenants pertaining to maintaining certain financial ratios, percentage of share held by the major shareholder and other conditions as specified in each agreement.

Details of the Group's facilities from financial institutions as at 31 December 2024 were as follows:

Currency	Facilities *(in million)*	Interest Rates (% p.a.)	Repayment Terms
The Company			
Baht	10,000	THOR plus margin	Principal is repayable once in June 2025.
Baht	10,000	THOR plus margin	Principal is repayable on a semi-annual basis, in 12 instalments commencing from January 2022.
Baht	10,000	MLR minus margin	Principal is repayable on a quarterly basis, in 12 instalments commencing from January 2023.
Baht	12,799.6	THOR plus margin	Principal is repayable on a semi-annual basis, in 20 instalments commencing from March 2023.
Baht	10,000	MLR minus margin	Principal is repayable on a quarterly basis, in 12 instalments commencing from December 2024.
Baht	2,000	THOR plus margin	Principal is repayable on a semi-annual basis, in 10 instalments commencing from March 2026.
Baht	2,000	THOR plus margin	Principal is repayable on a semi-annual basis, in 10 instalments commencing from March 2026.
Baht	15,000*	MLR minus margin	Principal is repayable on a quarterly basis, in 14 instalments commencing from March 2026.
Baht	1,000	Prime rate minus margin	Principal is repayable on a semi-annual basis, in 6 instalments commencing from June 2026.
Baht	10,000*	THOR plus margin	Principal is repayable once in December 2029.
Subsidiaries			
Baht	6,004	THOR plus margin	Principal is repayable on a semi-annual basis, in 20 instalments commencing from February 2021.
Baht	1,250	THOR plus margin	Principal is repayable on a semi-annual basis, in 20 instalments commencing from April 2023.
Baht	755	Highest interest rate for 6 month-fixed deposit plus margin	Principal is repayable on a semi-annual basis, in 10 instalments commencing from June 2024.
CNY	700	LPR minus margin	Principal is repayable on a semi-annual basis, in 10 instalments commencing from December 2025.
EUR	450	EURIBOR 1/3/6M plus margin	Principal is repayable once in October 2029.
USD	300	SOFR plus margin	Principal is repayable once in October 2029.
Baht	755	THOR plus margin	Principal is repayable on a semi-annual basis, in 10 instalments commencing from June 2024.

Currency	Facilities *(in million)*	Interest Rates (% p.a.)	Repayment Terms
Baht	2,000*	THOR plus margin	Principal is repayable on a semi-annual basis, in 10 instalments commencing from June 2026.
USD	100	SOFR plus margin	Principal is repayable in 4 instalments commencing from December 2025.
USD	1.93	Fixed rate	Principal is repayable on a quarterly basis, in 15 instalments commencing from October 2023.

*Sustainability-Linked Loan (or SLL), the interest rates will be adjusted down in line with operational achievements of Sustainability Performance Targets (or SPTs) according to the agreement.

As at 31 December 2024, the subsidiaries' long-term borrowings and debentures were guaranteed by the Company totalling Baht 52,543 million *(2023: Baht 81,622 million)* (see Note 27).

Debentures

Debentures balances as at 31 December 2024 and 2023 were as follows:

	Consolidated financial statements		Separate financial statements	
	2024	2023	2024	2023
	(in million Baht)			
Current				
Current portion of debentures				
- Unsecured	-	11,498	-	11,498
Total current	**-**	**11,498**	**-**	**11,498**
Non-current				
Debentures				
- Unsecured	127,037	152,691	78,456	78,445
Total non-current	**127,037**	**152,691**	**78,456**	**78,445**
Total	**127,037**	**164,189**	**78,456**	**89,943**

Details of the Group's debentures as at 31 December 2024 were as follows:

	Currency	Facilities *(in million)*	Face value per share	Years	Interest rates *(% p.a.)*	Repayment Terms
The Company						
Unsubordinated debenture unsecured without a debenture holders' representative	Baht	7,000	1,000	7	2.43	Interest is payable on a semi-annual basis and maturity in September 2026.
Unsubordinated debenture unsecured without a debenture holders' representative	Baht	1,500	1,000	10	2.75	Interest is payable on a semi-annual basis and maturity in September 2029.
Unsubordinated debenture unsecured with a debenture holders' representative	Baht	1,530	1,000	7	2.60	Interest is payable on a semi-annual basis and maturity in April 2027.

	Currency	Facilities *(in million)*	Face value per share	Years	Interest rates *(% p.a.)*	Repayment Terms
Unsubordinated debenture unsecured with a debenture holders' representative	Baht	3,310	1,000	10	2.99	Interest is payable on a semi-annual basis and maturity in April 2030.
Unsubordinated debenture unsecured with a debenture holders' representative	Baht	4,360	1,000	12	3.29	Interest is payable on a semi-annual basis and maturity in April 2032.
Unsubordinated debenture unsecured with a debenture holders' representative	Baht	5,800	1,000	15	3.50	Interest is payable on a semi-annual basis and maturity in April 2035.
Unsubordinated debenture unsecured with a debenture holders' representative	Baht	14,000	1,000	5	2.13	Interest is payable on a semi-annual basis and maturity in January 2027.
Unsubordinated debenture unsecured with a debenture holders' representative	Baht	2,000	1,000	7	2.65	Interest is payable on a semi-annual basis and maturity in January 2029.
Unsubordinated debenture unsecured with a debenture holders' representative	Baht	2,000	1,000	10	3.05	Interest is payable on a semi-annual basis and maturity in January 2032.
Unsubordinated debenture unsecured with a debenture holders' representative	Baht	12,000	1,000	12	3.29	Interest is payable on a semi-annual basis and maturity in January 2034.
Unsubordinated debenture unsecured with a debenture holders' representative	Baht	5,000	1,000	5	3.21	Interest is payable on a semi-annual basis and maturity in June 2027.
Unsubordinated debenture unsecured with a debenture holders' representative	Baht	3,000	1,000	12	4.00	Interest is payable on a semi-annual basis and maturity in June 2034.
Unsubordinated debenture unsecured with a debenture holders' representative and debenture issuer has right to redeem the debentures prior to maturity after one year of issuance	Baht	17,000	1,000	7	3.50	Interest is payable on a semi-annual basis and maturity in June 2029.

	Currency	Facilities *(in million)*	Face value per share	Years	Interest rates (% p.a.)	Repayment Terms
Subsidiaries						
Unsubordinated debenture at 98.68% of the face value unsecured with a debenture holders' representative and the debenture issuer can early redeem regarding the rights and obligations	USD	630	1,000	10	2.98	Interest is payable on a semi-annual basis and maturity in March 2031.
Unsubordinated debenture at 98.41% of the face value unsecured with a debenture holders' representative and the debenture issuer can early redeem regarding the rights and obligations	USD	374.33	1,000	30	4.30	Interest is payable on a semi-annual basis and maturity in March 2051.
Unsubordinated debenture at 99.41% of the face value unsecured with a debenture holders' representative and the debenture issuer can early redeem regarding the rights and obligations	USD	338.63	1,000	10	4.40	Interest is payable on a semi-annual basis and maturity in March 2032.
Unsubordinated debenture at 99.43% of the face value unsecured with a debenture holders' representative and the debenture issuer can early redeem regarding the rights and obligations	USD	102.98	1,000	30	5.20	Interest is payable on a semi-annual basis and maturity in March 2052.

The periods to maturity of interest-bearing liabilities, excluding finance lease liabilities, as at 31 December 2024 and 2023 were as follows:

	Consolidated financial statements		Separate financial statements	
	2024	2023	2024	2023
	(in million Baht)			
Within one year	22,083	21,118	22,804	19,076
After one year but within five years	117,166	106,397	87,118	67,052
After five years	89,940	137,537	84,279	132,196
Total	**229,189**	**265,052**	**194,201**	**218,324**

Lease liabilities

The periods to maturity of lease liabilities, as at 31 December 2024 and 2023 were as follows:

	Consolidated financial statements		Separate financial statements	
	2024	2023	2024	2023
	(in million Baht)			
Within one year	3,679	3,005	2,569	1,849
After one year but within five years	9,710	8,893	7,521	6,419
After five years	24,249	19,772	21,143	16,708
	37,638	**31,670**	**31,233**	**24,976**
Less Deferred interest expense	(8,896)	(6,619)	(7,269)	(4,909)
	28,742	**25,051**	**23,964**	**20,067**
Classification				
- Current portion of lease liabilities	2,763	2,198	1,841	1,258
- Lease liabilities	25,979	22,853	22,123	18,809
	28,742	**25,051**	**23,964**	**20,067**

Changes in liabilities arising from financing activities

	Consolidated financial statements				
	Accrued interest expense	Borrowings	Debentures	Lease liabilities	Total
			(in million Baht)		
2024					
As at 1 January	1,953	100,864	164,189	25,051	292,057
Net financing cash flows	(11,690)	2,938	(34,818)	(3,592)	(47,162)
Increase in lease liabilities	-	-	-	6,527	6,527
Effect from foreign exchange rate	7	(1,583)	434	(211)	(1,353)
Interest expense	10,618	-	-	1,039	11,657
Others	336	(67)	(2,768)	(72)	(2,571)
As at 31 December	**1,224**	**102,152**	**127,037**	**28,742**	**259,155**
2023					
As at 1 January	1,801	100,575	176,974	24,305	303,655
Net financing cash flows	(10,861)	473	(10,330)	(3,186)	(23,904)
Loss of control in subsidiary	-	(933)	-	(60)	(993)
Increase in lease liabilities	-	-	-	2,328	2,328
Effect from foreign exchange rate	194	686	(654)	62	288
Interest expense	10,615	-	-	821	11,436
Others	204	63	(1,801)	781	(753)
As at 31 December	**1,953**	**100,864**	**164,189**	**25,051**	**292,057**

	Separate financial statements				
	Accrued interest expense	Borrowings	Debentures	Lease liabilities	Total
			(in million Baht)		
2024					
As at 1 January	1,906	128,381	89,943	20,067	240,297
Net financing cash flows	(8,873)	(12,998)	(11,500)	(2,081)	(35,452)
Increase in lease liabilities	-	-	-	5,202	5,202
Effect from foreign exchange rate	-	301	-	-	301
Interest expense	8,020	-	-	810	8,830
Others	95	61	13	(34)	135
As at 31 December	**1,148**	**115,745**	**78,456**	**23,964**	**219,313**
2023					
As at 1 January	1,795	143,631	89,930	17,088	252,444
Net financing cash flows	(8,149)	(15,070)	-	(1,757)	(24,976)
Acquisition from transfers of businesses	-	-	-	2,864	2,864
Loss of control in subsidiary	-	-	-	34	34
Increase in lease liabilities	-	-	-	500	500
Effect from foreign exchange rate	-	(366)	-	-	(366)
Interest expense	8,120	-	-	611	8,731
Others	140	186	13	727	1,066
As at 31 December	**1,906**	**128,381**	**89,943**	**20,067**	**240,297**

17 Non-current provisions for employee benefits

	Consolidated financial statements		Separate financial statements	
As at 31 December	2024	2023	2024	2023
		(in million Baht)		
Post-employment benefits	7,683	7,614	4,463	3,872
Other long-term employee benefits	4,094	4,321	494	474
Fair value of plan assets	(2,844)	(2,927)	-	-
Total	**8,933**	**9,008**	**4,957**	**4,346**

Defined benefit plans

The Group and the Company operate a defined benefit plan based on the requirement of Thai Labour Protection Act B.E 2541 (1998) to provide retirement benefits to employees based on pensionable remuneration and length of service. The defined benefit plans expose the Company to actuarial risks, such as longevity risk, currency risk, interest rate risk and market (investment) risk.

Present value of the defined benefit obligations	Consolidated financial statements		Separate financial statements	
	2024	2023	2024	2023
		(in million Baht)		
As at 1 January	9,008	9,166	4,346	4,833
Include in profit or loss:				
Current service costs	513	529	249	284
Interest on obligation	283	280	140	134
Reversal	(386)	-	-	-
Actuarial loss (gain)	44	(65)	37	(71)
	454	744	426	347
Included in other comprehensive income:				
Loss (gain) on remeasurements of defined benefit plans	386	(249)	425	(640)
Exchange differences on translating financial statement	(277)	105	-	-
	109	(144)	425	(640)
Others				
Benefits paid by the plan	(638)	(624)	(236)	(216)
Defined benefit obligations acquired through businesses combinations	-	-	(2)	22
Defined benefit obligations decrease from change in ownership interest in subsidiary	-	(134)	-	-
	(638)	(758)	(238)	(194)
As at 31 December	**8,933**	**9,008**	**4,957**	**4,346**

The principal actuarial assumptions as at 31 December 2024 and 2023 (expressed as weighted-averages) were as follows:

Actuarial assumptions	Consolidated financial statements		Separate financial statements	
	2024	2023	2024	2023
		(%)		
Discount rate	1.6 - 7.0	1.0 - 7.0	2.4	3.4
Future salary growth	2.5 - 8.0	3.0 - 8.0	6.0	6.0
Employee turnover	0.0 - 50.0	0.0 - 50.0	0.0 - 4.0	0.0 - 4.0
Retirement age	55 - 67 years	55 - 67 years	60 years	60 years

Assumptions regarding future mortality have been based on published statistics and mortality tables.

As at 31 December 2024, the weighted-average duration of the defined benefit obligation was 11 years *(2023: 11 years)*.

Sensitivity analysis

Reasonably possible changes at the reporting date to one of the relevant actuarial assumptions, holding other assumptions constant, would have affected the defined benefit obligation by the amounts shown below:

	Consolidated financial statements			
Effect to the defined benefit obligation	1% increase in assumption		1% decrease in assumption	
At 31 December	2024	2023	2024	2023
	(in million Baht)			
Discount rate	(1,034)	(1,037)	1,219	1,157
Future salary growth	795	747	(694)	(653)

	Separate financial statements			
Effect to the defined benefit obligation	1% increase in assumption		1% decrease in assumption	
At 31 December	2024	2023	2024	2023
	(in million Baht)			
Discount rate	(434)	(390)	506	391
Future salary growth	486	396	(423)	(346)

Plan assets

The major categories and fair value of plan assets at the end of the reporting period for each category were as follows:

	Consolidated financial statements		Separate financial statements	
	2024	2023	2024	2023
	(in million Baht)			
Equity securities	742	748	-	-
Government and corporate bonds	959	1,028	-	-
Others	1,143	1,151	-	-
Total	**2,844**	**2,927**	**-**	**-**

18 Legal reserve

Section 116 of the Public Limited Companies Act B.E. 2535 (1992) requires that a company shall allocate not less than 5% of its annual net profit, less any accumulated losses brought forward (if any), to a reserve account ("legal reserve"), until this account reaches an amount not less than 10% of the registered authorised capital. The legal reserve is not available for dividend distribution.

19 Subordinated perpetual debentures

On 13 November 2024, the Company has issued and offered Subordinated perpetual debentures of the Company No. 1/2024 (the "Debentures") in the amount of Baht 17,000 million at par value with bullet payment upon dissolution of the Company or upon the exercise of the Company's early redemption right per conditions as stipulated in the terms and conditions of the Debentures. The Debentures are unsecured and unconvertible. The Debentures bear interest at 5.25% per annum for the first to the fifth years and six months; and thereafter, the interest rate for the Debentures shall be in accordance with the details stated under the terms and conditions in relation to the Debentures. The interest is paid on a 6 months basis. However, the Company has the sole right to unconditionally defer interest and cumulative interest payments to the Debentures holders without time and deferral amount limitation. If the Company defers interest and cumulative interest payment, the Company shall not perform as follows:

(a) declare or pay any dividend; and

(b) The payment of interest or the distribution of any assets to the holders of securities issued by the debenture issuer with a legal status equivalent to the debentures, or to the holders of securities with a legal status subordinate to the debentures.

(c) redeem, reduce, cancel, acquire or buy-back for any instruments or securities issued by the Company which rank pari passu or junior to these debentures.

20 Segment information and disaggregation of revenue

(a) Segment information

Management consider that the Group has 6 reportable segments which are significant business segments of the Group that offer different products and services, and are managed separately. For each of the business segments, the chief operating decision maker (CODM) reviews internal management reports on at least a quarterly basis. The operations in each of the Group's reportable segments are as follows:

Segment 1	Upstream (including Refinery, Aromatics and Olefins)
Segment 2	Intermediates (including EO-Based Performance, Phenol and others)
Segment 3	Polymers and Chemicals
Segment 4	Bio and Circularity
Segment 5	Performance Chemicals
Segment 6	Service and Others

Performance of each reportable segment is measured based on profit before finance cost, income tax, depreciation, amortisation and others as included in the internal management reports that are reviewed by the Group's CODM. Management believes that using profit before finance cost, income tax, depreciation, amortisation and others to measure performance is the most relevant in evaluating the results of certain segments relative to other entities that operate within these industries.

Year ended 31 December 2024	Consolidated financial statements							
	Upstream	Intermediates	Polymers and Chemicals	Bio and Circularity	Performance Chemicals	Service and Others	Elimination	Total
				(in million Baht)				
External revenues	320,492	77,528	98,750	16,686	91,395	3,699	-	608,550
Inter-segment revenues	126,600	9,692	4,252	3,394	-	3,253	(147,191)	-
Total revenues*	**447,092**	**87,220**	**103,002**	**20,080**	**91,395**	**6,952**	**(147,191)**	**608,550**
Cost of sales and rendering of services	(425,974)	(82,688)	(94,974)	(18,576)	(71,134)	(5,987)	147,009	(552,324)
Selling, distribution and administrative expenses	(3,811)	(3,275)	(4,915)	(949)	(14,140)	(2,036)	400	(28,726)
Profit (loss) before finance costs, income tax, depreciation, amortisation and others	**18,992**	**1,367**	**3,327**	**619**	**6,838**	**3,536**	**(924)**	**33,755**
Investment income	506	41	213	68	351	1,646	(1,263)	1,562
Finance costs	(2,309)	(1,010)	(2,052)	(198)	(3,484)	(3,981)	876	(12,158)
Depreciation and amortisation	(11,942)	(4,131)	(3,000)	(643)	(9,944)	(294)	357	(29,597)
Profit (loss) on impairment, provisions and disposal of assets	(200)	(3,079)	(24)	35	(11,196)	3	-	(14,461)
Share of profit (loss) of joint ventures and associates accounted for using equity method	-	(9,450)	(278)	(1,368)	(108)	532	5	(10,667)
Others	1,859	328	630	28	(369)	(2,004)	(88)	384
Profit (loss) before income tax	**6,906**	**(15,934)**	**(1,184)**	**(1,459)**	**(17,912)**	**(562)**	**(1,037)**	**(31,182)**
Profit (loss) for reportable segment Owners of the Company	**8,002**	**(13,252)**	**(2,322)**	**(1,267)**	**(17,346)**	**(2,482)**	**(1,144)**	**(29,811)**

**The above segment revenue of the Group is the same basis disclosure with disaggregation of revenue by type of goods and service (major line of products).*

Year ended 31 December 2023	Consolidated financial statements							
	Upstream	Intermediates	Polymers and Chemicals	Bio and Circularity	Performance Chemicals	Service and Others	Elimination	Total
				(in million Baht)				
External revenues	343,844	68,263	95,800	15,049	94,703	3,972	-	621,631
Inter-segment revenues	106,878	8,673	3,934	2,992	-	8,049	(130,526)	-
Total revenues*	**450,722**	**76,936**	**99,734**	**18,041**	**94,703**	**12,021**	**(130,526)**	**621,631**
Cost of sales and rendering of services	(425,631)	(74,424)	(89,041)	(17,041)	(76,478)	(9,881)	129,017	(563,479)
Selling, distribution and administrative expenses	(3,533)	(2,942)	(4,693)	(792)	(13,477)	(2,815)	1,429	(26,823)
Profit before finance costs, income tax, depreciation, amortisation and others	**21,382**	**64**	**6,718**	**325**	**6,275**	**4,128**	**1,557**	**40,449**
Investment income	466	50	104	50	202	11,024	(10,705)	1,191
Finance costs	(2,480)	(990)	(1,110)	(133)	(2,881)	(4,572)	448	(11,718)
Depreciation and amortisation	(11,651)	(4,136)	(2,995)	(663)	(8,894)	(573)	320	(28,592)
Profit (loss) on impairment and disposal of assets	294	420	714	74	(553)	(544)	78	483
Share of profit (loss) of joint ventures and associates accounted for using equity method	-	(1,014)	(550)	(219)	(205)	1,589	12	(387)
Others	216	165	53	9	(208)	914	(358)	791
Profit (loss) before income tax	**8,227**	**(5,441)**	**2,934**	**(557)**	**(6,264)**	**11,966**	**(8,648)**	**2,217**
Profit (loss) for reportable segment Owners of the Company	**7,945**	**(5,784)**	**1,738**	**(474)**	**(5,803)**	**12,102**	**(8,725)**	**999**

**The above segment revenue of the Group is the same basis disclosure with disaggregation of revenue by type of goods and service (major line of products).*

(b) Geographical segments

Geographical segment presentation is based on the geographical location of customers. Segment non-current assets (exclude derivatives and deferred tax assets) are based on the geographical location of the assets.

Geographical information

	Revenues	
	2024	2023
	(in million Baht)	
Thailand	340,505	357,580
The People's Republic of China	39,949	41,212
Vietnam	24,929	21,511
Singapore	23,486	29,743
India	22,219	15,827
Malaysia	18,490	11,498
United States of America	18,388	18,921
Indonesia	13,536	10,393
Japan	10,889	7,913
Germany	9,843	10,478
Other countries	86,316	96,555
Total	**608,550**	**621,631**

	Non-current assets	
	2024	2023
	(in million Baht)	
Thailand	317,273	339,061
Netherlands	81,748	88,530
Germany	47,222	53,280
United States of America	19,814	20,764
The People's Republic of China	5,812	5,744
France	255	6,628
Other countries	13,968	14,948
Total	**486,092**	**528,955**

(c) Major customers

Revenue from one customer, which is a related party, of Upstream and Bio and Circularity segments representing Baht 180,074 million *(2023: Baht 186,162 million)* of the Group's revenue.

21 Expenses by nature

	Consolidated financial statements		Separate financial statements	
	2024	2023	2024	2023
	(in million Baht)			
Included in cost of sales of goods				
Changes in finished goods work in progress and goods in transit	(1,615)	11,086	(1,554)	6,396
Raw materials used	433,046	437,368	362,579	367,352
Personnel expense	18,562	18,915	6,115	5,762
Depreciation of property, plant and equipment	20,629	19,907	14,484	14,211
Depreciation of right-of-use assets	1,665	1,373	999	814
Amortisation of intangible assets	477	470	435	409
Included in selling and distribution and administrative expenses				
Personnel expense	11,458	11,562	3,873	3,713
Depreciation of property, plant and equipment	1,103	1,180	438	496
Depreciation of right-of-use assets	1,329	1,362	928	924
Amortisation of intangible assets	3,538	3,542	251	260
Minimum lease payments recognised as a lease expense	328	368	105	118

During 2024, the Group and the Company have contributed provident funds for its employees amounting to Baht 1,045 million and Baht 596 million, respectively *(2023: Baht 1,097 million and Baht 590 million, respectively)*, which is included in employee benefit expenses.

22 Income tax

Income tax recognised in profit or loss	Consolidated financial statements		Separate financial statements	
	2024	2023	2024	2023
	(in million Baht)			
Current tax expense				
Current year	1,324	1,860	-	-
Under (over) provided in prior years	16	(67)	-	-
	1,340	1,793	-	-
Deferred tax expense				
Movements in temporary differences	(2,508)	(441)	(915)	1,974
Total	**(1,168)**	**1,352**	**(915)**	**1,974**

Reconciliation of effective tax rate	**Consolidated financial statements**			
	2024		2023	
	Rate (%)	*(in million Baht)*	*Rate (%)*	*(in million Baht)*
Profit (loss) before income tax expense		(31,182)		2,217
Income tax using the Thai corporation tax rate	20.0	(6,236)	20.0	443
Effect of different tax rates in foreign jurisdictions		(1,207)		(239)
Income not subject to tax		(335)		(202)
Expenses not deductible for tax purposes		4,971		1,746
Expenses deductible at a greater amount		(599)		(487)
Tax losses carried forward		76		38
Under (over) provided in prior years		16		(67)
Share of profit of joint ventures and associates accounted for using equity method		2,133		77
Others		13		43
Total	**-**	**(1,168)**	**61.0**	**1,352**

Reconciliation of effective tax rate	**Separate financial statements**			
	2024		2023	
	Rate (%)	*(in million Baht)*	*Rate (%)*	*(in million Baht)*
Profit (loss) before income tax expense		(22,252)		22,239
Income tax using the Thai corporation tax rate	20.0	(4,450)	20.0	4,448
Income not subject to tax		(571)		(2,077)
Expenses not deductible for tax purposes		4,535		23
Expenses deductible at a greater amount		(429)		(420)
Total	**-**	**(915)**	**8.9**	**1,974**

	Consolidated financial statements			
Deferred tax	**Assets**		**Liabilities**	
At 31 December	2024	2023	2024	2023
	(in million Baht)			
Total	18,374	15,847	(30,182)	(31,508)
Set off of tax	(14,796)	(12,780)	14,796	12,780
Net deferred tax assets (liabilities)	**3,578**	**3,067**	**(15,386)**	**(18,728)**

	Separate financial statements			
Deferred tax	**Assets**		**Liabilities**	
At 31 December	2024	2023	2024	2023
	(in million Baht)			
Total	12,126	9,484	(11,815)	(10,653)
Set off of tax	(11,815)	(9,484)	11,815	9,484
Net deferred tax assets (liabilities)	**311**	**-**	**-**	**(1,169)**

	Consolidated financial statements					
		(Charged) / Credited to				
	At 1 January 2024	Profit or loss	Other comprehensive income	Loss of control in subsidiary and others	Exchange differences	At 31 December 2024
			(in million Baht)			
Deferred tax assets						
Provisions for employee benefits	1,417	103	(58)	-	(32)	1,430
Property, plant and equipment	1,038	278	-	12	(16)	1,312
Lease liabilities	5,038	755	-	-	(3)	5,790
Loss carry forward	4,791	1,242	-	-	(96)	5,937
Others	3,563	(132)	578	37	(141)	3,905
Total	**15,847**	**2,246**	**520**	**49**	**(288)**	**18,374**
Deferred tax liabilities						
Property, plant and equipment	(10,171)	(206)	-	(12)	285	(10,104)
Right-of-use assets	(4,547)	(689)	-	-	(22)	(5,258)
Other intangible assets	(13,618)	674	-	24	870	(12,050)
Financial assets	(2,225)	6	(1)	(6)	-	(2,226)
Others	(947)	477	41	(61)	(54)	(544)
Total	**(31,508)**	**262**	**40**	**(55)**	**1,079**	**(30,182)**
Net	**(15,661)**	**2,508**	**560**	**(6)**	**791**	**(11,808)**

	Consolidated financial statements					
		(Charged) / Credited to				
	At 1 January 2023	Profit or loss	Other comprehensive income	Loss of control in subsidiary and others	Exchange differences	At 31 December 2023
			(in million Baht)			
Deferred tax assets						
Provisions for employee benefits	1,444	(46)	35	(27)	11	1,417
Property, plant and equipment	1,000	38	-	-	-	1,038
Lease liabilities	4,738	300	-	(9)	9	5,038
Loss carry forward	5,023	(262)	-	-	30	4,791
Others	2,392	(110)	1,389	(112)	4	3,563
Total	**14,597**	**(80)**	**1,424**	**(148)**	**54**	**15,847**
Deferred tax liabilities						
Property, plant and equipment	(10,196)	168	-	7	(150)	(10,171)
Right-of-use assets	(4,504)	(42)	-	7	(8)	(4,547)
Other intangible assets	(13,691)	492	-	-	(419)	(13,618)
Financial assets	(2,254)	9	29	(9)	-	(2,225)
Others	(850)	(106)	(42)	-	51	(947)
Total	**(31,495)**	**521**	**(13)**	**5**	**(526)**	**(31,508)**
Net	**(16,898)**	**441**	**1,411**	**(143)**	**(472)**	**(15,661)**

	Separate financial statements			
		(Charged) / Credited to		
	At 1 January 2024	Profit or loss	Other comprehensive income	At 31 December 2024
	(in million Baht)			
Deferred tax assets				
Provisions for employee benefits	740	111	(40)	811
Property, plant and equipment	793	307	-	1,100
Lease liabilities	3,929	749	-	4,678
Loss carry forward	2,536	914	-	3,450
Others	1,486	26	575	2,087
Total	**9,484**	**2,107**	**535**	**12,126**
Deferred tax liabilities				
Property, plant and equipment	(4,247)	(797)	-	(5,044)
Right-of-use assets	(3,667)	(682)	-	(4,349)
Others	(2,739)	287	30	(2,422)
Total	**(10,653)**	**(1,192)**	**30**	**(11,815)**
Net	**(1,169)**	**915**	**565**	**311**

	Separate financial statements				
		(Charged) / Credited to			
	At 1 January 2023	Profit or loss	Other comprehensive income	Acquisition from transfers of businesses	At 31 December 2023
			(in million Baht)		
Deferred tax assets					
Provisions for employee benefits	798	6	(68)	4	740
Property, plant and equipment	503	41	-	249	793
Lease liabilities	3,389	62	-	478	3,929
Loss carry forward	3,411	(875)	-	-	2,536
Others	408	(308)	1,385	1	1,486
Total	**8,509**	**(1,074)**	**1,317**	**732**	**9,484**
Deferred tax liabilities					
Property, plant and equipment	(3,440)	(754)	-	(53)	(4,247)
Right-of-use assets	(3,263)	17	-	(421)	(3,667)
Others	(2,532)	(163)	(31)	(13)	(2,739)
Total	**(9,235)**	**(900)**	**(31)**	**(487)**	**(10,653)**
Net	**(726)**	**(1,974)**	**1,286**	**245**	**(1,169)**

Effect from international tax reform - Pillar Two model rules

The Group falls within the scope of the Pillar Two model rules published by the Organisation for Economic Co-operation and Development (OECD). This includes the collection of top-up tax from large multinational corporations whose effective tax rates from operations in each country are lower than 15%. Accordingly, the Group has applied the mandatory exception requiring that entities shall neither recognise nor disclose information about deferred tax assets and liabilities related to Pillar Two income taxes.

The Group operates in several countries where Pillar Two legislation has already been enacted and is effective for fiscal years beginning on or after 1 January 2024. The Group's management believes that most of these countries have benefited from the "Transitional Safe Harbour" relief measures. Therefore, the Group has not recognized an additional provision for liabilities related to the top-up tax in the financial statements for the year ended 31 December 2024.

In addition, on 26 December 2024, Thailand enacted such law, which will be effective for fiscal years beginning on or after 1 January 2025. The Group's management is currently assessing the potential impact of the Pillar Two legislation on the Group's financial statements. The management expects that the legislation will not have a significant impact on the Group's financial statements for the year ended 31 December 2025.

23 Promotional privileges

The Company has been granted promotional certificates by the Office of the Board of Investment relating to production of upstream, intermediate and downstream petrochemical, utilities and production support facilities, jetty for transportation and storage of liquid product and transportation by marine vessels, production of petroleum product. The Company has been granted several privileges including exemption and/or reduction from payment of income tax on the net profit derived from promoted operations with certained terms and conditions prescribed in the promotional certificates, which the Company must comply with.

	Separate financial statements					
	2024			2023		
	Promoted businesses	Non-promoted businesses	Total	Promoted businesses	Non-promoted businesses	Total
	(in million Baht)					
Export sales	21,560	84,619	106,179	16,970	80,293	97,263
Domestic sales	49,897	330,921	380,818	41,806	355,859	397,665
Services income	-	485	485	-	474	474
Total revenues	**71,457**	**416,025**	**487,482**	**58,776**	**436,626**	**495,402**

Certain subsidiaries in the Group have been granted promotional privileges as same as the Company.

24 Earnings (loss) per share

	Consolidated financial statements		Separate financial statements	
	2024	2023	2024	2023
	(in million Baht / in million shares)			
Profit (loss) for the year attributable to ordinary shareholders of the parent company	(29,810.55)	999.13	(21,336.9)	20,264.71
Less interest expense for the year on subordinated perpetual debentures – net of tax	(37.17)	-	(37.17)	-
Profit (loss) for the year attributable to ordinary shareholders of the parent company (basic)	**(29,847.72)**	**999.13**	**(21,374.07)**	**20,264.71**
Weighted average number of ordinary shares (basic) at 31 December	4,508.85	4,508.85	4,508.85	4,508.85
Earnings (loss) per share (basic) *(in Baht)*	**(6.62)**	**0.22**	**(4.74)**	**4.49**

The Company has no potential dilutive ordinary shares during the years ended 31 December 2024 and 2023. Diluted earnings (loss) per share is therefore the same as basic earnings (loss) per share.

25 Dividends

	Approval date	Payment schedule	Dividend rate per share *(Baht)*	Amount *(in million Baht)*
2024				
2023 Annual dividend	9 April 2024	24 April 2024	0.75	3,381
2023				
2022 Annual dividend	7 April 2023	26 April 2023	0.25	1,127

26 Financial instruments

(a) Carrying amounts and fair values

Carrying amounts of cash and cash equivalents, investments in current financial assets, trade accounts receivable, other current receivables, short-term loans to related parties, short-term loans from financial institutions, trade accounts payable, other current payables, payables to contractor and short-term loans from related parties, which are measured at amortised cost. They are approximate to their fair values due to their short maturities.

Carrying amounts of long-term loans to related parties, other non-current assets, long-term loans from financial institutions with floating interest rates, long-term loans from other parties, long-term loans from related parties bearing floating interest rates, lease liabilities and other non-current liabilities measured at amortised cost. The value is close to the estimated fair value.

The following table shows the carrying amounts and fair values of financial assets and financial liabilities, including their levels in the fair value hierarchy, but does not include fair value information for financial assets and financial liabilities measured at amortised cost if the carrying amount is a reasonable approximation of fair value.

	Consolidated financial statement								
	Carrying amount					Fair value			
At 31 December 2024	Hedging instruments	Financial instruments measured at FVTPL	Financial instruments measured at FVOCI	Financial instruments measured at amortised cost	Total	Level 1	Level 2	Level 3	Total
					(in million Baht)				
Financial assets									
Cash and cash equivalents	-	-	5	32,740	32,745	-	5	-	5
Current financial assets	-	-	353	12	365	-	353	-	353
Current derivatives assets	1	158	-	-	159	-	159	-	159
Non-current financial assets	-	467	13,094	-	13,561	11,068	523	1,970	13,561
Non-current derivatives assets	-	40	-	-	40	-	40	-	40
Financial liabilities									
Current derivatives liabilities	-	112	-	-	112	-	112	-	112
Long-term borrowings from financial institution	-	-	-	100,739	100,739	-	40*	-	40
Debentures	-	-	-	127,037	127,037	-	119,569	-	119,569
Non-current derivative liabilities	-	78	-	-	78	-	78	-	78

** Fair value of long-term borrowings from financial institutions with fixed interest rate only.*

	Consolidated financial statement								
	Carrying amount					Fair value			
At 31 December 2023	Hedging instruments	Financial instruments measured at FVTPL	Financial instruments measured at FVOCI	Financial instruments measured at amortised cost	Total	Level 1	Level 2	Level 3	Total
					(in million Baht)				
Financial assets									
Cash and cash equivalents	-	-	1	37,318	37,319	-	1	-	1
Current financial assets	-	-	797	8,133	8,930	-	797	-	797
Current derivatives assets	34	497	-	-	531	-	531	-	531
Non-current financial assets	-	575	16,118	-	16,693	14,012	842	1,839	16,693
Non-current derivatives assets	-	109	-	-	109	-	109	-	109
Financial liabilities									
Current derivatives liabilities	-	74	-	-	74	-	74	-	74
Long-term borrowings from financial institution	-	-	-	98,410	98,410	-	63*	-	63
Debentures	-	-	-	164,189	164,189	-	151,900	-	151,900
Non-current derivative liabilities	-	79	-	-	79	-	79	-	79

** Fair value of long-term borrowings from financial institutions with fixed interest rate only.*

	Separate financial statements								
	Carrying amount					Fair value			
At 31 December 2024	Hedging instruments	Financial instruments measured at FVTPL	Financial instruments measured at FVOCI	Financial instruments measured at amortised cost	Total	Level 1	Level 2	Level 3	Total
					(in million Baht)				
Financial assets									
Cash and cash equivalents	-	-	5	12,712	12,717	-	5	-	5
Current financial assets	-	-	353	-	353	-	353	-	353
Current derivatives assets	-	113	-	-	113	-	113	-	113
Non-current financial assets	-	275	11,321	-	11,596	11,061	523	12	11,596
Non-current derivatives assets	-	20	-	-	20	-	20	-	20
Financial liabilities									
Current derivatives liabilities	-	56	-	-	56	-	56	-	56
Long-term borrowings from related parties	-	-	-	51,684	51,684	-	42,648*	-	42,648
Debentures	-	-	-	78,456	78,456	-	78,451	-	78,451
Non-current derivatives liabilities	-	40	-	-	40	-	40	-	40

* *Fair value of long-term borrowings from related parties with fixed interest rate only.*

	Separate financial statements								
	Carrying amount					Fair value			
At 31 December 2023	Hedging instruments	Financial instruments measured at FVTPL	Financial instruments measured at FVOCI	Financial instruments measured at amortised cost	Total	Level 1	Level 2	Level 3	Total
					(in million Baht)				
Financial assets									
Cash and cash equivalents	-	-	1	17,273	17,274	-	1	-	1
Current financial assets	-	-	797	4,088	4,885	-	797	-	797
Current derivatives assets	-	443	-	-	443	-	443	-	443
Non-current financial assets	-	316	14,529	-	14,845	13,991	842	12	14,845
Non-current derivatives assets	-	50	-	-	50	-	50	-	50
Financial liabilities									
Current derivatives liabilities	-	25	-	-	25	-	25	-	25
Long-term borrowings from related parties	-	-	-	74,266	74,266	-	66,995*	-	66,995
Debentures	-	-	-	89,943	89,943	-	88,046	-	88,046
Non-current derivatives liabilities	-	36	-	-	36	-	36	-	36

* *Fair value of long-term borrowings from related parties with fixed interest rate only.*

Measurement of fair values

Level 1 of fair values for debt instruments measured at fair value through profit or loss are based on quoted bid price as at the end of reporting period by references from the Stock Exchange of Thailand. For equity instruments measured at fair value through other comprehensive income are based on closing price as at the end of reporting period in the Stock Exchange of Thailand or New York Stock Exchange.

Level 2 of fair values for debt instruments measured at fair value through other comprehensive income are based on the yield rate quoted by the Thai Bond Market Association or other markets and for financial derivatives are based on broker quotes. Those quotes are tested for reasonableness by discounting expected future cash flows using market interest rate for a similar instrument at the measurement date. Fair values reflect the credit risk of the instrument and include adjustments to take account of the credit risk of the Group and counterparty when appropriate. For over-the-counter commodity derivatives are based on an estimated price by the organization that has expertise in petroleum and petrochemical areas as well as reliability from buyers and sellers in markets. The price forecast methodology takes account of fundamental factors including demand, supply and other factors that will affect the price direction in the future. For fixed-rate long-term borrowings are based on discounted future cash flows for the remaining periods using market interest rate for a similar instrument at the measurement date. For debentures are based on the last closing price on the Thai Bond Market Association at the measurement date.

Level 3 of fair value for debt instruments and equity instruments measured at fair value through profit or loss are as follows;

- For investment in a startup company, is based on valuation of the latest fundraising round.
- For investments in non-marketable securities, the fair values are based on the discounted present value of the future cash flows estimated based on available performance indicators at an appropriate interest rate.

Fair values for equity instruments measured at fair value through other comprehensive income are as follows;

- For investments in startup companies, the fair values are based on valuation of the latest fundraising round.
- For investments in non-marketable securities, the fair values are based on cost which considered as estimated fair values, except there are significant changes in their operations.
- For investments in funds, the fair values are referred to the net asset value of the funds.

	Consolidated financial statements		**Separate financial statements**	
Reconciliation of Level 3 fair values	2024	2023	2024	2023
	(in million Baht)			
Investments in non-current financial assets				
Balance as at 1 January	1,839	1,694	12	10
Total gains or (losses):				
in profit or loss	-	(35)	-	-
in other comprehensive income	6	(57)	-	2
Purchases/issues	175	233	-	-
Disposals	(8)	-	-	-
Effect from exchange differences on translating financial statements	(42)	4	-	-
Balance as at 31 December	**1,970**	**1,839**	**12**	**12**

(b) Financial risk management policies

Risk management framework

The Group is exposed to normal business risks from changes in market interest rates, currency exchange rates and commodity prices and from non-performance of contractual obligations by counterparties. The Group does not hold or issue derivative financial instruments for speculative or trading purposes.

Risk management is integral to the whole business of the Group. The management continually monitors the Group's risk management process to ensure that an appropriate balance between risk and control is achieved.

Capital management

The Company's Board of Directors' policy is to maintain a strong capital base so as to maintain the confidence of investors, creditors, partners and other stakeholders. In addition, the Board monitors the return on capital and the level of dividends to ensure business sustainability.

(b.1) Credit risk

Credit risk is risk of financial loss of the Group if a customer or a counterparty to the financial instrument fails to perform its contractual obligations, most of which is from trade receivables and investment in debt securities of the Group.

(b.1.1) Trade accounts receivable

Credit risk of the Group is influenced by individual characteristics of customers. However, management has to consider other factors that may affect the customer's credit risk, including the risk of default in relation to industry and country of operations.

Management has a policy in place and the exposure to credit risk is monitored on an ongoing basis. Credit evaluations are performed on all customers requiring credit over a certain amount. At the reporting date, there were no significant credit risk and the concentration of credit risk. The maximum exposure to credit risk is represented by the carrying amount of each financial asset in the statement of financial position. However, the majority of the customers are on the long-term contracted commitment and parts of them are the Company's shareholders which the company has consistently collected from them. For the customers who do not have the long-term contracted commitments, the Group monitors the risk on an ongoing basis and would do the business only with the credible customers by limiting the credit lines and requesting the guarantee on some cases. For the export, the credit of counterparty will be considered. The Group will demand a payment on a case to case basis and also has commercial credit insurance. Management anticipates no material losses from its debt collection.

For trade receivables, the Group apply simplified approach in accordance with TFRS 9 to measure lifetime expected credit loss. The Group consider expected credit loss by using trade receivables provision table which estimate historical credit loss. The overdue circumstance adjusted to reflect current situation of receivables and the future economic conditions were taken into account.

(b.1.2) Loans to related parties

In assessing credit risk, the Company considers that most of subsidiaries and joint ventures in which have borrowings from the Company have the affordability that payments will be made under the agreements. However, the Company continually monitors the possibility of payments from counterparties.

(b.1.3) Cash and cash equivalents

The Group's exposure to credit risk arising from cash and cash equivalents and derivative assets is limited because the counterparties are financial institutions which are rated at investment grade. The Group constantly assesses the financial status and stability of those financial institutions and companies to manage risks from deposit and investing.

(b.1.4) Investment in debt securities

The Group considers that all debt investments measured at amortised cost and FVOCI have low credit risk. Marketable bonds are considered to be an investment grade credit rating published by external credit rating agencies. The credit risk of other non-marketable debt instruments is considered to be low when the risk of default is low and the issuer has a strong capacity to meet its contractual cash flow obligations.

(b.2) Liquidity risk

The Group monitors its liquidity risk and maintains a level of cash and cash equivalents deemed adequate by management to finance the Group's operations and to mitigate the effects of fluctuations in cash flows.

The following table shows the remaining contractual maturities of financial liabilities at the reporting date. The amounts are gross and undiscounted and include contractual interest payments and exclude the impact of netting agreements.

	Consolidated financial statements			
At 31 December	1 year or less	More than 1 years but less than 5 years	More than 5 years	Total
		(in million Baht)		
2024				
Non-derivative financial liabilities				
Short-term borrowings from financial institutions	1,120	-	-	1,120
Trade accounts payable	62,154	-	-	62,154
Other current payables	16,005	-	-	16,005
Payables to contractors	941	-	-	941
Lease liabilities	3,679	9,710	24,249	37,638
Long-term borrowings from financial institutions	25,133	80,255	11,068	116,456
Long-term borrowings from other parties	118	37	242	397
Debentures	4,253	62,969	101,179	168,401
Other non-current liabilities	-	19	19	38
	113,403	**152,990**	**136,757**	**403,150**

	Consolidated financial statements			
At 31 December	1 year or less	More than 1 years but less than 5 years	More than 5 years	Total
	(in million Baht)			
Derivative financial liabilities				
Cash inflows from				
Foreign exchange forward contracts	6,145	180	-	6,325
Foreign currency and interest rate swap contracts	4,075	10,683	-	14,758
Commodity forward contracts	72	-	-	72
Cash outflows from				
Foreign exchange forward contracts	(6,163)	(187)	-	(6,350)
Foreign currency and interest rate swap contracts	(3,872)	(10,550)	-	(14,422)
Commodity forward contracts	(3)	-	-	(3)
	254	**126**	**-**	**380**

	Consolidated financial statements			
At 31 December	1 year or less	More than 1 years but less than 5 years	More than 5 years	Total
	(in million Baht)			
2023				
Non-derivative financial liabilities				
Short-term borrowings from financial institutions	2,248	-	-	2,248
Trade accounts payable	71,163	-	-	71,163
Other current payables	19,501	-	-	19,501
Payables to contractors	2,493	-	-	2,493
Lease liabilities	3,005	8,892	19,772	31,669
Long-term borrowings from financial institutions	12,262	92,043	12,936	117,241
Long-term borrowings from other parties	49	138	113	300
Debentures	17,555	47,855	164,211	229,621
Other non-current liabilities	-	32	17	49
	128,276	**148,960**	**197,049**	**474,285**
Derivative financial liabilities				
Cash inflows from				
Foreign exchange forward contracts	10,270	532	-	10,802
Foreign currency and interest rate swap contracts	1,602	32,427	-	34,029
Commodity forward contracts	69	-	-	69
Cash outflows from				
Foreign exchange forward contracts	(10,049)	(524)	-	(10,573)
Foreign currency and interest rate swap contracts	(1,209)	(31,499)	-	(32,708)
Commodity forward contracts	(48)	-	-	(48)
	635	**936**	**-**	**1,571**

	Separate financial statements			
At 31 December	1 year or less	More than 1 years but less than 5 years	More than 5 years	Total
		(in million Baht)		
2024				
Non-derivative financial liabilities				
Trade accounts payable	48,342	-	-	48,342
Other current payables	7,282	-	-	7,282
Payables to contractors	1,702	-	-	1,702
Lease liabilities	2,569	7,521	21,143	31,233
Short-term borrowings from related parties	2,612	-	-	2,612
Long-term borrowings from financial institutions	21,538	41,309	4,908	67,755
Long-term borrowings from related parties	3,220	10,725	69,568	83,513
Debentures	2,379	55,475	34,467	92,321
Other non-current liabilities	-	3	17	20
	89,644	**115,033**	**130,103**	**334,780**
Derivative financial liabilities				
Cash inflows from				
Foreign exchange forward contracts	1,597	-	-	1,597
Foreign currency and interest rate swap contracts	3,975	10,142	-	14,117
Commodity forward contracts	72	-	-	72
Cash outflows from				
Foreign exchange forward contracts	(1,595)	-	-	(1,595)
Foreign currency and interest rate swap contracts	(3,769)	(9,971)	-	(13,740)
Commodity forward contracts	(3)	-	-	(3)
	277	**171**	-	**448**

	Separate financial statements			
At 31 December	1 year or less	More than 1 years but less than 5 years	More than 5 years	Total
		(in million Baht)		
2023				
Non-derivative financial liabilities				
Trade accounts payable	58,024	-	-	58,024
Other current payables	8,982	-	-	8,982
Payables to contractors	3,230	-	-	3,230
Lease liabilities	1,849	6,419	16,708	24,976
Short-term borrowings from related parties	1,580	-	-	1,580
Long-term borrowings from financial institutions	8,112	43,246	7,512	58,870
Long-term borrowings from related parties	3,471	13,884	112,001	129,356
Debentures	14,508	35,666	56,655	106,829
Other non-current liabilities	-	22	17	39
	99,756	**99,237**	**192,893**	**391,886**
Derivative financial liabilities				
Cash inflows from				
Foreign exchange forward contracts	5,983	176	-	6,159
Foreign currency and interest rate swap contracts	1,508	31,748	-	33,256
Commodity forward contracts	69	-	-	69
Cash outflows from				
Foreign exchange forward contracts	(5,765)	(187)	-	(5,952)
Foreign currency and interest rate swap contracts	(1,110)	(30,807)	-	(31,917)
Commodity forward contracts	(48)	-	-	(48)
	637	**930**	-	**1,567**

The cash inflows/cash outflows disclosed in the above table represent the contractual undiscounted cash flows relating to derivative financial liabilities held for risk management purposes and which are not usually closed out before contractual maturity. The disclosure shows net cash flow amounts for derivatives that are net cash-settled and gross cash inflow and outflow amounts for derivatives that have simultaneous gross cash settlement.

(b.3) Market risk

The Group is exposed to the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market prices. Market risk is as follows:

(b.3.1) Foreign currency risk

The Group is exposed to foreign currency fluctuations risk in assets and liabilities and the gross profit (Product to Feed margin - P2F) of the Group that is referenced in foreign currency. Therefore, the Group has a policy in place to manage those risks by emphasizing the natural hedge on assets and liabilities held in foreign currency and the gross profit (P2F) of the Group that is referenced in foreign currency.

Moreover, the Group uses derivative hedges to mitigate the residual risk by entering into foreign currency forward contracts in accordance with the framework approved by the Risk Management Committee of the Group which will result in gain (loss) from derivatives which will be offset against the gross profit (P2F) in order to maintain the Group's net profit at the exchange rate specified in the business plan as follows:

- In the event that the Thai Baht appreciates more than the exchange rate in the foreign currency forward contracts, there will be gain on derivative. Meanwhile, the gross profit (P2F) which the Group received in cash will decrease due to the appreciation of the Thai Baht.
- On the contrary, in the event that the Thai Baht depreciates more than the exchange rate in foreign currency forward contracts, there will be loss on derivative. Meanwhile, the gross profit (P2F) which the Group received in cash will increase due to the depreciation of the Thai Baht.

Overall, the derivative hedge can mitigate the impact from fluctuations in foreign currency to the Group's performance.

Exposure to foreign currency At 31 December	**Consolidated financial statements**		**Separate financial statements**	
	2024	2023	2024	2023
	(in million Baht)			
USD				
Financial assets	24,463	35,243	19,885	28,940
Financial liabilities	(14,675)	(16,872)	(55,855)	(80,367)
Statement of financial position exposure	**9,788**	**18,371**	**(35,970)**	**(51,427)**
Net derivatives	**12,756**	**24,333**	**11,962**	**24,707**
EUR				
Financial assets	288	395	47,480	51,495
Financial liabilities	(487)	(268)	(45)	(39)
Statement of financial position exposure	**(199)**	**127**	**47,435**	**51,456**
Net derivatives	**998**	**1,233**	**-**	**-**

Sensitivity analysis

A reasonably possible strengthening (weakening) of Thai Baht against all other foreign currencies at the reporting date would have affected the measurement of financial instruments denominated in a foreign currency. This analysis assumes that all other variables, in particular interest rates, remain constant.

		Consolidated financial statements		Separate financial statements	
Impact to profit or loss	Movement	Strengthening	Weakening	Strengthening	Weakening
	(%)	*(in million Baht)*			
2024					
USD	10				
- Net gain (loss) on foreign exchange rate		(2,254)	2,254	2,401	(2,401)
EUR	10				
- Net gain (loss) on foreign exchange rate		(80)	80	(4,743)	4,743
2023					
USD	10				
- Net gain (loss) on foreign exchange rate		(4,182)	4,182	2,672	(2,672)
- Other equity - gain (loss) on cash flow hedges		(88)	88	-	-
EUR	9				
- Net gain (loss) on foreign exchange rate		(122)	122	(4,631)	4,631

In addition to forward exchange contracts, the Group uses derivatives financial instruments, principally currency swaps and interest rate swaps, to manage exposure to fluctuations in exchange rates and interest rates. As at 31 December 2024, the Group has entered into foreign currency and interest rate swap contracts, totalling Baht 13,847 million *(2023: Baht 30,690 million)*. Some of the contracts are Sustainability-Linked currency swaps and interest rate swaps linked to Sustainability Performance Targets (or SPTs).

The following tables detail the foreign currency forward contracts outstanding at the reporting date for their hedged items. Foreign currency forward contract assets and liabilities are presented in the line "Derivatives" (either as asset or as liabilities) within the statement of financial position.

	Consolidated financial statements			
	Average exchange rate *(rate)*	Notional value: Foreign currency *(million foreign currency)*	Notional value: Local currency *(million Baht)*	Carrying amount of the hedging instruments assets (liabilities) *(million Baht)*
At 31 December 2023				
Cash flow hedges				
Sell (USD)	35.23	26	916	34

The Group assesses effectiveness by comparing the nominal amount of the net assets (liabilities) designated in the hedge relationship with the nominal amount of the hedging instruments. This is a simplified approach because the currency of the exposure and hedging instruments perfectly match and the company identified that there was no change in fair value for hedge ineffectiveness recognized in the income statement.

(b.3.2) Interest rate risk

Interest rate risk is the risk that future movements in market interest rates will affect the results of the Group's operations and its cash flows because the Group's finances loans which have both floating and fixed interest rates for their operations. The Group has managed this risk to ensure the appropriateness to the business operation.

The effective interest rates of interest-bearing liabilities as at 31 December 2024 and 2023 and the periods in which those liabilities mature or re-price were disclosed in note 16 to the financial statement.

Sensitivity analysis

The sensitivity analyses below have been determined based on the exposure to interest rates for financial liabilities at the reporting date. For floating rate liabilities, the analysis is prepared assuming the amount of liability outstanding at the reporting date was outstanding for the whole year and using an increase or decrease rate by considering the reasonably possible change in interest rates.

	Consolidated financial statements		**Separate financial statements**	
Impact to profit or loss	Increase in interest rate 1%	Decrease in interest rate 1%	Increase in interest rate 1%	Decrease in interest rate 1%
	(Million Baht)			
2024				
Finance costs	1,014	(1,014)	650	(650)
2023				
Finance costs	991	(991)	527	(527)

(b.3.3) Commodity price risk

The Group is exposed to commodity price risk which may occur from purchases and sales. The Group mitigates risk by closely monitoring market situation, feedstock price and product price to appropriately adjust sales and production plans through our value chain amid fluctuating market situations. Moreover, the Group primarily applies derivative and forward contracts to hedge the commodity prices, in order to protect crude oil price and spread in accordance with the framework approved by the Risk Management Committee of the Group, which are not lower than the business plan levels. Those hedging transactions will cause a gain (loss) from derivatives which will be offset against crude oil and product prices, to maintain the Group's gross profit and net profit stability as the business plan are as follows:

- In the event that the crude oil price or spread is less than the forward contracts, there will be gain on derivative. Meanwhile, the gross profit which the Group received in cash will decrease due to the decrease in the crude oil price or spread.

- On the contrary, in the event that the crude oil price or spread is more than the forward contracts, there will be loss on derivative. Meanwhile, the gross profit which the Group received in cash will increase due to the increase in the crude oil price or spread.

Overall, the commodity price risk hedging by using the forward contracts and/or the derivative hedge can mitigate the impact of Group's performance from price and spread fluctuations.

The Group and the Company recognised gains on commodity hedging of Baht 1,467 million for the year ended 31 December 2024 *(2023: recognised losses of Baht 627 million)* due to the products spread prices were lower compared to the hedged prices of the commodity hedging.

Commodity price sensitivity analysis

The following table details the Group's sensitivity to an increase and decrease in commodity price. The sensitivity analysis includes only outstanding commodity derivative contracts at the reporting date and using an increase or decrease rate by considering the reasonably possible change in commodity price.

	Consolidated financial statements		**Separate financial statements**	
	Increase	**Decrease**	**Increase**	**Decrease**
	(in million Baht)			
At 31 December 2024				
Net derivatives gain (loss)				
Petroleum Crack Spread hedging +/- 1 USD per BBL	(60)	60	(60)	60
Petrochemical Spread hedging +/- 1 USD per Ton	(1)	1	(1)	1
At 31 December 2023				
Net derivatives gain (loss)				
Petroleum Crack Spread hedging +/- 1 USD per BBL	(51)	51	(51)	51
Petrochemical Spread hedging +/- 1 USD per Ton	(1)	1	(1)	1

27 Commitments with non-related parties

	Consolidated financial statements		**Separate financial statements**	
	2024	2023	2024	2023
	(in million Baht)			
Capital commitments contracted but not provided for				
Land	5	5	4	1
Plant, machinery and equipment	3,868	3,994	3,192	2,857
Buildings and furniture, fixtures and equipment	307	77	5	9
Others	491	279	447	233
Total	**4,671**	**4,355**	**3,648**	**3,100**

	Consolidated financial statements		Separate financial statements	
	2024	2023	2024	2023
	(in million Baht)			
Non-cancellable lease commitments				
Within one year	130	115	128	107
After one year but within five years	51	80	50	77
Total	**181**	**195**	**178**	**184**
Other commitments				
Letters of credits	110	99	46	47
Bank guarantees	7,630	10,155	4,588	5,903
Electrical guarantee	1,886	7,484	1,886	7,484
Guarantees to subsidiaries and joint ventures for credit facilities, debentures and bank guarantees	5,948	4,600	59,234	86,706
Other agreements	4,627	5,915	629	376
Total	**20,201**	**28,253**	**66,383**	**100,516**

The Company will provide direct or indirect financial support to an indirect joint venture in case of occurrence of cost overrun during the construction period according to its shareholding interest not exceeding Baht 486 million. In addition, the Company will provide direct financial support in case of occurrence of cash deficiency to an indirect joint venture according to its shareholding interest. However, this total support, combined with cost overrun, will not exceed Baht 990 million during the commercial operation period.

Utilities and Other Services Agreements with minimum purchase quantity

The Group has 34 utilities and other services agreements which have minimum purchase quantity with other parties. These agreements are for the periods from 3 years to 30 years, commencing from the date as specified in each agreement and expiring in December 2024 to March 2044. The minimum purchase quantity, the selling price of products and the renewal of the contract will be subject as specified in the agreements.

28 Litigations

(a) Oil spill incident legal case

During the third quarter of 2014, a number of people in Rayong filed several lawsuits with the Civil Court and the Rayong Provincial Court against the Company to claim extra compensation from an oil spill incident and to perform the rehabilitation of the sea and natural environmental recovery. Some cases have been dismissed and some cases have been passed a judgement by the Civil Court on 25 August 2016 which ordered the Company to compensate for damages including interest and rehabilitation of approximately Baht 11.26 million. The Company has appealed on 17 February 2017. Subsequently, on 11 May 2018, the Company made compromise agreements with the majority of plaintiffs at the Civil Court. On 20 December 2018, the Court of Appeal has passed the judgement according to the compromise agreements for which the Company has already paid compensation in full amount. For the remaining plaintiffs, the Court of Appeal ordered the Company to pay compensation with interest according to the judgement of the Court of First Instance and reduced the amount of interest. The Company has paid the compensation to all plaintiffs completely and no petition is submitted to Supreme Court by any plaintiffs. This case has become final.

For the case at Rayong Provincial Court, on 28 September 2018, the Court has made a judgement ordering the Company to pay damage costs with interest of approximately Bath 38 million by deducting the remedy payment paid to the plaintiffs of Baht 24 million. The Company deposited the remaining damage costs with interest with the Rayong Provincial Court on 25 February 2019. Some plaintiffs filed an appeal with the Rayong Provincial Court and the Company has filed an answer to the appeal with the Rayong Provincial Court on 2 October 2019. Subsequently, on September 1, 2020, the Court of Appeal Region 2 passes the judgement ordering the Company to pay additional damages including interest to the plaintiffs. The Company deposited the additional amount of Baht 25 million to the Rayong Provincial Court on 30 September 2020, which is to cover the additional damages ordered under the judgement. Afterwards, on 14 October 2020, the Rayong Provincial Court set an appointment to hear the judgement or the order of the Court of Appeal Region 2 on 26 November 2020. Then, the plaintiffs have filed the Dika appeal period on 1 March 2021. The Supreme Court has issued an order accepting the Dika appeal of the plaintiffs on 2 March 2022 and sent a copy of Dika appeal to the Company on 19 March 2022. The Company filed an answer to the Dika appeal on 13 September 2022. The case is currently under the trial by the Supreme Court.

Thereafter, on 28 July 2023, the Company received a related summons and a copy of the civil plaint which the Department of National Parks, Wildlife and Plant Conservation filed against the Company to Rayong Provincial Court regarding tort causing damage to natural resources and claim for damages. The plaintiff claimed that the oil spill incident in 2013 caused damage to the plaintiff. The Company and legal advisor of the Company considered relevant facts, evidence and laws and are of the opinion that the Company had remedied and compensated for the damage and the natural resources and environment had been restored after the incident, therefore, the Company should not have liability as claimed. Accordingly, the Company has not recorded any provision for any losses resulting from such case.

(b) Transfer of right for the payment of raw materials legal case of the subsidiary

(b.1) On 18 August 2017, Anatta Green Company Limited (“Anatta”), later changed its name to Thai Bio Innovation Company Limited, a subsidiary and Asia Capital Group Public Company Limited (“ACAP”) entered a tripartite MOU where Anatta agreed to be responsible for supplying crude palm oil to the subsidiary and ACAP agreed to provide financial support to Anatta for payment to its suppliers. On the same day, Anatta entered into a loan agreement with ACAP and transferred its right to receive payment for raw materials to ACAP, along with notifying the transfer of such claim to the subsidiary and the subsidiary has given consent to such transfer.

During the 2nd quarter of 2018, the subsidiary disclosed the material event of inventory issue to the Stock Exchange of Thailand. At the same time, ACAP has demanded that the subsidiary pay for the raw materials purchased from Anatta under the transfer of claim, a total of 11 items. The subsidiary considered the documents received and clarified to ACAP that such documents were not in the subsidiary's system and did not find evidence of the delivery of the raw materials from Anatta as specified.

Subsequently, on 20 August 2018, ACAP filed a lawsuit in the Civil Court, claiming Anatta and the subsidiary jointly to pay damages totalling Baht 324.65 million and 15% interest per annum. The subsidiary's legal advisor had considered the relevant facts and evidence and provided an opinion that the subsidiary is not liable for the allegation. Therefore, the subsidiary appointed a lawyer and submitted a statement to defend itself.

The Court of First Instance issued its judgement on 10 June 2020, requiring the subsidiary to compensate ACAP in the amount of Baht 289.56 million plus interest of 15% per annum from the date of default until the payment is complete. If the subsidiary does not pay the said debt in full, Anatta shall pay the remaining balance. The subsidiary filed a legal appeal on 25 November 2020.

On 20 January 2022, the Appeal Court upheld the judgment of the Court of First Instance. However, the subsidiary did not agree with the Appeal Court's decision and submitted a request for a petition to the Supreme Court on 9 March 2022. However, the subsidiary has decided to record a provision for damages from the said case amounting to Baht 443.57 million during 2021.

On 31 March 2022, the enforcement officer at the request of ACAP issued an order to freeze the deposits of the subsidiary. The subsidiary filed a request to withdraw the execution with the Civil Court. Subsequently, on 17 May 2022, the Civil Court has investigated and issued an order granting permission to unfreeze the deposit of the subsidiary and order the subsidiary to provide a bank guarantee amounting to Baht 503.31 million to the Court as guarantee. The subsidiary has pledged certain deposits of the subsidiary as collateral against the guarantee that the subsidiary received from the bank.

On 20 February 2023, the Supreme Court has issued an order accepting the subsidiary's petition. Subsequently, on 3 September 2024, the Supreme Court issued a judgment amending the decision, ordering the subsidiary to pay damages to ACAP in the amount of Baht 289.56 million, with interest at a rate of 7.5% per annum from the date of default on each contract until 10 April 2021, and at a rate of 5% per annum from 11 April 2021, until the payment is completed. This results in the subsidiary having to pay the plaintiff approximately Baht 400.61 million. The subsidiary fully settled the debt according to the judgment on 6 September 2024 and return bank guarantee to the subsidiary. Reversal of provision damage causing by lawsuit is recognised in the statements of income amounting to Baht 42.96 million.

(b.2) In 2020, a company, which was a former supplier of the subsidiary, filed 3 civil lawsuits against the subsidiary regarding breach of agreements concerning the reclaiming of purchase price on raw materials and claiming damages. The total principal and interest are Baht 1,069.23 million. The subsidiary and the subsidiary's legal advisor have considered relevant facts and evidence and provided the opinion that the subsidiary has not breached the agreements and has no obligation to pay as claimed. The subsidiary has appointed a lawyer to assist with the defense. Currently, one case has been dismissed by the Court of First Instance, one case is awaiting the court's judgment, and one case is under consideration by the Court of Appeal.

(c) Civil Court plaint regarding tort, breach of agreements, breach of promise and claiming damages occurred in year 2021 of the subsidiary

On 28 June 2021, the subsidiary received a summons and a copy of the Civil Court plaint in which a company filed a lawsuit against the subsidiary in the Civil Court regarding tort, breach of agreements, breach of promise and claiming damages amounting to Baht 449.77 million, together with interest at the rate of 7.5% per annum. The subsidiary and legal advisor of the subsidiary considered relevant facts and evidence and provided the opinion that the issue of this lawsuit is the same as the case that the subsidiary had filed against such company and the subsidiary has not committed a wrongful act and has not breached the agreements against the plaintiff as claimed. The subsidiary appointed a lawyer and submitted a file testimony with its defense. Subsequently, on 21 March 2022, the Civil Court has rendered its judgment to dismiss such case and on 29 May 2023, the Appeal Court affirmed the judgment of the Civil Court. Subsequently, the plaintiff exercised their right to file a petition to the Supreme Court, but the Supreme Court issued an order not to accept the plaintiff's petition, resulting in the case being legally finalized.

(d) Oil spill incident legal case in 2022

On 8 April 2023, the Company has received a summons and a copy of the civil plaint which the Local Fisheries Association, fishermen and merchants ("Plaintiffs") filed against Star Petroleum Refining Public Company Limited as the first defendant and the Company as the second defendant to Rayong Provincial Court regarding tort, claim for damages and request for marine resources restoration. The Plaintiffs claimed that the oil spill incident caused the Plaintiffs' loss of income. The Company and legal advisor of the Company considered relevant facts, evidence and laws and are of the opinion that the Company did not commit a wrongful act against the Plaintiffs as claimed and, therefore, it should have no liability as claimed. The Company submitted the statement of defense to the Rayong Provincial Court on 8 June 2023 and the case is under the trial by the Rayong Provincial Court. Accordingly, the Company has not recorded any provision for any losses resulting from such case.

29 Event after the reporting period

At the Board of Directors' meeting held on 17 February 2025, the Board approved to submit for approval at the Annual General Meeting of the Shareholders, a full year 2024 dividend payment at the rate of Baht 0.50 per share, amounting to Baht 2,254 million to the shareholders entitled to receive dividends. This dividend is subject to the approval of the Shareholders at the Annual General Meeting to be held on 8 April 2025.



4 APPENDIX

Technical Terms & Abbreviations

Technical Terms & Abbreviations	
Acrylonitrile (AN)	AN, an intermediate product, is used for many applications such as acrylic fiber, automotive parts, and electric appliance parts.
Acetone	It is widely used as a solvent in various industries such as the chemicals, cosmetics, and pharmaceutical industries. Also, it can be used as a substrate in the production of Bisphenol A, Methyl acrylates, and a wide range of coating agents and plastics.
Aromatics	A group of cyclic hydrocarbons containing one or more benzene rings of six carbon atoms characterized by single and double bonds, such as benzene, toluene, and xylene.
Benzene	Benzene is a raw material for intermediate petrochemical plants to make other chemicals including styrene monomer, cumene, and cyclohexane, which are used in the downstream petrochemical industry.
Bio-based Polybutylene Succinate (Bio-PBS)	Bio-PBS, a natural material made from bio-succinic acid and 1, 4-butanediol, used in applications such as paper coating, compound injection, and packaging.
Bisphenol A (BPA)	BPA, an intermediate product produced from phenol and acetone, is used to produce polycarbonate or epoxy resins.
Butadiene	Butadiene, derived from the extraction of mixed-C4, is used in making synthetic rubber.
Butene-1	Butene-1, a by-product of the cracking of petroleum (kerosene or gasoil) and naphtha distillation, or extraction of mixed-C4, is used as polymer feedstock.
Condensate	Condensate is typically separated out of a natural gas stream at the point of production when the temperature and pressure of the gas is dropped to atmospheric conditions. Condensate is mainly composed of propane, butane, pentane and heavier hydrocarbon fractions.
Ethane	Ethane is a gaseous hydrocarbon in natural gas. It is a by-product of the cracking and refining process of crude oil. It is used as a fuel and raw material in the petrochemical industry.
Ethanolamine (EA)	EA, obtained from the reaction between ethylene oxide and ammonia, is used in hair conditioner, fabric softener, cosmetics, and pharmaceuticals.
Ethoxylate	Ethoxylate, produced from ethylene oxide, is used as a surfactant in soap and detergent.
Ethylene	Ethylene, obtained from ethane, LPG, or naphtha, is feedstock for polyethylene, vinyl chloride monomer, styrene monomer, and ethylene oxide.

Technical Terms & Abbreviations	
Ethylene Glycol (EG)	EG is synthesized from ethylene oxide reacting with water, producing mono ethylene glycol, diethylene glycol, triethylene glycol, and polyethylene glycol.
Ethylene Oxide (EO)	EO, obtained from the reaction between ethylene and oxygen, is a chemical intermediate of ethylene glycol, ethanolamine, and ethoxylate, and others.
Fatty Alcohol	Fatty alcohol, produced from methyl ester and hydrogen through hydrogenation, is used in personal care products.
Glycerin	Glycerin, a by-product of methyl ester production, is used in pharmaceuticals, food, and personal care products.
Hexamethylene Diisocyanate (HDI)	HDI, obtained from the reaction between hexamethylenediamine and phosgene, is used in polyurethane production.
Hexene-1	Hexene-1, an organic compound primary is used as a comonomer in production of polyethylene.
High Density Polyethylene (HDPE)	HDPE produced from ethylene monomers, HDPE is a very dense and crystallized thermoplastic used for containers, including plastic bags, bottles, fuel containers, tanks, and cartons.
Linear Low Density Polyethylene (LLDPE)	LLDPE, properties are between LDPE and HDPE, but it is softer and more ductile than LDPE and HDPE have been processed into film, relatively clear, soft, stretchable. Product type is clear, strong and sealable products such as vegetable bags, fruit bags, bread bags, food bags.
Low Density Polyethylene (LDPE)	LDPE, the appearance is quite clear, soft, flexible and resistant to acidic and alkaline chemicals. Can be easily processed. It is electrically insulated and including able to support the impact well. It widely used in various types of plastic bags such as industrial bags, ice bags, frozen food bags.
Methyl Ester	Methyl ester, derived from the reaction between crude plant/vegetable oil or animal fats and alcohols under esterification, is used for biodiesel production.
Methyl Methacrylate (MMA)	MMA is an intermediate product for polymethyl methacrylate (PMMA) used for LCD screen light guide panels, automotive parts, and billboards.
Mixed C4	Mixed C4, the by-products produced from naphtha crackers for olefins production, can be isolated into butadiene, butane-1, and isobutene, and others.
Mixed Xylenes	Aromatics derived from naphtha undergoing a chemical reaction aided by catalysts. They consist of paraxylene, orthoxylene, and metaxylene, all capable of serving as reactants for higher-value aromatics and as industry solvents.

Technical Terms & Abbreviations	
Mono Ethylene Glycol (MEG)	MEG is most commonly used as chemical intermediate in the manufacture of polyester resins and textile fibers. MEG is also wildly used as automotive antifreeze due to its low freezing point when mixed with water and used as heat transfer fluids for ventilation and air-conditioning systems.
Naphtha	Naphtha is separated from crude oil in the fractional distillation process. Naphtha refers to the light fraction produced by distillation that is roughly in the gasoline boiling range. It serves as petrochemical feedstock and as a solvent.
Olefins	Olefins are unsaturated hydrocarbons with at least one carbon-carbon bond. The main olefins include ethylene, propylene, and butadiene.
Oleochemicals	Oleochemicals are natural chemicals derived from plant fats and animal fats, such as fatty alcohols, methyl ester, and glycerin.
O-xylene or Orthoxylene (OX)	This aromatic compound with two methyl groups in the 1- and 2-positions of the benzene ring is used to produce phthalic anhydride, feedstock for plasticizers.
Phenol	Phenol is an intermediate petrochemical product, which is created from Benzene and Propylene as feedstocks. It is used as an important substrate in the production of Bisphenol A (BPA) and Phenolic resin, as well as various other derivatives used in the plastic, pharmaceutical, and agriculture industries.
Polymers	Chemicals with molecular weights of 5,000 or more, derived when certain individual monomers come together and link up. Examples are polyethylene, rubber, and cellulose.
Polypropylene	Polypropylene, a thermoplastic polymer derived from the reaction between propylene and catalysts, is used in containers, textiles, and injected plastics.
Polyethylene Terephthalate (PET)	PET is made by combining mono ethylene glycol and pure terephthalic acid. PET and mono ethylene glycol serve as feedstock for synthetic fiber, water bottles, audiotapes, adhesive tapes, film, food packaging, and others.
Polyols	Polyols is a downstream petrochemical product, used as main feedstock to produce polyurethane.
Polystyrene	A thermoplastic made from styrene monomer.
Polyurethane (PU)	PU, a thermoplastic resulting from glycol and diisocyanate condensation, can be stiff, soft, or flexible, depending on the additives used. When blended with rubber, it provides shoe soles, heat insulators, windshield wipers, and others.
Polyvinyl Chloride (PVC)	PVC is a type of thermoplastic, can be formulated with various types of modifier and additives, compounded or fabricated into a variety of forms and used in various industries, such as automotive, construction, electrical and electronics, consumer goods, packaging, healthcare equipment, PVC pipes and fittings
Polypropylene Compound	A polypropylene with additives added to reinforcing substances to enhance special features.
Premix Polyols	Premix Polyols, a mixture of various polyols and additives co-developed with customers to achieve desired properties.

Technical Terms & Abbreviations	
Propylene	Propylene is an unsaturated hydrocarbon derived from propane, LPG, or naphtha. This feedstock of polypropylene is of three grades: refinery, chemical, and polymer, depending on the proportions of propylene and propane.
Propylene Oxide (PO)	PO, an important intermediate from propylene and used as feedstock in the manufacture of polyols and propylene glycol (PG).
Purified Terephthalic Acid (PTA)	PTA, an organic compound. The main raw material for polyethylene terephthalate (PET) and polyester fibers is produced by oxidizing paraxylene. Polyester fibers are used mainly in rugs, clothing, furniture and industrial applications, as well as other consumer products.
Paraxylene (PX)	Paraxylene is used in intermediate petrochemical plant as a raw material for PTA (Purified Terephthalic Acid) and is used to produce Polyester Fiber or Synthetic Fiber, which is used as a raw material for apparels such as clothing and fabric bag or used to produce PET (Polyethylene Terephthalate) bottle, which is commonly used to contain water and soft drink or used in the production of various plastic products such as film, food container and etc.
Pyrolysis Gasoline (Pygas)	Pygas, a by-product of olefins production. Pygas is a high octane number mixture which contains high aromatics content. Pygas can be used as a high-octane benzene blending component or used in aromatic extraction application.
Radiation-Curable Resins, or Radcure (RAD)	Radcure is made up of polymers that contain special functional groups that enable them to react and form a protective film upon the application of Ultra-Violet. They are commonly used in applications such as automotive industry, wood, plastic, cosmetic packaging and other industry.
Rotomolding Compound	A by-product produced from low-density polyethylene (LLDPE), is plastic powders which are processed through rotational moulding machine at suitable temperature. It is used to manufacture some products such as water tanks, chemical storage tanks, playground, kayaks and other common products.
Toluene	Toluene, an aromatic hydrocarbon with an aromatic ring molecular structure. Toluene usually undergoes different processes to make Paraxylene and Benzene. It can also be combined with Gasoline to boost the octane value, and can be used as a solvent for coating substances, insecticides, paint, and adhesive, etc.
Post-consumer Recycled (PCR)	Products are made from recycled plastic under mechanical recycling process to produce high quality post-consumer recycled (PCR) resins.

Attachment 1

Details of Directors, Executives, Controllers and Company Secretary

Directors' Profiles

PTT Global Chemical Public Company Limited

(As of 31 January 2025)

Mr. Predee Daochai

- Chairman
  and Chairman of the Independent Director
  (Non-executive Director)

Age: 66 Years
Appointed: 15 November 2023

Education/Training

- Honorary Doctorate in Business Administration, Southeast Bangkok University
- Master's Degree (MCL), University of Illinois at Urbana-Champaign, U.S.A.
- Barrister-at-Law, Thai Bar Association
- Bachelor of Laws (Honors), Thammasat University
- Advanced Management Program, Harvard Business School, U.S.A.
- Breakthrough Program for Senior Executives, Switzerland Course, IMD Business School, Switzerland
- Influence and Negotiation Strategies Program, Stanford Graduate School of Business, Stanford University, U.S.A.
- Making Innovation Happen Programme, London Business School, United Kingdom
- Executive Program, Singularity University, Silicon Valley, California, U.S.A.
- Executive Program on Risk Management, The Institute of International Finance, United Kingdom
- National Defence Course for the Joint State Private Sector (Class 24), National Defence College of Thailand (NDC)
- Capital Market Leadership Program (Class 20/2015), Capital Market Academy
- Executive Program of Energy Literacy for a Sustainable Future (Class 8/2016), Thailand Energy Academy (TEA)

Director Training

- Multiply Organization Performance with A High Trust & Inclusive Board Culture, Special Event 8/2024, Thai Institute of Directors Association (IOD)
- Role of the Chairman Program (RCP), Class 51/2022, Thai Institute of Directors Association (IOD)
- Board Nomination and Compensation Program (BNCP), Class 14/2022, Thai Institute of Directors Association (IOD)
- Corporate Governance for Capital Market Intermediaries (CGI), Class 11/2016, Thai Institute of Directors Association (IOD)
- Ethical Leadership Program (ELP), Class 1/2015, Thai Institute of Directors Association (IOD)
- Financial Institutions Governance Program (FGP), Class 1/2010, Thai Institute of Directors Association (IOD)
- Director Certification Program (DCP), Class 56/2005 Thai Institute of Directors Association (IOD)

Board Industry Experience & Expertise

- Finance, Treasury, Capital Market, Laws, Organizational Management, Risk Management, Corporate Governance, Security, and Information Technology

Board Member/Management in Listed Company – The Stock Exchange of Thailand : 5

- Chairman and Chairman of the Independent Director, PTT Global Chemical Public Company Limited
- Independent Director, Member of the Nomination and Remuneration Committee, Member of Audit Committee, Bangkok Bank Public Company Limited
- Independent Director, and Member of Audit and Risk Management Committee, Advanced Info Services Public Company Limited
- Independent Director, Gulf Energy Development Public Company Limited
- Independent Director, Chairman of Nomination and Remuneration Committee, Chairman of Corporate Governance Committee, Bangkok Dusit Medical Services Public Company Limited

Board Member/Management in Non-Listed Company – The Stock Exchange of Thailand : 2

- Director, Siam Motors Company Limited
- Director, Advanced Wireless Network Company Limited

Position in Other Organizations/Institutions : None

Work Experiences (5-year Past Experiences)

2021 - 2023	Independent Director, Chairman of Risk Management Committee, and Chairman of Sustainablity Development Committee, Carabao Group Public Company Limited
2021 - 2023	Director, Siam Paragon Development Company Limited
2021 - 2023	Director, Siam Paragon Retail Company Limited
2021 - 2022	Chairman, Executive Committee and Group CEO, The Mall Group Company Limited
2021 - 2021	Director, JD Food Public Company Limited
2020 - 2020	Minister, Ministry of Finance
2020 - 2020	Chairman, Bank for Agriculture and Agricultural Cooperatives
2020 - 2020	Chairman, Beacon Venture Capital Company Limited
2020 - 2020	Chairman, National Digital ID Company Limited
2017 - 2020	Chairman, National ITMX Company Limited
2016 - 2020	Chairman, KASIKORN Securities Public Company Limited
2016 - 2020	Committee, ASEAN Bankers Association
2016 - 2020	Member, National Strategy Committee
2016 - 2020	Committee, Payment Systems Committee (PSC), Bank of Thailand
2016 - 2020	Member, The Board of Investment of Thailand
2016 - 2020	EEC Policy Committee, the Eastern Economic Corridor Office of Thailand (EECO)
2016 - 2020	Member of the Board of SMEs Promotion, The Office of SMEs Promotion
2016 - 2020	Chairman, Thai Bankers Association
2015 - 2020	Vice Chairman and Chairman of Corporate Governance Committee, Thai Institute of Directors Association (IOD)
2013 - 2020	Chairman, KASIKORN Factory and Equipment Company Limited
2013 - 2020	Director and President, KASIKORNBANK Public Company Limited
2010 - 2020	Director, Muangthai Group Holding Company Limited
2016 - 2019	Member, National Legislative Assembly

Shareholding : None

Relation among Family with Other Directors, Management, Major Shareholders of the Company or Subsidiaries : None

Mr. Thanwa Laohasiriwong

- **Independent Director** (Non-executive Director)
- **Chairman of the Audit Committee**

Age: 59 Years
Appointed: 1 November 2023

Education/Training
- Bachelor of Engineering (Computer), King Mongkut's Institute of Technology Ladkrabang
- IBM/Harvard Management Development Program, 2001, Harvard Graduate School of Education
- Diploma, National Defence College, The National Defence Course (Class 60), National Defence College of Thailand (NDC)
- IBM/INSEAD Management Development Program, 1998, INSEAD Business School, Singapore
- Advanced Political and Election Development Program (Class 14), Office of the Election Commission of Thailand
- Capital Market Leader Program (Class 30), Capital Market Academy
- The Executive Program in Energy Literacy for a Sustainable Future (Class 13), Thailand Energy Academy (TEA)
- Executive Program on Rule of Law and Development (RoLD) (Class 3/2019), Thailand Institute of Justice (TIJ)
- Environmental Governance for Executive Officer (Class 4/2016), Department of Environmental Quality Promotion (DEQP), Ministry of Natural Resources and Environment
- Cybersecurity, Cyber Resilience & Privacy Risk in the Era of Digital Transformation, 2018, ACIS Professional Center
- Cyber Resilience Program (2020), Bank of Thailand
- Cyber Resilience Program (2021), Bank of Thailand
- Security Awareness (2021) (By guest speaker), Krungthai Bank Public Company Limited
- Cyber Security Awareness (2022) (By guest speaker), Krungthai Bank Public Company Limited
- Corporate Governance for Director and Top Management of State-Owned Enterprise and Public Organization Course (Class 20/2019), King Prajadhipok's Institute

Director Training
- Director Leadership Certification Program (DLCP), Class 9/2023, Thai Institute of Directors Association (IOD)
- Hot Issue for Directors: Climate Governance, Class 2/2023, Thai Institute of Directors Association (IOD)
- Board Nomination and Compensation Program (BNCP), Class 13/2021, Thai Institute of Directors Association (IOD)
- Role of the Chairman Program (RCP), Class 45/2019, Thai Institute of Directors Association (IOD)
- Boardroom Success through Financing and Investment (BFI), Class 2/2017 Thai Institute of Directors Association (IOD)
- Driving Company Success with IT Governance (ITG), Class 2/2016, Thai Institute of Directors Association (IOD)
- Ethical Leadership Program (ELP), Class 1/2015, Thai Institute of Directors Association (IOD)
- Successful Formulation & Execution of Strategy (SFE), Class 22/2014, Thai Institute of Directors Association (IOD)
- Director Certification Program (DCP), Class 43/2004, Thai Institute of Directors Association (IOD)
- Finance for Non-Finance Directors Program (FND), Class 10/2004, Thai Institute of Directors Association (IOD)

Board Industry Experience & Expertise
- Energy, Petrochemicals and Materials Industry, Finance, Internal Audit, Organizational Management, Risk Management, Innovation, Security, Corporate Governance, and Information Technology

Board Member/Management in Listed Company – The Stock Exchange of Thailand : 3
- Independent Director and Chairman of the Audit Committee, PTT Global Chemical Public Company Limited
- Director, Member of the Nomination and Remuneration Committee, and Member of the Risk Oversight Committee, Krungthai Bank Public Company Limited
- Independent Director, Chairman of the Audit Committee and Director to the Nomination and Remuneration Committee, TPBI Public Company Limited

Board Member/Management in Non-Listed Company – The Stock Exchange of Thailand : 1
- Chairman, LTMH Public Company Limited

Position in Other Organizations/Institutions : 1
- Advisor, Investment Committee, BCPG Public Company Limited

Work Experiences (5-year Past Experiences)

2020 - 31 Jan 2025	Independent Director and Director to the Audit Committee, Relationship Republic Company Limited
13 Sep 2023 - 25 Jan 2025	Chairman of the Nomination and Remuneration Committee, Krung Thai Bank Public Company Limited
23 Dec 2020 - 25 Jan 2025	Member of the Audit Committee, Krung Thai Bank Public Company Limited
26 Jan 2016 - 25 Jan 2025	Independent Director, Krung Thai Bank Public Company Limited
2020 - Jan 2024	Department Member of the Support Research and Innovation Administration Committee, National Research Council of Thailand (NRCT)
1 Apr 2022 - 30 Oct 2023	Independent Director, Director to Corporate Governance and Sustainable Development Committee and Director to Audit Committee, Global Green Chemicals Public Company Limited
2021 - 2022	Independent Director, Supamitr General Hospital Public Company Limited
2019 - 2020	Independent Director and Member of the Audit Committee, State Railway of Thailand

Shareholding : None

Relation among Family with Other Directors, Management, Major Shareholders of the Company or Subsidiaries : None

Mr. Pakorn Nilprapunt

- **Independent Director** (Non-executive Director)
- **Chairman of the Nomination & Remuneration Committee**
- **Director to the Audit Committee**

Age: 56 Years
Appointed: 9 April 2018,
5 April 2021 (1st re-elected),
9 April 2024 (2nd re-elected)

Education/Training

- Master of Laws (Trade Practices Law), The University of Sydney, Australia
- Public Sector Management and Organization Change, The Australian National University, Australia
- Bachelor of Laws, Thammasat University
- East Asian Public Sector Leadership Challenges, National Graduate Institute for Policy Study, Tokyo, Japan
- Chief Executive Training Program: Leadership with Vision and Morality (AMP 64), The Office of the Civil Service Commission (List of Qualified Candidates for Training)
- Train the Trainers Program in Information Communication and Technology Law for the Justice Executive, Class 1, Office of the Secretary of the Electronic Transaction Commission
- Program for Chief Executive Training Course, Class 2, The Royal Thai Police
- High-Level Budget Management 1st Edition, Bureau of the Budget

Director Training

- Diploma, National Defence College, The National Defence Course, Class 64, National Defence College of Thailand (NDC)
- Director Accreditation Program (DAP) Class 153/2018, Thai Institute of Directors Association (IOD)

Board Industry Experience & Expertise

- Extensive experience in law practice relating to the chemical industry, which includes drafting legislation, and providing legal recommendation and consultation in compliance with the Rule of Law for the chemical industry
- Specialized in laws and rules concerning the environment
- Educational background in Trade Practices Law

Board Member/Management in Listed Company – The Stock Exchange of Thailand : 1

- Independent Director, Chairman of the Nomination & Remuneration Committee and Director to the Audit Committee, PTT Global Chemical Public Company Limited

Board Member/Management in Non-Listed Company – The Stock Exchange of Thailand : None

Position in Other Organizations/Institutions : 9

- Commissioner of SEC Board, Securities Exchange Commission Office
- Member of the Audit and Monitoring Committee, Chulabhorn Royal Academy Council
- Commissioner, Civil Service Commission, Office of the Civil Service Commission
- Commissioner, Public Sector Development Commission, Office of the Public Sector Development Commission (OPDC)
- Member, the National Law Reform Committee, The Prime Minister's Office
- Distinguished Member, Educational Innovation Area Policy, Ministry of Education
- Director, The Rehabilitation Committee, Thai Airways International Public Company Limited
- Committee Member, Bank of Thailand
- Secretary-General, Office of the Council of State, The Prime Minister's Office

Work Experiences (5-year Past Experiences)

25 Sep 2023 - 31 Oct 2023	Chairman of the Audit Committee, PTT Global Chemical Public Company Limited
23 Apr 2018 - 31 Dec 2022	Director to the Nomination & Remuneration Committee, PTT Global Chemical Public Company Limited

Shareholding : None

Relation among Family with Other Directors, Management, Major Shareholders of the Company or Subsidiaries : None

General Nimit Suwannarat

- Independent Director (Non-executive Director)
- Chairman of the Corporate Governance and Sustainability Committee
- Director to the Audit Committee

Age: 53 Years
Appointed: 1 January 2023, 9 April 2024 (1st re-elected)

Education/Training
- Master of Arts in International Relations, Chulalongkorn University
- Master of Science in Electrical Engineering (Communications and Signal Processing), University of Minnesota, Minnesota, U.S.A.
- Bachelor of Science in Electrical Engineering, Virginia Military Institute, Virginia, U.S.A.
- Director's Briefing - Corporate Strategy beyond the Crisis, a Chairman/Board Perspective, Bain & Company, Inc.
- Public Key Infrastructure (Certification Authority, Digital Signature) Course, Ottawa, Canada
- Electronic Commerce Course, Orlando, Florida, U.S.A.
- Computer Emergency Response Team, Carnegie Mellon, Pittsburgh, Pennsylvania, U.S.A.
- National Crisis Management Course, APCSS, Honolulu, Hawaii, U.S.A.
- Command and General Staff Officer Course (Class 83), Command and General Staff College
- Joint Staff Course, Joint War College
- Intermediate Certificate Course in Political Leadership in the New Era (Class 2), King Prajadhipok's Institute

Director Training
- Director Certification Program (DCP) Class 216/2016, Thai Institute of Directors Association (IOD)

Board Industry Experience & Expertise
- Energy, Petroleum, Organizational Management, Risk Management, National Security, and Information Technology

Board Member/Management in Listed Company – The Stock Exchange of Thailand : 3
- Independent Director, Member of the Nomination and Remuneration Committee, Member of the Compliance Committee and Member of the Risk Oversight Committee, Krungthai Bank Public Company Limited
- Independent Director, Thaicom Public Company Limited
- Independent Director, Chairman of the Corporate Governance and Sustainability Committee, and Director to the Audit Committee, PTT Global Chemical Public Company Limited

Board Member/Management in Non-Listed Company – The Stock Exchange of Thailand : None

Position in Other Organizations/Institutions : 2
- Special Advisor, Office of the Permanent Secretary for Defence
- Advisor to the Prime Minister

Work Experiences (5-year Past Experiences)

1 Jan 2023 - 9 Apr 2024	Director to the Nomination & Remuneration Committee, PTT Global Chemical Public Company Limited
1 Sep 2014 - 31 Aug 2023	Independent Director, Member of the Risk Management Committee, and Member of the Corporate Governance and Sustainability Committee, PTT Exploration and Production Public Company Limited
2018 - 30 Sep 2021	Deputy Chief of Office, Office of Military Affairs Coordination to the Ministry of Foreign Affairs, Office of Policy and Planning, Ministry of Defence

Shareholding : None

Relation among Family with Other Directors, Management, Major Shareholders of the Company or Subsidiaries : None

Mr. Grisada Boonrach

- Independent Director (Non-executive Director)
- Chairman of the Risk Management Committee

Age: 67 Years
Appointed: 2 June 2020

Education/Training
- Master of Science (Political Science), Thammasat University
- Bachelor of Arts (Political Science), Ramkhamhaeng University
- Bachelor of Laws, Chiang Mai University
- Diploma, National Defence College, The National Defence Course, Class 53, National Defence College of Thailand (NDC)
- Intensive English Program (2019), English Language Center, Georgetown University
- The Management Development Participation, University Of Birmingham, U.K. (Scholarships offered by British Embassy, 2001)
- Senior Executives in State and Local Government, Kennedy School of Government Harvard University, U.S.A. (Scholarships offered by Office of the Civil Service Commission, 2009)
- Stability Security Transition and Reconstruction, Asia Pacific Center for Security Studies (APCSS), U.S.A. (Scholarships offered by US Embassy, 2007)

Director Training
- Director Certification Program (DCP) Class 298/2020, Thai Institute of Directors Association (IOD)

Board Industry Experience & Expertise
- Experience in the agricultural sector serving as the Minister of the Ministry of Agriculture and Cooperative
- Specialized in agricultural policies, forestry, water resources, and irrigation
- Driving robust promotion and development of agriculture and cooperative systems especially for agricultural manufacturing and products, agricultural-based biotechnology, and guideline and standard for agricultural chemicals

Board Member/Management in Listed Company – The Stock Exchange of Thailand : 2
- Independent Director, Audit Committee Director and Remuneration Committee Director, Bangkok Aviation Fuel Services Public Company Limited
- Independent Director and Chairman of the Risk Management Committee, PTT Global Chemical Public Company Limited

Board Member/Management in Non-Listed Company – The Stock Exchange of Thailand: None

Position in Other Organizations/Institutions: 6
- Member of Thai Red Cross Council, Thai Red Cross Society
- Member of the Council of State, Office of the Council of State
- Assistant Secretary General, Thai Red Cross Society
- Chairman, Royal Initiative Discovery Foundation
- Director, Thai Red Cross Chapters Administration Office, Thai Red Cross Society
- Committee Member, Sai Jai Thai Foundation Under Royal Patronage

Work Experiences (5-year Past Experiences) **:** None

Shareholding : None

Relation among Family with Other Directors, Management, Major Shareholders of the Company or Subsidiaries : None

Mr. Somkiat Prajamwong

- **Independent Director** (Non-executive Director)
- **Director to the Nomination & Remuneration Committee**

Age: 64 Years
Appointed: 4 April 2022

Education/Training
- Doctor of Philosophy in Agricultural and Irrigation Engineering, Utah State University, U.S.A.
- Master of Engineering (Water Resources Development), Asian Institute of Technology (AIT)
- Bachelor of Engineering (Irrigation Engineer), Kasetsart University
- Anti-Corruption Strategic Management for Senior Executives, Class 8, Sanya Dharmasakti National Anti-Corruption Institute, Office of the National Anti-Corruption Commission
- Foreign Affairs Executive Programme, Class 6, Devawongse Varopakarn Institute of Foreign Affairs, Ministry of Foreign Affairs (Outstanding Individual Research)
- Diploma, National Defence College, The National Defence Course, Class 54, National Defence College of Thailand (NDC) (Honorable mentions for Individual Research)
- Advanced Certificate Course in Public Economic Management for Executives, Class 7, King Prajadipok's Institute (2009)
- Change Management Training Programme, RIPA International Training Center, United Kingdom
- Agricultural and Cooperative Development Course for Senior Management, Class 41, Ministry of Agriculture and Cooperatives

Director Training
- Board Nomination and Compensation Program (BNCP) Class 19/2024 Thai Institute of Directors Association (IOD)
- Director Certification Program (DCP) Class 329/2022 Thai Institute of Directors Association (IOD)
- Ethical Leadership Program (ELP) Class 28/2022 Thai Institute of Directors Association (IOD)

Board Industry Experience & Expertise
- Energy, Organizational Management, Administration, and Corporate Governance

Board Member/Management in Listed Company – The Stock Exchange of Thailand : 2
- Independent Director and Chairman of Risk Committee, Seven Utilities and Power Public Company Limited
- Independent Director and Director to the Nomination and Remuneration Committee, PTT Global Chemical Public Company Limited

Board Member/Management in Non-Listed Company – The Stock Exchange of Thailand : None

Position in Other Organizations/Institutions : 1
- Special Advisor, Water Management, the Eastern Economic Corridor Office of Thailand (EECO)

Work Experiences (5-year Past Experiences)

13 Feb 2024 - 28 May 2024	Chairman, Committee of the Fish Marketing Organization, Ministry of Agriculture and Cooperative
17 Oct 2022 - 17 Oct 2023	Special Advisor, Water Management, the Eastern Economic Corridor Office of Thailand (EECO)
22 Nov 2017 - 30 Sep 2021	Secretary-General, Office of the National Water Resources (ONWR)

Shareholding : None

Relation among Family with Other Directors, Management, Major Shareholders of the Company or Subsidiaries : None

Mr. Surachai Achalaboon

- **Independent Director** (Non-executive Director)
- **Director to the Nomination & Remuneration Committee**

Age: 59 Years
Appointed: 22 May 2023

Education/Training
- Master of Science (Forestry), Kasetsart University
- High-Level Anti-Corruption Strategy Executives, Class 11, The National Anti-Corruption Commission (NACC)
- Diploma, National Defence College, The National Defence Course, Class 61, National Defence College of Thailand (NDC)
- Transformational Leadership Program, Class 2, Civil Service Training Institute, Office of the Civil Service Commission (OCSC)
- Executive Development Training Program, The Royal Thai Police
- Environmental Governance for Executive Officer, Class 2, Ministry of Natural Resources and Environment
- The Civil Service Executive Development Program, Class 3, Civil Service Training Institute, Office of the Civil Service Commission (OCSC)
- Advanced Certificate Course in Public Economics Management for Executives, Class 8, King Prajadhipok's Institute

Director Training
- Director Accreditation Program (DAP) Class 215/2024, Thai Institute of Directors Association (IOD)

Board Industry Experience & Expertise
- Materials Industry, Organizational Management, Human Resource Management, National Defence, Corporate Governance, and Environmental and Social Responsibility

Board Member/Management in Listed Company – The Stock Exchange of Thailand : 1
- Independent Director and Director to the Nomination & Remuneration Committee, PTT Global Chemical Public Company Limited

Board Member/Management in Non-Listed Company – The Stock Exchange of Thailand : 1
- Director, SRT Asset Company Limited

Position in Other Organizations/Institutions : 1
- Director-General, Royal Forest Department, Ministry of Natural Resources and Environment

Work Experiences (5-year Past Experiences)

22 May 2023 - 9 Apr 2024	Director to the Corporate Governance and Sustainability Committee, PTT Global Chemical Public Company Limited
Oct 2020 - Sep 2021	Director-General of the Department of Environmental Quality Promotion, Ministry of Natural Resources and Environment
Oct 2019 - Sep 2020	Inspector-General of the Ministry of Natural Resources and Environment, Ministry of Natural Resources and Environment

Shareholding : None

Relation among Family with Other Directors, Management, Major Shareholders of the Company or Subsidiaries: None

Pol.Col. Dusadee Aryawuit

- **Independent Director** (Non-executive Director)
- **Director to the Corporate Governance and Sustainability Committee**

Age: 64 Years
Appointed: 1 November 2023, 9 April 2024 (1st re-elected)

Education/Training
- Master of Political Science Program (Politics and Government), Chiang Mai University
- Bachelor of Political Science Program, Class 37, Royal Police Cadet Academy
- Diploma, National Defence College, The National Defence Course, Class 53, National Defence College of Thailand (NDC)
- The Executive Program in Justice System (Class 18), Judicial Training Institute
- The Civil Service Executive Development Program: Visionary and Moral Leadership, Class 47, Civil Service Training Institute, Office of the Civil Service Commission (OCSC)
- Senior Executive Development Programme (SEDP), Class 1, Civil Service Training Institute, Office of the Civil Service Commission (OCSC)
- ILEA Training Courses, Class 1, The International Law Enforcement Academy Bangkok
- Top Executive Program in Mahanakorn Development (Mahanakorn 2), Navamindradhiraj University

Director Training
- Director Certification Program (DCP) Class 353/2024, Thai Institute of Directors Association (IOD)

Board Industry Experience & Expertise
- Organizational Management, Laws, Internal Audit, Security, Information Technology, and Corporate Governance

Board Member/Management in Listed Company – The Stock Exchange of Thailand: 1
- Independent Director and Director to the Corporate Governance and Sustainability Committee, PTT Global Chemical Public Company Limited

Board Member/Management in Non-Listed Company – The Stock Exchange of Thailand : None

Position in Other Organizations/Institutions : 6
- Advisor to Deputy Prime Minister and Minister of Energy, Ministry of Energy
- Advisor to Minister of Justice, Ministry of Justice
- Legal and Governance Advisor, T Life Assurance Public Company Limited
- Legal and Governance Advisor, TMBThanachart Bank Public Company Limited
- Legal and Governance Advisor, Thanachart Insurance Public Company Limited
- Legal and Governance Advisor, MBK Public Company Limited

Work Experiences (5-year Past Experiences)

2021 - 2023	Audit Committee, National Housing Authority
2021 - 2023	Corporate Governance Committee, National Housing Authority
2012 - 2020	Deputy Permanent Secretary of Ministry of Justice, Member of the Sub-Committee on Anti-corruption Inspection for Transport, Advisor to the Sub-Committee on Commerce and Intellectual Property, Ministry Of Justice

Shareholding : None

Relation among Family with Other Directors, Management, Major Shareholders of the Company or Subsidiaries : None

Mr. Wim Rungwattanajinda

- **Independent Director** (Non-executive Director)
- **Director to the Corporate Governance and Sustainability Committee**

Age: 60 Years
Appointed: 9 April 2024

Education/Training
- Bachelor of Laws Program, Ramkhamhaeng University
- Diploma, National Defence College, The National Defence Course, Class 54, National Defence College of Thailand (NDC)
- Security Management and Leadership for Executives Program (SML), National Defence College of Thailand (NDC)

Director Training : None

Board Industry Experience & Expertise
- Business Management, Marketing, Enterprise Risk Management, Laws, Intelligence and Security, Corporate Governance, and Information Technology

Board Member/Management in Listed Company – The Stock Exchange of Thailand : 1
- Independent Director and Director to the Corporate Governance and Sustainability Committee, PTT Global Chemical Public Company Limited

Board Member/Management in Non-Listed Company – The Stock Exchange of Thailand: None

Position in Other Organizations/Institutions : 1
- Director, State Railway of Thailand

Work Experiences (5-year Past Experiences)

2024 - 2024	Member of Executive Committee, Vin Capital Company Limited
2023 - 2023	Advisor to Public Relations Department, Yanhee Hospital
2023 - 2023	Newspaper's Economic Editor, Wattachak Newspaper
2023 - 2023	Secretary to the Minister, The Prime Minister's Office

Shareholding : None

Relation among Family with Other Directors, Management, Major Shareholders of the Company or Subsidiaries : None

Mr. Patchara Anuntasilpa

- **Director** (Non-executive Director)
- **Director to the Corporate Governance and Sustainability Committee**

Age: 53 Years
Appointed: 7 April 2023

Education/Training

- Honorary Doctorate Degrees in Laws, Ramkhamhaeng University
- Master of Business Administration, Shenandoah University, U.S.A.
- Bachelor of Business Administration (Finance), Bangkok University
- Executive Program for Senior Management, Kellogg School of Management, Maxwell School of Citizenship and Public Affairs and Schulich School of Business by Fiscal Policy Research Institute Foundation
- WTO Advanced Regional Workshop on Government Procurement for Asia and Pacific Economies, WTO, China
- Fundamentals of Public Procurement, United Nations Development Programme: UNDP, Denmark
- Foreign Affairs Executive Program (Class 3), Ministry of Foreign Affairs
- Executive Program (Class 3), Office of the Civil Service Commission
- Capital Market Leader Program (Class 24), Capital Market Academy
- Top Executive Program in Commerce and Trade: TEPCoT (Class 11), University of the Thai Chamber of Commerce
- The Executive Program in Justice System (Class 23), Judicial Training Institute
- Advanced Master of Management Program (Class 4), The National Institute of Development Administration (NIDA)
- Super Series Program: Leadership & Effective Corporate Culture (Class 2), Institute of Research and Development for Public Enterprises (IRDP) in collaboration with Judge Business School, University of Cambridge
- Director and Executive Development Program, The Royal Thai Police
- Director's Briefing – Corporate Strategy Beyond The Crisis, a Chairman/Board Perspective, Bain & Company, Inc.
- The Executive Program in Energy Literacy for a Sustainable Future, Class 16, Thailand Energy Academy (TEA)

Director Training

- Director Leadership Certification Program (DLCP) Class 14/2024, Thai Institute of Directors Association (IOD)
- Director Certification Program (DCP) Class 221/2016, Thai Institute of Directors Association (IOD)

Board Industry Experience & Expertise

- Energy, Petroleum, Finance and Treasury, Capital Market, Organizational Management, Risk Management and Corporate Governance

Board Member/Management in Listed Company – The Stock Exchange of Thailand: 1

- Director and Director to the Corporate Governance and Sustainability Committee, PTT Global Chemical Public Company Limited

Board Member/Management in Non-Listed Company – The Stock Exchange of Thailand: None

Position in Other Organizations/Institutions : 1

- Director General of the Public Debt Management Office (PDMO), Ministry of Finance

Work Experiences (5-year Past Experiences)

18 Jan 2022 - 24 Jan 2024	Chairman, Government Housing Bank
Oct 2020 - 16 Dec 2023	Director-General of the Customs Department, Ministry of Finance
1 May 2018 - 15 Mar 2023	Director and Member of the Nominating and Remuneration Committee, PTT Exploration and Production Public Company Limited
26 Mar 2021 - 28 Dec 2022	Director, Judicial Administration Commission
2018 - 2022	Chairman, Board of Institute for Good Governance Promotion, Office of the Public Sector Development Commission (OPDC)
2017 - 2020	Honorable Director (Organization Development), Office of the Commission for Judicial Service

Shareholding : None

Relation among Family with Other Directors, Management, Major Shareholders of the Company or Subsidiaries : None

Mrs. Nivadee Jaroensitipun

- **Director** (Non-Executive Director)
- **Director to the Corporate Governance and Sustainability Committee**

Age: 57 Years
Appointed: 26 August 2024

Education/Training
- Master of Arts (Communication Arts and Information), Kasetsart University
- Master of Arts (Political Science), Kasetsart University
- Bachelor of Business Administration, Rajamangala Institute of Technology
- PTT Leadership Development Program 1 for EVP Pool, Development Dimensions International (DDI)
- Intermediate Certificate Courses - Good Governance for Medical Executives (Class 7), King Prajadhipok's Institute and the Medical Council of Thailand
- Advanced Certificate Course in Public Economics Management for Executives (PEM) (Class 5), King Prajadhipok's Institute
- The Rule of Law for Democracy (Class 8), College of the Constitutional Court
- Executive Program in Administrative Justice (Class 1), Foundation for Research and Development of the Administrative Justice System
- Senior Executive Justice Process Program (Class 28), Judicial Training Institute

Director Training
- Director Certification Program (DCP) Class 316/2022, Thai Institute of Directors Association (IOD)

Board Industry Experience & Expertise
- Business Management, Organizational Management, and Human Resource Management

Board Member/Management in Listed Company – The Stock Exchange of Thailand : 2
- Director and Director to the Corporate Governance and Sustainability Committee, PTT Global Chemical Public Company Limited
- Senior Executive Vice President, Government Relations, PTT Public Company Limited

Board Member/Management in Non-Listed Company – The Stock Exchange of Thailand : 1
- Director, Business Services Alliance Company Limited

Position in Other Organizations/Institutions : None

Work Experiences (5-year Past Experiences)

24 Jan 2024 - 1 Oct 2024	Director, PTT LNG Company Limited
2022 - 2024	Executive Vice President Acting Senior Executive Vice President, Government Relations, PTT Public Company Limited
2023 - 2023	Director, Energy Complex Company Limited
2021 - 2023	Director, Business Professional Solutions Recruitment Company Limited
2021 - 2022	Executive Vice President attached to Senior Executive Vice President, Organization Effectiveness and Corporate Governance, PTT Public Company Limited secondment as Managing Director, Business Services Alliance Company Limited
2021 - 2021	Vice President, PTT Oil and Retail Business Public Company Limited, Secondment as Senior Executive Vice President, Service Business Unit, Business Services Alliance Company Limited
2018 - 2021	Vice President, Oil and Retail Business Academy, PTT Oil and Retail Business Public Company Limited

Shareholding : None

Relation among Family with Other Directors, Management, Major Shareholders of the Company or Subsidiaries: None

Mr. Petai Mudtham

- **Director** (Non-Executive Director)
- **Director to the Risk Management Committee**

Age: 59 Years
Appointed: 12 February 2024

Education/Training
- Master of Science in Economics, Murray State University, U.S.A.
- Master of Science Program in Applied Statistics, The National Institute of Development Administration (NIDA)
- Bachelor of Economics, Ramkhamhaeng University
- Inspector General Program 2021, Government Inspection Development Institute, Office of the Permanent Secretary, Office of the Prime Minister
- Diploma, National Defence College, The National Defence Course, Class 62, National Defence College of Thailand (NDC)
- The Executive Program in Energy Literacy for a Sustainable Future, TEA 12, Thailand Energy Academy (TEA)
- Budgeting for Executives Program, BEP 5, Budget Bureau Personnel Development Institution, Budget Bureau

Director Training
- Director Leadership Certification Program (DLCP) Class 14/2024, Thai Institute of Directors Association (IOD)
- Director Certificate Program (DCP), Class 329/2022, Thai Institute of Directors Association (IOD)

Board Industry Experience & Expertise
- Energy, Petroleum, Economics, Business Management, Enterprise Risk Management, Security, and Corporate Governance

Board Member/Management in Listed Company – The Stock Exchange of Thailand : 1
- Director and Director to the Risk Management Committee, PTT Global Chemical Public Company Limited

Board Member/Management in Non-Listed Company – The Stock Exchange of Thailand : None

Position in Other Organizations/Institutions : 1
- Chief of Inspector General, Ministry of Energy

Work Experiences (5-year Past Experiences)

2022 - 2024	Director and Member of the Nomination and Remuneration Committee, IRPC Public Company Limited
2020 - 2022	Acting Manager, Energy Conservation Promotion Fund (ENCON Fund)
2017 - 2020	Deputy Director General, Energy Policy and Planning Office, Ministry of Energy

Shareholding : None

Relation among Family with Other Directors, Management, Major Shareholders of the Company or Subsidiaries : None

Mr. Pongpun Amornvivat

- **Director** (Non-Executive Director)
- **Director to the Risk Management Committee**

Age: 53 Years
Appointed: 17 February 2025

Education/Training

- Master of Business Administration, Sloan School of Management, Massachusetts Institute of Technology, U.S.A.
- Master of Arts (Economic Law), Chulalongkorn University
- Master of Engineering (Civil and Environmental Engineering), Massachusetts Institute of Technology, U.S.A.
- Bachelor of Engineering (Civil Engineering), Carnegie Mellon University, U.S.A.
- The Executive Program in Energy Literacy for a Sustainable Future (Class 16), Thailand Energy Academy
- Diploma, National Defence College, The National Defence Course, Class 67, National Defence College of Thailand
- Top Executive Program (Class 29), Capital Market Academy (CMA)
- The Executive Program in good governance for Sustainable Development (Class 1), Office of the Public Sector Development Commission (OPDC)
- The Young Executive Program in Energy Literacy for a Sustainable Future (YTEA) (Class 1), Thailand Energy Academy

Director Training

- Director Certification Program (DCP) Class 225/2016, Thai Institute of Directors Association (IOD)

Board Industry Experience & Expertise

- Chemical Engineering, Energy, Petroleum, Petrochemical, Finance, Capital Market, Business Management, International Business, Enterprise Risk Management, Innovation, Law, Sustainability and Information Technology

Board Member/Management in Listed Company – The Stock Exchange of Thailand : 2

- Director and Director to the Risk Management Committee, PTT Global Chemical Public Company Limited
- Senior Executive Vice President, Gas Business Unit, PTT Public Company Limited

Board Member/Management in Non-Listed Company – The Stock Exchange of Thailand : 2

- Chairman, PTT Natural Gas Distribution Company Limited
- Director, PE LNG Company Limited

Position in Other Organizations/Institutions : None

Work Experiences (5-year Past Experiences)

2024	Director and Member of the Risk Management Committee, IRPC Public Company Limited
2023 - 2024	Senior Executive Vice President, International Trading Business Unit, PTT Public Company Limited
2023 - 2024	Chairman, PTT International Trading Pte Ltd
2022 - 2024	Director, PTT Global LNG Co., Ltd
2021 - 2023	Director, PTT International Trading Pte Ltd
2021 - 2023	Director, PTT International Trading London Ltd
2021 - 2022	Executive Vice President, International Trading, PTT Public Company Limited
2021	Director and Member of the Corporate Governance Committee, Global Power Synergy Public Company Limited
2020 - 2021	Director, Thaioil Power Co., Ltd.
2020 - 2021	Director, TOP SPP Co., Ltd.
2019 - 2021	Director, Thaioil Treasury Center Co., Ltd.
2019 - 2021	Director, TOP Ventures Hong Kong Limited
2019 - 2021	Director, TOP Ventures America Limited
2018 - 2021	Director, PTT Digital Solutions Co., Ltd.
2017 - 2021	Executive Vice President-Strategy, Thai Oil Public Company Limited
2017 - 2021	Director, Sapthip Co., Ltd.
2015 - 2021	Director, Thaioil Ethanol Co., Ltd.
2018 - 2020	Acting Executive Vice President, New Business and Digitalization, Thai Oil Public Company Limited
2017 - 2020	Director, Sak Chaisidhi Co., Ltd.
2017 - 2020	Director, TOP Solvent Co., Ltd.
2016 - 2020	Director and Executive Director, Thai Petroleum Pipeline Co., Ltd.
2011 - 2020	Director, Thaioil Marine International Pte. Ltd.

Shareholding : 22,948 Shares (0.000509%)
As of 17 February 2025

Relation among Family with Other Directors, Management, Major Shareholders of the Company or Subsidiaries : None

Mr. Kongkrapan Intarajang

- **Director** (Non-Executive Director)

Age: 57 Years
Appointed: 1 October 2019,
4 April 2022 (1st re-elected)

Education/Training

- Doctor of Philosophy (Ph.D.) in Chemical Engineering, University of Houston, U.S.A.
- Bachelor of Engineering (Chemical Engineering) (Second-class Honors), Chulalongkorn University
- Breakthrough Program for Senior Executives, IMD Business School, Switzerland
- Diploma, National Defence College, The National Defence Course, Class 60, National Defence College of Thailand (NDC)
- The Executive Program in Energy Literacy for a Sustainable Future, Class 14, Thailand Energy Academy (TEA)
- Leadership Development Program (LDP3) Class 4, PTT Leadership and Learning Institute (PLLI), PTT Public Company Limited
- Capital Market Leader Program (Class 30), Capital Market Academy
- Executive Development Training Program, The Royal Thai Police

Director Training

- Director Certification Program (DCP) Class 119/2009, Thai Institute of Directors Association (IOD)
- Role of the Chairman Program (RCP) Class 21/2009, Thai Institute of Directors Association (IOD)

Board Industry Experience & Expertise

- Chemical Engineering, Energy, Petroleum, Petrochemical/Materials, Economics and Finance, Business Management, National Security, Sustainability, and Information Technology

Board Member/Management in Listed Company – The Stock Exchange of Thailand : 3

- Director, PTT Exploration and Production Public Company Limited
- Director, Secretary to the Board and President and Chief Executive Officer, PTT Public Company Limited
- Director, PTT Global Chemical Public Company Limited

Board Member/Management in Non-Listed Company – The Stock Exchange of Thailand : None

Position in Other Organizations/Institutions: 23

- Working Committee on Coordination and Progress Monitoring under the Memorandum of Understanding between the Ministry of Energy of the Kingdom of Thailand and the Ministry of Energy of Saudi Arabia in the Field of Energy
- Member, Energy Sources Inspection Committee
- Member Committee on the Solar PV for the Public
- Committee of the 7th Anniversary of the Passing of His Majesty King Bhumibol Adulyadej the Great, "The 70th Anniversary of Accession to the Throne of His Majesty Bhumibol Adulyadej" Ceremony and of 72nd Anniversary Celebration of His Majesty the King's Accession to the Throne Ceremony, His Majesty King Maha Vajiralongkorn Phra Vajiraklaochaoyuhua
- Honorary Member, CONNEXT ED Foundation
- Founding Member, UN Global Compact Network Thailand (UNGCNT)
- Chairman of the Council Board and Chairman of the Executive Committee of Thailand Carbon Neutral Network (TCNN) for the year 2024 - 2025
- Council Member, World Business Council for Sustainable Development (WBCSD)
- Social Cooperation Promotion Committee, Princess Maha Chakri Award Foundation
- Chairman, Power for Sustainable Future Foundation
- Chairman, Power of Innovation Foundation
- Member of the Steering Committee of Public Service Center, Ministry of Energy
- Vice Chairman, Thailand Energy Academy
- Member, the Policy Committee of State Enterprises and Private Sector Support for Sports Associations
- Co-founder, Thailand Supply Chain Network (TSCN)
- Committee, Chulalongkorn University Alumni Association under the Royal Patronage of His Majesty the King
- Director, Association of Capital Market Academy Alumni
- Director, The Federation of Thai Industries
- Member of Vidyasirimedhi Institute Council, Vidyasirimedhi Institute of Science and Technology (VISTEC)
- Member of Trustee, The Petroleum Institute of Thailand (PTIT)
- Council of Trustee, Thailand Business Council of Sustainable Development (TBCSD)
- Director, Kamnoetvidya Science Academy (KVIS)
- Co-Chairman, France-Thailand Business Forum

Work Experiences (5-year Past Experiences)

20 May 2024 - 14 Aug 2024	Sub-committee of 72nd Anniversary Celebration of His Majesty the King's Accession to the Throne Ceremony, His Majesty King Maha Vajiralongkorn Phra Vajiraklaochaoyuhua
14 Jun 2021 - 27 May 2024	Director and Member of The Nomination Committee and Remunerating Committee, Thai Institute of Directors Association (IOD)
11 Mar 2020 - 13 May 2024	Vice President (Supporting), Thailand Swimming Association
29 Dec 2021 - 12 May 2024	Chairperson of Advisory Committee in relation to its investment in allnex, PTTGC International (Netherlands) B.V.
8 Dec 2021 - 12 May 2024	Chairman, PTTGC International (Netherlands) B.V.
21 Oct 2020 - 12 May 2024	Chairman, Global Green Chemicals Public Company Limited
1 Sep 2020 - 12 May 2024	Chairman, PTTGC International Private Limited
1 Oct 2019 - 12 May 2024	Director to the Risk Management Committee and Secretary to the Board of Directors, PTT Global Chemical Public Company Limited
1 Oct 2019 - 12 May 2024	Senior Executive Vice President reporting to Chief Operating Officer, Downstream Petroleum Business Group, PTT Public Company Limited
1 Oct 2019 - 12 May 2024	Chief Executive Officer & President, PTT Global Chemical Public Company Limited
15 Aug 2019 - 12 May 2024	Director and Member of the Risk Management Committee, Global Power Synergy Public Company Limited
23 Jan 2017 - 9 May 2024	Board Member, National Energy Technology Center (ENTEC), National Science and Technology Development Agency (NSTDA)
25 Jul 2022 - 25 Mar 2024	Adviser of Small and Medium Industrial Institute (SMI), The Federation of Thai Industries
1 Oct 2020 - 31 Mar 2022	Advisor of the Member Relations, The Federation of Thai Industries
1 Sep 2020 - 15 Feb 2022	Chairman, GC International Corporation
1 Jul 2015 - 15 Feb 2022	Chairman, PTTGC America LLC
1 Jul 2015 - 15 Feb 2022	Chairman, PTTGC America Corporation
24 Aug 2020 - 25 Mar 2021	Committee Member, Power for Sustainable Future Foundation
6 Nov 2019 - 20 Oct 2020	Director, Global Green Chemicals Public Company Limited
Nov 2019 - Sep 2020	Director, Power of Innovation Foundation
Oct 2019 - Sep 2020	Director, Power of Learning Foundation
31 Oct 2019 - 31 Aug 2020	Director, GC International Corporation
9 Sep 2008 - 31 Aug 2020	Director, PTTGC International Private Limited
May 2017 - Jan 2020	Director, Thai Tank Terminal Limited

Shareholding : None

Relation among Family with Other Directors, Management, Major Shareholders of the Company or Subsidiaries : None

Mr. Narongsak Jivakanun

- **Director** (Executive Director)
- **Secretary to the Board of Directors**
- **Director to the Risk Management Committee**
- **Chief Executive Officer**

Age: 56 Years
Appointed: 13 May 2024

Education/Training

- Master of Science (Chemical Engineering), Oregon State University, Oregon, U.S.A.
- Bachelor of Engineering (Chemical Engineering), Chulalongkorn University
- The Executive Program in Energy Literacy for a Sustainable Future, Class 8, Thailand Energy Academy (TEA)
- Subsidiary Governance, Business and Legal Issues for Directors and Executives 2022, Director's Legal Liabilities, Ethical Leadership for New Era and High Performing Board & Board Effectiveness 2021 (In-house Programs by GC)
- IMD - TLCA Leadership Development Program (LDP) Class 1, 2013, organized by Thai Listed Companies Association (TLCA) and IMD Business School, Switzerland

Director Training

- Director Certification Program (DCP) Class 165/2012, Thai Institute of Directors Association (IOD)

Board Industry Experience & Expertise

- Chemical Engineering, Energy, Petroleum, Petrochemical / Materials, Economics and Finance, Business Management, National Security, Sustainability, and Information Technology

Board Member/Management in Listed Company – The Stock Exchange of Thailand : 3

- Chairman, Global Green Chemicals Public Company Limited
- Senior Executive Vice President reporting to Chief Operating Officer, Downstream Petroleum Business Group, PTT Public Company Limited
- Director and Secretary to the Board of Directors, Director to the Risk Management Committee, Chief Executive Officer and Acting Chief Operating Officer of International Business, PTT Global Chemical Public Company Limited

Board Member/Management in Non-Listed Company – The Stock Exchange of Thailand : 6

- Chairman, PTTGC International Private Limited
- Chairman and Chairperson of the Advisory Committee, PTTGC International (Netherlands) B.V.
- Chairman, PTTGC America Corporation
- Chairman, PTTGC America LLC
- Chairman, GC America Sustainability Corporation
- Director, Sermkij Textile Company Limited

Position in Other Organizations/Institutions : None

Work Experiences (5-year Past Experiences)

2 Sep 2020 - 30 Jun 2024	Chairman, Vencorex Holding
24 Nov 2023 - 31 May 2024	Chairman, Emery Oleochemicals UK Limited
1 Jan 2023 - 31 May 2024	Chairman, NatureWorks LLC
22 Apr 2022 - 31 May 2024	Director, Kuraray GC Advanced Materials Company Limited
16 Feb 2022 - 31 May 2024	Chairman, GC International Corporation
1 Oct 2019 - 31 May 2024	Managing Director, PTTGC International Private Limited
1 Oct 2019 - 31 May 2024	Director, President and Member of Advisory Committee, PTTGC International (Netherlands) B.V.
31 May 2018 - 31 May 2024	Chairman, GC Ventures America Corporation
22 May 2018 - 31 May 2024	Chairman, GC Ventures Company Limited
1 Feb 2022 - 12 May 2024	Chief Operating Officer - International Business, PTT Global Chemical Public Company Limited
12 Oct 2021 - 23 Nov 2023	Director, Emery Oleochemicals UK Limited
12 Oct 2021 - 23 Nov 2023	Chairman of Executive Committee and Risk & Audit Committee, Emery Oleochemicals UK Limited
15 Oct 2021 - 31 Mar 2022	Treasurer, GC International Corporation
1 Oct 2019 - 31 Mar 2022	President and Secretary, GC International Corporation
1 Oct 2020 - 15 Feb 2022	President & CEO and Secretary, PTTGC America LLC
1 Oct 2019 - 15 Feb 2022	President and Secretary, PTTGC America Corporation
1 Oct 2019 - 15 Feb 2022	Director, GC International Corporation
1 Oct 2019 - 31 Jan 2022	Executive Vice President - International Business Operations, PTT Global Chemical Public Company Limited
2 Sep 2020 - 31 Dec 2021	Chairman, NatureWorks LLC
24 Nov 2020 - 30 Oct 2021	Chairman of Executive Committee, Emery Specialty Chemicals Sdn. Bhd.
24 Nov 2020 - 30 Oct 2021	Chairman of Executive Committee and Risk & Audit Committee, Emery Oleochemicals (M) Sdn. Bhd.
1 Oct 2019 - 23 Nov 2020	Director, Emery Oleochemicals (M) Sdn. Bhd.
3 Oct 2019 - 1 Sep 2020	Director, NatureWorks LLC
1 Oct 2019 - 1 Sep 2020	Director, Vencorex Holding
1 Oct 2019 - 31 Aug 2020	Director, Emery Specialty Chemicals Sdn. Bhd.

Shareholding : None

Relation among Family with Other Directors, Management, Major Shareholders of the Company or Subsidiaries : None

Profile of GC Executives
PTT Global Chemical Public Company Limited

(As of January 31, 2025)

Mr. Narongsak Jivakanun

- Chief Executive Officer
- Acting Chief Operating Officer - International Business

Age: 56 Years
Appointed: 13 May 2024

Education/Training

- Master of Science (Chemical Engineering), Oregon State University, Oregon, U.S.A.
- Bachelor of Engineering (Chemical Engineering), Chulalongkorn University
- The Executive Program in Energy Literacy for a Sustainable Future, Class 8, Thailand Energy Academy (TEA)
- Subsidiary Governance, Business and Legal Issues for Directors and Executives 2022, Director's Legal Liabilities, Ethical Leadership for New Era and High Performing Board & Board Effectiveness 2021 (In-house Programs by GC).
- IMD - TLCA Leadership Development Program (LDP) Class 1, 2013, organized by Thai Listed Companies Association (TLCA) and IMD Business School, Switzerland
- Director Certification Program (DCP) Class 165/2012, Thai Institute of Directors Association (IOD)

Board Member/Management in Listed Company – The Stock Exchange of Thailand : 3

- Chairman, Global Green Chemicals Public Company Limited
- Senior Executive Vice President reporting to Chief Operating Officer, Downstream Petroleum Business Group, PTT Public Company Limited
- Director and Secretary to the Board of Directors, Director to the Risk Management Committee, Chief Executive Officer and Acting Chief Operating Officer of International Business, PTT Global Chemical Public Company Limited

Board Member/Management in Non-Listed Company – The Stock Exchange of Thailand : 6

- Chairman, PTTGC International Private Limited
- Chairman and Chairperson of the Advisory Committee, PTTGC International (Netherlands) B.V.
- Chairman, PTTGC America Corporation
- Chairman, PTTGC America LLC
- Chairman, GC America Sustainability Corporation
- Director, Sermkij Textile Company Limited

Position in Other Organizations/Institutions : None

Work Experiences (5-year Past Experiences)

2 Sep 2020 - 30 Jun 2024	Chairman, Vencorex Holding
24 Nov 2023 - 31 May 2024	Chairman, Emery Oleochemicals UK Limited
1 Jan 2023 - 31 May 2024	Chairman, NatureWorks LLC
22 Apr 2022 - 31 May 2024	Director, Kuraray GC Advanced Materials Company Limited
16 Feb 2022 - 31 May 2024	Chairman, GC International Corporation
1 Oct 2019 - 31 May 2024	Managing Director, PTTGC International Private Limited
1 Oct 2019 - 31 May 2024	Director, President and Member of Advisory Committee, PTTGC International (Netherlands) B.V.
31 May 2018 - 31 May 2024	Chairman, GC Ventures America Corporation
22 May 2018 - 31 May 2024	Chairman, GC Ventures Company Limited
1 Feb 2022 - 12 May 2024	Chief Operating Officer - International Business, PTT Global Chemical Public Company Limited
12 Oct 2021 - 23 Nov 2023	Director, Emery Oleochemicals UK Limited
12 Oct 2021 - 23 Nov 2023	Chairman of Executive Committee and Risk & Audit Committee, Emery Oleochemicals UK Limited
15 Oct 2021 - 31 Mar 2022	Treasurer, GC International Corporation
1 Oct 2019 - 31 Mar 2022	President and Secretary, GC International Corporation
1 Oct 2020 - 15 Feb 2022	President & CEO and Secretary, PTTGC America LLC
1 Oct 2019 - 15 Feb 2022	President and Secretary, PTTGC America Corporation
1 Oct 2019 - 15 Feb 2022	Director, GC International Corporation
1 Oct 2019 - 31 Jan 2022	Executive Vice President - International Business Operations, PTT Global Chemical Public Company Limited
2 Sep 2020 - 31 Dec 2021	Chairman, NatureWorks LLC
24 Nov 2020 - 30 Oct 2021	Chairman of Executive Committee, Emery Specialty Chemicals Sdn. Bhd.
24 Nov 2020 - 30 Oct 2021	Chairman of Executive Committee and Risk & Audit Committee, Emery Oleochemicals (M) Sdn. Bhd.
1 Oct 2019 - 23 Nov 2020	Director, Emery Oleochemicals (M) Sdn. Bhd.
3 Oct 2019 - 1 Sep 2020	Director, NatureWorks LLC
1 Oct 2019 - 1 Sep 2020	Director, Vencorex Holding
1 Oct 2019 - 31 Aug 2020	Director, Emery Specialty Chemicals Sdn. Bhd.

Shareholding : None

Relation among Family with Other Directors, Management, Major Shareholders of the Company or Subsidiaries : None

Mr. Toasaporn Boonyapipat

- President

Age: 59 Years
Appointed: 13 May 2024

Education/Training

- Master of Business Administration, Burapha University
- Bachelor of Engineering (Mechanical Engineering) (Second-Class Honors), Chiang Mai University
- The Executive Program in Energy Literacy for a Sustainable Future, Class 19, Thailand Energy Academy (TEA)
- ASEAN Executive Program (AEP), General Electric Crotonville, U.S.A.
- PTTCHEM Leadership Development Program, TBS/IMBA Thammasat University 2010
- Subsidiary Governance, Business and Legal Issues for Directors and Executives and Transformative Leadership for Global Enterprise 2022, Director's Legal Liabilities, Ethical Leadership for New Era and High Performing Board & Board Effectiveness 2021 (In-house Programs by GC), Role of the Chairman Program (RCP) Class 47/2021 and Director Certification Program (DCP) Class 197/2014, Thai Institute of Directors Association (IOD)

Board Member/Management in Listed Company – The Stock Exchange of Thailand : 2

- Director and Member of the Risk Management Committee, Global Power Synergy Public Company Limited
- President, PTT Global Chemical Public Company Limited

Board Member/Management in Non-Listed Company – The Stock Exchange of Thailand : 4

- Chairman, HMC Polymers Company Limited
- Vice Chairman of the Board of Directors, AGC Vinythai Public Company Limited
- Director, PTTGC International Private Limited
- Director, Thai Tank Terminal Limited

Position in Other Organizations/Institutions : 1

- Association President, Community Partnership Association (CPA) or Puenchumchon

Work Experiences (5-year Past Experiences)

5 Jan 2021 - 17 Jul 2024	Director, GC Maintenance and Engineering Company Limited
1 Feb 2022 - 12 May 2024	Chief Operating Officer - Base and Intermediate Chemicals, PTT Global Chemical Public Company Limited
1 Nov 2021 - 8 Nov 2023	Association Vice President, Community Partnership Association (CPA) or Puenchumchon
28 Feb 2022 - 31 Mar 2023	Chairman, GC Oxirane Company Limited
21 Feb 2022 - 31 Mar 2023	Chairman, PTT Phenol Company Limited
23 Feb 2022 - 25 Aug 2022	Chairman, GC Glycol Company Limited
5 Jan 2021 - 16 Feb 2022	Chairman, GC Estate Company Limited
1 Jan 2021 - 31 Jan 2022	Senior Executive Vice President - Upstream Petrochemical Business, PTT Global Chemical Public Company Limited
1 Jan 2021 - 1 Aug 2021	Director, Global Power Synergy Public Company Limited
28 Jul 2017 - 15 Oct 2020	Director, PTTGC International (Netherlands) B.V.
28 Jul 2014 - 15 Oct 2020	Director, Vencorex Holding
16 Mar 2017 - 1 Oct 2020	Director, PTTGC America Corporation
16 Mar 2017 - 1 Oct 2020	Director, PTTGC America LLC
6 Dec 2016 - 1 Oct 2020	Director, Emery Specialty Chemicals Sdn. Bhd.
6 Dec 2016 - 1 Oct 2020	Director, Emery Oleochemicals (M) Sdn. Bhd.
16 Jan 2016 - 1 Oct 2020	President & CEO, PTTGC America LLC
2019 - 2020	Executive Vice President reporting to Chief Executive Officer, PTT Global Chemical Public Company Limited, Secondment to PTTGC America LLC

Shareholding : None

Relation among Family with Other Directors, Management, Major Shareholders of the Company or Subsidiaries : None

Mr. Pirun Krimwongrut

- Chief Operating Officer – Base and Intermediate Chemicals

Age: 56 Years
Appointed: 13 May 2024

Education/Training

- Master of Engineering Science (Electrical Engineering), University of New South Wales, Sydney, Australia
- Bachelor of Engineering (Electrical Engineering), (Second-Class Honors), Khon Kaen University
- The Executive Program in Energy Literacy for a Sustainable Future, Class 18/2023, Thailand Energy Academy (TEA)
- Leadership Development Program (LDP1), PTT Leadership and Learning Institute (PLLI), PTT Public Company Limited
- Subsidiary Governance, Business and Legal Issues for Directors and Executives and Transformative Leadership for Global Enterprise 2022, Director's Legal Liabilities, Ethical Leadership for New Era and High Performing Board & Board Effectiveness 2021 (In-house Programs by GC), Role of the Chairman Program (RCP) Class 55/2023 and Director Certification Program (DCP) Class 257/2018, Thai Institute of Directors Association (IOD)

Board Member/Management in Listed Company – The Stock Exchange of Thailand : 1

- Chief Operating Officer, Base and Intermediate Chemicals, PTT Global Chemical Public Company Limited

Board Member/Management in Non-Listed Company – The Stock Exchange of Thailand : 2

- Director and Member of the Executive Committee, Thai Tank Terminal Limited
- Director and Chairman of the Business Advisory Committee, AGC Vinythai Public Company Limited

Work Experiences (5-year Past Experiences)

20 Jan 2023 - 12 Aug 2024	Chairman, NPC Safety and Environmental Service Company Limited
9 Dec 2020 - 9 Jul 2024	Director, PTT Asahi Chemical Company Limited
11 Jan 2023 - 15 Jun 2024	Chairman, GC Estate Company Limited
18 Jan 2023 - 5 Jun 2024	Chairman, GC Maintenance and Engineering Company Limited
22 Sep 2023 - 31 May 2024	Director, GC America Sustainability Corporation
16 Jan 2023 - 31 May 2024	Director, PTTGC America LLC
16 Jan 2023 - 31 May 2024	Director, PTTGC America Corporation
16 Feb 2022 - 31 May 2024	Director, GC International Corporation
1 Jan 2023 - 12 May 2024	Chief Operating Officer - Center of Excellence, PTT Global Chemical Public Company Limited
23 Jan 2018 - 10 Jan 2023	Director, GC Estate Company Limited
28 Nov 2019 - 5 Jan 2023	Director, Sport Services Alliance Company Limited
11 Oct 2019 - 1 Jan 2023	Director, PTT Digital Solutions Company Limited
1 Oct 2020 - 31 Dec 2022	Executive Vice President - Organizational Effectiveness, PTT Global Chemical Public Company Limited
Nov 2019 - Nov 2020	Director, GC Styrenics Company Limited
1 Oct 2019 - 30 Sep 2020	Acting Executive Vice President - Organizational Effectiveness, PTT Global Chemical Public Company Limited

Shareholding : Owner 27,033 Shares (0.000600%)
As of 31 December 2024

Relation among Family with Other Directors, Management, Major Shareholders of the Company or Subsidiaries : None

Mr. Saroj Putthammawong

- Chief Operating Officer – Value Added Products

Age: 56 Years
Appointed: 1 January 2024

Education/Training

- Master of Business Administration, Thammasat University
- Bachelor of Engineering (Chemical Engineering), Chulalongkorn University
- The Executive Program in Energy Literacy for a Sustainable Future, Class 11/2018, Thailand Energy Academy (TEA)
- Subsidiary Governance, Business and Legal Issues for Directors and Executives and Transformative Leadership for Global Enterprise 2022, Director's Legal Liabilities, Ethical Leadership for New Era and High Performing Board & Board Effectiveness 2021 (In-house Programs by GC) and Director Certification Program (DCP) Class 220/2016, Thai Institute of Directors Association (IOD)

Board Member/Management in Listed Company – The Stock Exchange of Thailand : 2

- Director/Director to Nomination and Remuneration Committee/Director to Risk Management Committee, Global Green Chemicals Public Company Limited
- Chief Operating Officer, Value Added Products, PTT Global Chemical Public Company Limited

Board Member/Management in Non-Listed Company – The Stock Exchange of Thailand : 5

- Chairman, GC Marketing Solutions Company Limited
- Chairman, PTT Asahi Chemical Company Limited
- Chairman, GC Polyols Company Limited
- Chairman, WHA GC Logistics Company Limited
- Director, HMC Polymers Company Limited

Work Experiences (5-year Past Experiences)

12 Jan 2024 - 30 Jul 2024	Chairman, HMC Polymers Company Limited
15 Jan 2024 - 31 May 2024	Director, PTTGC International Private Limited
1 Jan 2024 - 30 Apr 2024	Acting Senior Executive Vice President, Marketing and Sales - Industry Platforms, PTT Global Chemical Public Company Limited
28 Jan 2021 - 11 Jan 2024	Director, HMC Polymers Company Limited
18 Jan 2023 - 1 Jan 2024	Director, Revolve Group Limited
1 Jan 2023 - 31 Dec 2023	Executive Vice President - Marketing and Sales, Industry Platforms, PTT Global Chemical Public Company Limited
17 Mar 2021 - 31 Mar 2023	Director, PTT Phenol Company Limited
22 Feb 2022 - 7 Feb 2023	Chairman, GC-M PTA Company Limited
22 Feb 2022 - 7 Feb 2023	Chairman, Thai PET Resin Company Limited
1 Oct 2019 - 31 Dec 2022	Executive Vice President - Marketing, Commercial and Supply Chain, PTT Global Chemical Public Company Limited
18 Dec 2017 - 31 Dec 2022	Director, GC Treasury Center Company Limited
2 Jun 2017 - 31 Dec 2022	Director, GC Oxirane Company Limited
28 Oct 2019 - 19 Oct 2022	Director, GC Marketing Solutions Company Limited
27 Dec 2016 - 25 Aug 2022	Director, GC Glycol Company Limited
29 Sep 2020 - 28 Mar 2022	Committee Member of Industry Standards (ISC), The Federation of Thai Industries
27 Aug 2018 - 2020	Committee Member of Industrial Excellence Center (IEC), The Federation of Thai Industries

Shareholding : Owner 4,900 Shares (0.000109%)
As of 31 December 2024

Relation among Family with Other Directors, Management, Major Shareholders of the Company or Subsidiaries : None

Mr. Pornsak Mongkoltrirat

- Chief Operating Officer – Center of Excellence

Age: 58 Years
Appointed: 13 May 2024

Education/Training

- Master of Business Administration (Management), Kasetsart University
- Bachelor of Engineering (Mechanical Engineering), Kasetsart University
- Business and Legal Issues for Directors and Executives and Transformative Leadership for Global Enterprise 2022, Director's Legal Liabilities, Ethical Leadership for New Era and High Performing Board & Board Effectiveness 2021 (In-house Programs by GC),
  Role of the Chairman Program (RCP) Class 48/2021 and Director Certification Program (DCP) Class 263/2018, Thai Institute of Directors Association (IOD)

Board Member/Management in Listed Company – The Stock Exchange of Thailand : 1

- Chief Operating Officer, Center of Excellence, PTT Global Chemical Public Company Limited

Board Member/Management in Non-Listed Company – The Stock Exchange of Thailand : 4

- Chairman, NPC Safety and Environmental Service Company Limited
- Chairman, GC Estate Company Limited
- Chairman, GC Maintenance and Engineering Company Limited
- Director, HMC Polymers Company Limited

Work Experiences (5-year Past Experiences)

24 Feb 2022 - 6 Aug 2024	Director, GC-M PTA Company Limited
24 Feb 2022 - 6 Aug 2024	Director, Thai PET Resin Company Limited
13 Dec 2019 - 29 Jul 2024	Executive Committee Member, HMC Polymers Company Limited
9 Dec 2020 - 9 Jul 2024	Chairman of the Executive Committee, PTT Asahi Chemical Company Limited
28 Sep 2020 - 18 Jun 2024	Chairman, Revolve Group Limited
31 Jul 2020 - 17 Jun 2024	Director, Dynachisso Thai Company Limited
3 Feb 2020 - 15 Jun 2024	Chairman, ENVICCO Limited
31 Oct 2019 - 15 Jun 2024	Director, GC Logistics Solutions Company Limited
1 Apr 2020 - 12 May 2024	Executive Vice President - Polymers, PTT Global Chemical Public Company Limited
15 Jan 2023 - 19 Feb 2024	Chairman, GC Logistics Solutions (Vietnam) Company Limited
12 Nov 2019 - 19 Feb 2024	Chairman, PL Global Transport Company Limited
1 Jan 2023 - 31 Dec 2023	Managing Director, GC Logistics Solutions Company Limited
12 Nov 2019 - 21 Dec 2023	Chairman, GC Logistics Solutions Company Limited
28 Feb 2022 - 8 May 2023	Chairman, Solution Creation Company Limited
23 Feb 2021 - 27 Feb 2022	Director, Solution Creation Company Limited
28 Oct 2019 - 19 Oct 2022	Director, GC Marketing Solutions Company Limited
11 Nov 2019 - 24 Aug 2022	Chairman, GC Styrenics Company Limited
28 Sep 2020 - 22 May 2022	Director, Revolve Group Limited
29 Mar 2019 - 15 Feb 2022	Director, GC Maintenance and Engineering Company Limited
1 Oct 2019 - 30 Mar 2020	Acting Executive Vice President - Group Performance Center - Polymers Business Unit, PTT Global Chemical Public Company Limited

Shareholding : Owner 15,258 Shares (0.000338%), Spouse 16,158 Shares (0.000358%) As of 31 December 2024

Relation among Family with Other Directors, Management, Major Shareholders of the Company or Subsidiaries : None

Mr. Thitipong Jurapornsiridee

- Executive Vice President – Finance and Accounting

Age: 55 Years
Appointed: 1 October 2024

Education/Training

- Master of Business Administration, Thammasat University
- Master of Economics (English Program), Thammasat University
- Bachelor of Engineering (Electrical Engineering), Chulalongkorn University
- Advanced Management Program (AMP 3), Business & People Management 2022, PTT Public Company Limited
- Leadership Development Program (LDP3), PTT Leadership and Learning Institute (PLLI), PTT Public Company Limited
- Director Certification Program (DCP), Class 267/2018, Thai Institute of Directors Association (IOD)

Board Member/Management in Listed Company – The Stock Exchange of Thailand : 2

- Executive Vice President, PTT Public Company Limited
- Executive Vice President, Finance and Accounting, PTT Global Chemical Public Company Limited

Board Member/Management in Non-Listed Company – The Stock Exchange of Thailand : 11

- Chairman, GC Treasury Center Company Limited
- Director, WHA GC Logistics Company Limited
- Director, GC Polyols Company Limited
- Director, PTTGC International Private Limited
- Director, PTTGC America Corporation
- Director, GC Ventures America Corporation
- Director, Vencorex Holding
- Director, Emery Oleochemicals UK Limited
- Director, PTTGC America LLC
- Director, GC Ventures Company Limited
- Director, GC America Sustainability Corporation

Work Experiences (5-year Past Experiences)

29 Mar 2022 - 4 Nov 2024	Director, Houay Ho Power Company
10 Mar 2022 - 4 Nov 2024	Director, Houay Ho Thai Company Limited
8 Jan 2021 - 4 Nov 2024	Director, GHECO-ONE Company Limited
23 Apr 2024 - 16 Oct 2024	Director, Global Renewable Power Company Limited
8 Oct 2022 - 10 Oct 2024	Director, Avaada Energy Private Limited
10 Oct 2023 - 1 Oct 2024	Director, 24M Technologies, Inc.
10 Oct 2023 - 1 Oct 2024	Director, Chonburi Clean Energy Company Limited
14 Jun 2021 - 1 Oct 2024	Director, Global Renewable Synergy Company Limited
1 Apr 2021 - 1 Oct 2024	Chairman, Energy Recovery Unit Company Limited
22 Jan 2021 - 1 Oct 2024	Director, GPSC Treasury Center
4 Jan 2021 - 1 Oct 2024	Director, Union Power Development Company Limited
9 Feb 2024 - 30 Sep 2024	Director, Eastern Seaboard Clean Energy Company Limited
7 Apr 2022 - 30 Sep 2024	Director, GPSC Holding (Thailand) Company Limited
11 Jan 2022 - 30 Sep 2024	Director, Nuovo Plus Company Limited
15 Oct 2021 - 30 Sep 2024	Chairman, Combined Heat and Power Producing Company Limited
2 Feb 2021 - 30 Sep 2024	Chairman, IRPC Clean Power Company Limited
8 Jan 2021 - 30 Sep 2024	Director, GLOW IPP 3 Company Limited
1 Jan 2021 - 30 Sep 2024	Chief Financial Officer, Global Power Synergy Public Company Limited
1 Jan 2021 - 30 Sep 2024	Chairman, Nam Lik 1. Power Company Limited
21 Oct 2021 - 26 Sep 2024	Director, Global Renewable Synergy Taiwan Company Limited
1 Oct 2020 - 30 Dec 2020	Acting Executive Vice President - Finance and Accounting, PTT Global Chemical Public Company Limited
Jul 2019 - Sep 2020	Senior Vice President - Corporate Finance and Strategy, PTT Global Chemical Public Company Limited

Shareholding : Owner 20,000 Shares (0.000444%)
As of 31 October 2024

Relation among Family with Other Directors, Management, Major Shareholders of the Company or Subsidiaries : None

Mr. Anutin Chuaypen

- Executive Vice President – Organizational Effectiveness

Age: 58 Years
Appointed: 1 January 2023

Education/Training
- Master of Science (Computer & Engineering Management), Assumption University
- Bachelor of Science (Chemical Engineering), Chulalongkorn University
- Leadership Development Program (LDP2), PTT Leadership and Learning Institute (PLLI), PTT Public Company Limited
- Subsidiary Governance, Business and Legal Issues for Directors and Executives and Transformative Leadership for Global Enterprise 2022, Director's Legal Liabilities, Ethical Leadership for New Era and High Performing Board & Board Effectiveness 2021 (In-house Programs by GC) and Director Certification Program (DCP) Class 200/2015, Thai Institute of Directors Association (IOD)

Board Member/Management in Listed Company – The Stock Exchange of Thailand : 1
- Executive Vice President, Organizational Effectiveness, PTT Global Chemical Public Company Limited

Board Member/Management in Non-Listed Company – The Stock Exchange of Thailand : 2
- Director, GC International Corporation
- Director, GC Estate Company Limited

Work Experiences (5-year Past Experiences)

30 Jan 2023 - 24 Jun 2024	Director, PTT Digital Solutions Company Limited
31 Jan 2023 - 1 Jun 2024	Director, Sport Services Alliance Company Limited
29 Oct 2019 - 4 Jan 2023	Director, NPC Safety and Environmental Service Company Limited
22 Nov 2019 - 25 Aug 2022	Director, GC Styrenics Company Limited
27 Apr 2015 - 1 Jan 2020	Director, Thai Tank Terminal Limited

Relation among Family with Other Directors, Management, Major Shareholders of the Company or Subsidiaries : None

Mr. Siridech Kumvongdee

- Executive Vice President – Marketing, Commercial and Supply Chain

Age: 59 Years
Appointed: 1 January 2023

Education/Training
- Master of Science (Chemical Engineering), Washington University, U.S.A.
- Bachelor of Science (Chemistry), Ramkhamhaeng University
- Advanced Management Program (AMP), INSEAD University
- Certificate of Leadership Development Program (LDP3), Class 2, PTT Leadership and Learning Institute (PLLI), PTT Public Company Limited
- Certificate of Senior Executive Program (SEP), Sasin Graduate Institute of Business Administration of Chulalongkorn University
- Certificate of Politics and Governance in Democratic Systems for Senior Executives, Class 24/2020, King Prajadhipok's Institute
- Role of the Chairman Program (RCP) Class 53/2023, Subsidiary Governance, Business and Legal Issues for Directors and Executives and Transformative Leadership for Global Enterprise 2022, Director's Legal Liabilities and Ethical Leadership for New Era 2021 (In-house Programs by GC), Board Matters and Trends (BMT) Class 2/2017 and Director Certification Program (DCP) Class 209/2015, Thai Institute of Directors Association (IOD)

Board Member/Management in Listed Company – The Stock Exchange of Thailand : 1
- Executive Vice President, Marketing, Commercial and Supply Chain, PTT Global Chemical Public Company Limited

Board Member/Management in Non-Listed Company – The Stock Exchange of Thailand : 8
- Chairman, GC-M PTA Company Limited
- Chairman, Thai PET Resin Company Limited
- Director, PTT Asahi Chemical Company Limited
- Director, PTTGC America Corporation
- Director, PTTGC America LLC
- Director, GC America Sustainability Corporation
- Director, GC Treasury Center Company Limited
- Director and Executive Chairman, HMC Polymers Company Limited

Work Experiences (5-year Past Experiences)

22 Jun 2020 - 12 Dec 2022	Director, Basell Advanced Polyolefins (Thailand) Company Limited
19 Dec 2019 - 12 Dec 2022	Director, Rayong Olefins Company Limited
13 Dec 2019 - 12 Dec 2022	President, HMC Polymers Company Limited

Relation among Family with Other Directors, Management, Major Shareholders of the Company or Subsidiaries : None

Mrs. Chananchida Wiboonkanarak

- Executive Vice President – Corporate Strategy
- Acting Senior Vice President – Corporate Sustainability

Age: 51 Years
Appointed: 1 January 2024

Education/Training

- Master of Engineering (Chemical Engineering), Chulalongkorn University
- Bachelor of Science (Chemical Engineering), Chulalongkorn University
- The Executive Program in Energy Literacy for a Sustainable Future, Class 20, Thailand Energy Academy (TEA)
- Leadership Development Program (LDP3), PTT Leadership and Learning Institute (PLLI), PTT Public Company Limited
- Leadership Development Program (LDP2), 2015, Sasin Graduate Institute of Business Administration of Chulalongkorn University
- Leadership Development Program (LDP2), General Electric, GE, New York, U.S.A.
- PTT-HBS Leadership Development Program (LDP1), Harvard Business School, Campus Shanghai, The People's Republic of China
- Subsidiary Governance, Business and Legal Issues for Directors and Executives and Transformative Leadership for Global Enterprise 2022, Director's Legal Liabilities, Ethical Leadership for New Era and High Performing Board & Board Effectiveness 2021 (In-house Programs by GC) and Director Certification Program (DCP) Class 267/2018, Thai Institute of Directors Association (IOD)

Board Member/Management in Listed Company – The Stock Exchange of Thailand : 1

- Executive Vice President, Corporate Strategy, Acting Senior Vice President, Corporate Sustainability, PTT Global Chemical Public Company Limited

Board Member/Management in Non-Listed Company – The Stock Exchange of Thailand : 9

- Chairperson, GC Ventures America Corporation
- Chairperson, GC Ventures Company Limited
- Director and Member of the Business Advisory Committee, AGC Vinythai Public Company Limited
- Director, PTTGC International Private Limited
- Director, PTTGC America Corporation
- Director, PTTGC America LLC
- Director, GC America Sustainability Corporation
- Director, GC Polyols Company Limited
- Director, Kuraray GC Advanced Materials Company Limited

Work Experiences (5-year Past Experiences)

4 Jan 2024 - 12 Aug 2024	Director, GC Ventures America Corporation
4 Jan 2024 - 12 Aug 2024	Director, GC Ventures Company Limited
12 Oct 2021 - 31 May 2024	Director, Executive Committee and Risk & Audit Committee, Emery Oleochemicals UK Limited
20 Oct 2022 - 16 Jan 2024	Director, GC Marketing Solutions Company Limited
1 Apr 2022 - 1 Jan 2024	Chairperson, PTT MCC Biochem Company Limited
9 Dec 2020 - 1 Jan 2024	Director, PTT Asahi Chemical Company Limited
9 Oct 2019 - 1 Jan 2024	Director, Solution Creation Company Limited
11 Oct 2018 - 1 Jan 2024	Executive Committee Member, HMC Polymers Company Limited
1 Apr 2018 - 31 Dec 2023	Senior Vice President - Strategy, Business Development and Commercial Excellence, PTT Global Chemical Public Company Limited
1 Oct 2019 - 31 Mar 2023	Director, PTT Phenol Company Limited
13 Nov 2019 - 25 Aug 2022	Director, GC Glycol Company Limited
8 Feb 2018 - 31 Mar 2022	Director and Chairperson of the Executive Committee, PTT MCC Biochem Company Limited
15 Oct 2020 - 1 Mar 2022	Director, Vencorex Holding
15 Oct 2020 - 16 Feb 2022	Director, PTTGC International (Netherlands) B.V.
2 Sep 2020 - 16 Feb 2022	Director, NatureWorks LLC

Relation among Family with Other Directors, Management, Major Shareholders of the Company or Subsidiaries : None

Mr. Pukpong Wungrattanasopon

- Executive Vice President – Olefins

Age: 54 Years
Appointed: 1 April 2020

Education/Training
- Master of Science (Petrochemical Technology), The Petroleum and Petrochemical College, Chulalongkorn University
- Bachelor of Science (Chemical Technology), Chulalongkorn University
- Subsidiary Governance, Business and Legal Issues for Directors and Executives and Transformative Leadership for Global Enterprise 2022, Director's Legal Liabilities, Ethical Leadership for New Era and High Performing Board & Board Effectiveness 2021 (In-house Programs by GC) and Director Certification Program (DCP) Class 236/2017, Thai Institute of Directors Association (IOD)

Board Member/Management in Listed Company – The Stock Exchange of Thailand : 1
- Executive Vice President, Olefins, PTT Global Chemical Public Company Limited

Board Member/Management in Non-Listed Company – The Stock Exchange of Thailand : 3
- Director, GC-M PTA Company Limited
- Director, Thai PET Resin Company Limited
- Director, GC Maintenance and Engineering Company Limited

Position in Other Organizations/Institutions : 1
- Vice President, Thai Institute of Chemical Engineering and Applied Chemistry

Work Experiences (5-year Past Experiences)

27 Nov 2022 - 29 Jul 2024	Director, HMC Polymers Company Limited
17 Nov 2016 - 31 Mar 2023	Director, PTT Phenol Company Limited
14 Jul 2020 - 7 Dec 2022	Executive Committee Member, Thai Tank Terminal Limited
2 Jan 2020 - 19 Sep 2022	Director, Thai Tank Terminal Limited
1 Jan 2021 - 5 Aug 2022	Director, GC Glycol Company Limited

Relation among Family with Other Directors, Management, Major Shareholders of the Company or Subsidiaries : None

Mr. Kamel Ramdani

- Executive Vice President – Product Innovation
- Acting Senior Vice President – Innovation Growth Platforms and Corporate Venture Capital

Age: 52 Years
Appointed: 1 January 2024

Education/Training
- Doctor of Philosophy (Ph.D.) (Chemical Engineering), French Institute of Petroleum & French National Research Center, Lyon, France
- Master of Business Administration, Wharton School, Philadelphia, U.S.A.
- Master of Science (Chemistry and Catalysis), University Pierre & Marie Curie, Paris VI, France
- Bachelor of Engineering (Chemical Engineering), University Claude Bernard, Lyon, France
- Director Certification Program (DCP) Class 374/2024, Thai Institute of Directors Association (IOD)

Board Member/Management in Listed Company – The Stock Exchange of Thailand : 1
- Executive Vice President, Product Innovation, Acting Senior Vice President, Innovation Growth Platforms and Corporate Venture Capital, PTT Global Chemical Public Company Limited

Board Member/Management in Non-Listed Company – The Stock Exchange of Thailand : 4
- Director, PTT MCC Biochem Company Limited
- Director, Vencorex Holding
- Director and Managing Director, GC Ventures Company Limited
- Director, Chief Executive Officer/President, GC Ventures America Corporation

Work Experiences (5-year Past Experiences)

1 Dec 2021 - 31 Dec 2023	Senior Vice President - Product Innovation and Innovation Management and Acting Senior Vice President - Innovation Growth Platforms and Corporate Venture Capital, PTT Global Chemical Public Company Limited
2013 - 2021	Senior Vice President - Research & Innovation, Global Technology VP Solvay Group, Global Business Unit Novecare, Princeton, New Jersey, U.S.A.

Relation among Family with Other Directors, Management, Major Shareholders of the Company or Subsidiaries : None

Mr. Krit Treenutchakorn

- Senior Vice President – Corporate Governance and Legal and Company Secretary

Age: 47 Years
Appointed: 16 May 2024

Education/Training

- Master of Science (Engineering Management), California State Polytechnic University, Pomona, U.S.A.
- Bachelor of Engineering (Industrial Engineering), Chiang Mai University
- Professional Development Program for Company Secretary, 2024, Thai Listed Company Association (TLCA)
- Anti-Corruption Strategic Management for Senior Executives, Class 16, The National Anti-Corruption Commission (NACC)
- Leadership Development Program (LDP2), PTT Leadership and Learning Institute (PLLI), PTT Public Company Limited
- The Master of Inspirational Leader, SEASIA Leadavation Center
- APIC 2019, Taipei
- Leadership Development Program (LDP2, 2019), (Module 1), Slingshot Group
- Asia Petrochemical Industry Conference, Malaysian Petrochemicals Association, Malaysia
- Director Certification Program (DCP) Class 372/2024 and Company Secretary Program (CSP) Class 150/2024, Thai Institute of Directors Association (IOD)

Board Member/Management in Listed Company – The Stock Exchange of Thailand : 1

- Senior Vice President, Corporate Governance and Legal and Company Secretary, PTT Global Chemical Public Company Limited

Board Member/Management in Non-Listed Company – The Stock Exchange of Thailand : None

Work Experiences (5-year Past Experiences)

1 May 2024 - 15 May 2024	Vice President under Corporate Governance and Legal, PTT Global Chemical Public Company Limited
1 Oct 2022 - 30 Apr 2024	Director and Managing Director, Thai Ethoxylate Company Limited
1 Jul 2022 - 30 Sep 2022	Vice President - Subsidiary/ JVs Management, PTT Global Chemical Public Company Limited
1 Jan 2018 - 30 Jun 2022	Vice President - JVs Management, PTT Global Chemical Public Company Limited

Relation among Family with Other Directors, Management, Major Shareholders of the Company or Subsidiaries : None

Mr. Chatchawalit Dhammasaroj

- Senior Vice President – Internal Audit

Age: 57 Years
Appointed: 1 January 2024

Education/Training

- Master of Business Administration, Chulalongkorn University
- Master of Science (Electrical Engineering), Virginia Polytechnic Institute and State University (VPI&SU)
- Bachelor of Science (Electrical Engineering), Virginia Polytechnic Institute and State University (VPI&SU)
- Advanced People Management (APM) Class 43, Personnel Management Association of Thailand (PMAT)
- Advanced Certificate Course in Public Administration and Law for Executives, Class 14, King Prajadhipok's Institute
- GC X INSEAD Global Leadership Acceleration Program, 2022 (G-LAP), (In-house Programs by GC), INSEAD
- Leadership Development Program (LDP1/2016 and LDP2/2017) (In-house Program by GC), PacRim Group
- Advanced Audit Committee Program (AACP) Class 51/2024 and Director Certification Program (DCP) Class 265/2018, Thai Institute of Directors Association (IOD)

Board Member/Management in Listed Company – The Stock Exchange of Thailand : 1

- Senior Vice President, Internal Audit, PTT Global Chemical Public Company Limited

Board Member/Management in Non-Listed Company – The Stock Exchange of Thailand: None

Position in Other Organizations/Institutions : 1

- Director and Treasurer, Vibul Aryuravej Foundation

Work Experiences (5-year Past Experiences)

16 Jul 2022 - 31 Dec 2023	Vice President - HR Business Partner, PTT Global Chemical Public Company Limited
1 May 2021 - 15 Jul 2022	Vice President - HR Management, PTT Global Chemical Public Company Limited
16 Apr 2019 - 30 Apr 2021	Vice President - HR Operation and Services, PTT Global Chemical Public Company Limited

Relation among Family with Other Directors, Management, Major Shareholders of the Company or Subsidiaries : None

Mr. Panod Awaiwanond

- Senior Vice President – International Supply Chain and Trading Business

Age: 56 Years
Appointed: 1 July 2024

Education/Training
- Master of Business Administration (Finance), University of Akron, Ohio, U.S.A.
- Bachelor of Arts (Economic), Southern Illinois University at Carbondale, Illinois, U.S.A.
- Business and Legal Issues for Directors and Executives and Transformative Leadership for Global Enterprise 2022 (In-house Programs by GC), Thai Institute of Directors Association (IOD)

Board Member/Management in Listed Company – The Stock Exchange of Thailand : 1
- Senior Vice President, International Supply Chain and Trading Business, PTT Global Chemical Public Company Limited

Board Member/Management in Non-Listed Company – The Stock Exchange of Thailand : 3
- President & CEO, GC America Sustainability Corporation
- Director, President and Managing Director, PTTGC America Corporation
- Director, President & CEO, PTTGC America LLC

Position in Other Organizations/Institutions : None

Work Experiences (5-year Past Experiences)

1 Feb 2022 - 30 Jun 2024	Senior Vice President - US Second Home, PTT Global Chemical Public Company Limited
1 Oct 2021 - 31 Jan 2022	Vice President - International Business Operations, PTT Global Chemical Public Company Limited
1 Dec 2019 - 30 Sep 2021	Vice President under Executive Vice President - International Business Operations, PTT Global Chemical Public Company Limited

Relation among Family with Other Directors, Management, Major Shareholders of the Company or Subsidiaries : None

Mr. Pisit Fusiripong

- Senior Vice President – Technology Excellence

Age: 51 Years
Appointed: 1 January 2025

Education/Training
- Master of Science (Computer & Engineering), Assumption University
- Bachelor of Engineering (Mechanical Engineering), King Mongkut's University of Technology Thonburi
- Leadership Development Program (LDP2), PTT Global Chemical Public Company Limited

Board Member/Management in Listed Company – The Stock Exchange of Thailand : 1
- Senior Vice President, Technology Excellence, PTT Global Chemical Public Company Limited

Board Member/Management in Non-Listed Company – The Stock Exchange of Thailand : None

Work Experiences (5-year Past Experiences)

1 Dec 2024 - 31 Dec 2024	Vice President, Technical, Engineering and Maintenance, PTT Global Chemical Public Company Limited
1 Jan 2023 - 30 Nov 2024	Vice President, Olefins Plant IV, PTT Global Chemical Public Company Limited
1 Feb 2021 - 31 Dec 2022	Vice President, Olefins Maintenance 2, PTT Global Chemical Public Company Limited
1 Oct 2017 - 31 Jan 2021	Vice President, Reliability and Engineering, PTT Global Chemical Public Company Limited

Relation among Family with Other Directors, Management, Major Shareholders of the Company or Subsidiaries : None

Mr. Sakesiri Piyavej

- Senior Vice President – Quality, Safety & Occupational Health and Environment

Age: 58 Years
Appointed: 1 January 2022

Education/Training

- Master of Public Administration (Honor Class), The National Institute of Development Administration (NIDA)
- Bachelor of Engineering (Electrical Engineering), Chulalongkorn University
- Bachelor of Safety Science, Rajabhat Rajanagarindra University
- Subsidiary Governance, Business and Legal Issues for Directors and Executives and Transformative Leadership for Global Enterprise 2022 (In-house Programs by GC) and Director Certification Program (DCP) Class 321/2022, Thai Institute of Directors Association (IOD)

Board Member/Management in Listed Company – The Stock Exchange of Thailand : 1

- Senior Vice President, Quality, Safety, Occupational Health and Environment, PTT Global Chemical Public Company Limited

Board Member/Management in Non-Listed Company – The Stock Exchange of Thailand : 1

- Director, NPC Safety and Environmental Service Company Limited

Work Experiences (5-year Past Experiences)

Oct 2018 - Dec 2021	Vice President - Technical Safety and PSM, PTT Global Chemical Public Company Limited

Relation among Family with Other Directors, Management, Major Shareholders of the Company or Subsidiaries : None

Mrs. Chatsuda Kanjanarat

- Senior Vice President – Transformation Excellence

Age: 56 Years
Appointed: 1 July 2017

Education/Training

- Bachelor of Engineering (Electrical Electronics) (Second-Class Honors), King Mongkut's Institute of Technology Ladkrabang
- PTT-HBS Leadership Development Program (LDP1), PTT Leadership and Learning Institute (PLLI), PTT Public Company Limited
- Leading Digital Business Transformation (LDBT) 2017, Institute for Management Development (IMD)
- Executive Education Certificate Program in Cybersecurity (Executive CISO), Class 1, National Cyber Security Agency (NCSA)
- Subsidiary Governance, Business and Legal Issues for Directors and Executives and Transformative Leadership for Global Enterprise 2022, Director's Legal Liabilities, Ethical Leadership for New Era and High Performing Board & Board Effectiveness 2021 (In-house Programs by GC) and Director Certification Program (DCP) Class 249/2017, Thai Institute of Directors Association (IOD)

Board Member/Management in Listed Company – The Stock Exchange of Thailand : 1

- Senior Vice President, Transformation Excellence, PTT Global Chemical Public Company Limited

Board Member/Management in Non-Listed Company – The Stock Exchange of Thailand : 1

- Director, PTT Digital Solutions Company Limited

Relation among Family with Other Directors, Management, Major Shareholders of the Company or Subsidiaries : None

Mr. Rachean Chanthaweekul

- **Senior Vice President – Procurement**

Age: 56 Years
Appointed: 1 January 2024

Education/Training

- Bachelor of Engineering (Mechanical Engineering), King Mongkut's University of Technology Thonburi
- The Mastery of Inspirational Leader Program (2023), Sauce Skills
- GC X INSEAD Global Leadership Acceleration Program 2022 (G-LAP), (In-house Program by GC), INSEAD
- Leadership Development Program (LDP2), PTT Global Chemical Public Company Limited
- Director Certification Program (DCP) Class 363/2024, Thai Institute of Directors Association (IOD)

Board Member/Management in Listed Company – The Stock Exchange of Thailand : 1

- Senior Vice President, Procurement, PTT Global Chemical Public Company Limited

Board Member/Management in Non-Listed Company – The Stock Exchange of Thailand : 1

- Director, GC Estate Company Limited

Work Experiences (5-year Past Experiences)

1 May 2024 - 30 Sep 2024	Acting Managing Director, GC Estate Company Limited
1 Jun 2019 - 31 Dec 2023	Vice President, International Business, PTT Global Chemical Public Company Limited, Secondment as Vice President, Kuraray GC Advanced Materials Company Limited

Relation among Family with Other Directors, Management, Major Shareholders of the Company or Subsidiaries : None

Mr. Krit Kumpabooth

- **Senior Vice President – CAPEX Excellence, Maintenance and Reliability**

Age: 51 Years
Appointed: 1 January 2024

Education/Training

- Master of Science (Petrochemical Technology), The Petroleum and Petrochemical College, Chulalongkorn University
- Bachelor of Science (Industrial Chemistry), (Second-Class Honors), King Mongkut Institute of Technology North Bangkok
- GC X INSEAD Global Leadership Acceleration Program 2022 (G-LAP), (In-house Program by GC), INSEAD
- Leadership Development Program (LDP1/2015 and LDP 2/2017), PTT Global Chemical Public Company Limited
- Extraordinary Leader, 2017, PTT Global Chemical Public Company Limited
- Targeted Selection: Interviewer 2017 (In-house Programs by GC), Development Dimensions International (DDI)
- The Young Executive Program in Energy Literacy for a Sustainable Future, Class 1/2016, Thailand Energy Academy (TEA)

Board Member/Management in Listed Company – The Stock Exchange of Thailand : 1

- Senior Vice President, CAPEX Excellence, Maintenance and Reliability, PTT Global Chemical Public Company Limited

Board Member/Management in Non-Listed Company – The Stock Exchange of Thailand : None

Position in Other Organizations/Institutions : 1

- Steering Committee - Industrial Segment, The Thai Institute of Chemical Engineering and Applied Chemistry (TIChE)

Work Experiences (5-year Past Experiences)

1 May 2019 - 1 Jan 2023	Vice President - Innovation Strategy and Management, PTT Global Chemical Public Company Limited

Relation among Family with Other Directors, Management, Major Shareholders of the Company or Subsidiaries : None

Mr. Sombat Silsangwon

- Senior Vice President – EO and Derivatives

Age: 55 Years
Appointed: 1 January 2025

Education/Training
- Bachelor of Industrial Technology, King Mongkut's Institute of Technology Ladkrabang
- GC X INSEAD Global Leadership Acceleration Program 2022 (G-LAP) (In-house Program by GC and INSEAD)
- Advance Management Program 2019, PTT Global Chemical Public Company Limited
- Management Development Program Class 24/2016, Thailand Management Association (TMA)
- Director Certification Program (DCP) Class 362/2024, Thai Institute of Directors Association (IOD)

Board Member/Management in Listed Company – The Stock Exchange of Thailand : 1
- Senior Vice President, EO and Derivatives, PTT Global Chemical Public Company Limited

Board Member/Management in Non-Listed Company – The Stock Exchange of Thailand : 2
- Director, GC-M PTA Company Limited
- Director, Thai PET Resin Company Limited

Work Experiences (5-year Past Experiences)

1 Mar 2023 - 31 Dec 2024	Senior Vice President, Aromatics, PTT Global Chemical Public Company Limited
1 Oct 2016 - 28 Feb 2023	Vice President - Olefins Plant II, PTT Global Chemical Public Company Limited

Relation among Family with Other Directors, Management, Major Shareholders of the Company or Subsidiaries : None

Mr. Sawat Trongdilokrat

- Senior Vice President – Phenol and Derivatives

Age: 57 Years
Appointed: 1 May 2022

Education/Training
- Master of Business Administration (Marketing), Sripatum University
- Bachelor of Science (Chemical Engineering), Chulalongkorn University
- Leadership Development Program (LDP1 and LDP2), PTT Global Chemical Public Company Limited
- Subsidiary Governance, Business and Legal Issues for Directors and Executives and Transformative Leadership for Global Enterprise 2022 (In-house Programs by GC) and, Director Certification Program (DCP) Class 325/2022, Thai Institute of Directors Association (IOD)

Board Member/Management in Listed Company – The Stock Exchange of Thailand : 1
- Senior Vice President, Phenol and Derivatives, PTT Global Chemical Public Company Limited

Board Member/Management in Non-Listed Company – The Stock Exchange of Thailand : None

Work Experiences (5-year Past Experiences)

1 May 2022 - 31 Mar 2023	Director and Managing Director, PTT Phenol Company Limited
1 Apr 2022 - 30 Apr 2022	Vice President under Chief Operating Officer Value Added Products, PTT Global Chemical Public Company Limited
1 Oct 2019 - 31 Mar 2022	Vice President - Aromatics Maintenance, PTT Global Chemical Public Company Limited

Relation among Family with Other Directors, Management, Major Shareholders of the Company or Subsidiaries : None

Mr. Ratchada Sawasdirak

- Senior Vice President – Refinery

Age: 56 Years
Appointed: 1 October 2019

Education/Training
- Master of Public Administration, Chulalongkorn University
- Bachelor of Engineering (Mechanical Engineering), Mahanakorn University of Technology
- Ethical Leadership 2020: Ethical Challenges in New Normal, PTT Global Chemical Public Company Limited
- Subsidiary Governance and Transformative Leadership for Global Enterprise 2022, Director's Legal Liabilities, Ethical Leadership for New Era and High Performing Board & Board Effectiveness 2021 (In-house Programs by GC) and Director Certification Program (DCP) Class 287/2019, Thai Institute of Directors Association (IOD)

Board Member/Management in Listed Company – The Stock Exchange of Thailand : 1
- Senior Vice President, Refinery, PTT Global Chemical Public Company Limited

Board Member/Management in Non-Listed Company – The Stock Exchange of Thailand : 1
- Director, NPC Safety and Environmental Service Company Limited

Work Experiences (5-year Past Experiences)

2 Jan 2020 - 19 Sep 2022 Director, Thai Tank Terminal Limited

Relation among Family with Other Directors, Management, Major Shareholders of the Company or Subsidiaries : None

Mr. Panchoak Auetanapa

- Senior Vice President – Polymers

Age: 53 Years
Appointed: 13 May 2024

Education/Training
- Bachelor of Engineering (Electrical Engineering), Chulalongkorn University
- GC X INSEAD Global Leadership Acceleration Program 2022 (G-LAP) (In-house Program by GC), INSEAD
- Extraordinary Leader 2017, PTT Global Chemical Public Company Limited
- Leadership Development Program (LDP1/2015 and LDP2/2017), PTT Global Chemical Public Company Limited
- Subsidiary Governance, Business and Legal Issues for Directors and Executives, Transformative Leadership for Global Enterprise 2022, Director's Legal Liabilities, Ethical Leadership for New Era and High Performing Board & Board Effectiveness 2021 (In-house Programs by GC) and Director Certification Program (DCP) Class 305/2021, Thai Institute of Directors Association (IOD)

Board Member/Management in Listed Company – The Stock Exchange of Thailand : 1
- Senior Vice President, Polymers, PTT Global Chemical Public Company Limited

Board Member/Management in Non-Listed Company – The Stock Exchange of Thailand : 4
- Chairman of the Executive Committee, PTT Asahi Chemical Company Limited
- Executive Committee, HMC Polymers Company Limited
- Director, Revolve Group Limited
- Director, WHA GC Logistics Company Limited

Work Experiences (5-year Past Experiences)

11 Jan 2023 - 17 Jun 2024 Director, GC Estate Company Limited
24 Feb 2023 - 12 Jun 2024 Director, Eastern Fluid Transport Company Limited
1 Jan 2024 - 12 May 2024 Senior Vice President - Utilities, PTT Global Chemical Public Company Limited
1 Jan 2023 - 31 Dec 2023 Acting Senior Vice President - Utilities, PTT Global Chemical Public Company Limited
1 Jul 2022 - 31 Dec 2022 Vice President - PS Plant, PTT Global Chemical Public Company Limited
1 Feb 2021 - 30 Jun 2022 Director and Managing Director, GC Styrenics Company Limited
1 Mar 2019 - 31 Jan 2021 Vice President - Utilities Technology & Maintenance, PTT Global Chemical Public Company Limited

Relation among Family with Other Directors, Management, Major Shareholders of the Company or Subsidiaries : None

Mr. Thitipol Artsanchorn

- Senior Vice President – Marketing and Sales – General Applications

Age: 54 Years
Appointed: 1 July 2022

Education/Training
- Master of Business Administration (Executive MBA Program), Kasetsart University
- Bachelor Degree in Mechanical Engineering, Kasetsart University
- Leadership Program 2012, Ashridge Business School, U.K.
- Supply Chain Process Optimization 2010, Marcus Evans, Singapore
- Key Account Management - Leadership 2001, Cranfield, Bangkok
- Role of the Chairman Program (RCP) Class 58/2024, Subsidiary Governance, Business and Legal Issues for Directors and Executives and Transformative Leadership for Global Enterprise 2022, Director's Legal Liabilities, Ethical Leadership for New Era and High Performing Board & Board Effectiveness 2021 (In-house Programs by GC) and Director Certification Program (DCP) Class 273/2019, Thai Institute of Directors Association (IOD)

Board Member/Management in Listed Company – The Stock Exchange of Thailand : 1
- Senior Vice President, Marketing and Sales - General Application, PTT Global Chemical Public Company Limited

Board Member/Management in Non-Listed Company – The Stock Exchange of Thailand : 7
- Chairman, GC Marketing Solutions (Shanghai) Company Limited
- Chairman, PT GCM Marketing Solutions Indonesia
- Chairman, GC Marketing Solutions Vietnam Company Limited
- Chairman, GCM Polymer Trading DMCC
- Chairman, GC Marketing Solutions Myanmar Company Limited
- Director and Managing Director, GC Marketing Solutions Company Limited
- Executive Committee Member, HMC Polymers Company Limited

Work Experiences (5-year Past Experiences)

3 Feb 2020 - 15 Jun 2024	Director, ENVICCO Limited
31 Oct 2019 - 20 Feb 2024	Director, PL Global Transport Company Limited
31 Oct 2019 - 20 Dec 2023	Director, GC Logistics Solutions Company Limited
1 Mar 2019 - 30 Jun 2022	Senior Vice President under Chief Operating Officer - Downstream Petrochemical Business, PTT Global Chemical Public Company Limited
26 Mar 2019 - 28 Sep 2020	Director, Revolve Group Limited

Relation among Family with Other Directors, Management, Major Shareholders of the Company or Subsidiaries : None

Miss Kornkamol Korpaisarn

- Senior Vice President – Strategy, Business Development and Commercial Excellence

Age: 49 Years
Appointed: 1 January 2024

Education/Training
- Master of Business Administration (MBA), University of California at Berkeley, U.S.A.
- Bachelor of Business Administration (Finance and Banking) (First-Class Honors and Gold Medal - Ananda Mahidol Scholarship for highest GPA), Thammasat University
- Asia Petrochemical Industry Conference, 2012, Malaysian Petrochemicals Association, Malaysia
- The 8th ICIS World Oleochemical Conference, 2011, Australia
- Private Equity Training, Euromoney Training, U.K., 2011
- Leadership Development Program (LDP1 and LDP2), PTT Leadership and Learning Institute (PLLI), PTT Public Company Limited
- Role of the Chairman Program (RCP) Class 58/2024, Subsidiary Governance, Business and Legal Issues for Directors and Executives and Transformative Leadership for Global Enterprise 2022, Director's Legal Liabilities, Ethical Leadership for New Era and High Performing Board & Board Effectiveness 2021 (In-house Programs by GC) and Director Certification Program (DCP) Class 255/2018, Thai Institute of Directors Association (IOD)

Board Member/Management in Listed Company – The Stock Exchange of Thailand : 1
- Senior Vice President, Strategy, Business Development and Commercial Excellence, PTT Global Chemical Public Company Limited

Board Member/Management in Non-Listed Company – The Stock Exchange of Thailand : 7
- Chairman, ENVICCO Limited
- Chairman, Revolve Group Limited
- Chairman, PTT MCC Biochem Company Limited
- Chairman, Solutions Creation Company Limited
- Director, Executive Committee and Risk & Audit Committee, Emery Oleochemicals UK Limited
- Member of the Executive Committee, HMC Polymers Company Limited
- Director, PTT Asahi Chemical Company Limited

Position in Other Organizations/Institutions : None

Work Experiences (5-year Past Experiences)

3 Jan 2024- 30 Sep 2024	Director, Solutions Creation Company Limited
12 Jan 2024 - 30 Jul 2024	Director, HMC Polymers Company Limited
14 Feb 2024 - 16 Jul 2024	Director and Member of the Business Advisory Committee, AGC Vinythai Public Company Limited
1 Feb 2024 - 17 Jun 2024	Director, Revolve Group Limited
16 Jan 2024 - 15 Jun 2024	Director, GC Marketing Solutions Company Limited
14 Nov 2017 - 27 Feb 2024	Director, GC Polyols Company Limited
14 Nov 2017 - 31 Dec 2023	Director and Managing Director, GC Polyols Company Limited
14 Nov 2017 - 31 Dec 2023	Senior Vice President - Value Added Products, PTT Global Chemical Public Company Limited, Secondment as Managing Director, GC Polyols Company Limited.

Relation among Family with Other Directors, Management, Major Shareholders of the Company or Subsidiaries : None

Miss Wanlapa Sophiskhuankhant

- **Senior Vice President – International Finance and Strategy**

Age: 45 Years
Appointed: 1 January 2024

Education/Training
- Master of Engineering (Chemical Engineering), King Mongkut's University of Technology Thonburi
- Bachelor of Engineering (Chemical Engineering), King Mongkut's Institute of Technology Ladkrabang
- Executive Development Program (EDP) Class 23, Thai Listed Company Association (TLCA)
- CFO Orientation, Strategic CFO and CFO Refresher Program, The Stock Exchange of Thailand
- CFO Certification Program, The Federation of Accounting Professions Under The Royal Patronage of His Majesty The King
- Subsidiary Governance Program (SGP) Class 12/2025 and Director Certification Program (DCP) Class 270/2019, Thai Institute of Directors Association (IOD)

Board Member/Management in Listed Company – The Stock Exchange of Thailand : 1
- Senior Vice President, International Finance and Strategy, PTT Global Chemical Public Company Limited

Board Member/Management in Non-Listed Company – The Stock Exchange of Thailand : 7
- Director, Kuraray GC Advanced Materials Company Limited
- Director, Vencorex Holding
- Director and Managing Director, PTTGC International Private Limited
- Director and President, PTTGC International (Netherlands) B.V.
- Chairperson, Vencorex (Thailand) Company Limited
- Member of the Governance Board of Directors and Member of the Finance and Audit Committee, NatureWorks LLC
- Member of the Board of Directors and Executive Committee and Risk & Audit Committee, Emery Oleochemicals UK Limited

Position in Other Organizations/Institutions : 1
- Member of Industrial Advisory Board, Faculty of Engineering, King Mongkut's Institute of Technology Ladkrabang

Work Experiences (5-year Past Experiences)

24 Aug 2015 - 31 Dec 2023	Vice President, Corporate Finance and Accounting, Global Green Chemicals Public Company Limited
2020 - 2022	Director and Managing Director, Thai Fatty Alcohols Company Limited
2018 - 2020	Director, GGC Biochemical Company Limited
2018 - 2020	Director, Thai Eastern Top Seeds Oil Company Limited

Relation among Family with Other Directors, Management, Major Shareholders of the Company or Subsidiaries : None

Mr. Meata Moleechat

- **Acting Senior Vice President – Aromatics**

Age: 58 Years
Appointed: 1 January 2025

Education/Training
- Bachelor of Engineering (Mechanical Engineering), Chiang Mai University
- Leadership Development Program (LDP2), PTT Global Chemical Public Company Limited

Board Member/Management in Listed Company – The Stock Exchange of Thailand : 1
- Acting Senior Vice President, Aromatics, PTT Global Chemical Public Company Limited

Board Member/Management in Non-Listed Company – The Stock Exchange of Thailand : None

Work Experiences (5-year Past Experiences)

1 Oct 2019 - 31 Dec 2024	Vice President, Aromatics Plant I, PTT Global Chemical Public Company Limited

Relation among Family with Other Directors, Management, Major Shareholders of the Company or Subsidiaries : None

Mr. Pichet Phannachet

- Acting Senior Vice President – Utilities

Age: 50 Years
Appointed: 13 May 2024

Education/Training

- Bachelor of Engineering (Chemical Engineering), Mahidol University
- Leadership Development Program (LDP1/2015, LDP 2/2019), PTT Global Chemical Public Company Limited
- Executive Energy Management Program (EEM), Class 2/2018, Ministry of Energy
- Director Certification Program (DCP) Class 369/2024, Thai Institute of Directors Association (IOD)

Board Member/Management in Listed Company – The Stock Exchange of Thailand : 1

- Acting Senior Vice President, Utilities, PTT Global Chemical Public Company Limited

Board Member/Management in Non-Listed Company – The Stock Exchange of Thailand : 1

- Director, Eastern Fluid Transport Company Limited

Work Experiences (5-year Past Experiences)

1 Jan 2022 - 12 May 2024	Vice President - Chemical Movement and Dispatching, PTT Global Chemical Public Company Limited

Relation among Family with Other Directors, Management, Major Shareholders of the Company or Subsidiaries : None

Mr. Kitchai Chalermsuksant

- Acting Senior Vice President – Marketing and Sales – Industry Platforms

Age: 55 Years
Appointed: 1 May 2024

Education/Training

- Bachelor of Science (Chemical Engineering), Chulalongkorn University
- The Mastery of Inspirational Leadership Program III, 2023, GC and Sauce Skills
- GC x INSEAD Global Leadership Acceleration Program, 2022 (G-LAP), (In-house Programs by GC), INSEAD
- Management Acceleration Program, 2018, Duke Corporate Education
- Management Development Program, 2010, The Wharton School, University of Pennsylvania
- Director Certification Program (DCP) Class 372/2024, Thai Institute of Directors Association (IOD)

Board Member/Management in Listed Company – The Stock Exchange of Thailand : 1

- Acting Senior Vice President, Marketing and Sales, Industry Platforms, PTT Global Chemical Public Company Limited

Board Member/Management in Non-Listed Company – The Stock Exchange of Thailand : 3

- Director, ENVICCO Limited
- Director, Dynachisso Thai Company Limited
- Director, GC Marketing Solutions Company Limited

Work Experiences (5-year Past Experiences)

1 May 2023 - 30 Apr 2024	Vice President - Marketing Management, PTT Global Chemical Public Company Limited
1 Nov 2022 - 30 Apr 2023	Vice President - Pricing Excellence, PTT Global Chemical Public Company Limited
1 Sep 2021 - 31 Oct 2022	Vice President - Marketing and Sales, GC-M PTA Company Limited, Acting Vice President - Marketing and Sales, Thai PET Resin Company Limited
1 Jan 2021 - 31 Aug 2021	Vice President - Marketing and Sales, Thai PET Resin Company Limited, Acting Vice President - Marketing and Sales, GC-M PTA Company Limited
1 Jan 2019 - 31 Dec 2020	Vice President - Marketing and Sales, Thai PET Resin Company Limited

Relation among Family with Other Directors, Management, Major Shareholders of the Company or Subsidiaries : None

Mr. Andy Ting

- **Acting Senior Vice President - Specialty and International Business Development**

Age: 59 Years
Appointed: 1 July 2024

Education/Training

- Master of Science (Industrial Administration) (MBA) (Honors), The Tepper School of Business, Carnegie Mellon University
- Master of Science (Chemical Engineering), University of California at Berkeley
- Bachelor of Engineering (Chemical Engineering), The Cooper Union

Board Member/Management in Listed Company – The Stock Exchange of Thailand : 1

- Acting Senior Vice President, Specialty and International Business Development, PTT Global Chemical Public Company Limited

Board Member/Management in Non-Listed Company – The Stock Exchange of Thailand : 5

- Chairman, Vencorex Holding
- Chairman, GC International Corporation
- Director, NatureWorks LLC
- Treasurer, GC America Sustainability Corporation
- Vice President, GC Ventures America Corporation

Work Experiences (5-year Past Experiences)

1 Jul 2019 - 20 Sep 2024	President & Chief Executive Officer, PTTGC Innovation America Corporation
1 Mar 2022 - 30 Jun 2024	Director, Vencorex Holding
25 Mar 2022 - 1 Jun 2024	President & Managing Director, GC International Corporation
1 Jun 2020 - 16 May 2022	Chief Executive Officer, GC Ventures America Corporation
1 Mar 2020 - 26 Jan 2022	Head of Strategic Planning & Portfolio, GC International Corporation

Relation among Family with Other Directors, Management, Major Shareholders of the Company or Subsidiaries : None

Executive Vice President / Senior Vice President Appointed as Executives of GC's Subsidiaries

(As of January 31, 2025)

1. Mr. Kridsada Prasertsuko
Executive Vice President,
Value Added Products
Secondment as Managing Director,
Global Green Chemicals Public Company Limited

2. Mrs. Panida Chinayone
Senior Vice President,
Value Added Products
Secondment as Co-Managing Director,
WHA GC Logistics Company Limited

3. Mr. Kasem Leewongjaroen
Senior Vice President,
Base and Intermediate Chemicals
Secondment as President,
GC-M PTA Company Limited
and Thai PET Resin Company Limited

4. Mr. Sarawuth Nuntavadeepisarn
Senior Vice President,
Center of Excellence
Secondment as Managing Director,
GC Maintenance and Engineering Company Limited

5. Mr. Prakart Buttamart
Senior Vice President,
Center of Excellence
Secondment as Managing Director,
NPC Safety and Environmental Service
Company Limited

6. Miss Kamolwan Wongkolkitsilp
Senior Vice President,
Value Added Products
Secondment as Managing Director,
GC Polyols Company Limited

7. Miss Varanyanan Inthatathon
Acting Senior Vice President,
Base and Intermediate Chemicals
Secondment as Managing Director,
Thai Tank Terminal Limited

Profile of The Person Supervising Accounting (Chief Accountant)
PTT Global Chemical Public Company Limited

Mrs. Ratana Warinpramote

- Vice President-Financial Accounting 1

Age: 55 Years
Appointed: 1 September 2024

Education/Training

- Master of Business Administration, Kasetsart University
- Bachelor of Accounting, University of the Thai Chamber of Commerce
- Navigating AI Governance and ESG Reporting for the Future
- Embracing the ISSB Standard Connecting Sustainability and Financial Reporting
- CFO Conference 2023: Embracing Changes & Unveiling the Path to Business Resilience and Success
- Anti-corruption for Executive Program: Fraud Risk Management in Practice
- Decarbonization Standards & Governance
- Carbon Credit & Market Mechanism
- Financial Reporting Standards Training for PTTGC Group, 2023
- Chief Financial Officer Certification Program

Board Member/Management in Listed Company – The Stock Exchange of Thailand : 1

- Vice President, Financial Accounting I, Finance and Accounting, PTT Global Chemical Public Company Limited

Board Member/Management in Non-Listed Company- The Stock Exchange of Thailand : None

Work Experiences (5-year Past Experiences)

1 Aug 2023 - 31 Aug 2024	Acting Vice President, Financial Accounting I, Finance and Accounting, PTT Global Chemical Public Company Limited
1 Nov 2014 - 31 Jul 2023	Division Manager - Tax Management, Financial Accounting I, Finance and Accounting, PTT Global Chemical Public Company Limited
19 Oct 2011 - 31 Oct 2014	Division Manager - Consolidation Financial Statements, Financial Accounting I, Finance and Accounting, PTT Global Chemical Public Company Limited

Relation among Family with Other Directors, Management, Major Shareholders of the Company or Subsidiaries : None

Attachment 2

Details of Directors of Subsidiaries

List of the Board of Directors in Subsidiaries / Joint Ventures / Affiliates / Others (As of January, 31 2025)

No.	Name - Surname	GC	Subsidiaries						Joint Ventures / Affiliates / Others	
			GGC	GCA Corp	GCA	GC Inter	GCAS	GC BV	PTT	PTTEP
1	Mr. Predee Daochai	▲■								
2	Mr. Thanwa Laohasiriwong	■								
3	Mr. Pakorn Nilprapunt	■								
4	General Nimit Suwannarat	■								
5	Mr. Grisada Boonrach	■								
6	Mr. Somkiat Prajamwong	■								
7	Mr. Surachai Achalaboon	■								
8	Police Colonel Dusadee Aryawuit	■								
9	Mr. Wim Rungwattanajinda	■								
10	Mr. Patchara Anuntasilpa	■								
11	Mrs. Nivadee Jaroensitipun	■							●	
12	Mr. Petai Mudtham	■								
13	Mr. Kongkrapan Intarajang	■							■●	■
14	Mr. Narongsak Jivakanun	■●	▲	▲	▲	▲	▲	▲	●	

Remarks: ▲ = Chairman ■ = Director ● = Executive

Subsidiaries

GGC = Global Green Chemicals Public Company Limited
GCA Corp = PTTGC America Corporation
GCA = PTTGC America LLC
GC Inter = PTTGC International Private Limited
GCAS = GC America Sustainability Corporation
GC BV = PTTGC International (Netherlands) B.V.

Joint Ventures / Affiliates / Others

PTT = PTT Public Company Limited
PTTEP = PTT Exploration and Production Public Company Limited

List of GC's Executives in Subsidiaries / Associates / Joint Ventures / Related Companies (As of January, 31 2025)

No.	Name - Surname	GC	Subsidiaries															Associates / Joint Ventures / Related Companies							
			GGC	GCME	NPC	GCTC	GCEC	GCM	GCP	GCA Corp	GCA	GC Inter	GCAS	GCV	GCVA	GC BV	Vencorex	PTT	GPSC	EOUK	WGCL	PTTAC	HMC	TTT	AVT
1	Mr. Narongsak Jivakanun	■ ●	▲							▲	▲	▲	▲			▲		●							
2	Mr. Toasaporn Boonyapipat	●										■							■				▲	■	■
3	Mr. Saroj Putthammawong	●	■					▲	▲												▲	▲	■		
4	Mr. Pirun Krimwongrut	●																						■	■
5	Mr. Pornsak Mongkoltrirat	●		▲	▲		▲																■		
6	Mr. Thitipong Jurapornsiridee	●				▲			■	■	■	■	■	■	■		■	●		■	■				

Remarks: ▲ = Chairman ■ = Director ● = Executive

Subsidiaries

GGC	=	Global Green Chemicals Public Company Limited
GCME	=	GC Maintenance and Engineering Company Limited
NPC	=	NPC Safety and Environmental Service Company Limited
GCTC	=	GC Treasury Center Company Limited
GCEC	=	GC Estate Company Limited
GCM	=	GC Marketing Solutions Company Limited
GCP	=	GC Polyols Company Limited
GCA Corp	=	PTTGC America Corporation
GCA	=	PTTGC America LLC
GC Inter	=	PTTGC International Private Limited
GCAS	=	GC America Sustainability Corporation
GCV	=	GC Ventures Company Limited
GCVA	=	GC Ventures America Corporation
GC BV	=	PTTGC International (Netherlands) B.V.
Vencorex	=	Vencorex Holding

Associates / Joint Ventures

EOUK	=	Emery Oleochemicals UK Limited
WGCL	=	WHA GC Logistics Company Limited
PTTAC	=	PTT Asahi Chemical Company Limited
HMC	=	HMC Polymers Company Limited
TTT	=	Thai Tank Terminal Limited
AVT	=	AGC Vinythai Public Company Limited

Related Companies

PTT	=	PTT Public Company Limited
GPSC	=	Global Power Synergy Public Company Limited

List of Directors in Subsidiaries wholly 100% owned by GC (As of January 31, 2025)

1. Solution Creation Company Limited

	List of Directors	Position
1	Miss Kornkamol Korpaisarn	Chairman
2	Miss Narumon Chokdamrongsuk	Director
3	Assoc. Prof. Dr. Singh Intrachooto	Director
4	Mr. Pirat Sirikwanchai	Director
5	Mr. Airin Rattanaiyathikul	Director / Managing Director

2. GC Maintenance and Engineering Company Limited

	List of Directors	Position
1	Mr. Pornsak Mongkoltrirat	Chairman
2	Mr. Pukpong Wungrattanasopon	Director
3	Mr. Sarawuth Nuntavadeepisarn	Director / Managing Director

3. NPC Safety and Environmental Service Company Limited

	List of Directors	Position
1	Mr. Pornsak Mongkoltrirat	Chairman
2	Mr. Ratchada Sawasdirak	Director
3	Mr. Sakesiri Piyavej	Director
4	Mr. Prakart Buttamart	Director / Managing Director

4. GC Treasury Center Company Limited

	List of Directors	Position
1	Mr. Thitipong Jurapornsiridee	Chairman
2	Mr. Siridech Kumvongdee	Director
3	Miss Kanoknun Buranapunsri	Director
4	Mr. Chakrid Nondakovit	Director / Managing Director

5. GC Estate Company Limited

	List of Directors	Position
1	Mr. Pornsak Mongkoltrirat	Chairman
2	Mr. Anutin Chuaypen	Director
3	Mr. Rachean Chanthaweekul	Director
4	Mrs. Sunutta Sukthai	Director / Managing Director

6. GC Marketing Solutions Company Limited

	List of Directors	Position
1	Mr. Saroj Putthammawong	Chairman
2	Mr. Kitchai Chalermsuksant	Director
3	Mr. Thitipol Artsanchorn	Director / Managing Director

7. PTTGC America Corporation

	List of Directors	Position
1	Mr. Narongsak Jivakanun	Chairman
2	Mr. Siridech Kumvongdee	Director
3	Mr. Thitipong Jurapornsiridee	Director
4	Mrs. Chananchida Wiboonkanarak	Director
5	Mr. Panod Awaiwanond	Director / Managing Director

8. PTTGC International Private Limited

	List of Directors	Position
1	Mr. Narongsak Jivakanun	Chairman
2	Mr. Toasaporn Boonyapipat	Director
3	Mr. Thitipong Jurapornsiridee	Director
4	Mrs. Chananchida Wiboonkanarak	Director
5	Mrs. Tanunporn Tangpithakkul	Resident Director
6	Miss Wanlapa Sophiskhuankhant	Director / Managing Director

9. GC Ventures Company Limited

	List of Directors	Position
1	Mrs. Chananchida Wiboonkanarak	Chairman
2	Mr. Thitipong Jurapornsiridee	Director
3	Mr. Kamel Ramdani	Director / Managing Director


Revive Fiber

Attachment 3

Details of the Heads of the Internal Audit and Compliance Units

Head of Internal Audit and Head of Corporate Compliance

Head of Internal Audit

The Committee resolved at the Audit Committee Meeting (special meeting) No. 1/2023 convened on September 17, 2023, to appoint Mr. Chatchawalit Dhammasaroj as Senior Vice President, Internal Audit, effective January 1, 2024, to be responsible for evaluating and enhancing internal control effectiveness, supervising the operations of the internal audit function to be in accordance with the objectives and Global Internal Audit Standards, providing objective and independent advisory on the Company's operations, and reporting directly to the Audit Committee.

Name – Surname	**Mr. Chatchawalit Dhammasaroj** **Senior Vice President – Internal Audit**
Age	57 Years
Appointed	1 January 2024
Education	• Master of Business Administration, Chulalongkorn University • Master of Science (Electrical Engineering), Virginia Polytechnic Institute and State University (VPI&SU) • Bachelor of Science (Electrical Engineering), Virginia Polytechnic Institute and State University (VPI&SU)
Training	• Advanced People Management (APM) Class 43, Personnel Management Association of Thailand (PMAT) • Advanced Certificate Course in Public Administration and Law for Executives, Class 14, King Prajadhipok's Institute • GC X INSEAD Global Leadership Acceleration Program, 2022 (G-LAP) (In-house Programs by GC and INSEAD) • Leadership Development Program (LDP1/2016 and LDP2/2017) (In-house Programs by GC), and PacRim Group • Advanced Audit Committee Program (AACP) Class 51/2024 and Director Certification Program (DCP) Class 265/2018, Thai Institute of Directors Association (IOD)

Board Member / Management in Listed Company – The Stock Exchange of Thailand : 1

- Senior Vice President, Internal Audit, PTT Global Chemical Public Company Limited

Position in Other Organizations / Institutions : 1

- Director and Treasure, Vibul Aryuravej Foundation

Work Experiences (5-year past experiences)

16 Jul 2022 - 31 Dec 2023	Vice President - HR Business Partner, PTT Global Chemical Public Company Limited
1 May 2021 - 15 Jul 2022	Vice President - HR Management, PTT Global Chemical Public Company Limited
16 Apr 2019 - 30 Apr 2021	Vice President - HR Operation and Services, PTT Global Chemical Public Company Limited

Relation among Family with Other Directors, Management, Major Shareholders of the Company or Subsidiaries : None

Head of Corporate Compliance

The Committee has appointed Miss Darawadee Denpaibul as Acting Vice President of Corporate Governance, effective February 16, 2024. The responsibilities include overseeing corporate compliance, promoting corporate governance in business practices, and ensuring that the Executives and employees of GC Group comply with laws, rules, and regulations in countries where GC operates.

Name – Surname **Miss Darawadee Denpaibul**
Acting Vice President – Corporate Governance

Age 50 Years
Appointed 16 February 2024
Education
- Master of Law (LLM.), Case Western Reserve University, School of Law, Cleveland, OH, U.S.A.
- Bachelor of Law (LLB), Thammasat University, Faculty of Law

Training
- Refreshment Training Program (Class 19), Company Secretary Program (CSP 149/2024), and Effective Minutes Taking (57/2024) at Thai Institute of Directors (IOD)
- Fraud 2023 organized by Federation of Accounting Professions under the Royal Patronage of His Majesty the King
- Integrated Enterprise Risk Management 2023 organized by PWC Thailand
- Anti-Corruption for executive program 2023 organized by PTT Global Chemical Public Company Limited
- Segregation of Duties 2022 organized by PTT Global Chemical Public Company Limited
- Three Lines Model 2022 organized by PTT Global Chemical Public Company Limited
- dEXI SPARK- Data Science & Engineering 2021 organized by PTT Global Chemical Public Company Limited
- Ethical Leadership: Turning Ethics into Action 2021 organized by PTT Global Chemical Public Company Limited
- GC Compliance for management 2021 organized by PTT Global Chemical Public Company Limited
- GCMS Lead Assessor, GCMS Assessment, Scoring, and Report, and Writing, and GCMS Principles and Criteria Group 2, 2021 organized by PTT Global Chemical Public Company Limited
- CG Role Model Focus on Action Group 5, 2019 organized by PTT Global Chemical Public Company Limited
- Mandatory Compliance 2019 organized by PTT Global Chemical Public Company Limited
- Roles of Executives vs Internal Control Group 3, 2018 organized by PTT Global Chemical Public Company Limited
- Management Development Program Group 2, 2014 organized by PTT Global Chemical Public Company Limited
- HR for Section Heads (4B1L) 2013 organized by DDI: Development Dimensions International
- Internship in Legal Department 2001, Forest City Enterprise Inc., Cleveland, OH, U.S.A.
- Passed a training course and examination of lawyer's license in 1998 as set by the Lawyer Council of Thailand under the Royal Patronage

Board Member / Management in Listed Company – The Stock Exchange of Thailand : 1
- Acting Vice President, Corporate Governance, PTT Global Chemical Public Company Limited

Board Member / Management in Non-Listed Company – The Stock Exchange of Thailand : None

Work Experiences (5-year past experiences)

1 Aug 2022 - 15 Feb 2024	Division Manager - Governance Risk and Compliance, PTT Global Chemical Public Company Limited
16 Jan 2019 - 31 Jul 2022	Division Manager - Subsidiary Governance and Policy, PTT Global Chemical Public Company Limited
1 Jun 2014 -15 Jan 2019	Division Manager - Subsidiary Management, PTT Global Chemical Public Company Limited

Relation among Family with Other Directors, Management, Major Shareholders of the Company or Subsidiaries : None

Attachment 4

Assets Used in Business Operations and Details of Asset Valuations

1. Property, Plant, and Equipment

As at December 31, 2024, the net book value of GC's and subsidiaries' operating fixed assets less accumulated depreciation and allowance for impairment was Baht 267,769 million, respectively. The total fixed assets shown in the consolidated financial statements are GC's and subsidiaries' owned assets.

(Unit: Million Baht)

No.	Item	Ownership	Book Value Dec 31, 2024	Obligation
1	Land and land improvement	GC and subsidiaries	15,697	42
2	Plant, machinery, equipment, and factory tools	GC and subsidiaries	213,278	6,953
3	Buildings and buildings improvement	GC and subsidiaries	17,693	1,765
4	Furniture, fixtures, and equipment	GC and subsidiaries	1,139	3
5	Vehicles	GC and subsidiaries	62	-
6	Assets under construction	GC and subsidiaries	19,900	-
Total			**267,769**	**8,763**

2. Investment Properties

(Unit: Million Baht)

No.	Item	Ownership	Book Value Dec 31, 2024
1	Land	GC and subsidiaries	6,198
2	Buildings and buildings improvement	GC and subsidiaries	36
3	Investment property under construction	GC and subsidiaries	3
Total			**6,237**

3. Rights of Use

As at December 31, 2024, GC and its subsidiaries' right-of-use assets less accumulated depreciation and allowance for impairment was Baht 28,105 million in net value, as detailed below.

(Unit: Million Baht)

No.	Item	Ownership	Book Value Dec 31, 2024	Remaining Lease Period
1	Land and land improvement	Long-term lease	11,788	1-86 Years
2	Plant, machinery, equipment, and factory tools	Long-term lease	14,185	1-16 Years
3	Buildings and buildings improvement	Long-term lease	1,328	1-73 Years
4	Furniture, fixtures, and equipment	Long-term lease	181	1-4 Years
5	Vehicles	Long-term lease	623	1-9 Years
Total			**28,105**	

Details of Significant Rights of Use

Other Land Leasehold Rights

Land Lease Agreements with PTT

1. A land lease agreement for the construction of a jetty and a seaside tank farm for liquid chemicals in Map Ta Phut Sub-district, Rayong, with a term of 22 years and 4 days from December 28, 2014 to December 31, 2037, consisting of:
   - The rental rate of a 8-2-70.90 rai land parcel to which PTT has gained the right through expropriation by the Treasury Department.
   - The rental rate of a 67-2-52.90 rai land parcel owned by PTT.
2. A land lease agreement for a parcel of land of 5 rai, 3 ngan, and 56.73 square wah, with a term of 17 years from January 1, 2021 to December 31, 2037.
3. A land lease agreement for a portion of land in PTT Gas Separation Plant for a power station with a total area of 2 ngan and 50 square wah, with a term of 3 years from January 1, 2025 to December 31, 2027.
4. An agreement for use of assets for the installation of underground wiring in PTT Gas Separation Plant with a total area of 2 ngan and 74.5 square wah with a term of 3 years from January 1, 2025 to December 31, 2027.

Lease Agreement and Service Agreement with Energy Complex Company Limited

555/1 Energy Complex Building A

- A lease agreement for a 14,227 sq.m. office space in Lobby A, on Floors 14-18 in Building A, storage and pantry for a term of 3 years from October 1, 2021, to September 30, 2024, consisting of:
  (1) 302 sq.m. office space in Lobby A
  (2) 13,675 sq.m. office space on Floors 14-18
  (3) 135 sq.m. storage space on Floors 14, 16-17
  (4) 65 sq.m. storage space on M Floor in Building F and
  (5) 50 sq.m. pantry

  As of November 1, 2022, the rental of the 715 sq.m. office space on Floor 15 and the 10 sq.m. pantry on Floor 15 was discontinued.

Lease Agreement with the State Railway of Thailand

An area in the Map Ta Phut train station with a total area of 15,900 square meters with a term of 3 years from June 16, 2022 to June 15, 2025.

4. Intangible Assets

The intangible assets of GC and its subsidiaries as at December 31, 2024, consist of:

(Unit: Million Baht)

Intangible Asset	Net book value after accumulated amortization and allowance for impairment	Useful lives
Production license fees	4,473	10-35 Years
Computer software	2,993	3-20 Years
Customer contracts and the related customer relationships	14,334	5-25 Years
Right to use–others	29,751	10-23 Years
Intangible assets under development	832	-
Total	**52,383**	

Details of Significant Intangible Assets

PTT Global Chemical Public Company Limited

Rights to Use Pipe Racks

GC has been granted the right to charge right-of-use fees from users making a request to lay pipes on its pipe racks at the rate specified in the pipe rack agreement. The amount of the right-of-use fee charged to each user will depend on the value of GC's investment and the location where the user is laying pipes.

Electricity Generation Licenses

(1) GC (Branch 2) was granted a license to operate an electricity generation business with a capacity of over 150 megawatts from the Energy Regulatory Commission.

- Installed capacity of 357.230 megawatts (capacity expansion of 35.300 megawatts on June 2, 2021)
- The license is valid for 15 years from December 3, 2009 to December 2, 2024.

(2) GC (Branch 2) was granted a license to operate an electricity sale business from the Energy Regulatory Commission. The license is valid for 15 years from October 19, 2011, to December 2, 2024.

(3) GC (Branch 2) was granted a license to operate an electricity distribution system business from the Energy Regulatory Commission. The license is valid for 15 years from October 19, 2011, to December 2, 2024.

(4) GC (Branch 6) was granted a license to operate an electricity generation business with an installed capacity of over 10 megawatts but not exceeding 150 megawatts from the Energy Regulatory Commission.

- Installed capacity of 98.752 megawatts.
- The first license was valid for 10 years from February 14, 2011, to February 13, 2021.
- The license was renewed (first renewal) for another five years from February 14, 2021, to February 13, 2026. The renewal was approved on January 27, 2021.
- Four specific conditions to operate an electricity business were stipulated (specified in the license).

Thai Tank Terminal Company Limited, A Joint Venture Company

Thai Tank Terminal Company Limited (TTT) has been granted a concession from the Industrial Estate Authority of Thailand to manage and operate a liquid product handling and storage business in Map Ta Phut Industrial Estate in Tambon Map Ta Phut, Amphoe Muang, Rayong. On December 9, 2022, TTT entered into a Public Private Partnership (PPP) with the Industrial Estate Authority of Thailand in a public jetty management project for the handling of liquid products in Map Ta Phut Industrial Estate, Rayong for a period of 30 years from the signature date.

BOI Investment Promotion Certificates

GC and its subsidiaries have been granted investment promotion certificates from the Thailand Board of Investment (BOI), which offer tax privileges such as exemption from import duty on machinery and business taxes on imported machinery and equipment as well as exemption from corporate income taxes on net profit derived from business operation from the date on which income is first generated.

The details of the investment promotion certificates that BOI approved and awarded to GC and its subsidiaries and that were in effect as of December 31, 2024, as given below.

No.	Promoted Project	Date of Issuance	Product and Capacity	Expiration of Corporate Income Tax Privilege	Remark
1	Manufacture of petrochemicals Certificate No. 2266(2)/Or./2554	October 19, 2011	Production of approximately 75,000 tons of butadiene per year, approximately 40,000 tons of butene-1 per year, and approximately 95,000 tons of by-products, namely isobutene, isobutylene, n-Butane, raffinate, C4 acetylene, and C5+; approximately 95,000 tons per year	April 29, 2027	Transferred from PTTCH on October 19, 2011
2	Production of electricity and steam Certificate No. 2267(2)/Or./2554	October 19, 2011	Electricity production capacity of 112.5 megawatts and steam production capacity of 560 tons/hour	February 28, 2025	Transferred from PTTCH on October 19, 2011
3	Manufacture of petrochemicals Certificate No. 1616(2)/2556	May 8, 2013	Production of approximately 137,760 tons of paraxylene per year, approximately 73,800 tons of benzene per year, approximately 46,700 tons of toluene per year, and approximately 21,900 tons of orthoxylene per year	December 22, 2028	
4	Manufacture of chemicals Certificate No. 1623(2)/2556	May 10, 2013	Production of approximately 154,176,000 cubic meters of purified hydrogen per year	January 30, 2030	
5	Manufacture of petrochemicals Certificate No. 1715(2)/2557	June 9, 2014	Production of approximately 55,000 tons of hexene-1 per year and approximately 4,000 tons of heavy polymers per year	May 29, 2031	
6	Manufacture of petrochemicals Certificate No. 2215(2)/2557	September 30, 2014	Production of approximately 400,000 tons of polyethylene (PE) per year	January 7, 2031	
7	Manufacture of petrochemicals Certificate No. 60-1300-0-00-1-0	November 20, 2017	Approximately 558,441 tons of ethylene per year Approximately 269,667 tons of propylene per year By-product consisting of Mixed C4, Pyrolysis Gasoline, Pyrolysis Gas Oil, Pyrolysis Fuel Oil, C9+, Fuel Gas, and scraps and waste from manufacturing.	March 1, 2034	ORP Project

No.	Promoted Project	Date of Issuance	Product and Capacity	Expiration of Corporate Income Tax Privilege	Remark
8	Utilities and basic services Certificate No. 61-0929-0-00-1-0	August 8, 2018	Electricity production from natural gas capacity of 56 megawatts and Steam of 140 tons per hour	February 28, 2030	GTG-J Project
9	Utilities and basic services Certificate No. 61-1336-0-00-1-0	November 15, 2018	Goods handling and marine vessels; oil and petroleum product handling capacity of approximately 3,000,000 tons per year	13 years after income recognition	Jetty 4 Project
10	Research and development Certificate No. 64-0228-1-00-2-0	March 3, 2021	Pilot research and development for the manufacturing of catalysts for various types of polymerization	8 years after income recognition	
11	Research and development Certificate No. 64-0264-1-00-2-0	March 12, 2021	Pilot research and development for the manufacturing of polyethylene products	8 years after income recognition	
12	Manufacture of petrochemicals Certificate No. 64-1078-1-04-1-0	October 14, 2021	Energy efficiency improvement. Production of ethylene, propylene, mixed C4 and pyrolysis gas products	3 years after income recognition	OMP
13	Manufacture of other chemicals Certificate No. 65-1158-0-00-0-2	September 14, 2022	Production of approximately 60,000 tons of purified ethylene oxide per year	December 4, 2028	Previous certificate No. 2384(2)/Or./2557 dated October 31, 2014, transferred from GC Glycol
14	Manufacture of petrochemicals Certificate No. 65-1159-0-00-0-2	September 14, 2022	Approximately 4,297 tons of TEG per year Approximately 830 tons of by-products, namely PEG, per year	October 21, 2030	New TEG Project Previous certificate No. 61-0448-1-18-1-0 dated April 23, 2018, transferred from GC Glycol
15	Manufacture of petrochemicals Certificate No. 65-1154-1-04-1-2	September 14, 2022	Energy efficiency improvement Production of approximately 88,500 tons of polystyrene per year (Operating 24 hours/day: 333 days/year)	3 years after income recognition	Previous certificate No. 65-0327-1-04-1-0, dated March 23, 2022, transferred from GC Styrenics
16	Manufacture of petrochemicals Certificate No. 65-1250-1-05-1-0	October 6, 2022	Machinery adjustment for partial production efficiency improvement. Production of approximately 149,110 tons of propylene per year (Operating 24 hours/day: 360 days/year)	3 years after income recognition	OIP
17	Manufacture of petrochemicals Certificate No. 66-0315-0-00-1-2	March 9, 2023	Production of approximately 301,125 tons of phenol per year, approximately 186,700 tons of acetone per year, and by-products, consisting of approximately 2,285 tons of benzene & dips drag per year, approximately 2,520 tons of heavy aromatics per year, approximately 13,190 tons of heavy residue per year, and approximately 11,620 tons of Alpha-Methylstyrene (AMS) per year.	April 24, 2029	Previous certificate No. 1126(2)/2556, dated January 30, 2013, transferred from PPCL

No.	Promoted Project	Date of Issuance	Product and Capacity	Expiration of Corporate Income Tax Privilege	Remark
18	Manufacture of petrochemicals Certificate No. 66-0316-0-00-1-2	March 9, 2023	Production of approximately 76,650 tons of epoxy resin per year	13 years after income recognition	Previous certificate No. 61-0709-0-00-1-0, dated June 20, 2018, transferred from PPCL
19	Manufacture of petrochemicals Certificate No. 66-0124-0-00-1-2	January 24, 2023	Approximately 228,000 tons of propylene oxide per year By-products consist of: Approximately 678 tons of fuel gas per year Approximately 33,288 tons of fuel oil per year	November 13, 2033	Previous certificate No. 60-0769-0-00-1-0, dated July 13, 2017, transferred from GCO
Vencorex					
20	Manufacture of chemical products for industries Certificate No. 1403(2)/2557	March 28, 2014	Production of approximately 18,000 tons of hexamethylene diisocyanate derivatives (HDI Derivatives) per year	April 6, 2029	
GC Polyols					
21	Manufacture of petrochemicals Certificate No. 60-0770-0-00-1-0	July 13, 2017	Approximately 200,000 tons of polyols per year, consisting of Polyether Polyols (PPG), Polymer Polyols (POP), and Formulated Polyols (PREMIX)	September 28, 2033	
ENVICCO					
22	Manufacture of recycled plastic: rPET (FOOD GRADE) and rHDPE Certificate No. 63-1102-1-00-1-0	June 17, 2020	Production of approximately 35,040 tons of rPET (FOOD GRADE) per year, approximately 16,650 tons of rHDPE, and by-products, consisting of metal scraps, plastic scraps (excluding PET and HDPE), and scraps and waste from manufacturing	13 years after income recognition	
GC-M PTA					
23	Manufacture of purified Terephthalic Acid (PTA) Certificate No. 67-1334-2-04-1-0	June 26, 2024	Production of approximately 511,000 tons of purified Terephthalic Acid (PTA) per year. By-products include scraps and waste from manufacturing.	3 years after income recognition	Previous certificate No. 9023(2)/2556 dated June 19, 2013

Attachment 5

GC Policy and Practices of Corporate Governance and Business Code of Conduct

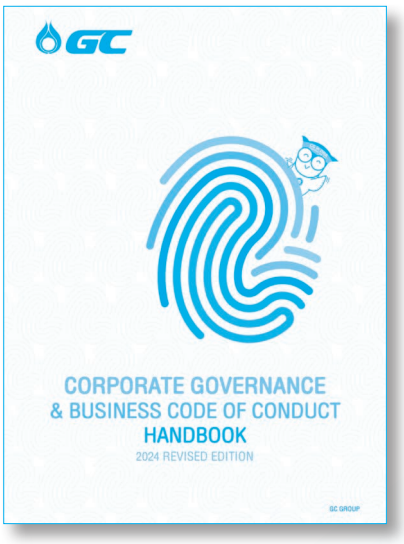
PTT Global Chemical Public Company Limited operates its business responsibly, transparently, accountably, fairly, ethically and with due regard to all of its stakeholders by adhering to the principles of good corporate governance. The Company recognizes that its adherence to the principles of good corporate governance will contribute to the operational and management efficiency of the GC Group. The Company also bolsters its credibility and fosters sustainable growth, not only for the Company itself but also for the society and the nation as a whole in order to achieve its vision “To Be a Leading Chemical Company for Better Living”.

In order to accomplish such goal, the Board of Directors has integrated the Corporate Governance Policy into the Company’s Business Operations Policy and has made the Corporate Governance and Business Code of Conduct Handbook. This handbook has been distributed throughout the Company since its establishment in order for directors, executives and employees, to adhere to code of conduct and all policies when performing their duties.

To express intention to develop and improve our good corporate governance to be rated “Excellence” in accordance with international standards, the Company has reviewed and revised the handbook so as to keep them up-to-date, and to keep them abreast of any changes. This handbook must also be in line with business strategies and corporate governance principles, both domestically and internationally and related regulations. This handbook has been comprehensively and directions communicated to all Directors, Executives and Employees, who have acknowledged and understood it entirely, and are expected to stringently implement the handbook as a guideline for executing their duties. They are also required to inform individuals involved in GC Group’s businesses, namely suppliers, customers and joint-business partners, both local and overseas, of the Corporate Governance and Business Code of Conduct Handbook in order for all concerned parties to understand and comply with these important practices.

In this regard, the full details of the Company’s policies and practices from the Corporate Governance and Business Code of Conduct Handbook can be found on the GC website:

https://www.pttgcgroup.com/en/corporate-governance/corporate-governance/handbook/corporate-governance-and-business-code-of-conduct-handbook



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