

EXECUTION FOR SUCCESS

ANNUAL REPORT 2024

Form 56-1 One Report



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Vision

“To be a leading green chemical company by creating sustainable value”

Mission

1

Customers

Innovate and provide excellent quality products and services for long term partnership

2

Shareholders

Maximize sustainable value for shareholders with transparency and integrity

3

Employees

Foster a work-life balance culture and empower employees as the organization's most valuable resource to achieve collective excellence

4

Society

Show responsibility and commitment to the sustainable development of society and the environment

5

Green Flagship Company of GC Group



Objectives and Goals

Global Green Chemicals Public Company Limited (“the Company” or “GGC”) conducts systematic annual reviews of its vision, mission and business direction, including the evaluation of internal and external factors that may influence strategic plans in both short-term and long-term. These reviews aim to assess the competitiveness of GGC’s current product portfolio, strengthen core capabilities and enhance competitive advantages. Concurrently, GGC focuses on researching and developing high-value products (HVPs) and sustainable products to increase profitability and support long-term sustainable operations. The operational strategy is structured into three key phases: (1) Shaping Portfolio, which focuses on restructuring the bioenergy business into the biochemical business. (2) Transformation, which emphasizes expanding biochemical production capacity and increasing revenue from high-value products and (3) Sustain & Growth Portfolio, which aims to drive sustainable growth and long-term business expansion. These initiatives ensure GGC remains competitive amid challenging circumstances. Additionally, GGC prioritizes strategic risk management, explores business growth opportunities aligned with global megatrends and develops sustainable business operations to establish itself as an internationally recognized company. From 2024 to 2030, GGC strives to become a leader in the oleochemical and green chemical industries, enhancing the value of agricultural product, improving farmers’ livelihoods and achieving sustainable global operations.



Leader in the Regional Oleochemical Industry

GGC strives to establish itself as a domestic and regional leader in the methyl ester and fatty alcohol businesses, ensuring consistent and sustainable profit margins while enhancing growth potential within the oleochemical industry.

Green Flagship Company of GC Group

GGC strives to establish itself as a global leader in environmentally friendly chemical products, excelling in every market where it operates. The business is structured into two core segments: Biochemicals, focused on environmentally friendly biochemical products, and high-value products (HVP) & Sustainable Products, emphasizing value-added and sustainability-driven innovations.

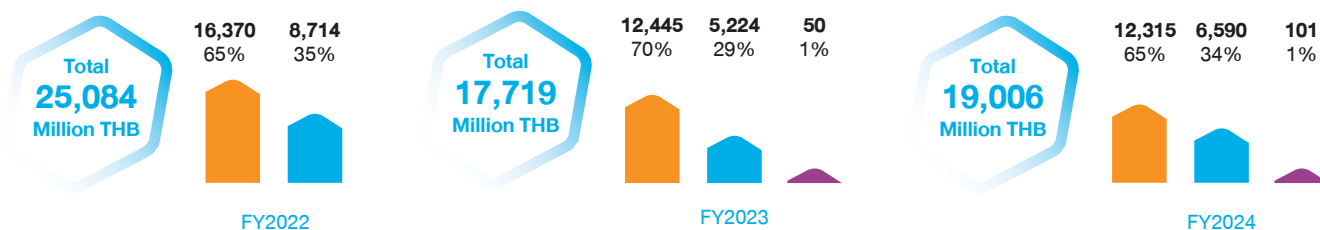


A Company that delivers stable and continuous growth and profits

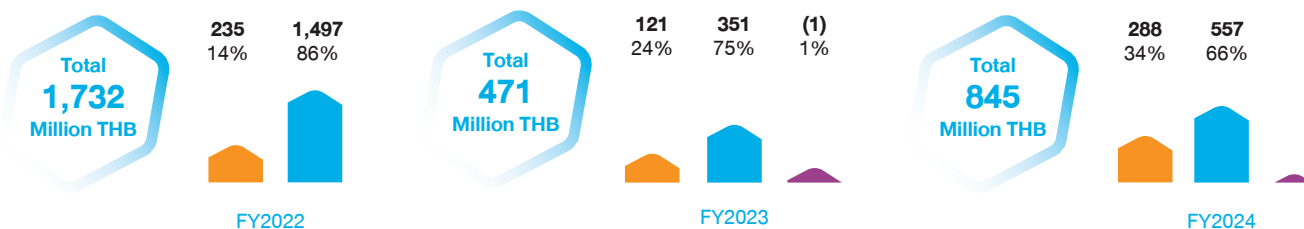
GGC strives to achieve sustained profit growth by implementing a comprehensive business expansion strategy. Key initiatives include optimizing the efficiency of existing production facilities, increasing production capacity through investments in new manufacturing plants, expanding market share and sales, prioritizing high-value products, and diversifying the product portfolio to address evolving market demands.

Key Financial Highlights

Sales Revenue

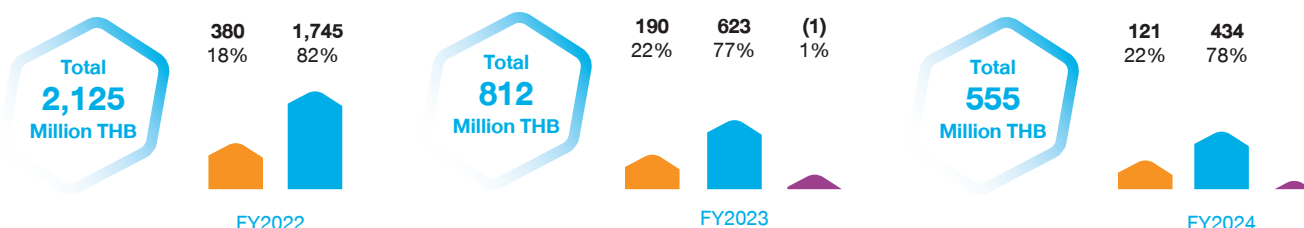


EBITDA⁽¹⁾



Adjusted EBITDA⁽²⁾

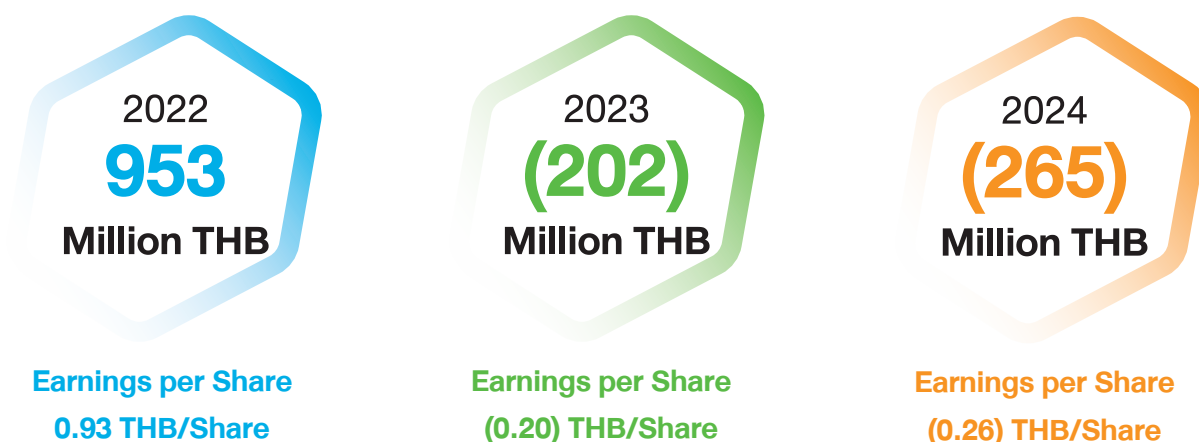
Breakdown by Business Group



■ Methyl Ester
 ■ Fatty Alcohols
 ■ Food & Pharmaceutical

*The Company recorded revenue of Food & Pharmaceutical since 3Q2023.

Net Profit



**Net Profit after extra items from the provision of contingent liabilities from lawsuit and deferred income tax items.

Remarks: 1) EBITDA refers to earnings before interest, tax, depreciation and amortization

(2) Adjusted EBITDA refers to EBITDA excluding impact of inventory of Stock Gain/Loss and NRV.

Statement of Financial Position
(Unit: Million THB)

	FY2022	FY2023	FY2024
Total Assets	13,633	13,681	11,338
Cash, Cash-Equivalent and Short-Term Investment	2,734	3,087	1,057
Other Current Assets	3,803	3,776	4,686
Property, Plants & Equipment	4,072	3,835	3,627
Other Non-Current Assets	3,024	2,984	1,968
Total Liabilities	3,306	3,862	1,823
Interest-Bearing Debts	1,352	2,077	394
Other Liabilities	1,954	1,785	1,429
Total Equity	10,327	9,819	9,515

Key Financial Ratio

	FY2022	FY2023	FY2024
Current Ratio (times)	3.3	3.5	4.2
EBITDA to Sales Revenue (%)	6.9	2.7	4.4
Net Profit to Sales Revenue (%)	3.8	(1.1)	(1.4)
Return on Total Assets (%)	7.8	(0.5)	2.1
Return on Equity (%)	9.4	(2.0)	(2.7)
Debt to Equity (times)	0.3	0.4	0.2
Interest-Bearing Debt to Equity (times)	0.1	0.2	0.0
Interest-Bearing Debt to EBITDA (times)	0.8	4.4	0.5

Dividend Paid

Year	Dividend Paid (THB/Share)	Dividend Payout Ratio (%)
2022 ⁽³⁾	0.50	54%
2023 ⁽⁴⁾	0.10	218% ⁽⁵⁾
2024 ⁽⁶⁾	0.10	49% ⁽⁷⁾

Remarks: (3) The Board of Directors at its meeting No 2/2023 held on February 10, 2023 has approved the proposal to propose at the 2023 Annual General Meeting of Shareholders to consider and approve on the dividend payment for the year 2022 operating performance of THB 0.50 per share, of which an interim dividend payment of the first 6 months year 2022 (January - June 2022) of THB 0.25 per share was paid on September 6, 2022. The final dividend payment of year 2022 (July - December 2022) of THB 0.25 per share was paid on April 20, 2023.

(4) The Board of Directors at its meeting No 2/2024 held on February 9, 2024 has approved the proposal to propose at the 2024 Annual General Meeting of Shareholders to consider and approve the omission of the dividend payment, since GGC posted the net loss for the period 2023 and acknowledge the interim dividend payment of the first 6 months year 2023 (January - June 2023) of THB 0.10 per share was paid on September 6, 2023.

(5) Calculate from Separate Financial Statements of the first 6 months, ended June 30, 2023.

(6) The Board of Directors at its meeting No 2/2025 held on February 10, 2025 has approved the proposal to propose at the 2025 Annual General Meeting of Shareholders to consider and approve the dividend payment for the year 2024 operating performance of THB 0.10 per share. But the right to receive dividend is subject to the approval of shareholders at the 2025 Annual General Meeting.

(7) Calculate from Separate Financial Statements of FY2024.

Message from the Chairman

Dear Shareholders,

2024 was another year that the world had to face challenges and changes from ongoing events, including a global economic recession, geopolitical conflicts and trade barriers, fluctuations in foreign exchange rates, climate change, the transition to clean energy, sustainability regulations, and changing consumer needs and behaviors, as well as a changing business landscape.

Global Green Chemicals Public Company Limited (GGC) closely monitors and analyzes the impact of external factors and uncertainties on its business. We have set short-term and long-term directions and strategies to mitigate the impact on our overall business in the future. We prioritize strengthening and increasing our competitiveness, continuously improving process efficiency to ensure customer confidence in our products and services, and honing our personnel's effective response to change. In addition, we collaborate with strategic partners in raw material management, marketing and sales, and developing value-added and sustainable products. This enables us to deliver safe, high-quality, and environmentally friendly products to our customers and meet the growing demand for bio-based chemical products.

In 2024, our Company focused on four main strategies in response to the rapidly changing business environment:

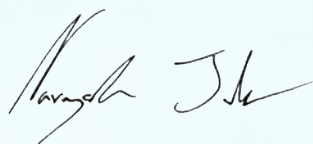
1. Enhancing competitiveness: strengthening our business and competitive capabilities in challenging business conditions. We are enhancing operational efficiency, optimizing existing asset utilization, managing our supply chain, and increasing sales and marketing efficiency. We also carefully control operating costs without compromising safety and process reliability.
2. Growth in green business: reviewing and adjusting our business strategies to expand our bio-based chemicals and specialty products portfolio to build long-term business strength. We are cautiously investing in potential projects with good returns and establishing strategy and direction for scaling up to high values and sustainable products.
3. Building business sustainability: driving the organization to achieve sustainable business strategies encompassing economic, social, and environmental dimensions. This will instill confidence in our sustainable growth and enhance the value and standards of our business operations for national and international recognition. We are integrating sustainability into all facets of our operations and business growth.
4. Strengthening organizational foundations: focusing on enhancing financial management, improving organizational structure, good corporate governance, and innovation.

The Company is committed to driving the organization forward as a leader in environmentally friendly chemical products, emphasizing sustainable business practices. We are expanding the production capacity of fatty alcohol ethoxylate through our joint venture, Thai Ethoxylate Company Limited, and further developing oleochemical products into higher-value products, enhancing competitiveness, and meeting the growing demand for bio-based chemical products, with commercial operations already commencing in the fourth quarter of 2024. Furthermore, the Company is developing bio-based transformer oil from palm oil that is safe and environmentally friendly, aligning with Thailand's government initiatives—the holistic economic development approach focused on Bio-Economy, Circular Economy, and Green Economy (BCG Model) and the New S-Curve in bio-based chemical products. In addition, the Company is implementing the Sustainable Palm Oil Production and Procurement Project for Climate Mitigation and Adaptation Project (SPOPP CLIMA), building upon the success of certifying individual farmers under the Roundtable on Sustainable Palm Oil (RSPO) standard and aiming to uplift it to low-carbon palm oil production.

“We are committed and strictly adhere to sustainable development practices to address the challenging global situation while creating business growth opportunities to achieve our long-term goals.”

As a global sustainability leader, we have integrated sustainability into the foundation of our business operations. We aim to achieve net-zero greenhouse gas emissions by 2050, reducing Scope 1 and 2 emissions by 20% by 2030 and Scope 3 emissions by 50% by 2050. These goals represent opportunities for our Company to grow in the green business in line with global trends. Our business operations are emphasized to balancing environmental, social, and governance factors under the Environmental, Social, and Governance (ESG) framework for sustainable organizational development. As a result, our Company has been recognized and selected as an S&P Global Yearbook Member 2024 for the second consecutive year. We have also received B (Management Level) rating for climate change management from the Carbon Disclosure Project (CDP), a globally recognized sustainability assessment institution with credible disclosure standards. Additionally, we were awarded a Gold level rating from EcoVadis in the basic chemical manufacturing industry, reflecting our commitment to sustainable business practices throughout the supply chain. We have also maintained an A- rating for long-term National Rating from Fitch Ratings (Thailand) Ltd. for the second year in a row. Furthermore, our membership has also been recertified in the Collective Action Against Corruption (CAC) for the second time from the Thai Institute of Directors (IOD) and received an “Excellent” rating (5 emblems) for the seventh consecutive year in the IOD’s Corporate Governance Survey 2024. This reflects our commitment to responsible business practices towards society, the environment, and all stakeholders with good corporate governance.

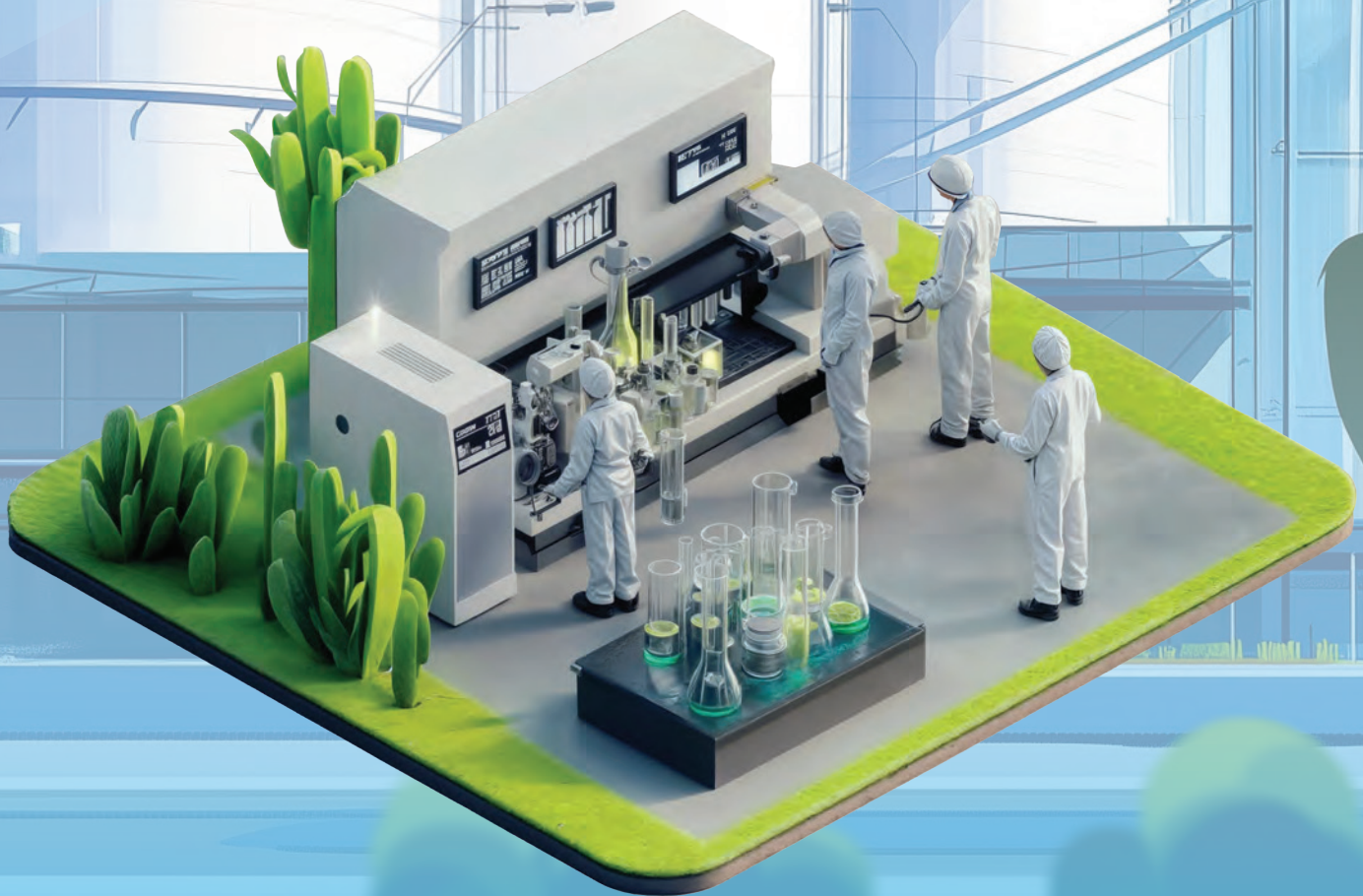
On behalf of the Board of Directors, I would like to thank all shareholders and stakeholders for your trust, confidence in our potential, and continued support of our business operations. We are committed and strictly adhere to sustainable development practices to address the challenging global situation while creating business growth opportunities to achieve our long-term goals. We shall diligently strive to maintain our leadership in environmentally friendly chemical products, ensure stable growth, conduct our business with transparency and accountability, and assure fair treatment to all stakeholders.



Mr. Narongsak Jivakanun
Chairman of the Board of Directors



01 Business Operations and Business



1. Structure and Operation of GGC Group

1.1 Policy and Business Overview

1.1.1 Vision, Mission, business objectives and strategies

Vision

To be a leading green chemical company by creating sustainable value

Mission

- 1) Customers: Innovate and provide excellent quality products and services for long term partnership
- 2) Shareholders: Maximize sustainable value for shareholders with transparency and integrity
- 3) Employees: Foster a work-life balance culture and empower employees as the organization's most valuable resource to achieve collective excellence
- 4) Society: Show responsibility and commitment to the sustainable development of society and the environment
- 5) Green Flagship Company of GC Group

Objectives and Goals

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1) Leader in the Regional Oleochemical Industry

GGC strives to establish itself as a domestic and regional leader in the methyl ester and fatty alcohols businesses, ensuring consistent and sustainable profit margins while enhancing growth potential within the oleochemical industry.

2) Green Flagship Company of GC Group

GGC strives to establish itself as a global leader in environmentally friendly chemical products, excelling in every market where it operates. The business is structured into two core segments: Biochemicals, focused on environmentally friendly biochemical products and high-value products (HVP) & Sustainable Products, emphasizing value-added and sustainability-driven innovations.

3) A Company that delivers stable and continuous growth and profits

GGC strives to achieve sustained profit growth by implementing a comprehensive business expansion strategy. Key initiatives include optimizing the efficiency of existing production facilities, increasing production capacity through investments in new manufacturing plants, expanding market share and sales, prioritizing high-value products, and diversifying the product portfolio to address evolving market demands.

Operating Strategies

GC remains committed to achieving its vision and mission by enhancing competitive capabilities and driving growth in environmentally friendly chemical products, while prioritizing stakeholder value and sustainable operations. Strategies are continuously reviewed and refined to ensure adaptability in a dynamic business landscape. These strategic directions provide a structured framework for setting corporate objectives, with regular monitoring to achieve both short-term and long-term goals.

In 2024, business processes were revised and optimized to improve efficiency, clarity, and prudence across all operations. This included accelerating the execution of corporate strategies to respond effectively to evolving internal and external conditions. The strategic focus is centered on three key areas:

1. Enhance Competitiveness – Business as Usual

To enhance competitiveness in a challenging business environment, GGC strategically realigns its portfolio to reflect market trends and business directions. Simultaneously, efforts are made to reinforce organizational resilience across the supply chain, strengthening competitive capabilities for both current and future operations. These initiatives position GGC for sustainable growth, guided by the following key strategies:

1) Operational Excellence

GGC has enhanced its processes by advancing operational excellence, aiming to achieve greater stability and efficiency in production for maximum productivity. Concurrently, GGC maintains consistent product quality standards while adhering to GC Group's operational excellence framework, with a strong emphasis on safety, environmental responsibility, energy efficiency, and carbon emission reduction. Additionally, existing machinery and equipment are optimized to ensure maximum asset utilization and productivity.

2) Supply Chain Management

GGC has reviewed, evaluated, and refined operating costs to enhance efficiency across the supply chain, encompassing feedstock supply, transportation, processing, marketing, inventory management and risk mitigation related to volatile feedstock and product prices. Additionally, feedstock supply contracts, transportation, and storage of feedstock and products are managed to ensure seamless operations. These initiatives are designed to enhance operational efficiency, maintain cost-effectiveness, and strengthen GGC's competitive advantage.

3) Commercial Excellence

The strategic actions for GGC's core business consist of

- (i) **Strengthening market position and advancing Methyl Ester products toward high-value products (HVP):** Over the long term, GGC aims to enhance product value by transitioning to high-value products (HVPs) to address declining demand and remains committed to establishing sales stability with business partners by ensuring secure product delivery through effective management of feedstock, logistics, efficient process standards, and the promotion of sustainable practices across the supply chain.

Furthermore, GGC fosters collaboration within the GC Group and strengthens its supplier network by partnering with Methyl Ester producers to enhance product and transportation security. This includes purchasing, selling, or bartering with other producers during operational disruptions to ensure uninterrupted product delivery as planned.

- (ii) **Strengthening competitiveness through improved production processes to enhance efficiency and flexibility in the ethanol product line:** In the short-term, efforts focus on optimizing production stability, maintaining competitive pricing, and ensuring cost efficiency, while building customer confidence in product quality and delivery reliability. GGC collaborates with partners, PTT Group, and other associations to support government policies promoting gasohol usage. In the long-term, GGC aims to further enhancing production processes and diversifying the product portfolio to reinforce its competitive edge.

- (iii) **Strengthening market position and advancing oleochemical products toward high-value products (HVP):** GGC leverages portfolio management to target higher-value markets, with the position as the sole domestic producer of fatty alcohols (FA) providing a competitive edge over producers in Malaysia and Indonesia. To enhance profit margins per unit, GGC aims to increase the proportion of domestic sales. Additionally, efforts are underway to expand oleochemical products into downstream businesses through collaboration with GC Group, jointly developing products and marketing strategies tailored to customer needs. GGC also promotes demand for biochemicals derived from feedstock certified by the Roundtable on Sustainable Palm Oil (RSPO) by advocating for sustainable palm oil cultivation domestically in accordance with RSPO standards. Taking a proactive approach, GGC continues to advance its portfolio toward high-value and sustainable products, targeting high-growth markets aligned with long-term strategic objectives.

2. Growth Portfolio

GGC is implementing a business transformation strategy to proactively adapt to the energy transition toward clean energy and the decarbonization trend, which pose both opportunities and challenges to its current operations. As part of this transformation, GGC has identified three core strategies for sustainable growth and future development:

1) BioChemicals Capacity Expansion

GGC recognizes the significant growth potential of the biochemical business, particularly in the Home and Personal Care (HPC) segment. By leveraging the position as the country's sole producer and capitalizing on synergies within the GC group to optimize transportation costs, GGC is strategically expanding production capacity and advancing into specialty product segments to strengthen competitiveness and drive sustainable growth.

2) High Value Products (HVP) and Sustainable Products

GGC is responding to the rising megatrend in health and well-being, along with the growing emphasis on sustainability, by expanding its presence in this promising market segment. As an initial approach, GGC will adopt a trading and tolling model to facilitate effective market entry and establish operational viability. This strategy is guided by an asset-light approach, leveraging low-capital investment to drive agile growth, enhance flexibility, and mitigate risks associated with asset ownership.

3) Opportunities for Synergy with Strategic Partners

GGC is exploring opportunities for related business operations in collaboration with GC Group partners while actively seeking to expand into markets for high-value and sustainable products.

3. Sustainability Development

GGC has advanced its corporate sustainability vision in alignment with the United Nations Sustainable Development Goals (SDGs), integrating economic, social, and environmental dimensions. The objective is to foster confidence in sustainable business growth, create long-term value, and elevate business standards to achieve both national and international recognition. The ESG concept has been implemented across three key aspects:

1) Environment

As a leader in environmentally friendly chemical products, GGC is committed to balancing business growth with sustainable environmental stewardship. Emphasizing proactive measures to address climate change and promote biodiversity conservation, GGC strives to establish itself as a globally recognized sustainability-focused organization. These efforts are reinforced through collaboration across all sectors and are structured into two key areas as follows:

(i) **Decarbonization Pathway:** GGC has established a comprehensive plan and strategic framework to reduce greenhouse gas emissions, targeting a 20% reduction in Scope 1 and Scope 2 emissions by 2030 and achieving Net Zero emissions for these scopes by 2050. Additionally, GGC is committed to reducing Scope 3 emissions by 50% by 2050, aligning with global efforts to combat climate change. These ambitious targets are overseen by the GGC Group's Sustainability Development Committee, chaired by the Managing Director, and are seamlessly integrated into business operations and production processes. The decarbonization strategy is driven by three core initiatives, as outlined below:

- **Efficiency-Driven** Implementation of energy efficiency improvements and adoption of renewable energy.
- **Portfolio-Driven** Investment restructuring, exploration of low-carbon businesses, and development of high-value products to drive revenue growth and reduce greenhouse gas emissions.
- **Compensation-Driven** Exploring new carbon reduction technologies, such as Carbon Capture Utilization (CCU), alongside managing carbon credits through nature-based solutions, carbon market purchases, and community forestation projects in collaboration with governments and other organizations.

Additionally, GGC has conducted a reassessment of its Decarbonization Roadmap to ensure alignment and comprehensiveness, particularly in anticipation of potential future investments in new businesses that may lead to increased carbon dioxide emissions. Furthermore, GGC has implemented enhanced measures to monitor and track carbon dioxide emission reductions using GHG Absolute Emission metrics. These metrics are regularly reviewed and benchmarked against annual targets to ensure progress toward achieving decarbonization goals.

(ii) **Biodiversity**

GGC recognizes the critical importance of ecosystems and biodiversity, as its primary raw materials are agricultural products that rely heavily on natural resources. To address this, biodiversity has been integrated into the company's overall risk assessment and monitoring processes, acknowledging that any impact on biodiversity could have significant consequences for operations. Key risks include reduced agricultural production due to natural disasters and deforestation, which could affect supply chain stability and pose reputational challenges.

2) Social

GGC has developed strategies and plans to transform its Corporate Social Responsibility (CSR) initiatives into Creating Shared Value (CSV) projects and Social Enterprises (SE). These efforts align CSR activities with the Sustainable Development Goals (SDGs) to achieve a balance between business objectives and sustainability. The focus is on initiatives that effectively address socio-environmental challenges in a sustainable and impactful manner.

3) Governance

GGC is dedicated to establishing itself as a recognized leader in sustainability, both nationally and internationally, by adhering to sustainable development principles. As a pioneer in green chemical products, GGC fosters stakeholder trust through excellence, transparency, fairness, innovation, and a robust sustainability management framework aligned with international standards. This framework serves as a guiding principle for the organization, with strong support and engagement from management and employees to advance sustainability objectives.

Furthermore, GGC's growth is propelled by four key enablers, outlined as follows:

1. Financial Management

To align with GGC's strategic direction to ensure effective oversight and capitalize on investment opportunities that drive long-term growth. Furthermore, GGC maintains a strong and attractive financial position to sustain investor confidence and interest.

2. Organization Transformation

GGC is committed to enhancing organizational capabilities and empowering its workforce to align effectively with its strategic direction and objectives. This approach focuses on optimizing workforce management, developing employee potential, and fostering strong engagement to achieve key goals, strengthen competitiveness, and ensure sustainable long-term growth.

3. Innovation

GGC leverages innovation to accelerate progress and drive the development of high-value products (HVP) and sustainable products in accordance with the planned initiatives.

4. Governance Risk & Compliance

GGC places great emphasis on building a strong foundation and preparing the organization to align with future business directions while effectively adapting to changing circumstances. To achieve this, GGC continuously enhances operational efficiency, upholds corporate governance principles, and strengthens internal controls. These efforts ensure compliance with applicable laws, regulations, and standards while fostering transparency and accountability, reinforcing stakeholder trust in GGC's business practices.



1.1.2 Milestone development and awards of 2024

Milestone

April 2024



GGC signs a collaboration agreement with BIG for the development of the 'Carbon Accounting Platform' project.

GGC signed a collaboration agreement with Bangkok Industrial Gas Co., Ltd. (BIG) for the 'Carbon Accounting Platform' project. This partnership focused on developing and implementing an advanced platform to manage greenhouse gas emissions, supported strategic planning, optimized product portfolios, and guided future business directions in line with sustainable development principles. Additionally, the initiative aimed to strengthen GGC's capabilities, build local expertise in sustainability, and promote integration through the active involvement of GGC's subsidiary, Thai Ethoxylate Co., Ltd. (TEX), alongside BIG.



May 2024



GGC and GIZ jointly announce the successful production of sustainable palm oil.

GGC, in collaboration with the German International Cooperation Agency (GIZ) Thailand, Palm oil extraction plant and smallholder farmer groups, jointly announced the successful advancement of sustainable palm oil production and procurement (SPOPP) standards. The project aims to promote and enhance sustainable palm oil production in Thailand, as well as to improve the production capacity of smallholder farmers and support them in obtaining certification under the RSPO standard. To date, more than 1,000 farmers have been RSPO-certified, contributing to the global supply of high-quality palm oil and laying the foundation for future opportunities in the carbon credit market.



July 2024



GGC, in collaboration with the government sector, pioneers the use of 'EnPAT,' a safe transformer oil made from Thai palm oil. This initiative aims to enhance public safety while unlocking opportunities for a new economy under the BCG (Bio-Circular Green) model.

GGC participated in the press conference and opening ceremony of 'EnPAT: Safe Transformer Oil from Thai Palm Oil—Enhancing Public Safety and Unlocking Opportunities for a New Economy.'

This pioneering project, developed entirely by Thai experts, focuses on creating flame-retardant, bio-based transformer oil from Thai palm oil, supported by integrated field testing to drive sustainable commercialization. The innovative oil aligns with the BCG Model and the New S-Curve in Biochemicals, adding value to palm oil, generating income for Thai farmers, and reducing reliance on imports. With high safety standards and rigorous field testing, the environmentally friendly oil supports GGC's commitment to sustainability by reducing greenhouse gas emissions and featuring a lower carbon footprint than conventional oils. This innovation plays a vital role in advancing Thailand toward a Low-Carbon Society and achieving national sustainability goals.

September 2024



GGC and GIZ build on the success of 'Sustainable Palm Oil Production' by advancing toward the production of low-carbon palm oil.

GGC, in collaboration with GIZ Thailand, the Department of Agriculture, palm oil extraction plants, and smallholder farmers from four southern provinces, has advanced its efforts from sustainable palm oil production to low-carbon palm oil production. This initiative, formalized through an MOU for the 'Sustainable Palm Oil Production and

Procurement Project on Climate Mitigation and Adaptation' (SPOPP CLIMA), builds on the success of RSPO certification for smallholder farmers under the original SPOPP project. Funded by GGC and implemented by GIZ with the knowledge to calculate the carbon footprint of fresh fruit bunches (FFBs) and adopt low-carbon plantation practices. These efforts aim to mitigate climate impacts, enhance sustainability, and strengthen the global reputation of Thai palm oil products.

November 2024



GGC partners with PSP to develop EnPAT, a bio-based transformer oil, revolutionizing Thailand's industry and driving it toward a sustainable future.

GGC signed an MOU with P.S.P. Specialties Public Company Limited (PSP), a leader in lubricant solutions, to jointly develop and commercialize EnPAT, a bio-based transformer oil. Made from Thai palm oil, EnPAT is an environmentally friendly product that supports sustainability by reducing reliance on fossil

fuels and meeting the demands of the renewable energy market. The agreement also involves exploring business feasibility, scaling production to an industrial level, and collaborating on marketing and distribution to enhance future competitiveness.

Awards 2024

February 2024



GGC recognized as a Sustainability Leader by S&P Global

GGC was recognized as a global sustainability leader in the S&P Global Corporate Sustainability Assessment (S&P Global CSA) for the first time, achieving an impressive 5th place out of 355 companies in the chemicals sector. This milestone underscored GGC's dedication to operating as a globally recognized sustainable organization, adhering to the ESG framework to balance business operations responsibly. GGC prioritized sustainability across three key dimensions—Environment, Social, and Governance—with a clear goal of achieving Net Zero greenhouse gas emissions by 2050. Guided by its vision, 'TO BE A LEADING GREEN CHEMICAL COMPANY BY CREATING SUSTAINABLE VALUE'.



GGC was recognized in the S&P Global Sustainability Yearbook 2025 for the second consecutive year, based on the S&P Global Corporate Sustainability Assessment (CSA). It is ranked 4th in the chemicals sector, reflecting its commitment to conducting business in accordance with ESG principles (Environmental, Social, and Governance) while driving the organization toward its Net Zero goal by 2050.

March 2024



GGC achieves A- rating from CDP

GGC received A- rating (A- Level), placing it in the Leadership Level for Climate Change management under the globally recognized Carbon Disclosure Project (CDP) framework for 2023. This marked the second consecutive year that GGC achieved this distinction, with over 21,000 companies worldwide participating in the evaluation. Notably, GGC was one of only 81 companies from Thailand included in the CDP assessment. This recognition reinforced GGC's position as a global leader in environmentally friendly chemical products.

GGC received B-rating (Management Level) for climate change management by the Carbon Disclosure Project (CDP) 2024, a globally recognized sustainability assessment organization for the 4th consecutive year that GGC has participated in the evaluation, alongside over 24,800 companies worldwide in this year's assessment. This rating reflects the Company's strong commitment to managing climate-related risks and impacts, reinforcing its position as a global leader in environmentally friendly chemical products and a key driver of sustainable development.

June 2024



GGC wins Gold Medal from EcoVadis

GGC received a Gold Medal for 2024 from EcoVadis with a score of 75, placing GGC in the top 5% of the basic chemical manufacturing industry. This marked the highest score GGC had ever achieved and represented a successful advancement from Silver to Gold status. The award reflected stakeholder confidence, particularly in the areas of 'Environment' and 'Ethics.' EcoVadis, a global leader in sustainability assessment and supply chain rankings, evaluated companies across four dimensions: Environment, Labor and Human Rights, Ethics, and Sustainable Procurement. These assessments were based on international standards, including the UN Global Compact's 10 Principles, International Labor Organization (ILO) Conventions, Global Reporting Initiative (GRI) Standards and ISO 26000.

July 2024



GGC receives CAC Recertification for the second time

GGC received its certificate of recertification for membership in the Thai Private Sector Collective Action Against Corruption (CAC) for the 2nd time at the "CAC Certification Ceremony 2024: Business Beyond CAC - Spotlight on Supply Chain" event, organized by the Thai Private Sector Collective Action Against Corruption (CAC). This achievement reflected GGC's dedication and commitment to sustainable business development, emphasizing its strict adherence to anti-corruption policies and practices. Under its pledge to uphold principles of good corporate governance, integrity, transparency, and accountability, GGC remained steadfast in enforcing rigorous anti-corruption policies to combat bribery and corruption in all forms, reinforcing its role as a committed ally in the fight against corruption.

August 2024



GGC earns Authorized Economic Operator (AEO) Standard Certification and Status Renewal Certificate

GGC was awarded the Authorized Economic Operator (AEO) Standard Certificate and the AEO Status Renewal Certificate by the Director-General of the Customs Department. These prestigious certifications are granted to importers and exporters who meet the stringent criteria of the Authorized Economic Operator (AEO) program for customs clearance procedures. This initiative aims to strengthen and maintain security within the national trade supply chain while ensuring compliance with international standards.



GGC is honored with the Green Star Award and the Gold Star Award.

GGC was honored with the Gold Star Award for the 6th consecutive year and the Green Star Award for the 11th consecutive year by the Industrial Estate Authority of Thailand (IEAT) last year. These prestigious accolades underscored GGC's dedication to environmental governance and its exemplary performance, earning recognition from both the government and the public.

September 2024



GGC wins the ISB Excellence Award at the outstanding level.

GGC received the ISB Excellence Award at the Outstanding Level and the ISB DNA Award for promoting organizational culture under the I-EA-T Sustainable Business (ISB) program by the Industrial Estate Authority of Thailand (IEAT). These accolades highlighted GGC's leadership in the industrial sector and exceptional impact performance, demonstrating its ability to create shared value with stakeholders, drive meaningful outcomes, and uphold its commitment to sustainability.



GGC Obtains the Eco Factory Award.

GGC attained the 2024 Eco Factory Award for both its Rayong and Chonburi facilities, certified by the Federation of Thai Industries and the Industrial Estate Authority of Thailand. This recognition reflects GGC's commitment to environmentally friendly operations, aligning with the five dimensions of an eco-industrial city: physical, economic, social, environmental, and management aspects. Additionally, GGC actively promotes social and economic improvements, driving progress toward sustainable development.

October 2024



GGC is evaluated and awarded an "Excellent" or 5-star rating for its corporate governance reporting.

GGC was evaluated and awarded an "Excellent" or 5-star rating for its corporate governance reporting for the seventh consecutive year, placing it in the Top Quartile among listed companies with a market capitalization of no less than 10 billion baht, according to the 2024 Corporate Governance Report (CGR) survey. This recognition underscored GGC's unwavering commitment to upholding the highest standards of governance, with a strong focus on the interests of all stakeholders, while driving sustainable business growth in alignment with ESG principles.

November 2024



GGC receives the Corporate Nation-Building Award

GGC received the “Corporate Nation-Building Award” at the 5th edition of the event, organized by the Nation-Building Institute. GGC was honored with two prestigious awards: the Thailand Corporate Nation-Building Award and the CNB Sustainability Award. Additionally, GGC was awarded a 5A Certificate for achieving an average score of 90% or higher across six key dimensions. This achievement demonstrates GGC’s focus on environmental management, with well-defined strategies to address impacts and implement corrective actions. GGC continues to uphold the following six award criteria: 1) Innovation, 2) Governance, 3) Alignment with the philosophy of a civilized society, 4) Sustainability, 5) Positive impact, and 6) Dedication and selflessness.

December 2024



GGC secures the CSR-DIW Continuous Award 2024 and the CSR-DIW 2024.

GGC attained the CSR-DIW Continuous Award 2024 for its Rayong facility for the 9th consecutive year and the CSR-DIW Award 2024 for its Chonburi facility from the Department of Industrial Works, Ministry of Industry. These recognitions reflect GGC’s steadfast commitment to corporate social responsibility and its ongoing efforts to develop local communities through sustainable practices.



GGC recognized with the Sustainability Disclosure Award

GGC earned national recognition for its tangible sustainability initiatives and transparent public disclosures. The Sustainability Disclosure Award evaluated organizations on their efforts to share sustainability-related data with the public and stakeholders through comprehensive development reports. This award highlights GGC’s strong focus on sustainable development, fostering growth across economic, social, and environmental dimensions in accordance with the Global Reporting Initiative (GRI) standards.



GGC wins The Best of ESG award at Future Trends Awards 2025

The Company has been honored with “The Best of ESG” award from the Future Trends Awards 2025, reaffirming its role as a model organization in ESG (Environmental, Social, and Governance). GGC continues to conduct business responsibly while creating sustainable value for society and the environment. This award recognizes organizations with outstanding ESG strategies and achievements. The selection was made by a panel of esteemed judges from Future Trends, a leading media platform specializing in business and innovation.

1.1.3 Business overview

GGC operates in the green chemical business, offering a diverse portfolio of core products. These include Methyl Ester (ME), Fatty Alcohols (FA) and by-products such as Refined Glycerine. Additionally, GGC produces Ethylene Oxide (EO) derivatives, including Fatty Alcohol Ethoxylates (FAEO), as well as Ethanol and food ingredients and nutraceutical products.

Methyl Ester, commonly referred to as “B100” is used as a blending component in high-speed diesel fuel. GGC distributes nearly all of its Methyl Ester production to domestic customers, with the capability to export to international markets as well. Customers blend Methyl Ester with base diesel fuel to produce high-speed diesel, which is then distributed to consumers through service stations. GGC’s total nameplate production capacity for Methyl Ester Plant 1 and Plant 2 is 500,000 tons per year.

GGC is the sole domestic producer of fatty alcohols, which serve as a key component in the production of cosmetics, surfactants, and pharmaceutical products. The nameplate production capacity of GGC’s fatty alcohols plant is 100,000 tons per year.

GGC also produces refined glycerine, which is widely used in cosmetics and pharmaceutical products, total nameplate production capacity for refined glycerine Plant 1 and Plant 2 is 51,000 tons per year. In addition, GGC has several byproducts, including crude glycerine, yellow glycerine, potassium sulfate, ME residue, and FA residue.

Methyl Ester, Fatty Alcohols, and Refined Glycerine are produced by GGC and Thai Fatty Alcohols Co., Ltd. (TFA). In April 27, 2022, GGC’s Board of Directors approved the transfer of the entire TFA business, which it wholly owned directly and indirectly, to GGC as part of the business restructuring in support of business efficiency improvement and raise its competitiveness in the FA business. This transfer was legally completed on October 1, 2022.

Thai Ethoxylate Co., Ltd. (TEX), equally owned by GGC and its joint-venture partner BASF (Thai) Co., Ltd., is the sole producer of Fatty Alcohols Ethoxylates (FAEO) in Thailand. FAEO serve as essential raw materials for personal care products, home care products, and are also used in scouring agents during the textile preparation process. Additionally, they function as softeners in the final stages of fiber preparation. TEX is a major domestic customer of GGC’s FA products and operates with a nameplate production capacity of 200,000 tons per year for FAEO.

GGC Biochemical Co., Ltd. (GGC Bio) holds a 50% stake in GGC KTIS Bioindustrial Co., Ltd. (GKBI), a joint venture between GGC Bio, GGC owns a 100% stake in GGC which was officially established on December 18, 2018 to focus on the operation and investment in environmentally friendly chemical products, and KTIS Bioethanol Co., Ltd. (KTBE). GKBI was established on January 11, 2019, to invest in the construction and operation of (1) a sugarcane mill plant, (2) an ethanol plant, (3) A biomass power plant with the option to sell electricity to other operators, and (4) facilities and infrastructure necessary for business operations. The commercial operation of all production processes is expected to commence in the first quarter of 2024.

GKBI produces ethanol (E100) for blending with base gasoline. Its ethanol plant has a nameplate capacity of 600,000 liters per day (equivalent to 186 million liters per year or 147,000 tons per year). The power and steam generation facilities have an installed capacity of 85 megawatts and 475 tons per hour, respectively.

Additionally, GGC successfully completed the transfer of food ingredients and nutraceuticals business operations for Solution Creation Co., Ltd. (SUN) from the GC Group, effective July 1, 2023. It serves as a distributor across four key product categories: sweeteners, food colorings, flavoring agents, and nutraceutical ingredients.



Business Overview



1.1.4 Key Project Updates

GGC reports two types of projects this year: completed projects and projects under construction.

Joint venture in the green chemical industrial estate

(Completed Construction)

The Joint Venture Project within the Environmental Chemical Industrial Estate is a pilot initiative in which the company has participated under Thailand's Bioindustry Promotion Measures for 2018–2027. On December 24, 2018, GGC Biochemical Co., Ltd. (GGC Bio), a subsidiary of GGC, signed a joint venture agreement with KTIS Bioethanol Co., Ltd. (KTBE), a subsidiary of KTIS Public Company Limited (KTIS), to establish the Nakhonsawan Biocomplex Project. Following this agreement, on January 11, 2019, GGC KTIS Bioindustrial Co., Ltd. (GKBI) was officially founded as a joint venture between GGC Bio and KTBE, with an equal shareholding structure of 50:50. The project is located in Takhli District, Nakhon Sawan Province, and encompasses the following components:

- (1) A sugarcane milling and syrup production facility with a crushing capacity of 2.4 million tons per year.
- (2) An ethanol production plant with a nameplate capacity of 186 million liters per year (or 600,000 liters per day), using sugarcane juice or syrup from the milling process as feedstock.
- (3) A biomass power plant and high-pressure steam generation facility with an installed power generation capacity of 85 megawatts and a steam production capacity of 475 tons per hour.

The Board of Directors approved the investment in the project in March 2019, with a total construction investment of 7,500 million baht. The project commenced ethanol production in March 2022, with the first ethanol sales occurring in April 2022, and is expected to begin commercial operations in the first quarter of 2024.

This joint venture extends GGC's biofuel business, creating opportunities in the biochemical sector and sugarcane-based supply chains while also supporting sugarcane farmers in Thailand.

Expansion of Fatty Alcohol Ethoxylate Production Capacity – Thai Ethoxylate Co., Ltd. (TEX) (ICARE Project)

(Completed Construction)

Thai Ethoxylate Co., Ltd. (TEX) was found in 2005 as a joint venture between GGC and BASF (Thai) Co., Ltd., with an equal shareholding structure of 50:50. TEX is the sole producer of fatty alcohol ethoxylates in Thailand, which serve as key feedstock in the production of personal care products, household cleaning products, and various industrial and institutional applications.

Recognizing the growing market demand, GGC initiated a capacity expansion project for fatty alcohol ethoxylate production, increasing the nameplate capacity to 200,000 tons per year. This expansion aims to enhance competitiveness and long-term business growth, with an investment of 1,172 million baht. Construction began in March 2023 and was completed in the fourth quarter of 2024, enabling the project to commence commercial operations.

Utility Provider and Infrastructure for Nakhonsawan Biocomplex Phase 2

(Under Construction)

The utility and infrastructure services project for Nakhonsawan Biocomplex Phase 2 is an extension aimed at enhancing the capacity and value of the joint venture within the Environmental Chemical Industrial Estate. This investment strengthens the readiness of the Nakhonsawan Biocomplex to accommodate future industrial investments and fosters the values for Thailand's agricultural produce utilized in various projects in the complex. By providing comprehensive utility and infrastructure services, future investors can leverage these facilities without the need for separate investment. Additionally, advancing the Nakhonsawan Biocomplex to match the capabilities of other industrial estates and attracting more environmentally friendly chemical industry projects aligns with Thailand's strategy for sustainable development under the Bio-Circular-Green (BCG) Economy Model. This initiative also reinforces GGC's leadership in green chemicals and environmentally responsible business practices.

In 2021, GGC successfully secured a new investor from the United States, NatureWorks LLC, the world's largest producer of polylactic acid (PLA) bioplastics. NatureWorks is jointly owned by PTT Global Chemical Public Company Limited (GC) and Cargill Incorporated (Cargill), each holding a 50:50 share. Under this investment, GGC KTIS Bioindustrial Co., Ltd. (GKBI) is responsible for providing utility and infrastructure support to NatureWorks, including a highly stable power distribution system, steam production and distribution systems, water production and wastewater treatment facilities, as well as a sugar dissolution system, all under a long-term agreement. The project is currently under construction and is expected to commence commercial operations by 2025, with a total investment of 1,430 million baht.

1.2 Nature of Business

1.2.1 Revenue Structure

GGC's sales revenue consists of revenue derived from the sale of methyl ester, fatty alcohols, and refined glycerine, in addition to by-products, including raw glycerine, yellow glycerine, potassium sulfate, methyl ester residue, and fatty alcohols residue. Additionally, the sale of feedstock during certain periods.

Sales revenue by product type

For the Year Ended December 31

Product	2022		2023		2024	
	Sales Revenue (Baht Million)	Percentage of Total Revenue	Sales Revenue (Baht Million)	Percentage of Total Revenue	Sales Revenue (Baht Million)	Percentage of Total Revenue
Methyl Ester	13,927.8	55.5%	11,470.8	64.7%	11,425.5	60.1%
Fatty Alcohols	8,428.4	33.6%	5,024.0	28.4%	6,284.2	33.1%
Refined Glycerine	2,006.9	8.0%	864.1	4.9%	783.6	4.1%
Others ⁽¹⁾	720.9	2.9%	360.2	2.0%	512.5	2.7%
Total	25,084.0	100.0%	17,719.1	100.0%	19,005.8	100.0%

Remark: (1) Mainly raw glycerine, yellow glycerine, potassium sulphate, methyl ester residue, fatty alcohols residue and others.

Below are domestic and international sales revenues.

For the Year Ended December 31

Product	2022		2023		2024	
	Revenue (Baht Million)	Percentage of Total Revenue	Revenue (Baht Million)	Percentage of Total Revenue	Revenue (Baht Million)	Percentage of Total Revenue
Domestic Sale	18,665.8	74.4%	13,538.8	76.4%	14,419.4	75.9%
International Sale						
- China & India	3,647.9	14.5%	3,067.7	17.3%	2,970.9	15.6%
- CLMV Countries ⁽¹⁾	44.5	0.2%	22.4	0.1%	29.3	0.2%
- Other Asian Countries	1,050.4	4.2%	467.0	2.6%	432.6	2.3%
- Others	1,675.4	6.7%	623.3	3.5%	1,153.6	6.1%
Total	25,084.0	100.0%	17,719.1	100.0%	19,005.8	100.0%

Remarks: (1) CLMV countries are Cambodia, Laos, Myanmar and Vietnam.

1.2.2 Product Information

Global and Thai Economic Overview 2024 and Outlook for 2025

The global economy in 2024 experienced a slowdown, with global GDP expanding at a subdued pace. Industrial production in key economies, including the United States, Europe, and Japan, continued to contract. The International Monetary Fund (IMF) projected that global economic growth for the year would remain weak, at approximately 2%. Looking ahead to 2025, growth is expected to stabilize; however, the IMF has warned that the global economy remains vulnerable to multiple risks, including (1) intensifying trade protectionism, (2) a resurgence of inflation driven by geopolitical tensions, and (3) a deeper-than-anticipated downturn in China's real estate sector.

For 2025, global economic growth is forecasted to reach approximately 3%, in line with 2024, amid persistent policy uncertainties. Key supportive factors include advancements in technology and the continuation of accommodative monetary policies. However, trade protectionism remains a critical concern, particularly the United States' tariff increases, which are set to affect approximately 60% of imports from China and 10% – 20% of imports from other countries. Retaliatory measures by affected trading partners could further exacerbate economic challenges, particularly in the latter half of 2025 when these policies are expected to take effect. Additionally, geopolitical tensions may drive up global energy prices, while financial market volatility is likely to persist due to uncertainties surrounding U.S. monetary policy.

The Thai economy in 2024 is projected to grow at a rate of 2.6% – 2.8%, driven primarily by exports, particularly in the electronics sector, which is expected to support overall export growth of 2.5% – 2.9%. Additional growth factors include government measures to stimulate purchasing power and accelerated public budget disbursement. Furthermore, a series of short-term, medium-term, and long-term government policies set to be implemented—including debt relief programs for individual borrowers and SMEs as well as legal amendments allowing 99-year land leases to attract foreign investment are expected to serve as key mechanisms for addressing structural economic challenges and bolstering confidence in Thailand's long-term economic growth.

Looking ahead to 2025, Thailand's economic growth is projected at 2.4% – 2.9%, while exports are expected to expand by 1.5% – 2.5%. Inflation is anticipated to remain low, ranging between 0.8% – 1.2%. The economy will continue to rely heavily on the tourism sector, with the number of foreign visitors projected to rise to 39 million. Additionally, the government is set to roll out further stimulus measures in the first half of the year, including Phases 2 and 3 of economic stimulus programs and the Easy E-Receipt initiative.

However, Thailand's GDP growth remains below its potential due to persistent structural challenges. These include household debt reaching 104% of GDP when including informal debt, an informal economy accounting for nearly half of GDP, and SMEs struggling to adapt and compete against an influx of imported goods in both domestic and export markets. Addressing these structural weaknesses is crucial, with key priorities including formalizing the informal economy, enhancing competitiveness among local businesses, reducing barriers to business operations, attracting foreign investment, implementing systematic household debt solutions, and equipping SMEs with the necessary tools to adapt and grow.

Methyl Ester

(1) Nature of Product

Methyl Ester (Methyl Ester: ME) is a fundamental oleochemical product that supports environmental sustainability. Commonly referred to as Methyl Ester or B100, it can be blended with base diesel fuel to produce high-quality biodiesel that meets the European standard (EN14214) for use in diesel engines. Methyl Ester significantly enhances diesel fuel performance by improving lubricity, optimizing combustion efficiency, and extending engine lifespan. Most importantly, it plays a crucial role in reducing pollution and mitigating environmental impacts, particularly by helping to address the issue of PM 2.5.

ME is derived from the refining of palm oil and subsequent transesterification with catalysts. Blended with diesel at the right proportion, it yields clean, environment-friendly fuel called biodiesel.

Methyl Ester Process



(2) Marketing and Competition

a) Policy and Nature of Market

Methyl Ester (ME) is primarily sold to producers and blenders of high-speed diesel, with most customers being domestic. GGC supplies ME directly to customers under agreements with specified terms. In 2024, Thailand’s biodiesel plants, using ME derived from Fatty Acids approved by the Department of Energy Business, have a combined production capacity of 11,660,184 Liters/day. Details are presented as follows:

No.	Company	Capacity (Liters/day)	Province
1	AI Energy Plc	722,222	Samut Sakhon
2	BBGI Biodiesel Co., Ltd.	1,000,000	Ayutthaya
3	Global Green Chemicals Plc	693,642	Chonburi
		1,234,320	Rayong
4	New Biodiesel Co., Ltd.	1,300,000	Surat Thani
5	PPP Green Complex Co., Ltd.	630,000	Prachuap Khiri Khan
6	Patum Vegetable Oil Co., Ltd.	3,400,000	Pathum Thani
7	Verasuwan Co., Ltd.	200,000	Samut Sakorn
8	Global Bio Power Co., Ltd.	400,000	Rayong
9	Trang Palm Oil Co., Ltd.	150,000	Trand
10	Bio Synergy Co., Ltd.	30,000	Nakhon Ratchasima
11	Energy Absolute Plc	650,000	Prachin Buri
12	Suksomboon Co., Ltd.	450,000	Chonburi
13	Circular Energy Co., Ltd.	600,000	Pathum Thani
14	Matter Oil Synergy Co., Ltd.	200,000	Chomphon
	Total	11,660,184	

Source: Department of Energy Business

b) Market Overview and Outlook

2024 Market Overview

The demand for Methyl Ester (ME) in 2024 is expected to remain stable or show a slight improvement compared to 2023, which recorded approximately 1.39 Million tons/year. This outlook is supported by various government measures to stimulate the economy, such as the promotion of tourism and implementation of energy price reductions. Notably, the retail diesel price has been capped at 30 Baht/liter until April 2024, after which the ceiling will be adjusted to 33 Baht/liter until October 31, 2024. Efforts to maintain diesel prices at 33 Baht/liter are ongoing, utilizing the Oil Fund's financial mechanisms. Additionally, the government has extended the Oil Fund Act B.E. 2562 (2019) for two more years, until September 2026, to support biofuel pricing. However, retail diesel prices may fluctuate in response to global crude oil price trends. Toward the end of 2024, demand for ME is expected to decline due to a government policy change reducing the biodiesel blend from B7 to B5, effective November 21, 2024. This adjustment aims to address shortages of edible vegetable oil and rising prices. Consequently, the overall demand for ME in the market is projected to shrink by approximately 22% compared to levels under the B7 policy.

The supply of Methyl Ester in 2024 is expected to increase compared to 2023 due to production capacity expansions by two existing manufacturers. This expansion adds 1.7 Million liters/day, raising the total installed production capacity in the country from 10.26 million liters per day in 2023 to 11.96 million liters per day, an increase of approximately 17%. Despite the increased capacity, the average industry utilization rate is expected to decline to around 35% – 40%, reflecting the higher supply and decreased demand caused by the reduced Biodiesel Blending Rate Adjustment Policy at the end of the year.

The average price of Methyl Ester in 2024 is projected to rise to 43.70 Baht/kg. an increase of 4.48 Baht/kg. or approximately 11%, compared to 39.22 Baht/kg. in 2023. This price increase aligns with the rising domestic CPO price. 2025

2025 Market Outlook

The demand for Methyl Ester (ME) in 2025 is projected to stable compared to the previous year, expected that the government will maintain the biodiesel blend ratio at B5 during the first quarter of 2025 and subsequently increase up to B7 for the remainder of the year as CPO shortage subsides. Furthermore, B20 is anticipated to remain available as an alternative fuel throughout the year. Government initiatives, including measures to stimulate the economy, promote tourism, and cap diesel prices, are expected to support market stability.

The supply of Methyl Ester in 2025 is expected to remain stable, as no production capacity expansions are planned by domestic producers. Given the moderate growth in demand, the industry's average utilization rate is forecasted to remain steady at approximately 35% – 40%.

Ethanol

(1) Nature of Product

Ethanol (E100) is a product made from sugarcane. It can be blended with base gasoline to produce gasohol, a fuel designed for use in gasoline engines. Ethanol offers significant environmental benefits by reducing pollution and minimizing environmental impacts. Additionally, it supports sugarcane farmers by utilizing this natural raw material as a primary input.

The production of ethanol begins with the extraction of sugarcane juice through a crushing process. The juice is then fermented using microorganisms that convert sugars into alcohol. The resulting ethanol is blended with gasoline to produce various grades of gasohol, depending on the mixing ratio. This clean-burning fuel is suitable for gasoline engines and contributes to reducing air pollution.

Ethanol Process



(2) Market and Competition

a) Policy and Nature of Market

Ethanol products are distributed to gasoline producers and blenders, with the majority of customers being domestic. The company directly supplies these products to its customers under fixed-term sales contracts. As of 2024, Thailand had a total of 27 ethanol production plants, with a combined registered production capacity of 7,105,000 Liters/day, as recorded by the Excise Department.

No.	Company	Capacity (Liters/day)	Main Feedstock	Province
1	KTIS Bioethanol Co., Ltd.	230,000	Molasses	Nakhon Sawan
2	Thai Sugar Ethanol Co., Ltd.	200,000	Molasses	Kanchanaburi
3	Mitr Phol Bio Fuel Co., Ltd.	500,000	Molasses	Chaiyaphum
4	Mitr Phol Bio Fuel Co., Ltd.	230,000	Molasses	Kalasin
5	Mitr Phol Bio Fuel (Kuchinarai) Co., Ltd.	320,000	Molasses	Kalasin
6	KI Ethanol Co., Ltd.	250,000	Molasses	Nakhon Ratchasima
7	BBGI Bioethanol Plc	350,000	Molasses	Khon Kaen
8	Thai Roong Ruang Energy Co., Ltd.	300,000	Molasses	Saraburi
9	Mitr Phol Bio Fuel Co., Ltd.	230,000	Molasses	Suphanburi
10	BBGI Bioethanol Plc	300,000	Molasses	Kanchanaburi
11	GGC KTIS Bioindustrial Co., Ltd.	600,000	Molasses	Nakhon Sawan
12	Maesod Clean Energy Co., Ltd.	230,000	Sugarcane Juice	Tak
13	Rajburi Ethanol Co., Ltd.	150,000	Cassava Chips/ Molasses	Ratchaburi
14	ES Power Corp., Ltd.	150,000	Cassava Chips/ Molasses	Sa Kaeo
15	Thai Alcohol Plc	200,000	Cassava Chips/ Molasses	Nakhon Pathom
16	Thai Agro Energy Plc	350,000	Cassava Chips/ Molasses	Suphan Buri
17	Impress Ethanol Co., Ltd.	200,000	Cassava Chips/ Molasses	Chachoengsao
18	Sapthip Co., Ltd.	200,000	Cassava Chips	Lopburi
19	Thai Ethanol Power Plc	130,000	Fresh Cassava	Khon Kaen
20	Taiping Ethanol Co., Ltd.	300,000	Fresh Cassava	Sa Kaeo

No.	Company	Capacity (Liters/day)	Main Feedstock	Province
21	P.S.C. Starch Products Plc	150,000	Cassava chips	Chon Buri
22	E85 Co., Ltd.	500,000	Fresh Cassava/ Starch Water	Prachin Buri
23	Ubon Bio Ethanol Plc	400,000	Fresh Cassava/ Cassava Chips	Ubon Ratchathani
24	BBGI Bioethanol Plc	150,000	Fresh Cassava/ Cassava Chips	Chachoengsao
25	Up Ventures Co., Ltd.	340,000	Cassava Chips	Nakhon Ratchasima
26	Fakwantip Co., Ltd.	120,000	Fresh Cassava	Prachin Buri
27	Pornvilai International Group Trading Co., Ltd.	25,000	Tapioca	Ayutthaya
Total		7,105,000		

Source: Department of Alternative Energy and Energy Conservation

b) Market Overview and Outlook

2024 Market Overview

The demand for ethanol (E100) in 2024 decreased compared to the previous year, averaging approximately 3.44 Million liters/day, a decline of 0.09 Million liters/day or 3%. This reduction was primarily attributed to persistently high crude oil prices and the termination of the excise tax reduction on gasoline products, which took effect on January 31, 2024. The resulting increase in retail gasohol prices led consumers to switch back to standard gasohol (E10) or opt for public transportation over personal vehicles to reduce expenses. Despite the continued recovery of the tourism sector providing some positive momentum, the overall demand for ethanol in the country fell short of expectations. The government extended the Oil Fund Act B.E. 2562 (2019) for an additional two years, until September 2026, to support biofuel pricing. However, retail fuel prices at service stations may continue to fluctuate based on global crude oil price trends. The market is closely monitoring the progress of new legislation aimed at restructuring domestic oil pricing, which is expected to be finalized by the end of 2024. Ethanol supply in 2024 remained stable, as no production capacity expansions were made by domestic producers. The industry's average utilization rate was estimated at around 45% - 50%.

Ethanol price in 2024 rose to approximately 30.07 Baht/liter, an increase of 0.70 Baht/liter or 2% from 29.37 Baht/liter in 2023. This increase was driven by higher prices of key raw materials used in ethanol production, including sugarcane and molasses, both of which experienced price hikes due to drought conditions, as well as cassava. These factors collectively increased production costs, resulting in a rise in the overall market price of ethanol.

2025 Market Outlook

The demand for ethanol (E100) in 2025 is expected to increase compared to the previous year, reaching approximately 3.49 Million liters/day, an increase of 0.05 Million liters/day or 1% annually. This growth is attributed to positive factors such as government economic stimulus policies and the continued recovery of the tourism sector. At the same time, factors influencing gasohol consumption in Bangkok will require close monitoring. These include policies such as reducing fares for mass public transportation (BTS and MRT trains), implementing congestion fees in certain areas, and the potential adoption of gasohol E20 as the standard grade fuel, which could significantly boost demand.

The ethanol supply in 2025 is expected to remain stable, as no production capacity expansions are anticipated among domestic producers. Consequently, the average utilization rate for ethanol production in the country is projected to remain steady at approximately 45% – 50%.

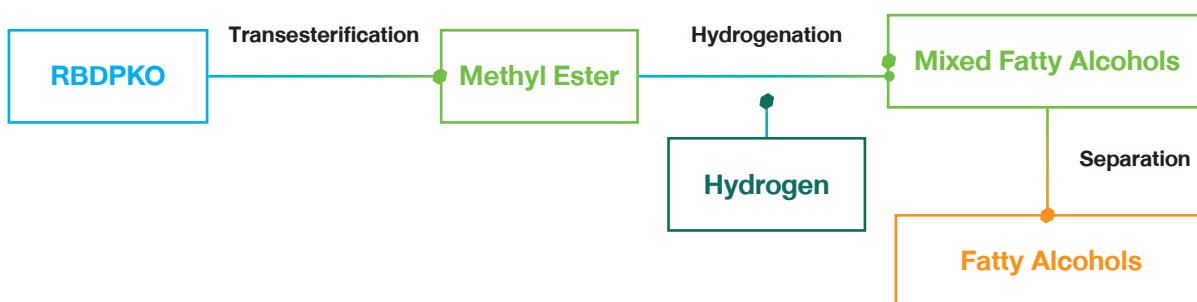
Ethanol price in 2025 is forecasted to decline, driven by lower raw material costs for ethanol production, including an anticipated increase in sugarcane output from the previous year.

Fatty Alcohols (FA)

(1) Nature of Product

Fatty Alcohols (FA) are basic oleochemicals and key feedstock for the personal care industry. They are also mainly used in a wide range of products, including surfactants, plasticizers, solvents, flavorings, fragrances, detergents, foam stabilizers, lubricants, cosmetics, plastic intermediates, shampoos, paints and coatings, parts of textiles and leather products, and other industries.

Fatty Alcohols Process



(2) Market and Competition

a) Policy and Nature of Market

GGC distributes Fatty Alcohols products to both domestic and international customers. Key customers include manufacturers of consumer goods, oleochemical industry operators, traders, and distributors who purchase Fatty Alcohols for resale to their own clients. Domestically, the primary customer is Thai Ethoxylate Co., Ltd. (TEX). Internationally, GGC serves markets across Asia, Europe, South Africa, South America, and other regions.

b) Market Overview and Outlook

2024 Market Overview

The demand for natural Fatty Alcohols in 2024 increased compared to the previous year. This growth was driven by concerns among buyers about the anticipated intensification of trade protectionism policies toward the end of the year, as well as geopolitical conflicts that disrupted logistics. These disruptions included limited container availability and rising freight rates. Additionally, supply constraints arose due to planned production shutdowns for maintenance by major Fatty Alcohols producers in Indonesia, Malaysia, the Philippines, China, and Thailand starting in early 2024. This tightening of the Short-Chain Fatty alcohols market prompted most buyers to build stock in advance. However, demand for Fatty Alcohols from the European Union began to slow in October 2024, following the announcement of a one-year delay in the enforcement of the EU Deforestation Regulation (EUDR). Originally scheduled to take effect on December 30, 2024, the regulation will now be implemented on December 30, 2025.

The overall supply of Fatty Alcohols in 2024 was tighter compared to 2023. Two major producers in Indonesia temporarily halted production in May 2024 due to energy shortages caused by the ongoing construction of natural gas pipelines. In addition, several major producers in Indonesia, Malaysia, the Philippines, China, and Thailand planned maintenance shutdowns throughout the year, particularly between July and November 2024. Furthermore, the production halt by Fatty Acid manufacturers in Malaysia, resulting from a fire incident, continued from May 2024 through the first quarter of 2025. These factors significantly tightened the market for Short-Chain Fatty Alcohols and increased pressure on the overall supply of Fatty Alcohols, especially during the third and fourth quarters of 2024.

The average price of natural Fatty Alcohols in 2024 rose compared to the previous year, increasing from approximately of 1,467 USD/ton to 1,838 USD/ton, a rise of 371 USD/ton or 25%. This price increase was driven by higher Crude Palm Kernel Oil (CPKO) prices, improved overall demand, and tight supply conditions.

2025 Market Outlook

The demand for natural Fatty Alcohols in 2025 is anticipated to improve compared to the previous year. Positive drivers include a projected recovery in the global economy, supported by economic stimulus policies implemented by various governments, particularly in China, where ongoing measures are being introduced. Additionally, a potential easing of geopolitical tensions in Europe and the Middle East could further contribute to market stability. The postponement of the European Union's new regulation, the EU Deforestation Regulation (EUDR), to December 30, 2025, is also expected to encourage buyers to build stock in advance toward the end of the year. Nevertheless, several risks persist. These include planned capacity expansions by major Fatty Alcohols producers seeking to increase their market share, as well as the potential intensification of trade protectionism between China and the United States.

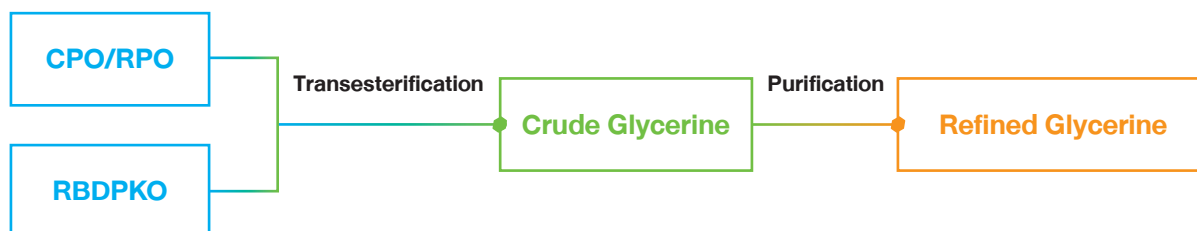
On the supply side, the market in 2025 is projected to expand compared to the previous year. This growth is primarily driven by planned production capacity additions by Fatty Alcohols producers in Indonesia, which are expected to contribute an additional 420,000 tons annually. Moreover, no production halts have been announced by other producers in the market.

Refined Glycerine

(1) Nature of Product

Glycerine is a by-product derived from the production processes of Methyl Ester and Fatty Alcohols. It can be utilized across various industries, including pharmaceuticals, food, personal care, and other industrial applications.

Refined Glycerine Process



(2) Market and Competition

a) Policy and Nature of Market

GGC sells Refined Glycerine to health and personal care product manufacturers and suppliers, both domestic and international, mainly through distributors, while some portions are sold direct to customers such as Multinational Corporations (MNCs) in the medical supply and hygiene industry as well as major medicine producers of South Asia that rely on glycerine as feedstock.

b) Market Overview and Outlook

2024 Market Overview

The demand for Refined Glycerine in 2024 improved compared to the same period in the previous year. This growth was driven by buyers' concerns about the anticipated intensification of trade protectionism policies toward the end of the year, as well as geopolitical conflicts that disrupted logistics, including limited container availability and rising freight rates. These challenges prompted many buyers to build stock in advance. Additionally, demand was bolstered by China's announcement of its largest-ever economic stimulus measures at the end of September 2024. These measures were aimed at revitalizing the real estate sector and boosting the country's overall economy. Consequently, there was an increased demand for glycerine in industries such as home and personal care products, as well as the epichlorohydrin (ECH) market in China. However, demand for Glycerine in the European Union began to slow in October 2024 due to the one-year postponement of the enforcement of the EU Deforestation Regulation (EUDR). Originally scheduled to take effect on December 30, 2024, the regulation has been delayed until December 30, 2025.

The overall supply of Glycerine in 2024 remained relatively high compared to the previous year. This was primarily due to Brazil increasing its biodiesel blending mandate from B12 to B14 as of March 14, 2024, which resulted in a greater volume of Glycerine, a by-product of biodiesel production, entering the market. Meanwhile, Glycerine production from Fatty Alcohols manufacturers experienced a slight decline due to maintenance shutdowns by several oleochemical producers. As a result, the overall Glycerine supply in the market remained at a relatively high level.

2025 Market Outlook

The demand for Glycerine in 2025 is expected to improve compared to the previous year, driven by the anticipated recovery of the global economy. This growth is particularly notable in China, where continuous economic stimulus measures are being implemented, focusing on revitalizing the real estate sector and boosting the overall economy. As a result, the epichlorohydrin (ECH) market, a key segment, is expected to recover, alongside increased demand for Home and Personal Care (HPC) products and food and pharmaceutical applications. This growth is further supported by the stabilization of the global economy and the easing of geopolitical conflicts. Additionally, the postponement of the enforcement of the European Union's EU Deforestation Regulation (EUDR) to December 30, 2025, may prompt buyers to build stock in advance toward the end of 2025. However, heightened trade protectionism measures between China and the United States remain a concern and could temper overall demand growth in the Glycerine market.

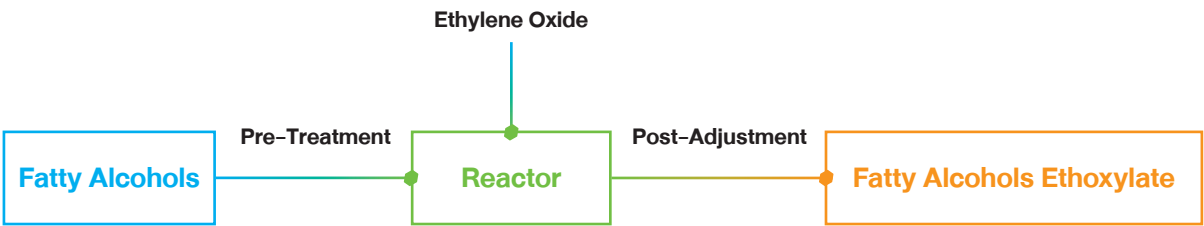
The overall supply of Glycerine in 2025 is forecasted to increase compared to the previous year. This rise is attributed to expanded production capacity by major Fatty Alcohols producers in Indonesia, as well as energy policies in various countries that support higher biodiesel blending rates. For example, Indonesia plans to increase its biodiesel blending mandate from B35 to B40, while Brazil aims to raise its blending mandate from B14 to B15. These changes are expected to result in higher production of Glycerine as a by-product of biodiesel manufacturing.

Fatty Alcohol Ethoxylates

Nature of Product

Fatty Alcohol Ethoxylates (FAEO) are derived from Ethylene Oxide (EO) and Fatty Alcohols. These products are manufactured and distributed by Thai Ethoxylate Co., Ltd. (TEX). FAEO is widely used as a raw material, particularly as nonionic surfactants, in the production of personal care products such as shampoos and household cleaning products including dishwashing liquids and laundry detergents. In addition, FAEO serves as a versatile chemical agent in various industrial and institutional applications. In the textile industry, it is used as an additive in fiber scouring agents during the preparation process and as a softener in the final stages of fiber preparation to enhance softness. In the paper industry, FAEO functions as a wetting and dispersing agent for pulp conditioning. Moreover, it is also employed as a component in the formulation of insecticides and herbicides.

Fatty Alcohols Ethoxylate Process



(2) Market and Competition

a) Policy and Nature of Market

Thai Ethoxylate Co., Ltd. (TEX) is committed to maintaining and increasing its market share for Fatty Alcohol ethoxylates within the domestic market, leveraging its production base in the Home and Personal Care (HPC) product segment. At the same time, the company has expanded distribution to international markets and regions where competition is relatively low due to a lack of local producers. These regions include South Asia, the Middle East, and Africa, among others.

b) Market Overview and Outlook

2024 Market Overview

The demand for Fatty Alcohol Ethoxylates in 2024 declined compared to the previous year. During the first quarter, demand weakened, primarily due to concerns over rising raw material costs and volatility in transportation rates. However, demand began to recover in the second quarter and maintained an upward trajectory in the latter half of the year. This recovery was driven by the announcement of the enforcement of the EU Deforestation Regulation (EUDR), originally scheduled for December 30, 2024, which led buyers to accelerate stockpiling. Later, the enforcement date was postponed to December 30, 2025.

Additionally, annual maintenance shutdowns by major raw material producers contributed to increased raw material costs. Consequently, the average price of Fatty Alcohol Ethoxylates in 2024 rose to 1,570 USD/ton, an increase of 80 USD/ton or 5% compared to the previous year.

2025 Market Outlook

The market for Fatty Alcohol Ethoxylates in 2025 is expected to continue growing, supported by rising demand in the cleaning products and eco-friendly chemicals industries. This growth is particularly pronounced in the Asia-Pacific region, which is projected to achieve an average annual growth rate of 7%–8%. However, external challenges persist, including geopolitical tensions such as conflicts between Israel and Middle Eastern countries, the Ukraine–Russia war, and the ongoing trade disputes between the United States and China, all of which may hinder export activities.

In anticipation of rising demand, Thai Ethoxylate Co., Ltd. (TEX) implemented a capacity expansion project in 2024, increasing its nameplate production capacity for Fatty Alcohol Ethoxylates to 200,000 tons/year. This expansion positions the company to effectively meet growing demand driven by the sustained rise in eco-friendly product trends.



Food Ingredients & Nutraceuticals

(1) Nature of Product

Food ingredients are components or raw materials used in the formulation of food and beverage products. Virtually all food and beverage products available in the market contain food ingredients or additives. Meanwhile, there has been a growing consumer focus on health and wellness, with an increasing preference for products that support better health. Consequently, many manufacturers are incorporating additional nutritional ingredients into their offerings. This trend has significantly expanded the variety of nutritional components and additives included in food and beverage products in today's market.

Nutraceuticals, also known as medical or functional foods, refer to consumable products that serve as both food and medicine, or as quasi-dietary supplements. Unlike regular dietary supplements, nutraceuticals are recognized and utilized by medical institutions and hospitals and are often registered as dietary supplements. Examples of nutraceuticals include probiotics and astaxanthin.

(2) Market and Competition

a) Policy and Nature of Market

GGC distributes food ingredient products sourced from leading international manufacturers. These include natural sweeteners such as stevia, synthetic sweeteners such as sucralose, aspartame, acesulfame K, and erythritol, natural red coloring derived from tomatoes, astaxanthin extracts, plant extracts such as white fungus or snow fungus, and plant-based protein substitutes made from various beans and grains, among others. These products are supplied to domestic customers, primarily leading food and beverage manufacturers in Thailand. GGC operates exclusively as a distributor and marketer for these products within the Thai market.

b) Market Overview and Outlook

2024 Market Overview

Food products in Thailand are classified into four primary groups, marketed both domestically and internationally. These are 1) functional foods and drinks that provide essential nutrients, such as those that boost the immune system and slow the aging process; 2) novel foods, which are innovative products created using entirely new production techniques; 3) medical foods, specifically designed for medical purposes but distinct from drugs or dietary supplements; and 4) organic foods, produced through agricultural practices that are free from chemical contaminants. These product categories have demonstrated consistent growth, reflecting an increasing trend toward health-conscious consumption and a rising demand for immunity-enhancing products. With greater awareness of health and quality of life, consumers are driving demand for products such as probiotics, astaxanthin, plant-based proteins, and sugar substitutes. This trend aligns with the expected growth of health-focused food consumption in the coming years.

The overall market supply from 2024 to 2026 is projected to grow steadily, with domestic demand in the food industry expected to increase by an average of 3.0% – 4.0% per year. This growth is driven by the easing of the COVID-19 pandemic, enabling people to resume normal activities such as shopping and dining out. Additional contributing factors include 1) improved purchasing power fueled by economic recovery, 2) the expansion of distribution channels through modern retail outlets, 3) the development of diverse products, particularly health-oriented options, and 4) a shift toward convenient and speedy consumption as economic activities return to full capacity. This growth has also resulted in increased imports of synthetic sweeteners from China, including sucralose, aspartame, acesulfame K, and erythritol, in alignment with government policies to raise sugar taxes. These taxes have encouraged manufacturers to adopt sugar substitutes to reduce costs. Additionally, global food producers have increasingly embraced alternative sweeteners, such as zero-calorie stevia and those derived from fruits like pomegranate, coconut, and dates. Stevia imports, particularly from China and Malaysia, have risen due to high demand from health-conscious consumers. Health-focused products that boost immunity, such as probiotics, are gaining traction. Leading manufacturers from the United States, Japan, and China are offering probiotics with diverse benefits, including immune support, weight management, and enhanced sleep quality. Similarly, plant-based protein alternatives derived from beans and natural extracts are in high demand, with China emerging as a key supplier. These products are expected to experience continued growth in 2025. Advancements in food and beverage technology have improved the ability to process plant-based raw materials efficiently, facilitating the development of natural and complex products. GGC imports and distributes products made from natural raw materials, which often require sophisticated production processes and operate in a highly competitive market with an increasing number of producers and importers. Establishing partnerships with reputable global manufacturers is essential to ensuring the availability and timely delivery of these products to meet customer demands.

The average price of probiotics in 2024 remained stable compared to 2023, ranging from 50,000 to 65,000 Baht/kg. The price of astaxanthin declined slightly, falling from 75,000 Baht/kg. in 2023 to between 65,000 and 70,000 Baht/kg., due to heightened competition from Chinese producers. Natural coloring products saw no price adjustments, maintaining an average price of 4,500 Baht/kg., while the average price of natural extracts also remained stable at 25,000 Baht/kg. In the general food ingredient category, synthetic sugar substitutes experienced price reductions. Sucralose dropped from 1,400 Baht/kg. in 2023 to 800 Baht/kg. in 2024, while erythritol decreased to 70 Baht/kg. and aspartame to 450 Baht/kg. Conversely, natural sweeteners such as stevia saw a slight price increase in 2024, with an average rise of 5% compared to 2023. This increase was attributed to production and harvest constraints that caused occasional shortages, prompting manufacturers to adjust prices accordingly.

2025 Market Outlook

For the consumer market outlook in the nutraceutical business in 2025, the import of nutraceutical raw materials, particularly organic ingredients, is expected to focus increasingly on health and food safety. The market is projected to grow at an average annual rate of 14% through 2027. This aligns with the rising demand for natural herbal extracts used for weight management, such as extracts from ginger, black pepper, and garlic extracts. Additionally, manufacturers are focusing on combining dietary fibers with probiotics to enhance immunity.

The plant-based protein market is projected to grow at an average annual rate of 11.9% through 2027. While dairy products hold the largest market share at 45%, followed by meat substitutes at 15% and egg substitutes at 10%, the number of individuals with allergies to animal proteins and lactose intolerance continues to rise. Additionally, advancements in food and beverage technology have enhanced the ability to process plant-based raw materials more effectively, catering to the demand for high-protein and high-energy products. Examples include plant-based proteins derived from beans, particularly from China, which are priced more competitively than global counterparts, as well as products in the medical food and dietary supplement segments. These categories, driven by increasing health awareness and a reduction in common illnesses, are expected to grow at an average annual rate of 5.2% through 2027. These products are predominantly distributed through healthcare facilities and hospitals, which represent the highest revenue share. Imports of raw materials for vitamins, minerals, and active ingredients supporting neurological, cognitive, and cardiovascular health, such as Omega-3, antioxidants, and amino acids, are also increasing. Additionally, extracts that address stress and sleep disorders, such as CBD (hemp), L-Theanine (green tea extract), melatonin, and valerianic acid, show a consistent upward trend. Recognizing these growth opportunities, GGC plans to collaborate with government initiatives to promote and develop Thai herbal products, aiming to enhance value for operators throughout the domestic supply chain.

The prices of synthetic sugar substitutes are expected to decline in 2025. Aspartame and sucralose prices are forecasted to drop by 5% - 15% compared to 2024 due to heightened competition among importers and manufacturers. Chinese producers, in particular, have quickly adjusted strategies, offering comparable or superior products to European manufacturers. This, coupled with an increasing number of importers and intensifying price competition, has driven down the prices of certain raw materials to maintain competitiveness. Meanwhile, natural sugar substitutes like stevia are not expected to see price increases in 2025, as manufacturers aim to enhance competitiveness against synthetic sweeteners. The average price for stevia is projected to remain between 2,000 Baht/kg. and 5,000 Baht/kg., consistent with 2024 levels. In contrast, functional ingredients such as astaxanthin extracts, probiotics, and herbal extracts are likely to experience price reductions in 2025. The influx of raw material imports from China has provided more options for customers, leading to an anticipated price decline of 5% - 10% compared to the average prices in 2024.

1.2.3 Procurement of Raw Materials

Crude Palm Oil: CPO

The primary raw material used in the production of Methyl Ester at GGC's facilities is Crude Palm Oil (CPO), exclusively sourced from domestic suppliers. This policy supports local farmers and fosters the growth of related industries within Thailand.

For the production of Fatty Alcohols, GGC primarily uses Crude Palm Kernel Oil (CPKO), extracted from the kernels of palm fruit. While GGC prioritizes sourcing CPKO domestically, occasional imbalances between domestic supply, internal demand, and export volumes may necessitate the import of Refined Crude Palm Kernel Oil from Malaysia and Indonesia.

In addition, the production processes for Methyl Ester and Fatty Alcohols generate Crude Glycerine as a by-product, which is subsequently refined into purified glycerine. Beyond utilizing crude glycerine from its own operations, GGC also procures Crude Glycerine from other Methyl Ester producers to supplement its supply. GGC operates a commercial-scale production facility with a nameplate capacity of 51,000 tons of refined glycerine per year.

2024 Domestic Crude Palm Oil Overview

The production of oil palm bunches in 2024 totaled 18.6 million tons, a slight increase from 18.2 million tons in the previous year. However, the volume that could be processed into Crude Palm Oil (CPO) decreased slightly to 3.27 million tons due to lower oil extraction rates in the first half of the year, influenced by drought conditions. In May and June 2024, Thailand recorded its highest-ever monthly oil palm bunch production, reaching 2.3 – 2.4 Million tons/month. Production then steadily declined, reaching 0.9 – 1.0 Million tons/month by year-end. According to the Office of Agricultural Economics (OAE), the productive area in 2024 increased to 6.34 million rai, up by 0.13 million rai, while Yield/rai remained steady at 2.93 Tons/rai from the previous year.

The severe fluctuations in production throughout the year, particularly the record-high production in May, combined with low oil extraction rates due to drought and harvesting of under-ripe fruit affected by sun exposure, caused purchasing prices for oil palm bunches to plummet to 3.60 – 3.80 Baht/kg. This situation negatively impacted farmers. On May 28, 2024, the Department of Internal Trade (DIT), Ministry of Commerce, issued a directive urging palm oil mills to raise purchasing prices to no less than 4.50 Baht/kg., which was subsequently increased to 4.50 Baht/kg. Additionally, on June 20, 2024, the Office of the Permanent Secretary of the Ministry of Energy issued a letter requesting cooperation from oil traders under Section 7, biodiesel producers, and palm oil mills to purchase biodiesel (B100), Crude Palm Oil, and oil palm bunches at the prices announced by the government. GGC responded positively to these measures, culminating in the signing of a Memorandum of Understanding (MOU) on July 11, 2024, with its partners to purchase CPO and raw materials in line with sustainable development practices. This agreement aimed to raise the purchasing price of palm oil bunches, providing tangible benefits to farmers.

Domestic demand for CPO in 2024 totaled 2.49 million tons, near to 2.48 million tons in the previous year. During the first nine months, demand showed an upward trend compared to the same period in the prior year, supported by the recovery of the economy and key industries such as food manufacturing, tourism,

and biodiesel production. However, domestic CPO prices surged up to 40 – 47 Baht/kg. during in Q4, rising from 32 – 35 Baht/kg. during in the first nine months of this year. This rapid increase in raw material costs put pressure on the food industry, which struggled to absorb the higher input costs. Meanwhile, the biodiesel industry was affected by a reduction in the blending ratio from B7 to B5, effective November 21, 2024, following a resolution by the Energy Policy Administration Committee (EPAC). This adjustment significantly reduced CPO demand in Q4.

CPO exports in 2024 totaled 0.87 million tons, a slight decrease from 0.91 million tons in the previous year, due to reduced domestic CPO surplus. At the beginning of 2024, Thailand's domestic CPO stock levels were lower than in the previous year. By the end of 2024, domestic CPO stock levels stood at 0.20 million tons, down from 0.29 million tons at the end of the previous year

Domestic CPO Production, Consumption, and Stocks (k.Tons)

	2022	2023	2024
Production	3,375	3,328	3,274
Import	1	0	3
Domestic Consumption	2,170	2,484	2,491
- Food, Oleochemical and others	1,251	1,449	1,437
- Biodiesel	919	1,035	1,054
Export	1,031	906	872
Ending Stock	348	287	201

Source: Department of Internal Trade

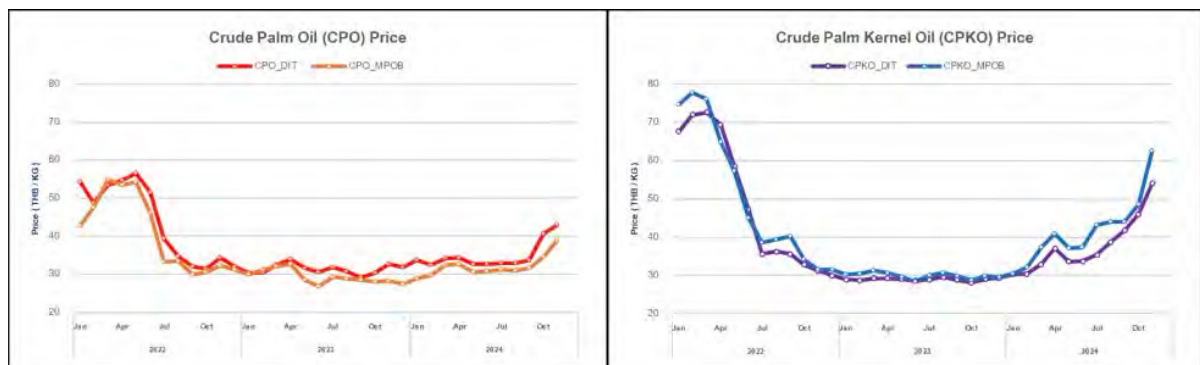
In 2024, the prices of fresh palm fruit, Crude Palm Oil (CPO), and Crude Palm Kernel Oil (CPKO) in Thailand remained higher than the previous year's averages. This increase aligned with the upward trend in global CPO prices, driven by persistent concerns over tight global palm oil supplies in major producing countries like Indonesia and Malaysia. Additional factors included apprehensions about the policies of importing and exporting countries, as well as heightened geopolitical and energy-related tensions resulting from ongoing conflicts and strained international relations.

Key factors influencing global palm oil prices in 2024 include:

- 1) Palm oil production in Indonesia declined due to severe drought caused by the El Niño phenomenon starting in the second half of 2023, combined with insufficient replanting of new oil palms. This resulted in lower yields per hectare and a decrease in overall production. Conversely, global demand for palm oil remained high, leading to a drop in Indonesia's palm oil stock levels to 2.4 – 2.5 million tons in the second half of 2024, marking the lowest level in five years. Similarly, Malaysia's palm oil stock levels were affected by strong global demand, contributing to an overall reduction in global palm oil inventories.
- 2) Additional contributing factors include Indonesia's commitment to increasing the biodiesel blending mandate from B35 to B40 by January 1, 2025, announced in August 2024; the implementation of export tax hikes on palm oil by Indonesia and Malaysia, effective in October and November 2024, respectively; China's major economic stimulus measures announced in late September 2024; and escalating conflicts such as the Russia-Ukraine war and renewed violence in the Middle East in October 2024. These factors collectively drove palm oil prices from 4,000 MYR per ton in September 2024 to 5,300 MYR per ton by December 2024, reflecting heightened concerns over tight supplies of palm oil and competing vegetable oils.

The domestic palm oil market in Thailand experienced a seasonal production decline in 4Q 2024. Both production volumes and domestic stock levels dropped significantly, leading to a rapid increase in domestic palm oil prices. Prices rose from 32 – 35 Baht/kg. (with an average price differential of 1.5 – 3.0 Baht compared to Malaysia) to 40 – 47 Baht/kg. (with an average price differential of 4 – 11 Baht compared to Malaysia) during this period.

- The average price of fresh palm fruit was 6.2 Baht/kg., a 10% year-on-year (YoY) increase, with fluctuations ranging from 4.5 – 8.8 Baht/kg.
- The average price of Crude Palm Oil was 35.5 Baht/kg., a 14% YoY increase, with fluctuations ranging from 31.6 – 47.3 Baht/kg.
- The average price of crude palm kernel oil was 39.3 Baht/kg., a 36% YoY increase, with fluctuations ranging from 29.6 – 61.3 Baht/kg.



2025 Domestic Crude Oil Palm Outlook

GGC anticipates a slight increase in the production volume of fresh palm fruit bunches and Crude Palm Oil (CPO) in 2025. The production of fresh palm fruit bunches is projected to reach 18.9 million tons, or 1% increase compared to the previous year. Similarly, the annual extraction of Crude Palm Oil is estimated at 3.40 million tons, reflecting a 3% year-on-year growth. This expected increase is primarily attributed to the expansion of productive areas, particularly from palm trees planted in 2022 as replacements for rubber plantations, which are now beginning to yield. Additionally, the anticipated mitigation of the El Niño phenomenon, expected to transition to a neutral state by the third quarter of 2024 and subsequently shift to La Niña conditions, is likely to ensure sufficient rainfall to meet the water requirements of oil palm trees. These favorable conditions are projected to result in improved fruit bunch weights and higher oil extraction rates in 2025.

On the demand side, domestic consumption of Crude Palm Oil in 2025 is forecasted to decline to 2.4 million tons, a 4% reduction compared to the previous year. While the consumption of refined palm oil is expected to remain stable despite government economic and tourism stimulus measures, certain consumers and businesses may shift to soybean oil as a cost-effective alternative. In the energy sector, demand is also expected to decrease, as the Ministry of Energy is likely to maintain the biodiesel blend ratio at B5 at least until the end of the first quarter of 2025, in response to the persistently high prices of Crude Palm Oil.

In terms of pricing trends for fresh palm fruit, Crude Palm Oil, and Crude Palm Kernel Oil in the domestic market, GGC anticipates a downward trajectory compared to the fourth quarter of the previous year. However, average prices for the year are expected to show an increase compared to the annual average of the prior year. This outlook aligns with global Crude Palm Oil price trends, which are expected to decline due to several key factors as follows:

1) Increasing Supply Outlook: Supply levels, particularly in Indonesia, are expected to rise (according to assessments by the USDA and Reuters). This growth is attributed to favorable weather conditions that support improved production, following the transition from El Niño to Neutral and subsequently to La Niña conditions, beginning in 3Q2024. This shift is anticipated to alleviate concerns over tight supply conditions.

2) Global Palm Oil Demand Trends: The demand for palm oil in the global market is likely to decline due to its significantly higher prices, making it the most expensive among the major vegetable oils. This price disparity is expected to prompt major importers such as India and China to increase their imports of alternative vegetable oils as substitutes for the higher-priced palm oil.

In addition to these global factors, domestic conditions in Thailand are also expected to influence the market. Higher domestic production levels, combined with reduced local consumption as previously forecasted, are likely to ease tight supply conditions within the country. This is expected to contribute to a downward adjustment in domestic palm oil prices.

Methyl Ester (ME), Fatty Alcohols (FA), and Refined Glycerine Production Overview

GGC has two main plants. ME Plant 1 was founded in 2005 at No. 8, Soi G 12, Pakornsongkrohrt Road, Tambon Map Ta Phut, Amphoe Mueang, Rayong. It produces ME (300,000 Metric tons/year) and Refined Glycerine (31,000 Metric tons/year) in addition to FA (100,000 metric tons/year). Incidentally, GGC's FA plant is the one and only FA producer in Thailand.

ME Plant 2 was founded in 2016 at No. 1/199 Moo 2, Thai Eastern Industrial Estate, Tambon Khao Sok, Amphoe Nong Yai, Chon Buri. This facility produces Methyl Ester and Refined Glycerine, with installed production capacities of 200,000 Metric tons per year and 20,000 Metric tons per year, respectively.

Nameplate Capacity of Plant 1 and Plant 2.

Product	Nameplate Capacity (metric tons/year)		
	Plant 1, Rayong	Plant 2, Chonburi	Output
Methyl Ester	300,000	200,000	500,000
Fatty Alcohols	100,000	-	100,000
Refined Glycerine	31,000	20,000	51,000

GGC's production processes adhere to internationally recognized standards, having achieved certifications such as ISO 9001 for quality management systems, ISO 14001 for environmental management systems, ISO 45001 for occupational health and safety management systems, and ISO 50001 for energy management systems, all certified by the ISO Certification Institute (MASCI). Additionally, GGC's Fatty Alcohol and Refined Glycerine products, widely utilized in the personal care, food, and pharmaceutical industries, are certified for food safety under the Food Safety System Certification 22000 (FSSC 22000). These products also hold Kosher and Halal certifications, ensuring compliance with diverse religious dietary requirements.

GGC demonstrates a steadfast commitment to sustainable business practices by implementing internationally recognized sustainability frameworks. The company is certified under the Roundtable on Sustainable Palm Oil (RSPO) for sustainable palm oil management. Furthermore, it has earned ISO 14064-1:2018 certification for excellence in greenhouse gas reporting and management at an international standard, as awarded by MASCI. GGC has also achieved certifications for its organizational carbon footprint (Carbon Footprint for Organization: CFO) and product carbon footprint labeling (Carbon Footprint of Product: CFP) from the Thailand Greenhouse Gas Management Organization (Public Organization) or TGO. Additional certifications include ISCC EU and ISCC PLUS from the International Sustainability and Carbon Certification (ISCC), acknowledging GGC's robust carbon management and sustainability efforts across the supply chain. As a result, GGC stands as Thailand's first leading oleochemical producer to actively support the agricultural sector, advance resource circularity, and transform resources into cutting-edge industrial applications under globally certified standards. These accomplishments highlight GGC's unwavering dedication to achieving its sustainability objectives with measurable and meaningful impact.



Fatty Alcohols Ethoxylates (FAEO)

The primary feedstocks for FAEO are Fatty Alcohols and Ethylene Oxide. Thai Ethoxylate Co., Ltd. (TEX) receives FA via a pipeline directly connected to GGC's plants and the FAEO production facility.

TEX also imports a portion of its FA requirements and procures Ethylene Oxide from GC Glycol Co., Ltd., a GC affiliate, under a long-term supply agreement. The FAEO plant operated by TEX has nameplate capacity of 200,000 tons/year.

Sugarcane

Sugarcane is the main feedstock for ethanol. To promote agriculture and domestic downstream industries, GGC KTIS Bioindustrial Co., Ltd. (GKBI), buys sugarcane outputs largely within its vicinity.

GKBI's plant has nameplate capacity of 146,750 tons/year.

2024 Sugarcane Overview

In 2024, sugarcane production totaled approximately 82 million tons, reflecting a substantial decrease of 12 million tons, or 13%, compared to the previous year. This decline was primarily driven by the El Niño phenomenon, which brought hot and dry weather conditions, significantly impacting sugarcane yields.

On the demand side, sugarcane usage in 2024 also decreased, particularly within the energy sector, where sugarcane serves as a feedstock for ethanol production. Approximately 57 million tons of sugarcane were used for ethanol production, a reduction of 10 million tons, or 15%, compared to the previous year. This decline was attributed to lower sugarcane yields and higher prices. Additionally, alternative raw materials for ethanol production, such as cassava chips, became increasingly competitive due to their declining prices, resulting in a greater share of cassava chips being utilized for ethanol production.

The average price of sugarcane in 2024 (for the 2023 - 2024 crop year) was 1,384 Baht/ton, representing an increase of 169 Baht/ton, or 14%, compared to the previous year. This price increase was primarily due to the significant reduction in sugarcane supply caused by drought conditions.

2025 Sugarcane Outlook

GGC projects that sugarcane production in Thailand in 2025 will rise to approximately 95 million tons, an increase of 13 million tons, or 16%, compared to 2024. This growth is expected to result from increased rainfall associated with the La Niña phenomenon, which is anticipated to enhance sugarcane yields.

In terms of demand, sugarcane usage for domestic ethanol production in 2025 is forecasted to remain stable to grow slightly, driven by higher gasoline consumption.

The average preliminary sugarcane price in 2025 is expected to decline to 1,160 Baht/ton, a decrease of 224 Baht/ton, or 16%, compared to the previous year. This price reduction is attributed to the projected increase in sugarcane supply.

1.2.4 Business Assets

Key fixed assets of GGC and subsidiaries

As of December 31, 2024, the following items and book values after cumulative depreciation and losses resulting from impairment of their buildings and equipment appeared in GGC's financial statements as detailed below.

Key Permanent Asset	Ownership	Net Book Value as of		
		December 31, 2023 (Baht)	December 31, 2024 (Baht)	Obligation
Plants, machinery, equipment, and plant apparatus	Business-owned	3,285,275,061	3,165,713,282	No obligation
Buildings and building addenda	Business-owned	283,458,122	267,518,967	No obligation
Relandscaping	Business-owned	21,579,748	19,115,895	No obligation
Fixtures and office equipment	Business-owned/Leased assets	10,003,767	10,296,421	No obligation
Vehicles	Business-owned/Leased assets	1,180,606	780,604	No obligation
Assets under construction	Business-owned	233,004,824	163,252,404	No obligation
	Total Net Book Value	3,834,502,128	3,626,677,573	

Land Lease Rights

Below is a list of GGC's and subsidiaries' land lease rights as of December 31, 2024.

- (1) Title deed No.111033 in Tambon Map Ta Phut, Amphoe Mueang Rayong, Rayong, occupying 27 rai 3 ngan 13.598 sq. wah, owned by PTT Global Chemical Plc. Lease period of 30 years from August 1, 2006, to July 31, 2036. Location of Methyl Ester Plant 1.
- (2) Title deed No. 123254 in Tambon Map Ta Phut, Amphoe Mueang Rayong, Rayong, occupying 9 rai 3 ngan 43.9 sq. wah, owned by PTT Global Chemical Plc. Lease period of 30 years from August 1, 2006, to July 31, 2036. Location of Methyl Ester Plant 1.
- (3) Title deed No. 126435 in Tambon Map Ta Phut, Amphoe Mueang Rayong, Rayong, occupying 28.70 sq. wah, owned by PTT Global Chemical Plc. Lease period of 16 years 7 months 15 days from December 17, 2019, to July 31, 2036. Location of Methyl Ester Plant 1.
- (4) Title deed No. 6150 in Tambon Khao Sok, Amphoe Nong Yai, Chon Buri, occupying 27 rai 2 ngan, owned by Thai Eastern Industrial Land Co., Ltd. Lease period of 30 years from April 1, 2006, to March 31, 2046. Location of Methyl Ester Plant 2.
- (5) Title deed No. 6150 in Tambon Khao Sok, Amphoe Nong Yai, Chon Buri, occupying 2 rai 2 ngan, owned by Thai Eastern Industrial Land Co., Ltd. Lease period of 30 years from March 1, 2018, to February 29, 2048. Location of Refined Glycerine Plant 2.
- (6) Title deed No. 111033 in Tambon Map Ta Phut, Amphoe Mueang Rayong, Rayong, occupying 2 rai 86.402 sq. wah, owned by PTT Global Chemical Plc. Lease period of 30 years from August 1, 2006, to July 31, 2036. Location of Fatty Alcohols Plant.

Other lease rights not recorded with other land lease rights as of December 31, 2024.

- (1) Space lease contract for offices and service contracts with Energy Complex Co., Ltd., at 555/1 Energy Complex, Building A, 4th Floor. Contract period of 2 years from October 1, 2024, to September 30, 2024. Lease area of 837 sq. m.
- (2) Space lease contract rent for offices with GC Estate Co., Ltd., at 888, 3rd Floor, Map Chalut – Laem Son Road, Tambon Huai Pong, Amphoe Mueang Rayong, Rayong. Contract period of 3 years from September 1, 2020, to August 31, 2026. Lease area of 750 sq. m.

Usage Rights Assets

Below are details of GGC's and subsidiaries' usage rights assets as of December 31, 2024.

Usage Right	Net value after cumulative amortization and provision for asset impairment (Baht)
Land	138,417,493
Buildings	16,680,200
Plants, machinery, equipment, and tools	180,535,827
Vehicles	25,961,693
Total Net Book Value	361,595,213

Intangible Assets

Below are details of GGC's and subsidiaries' intangible assets as of December 31, 2024.

Intangible Assets	Net value after cumulative amortization and provision for asset impairment (Baht)
Production process patent fees	9,526,354
Goodwill	33,527,418
Other intangible assets	37,713,551
Total Net Book Value	80,767,323

Trademarks and Service Marks

As of December 31, 2024, GGC subsidiaries owned key trademarks below.

Service Mark / Trademark	THAIOL	For industrial application of fatty alcohols
Country		Period
Thailand		August 21, 2017 – August 21, 2027
India		August 22, 2017 – August 22, 2027
South Africa		September 7, 2017 – September 7, 2027
Mexico		August 23, 2017 – August 23, 2027
New Zealand		August 20, 2017 – August 20, 2027
Indonesia		September 7, 2017 – September 7, 2027
Malaysia		September 19, 2017 – September 19, 2027
Chile		February 27, 2018 – February 27, 2028
The Philippines		March 10, 2018 – March 10, 2028
Columbia		April 30, 2018 – April 30, 2028
Argentina		August 15, 2018 – August 20, 2028
Brazil		March 24, 2015 – March 24, 2025
Canada		March 21, 2016 – March 21, 2025

Service Marks / Trademarks		For application of chemical fertilizer (potassium sulfate)
Country		Period
Thailand		September 23, 2019 – September 22, 2029

Other intellectual property rights

GGC currently holds no other intellectual property.

GGC entered a licensing agreement with UHDE GMBH (Uhde) with effect from September 7, 2006, under which Uhde licensed application of Agrar Technik's technology in GGC's methyl ester plants through the plants' operating periods. GGC has paid the full sum for this license as laid out in such agreement.

GGC also entered a licensing agreement with a leading German technology firm for technological application in its fatty alcohol plant through its operating period. Development of technology for fatty alcohol production belongs solely to this company; in return, GGC is eligible for the rights to upgraded technology in its processes, but such rights are non-transferable and not limited to GGC. GGC has paid the full sum for this license as laid out in such agreement.

GGC has entered into a licensing agreement with PTT Global Chemical Public Company Limited ("GC"), which becomes effective on October 1, 2024. Under this agreement, GC grants GGC the rights to use GC's technology for the production and sale of C12-C14 Alkyl Benzoate throughout the duration of the contract.

Investment Promotion Certificates

GGC and subsidiaries earned investment promotion certificates from the Office of the Board of Investment of Thailand (BOI) in the form of tax privileges, including corporate income tax rebates for net profits applicable to income generation of business, beginning on the start date of net profit accrual.

Below are details of GGC's and subsidiaries' certificates valid as of December 31, 2024.

No.	Project with Promotion Certificates	Promotion Date	Product and Capacity	Expiry of Income Tax Privileges	Remarks
1	1. Production of Methyl Ester, Fatty Alcohols, Glycerine, and Potassium Sulfate.	June 1, 2022	<ul style="list-style-type: none"> Methyl Ester, about 300,000 tons/year Fatty Alcohols, about 120,000 tons/year Glycerine about 42,000 tons/year Potassium Sulfate about 4,500 tons/year 	June 25, 2026	
2	Production of biodiesel, Certificate No. 59-1251-1-00-1-0	September 28, 2016	<ul style="list-style-type: none"> Biodiesel or Methyl Ester, about 231,21,873 liters (or 200,000 ton) 	November 17, 2026	
3	Production of Refined Glycerin, Certificate No. 60-1232-1-18-1-0	October 10, 2017	<ul style="list-style-type: none"> Refined Glycerine (Not less than 99.5% purify), about 26,136 tons/year 	November 23, 2033	
4	Production of Fatty Alcohols, Certificate No.65-1245-0-00-0-2	October 4, 2565	<ul style="list-style-type: none"> Fractionated Fatty Alcohols about 120,000 tons/year By-products: Light Ends Hydrocarbon about 1,700 tons/year, Residue about 1,250 tons/year 	Privileges were only for machinery feedstock and non-tax privileges	This was a business transfer from TFA

Policy on investment in subsidiaries

GGC's policy is to invest in subsidiaries and associated companies that agree with its goals, vision, and strategic plans for its own growth and supports the businesses of downstream companies, or downstream businesses, or those with comparable nature, or those investing in synergistic undertakings with GGC to raise competitiveness and produce sound outcomes as well as long-term security. GGC implements its investment strategy and operational philosophy to ensure that scrutiny of investment, investment models, and its project implementation align with the nature of business and core competencies of GGC before defining suitable scrutiny approaches for the corporate business plans. To this end, GGC analyzes investment feasibility by setting criteria for such scrutiny in aspects including market demand and supply chain, technology and engineering, competitiveness, and requirements, contracts, and regulations. It also conducts project risk assessment. Appropriate analytical procedures and consideration are in place, following GGC's investment scrutiny process, including the Board of Directors's approval or the AGM's approval (as applicable). Requests for approval by subsidiaries or associates, or both, must comply with applicable SEC and SET announcements.

For proper governance of these companies, the Company delegates its executives as managing directors of subsidiaries. GGC executives, meaning its vice presidents or above, also serve as directors of these companies. Through these actions, GGC takes part in the formulation of policies, proper and watertight internal control system through oversight under the GGC Way of Conduct approach, has access to data, and periodically monitors these companies' operations as a way of stewardship of GGC's investment funds against GGC's criteria. If any of these companies engages in businesses with significant involvement with GGC, such engagement must secure prior approval from management committee meetings or Board meetings, or both, as applicable.



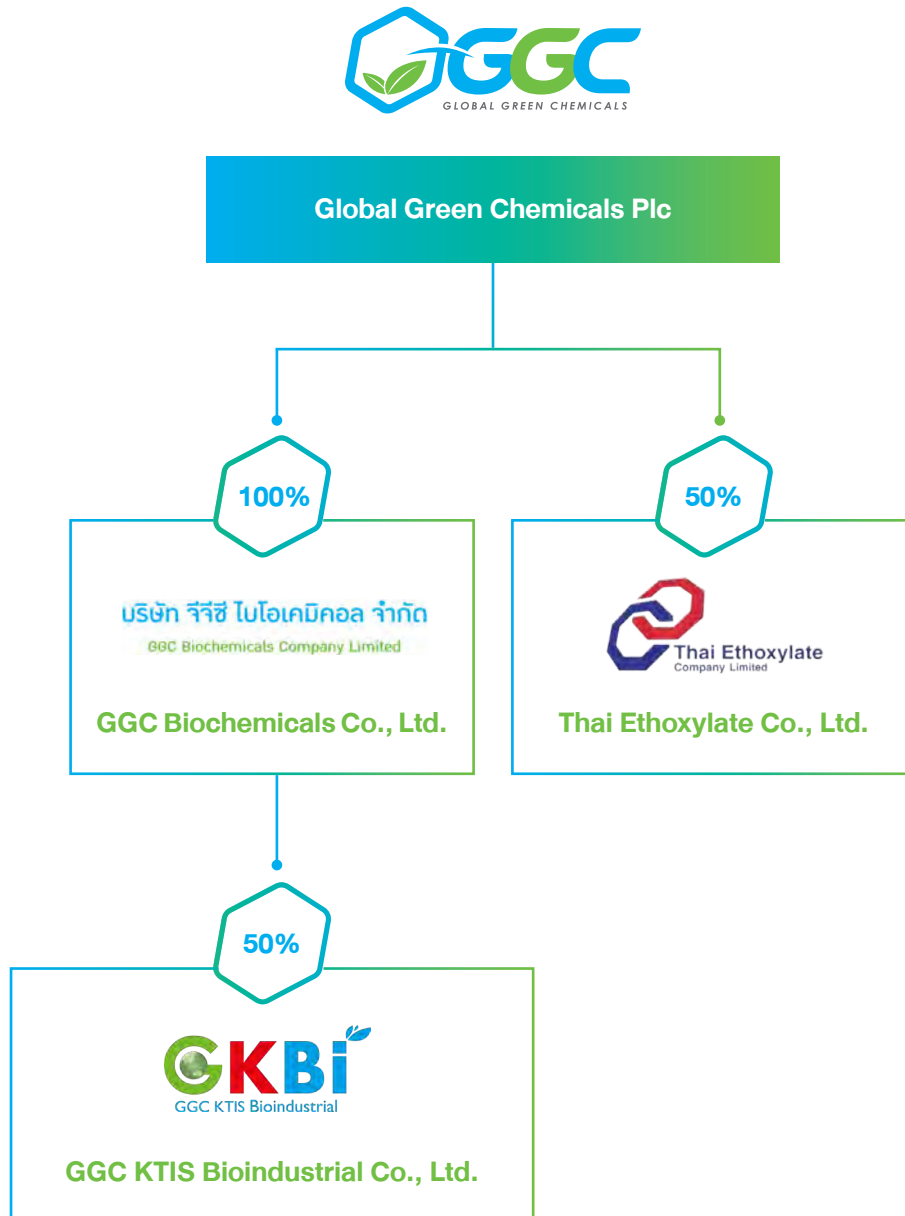
As of 2024, GGC commanded investment in the following subsidiaries and associated companies.

Company	Abbreviation	Business	Registered capital (Baht million)	Paid-up capital (Baht million)	Paid-up capital (Baht million) Percentage of shareholding	Share type
Subsidiaries						
1. GGC Biochemicals Co., Ltd. 555/1 Energy Complex Building A, 4th floor, Vibhavadi Rangsit Road, Chatuchak, Bangkok 10900 Phone: +66 (0) 2 558-7300 Fax: +66 (0) 2 558-7301	GGC Bio	Oleochemical business	1,669	1,669	100	Common
Joint Ventures						
2. Thai Ethoxylate Co., Ltd. 555/1 Energy Complex Building A, 15th floor, Vibhavadi Rangsit Road, Chatuchak, Bangkok 10900 Phone: +66 (0) 2 265-8400 Fax: +66 (0) 2 265-8125	TEX	Production and sale of Fatty Alcohol Ethoxylates	420	420	50	Common
Indirect Joint Ventures						
3. GGC KTIS Bioindustrial Co., Ltd. 133 Vibhavadi Rangsit Road, Samsen Nai, Bangkok 10400 Phone: +66 (0) 2 248-2767	GKBI	Power generation and distribution / production of sugarcane-based ethanol	3,315	3,315	50 (through GGC Bio)	Common

1.3 Shareholding Structures of Affiliates

1.3.1 Shareholding structures of affiliates and relationship with major shareholders

Shareholding in Affiliates



Remarks: Subsidiaries

- GGC Biochemicals Co., Ltd.

Joint venture

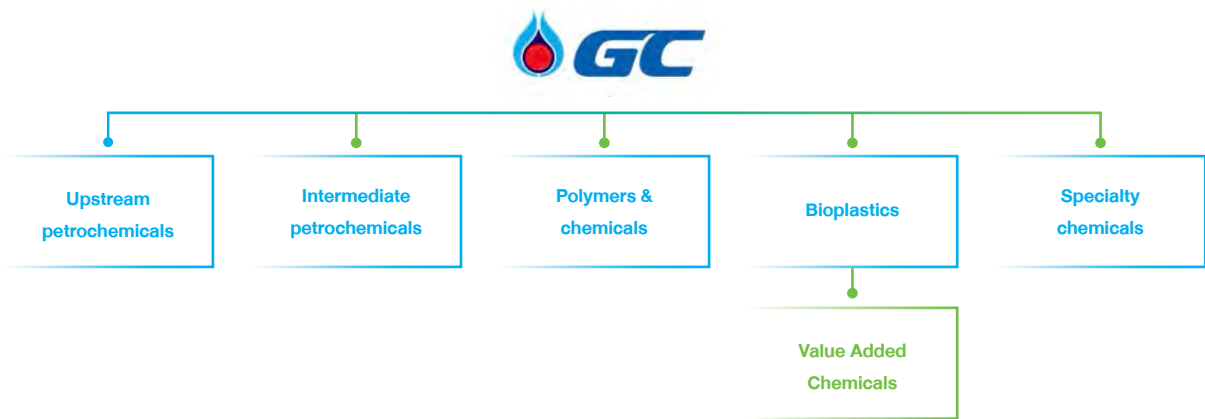
- Thai Ethoxylate Co., Ltd. (TEX, a joint venture between GGC and BASF (Thai) Co., Ltd.)

Indirect joint venture

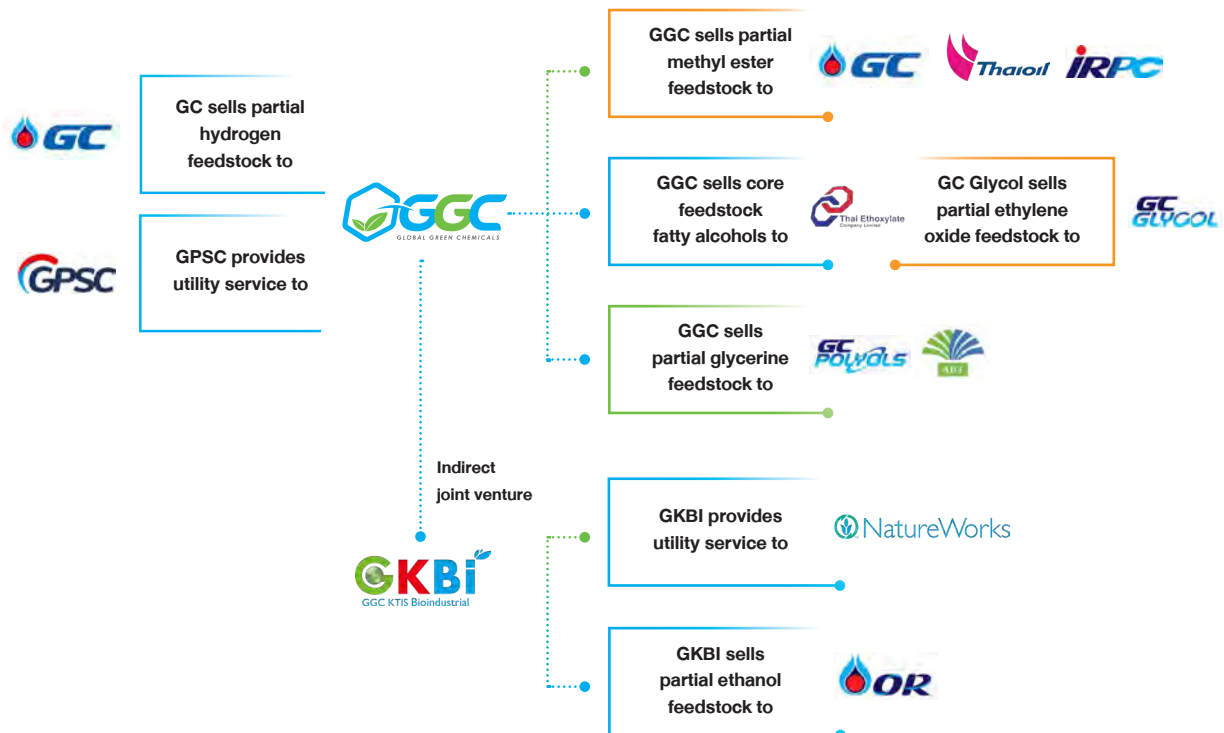
- GGC KTIS Bioindustrial Co., Ltd. (GKBI, a joint venture between GGC and KTIS Bio Ethanol Co., Ltd.)

Relationship with Major Shareholders' Businesses

GGC belongs to the green chemical business under the management of the oleochemical business of PTT Global Chemical Plc (GC), as shown in the management structure below:



Key relationships between GGC and other companies within the PTT Group, which are significantly involved in business activities related to GGC's core operations, can be outlined as follows:



1.3.2 Shareholders

Below were the top 10 shareholders as of the share-roster closing date of January 20, 2025.

No.	Name	Shareholding (shares)	Percentage
1	PTT Global Chemical Plc ⁽¹⁾	739,999,990	72.29
2	Mr. Samroeng Manoonphol ⁽²⁾	155,361,900	15.18
3	Mr. Songchai Ajchariyahiranchai	20,649,400	2.02
4	Mr. Suthat Tejavibul	10,776,600	1.05
5	Ms. Pornrat Ajchariyahiranchai	5,000,000	0.49
6	Mr. Sanchai Wiriyathawicha	4,075,000	0.40
7	Yitongtiantai Co., Ltd.	3,828,000	0.37
8	Thai NVDR Co., Ltd.	3,078,301	0.30
9	Ms. Rattiporn Kornsutisophon	2,900,000	0.28
10	Mr. Suwinai Suwanhirankul	2,186,700	0.21

Remarks: (1) The de facto major shareholder significantly influencing GGC's management policy or its operations was PTT Global Chemical Plc (GC), with 72.29% shareholding. It was represented on the GGC Board of Directors by three directors/executives of the 11 directors. GC's major shareholder is PTT Plc.

(2) Mr. Samroeng Manoonphol, another major shareholder, held significant influence over GGC's management policy or its operations and was represented on the GGC Board of Directors by one of the 11 directors.

As of January 20, 2025, GGC had a total of 16 Foreign shareholders, with a combined shareholding of 1,153,495 shares or 0.11% of the paid-up registered capital.

1.4 Registered Capital and Paid-up Capital

As of December 31, 2024, GGC's registered capital amounted to Baht 9,724,833,650, consisting of 1,023,666,700 ordinary shares at Baht 9.50 per share. The paid-up portion amounted to Baht 9,724,833,650.

Limit on GGC's Share Transfer

Under the articles of association on GGC's restriction on aliens' shareholding, Clause 8 reads "The Company's shares may be freely transferred except if a transfer gives alien shareholders more than 37% of all sold shares. GGC reserves the right to reject such share transfer should such percentage be exceeded."

1.5 Dividend Policy

GGC Plc's Dividend Policy

GGC's Board meeting No. 7/2558 of September 25, 2013, defined a dividend payment policy to shareholders at no less than 30% of net profit after tax and capital provisions provided that such payment is subject to investment plans, necessity, and other justifications.

Subsidiaries'/associates' dividend policies

In deciding this matter, the board of each subsidiary/associate in question endorses and proposes the matter to the shareholders' meeting for approval each year. Dividend payment considers essential investment plans and other appropriate matters, including the adequacy of cash flow after legally required capital provisions.

Details of dividend payments for the past three years are as follows:

Year	Dividend Paid (Baht/Share)			Percentage of dividend paid to net profit	Net profit per share (Baht/share)
	First Half-year	Second Half-year	Full Year		
2021 ⁽¹⁾	-	-	0.35	109	0.32
2022 ⁽²⁾	0.25	0.25	0.50	54	0.93
2023 ⁽³⁾	0.10	-	0.10	218 ⁽⁴⁾	0.05
2024 ⁽⁵⁾	-	-	0.10	49 ⁽⁶⁾	0.21

Remarks: (1) Board Meeting No. 2/2022 of February 11, 2022, endorsed a proposal for the 2022 AGM to approve dividend payment for the performance of GGC and subsidiaries in 2021 at Baht 0.35 per share, paid out on April 20, 2025.

(2) Board Meeting No. 2/2023 of February 10, 2023, endorsed a proposal for the 2023 AGM to approve dividend payment for the performance of GGC and subsidiaries in 2022 at Baht 0.50 per share, to be divided into interim payment for first-half (January-June) performance of 2022 at Baht 0.25 per share. This was paid out on September 6, 2022. For the second-half (July-December) performance of the same year, the rate was to be Baht 0.25 per share, paid out on April 20, 2023.

(3) Board Meeting No. 2/2024 of February 9, 2024, endorsed a proposal for the 2024 AGM to suspend dividend payment for the performance of GGC and subsidiaries in 2023 on account of the loss incurred in 2023. It also acknowledged the interim dividend payment for the first half of 2023 (January-June) at Baht 0.10 per share, paid out on October 6, 2023.

(4) Calculated from the separate financial statements for the first half-year ending June 30, 2023.

(5) Board of Directors at its meeting No 2/2025 held on February 10, 2025 has approved the proposal to propose at the 2025 Annual General Meeting of Shareholders to consider and approve the dividend payment for the year 2024 operating performance of THB 0.10 per share. But the right to receive dividend is subject to the approval of shareholders at the 2025 Annual General Meeting.

(6) Calculated from the separate financial statements of FY2024.

2. Risk Factors

2.1 Risk Management Policies and Plans

Risk Management

In 2024, GGC faced significant challenges arising from internal operational factors and severe external influences, including ongoing global geopolitical conflicts that persistently affected the Thai economy, directly impacting the supply chain and trade. These challenges, combined with declining consumer demand, intensified trade competition and heightened price volatility for feedstock and products. Nevertheless, leveraging a robust risk management system and the close oversight of the Enterprise Risk Management Committee (ERMC) and the Risk Management Committee (RMC), GGC successfully navigated these difficulties. Through diligent market monitoring and proactive risk mitigation, GGC managed critical aspects of its business performance, including sales management, supply chain management, inventory management, the operational performance of GGC and its subsidiaries, exchange rate fluctuations, and other emerging risks with the potential to impact the Company's corporate goals.

As for the impacts of the price volatility of feedstock and products, there was a declining demand for biodiesel. Intense competition in the methyl ester (ME) market emerged due to capacity expansions by existing producers. Furthermore, the continued rise in palm kernel oil and crude palm oil prices led the government to implement a temporary reduction in the biodiesel blending ratio from B7 to B5 in November 2024, aimed at alleviating the impact of rising fuel prices. Despite these measures, market competition remained fierce, driven by reduced demand resulting from the domestic economic downturn. Demand for fatty alcohols (FA) also weakened, influenced by China's economic slowdown and heightened concerns over a global recession. This economic uncertainty further dampened demand for products. Similarly, the price of refined glycerine (RGL) experienced a continued decline, caused by falling demand and an oversupply arising from Indonesia's policy to increase its biodiesel blending ratio, which significantly boosted glycerine availability in the market.



GGC responded proactively by closely monitoring market conditions and assessing the impact on its performance on a weekly basis. The Company implemented a series of measures to mitigate risks and minimize potential impacts. These included reducing operational expenses and production costs, collaborating with business partners to maintain market share, strengthening customer relationships to meet their evolving needs, reviewing investments in key projects, and adjusting production and sales plans to manage pricing and price spread risks. Additionally, GGC refined its risk management framework to address feedstock and product price volatility, enhanced inventory management practices, and managed foreign exchange risks to adapt to the rapidly changing market environment. Through the collective efforts of GGC's executives and employees across all divisions, the Company effectively addressed these challenges. This highlights GGC's commitment to continuously developing and integrating systematic risk management practices across the organization. These efforts not only minimize potential risks and damages but also create opportunities to strengthen the GGC's competitiveness, ensuring sustainable and resilient business operations.

GGC is fully committed to executing a comprehensive risk management system and continuously improving the internal control system in alignment with corporate strategic management to achieve strategic objectives and business goals within an acceptable and manageable risk threshold. GGC's risk management scope encompasses quality, security, safety, occupational health, and environmental factors; compliance with legal, regulatory, and operating standards; anti-corruption practices; and equitable engagement with stakeholders. All employees are systematically encouraged to adhere to the enterprise risk management system. Annual performance evaluations are conducted against corporate strategic objectives and measured against strategic targets. To ensure continuity of business operations and alignment across the organization, GGC consistently communicates risk management policies, principles, and procedures to all executives and employees. This communication fosters awareness of potential risks and their impacts on the entire value chain, enhancing the reliability and efficiency of the risk management system. The risk management framework is overseen by the Risk Management Committee (RMC) and the Board of Directors, extending to operating executives and personnel. Specific responsibilities are assigned for risk assessment and management of domestic and international factors that could potentially impact GGC's business performance. Risk management is seamlessly integrated with strategic planning, investment schedules, and business plans to ensure alignment with both short-term and long-term annual goals, all within an acceptable and controlled risk threshold.

Risk Management Standards

To achieve both short-term and long-term strategic objectives and business goals, risk management serves as a critical tool for enhancing overall performance and driving business operations. GGC has adopted the 2017 Committee of Sponsoring Organizations of the Treadway Commission for Enterprise Risk Management (COSO-ERM 2017), the 2018 International Organization for Standardization (ISO 31000:2018), and the Thai Corporate Governance Code for Listed Companies - 2017, while also adhering to guidelines and commitments related to anti-corruption practices. GGC has been certified as a member of the Thai Collective Action Against Corruption (CAC). The enterprise risk management system is fully integrated with policies, laws, regulations, and standard operating procedures, incorporating Governance, Risk Management & Internal Control and Compliance (GRC). This comprehensive approach enables the effective prevention, reduction, and mitigation of risks and their potential impacts, ensuring the achievement of strategic objectives and business targets.

Risk Management Structure

GGC has adopted a triple-tier risk management architecture to interconnect the aspects of its enterprise risk management system. Additional system improvements were made during 2024 as follows:

Risk Management Structure	
1. Board of Directors Level	
Existing Assignments	Additional Assignments in 2024
<p>Formalizing a Risk Management Committee (RMC) with roles, duties, and responsibilities as follows:</p> <ul style="list-style-type: none"> The RMC acts on behalf of the Board to provide opinions, recommendations, and reviews concerning enterprise risk management and the risk management framework, ensuring alignment with strategic objectives and adapting to evolving circumstances. The RMC evaluates the company's risk management policies to serve as a guideline for oversight and alerts, ensuring that risk management processes operate in a unified and consistent direction. 	<p>To ensure that both short-term and long-term enterprise risk management aligns with the company's objectives, it has been recommended to closely monitor short-term and long-term risks related to the management of group companies. This includes the management of foreign exchange risks to closely oversee operations and minimize potential opportunities for and impacts of damage that may arise.</p>
2. Top Management level	
Existing Assignments	Additional Assignments in 2024
<p>Formalizing an Enterprise Risk Management Committee (ERMC) with top management executives from various business units as members and the Managing Director as chairman. ERMC is tasked with following roles, duties, and responsibility:</p> <ul style="list-style-type: none"> Promoting and defining a risk management framework for maximum efficiency. Supervising and periodically monitoring the overall risk management and activities. 	<ul style="list-style-type: none"> The ERMC meeting approved the appointment of Risk and Internal Control Coordinators at the operational level, ensuring their roles are appropriate and aligned with the organizational structure.
3. Operating Unit Level	
Existing Assignments	Additional Assignments in 2024
<p>The Company has undertaken the following actions:</p> <ul style="list-style-type: none"> The Enterprise Risk Management and Internal Control Unit, under the Corporate Strategy Department, in collaboration with Risk Owners and Coordinators, has identified risk factors, assessed risks, developed mitigation plans, and established key risk indicators. Prepared risk management reports to present operational outcomes to the ERMC in accordance with the enterprise risk management structure on a quarterly basis. 	<ul style="list-style-type: none"> The Enterprise Risk Management and Internal Control Unit supports and advises all departments facing extreme levels of risk to submit quarterly mitigation plan reports to the ERMC. These reports detail progress and monitor measures to minimize the impact of various risk factors. Conducting risk workshops in collaboration with relevant departments to jointly assess risks, identify improvement plans to reduce risk levels to an acceptable range, and explore strategies for addressing potential risks. Developing online learning materials (e-learning) via the SuccessFactors platform to enhance knowledge and understanding of self-assessment in risk management and internal control for senior executives and employees across the organization.

To address business-specific risks, GGC has implemented enterprise-level risk management to enhance agility in managing risks directly and to enable close monitoring of various situations. The measures include the following:

- **Value Chain Management (VCM):** The VCM committee is in charge of reviewing and making suggestions on sales and marketing plans, procurement management, product distribution management, inventory management of feedstock and products, management of risks associated with product prices and spreads between products and feedstock, exchange rate risk management under the risk management framework guided and endorsed by the RMC, routine monitoring of the economic outlook, industrial situations, and market volatility involving corporate businesses.
- **Investment Committee (IC):** The IC is tasked not only to supervise and make investment decisions for all units, but also to offer opinions on business opportunities and impacts on project investments under the strategic objectives and growth strategy.
- **Other Committee:** To ensure that GGC's operations align with its objectives and to mitigate potential risks, several committees have been established with distinct responsibilities. The Credit Committee manages credit risks associated with business operations involving customers and feedstock suppliers. The GGC Operation Excellence Committee addresses risks related to production stability and security, ensuring compliance with applicable laws, regulations, requirements, and standards relevant to manufacturing facilities. Additionally, the Safety, Occupational Health, and Workplace Environment Committee oversees risks related to GGC's safety, occupational health, and environmental practices.
- **A special water resource taskforce assigned to closely monitor drought and water resource short falls in Rayong and Chon Buri provinces:** GGC closely monitors drought conditions through updates from the Industrial Estate Authority of Thailand (IEAT) or relevant industrial zones and reports findings to management to devise strategic action plans.
- **Personal Data Protection Act (PDPA) Task Force:** To ensure that GGC employees involved in the processing of personal data are aware of the importance of data protection laws and are equipped to follow proper practices as outlined in the PDPA guidelines.

Risk Management Tools and Monitoring

Various management tools have been adopted and modified to suit corporate needs for risk identification, assessment, and development of a risk management framework to define all parameters such as risk appetite or acceptable levels of risks, a risk map to assess risk levels and rank all risks, monitoring of mitigation plans, and key risk indicators (KRIs).

An early warning system developed under the PESTEL Analysis Framework is in place to help GGC closely and continuously monitor all external risk factors potentially affecting short-term and long-term businesses. This system significantly enhances GGC's ability to move proactively before actual impacts. The system analyzed seven aspects for precise risk identification for risk management in 2024:

- 1) **External Factors:** The system monitors and analyzes all risks potentially as threats and opportunities for GGC's businesses, including political, economic, social, technological, environmental, and legal & regulation aspects.
- 2) **Strategic Focus:** All potential risks are mandatorily defined in association with the corporate strategy endorsed by the Board.
- 3) **Management Concerns:** These concerns are regularly compiled from the suggestions of the Board at the annual strategy forum and from top management during 2024.
- 4) **Residual Risks of Year 2023:** Certain risks in 2023 were incorporated into the 2024 risk management system due to their prolonged nature.
- 5) **Stakeholder Expectations:** All concerns and suggestions from shareholders and investors during the AGM were compiled, reconciled, and added to the list of risk identification of the year 2024.
- 6) **Policy/Standard/Regulation Changes:** In 2024, there have been changes to policies, standards, rules, and regulations that may directly impact the company. The details are as follows:

- **The promulgation of the Oil Fund Act 2024 (B.E. 2567)**

This upcoming act prohibits the use of the Oil Fund to support biofuels during normal periods, except in emergencies when crude oil prices are high. The measure aims to prevent fuel prices, particularly biodiesel, from exceeding 30 Baht/liter. To support this policy, a loan framework will be established for management purposes.

- **Thailand Taxonomy**

This central reference standard categorizes green economic activities, aiming to encourage businesses to adopt more sustainable practices and drive Thailand's economic and social systems toward seamless and timely sustainability.

- **New Plans for National Energy and Emerging Energy Forms:** These plans promote clean energy aligned with the carbon neutrality goal by 2050 and the Net Zero goal by 2065. They include Thailand's first grid modernization investment plan, revised regulations to facilitate localized clean power trading, and incentives for EV and EV charging station investments. Additionally, the plans investigate potential and establish criteria for implementing Carbon Capture Utilization and Storage (CCUS) technology.
 - **Thailand Power Development Plan (PDP):** This 20-year plan outlines national power procurement strategies to ensure energy security while balancing economic stability and environmental sustainability.
 - **Climate Change Act:** This legislation focuses on regulating activities and businesses that contribute to pollution and greenhouse gas (GHG) emissions. It includes guidelines for defining measures to address Thailand's climate change challenges, such as carbon-offsetting measures. Businesses exceeding carbon emission limits are required to improve their operations to comply. If unable to do so, they must utilize carbon market mechanisms, carbon credit trading, or carbon taxation on goods with high GHG emissions.
 - **The EU Deforestation-Free Regulation (EUDR):** The European Union's new regulation on deforestation-free products will come into effect on December 30, 2024. However, the EU has announced a one-year postponement of the enforcement of this regulation.
- 7) **Existing Internal Control Management:** All internal control issues brought up by all levels of management were compiled and reconciled to support risk and internal control management, including the following:
- **Compliance:** Improvement of the roles and clarity of approval authority associated with legal, regulatory, and procedural compliance to ensure a full range of operations.
 - **Project Management:** Promotion of clear management of all stages of invested projects and reporting schedules to the Board as planned.
 - **Human Resource Development & Management:** Supporting human resource development and human resource management plans in support of operations of the existing businesses and business plans.

GGC places significant importance on addressing emerging risks to proactively develop measures for effective risk management. Regular monitoring, evaluation, and reporting of risk management performance are conducted quarterly to the Enterprise Risk Management Committee (ERMC). Additionally, updates are provided to the Risk Management Committee (RMC) and the Board of Directors on a quarterly basis or in response to critical incidents. The ERMC and RMC have mandated that task forces or directly responsible units present risk mitigation measures in cases where their risk levels are classified as severe alerts with significant impacts on operations.

Risk Management Culture

GGC pursues development and institutionalizes the risk management culture throughout the organization via six key aspects, namely supervision, leadership, architecture, techniques, communication, and continuous education. Risk management system supervision is executed through the development of a risk management policy with clear objectives, risk appetite, and a risk management framework. Risk management architecture covers the entire organization with clear roles and responsibilities for monitoring and reporting to management and the Board regularly. The system also calls for process reviews and evaluation of roles, duties, and performance of the executives, RMC, and the risk management taskforce regularly. Communication and promotion of knowledge-sharing on risk management in various patterns are consistently conducted under the coordination of Corporate Risk Management and Internal Control taskforce, which routinely communicates with assigned risk owners and risk and internal control coordinators. This ongoing coordination is fully supported to strengthen the risk management culture in addition to the quarterly reports presented to the RMC. Details of the performance are as follows:



Routinely communicating to all executives and employees to become fully aware of the risk management policy, operating guidelines, and risk management framework.



Driving the Tone From The Top approach to manage behavioral change of the organization and all employees to be fully aware of potential risks concerning their work environment.



The Risk Management and Internal Control Taskforce has consistently improved the risk assessment report form with clear classification of existing controls, mitigation plans, and key risk indicators (KRIs) and communicated with all relevant units thoroughly on how to fill the form to ensure consistency.

Efforts have been further expanded to enhance the efficiency of risk assessment and internal control processes through the development of the Risk and Control Self-Assessment (RCSA) framework. This initiative includes the creation of online learning materials (e-learning) to build knowledge and understanding of self-assessment in risk management and internal control among employees across the organization. The RCSA process empowers employees to identify and assess risks that may impact operational objectives, evaluate the adequacy and effectiveness of risk management measures to maintain risks within acceptable levels, and establish guidelines for improving internal controls. It also involves monitoring the success of improvement plans. As a key tool, RCSA promotes awareness of the importance of risk management at the operational level, reduces the likelihood of incidents that could cause damage or uncertainty, and ensures alignment with organizational objectives. In 2024, the RCSA framework has been further enhanced, emphasizing the analysis and prioritization of key risk and internal control issues across the organization (RCSA Effectiveness) to optimize the efficiency of improvement and development efforts. Additionally, the internal control system at the operational level has been aligned with corporate governance principles and the GC Way of Conduct management framework. This alignment covers all business processes, including core operations and support and management processes. Furthermore, mitigation plans are rigorously monitored to ensure the adequacy and effectiveness of GGC's internal controls.

Management of Human Rights across the Value Chain

GGC has established a policy for managing human rights across its value chain in alignment with the UN Guiding Principles on Business and Human Rights (UNGP). This policy aims to prevent human rights violations involving employees, the public sector, shareholders, investors, analysts, suppliers, and business partners.

GGC implements a Human Rights Due Diligence (HRDD) process and conducts human rights risk assessments encompassing all activities across the value chain. This process addresses four key aspects of human rights: labor rights, community rights, supplier/contractor rights, and customer/consumer rights. To define control and mitigation measures, GGC has assessed the following high-priority human rights

1. Work conditions
2. Labor health and safety
3. Community health and safety
4. Community cost-of-living standards
5. Forced labor, human trafficking, discrimination, sexual harassment, work conditions, labor health and safety and those of suppliers of other goods and services.

Concerning these risks, GGC has carefully defined measures and guidelines for controlling potential impacts while requiring operating units and related parties to strictly conform to ensure that the company's businesses do not violate human rights in all activities across the value chain.

2.2 Risk Factors Affecting GGC's Businesses

GGC has conducted an analysis of the business environment, internal factors, and external factors impacting its operations. This analysis encompasses trends in political, economic, social, technological, environmental, and legal (PESTEL) volatility. Key risk factors that may affect GGC's objectives, operational performance, and 2024 strategies have been identified. These enterprise-level risk factors are categorized into three groups as follows:

Business-as-Usual Risks

Risk Factors	Mitigation Measures
<p>Sales and marketing</p> <p>The volatility of market situations and a focus on target customers, market development, and product development to higher-value product groups of biofuels and biochemicals. prices of feedstock and the uncertain policy on biodiesel composition drive GGC to maintain and strengthen its core businesses with higher flexibility. Sales and marketing strategies include domestic market expansion with</p>	<p>Methyl Ester (ME) GGC faces pricing competition with new players in the market and the declining demand of biodiesel, along with weekly domestic price fixing of biodiesel with reference to the announcement of the Energy Policy and Planning Office (EPPO), which tied them to prices of other feedstock, including crude palm oil, refined bleached deodorized palm oil (RBDPO), and palm stearin. These reference prices are announced by the Department of Internal Trade. The reference price basket helps define the range of feedstock prices. However, feedstock price volatility continues to pose a threat to the company's performance, hence the following mitigation measures for biodiesel price and volume volatility:</p> <ul style="list-style-type: none"> • Value Chain Management (VCM) is in charge of supervising and defining price ranges for feedstock and products, monitoring price movements of feedstock and products, and market movement weekly as well as searching for qualified alternative feedstock and raw materials for processes. • Commercial arrangements and agreements with various customers are made in both short and long terms. • Increasing the added value of biodiesel products by expanding into green chemical products and pursuing other new business developments. • Exploring the feasibility of exporting select biodiesel products at competitive costs through partnerships with business partners and other companies within the Group as part of the market expansion strategy. • Forecasting the sales volume as least 1 quarter in advance and monitor the amount of the domestic crude palm oil (CPO) to assess the market situation and prices. • Collaborating closely with business partners to maintain sales volumes and effectively manage sales during planned maintenance shutdowns.

Risk Factors	Mitigation Measures
	<p>Fatty Alcohols (FA) Risk factors in the FA product line continue to include competition from new entrants in the market, as well as economic, social, and situational dynamics. To maintain GGC's competitive edge amidst market and sales volatility in the FA product segment, the company has implemented risk mitigation measures to ensure sustained competitiveness. The details are as follows:</p> <ul style="list-style-type: none"> • Extending product sales agreements with key customers into a long-term format to increase the domestic market share. • Preventing FA product price risks and avoiding undesirable FA product-to-feed-margin (P2F) by implementing back-to-back production cost control, resulting in controllable FA prices. The company also closely monitors FA P2F to ensure that price risks are under control. • Working closely with the business and product development unit to develop new products under the Home and Personal Care Platform (HPC Platform) to pursue new businesses and add value to the FA product line. • Seeking more business partners to support sales and marketing of FA during planned maintenance shutdowns. • Increasing the market shares of FA manufactured under the Roundtable on Sustainable Palm Oil (RSPO) standard. • Develop marketing activities to strengthen relations and confidence among customers.
<p>Supply Chain Management</p> <p>The volatility of feedstock prices, particularly palm oil and palm kernel oil, is a significant factor that greatly impacts GGC's performance. Reliance on government-announced pricing, an external factor beyond control, further adds to the challenge. Additionally, environmental and climatic conditions remain critical risk factors influencing the availability of raw materials.</p>	<p>GGC has implemented effective control measures to manage and mitigate risks across its supply chain activities, covering both feedstock management and logistics and warehouse management. The details are outlined as follows:</p> <p>Feedstock Management</p> <p>1. Feedstock Selection GGC employs a data-driven approach to select feedstock for production processes, developing decision making criteria based on information collected from various agencies, with the ultimate aim of process optimization. A simulation model was initiated to incorporate factors affecting prices of domestic palm oil, referenced to the Department of Internal Trade, and prices posted by the Malaysian Palm Oil Board (MPOB). They are then assessed and developed for use as a planning tool.</p> <p>2. Feedstock Procurement GGC has increased the proportion of long-term procurement contracts with reliable suppliers that have a proven track record of delivering high-quality feedstock on time. This strategy enhances the efficiency of feedstock management across the supply chain. Furthermore, GGC collaborates with the GC Group to improve procurement processes, including transportation scheduling, by integrating automated systems and software solutions.</p>

Risk Factors	Mitigation Measures
	<p>Logistics and Warehouse Management</p> <p>1. Control of Feedstock Purchase Volumes The SAP system has been deployed to manage and control purchase volumes in alignment with approved levels based on supplier ratings, as determined by the Credit Committee.</p> <p>2. Logistics Management GGC is enhancing its logistics system for raw materials in 2024 to ensure operational efficiency, including optimizing the use of in-plant tanks to maximize asset utilization.</p> <p>3. Warehouse Management GGC, in collaboration with GC Logistics Co., Ltd., is implementing improvements under the Map Ta Phut Integration (MTPI) project. These efforts aim to optimize in-house warehouse operations, reduce reliance on external storage facilities, and integrate automation systems to enhance operational efficiency.</p> <p>To maintain competitiveness, ensuring an adequate supply of feedstock at reasonable prices that align with production plans is critical to operational effectiveness. To address the risks associated with price and feedstock volume fluctuations, GGC has implemented the following measures:</p> <ul style="list-style-type: none"> • Submitting a quarterly inventory risk management framework report to the Risk Management Committee (RMC) and obtaining approval for adjustments to the framework in response to current conditions if inventory risks are identified as potentially impacting performance. • Assigning the Value Chain Management (VCM) Committee to oversee feedstock and inventory management, monitor economic and industrial volatility, and enforce risk management frameworks approved by the RMC. • Reviewing the inventory risk management framework to align with sales plans, reduce inventory storage levels, monitor performance outcomes, and update the framework as required to reflect current conditions. • Establishing long-term contracts for palm oil and palm kernel oil to mitigate price volatility risks. • Managing feedstock procurement in advance during scheduled maintenance shutdowns. • Developing advanced forecasting tools for product pricing to enable precise sales management, particularly for fatty alcohols products, and minimize risks of inventory stocks that could impact GGC's performance.

Risk Factors	Mitigation Measures
<p>Plant Operation and Safety</p> <p>As GGC's core business involves industrial manufacturing, safety, occupational health, and the stability of production facilities are among the most critical aspects of its operations. Emphasizing operational and safety standards throughout the value chain, GGC has adopted the Operational Excellence Management System (OEMS) and the Process Safety Management (PSM) standard as benchmarks for operations within its plant areas. These frameworks ensure compliance with safety, security, occupational health, and environmental policies while fostering awareness among employees and contractors about GGC's "safety culture."</p>	<p>Plant Reliability</p> <p>GGC has achieved significant success in maintaining plant reliability under the Plant Reliability Master Plan. This includes ongoing development and improvements aimed at enhancing process stability and efficiency to achieve optimal production capacity and deliver the highest-quality products. The company adheres to the Operational Excellence (OE) philosophy of the GC Group and the Process Safety Management (PSM) standard across all operating areas, along with its policy on safety, security, health, and the environment. These policies and standards are rigorously implemented to ensure uninterrupted operations, maximizing both efficiency and safety. Furthermore, additional mitigation measures are employed to minimize risks and their potential impacts on operations as follows:</p> <ul style="list-style-type: none"> • Developing a system to effectively manage the reliability and efficiency of machinery: This is done by integrating the skill development of the maintenance team with a clear development timetable intended to groom the workforce to become experts, ranking levels of importance of all machinery and its planned maintenance program to minimize mechanical failure, development of a spares and parts schedule, especially critical items for production, preparation of emergency power supply, scheduling advance maintenance programs for machinery and parts to avoid early wear and tear, and development of emergency procedures for critical equipment and production units. • Process efficiency control: To maintain competitiveness, GGC focuses on controlling production costs while leveraging digital technology and data analytics to ensure accurate analysis of operational data. These advancements contribute to enhanced efficiency in production process management. • Safety awareness: Continuous promotion of safety awareness and adherence to operating standards are organized for all employees. The program includes PSM standards, energy consumption reduction plans, work safety rules, and waste reduction plans. <p>Safety</p> <p>GGC has implemented various tools to continuously promote a strong safety culture. These include organizing 5S activities, holding monthly Safety Committee meetings to report progress on safety initiatives, regularly reporting accident risks, conducting ongoing Safety Walk Observations (SWO), and establishing safety standards and processes.</p> <p>Despite these measures, accidents or incidents remain potential occurrences with varying levels of severity that could significantly impact GGC's safety image and objectives. To address this, GGC has developed a risk mitigation plan to minimize the severity of such events, as detailed below:</p> <ul style="list-style-type: none"> • Enforcing the mandatory Operational Discipline orientation for all employees and service contractors before they enter operating areas. • Organizing the One Supervisor One Project scheme to support GC Group's B-CAREs safety culture. • Promoting the application of the safety culture with the Process Safety Awareness program and Field Risk Assessment (FRA) to assess potential risks at work sites so that workers can clearly determine any abnormal and deviated conditions from the original design to significantly help the investigation and develop further protection from future accidents.

Risk Factors	Mitigation Measures
<p>Foreign Exchange Rates</p> <p>In addition to risks related to sales, marketing, inventory management of feedstock and products, and delivery, currency exchange rate fluctuations pose a significant risk to GGC's overall performance. This is because product purchases and sales are conducted in US dollars (USD), making the company inherently exposed to financial exchange rate risks that cannot be entirely mitigated.</p>	<ul style="list-style-type: none"> • Entering financial arrangements with commercial banks, including forward contracts or options, to provide financial risk protection (hedging) during 2023 at exchange rates not lower than the budget rates with acceptable tolerance rates or rates endorsed by the RMC (Risk Management Committee). • Managing foreign currency revenues and expenses by aligning income and expenditures in US dollars to naturally offset exchange rate risks (natural hedge). • Seeking other financial tools from commercial banks to prevent risks borne by volatile exchange rates. • Putting up USD forward sales contracts to cover up invoices with excess value by selling the USD in advance at a higher rate than recorded in the books to minimize foreign exchange losses in the profit/ loss account. • Closely monitoring exchange rate markets and exercising hedging with the available financials tools.
<p>Subsidiaries Performance</p>	<p>Risks associated with the business performances of GGC Group subsidiaries are also crucial. The following mitigation measures were therefore put in place.</p> <ul style="list-style-type: none"> • Closely evaluating and analyzing market situations, managing the product-to-feed margin (P2F), ensuring adequate feedstock inventory, implementing plant improvement plans, enhancing corporate governance management, and addressing key risk factors in collaboration with companies within the GGC Group on a monthly basis. Additionally, continuously reporting performance or reporting immediately when there are significant impacts on business operations to the Company's management.
<p>Cybersecurity</p> <p>The increasing prevalence of cybercrime has introduced a wide range of sophisticated attack methods and threats, often leveraging new technologies across multiple channels. As business operations evolve, organizations are increasingly adopting digital technologies to enhance efficiency and competitiveness. However, this digital transformation also raises the potential risk of GGC becoming a target of cyberattacks.</p>	<ul style="list-style-type: none"> • Educating and communicating with executives and employees about cyber security through GGC IT News. • Conducting a Cyber Security Online training course for executives and employees, ensuring full participation and emphasizing the completion of assessments to evaluate understanding of cyber security. • Assessing cyber security knowledge and awareness across the organization by conducting phishing tests. • Promoting phishing awareness among executives and employees through various channels, including company emails, the Line application, and meetings organized by the Human Resources and Corporate Support teams responsible for managing GGC's cyber security systems. • Integrating cyber security awareness into GGC's core culture by leveraging communication from Culture Change Agents within each department. • Collaborating with the GC Group to implement an information security management system aligned with international standards. Continuously monitoring government measures, laws, and regulations related to IT security. Regularly conducting cyberattack response drills, IT system recovery exercises, and periodic evaluations of cyber security measures to ensure their effectiveness.

Strategic Risk

Risk Factors	Mitigation Measures
<p>Key Project Operations</p> <p>GGC has established strategic plans for its key projects, including the continuation of the Nakhon Sawan Biocomplex Phase 2. This project involves the construction of infrastructure, power generation systems, steam and water systems, and wastewater treatment facilities to support future biochemicals and bioplastics industries in alignment with the company's long-term strategic goals.</p> <p>Additionally, GGC is conducting studies to enhance the value of Methyl Ester and Fatty Alcohols by transforming them into higher-value products and diversifying the company's product portfolio.</p> <p>Given the objectives of these key projects, GGC may face obstacles that could impact its strategic plans. To address these challenges, GGC has implemented risk mitigation measures to ensure the successful execution of its key project operations.</p>	<ul style="list-style-type: none"> • Closely monitor the progress of key projects on a monthly basis, providing critical updates to the Risk Management Committee and offering recommendations for joint decision-making to ensure project goals are achieved. • Track market trends, potential changes in demand, and incremental supply closely. • Monitor trade policies, trade barriers, government renewable energy promotion policies, and energy policies to support Thailand's transition toward clean energy and the achievement of Net Zero Emissions, reducing greenhouse gas (CO2) emissions. • Conduct preliminary market demand assessments with strategic partners and target customer groups. • Explore alternative products as contingency plans if the primary product objectives cannot be achieved according to the plan, and study alternative markets for each product type.
<p>Net Zero Readiness</p> <p>To establish global leadership in sustainability, GGC has committed to achieving Net Zero greenhouse gas emissions. The Company's medium-term target is a 20% reduction in emissions by 2030, with the ultimate goal of Net Zero emissions by 2050. Addressing the risks associated with these objectives involves overcoming challenges in implementing carbon reduction initiatives through three core strategies: efficiency-driven, portfolio-driven, and compensation-driven approaches. Success will also depend on effectively navigating government policies, including regulatory frameworks and supportive measures.</p>	<ul style="list-style-type: none"> • Advancing decarbonization efforts through a dedicated task force, with monthly progress monitoring, comprehensive reporting, and collaborative decision-making to ensure project objectives are met. • Supporting energy reduction initiatives within factories and integrating energy conservation as a key organizational performance indicator. • Shifting the portfolio toward low-carbon businesses and products, including investments in bioproducts and environmentally friendly solutions. • Monitoring and analyzing trends and impacts related to advancements in greenhouse gas reduction technologies on an annual basis. • Tracking the progress of reforestation projects by consulting government forestry experts and incorporating their recommendations to align with project targets. • Collaborating with government agencies to propose legislation, regulations, and supportive policies related to decarbonization.
<p>Personnel and Organization</p> <p>GGC must ensure readiness across its workforce, organization, and culture to adapt to evolving business models and work practices. This preparation is critical to strengthening competitiveness and achieving sustainable growth.</p>	<p>People</p> <ul style="list-style-type: none"> • Developing a comprehensive personnel development roadmap to establish frameworks for workforce growth aligned with the Company's strategic expansion. • Promoting workforce diversity and ensuring employee skillsets align with evolving and diverse job requirements. • Facilitating interdepartmental knowledge sharing to enhance employee capabilities and prepare for future business challenges.

Risk Factors	Mitigation Measures
	<p>Organization</p> <ul style="list-style-type: none"> Strengthening organizational resilience, agility, and efficiency to adapt to dynamic conditions, including fostering cross-functional collaboration. Implementing flexible and adaptable work practices, such as a "Work from Anywhere" approach, to support the New Normal lifestyle. <p>Corporate Culture</p> <ul style="list-style-type: none"> Continuously fostering and strengthening the organization's culture by promoting awareness, understanding, and consistent implementation among employees at all levels. The objective is to ensure employees consistently demonstrate the Company's 4 Core Behaviors in their daily activities.

Emerging Risk

Risk Factors	Mitigation Measures
<p>Biodiversity Loss from Palm Oil Plantation</p>	<ul style="list-style-type: none"> Develop an EU Deforestation Regulation (EUDR) Statement and obtain external certification to assess potential impacts and identify opportunities for market expansion within the European Union. Continuously monitor and report on EUDR-related activities. Allocate reserve funds to cover operational expenses for exporting products to the European Union and to manage potential future increases in the cost of sourcing high-quality raw materials. Set guidelines for supply chain management whereby GGC integrates Quality, Security, Safety, Health, Environment, Finance, and Social Responsibility, which covers biodiversity management issues, into the partner selection process and annual supplier assessment. Conduct a study of biodiversity risks in terms of operations and activities in GGC's supply chain, as well as operational risks and activities in GGC's supply chain towards biodiversity and the environment. Create a plan to support biodiversity risks that may be clearly different in each area, according to the principle of mitigating impacts on biodiversity according to the Mitigation Hierarchy, which consists of avoiding interference with biodiversity and restoring the forest to a better condition. Carry out the Sustainable Palm Oil Production and Procurement: SPOPP project in collaboration with the German International Cooperation Organization Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) and the Thailand Oil Palm Smallholder Academy (TOPSA), which is a project that promotes small farmers who grow oil palm in Thailand to operate according to set standards to achieve the Roundtable on Sustainable Palm Oil (RSPO) certification, which is a principle for growing palm oil that avoids deforestation and is a guideline for sustainable palm cultivation to reduce risks to the environment and society.

Risk Factors	Mitigation Measures
Feedstock Shortages	<ul style="list-style-type: none">• Secure alternative sources of palm oil feedstock, both domestically and internationally.• Develop efficient feedstock management plans.• Enhance products that use palm oil feedstock by improving quality and increasing market value.• Explore and expand business opportunities from oleochemical products to downstream products within higher-value segments and more diverse industries. This approach helps diversify risks and opens opportunities to collaborate with a broader range of new customers.• Strengthen supply chain management by working closely with capable partners to ensure sufficient feedstock inventory for year-round production.

GGC believes that implementing the outlined risk management strategies and mitigation measures will effectively minimize risks and create new business opportunities for sustainable growth. These efforts will also enable GGC to achieve its business objectives in alignment with its strategic direction and plans.



3. Driving Business Toward Sustainability

3.1 Sustainability Policies and Targets

3.1.1 Sustainability Management Policies and Targets

GGC Group is committed to conducting business in accordance with sustainable development guidelines to become a leading company in the oleochemical business with readiness to drive the power of creativity for sustainable value by enhancing trust among stakeholders through operational excellence, transparency, fairness, and relentless innovation. Through its sustainability management framework, the guidelines align GGC Group with international standards. GGC's operating policies are as follows:

- 1 To comply with applicable laws and regulations of each country where it operates and to respect international practices.
- 2 To maintain economic, social, and environmental balance, also taking into consideration stakeholders' expectations in operating for sustainable growth.
- 3 To foster awareness of GGC Group's sustainability management policy among business partners, customers, and consumers and to promote the application of sustainable practices to enhance operations while minimizing impacts potentially caused by operations throughout the value chain.
- 4 To promote continuous development of innovative processes and products that sustainably benefit the society and environment.
- 5 To adhere to the principles of being a good corporate citizen, able to leverage knowledge, expertise, and experience of GGC Group to help enhance the quality of life.
- 6 To transparently disclose policies, management approaches, and performance outcomes and to be a role model whose behavior favors a business culture that values sustainable operations.

Executives and employees of GGC Group are required to support, drive, and comply with the established sustainability policies and management framework.



3.1.2 Sustainability Strategy

As a leading green chemical company, the Company is advancing organizational initiatives that align with the United Nations' Sustainable Development Goals (SDGs). This comprehensive strategy integrates economic, social, and environmental dimensions, reinforcing confidence in the company's commitment to sustainable growth while generating value and elevating operational standards to achieve recognition on both national and international stages. As part of its vision for long-term sustainability, GGC has adopted a strategic framework grounded in the principles of corporate sustainable development, commonly referred to as "ESG." This framework underscores accountability across three critical pillars: Environment, Society, and Governance. The specifics of this approach are as follows:

1) Environment:

GGC has developed a strategic plan and set targets for reducing greenhouse gas emissions, referred to as the Decarbonization Roadmap. The goal is to achieve a 20% reduction in emissions by 2030 and reach Net Zero greenhouse gas emissions by 2050 for Scope 1 and 2, while also halving Scope 3 emissions. To support these objectives, a dedicated subcommittee (Workstream) has been appointed under the Sustainability Development Committee to oversee and drive sustainability initiatives. GGC is committed to becoming a global leader in sustainability through collaboration with all sectors, guided by its Climate Strategy. This strategy focuses on three key areas:

1.1 Risks and Opportunities: In alignment with the National Determined Contributions (NDCs) approach to limit global temperature rise to no more than 2 degrees Celsius (2DS), as outlined by the International Energy Agency (IEA) following the COP 21 (21st Session of the Conference of the Parties) in Paris, France, and COP 26 in Glasgow, Scotland—where the target was further tightened to 1.5 degrees Celsius—GGC has conducted a comprehensive analysis of climate change impacts. This includes identifying and assessing potential risks and opportunities associated with climate change, which form the foundation for governance, strategy development, and climate action plans that adhere to international standards.

GGC's risk management efforts are transparently disclosed to provide valuable insights for investors and stakeholders, in line with the guidelines of the Task Force on Climate-Related Financial Disclosures (TCFD). These disclosures comprehensively address physical risks, transition risks, and opportunities arising from climate change, in accordance with global standards.

1.2 Decarbonization Pathway: GGC has developed strategic initiatives to reduce greenhouse gas emissions, with a target of a 20% reduction by 2030 and achieving Net Zero emissions by 2050 for Scope 1 and Scope 2 emissions. Additionally, GGC aims to reduce Scope 3 emissions by half. These objectives are pursued through three core approaches: the Efficiency Driven concept, which focuses on enhancing operational efficiency, reducing waste, and utilizing low-carbon or renewable energy sources; the Portfolio Driven concept, which involves restructuring the business portfolio toward low-carbon products and avoided emissions products, supporting investments in environmentally friendly ventures such as palm-derived products like Fatty Alcohol Ethoxylate (FAEO), high-value products, and sustainable products; and the Compensation concept, which incorporates natural and technological carbon absorption methods, including carbon offset activities, nature-based solutions, and technology-based solutions.

1.3 BCG Integration: GGC incorporates the three aspects of the Bio-Circular-Green (BCG) Economy Model. The bioeconomy emphasizes creating high-value products from biological resources, connecting seamlessly with the circular economy, which prioritizes the maximum reuse of materials and efficient waste and wastewater management. This approach is further integrated with the green economy, which aims to balance economic growth, social development, and environmental conservation, achieved through life-cycle assessments (LCA) of products.

2) Society:

GGC aligns its corporate social responsibility (CSR) initiatives with the Sustainable Development Goals (SDGs) to achieve a balance between business growth and addressing social and environmental challenges sustainably. The Company prioritizes collaboration with stakeholders across the supply chain through a two-part operational strategy as follows:

2.1 Transforming CSR to CSV and SE: GGC is transitioning from traditional CSR practices to initiatives focused on Creating Shared Value (CSV) and Social Enterprise (SE) projects. These efforts aim to drive sustainable development in collaboration with society and communities throughout the supply chain.

2.1.1 Creating Shared Value (CSV) Projects: An example of this initiative is the Sustainable Palm Oil Production and Procurement (SPOPP) project, conducted in partnership with the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) in Thailand. The project seeks to enhance sustainable palm oil production and procurement practices while improving the quality of life for palm oil farmers in Thailand.

2.1.2 Social Enterprise (SE) Projects: One notable project is the Health & Personal Care Product initiative, which involves building knowledge, developing hygiene product formulations, and promoting marketing efforts for the Koh Kok community enterprise in Rayong Province. Operating under the Contribution to Society plan, this initiative serves as a model for expanding and fostering development in other communities in the future. The support provided to the Koh Kok community enterprise serves as a flagship example of social enterprise (SE) projects under the Pracharath Rak Samakkee Rayong program, supported by GGC and PTT Global Chemical Public Company Limited (GC).

2.2 Compliance with Human Rights Principles and Regulations: GGC is committed to upholding human rights principles and complying with applicable regulations through comprehensive human rights management practices across the value chain. These practices are guided by the United Nations Guiding Principles on Business and Human Rights (UNGP) to prevent and mitigate human rights violations throughout GGC's supply chain. This includes employees within the GGC Group, related businesses (joint ventures), business partners (suppliers, contractors, and customers), and surrounding communities. For suppliers, the focus is currently limited to 1st Tier suppliers, such as palm oil mills and extraction facilities, and does not yet extend to 2nd Tier suppliers such as palm farmers. GGC conducts annual monitoring and reporting on its human rights performance while actively raising awareness among stakeholders to prevent potential human rights violations.

3) Governance:

GGC conducts honest, transparent, and fair business with constant innovation and with a sustainability management framework to ensure conformance to international standards and applicable national and international laws and regulations

- **Compliance with Domestic & International Standards: GGC has established targets and operational plans to achieve sustainable development certifications at both the national and international levels. The key initiatives for sustainability disclosures in 2024 include:**

- o Evaluation and ranking in the S&P Global Yearbook 2024.
- o Participation in the Carbon Disclosure Project (CDP) to assess climate change management.
- o Membership in the United Nations Global Compact (UNGC) Sustainability assessments within the business value chain by EcoVadis Ratings.

These efforts enhance GGC's credibility and commitment to sustainable business practices, reinforcing its reputation as a company dedicated to operating under good governance principles. By considering the interests of all stakeholders, GGC aims to achieve balanced growth that integrates business profitability and socio-environmental development.

3.2 Managing Impacts on Stakeholders across the Value Chain

3.2.1 Business Value Chain and Stakeholder Analysis in the Value Chain

In GGC's supply chain management, guidelines were laid down for managing and controlling risks concerning sustainability throughout the value chain. These guidelines suggest measures for supplier selection and registration process through relationship management and distribution of the Code of Business Conduct Handbook to suppliers. The guidelines also advise doing ESG risk screening, supplier ESG risk management, and supplier identification, which has become part of the annual supplier assessment and contributed to supplier promotion and support for their capacity development through various projects to create suppliers' awareness and help raise their social and environmental responsibility. The guidelines also cover feedstock management together with logistics and warehouse management.

Supplier Selection and Registration Process

GGC's Credit Rating Committee oversees the selection and registration of suppliers. Criteria have been established for the supplier selection process, encompassing technical expertise, quality, safety, occupational health and environment, financial stability, and social responsibility. Additionally, the Code of Business Conduct Handbook, regularly reviewed and updated by the Corporate Governance and Sustainable Development Committee, is consistently communicated to all relevant parties. The handbook outlines behavioral guidelines for employees and suppliers, covering business ethics, quality, security, safety, occupational health, and ESG principles. It also addresses human rights and labor considerations, ensuring compliance with applicable laws, regulations, requirements, criteria, and standards. These efforts enhance suppliers' understanding of socio-environmental responsibility in their operations, thereby increasing transparency and accountability, while fostering greater confidence among all stakeholders throughout the supply chain.

GGC conducts annual supplier assessments, evaluating with five factors such as the industrial environment, flexibility and bargaining power, financial performance, feedstock deliverability, and overall competitiveness. For key suppliers, GGC extends the assessment to include sustainability considerations, focusing on environmental, social, and governance (ESG) aspects. This includes developing, supporting, and monitoring their sustainability management practices, with a particular emphasis on regulatory compliance, business ethics, human rights, safety, occupational health, and environmental stewardship. If an assessment identifies key suppliers as high-risk partners, GGC provides guidance and recommends corrective actions, which are subsequently monitored and reassessed. However, if a supplier fails to implement the necessary improvements within the specified timeframe, GGC may take measures such as limiting raw material orders, suspending procurement activities, or ultimately removing the supplier from the Company's approved supplier list.

GGC, in collaboration with PTT Global Chemical Public Company Limited (GC), organizes an annual Supplier Conference to consult with and discuss strategies for addressing challenges and improving joint operations with suppliers under the Supplier Promote and Support on Capacity Development initiative. The theme for the 2024 conference, "Thriving Together Amid Economic Pressures: Enhancing Cost Competitiveness, Digital Innovation, and Sustainability," reflects a focus on critical priorities. The conference emphasizes communication with suppliers on business directions, business ethics, the no-gift and no-gratuity policy, and the importance of the whistleblower system for reporting and resolving complaints. It also highlights the value and advantages of sustainable business practices for suppliers and introduces various digital systems utilized in the procurement process.

Detailed information about the Supplier Selection and Registration Process, as well as the Supplier Promote and Support on Capacity Development Program, is available in the 2024 Integrated Sustainability Report under the 'Supply Chain Risk Management' section and on GGC's website under the 'Value Chain Management' section

Feedstock Management

GGC aims to become a globally recognized sustainable company by aligning its operations with sustainability policies and the United Nations Sustainable Development Goals (SDGs) throughout its supply chain. As part of this commitment, GGC has developed plans to support smallholder oil palm farmers in Thailand in complying with and achieving certification under the Roundtable on Sustainable Palm Oil (RSPO) standard. This initiative is a key component of the company's green procurement practices. Additionally, GGC actively promotes the creation of green networks by supporting suppliers that meet the Green Industry (GI) standard and encouraging the adoption of eco-friendly goods and services, such as those with green labels. The Company also prioritizes sourcing products and services from suppliers certified under Green Industry and ISO 14001.

To ensure effective decision-making, GGC has established a comprehensive feedstock selection process and entered into long-term procurement agreements with reliable suppliers. For agricultural feedstock, particularly palm-based products, GGC mandates the use of RSPO-certified materials. This approach not only strengthens the company's credibility among external stakeholders but also mitigates risks associated with unsustainable palm cultivation. Furthermore, it facilitates knowledge transfer to farmers on sustainable palm cultivation practices, contributing to their improved livelihoods. In 2024, products incorporating RSPO-certified palm oil include fatty alcohols and refined glycerine.

In 2024, GGC, in collaboration with the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) and the Thailand Oil Palm Smallholder Academy (TOPSA), will continue the Sustainable Palm Oil Production and Procurement (SPOPP) project for the third consecutive year. The project aims to assist smallholder palm oil farmers in Thailand in meeting RSPO standards and achieving certification within the year. GGC monitors the project's progress annually. Currently, the initiative is being implemented in four pilot provinces: Krabi, Trang, Phang Nga, and Chumphon. The project involves six palm oil mills and a network of 1,077 farmers, surpassing the target of 1,000 smallholder farmers to be RSPO-certified by 2024.

Further details about RSPO-certified palm-based products and the Sustainable Palm Oil Production and Procurement project can be found in the 2024 Integrated Sustainability Report under the Feedstock Management section.

Logistics and Warehouse Management

GGC collaborates with suppliers to transport feedstock by ship to the suppliers' storage facilities and subsequently by truck to GGC's plants. These transactions are conducted under Delivered Duty Paid (DDP) terms, whereby the seller fulfills their delivery obligations upon delivery to GGC's designated location. This approach enhances transportation efficiency and reduces greenhouse gas emissions compared to overland transportation directly from the feedstock source.

GGC has successfully reduced rental costs for external warehouses by optimizing the use of its own feedstock storage tanks, thereby decreasing reliance on external oil storage facilities. This initiative not only lowers storage costs but also minimizes dead stock and enhances inventory management efficiency. Additional information about the project aimed at improving transport and warehouse management can be found under Logistics and Warehouse Management.

To further this effort, GGC conducted an in-depth analysis of the business value chain to identify various ongoing activities, including feedstock sourcing, the production process, and marketing, as well as the stakeholders involved in each activity. Detailed information is available in the 2024 Integrated Sustainability Report under Creating Shared Business Values and on the website under Stakeholder Engagement.

3.2.2 Materiality Management

GGC assessed key issues essential to sustainable development while addressing both the positive and negative expectations of all stakeholder groups across the value chain. This assessment covers environmental, social, economic, and governance (ESG) dimensions, following the reporting guidelines of the Global Reporting Initiative (GRI). Details of the materiality assessment process are provided in the 2024 Integrated Sustainability Report under the section "Materiality Assessment Process."

3.2.3 Value Creation toward Sustainability

GGC is committed to improving its marketing capability and creating value toward sustainability, encompassing economic, social, and environmental dimensions. GGC's comprehensive approach to economic development is structured around three key aspects:



BIOECONOMY



**CIRCULAR
ECONOMY**



**GREEN
ECONOMY**

1. Bioeconomy Development:

GGC focuses on driving business growth related to agricultural feedstock, enhancing its competitiveness while contributing to the economic and social development of its suppliers in Thailand. This includes ensuring fair treatment of suppliers and labor throughout the supply chain. Additionally, GGC prioritizes investments in expanding its biochemicals product line to address stakeholder demands through innovative product development. Examples include utilizing fatty alcohols to produce chemicals for home and personal care products, as well as high-value and sustainable products. GGC also engages in open innovation with government agencies, such as development of less flammable bio-transformer oil from palm oil. This initiative alleviates surplus palm oil in the market, increases its value, and generates additional income for Thai oil palm farmers.

2. Circular Economy Development:

GGC emphasizes resource efficiency and effective waste management, focusing on waste reduction and systematic water management. The company adopts the 5Rs principles; Reduce, Reuse, Recycle, Refuse, and Renewable, to manage waste. Policies have been implemented to reduce waste volumes, targeting zero hazardous and non-hazardous waste to landfill (Zero Waste to Landfill). Notable initiatives include the Waste-to-Biogas project, which converts waste into biogas as an alternative to fossil fuels, and projects to improve filtration efficiency in cooling towers, such as the Increase Time for Backwash Side Stream Filter project. Additionally, GGC has enhanced its water management and wastewater treatment systems, including the Integrated Fixed Activated Sludge (IFAS) system, which has significantly reduced annual waste disposal costs and contributed to lowering greenhouse gas emissions.

3. Green Economy Development:

GGC is committed to improving production processes and developing products that support the Net Zero goals. This involves investing in and optimizing operations to enhance efficiency and reduce greenhouse gas emissions. GGC manages its product portfolio, starting from upstream production, by calculating emissions using the Life Cycle Assessment (LCA) methodology and applying the 5Rs principles. These efforts have resulted in the development of low-carbon products and the exploration of advanced technologies for carbon capture and offsetting emissions that cannot be eliminated during production. Additionally, GGC has begun collaborating with partners on research and development for new products, such as bio-solvents under the brand “Biosovell,” made from palm-based feedstock. These bio-solvents serve as environmentally friendly and user-safe alternatives to petroleum-based chemicals like Xylene A100 and A200. Biosovell is expected to unlock new market opportunities for GGC across various industries, including agrochemicals, paints and coatings, adjuvants, and industries requiring diverse solvent products. This initiative will expand GGC’s product portfolio while addressing evolving consumer needs.

3.3 Managing Environmental Materiality

Quality, Security, Safety, Occupational Health, Environment, and Business Continuity Policy

GGC is committed to becoming a global leader in the chemical industry by integrating innovation and environmentally friendly technologies. The aim is to serve as a model organization for sustainable development and growth, considering economic, social, and environmental dimensions. Efforts focus on continuously improving operational efficiency in quality, security, safety, occupational health, environmental stewardship, and business continuity. This policy encompasses all operations, engaging executives, employees, stakeholders at all levels, suppliers, and contractors.

- Ensure compliance with laws and regulations regarding quality, security, safety, occupational health, environmental management, and business continuity, along with adherence to international standards.
- Employ quality management tools, knowledge management, and productivity improvements to enhance customer satisfaction and drive the development of environmentally friendly innovations.
- Mitigate risks to prevent harm, workplace illnesses, accidents, injuries, and property damage while fostering personal safety and cultivating a safety culture through the B-CAREs program, which includes Process Safety Management (PSM) to safeguard well-being.
- Address security threats by establishing emergency management protocols to protect lives, assets, data, and organizational continuity.
- Promote occupational health and a positive working environment, encouraging health and happiness among employees.
- Identify, evaluate, and prioritize environmental issues to create operational plans that prevent and mitigate impacts on the environment, ecosystems, and biodiversity. Operations incorporate an integrated environmental management system that addresses energy, air, water, and waste, ensuring the most efficient and sustainable use of resources throughout the supply chain in alignment with the circular economy model. Commitment to enhancing greenhouse gas reduction efficiency and improving climate adaptability supports the goal of achieving Net Zero emissions by 2050. Furthermore, GGC fosters an environmental culture by raising awareness and encouraging employees and stakeholders to actively participate in its sustainability efforts.

Executives, employees, stakeholders at all levels, suppliers, and contractors share responsibility for achieving objectives and targets. They are expected to lead by example in maintaining and improving systems for quality, security, safety, occupational health, environmental management, and business continuity. Resources are allocated to enable effective implementation of this policy. Participation is promoted through training and communication to ensure collaboration within and across organizations, contributing to GGC's long-term sustainability.

Greenhouse Gas Management

In line with an efficiency-driven strategy and waste reduction goals, resources are allocated to modify energy consumption in processes and operations. Plans are also in place to invest in clean energy innovation and technology, which are critical for achieving greater energy efficiency. Major projects implemented during 2024 included:

- **Renewable Energy from Biogas Project:** This project achieved significant energy cost reductions of over 19.75 million baht while lowering Scope 1 greenhouse gas emissions by more than 15,300 tons of CO₂ equivalent per year.
- **Coating Pump for Cooling Water Pump Efficiency:** Applying an internal coating to cooling water pumps reduced friction and smoothed the surface, enhancing water flow and minimizing electricity consumption. This initiative resulted in annual energy savings of 121,721 kWh, a reduction of 52 tons of CO₂ equivalent per year, and cost savings exceeding 450,000 baht.
- **Optimize Cooling Fan Mode Project:** By halting the operation of one cooling fan during periods of low ambient temperatures (rainy and winter seasons) while maintaining temperatures above the set point, this project achieved annual energy savings of 197,040 kWh, reducing greenhouse gas emissions by 83 tons of CO₂ equivalent per year, with cost savings exceeding 729,000 baht.
- **Optimize Bottom Temperature of Methyl Ester Drying Project:** Adjusting the bottom temperature of heat exchangers in the methyl ester drying unit reduced fuel oil carry-over and energy consumption. The project saved 534 tons of steam annually, which corresponds to a reduction of 93.29 tons of CO₂ equivalent per year, and generated cost savings of over 1,254,000 baht.
- **Advanced Process Control at Methanol Rectification Project:** The installation of an Advanced Process Control (APC) system enhanced the efficiency of methanol rectification by optimizing steam utilization, maintaining column balance, and ensuring the desired distillation quality. This project reduced steam usage by 4,870 tons annually, equivalent to a reduction of 850.79 tons of CO₂ equivalent per year, and saved over 8,665,000 baht in costs.
- **Circulate Pump Optimization for Transesterification Reactor:** Optimizing the circulate pump in the transesterification reactor reduced electricity consumption in Unit 1100 by 116,880 kWh annually, equivalent to a reduction of 42.11 tons of CO₂ equivalent per year, with cost savings exceeding 440,000 baht.
- **Advanced Process Control for Distillation Columns:** The implementation of an Advanced Process Control system for the distillation column maximized steam efficiency while maintaining column balance and ensuring consistent distillation quality. This project reduced steam usage by 563 tons annually, which translates to a reduction of 98.36 tons of CO₂ equivalent per year, with cost savings exceeding 844,500 baht.

Energy Management Performance

	2021	2022	2023	2024	2024 Target
Energy consumption per ton of production (megawatt hour per ton of production)	2.418* 0.42**	2.7835* 0.41**	3.1673* 0.35**	2.888* 0.336**	<3.147* <0.343**
Reduced energy consumption (%)	+13.3*	+15.12* 2.38**	+13.79* 14.63**	8.22* 2.11**	0.65* 0.65**

* Methyl Ester Plant 1

** Methyl Ester Plant 2 (Methyl Ester and Refined Glycerins)

In addition to reducing greenhouse gas (GHG) emissions within the organization, GGC actively explored opportunities and allocated resources to carbon compensation and capture through both nature-based and technology-based solutions. Notable initiatives in 2024 included :

Care the Wild project, Plant and Protect project, where GGC participated in reforestation efforts in Amphoe Thong Pha Phum, Kanchanaburi. Over 4,000 trees were planted across 20 rai of land, achieving a reduction of 36,000 kilograms of carbon dioxide equivalent per year.

Green Heart project in Amphoe Ban Chang, Rayong, involved the planting of 3,200 trees over eight rai, resulting in a reduction of 28,000 kilograms of carbon dioxide equivalent per year.

The SPOPP CLIMA project expanded on the SPOPP initiative, positioning GGC as a Carbon Credit Trader by facilitating the sale of carbon credits in the agricultural sector, directly connected to its upstream operations, particularly oil palm cultivation.

The Carbon Credit RECs Trading project, which promoted the study and application of carbon credits and Renewable Energy Certificates (RECs). These efforts aim to generate revenue while supporting the achievement of greenhouse gas reduction goals. Additionally, GGC and GC collaboratively studied and planned the implementation of Carbon Capture and Storage (CCS) technology. Efforts also included a carbon offset plan and an exploration of opportunities to purchase Renewable Energy Certificates (RECs) and carbon credits.

Green House Gas Emission Performance

	2021	2022	2023	2024
GHG emission volume, Scope 1	30,509	29,817	28,450	24,929
GHG emission volume, Scope 2	61,359	67,955	73,709	71,328
GHG emission volume, Scope 1 and 2	91,868	97,772	102,159	96,257

Remarks: The data on greenhouse gas emissions (Scope 1 and Scope 2, measured in tons of carbon dioxide equivalent) covers the period from January 1 to December 31, 2024. The data is based on the PTT GHG Tool (L1) and has not yet undergone annual verification.

Waste Management

GGC has implemented waste management practices based on the 5Rs principles to effectively control waste generation. These principles include Reduce (minimizing waste generation), Reuse, Recycle, Refuse (avoiding the use of substances harmful to natural resources and the environment), and Renewable (utilizing low-carbon, renewable energy sources). These measures aim to mitigate environmental impact while reducing waste disposal costs. In 2024, GGC remains committed to its goal of achieving Zero Waste to Landfill for both hazardous and non-hazardous waste through key initiatives such as:

- **Waste to Biogas Initiative:** GGC is committed to maximizing the value of waste to minimize the volume sent to landfills. As part of this commitment, the Waste to Biogas Initiative has been implemented. The project utilizes waste and wastewater generated from production processes in a biological treatment system to produce biogas. This biogas serves as a substitute for fuel oil in the Hot Oil Boiler and Steam Boiler, significantly reducing GGC's reliance on fuel oil consumption and imports. Waste and wastewater for this initiative are sourced from both of GGC's facilities (Plant 1 and Plant 2). This initiative aligns with GGC's strategic objective of achieving Zero Waste to Landfill, ensuring that no hazardous or non-hazardous waste is sent to landfills. It also helps reduce waste transportation and disposal costs, as well as energy procurement expenses.
- **Reducing Wastewater from Maintenance Activities:** To minimize wastewater requiring off-site disposal, GGC has adopted Reduce principles. By assessing the concentration and composition of wastewater from maintenance activities in advance, GGC prepares storage tanks to segregate wastewater at the source. This ensures that only compliant wastewater enters the treatment system, avoiding disruptions. As a result of this initiative, GGC reduced external wastewater disposal by 550 cubic meters—a 90% reduction compared to similar activities in 2022—leading to cost savings of over 300,000 THB.
- **Optimizing Water Efficiency in Methanol Condenser Cleaning:** GGC has enhanced water efficiency during the cleaning of methanol condensers by implementing Reduce principles. Baseline water usage data was collected, and wastewater from the cleaning process was routed into IBC storage tanks. This wastewater was then systematically integrated into the treatment system to ensure compliance and efficiency. The activity generated 2.3 cubic meters of oil-contaminated water, which was effectively managed through planned treatment. This approach resulted in zero external wastewater disposal and saved 17,000 THB per cleaning cycle.
- **Glycerine Residue Reduction Initiative:** GGC has taken steps to reduce the disposal of glycerine residue by extending the retention time of glycerine residues produced during the glycerine distillation process. This adjustment allowed for better separation of the liquid and solid phases, enabling the liquid phase to be processed into Technical Glycerine Grade B, a by-product sold to generate additional revenue. This initiative reduced the volume of glycerine residue (sludge) requiring disposal by 66% while generating 816,000 THB in additional revenue. Additionally, it lowered GGC's disposal costs by 1,428,000 THB.

- **Enhancing Cooling Tower Filtration Efficiency:** The Company has adopted value-added recycling (Recycle) practices and renewable, low-carbon energy (Renewable) solutions to optimize water usage in the cooling system. This initiative focuses on extending the backwash interval for the Side Stream Filter, thereby improving filtration efficiency and reducing the frequency of water replenishment. Since its implementation in January 2567, the project has significantly decreased Clarified water consumption by 1,747.40 cubic meters and achieved annual cost savings of 41,000 THB in water procurement.
- **Recycling Cooling Blowdown for Water Optimization:** By leveraging value-added recycling (Recycle) methods, the Company has optimized water usage in the wastewater treatment system. Cooling Blowdown water is now utilized as a substitute for Clarified water in urea mixing processes. This innovation has reduced Clarified water consumption by an average of 1 cubic meter per day, resulting in annual cost savings of 9,000 THB.
- **Sustainable Regeneration of Activated Carbon:** Under value-added recycling (Recycle) practices, the Company has developed a sustainable solution for managing spent activated carbon. This involves regenerating the spent carbon for reuse, replacing the need for Fresh Activated Carbon. The initiative yields approximately 48 tons of Regenerated Activated Carbon annually, reducing disposal costs by 72,000 THB per year.
- **Eliminating Sodium Hydroxide in Plate Cleaning:** The Company has embraced the principle of refusing environmentally harmful substances (Refuse) to optimize the cleaning process for methanol and fatty acids from the Plate Methanol Condenser. Pilot-scale tests explored alternative cleaning methods using hot water, plain water, oil, and sodium hydroxide (NaOH). The results demonstrated that hot water, heated to 50–60°C, effectively cleans plates with 100% efficiency while preserving the properties of raw materials. Additionally, fatty acids recovered during this process are reintegrated into production (Reprocess), minimizing raw material losses, eliminating the disposal of degraded chemicals and achieving zero chemical waste.

Water Management

Water management plays a crucial role in optimizing resource efficiency and fostering effective resource circularity. GGC has adopted the 3Rs principles; Reduce (minimizing water use), Reuse (recycling water for repeated applications), and Recycle (treating water for reuse), to enhance its operations. In addition, GGC's water management practices align with the regulatory requirements of the Map Ta Phut Industrial Estate in Rayong Province, ensuring minimal impact on local communities in the Eastern region.

In 2024, GGC implemented several key initiatives;

- **Optimizing Filtration Efficiency in cooling towers.** GGC's cooling towers operate on an open cooling system, which can introduce impurities that may clog equipment. To mitigate this, Side Stream Filters are utilized to remove impurities from cooling water before it is circulated for heat exchange within the cooling towers. These filters are equipped with a self-cleaning mechanism, referred to as Backflush or Backwash, designed to remove trapped impurities and particles. However, the backwashing process consumes clarified water, and prolonged durations can lead to excessive water usage. To address this, GGC optimized the operational intervals of the Side Stream Filter, reducing backwash durations. This adjustment has resulted in an annual reduction of approximately 1,747.40 cubic meters of clarified water, achieving cost savings of 41,115.43 THB per year.

- **Advancing Wastewater Treatment with the Integrated Fixed Film Activated Sludge (IFAS) system,** was introduced to enhance GGC's wastewater treatment capacity. This project aims to handle wastewater generated from methyl ester and fatty alcohols production plants while improving the reduction of Chemical Oxygen Demand (COD). The IFAS system, a hybrid technology, increases treatment efficiency by incorporating media surfaces for microorganisms to attach to, enabling them to process higher COD loads. This approach also reduces sludge accumulation in treatment tanks, leading to lower concentrations of Total Suspended Solids (TSS) in treated water before discharge. As a result, the project has increased the COD loading treatment capacity from 100 kgCOD/hr to 280 kgCOD/hr. Furthermore, it has significantly reduced the volume of high-concentration glycerine residue requiring disposal, delivering cost savings of 16.3 million THB annually in waste management expenses.

Water Resource Management Performance

	2021	2022	2023	2024
Water consumption per product (cubic m./product ton)	0.98* 0.90*	1.20* 1.20**	1.26* 0.78**	1.30* 1.00**
Volume of water usage (cubic m.)	282,366* 234,705**	288,894* 232,295**	313,563* 236,497**	314,959* 255,007**

* Methyl Ester Plant 1

** Methyl Ester Plant 2

Eco Friendly (Green) Products

GGC has developed a strategic growth portfolio for green products aimed at enhancing its potential and competitiveness in the oleochemicals and green chemical industries. By delivering low-carbon products to both domestic and international markets, GGC aligns its efforts with its sustainability targets for achieving Net Zero, while addressing the growing demand for a low-carbon society. Demonstrating a steadfast commitment to sustainability, GGC has continuously advanced the development of low-carbon products. For eight consecutive years, GGC has maintained ISO 14040 and ISO 14044 certifications, covering Carbon Footprint of Products (CFP).

Type of Certification	Product Group	Percentage of Revenue from Product	GHG Emissions Per Year
Low-carbon product	Fatty Alcohols Main-Cut and Fatty Alcohols Pre-Cut	33	Fatty Alcohols Main-Cut = 624.28 tonCO ₂ e Fatty Alcohols Pre-Cut = 2,408.52 tonCO ₂ e
Avoided-Emission Product	Bio-Methyl Ester: BME	60	629,747.33 tonCO ₂ e

3.4 Managing Social Materiality Aspect

Policies and Guidelines for Social Aspect

GGC is committed to creating corporate shared value (CSV) by enhancing the quality of life, economy, society, and environmental well-being of communities. Through active participation in community and stakeholder activities via CSR projects, GGC contributes to national economic and social development. In 2024, GGC continues to operate in alignment with its human rights policy, which has been formulated in compliance with applicable laws. This policy emphasizes the prevention of non-compliance and applies to employees, joint ventures, business partners, contractors, customers, and local communities. To guide its CSR initiatives, GGC has adopted a strategy focused on strength, growth, and sustainability, creating value in three key dimensions: the environment, economy, and society. Additionally, new CSR projects have been launched to foster trust among communities and stakeholders, paving the way for sustainable and mutual growth. Below is an overview of how GGC manages its social materiality aspects:

Human Rights and Fair Labor Practices

GGC is committed to conducting its business with a steadfast respect for stakeholders' human rights across the supply chain. Human rights due diligence has been carried out across all GGC operating areas, including suppliers, key contractors, customers, and traders, to identify and address any potential human rights issues affecting employees, community members, customers, partners, and contractors. Comprehensive guidelines for risk management have been established, incorporating measures to address identified issues and implement remedial actions for those affected by human rights violations. As part of this commitment, GGC has adopted a plan to conduct a thorough review of potential human rights risks within its operations and supply chain every five years. Additionally, GGC has initiated various projects to promote human rights and fair labor practices, ensuring non-discrimination toward people with disabilities and other vulnerable groups. These initiatives include:

- Sustainable Palm Oil Production and Procurement (SPOPP)** The Sustainable Palm Oil Production and Procurement (SPOPP) project is a key initiative within GGC's green procurement strategy. Palm oil and its derivatives serve as critical feedstocks in the production of methyl ester, fatty alcohols, and refined glycerine. Acknowledging the significant environmental impacts and high risks associated with palm oil production—particularly concerning labor practices and the treatment of farmers—GGC is committed to ensuring responsible and sustainable sourcing. Key issues, such as unfair labor practices, exploitation of migrant workers, and inadequate wages, are proactively addressed through rigorous standards and oversight. To mitigate these challenges, GGC prioritizes working with farmers certified under the Roundtable on Sustainable Palm Oil (RSPO) standards. These standards emphasize environmental sustainability, respect for human rights, anti-corruption measures, the prevention of sexual harassment, and the promotion of fair wages. This approach underscores GGC's commitment to safeguarding human rights across all operations, as outlined in its Human Rights Policy (detailed in Appendix 5: Corporate Governance Policy and Guidelines and Business Code of Conduct).

In 2024, GGC launched a training initiative under the TOPSA curriculum to equip farmers with knowledge about RSPO certification standards and legal requirements for sustainable palm oil cultivation. The training covered key topics, including selecting high-quality palm oil varieties, implementing scientifically informed and sustainable plantation management practices, and adopting environmentally friendly cultivation methods. Additionally, the program emphasized the importance of preserving ecosystems, conserving resources, and reducing greenhouse gas emissions, thereby strengthening farmers' capacities to produce sustainable palm oil. Through this program, 1,077 smallholder farmers completed training aligned with RSPO standards, with women representing 38% of the participants. The initiative has significantly enhanced the livelihoods of those involved while fostering positive impacts across the supply chain. GGC also set a target to support at least 1,000 smallholder farmers in achieving RSPO certification by the end of 2024.

Products Made from RPSO-Certified Palm Oil Feedstock

Products Made from RPSO-Certified Palm Oil	2021	2022	2023	2024
Methyl Ester (ME)	0*	0*	0*	0*
Fatty Alcohols (FA)	3,901	4,280	5,376	4,004*
Refined Glycerine	2,411	765	1,006	1,423*

Remarks: ME, also known as B100, is sold mostly in the domestic market without promotional campaign nor requirements for sellers to be certified for the significant trading volume as of 2021.

Staff Development

GGC is dedicated to fostering the growth and development of all employees, aiming to enhance overall workforce efficiency while ensuring job security and strengthening their connection to the organization. This commitment is achieved through tailored knowledge and skill development programs designed to suit the requirements of various roles, from executive positions to operational levels. Key projects for staff development include:

- **Data Analysis by Power BI Project:** In 2024, 44 employees participated in this program, equipping them with the knowledge to apply data analysis and effectively present information through data visualization techniques.
- **Learning Management System (LMS) via the SuccessFactors Platform:** This initiative marked an upgrade to the LMS management system in collaboration with GC, transitioning to the SuccessFactors platform, now utilized across the entire GC Group. The program emphasizes fostering continuous learning through Upskilling and Reskilling, offering access to more than 8,000 online courses. The development focuses on enhancing skills across multiple dimensions:
 - o Core Competency: Emphasizing the development of four key core behaviors.
 - o Functional Competency: Divided into Hard Skills and Soft Skills to address specific professional needs.
 - o Personal Effectiveness: Focusing on self-development to prepare employees for advancement to management roles.
- **Leadership Competency Program:** Designed around three core dimensions: People Excellence, Performance Excellence, and Future Excellence.

Safety, Health, and Environmental Management (SHE Management)

GGC has formalized a policy for managing safety, occupational health, and the environment (SHE) through the Operational Excellence Management System (OEMS). This policy aims to comprehensively and continuously enhance personal safety and process safety while building confidence among stakeholders in its performance. Additionally, GGC has developed a Five-Year SHE Plan (2021–2025), integrating its operations with international safety standards. The initiative also focuses on promoting employee knowledge and skill development through various training programs, including the Safety Orientation for Newcomers, Refresh SHE Procedure Regulation and PSM Awareness Training, and Basic Firefighting Training. Furthermore, GGC conducts annual Business Continuity Plan (BCP) drills to ensure employees fully understand their roles and responsibilities and can effectively apply strategies during emergencies. These drills simulate scenarios such as electrical short circuits resulting in fires, preparing employees to respond efficiently and effectively in critical situations.

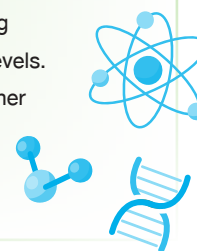
Personal Safety

- Strengthen the B-CAREs safety culture.
- Collaborate with contractors to manage contractor safety effectively.
- Promote awareness of personal risks and implement efficient measures to prevent such risks.



Process Safety

- Reinforce a strong safety culture.
- Implement Process Safety Management (PSM) principles across all levels of the company through the PSM Committee.
- Promote safety leadership among employees at all organizational levels.
- Enhance PSM techniques to further develop the capabilities of employees.



Off the Job Safety

- Improve and apply principles for safe road usage.



Emergency/Crisis Management

- Strengthen emergency and crisis management practices.



GGC has consistently implemented the Process Safety Management (PSM) system for the past five years. To further enhance operational effectiveness, external auditors have been engaged to evaluate the safety management of production processes, ensuring continuous improvement and robustness in practices. Additionally, GGC has established a PSM Taskforce to oversee and monitor safety standards within production processes. A Safety, Occupational Health, and Workplace Environment Committee has also been formed to supervise and ensure compliance with safety, health, and environmental standards across the organization. These initiatives reflect GGC's commitment to aligning with international standards and achieving its goal of becoming an accident-free organization.

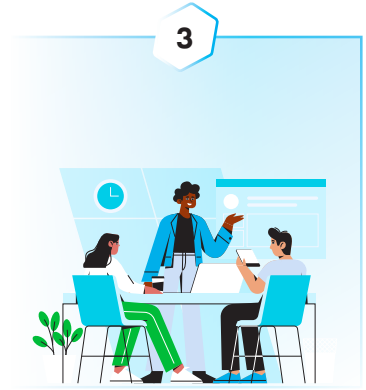
Roles and Responsibility of SHE Steering Committee



1 Define and review SHE policies, targets, and plans.



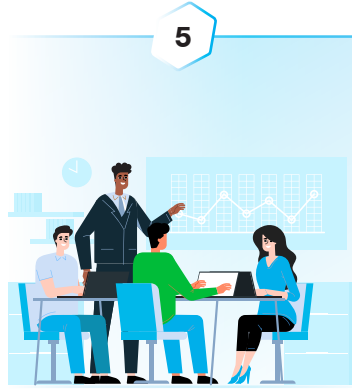
2 Supervise, support, and monitor SHE performance of related divisions to ensure conformance to international standards and GGC policies.



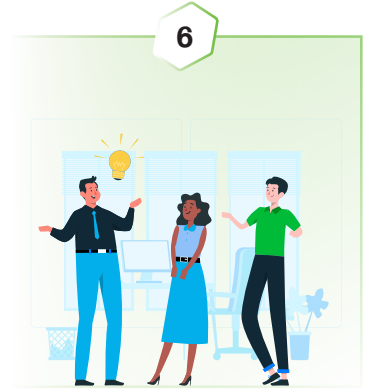
3 Review, approve, and roll out SHE guidelines and processes related to GGC operations.



4 Organize at least six meetings a year.



5 Have a quorum of at least half of the committee.



6 Appoint a subcommittee or working group as seen fit.

GGC has adopted the B-CAREs strategy to strengthen its safety culture through a structured “Leadership Model” pyramid. This model integrates policies from senior management (Leadership) into practical implementation, serving as a Role Model and emphasizing on-site execution (GGC Genba). These practices are cascaded to task and area owners (Ownership), who rigorously implement the B-CAREs JSEA and B-CAREs KYT methodologies. At the operational level (Partnership), contractors and workers are required to comply with these policies and consistently perform 5S activities upon task completion. The Partnership level has also adapted and applied this policy within their operations. Furthermore, GGC incorporates Fail Safe and Fool Proof principles into its engineering design, focusing on critical loops and implementing Top Risk Bow-Tie Protection Layers. The Partnership level is encouraged to utilize specialized tools to enhance operational safety. In 2024, the highlighted Personal Safety initiatives are:

- **The “3 Brave Men” Project:** Aims to enhance safety awareness among employees and contractors by promoting the “Brave Man Stand Up” principle, which encourages individuals to take courageous actions to improve or refine existing practices for greater efficiency. A central feature of the project is a video contest under the theme of “3 Brave Actions”: brave to stop, brave to warn, and brave to ask. Employees are invited to create and submit videos showcasing their perspectives on safety through acts of courage. The winning video will be utilized as promotional material for various internal safety campaigns and personal safety initiatives. To encourage participation and foster morale, awards are given to the contest winners.
- **B-CAREs Smart SWO Project:** Given the high-risk nature of factory operations, employees are required to obtain a work permit (Permit to Work) and include a B-CAREs JSEA with every task to ensure safety and a comprehensive understanding of associated risks. To reinforce this, the Smart SWO team conducts daily safety inspections, engaging directly with workers to discuss and evaluate their understanding of workplace risks and hazards. Each day, a designated leader oversees the inspections, which involve randomly reviewing one or two activities. This initiative has resulted in improved awareness among workers regarding risks and preventive measures, significantly reducing the likelihood of accidents. Additionally, participants in the Smart SWO inspections gain a deeper understanding of operational processes and hidden hazards, enabling them to make safety enhancements in the work environment before contractors begin their tasks.
- **Refresh SHE Procedure Regulation and PSM Awareness Training:** The SHE Committee at GGC organizes annual training sessions to refresh employees’ knowledge and understanding of process safety management, chemical management, and waste management. These sessions are conducted through the company’s Green Learning (TPM) platform to ensure compliance with safety and environmental standards and to cultivate a culture of safety and sustainability. To encourage participation, the company offers incentives, rewarding the first 40 employees who demonstrate discipline and proactiveness by completing the training.

GGC continues to prioritize process safety through its Process Safety Management (PSM) system, which has been consistently implemented for seven consecutive years. To strengthen operations, the company engages external auditors to evaluate its process safety management system. Key initiatives for 2024 include:

- **Bow-Tie Barrier Validation Checklist Project:** This project employs the Bow-Tie risk identification method to monitor and prevent process safety incidents. The Bow-Tie model serves as a tool to validate control measures (barriers) aimed at preventing and mitigating the impact of major accident events (MAEs) at the facility. The validation process includes a review of preventive maintenance (PM) procedures for protective equipment, combined with on-site inspections. Performance is assessed and categorized into two types: operations that meet standards and demonstrate strong capability, and operations requiring improvement.

- **Field Risk Assessment (FRA) & Smart SWO Project:** This initiative involves field inspections by relevant personnel to assess the condition and readiness of production and safety equipment. Employees are tasked with verifying the operational readiness of equipment, preparing detailed inspection reports, and identifying areas for improvement or potential enhancements. This proactive approach ensures the ongoing reliability of safety systems and fosters continuous operational improvement.
- **e-Permit to Work (e-PTW) Project:** This project is designed to enhance the efficiency and convenience of the work permit process. It reduces processing time while facilitating inspections and operational oversight, as all data is recorded on an online system, enabling approvals to be granted from anywhere, at any time. For contractor work approval requests, the system automatically retrieves contractor information from a database, including details of safety and occupational health training, confined space training, and specific work skills. This automation minimizes errors in the verification process and ensures accurate data management.
- **Reporting on Process Safety Management (PSM) Leading Indicators:** GGC actively communicates and monitors the reporting of Process Safety Management (PSM) leading indicators through the GGC OEMS KPI and PSM Taskforce Meeting. These reports are presented to the Operational Excellence Management team every two months by the responsible unit overseeing and managing assigned indicators.

Remarks: Detailed information about Pursuit of Sustainability is available in the Integrated Sustainability Report, separately made from the 56-1 One Report, as appeared in www.ggcplc.com/th/sustainability/home.



4. Management Discussion and Analysis (MD&A)

4.1 Management Discussion and Analysis

Executive Summary

For the performance of FY2024 compared to FY2023, Global Green Chemical Public Company Limited (“the Company”) reported total sales revenue of THB 19,006 million, increased by 7% from FY2023, a result of improvement of production volumes with greater efficiency as well as an increase in sales volume and average prices of fatty alcohols business. The Company recorded Adjusted EBITDA of THB 555 million, decreased by 32% from the previous year mainly from dropped performance of the fatty alcohols business. In FY2024, the Company had effect of Stock Gain & NRV of THB 290 million driven by an increase in product and raw material prices, particularly during the end of the year. When included the effect of Stock Gain & NRV, the Company reported EBITDA of THB 845 million. For the performance of joint venture in FY2024, the Company recorded share of loss from investment of THB 567 million primarily due to loss from the ethanol business, which is in its first year of production. As a result, the Company recorded net loss of FY2024 of THB 265 million.

For the performance of the methyl ester (ME) business in FY2024, although the selling price of methyl ester rose by 11% in line with the CPO price, the sales volume decreased by 10% from the previous year. This decline was due to the government’s announcement of the biodiesel mandatory reduction from B7 to B5, effective from November 21, 2024, in order to resolve the shortage of edible vegetable oils and rising prices. In comparison, the mandate has been set at B7 throughout FY2023. Additionally, the expansion of production capacity by existing manufacturers at the beginning of 2024 resulted in higher competition. As a result, in FY2024, the Company reported revenue of methyl ester business of THB 12,315 million, slightly decreased by 1% from the previous year. The P2F of methyl ester in FY2024 remained at a similar level to the previous year.

For the performance of the fatty alcohols (FA) business in FY2024, the sales volume of fatty alcohols in FY2024 reached 103,692 tons, increased by 6% as a result of improvement of production efficiency, along with an increase in purchasing orders from buyers to restock their inventory in advance due to concerns about trade barriers which were expected to intensify toward the end of the year, including concern about shortages as the European Union’s EUDR measures came into effect and geopolitical conflicts, which could lead to higher transportation costs and container shortages. An average of fatty alcohols price increased by 17% in line with the CPKO price. As a result, the Company recorded revenue of fatty alcohols business in FY2024 of THB 6,590 million, increased by 26% from the previous year. The P2F of fatty alcohols in FY2024 decreased due to the rapid increase in CPKO price during at the end of the year.

In terms of the performance of other businesses, following the Company’s strategic direction to move forward into the value-added product, the Company has started the Food & Nutraceutical business, which distributes food ingredients and various nutraceuticals products such as sweeteners, plant-based protein, antioxidant, etc. In FY2024, the Company recorded revenue of food & nutraceuticals Trading business of THB 101 million.

As of December 31, 2024, the Company has total assets in the amount of THB 11,338 million which comprised of cash and short-term investment amounting to THB 1,057 million, with total liabilities of THB 1,823 million and total equities of THB 9,515 million.

Operating Performance

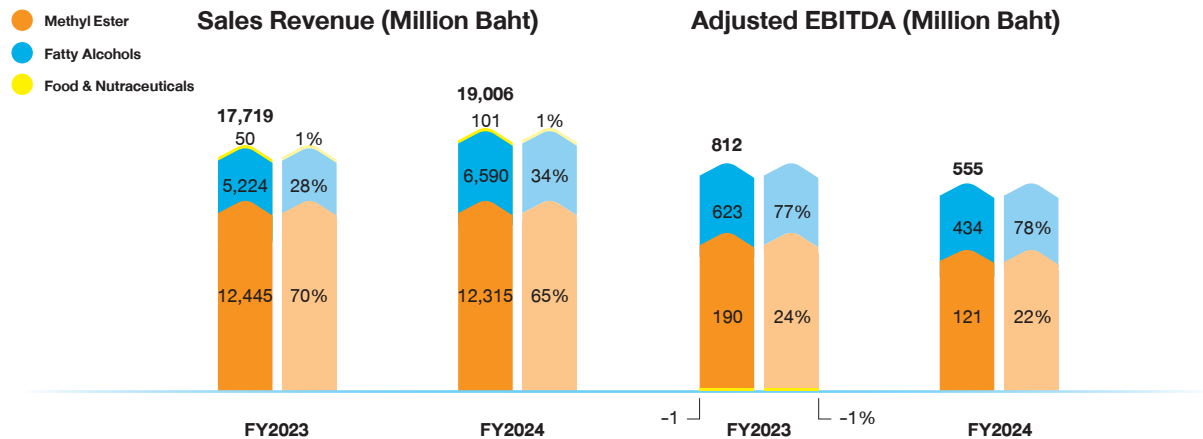
Exhibit 1: Consolidated Company's Performance

UNIT: Million Baht	FY2023	FY2024	% YoY
Sales Revenue	17,719	19,006	7%
EBITDA	471	845	79%
EBITDA Margin (%)	2.7%	4.4%	1.7%
Stock Gain/(Loss) & NRV	(341)	290	185%
Adjusted EBITDA ⁽¹⁾	812	555	-32%
Adjusted EBITDA Margin (%)	4.6%	2.9%	-1.7%
Net Profit	(262)	(265)	1%
Extra items ⁽²⁾	60	-	-100%
Net Profit after extra item	(202)	(265)	31%
EPS (Baht/Share)	(0.20)	(0.26)	30%

Note: (1) Adjusted EBITDA refers to EBITDA excluding impact of Stock Gain/(Loss) and NRV
 (2) Extra Items from the provision of contingent liabilities from lawsuit and deferred income tax items

Exhibit 1:

Sales revenue and Adjusted EBITDA breakdown by business unit comparison of FY2023 vs. FY2024 (million THB)



Operating Performance by Business Unit

Methyl Ester (Biodiesel) Business Unit

Exhibit 2: Product and Feedstock Prices

Average Price	FY2023	FY2024	% YoY
Methyl Ester (B100) (Baht/litre) ⁽¹⁾	33.93	37.80	11%
Methyl Ester (B100) (Baht/kg) ⁽²⁾	39.22	43.70	11%
Crude Palm Oil (CPO) (Baht/kg) ⁽³⁾	31.28	35.51	14%
EPPO P2F (Baht/kg) ⁽⁴⁾	4.26	4.27	0%
Biodiesel Mandate	As B7 (October 10, 2022 – November 20, 2024) As B5 (November 21, 2024 – Present)		

Note : (1) Reference Price of EPPO

(2) Conversion ratio: 0.865 Tons = 1,000 Liters

(3) Reference Price of DIT

(4) Market ME Price - Mixed Feedstock and MeOH price according to EPPO's B100 formula

Regarding an overview of the methyl ester market for FY2024 compared to FY2023, CPO-DIT price in FY2024 was 35.51 Baht/kg., an increase of 4.23 Baht/kg. or 14% from the previous year. This increase was primarily driven by an increase of global CPO price, following an average CPO price in Malaysia (CPO-MPOB) reaching 4,233 Ringgit/tons (equivalent to 32.58 Baht/kg.), increased by 3.31 Baht/kg. from the previous year. The main factor is the concerns about tight global CPO supply, particularly in Indonesia, where production has declined due to the impact of El Niño, along with the lack of new palm replacement and low expansion of plantation areas. Additionally, Indonesia's government plans to increase the biodiesel mandatory from B35 to B40, effective in early 2025, in contrasts to the continuously growing global demand. Furthermore, CPO stock level in major production countries such as Indonesia and Malaysia had decreased compared to the previous year.

The situation of domestic CPO price aligned with the global price, but with fluctuations at certain times due to the competition among mills for purchasing palm fruits and the level of CPO stock remaining in the country. The overall production, consumption, and CPO stock remaining in Thailand for FY2024 are as follows:

- **Palm Bunch Production:** 18.65 million tons (increased by 2.4% from FY2023), an average oil content is 17.6% (18.3% in FY2023). The resulting CPO for the year was 3.27 million tons (decreased by 1.6% from FY2023).
- **Domestic Consumption:** 2.49 million tons (increased by 0.3% from FY2023), with 1.44 million tons used in the food industry (similar to the previous year) and 1.05 million tons used in the biodiesel industry (increased by 1.9% from FY2023).
- **Exports:** 0.87 million tons (decreased by 3.7% from FY2023).
- **The CPO stock remaining:** 0.20 million tons at the end of 2024 compared with 0.29 million tons of previous year (decreased by 31% from FY2023).

The domestic CPO price rose significantly in 4Q2024 up to 40 – 45 Baht/kg. due to the off-season in production and reduced supply. In addition, with the CPO stock remaining low, the government has implemented measures requesting cooperation from mills to temporarily halt the export of palm oil and also announced the biodiesel mandatory reduction from B7 to B5 effective from November 21, 2024, in order to slow down the rapid increase in domestic CPO price.

The demand for methyl ester in FY2024 improved slightly compared to FY2023, up to 1,394,515 tons, an increase of 9,857 tons or 1%. Although there were positive factors from the government's economic policies such as tourism promotion policies and the retail price of high-speed diesel cap policy at no more than 30 baht/liter until April 2024 before raising to 33 baht/liter until October 31, 2024, which continued to cap the high-speed diesel price at 33 baht/liter through the end of 2024 by using the Oil Fuel Fund mechanism. In addition, the government has extended the Oil Fund Act B.E. 2562 to support biofuel prices for the next two years or until September 2026. However, the government's announcement of the biodiesel mandatory reduction from B7 to B5 effective from November 21, 2024, to resolve the shortage of edible vegetable oils and rising prices, affected the demand for methyl ester in FY2024 decreased when compared to FY2023 which was B7.

On the supply of methyl ester in FY2024, CPO production capacity increased due to the expansion of the installed production capacity of two existing manufacturers, which collectively increased capacity by 1.7 million liters/day. As a result, the overall installed methyl ester production capacity in the country increased from 10.26 million liters/day to 11.96 million liters/day, or increased by 17%, causing the industry's average capacity utilization decrease to 35% – 40% due to the increased supply.

The methyl ester price in FY2024 increased compared to FY2023, in line with the CPO price, up to 43.70 Baht/kg., an increase of 4.48 Baht/kg., or 11%.

Exhibit 3: Keys Operating Performance of ME Business Unit

Methyl Ester Business	FY2023	FY2024	% YoY
Utilization (%)	64%	58%	-6%
Sales Volume (ton)	319,894	288,708	-10%
Sales Volume (million litre) ⁽¹⁾	370	335	-10%
Sales Revenue (million baht)	12,445	12,315	-1%
EBITDA (million baht)	121	288	138%
EBITDA margin (%)	1.0%	2.3%	1.3%
Stock Gain/(Loss) & NRV (million baht)	(69)	167	342%
Adjusted EBITDA (million baht) ⁽²⁾	190	121	-36%
Adjusted EBITDA Margin (%)	1.5%	1.0%	-0.5%

Note: (1) Conversion ratio: 0.865 Tons = 1,000 Liters

(2) Adjusted EBITDA refers to EBITDA excluding impact of Stock Gain/(Loss) and NRV.

For methyl ester business operating performance in FY2024, the Company posted methyl ester business sales revenue of THB 12,315 million, decreased by 1% compared to FY2023, mainly due to a 10% decrease in the sales volume of methyl ester, as the government's announcement of the biodiesel mandatory reduction from B7 to B5, effective from November 21, 2024, to resolve the shortage of edible vegetable oils and rising prices, led to a decline in the demand for methyl ester in FY2024, compared to FY2023 which the blend was B7. Additionally, the expansion of the installed production capacity of two existing manufacturers in early 2024 resulted in high competition in the market.

In FY2024, the Company recorded Stock Gain & NRV of THB 167 million while recorded Stock Loss in the previous year. Adjusted EBITDA reported of THB 121 million, decreased by 36% from FY2023, and Adjusted EBITDA Margin was at 1%. When included the effect of Stock Gain & NRV as aforementioned, the Company reported EBITDA of THB 288 million.

Fatty Alcohols (FA) Business Unit

Exhibit 4: Products and Feedstock's prices

Average Price (USD per ton)	FY2023	FY2024	% YoY
Fatty Alcohols ⁽¹⁾			
- Short Chain	3,210	2,213	-31%
- Mid Cut	1,350	1,736	29%
- Long Chain	1,382	1,658	20%
Average Fatty Alcohols ⁽²⁾	1,489	1,747	17%
Crude Palm Kernel Oil (CPKO) ⁽³⁾	865	1,152	33%
Market P2F of Fatty Alcohols	434	341	-21%

Note: (1) Reference Price of ICIS

(2) Average price of fatty alcohols with production proportion: Short Chain 7% Mid Cut 64% and Long Chain 29%

(3) Reference Price of Malaysian Palm Oil Board (MPOB)

An average CPKO-MPOB price for FY2024 was at 1,152 USD/ton, rose by 287 USD/ton or 33% from FY2023, primarily driven by a higher demand in the oleochemical industry following the announcement of the enforcement of the European Union's regulation on deforestation-free products (EU Deforestation Regulation: EUDR) (previous version), which was set to effective on December 30, 2024. However, in early October 2024, the EU announced the postponement of the EUDR regulation enforcement which effective from December 30, 2025 instead. The EUDR regulation covers seven product categories, including palm oil and its derivatives, leading to concerns about shortages in the first quarter of 2025 when the regulation would take effect. As a result, most buyers had restocked their inventory in advance. Additionally, the Indonesian government announced an increase in the export tax for CPO to align with their plan to implement biodiesel mandatory as B40 which will effective in early 2025. These factors caused an increase in CPKO price compared to FY2023.

The demand of natural fatty alcohols in FY2024 improved compared to last year, mainly from buyers' concerns about trade barriers and geopolitical conflicts, which could affect to logistics, including container shortages and higher shipping costs. Furthermore, the supply was tight due to temporary shutdown plan for maintenance by the major fatty acids and fatty alcohols producers, resulting in buyers rushing to restock their inventory in advance. However, the overall demand for fatty alcohols in Europe began to slow down in October 2024, following the EU announced the postponement of the EUDR regulation enforcement for one year, from December 30, 2024 to December 30, 2025 instead.

The supply side of fatty alcohols in the market of FY2024 was tight compared to FY2023, mainly from major two fatty alcohols producers in Indonesia had temporary shutdown in May 2024 due to energy shortages caused by the natural gas pipelines construction. Including several major fatty alcohols producers in Indonesia, Malaysia, the Philippines, China, and Thailand also had temporary shutdown for maintenance during this year, particularly in 2H2024. Additionally, major fatty acids producers in Malaysia have continued shutdown their production due to the fire during May 2024 - 1Q2025, which indirectly affected the Short Chain fatty alcohols market and overall supply of fatty alcohols in the market remains tight.

An average price of natural fatty alcohols in FY2024 increased compared to last year, in line with an increase in CPKO price. The Mid Cut fatty alcohols prices increased to 1,736 USD/ton, an increase of 386 USD/ton or 29% as well as the Long Chain fatty alcohols price up to 1,658 USD/ton, an increase of 276 USD/ton or 20%. While the Short Chain fatty alcohols price decreased to 2,213 USD/ton, dropped of 997 USD/ton or 31% because the supply of Short Chain Fatty Alcohols in previous years was significantly tight.

Exhibit 5: Keys Operating Performance of FA Business Unit

Fatty Alcohols Business	FY2023	FY2024	% YoY
Utilization (%)	95%	105%	10%
Sales Volume (Ton)	97,390	103,692	6%
Revenue from Sales (million baht)	5,224	6,590	26%
EBITDA (million baht)	351	557	59%
EBITDA margin (%)	6.7%	8.5%	1.8%
Stock Gain/(Loss) & NRV	(272)	123	145%
Adjusted EBITDA (million baht) ⁽¹⁾	623	434	-30%
Adjusted EBITDA Margin (%)	11.9%	6.6%	-5.3%

Note: (1) Adjusted EBITDA refers to EBITDA excluding impact of Stock Gain/(Loss) and NRV

For the fatty alcohols business operating performance of FY2024, the Company recorded sales revenue of THB 6,590 million increased from FY2023 by 26% due to an increase in average of fatty alcohols price by 17% in line with an increase in CPKO price, owing to concerns about shortages during the enforcement of the EUDR regulation (previous version), which was set to effective on December 30, 2024. As a result, most buyers had restocked their inventory in advance. However, in early October 2024, the EU announced the postponement of the EUDR regulation enforcement which effective from December 30, 2025 instead. In addition, the Indonesian government announced an increase in the export tax for CPO to align with their plan to implement biodiesel mandatory as B40, which will be effective in early 2025 caused an increase in CPKO price. Meanwhile, the sales volume of fatty alcohols rose by 6% owing to buyers' concerns about trade barriers and geopolitical conflicts, which could affect to logistics, including container shortages and higher shipping costs. Including the tight supply from temporary shutdown for maintenance by the major fatty acids and fatty alcohols producers in several countries caused buyers to restock their inventory in advance.

In FY2024, the Company recorded Adjusted EBITDA of THB 434 million, decreased from FY2023 by 30% and Adjusted EBITDA Margin was at 6.6% and recorded EBITDA of THB 557 million, increased by 59% compared to the previous year, when included the effect of Stock Gain & NRV of THB 123 million.

4.1 Financial Statement

Statements of Profit or Loss

STATEMENTS OF PROFIT OR LOSS
FOR THE YEAR ENDED DECEMBER 31

Fatty Alcohols Business	2022		2023		2024	
	(Million Baht)	%	(Million Baht)	%	(Million Baht)	%
Revenues from sales	25,084.0	100.0	17,719.1	100.0	19,005.8	100.0
Cost of sales	(23,119.8)	(92.2)	(17,118.9)	(96.6)	(17,872.8)	(94.0)
Gross profit	1,964.3	7.8	600.2	3.4	1,133.0	6.0
Interest income and dividend income	11.7	0.0	49.9	0.3	67.5	0.4
Other income	68.8	0.3	37.4	0.2	41.1	0.2
Distribution expenses	(404.0)	(1.6)	(315.0)	(1.8)	(366.4)	(1.9)
Administrative expenses	(500.4)	(2.0)	(354.9)	(2.0)	(503.6)	(2.6)
Net foreign exchange gain (loss)	79.6	0.3	37.0	0.2	17.9	0.1
Net derivatives gain (loss)	(128.3)	(0.5)	(29.5)	(0.2)	(9.4)	(0.0)
Finance costs	(49.5)	(0.2)	(57.2)	(0.3)	(75.8)	(0.4)
Share of loss of joint ventures accounted for using equity method	47.1	0.2	(87.5)	(0.5)	(567.4)	(3.0)
Profit before income tax income (expense)	1,089.3	4.3	(119.5)	(0.7)	(220.1)	(1.2)
Income tax income (expense)	(136.0)	(0.5)	(82.0)	(0.5)	(44.8)	(0.2)
PROFIT FOR THE YEAR	953.3	3.8	(201.5)	(1.1)	(264.9)	(1.4)
PROFIT ATTRIBUTABLE TO:						
Owners of the parent	953.3	3.8	(201.5)	(1.1)	(264.9)	(1.4)
PROFIT FOR THE YEAR	953.3	3.8	(201.5)	(1.1)	(264.9)	(1.4)
BASIC EARNINGS PER SHARE (BAHT)	0.93		(0.20)		(0.26)	

Statements Of Financial Position

STATEMENTS OF FINANCIAL POSITION
AS AT DECEMBER 31

Fatty Alcohols Business	2022		2023		2024	
	(Million Baht)	%	(Million Baht)	%	(Million Baht)	%
ASSETS						
CURRENT ASSETS						
Cash and cash equivalents	1,383.6	10.1	1,086.7	7.9	1,056.7	9.3
Current financial assets	1,350.0	9.9	2,000.0	14.6	-	-
Trade accounts receivable	1,759.1	12.9	1,744.2	12.7	2,039.3	18.0
Other receivables	263.0	1.9	374.3	2.7	332.9	2.9
Value-added tax receivable	99.4	0.7	6.2	0.0	55.5	0.5
Inventories	1,656.9	12.2	1,629.5	11.9	2,232.9	19.7
Other current assets	24.6	0.2	21.8	0.2	25.5	0.2
Total Current Assets	6,536.5	47.9	6,862.6	50.2	5,742.8	50.7
NON-CURRENT ASSETS						
Investments in joint ventures	1,882.4	13.8	1,953.0	14.3	1,479.7	13.1
Plant and equipment	4,072.1	29.9	3,834.5	28.0	3,626.7	32.0
Right-of-use assets	385.2	2.8	361.5	2.6	361.6	3.2
Intangible assets	75.6	0.6	84.3	0.6	80.8	0.7
Deferred tax assets	168.6	1.2	74.5	0.5	40.1	0.4
Deposits with financial institutions used as collateral	503.3	3.7	503.3	3.7	-	-
Other non-current assets	9.1	0.1	7.3	0.1	6.4	0.1
Total Non-current Assets	7,096.2	52.1	6,818.5	49.8	5,595.3	49.3
TOTAL ASSETS	13,632.7	100.0	13,681.1	100.0	11,338.0	100.0

STATEMENTS OF FINANCIAL POSITION
AS AT DECEMBER 31

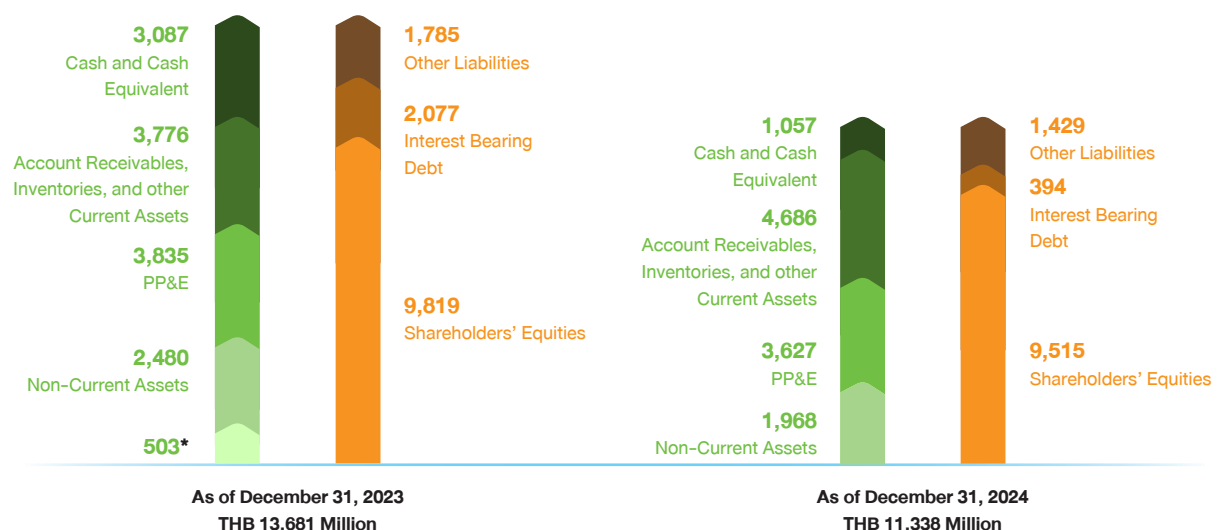
Fatty Alcohols Business	2022		2023		2024	
	(Million Baht)	%	(Million Baht)	%	(Million Baht)	%
LIABILITIES AND SHAREHOLDERS' EQUITY						
CURRENT LIABILITIES						
Trade accounts payable	862.4	6.3	983.7	7.2	918.5	8.1
Other payables	367.5	2.7	237.9	1.7	364.4	3.2
Payables to contractors	40.8	0.3	19.3	0.1	15.5	0.1
Current portion of long-term borrowings from financial institutions	85.5	0.6	227.8	1.7	-	-
Current portion of lease liabilities	48.4	0.4	41.9	0.3	55.2	0.5
Accrued corporate income tax	120.6	0.9	-	-	-	-
Provision for short-term liabilities	443.6	3.3	443.6	3.2	-	-
Total Current Liabilities	1,968.8	14.4	1,954.2	14.3	1,353.7	11.9
NON-CURRENT LIABILITIES						
Long-term borrowings from financial institutions	859.2	6.3	1,461.6	10.7	-	-
Lease liabilities	359.0	2.6	345.7	2.5	338.7	3.0
Provision for employee benefits	118.8	0.9	100.5	0.7	130.6	1.2
Total Non-current Liabilities	1,337.0	9.8	1,907.7	13.9	469.4	4.1
SHAREHOLDERS' EQUITY	3,305.9	24.2	3,861.9	28.2	1,823.0	16.1
SHARE CAPITAL						
Authorized share capital						
Issued and paid-up share capital	9,724.8	71.3	9,724.8	71.1	9,724.8	85.8
Share premium	9,724.8	71.3	9,724.8	71.1	9,724.8	85.8
Difference arising from business combination	89.2	0.7	89.2	0.7	89.2	0.8
under common control	(4.1)	(0.0)	(4.1)	(0.0)	(4.1)	(0.0)
RETAINED EARNINGS (DEFICIT)						
Appropriated						
Legal reserve	98.7	0.7	98.7	0.7	109.2	1.0
Unappropriated (Accumulated deficit)	418.2	3.1	(116.5)	(0.9)	(404.1)	(3.6)
Other components of shareholders' equity	-	-	27.1	(0.2)	-	-
TOTAL SHAREHOLDERS' EQUITY	10,326.9	75.8	9,819.2	72.0	9,515.0	83.9
TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY	13,632.7	100.0	13,681.1	100.0	11,338.0	100.0

The Company's operating result in FY2024 was net loss of THB 265 million, the details are as follows:

- In FY2024, the Company recorded sales revenue of THB 19,006 million, rose by 7% from FY2023, mainly from the selling price and sales volume of fatty alcohols has increased as detailed above.
- Manufacturing overhead of THB 727 million decreased by 10% from previous year due lower plant maintenance costs from controlling cost to be in accordance with the plan.
- SG&A expense of THB 492 million increased by 23% from FY2023 primary from an increase of employee expense, consulting fees, office expenses and other expenses.
- In 3Q2024, Reversal of estimate damage causing by lawsuit of 43 million following the Company announced to the Stock Exchange of Thailand (SET) on September 3, 2024 as the Supreme Court's judgment under Black Case No. Por. 4702/2018, ordering the Company to pay according to the judgment The Company had set aside the provision for this case in over the liabilities, resulting in the reversal.
- FX gain in FY2024 of 18 million. Although the exchange rate at the end of 2024 appreciated by 0.8% compared to the beginning of the year, THB significantly depreciated during the year, resulting in FX gain.
- For the investment in joint ventures in FY2024, the Company recorded a significant increase in the net profit from Fatty Alcohols Ethoxylate (FAEO) business compared to the previous year. In that year, the FAEO business experienced a long-term temporary shutdown due to a raw material shortage caused by a supplier's maintenance shutdown, resulting in significant decrease in FAEO production and sales volume, while the production in 2024 was able to proceed as usual. However, the Company recorded loss from ethanol business, which was in early production phase, resulting in an overall decline in profits from investment in joint ventures.

Exhibit 2:

Consolidated Financial Position as of December 31, 2023 and as of December 31, 2024



Assets

As of December 31, 2024 the Company had total assets of THB 11,338 million, a decrease of THB 2,343 million compared to December 31, 2023 in which key changes are described as follow;

1. Current assets decreased by THB 1,120 million mainly from;
 - 1.1 A decrease in cash and cash equivalent THB 2,030 million.
 - 1.2 Inventory increased by THB 603 million due to the increase in the volume of methyl ester and fatty alcohols at the end of the period including an increased average selling price, resulting in an increase in inventories.
 - 1.3 Accounts receivable increased by THB 295 million
2. Non-current assets decreased by THB 1,223 million mainly from;
 - 2.1 Restricted deposits decreased by THB 503 million due to the payment according to the Supreme Court's judgment under Black Case No. Por. 4702/2561 as the Company announced to the Stock Exchange of Thailand (SET) on September 3, 2024. For the amount of payment, the Company had set aside in fully covers the liabilities and did not impact on the Company's financial statements or liquidity in any regards.
 - 2.2 Investment in joint ventures decreased by THB 473 million.
 - 2.3 PP&E decreased by THB 208 million due to depreciation expenses.
 - 2.4 Deferred tax assets decreased by THB 34 million.

Liabilities

As of December 31, 2024, the Company had total liabilities of THB 1,823 million, a decrease of THB 2,039 million compared to December 31, 2023, mainly attributed to

1. Long-term loans from financial institutions decreased by THB 1,462 million due to the scheduled repayment to reduce the interest burden.
2. Short-term provision decreased by THB 444 million due to the repayment following the lawsuits case as mentioned above.
3. Current portion of long-term loans from financial institutions decreased by THB 228 million.

Shareholders' equity

As of December 31, 2024, the Company had total shareholders' equity of THB 9,515 million, a decrease of THB 304 million compared to December 31, 2023. This was the net loss for the year 2024 of THB 265 million, loss from remeasurement of employee benefits of THB 12 million and loss from cashflow hedge of THB 27 million.

Credit Policy

As for the credit policy, the Company has the credit policy which performed by the standard regulations with considering the appropriate credit lines and credit terms to customers and suppliers. The policy was taking into consideration risks of the Company, business liquidities and credit terms to customers. In addition, the payment terms to suppliers must be in the standard level of market.

Furthermore, the Company usually reviews credit lines and credit terms to customers and suppliers in concurrence with the Company's risk policy.

Statements of Cash Flows

STATEMENTS OF CASH FLOWS			
AS AT DECEMBER 31			
	2022	2023	2024
	(Million Baht)		
Cash Flow			
Net cash received (used in) operating activities	1,746.8	357.4	(31.4)
Net cash received (used in) investing activities	(1,291.7)	(941.9)	1,806.1
Net cash received (used in) financing activities	(568.9)	284.7	(1,810.9)
Effect of exchange rate changes on balances held in foreign currencies	(13.8)	3.1	6.0
Net increase (decrease) in cash and cash equivalents	(113.7)	(299.9)	(30.1)
Cash and cash equivalents as at 1 January	1,511.0	1,383.6	1,086.7
Cash and cash equivalents as at 31 December	1,383.6	1,086.7	1,056.7

As for the statement of cash flows for FY2024, the Company had cash used in operating activities of THB 31 million as a result of the net loss of THB 265 million together with the results of adjusting non-cash items, depreciation and amortization, the share of loss from joint venture, a decrease in restricted deposits, short-term provision and an increase in account receivable, resulting in the Company having net cash used in such operating activities.

The Company had cash received from investing activities of THB 1,806 million, primarily due to cash receiving from current investments in financial assets of THB 2,000 million, cash spending for acquisition of buildings and equipment of THB 165 million, cash spending for investment in joint ventures of THB 107 million and interest income of THB 72 million.

The Company had cash used in financial activities of THB 1,811 million, mainly due to cash spending for long-term loans from financial institutions repayment of THB 1,695 million, interest paid of THB 58 million and cash spending for lease liabilities of THB 58 million.

As with the activities above, the Company had a decrease in cash and cash equivalents of THB 30 million, which had cash and cash equivalents as of January 1, 2024 in the amount of THB 1,087 million. As a result, as of December 31, 2024 the Company had cash and cash equivalents of THB 1,057 million.

4.3 Key Financial Ratio

	FOR THE YEAR ENDED DECEMBER 31		
	2022	2023	2024
Liquidity Ratio			
Current Ratio (x)	3.3	3.5	4.2
Quick Ratio (x)	2.4	2.7	2.5
Cash Ratio (x)	0.7	0.2	0.0
Receivables Turnover Ratio (x)	12.1	10.1	10.0
Average Recievable Collection Period (Day)	30.1	36.1	36.5
Inventory Turnover (x)	31.3	31.8	25.8
Average Inventory Processing Period (Day)	11.7	11.5	14.1
Payables Turnover Ratio (x)	22.1	18.5	18.8
Average Payable Period (Day)	16.5	19.7	19.4
Cash Conversion Cycle (Day)	25.3	27.9	31.2
Profitability Ratio			
Gross Profit Margin (%)	7.8	3.4	6.0
Operating Profit Margin (%)	4.2	(0.4)	1.4
Other Income to Total Income Ratio (%)	0.3	0.5	0.6
Operating Cash Flow to Operating Profit Ratio (%)	164.8	(512.4)	(11.9)
Net Profit Margin (%)	3.8	(1.1)	(1.4)
Return on Equity (%)	9.4	(2.0)	(2.7)
Efficiency Ratio			
Return on Asset (%)	7.8	(1.5)	2.5
Return on Fixed Asset (%)	33.2	4.7	2.7
Total Asset Turnover (x)	1.9	1.3	1.5
Financial Policy Ratio			
Debt to Equity (x)	0.3	0.4	0.2
Interest Coverage Ratio (x)	37.0	9.3	0.6
Cash Basis (x)	1.7	0.5	(0.1)
Dividend Payout Ratio (%)	64.4	(177.8)	0.0
Per Share Data			
Earning per Share Ratio (Baht)	0.93	(0.20)	(0.26)
Book Value per Share Ratio (Baht)	10.1	9.6	9.3

GGC and Sustainability Pathways

The Company has driven the business to achieve the vision of sustainable development aligns with the United Nations Sustainable Development Goals (SDGs) which are covering economic, social, and environmental dimensions to foster confidence in sustainable business growth, create value and become an internationally progressive and accepted Company both nationally and internationally.

The Company has established the Sustainability Pathways aligned with the Environmental, Social, and Governance (ESG) concept with due regard for 3 responsibilities: Environment, Social and Governance, as follows:

1.Environment: To balance business growth and environmental sustainability, the Company has dedicated itself to conducting business to reduce the impacts of climate change and make biodiversity management concrete. The Company cooperated with all sectors to achieve these objectives to be ready for being an international sustainability organization under the climate strategy, which are:

1.1 Decarbonization Pathway

The Company has planned and developed strategies to reduce greenhouse gas emissions by setting a target to reduce greenhouse gas emissions (Scope 1 and 2) by 20% by 2030 and achieve the Net Zero target (Scope 1 and 2) and to reduce half of Scope 3 greenhouse gas emissions by 2050. These strategies support climate change management through three main dimensions, including;

- 1.Efficiency Driven:** Improving process by apply energy efficiency improvement projects and renewable energy utilization.
- 2.Portfolio Driven:** Considering investments in low-carbon businesses.
- 3.Compensation Driven:** Explore technology to reduce greenhouse gas (GHG) emissions such as Carbon Capture Utilization and Storage: CCUS and also nature-based solution by collaboration with palm and sugarcane plantation business.

1.2 Biodiversity

The Company has assessed and monitored the overall risk management process, as the main raw materials are agricultural products. Additionally, the Company has continued to raise awareness among stakeholders to prevent potential biodiversity violations to maintain appropriate biodiversity.

2.Social : The Company focuses on building cooperation with stakeholders throughout the supply chain and changing from Corporate Social Responsibility (CSR) to Creating Shared Value (CSV) such as Sustainable Palm Oil Production and Procurement project (SPOPP) in cooperation with the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) in Thailand to uplift and develop the quality of life for palm oil farmers in Thailand. Moreover, there are the projects in Social Enterprise (SE) which aim to create sustainable development together with society and communities throughout the supply chain such as the Health & Personal Care product project by creating knowledge, developing hygiene product including marketing promotion for Ko Kok community enterprises, Rayong province.

In addition, the Company has committed to operating in accordance with the United Nations Guiding Principles on Business and Human Rights (UNGPs) to prevent and avoid human rights violations throughout the supply chain, including employees, joint venture, business partners, customers, and surrounding communities.

3. Governance: The Company operates business with honesty, transparency and fairness, and develops innovation and has sustainability framework to serve as a guideline that aligned with international standards, laws and regulations both nationally and internationally such as integrating Governance, Risk Management and Compliance (GRC) in the organization effectively.

In these regards, the Company has created an ecosystem and sustainability development network with 2 levels as follows:

(1) External Level: This includes upstream processes (laws, regulations, policies, measures), midstream processes (collaboration with GC Group and Global Rater) to understand and monitor various requirements, and downstream processes that support the Company's operations such as the Thailand Greenhouse Gas Management Organization (Public Organization: TGO), Forest Plantation Promotion Organization and financial institutions both domestically and internationally. The recognition from Global Rater in 2024 as in the following:

- S&P Global Sustainability Yearbook as 4th ranked of Chemical Industry
- Carbon Disclosure Project (CDP) Climate is Officially Announced in 1Q2025
- Ecovadis Sustainability Rating in Gold Medal, which is evaluated sustainable along the value chain
- ISB Award from Industrial Estate Authority of Thailand in Excellent Ranked as 1st year entry
- Sustainability Disclosure Award from Thaipat Institute the 3rd consecutive year

(2) Internal Level: The Company has sustainability development plans focusing on the sustainability of raw materials, such as sugarcane and palm oil, in collaboration with business partners and joint ventures, including TEX and GKBI. Additionally, the Company has collaborated with PTT Group and GC Group to develop technology to ensure that the Company set sustainability plans align with market and customer demands both domestically and internationally.

Market and Business Outlook in 2025**Methyl Ester Market Outlook**

For the methyl ester demand outlook in 2025, the Company anticipates that it will remain stable compared to 2024. Currently, the government is expected to remain the biodiesel mandatory at B5 as main grade during 1Q2025 and will likely increase up to B7 for the remainder of FY2025, following the easing of CPO shortage. This adjustment is expected to improve the business and production situation. Also, B20 will remain an alternative grade throughout the year. In addition, the Company anticipates that the overall of methyl ester market will be supported by positive factors through various government's economic policies, such as tourism promotion policies and the high-speed diesel price cap policy.

The methyl ester supply outlook in 2025 is expected to remain stable due to no expansion of installed capacity production from existing manufacturers. While the demand trend is not expected to grow significantly, it is anticipated that an average utilization rate of the industry in 2025 will remain stable at 35% – 40%.

Fatty Alcohols Market Outlook

For the natural fatty alcohols demand outlook in 2025, the Company anticipates that it will remain stable compared to 2024, the overall of fatty alcohols market still has positive factors from the recovering global economic situation driven by various governments' economic stimulus policies, particularly in China, who continually announces economic measures. Additionally, the situation regarding conflicts in Europe and the Middle East may ease and the postponement of the enforcement of the EU Deforestation Regulation (EUDR) to December 30, 2025, could lead buyers to restock their inventory in late 2025. However, it is important to monitor supply situation from the expansion of production capacity by major fatty alcohols producers, as well as the trade war between China and the United States.

In terms of the fatty alcohols supply outlook in 2025, it is likely to increase from 2024 due to the expansion of production capacity of fatty alcohols producers in Indonesia in estimate amount of 420,000 tons/year, while there are no plans to shutdown the production of other manufacturers in the industry.

Refined Glycerine Market Outlook

For the refined glycerine demand outlook in 2025, the Company anticipates an improvement from 2024, driven by the expected recovery of the global economy, particularly in China, who has been continuously implementing economic stimulus measures aimed at reviving the real estate sector and boosting the overall economy. This is expected to lead to a recovery in the Epichlorohydrin (ECH) market, which is a key market segment, alongside improving demand for home and personal care products (HPC) as well as for food and pharmaceutical products. The overall economic situation and global market conflicts are returning to normal and the postponement of the enforcement of the EU Deforestation Regulation (EUDR) to December 30, 2025, may encourage buyers to restock their inventory in late 2025. However, it is necessary to monitor the trade war between China and the United States situation, following the establishment of the new U.S. administration.

In terms of the refined glycerine supply outlook in 2025, the Company anticipates that it is likely to increase compared to the previous year driven by anticipated the expansion of production capacity by manufacturers who have refined glycerine as by-product).

Ethanol Market Outlook

For the ethanol (E100) demand outlook in 2025, the Company anticipates that it will 1% increase compared to 2024, driven by positive factors from governments' economic stimulus policies and the continuous recovery of the tourism sector. However, it is needed to monitor factors that affect the consumption of gasohol in Bangkok such as policies to reduce electric car fares, congestion charges in certain areas, and the clarity of policies promoting E20 gasohol as main grade, which could significantly improve demand.

On the supply side of the ethanol market outlook in 2025, the Company anticipates that it will remain stable from 2024 due to no expansion of installed capacity production from existing manufacturers. Consequently, an average utilization rate of ethanol production in the country is likely to remain stable at approximately 45% - 50%. For the ethanol price outlook in 2025, the Company anticipates that it will decrease by 22% from 2024 in line with raw materials price from an increase in sugarcane production in 2025 compared to 2024.





5. General Information and Other Key Information

5.1 General information and other key information

Company Name	: Global Green Chemicals Plc
Ticker Symbol	: GGC
Website	: www.ggcplc.com
Company Registration Number	: 0107559000044
Registered Capital	: As of December 31, 2024, Baht 9,724,833,650 (made up of 1,023,666,700 shares at Baht 9.50 per share).
Company Registration Date	: July 28, 2005
Public Company Listing Date	: February 18, 2016
First Trading Date on SET	: May 2, 2017
Core Businesses	: Methyl Ester Products : Fatty Alcohols Products : Services and Others
Personnel Headcount	: 284 (as of December 31, 2024)
Contacts	
Investor Relations	Tel. +66 (0) 2 558-7345, +66 (0) 2 558-7395 Email: ir@ggcplc.com
Corporate Affairs & Corporate Secretary	Tel. +66 (0) 2 558-7310, +66 (0) 2 558-7392 Email: corporategovernance@ggcplc.com
Head Office	555/1 Energy Complex Building A, 4 th Floor, Vibhavadi-Rangsit Road, Chatuchak, Chatuchak, Bangkok 10900 Tel. +66 (0) 2 558-7300 Fax: +66 (0) 2 558-7301

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Branch 2**Methyl Ester Plant 1**

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Branch 3**Methyl Ester Plant 2**

199/1 Moo 2, Tambon Khao Sok, Amphoe Nong Yai
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2. Mr. Waiyawat Kawsamanchaikij, CPA 6333
3. Ms. Dusanee Yimsuwan, CPA 10235
4. Ms. Sopit Phrompol, CPA 10042

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Website: www.kap.co.th

5.2 Litigation

As of 31 December 2024, GGC and subsidiaries were involved in the following ongoing litigation potentially significantly affecting their business operations as detailed below.

1. Asia Capital Group Plc (Civil Case)

On August 20, 2018, Asia Capital Group Plc sued Thai Bio Innovation Co., Ltd. (formerly Anatta Green Co., Ltd.), as the first defendant and GGC as the second defendant in the Civil Court, accusing GGC of breaching an agreement in a letter consenting to claim transfer. The first defendant allegedly transferred to the plaintiff the right to receive payment for crude palm oil and palm kernel oil, so the plaintiff suffered Baht 324.65 million in damages along with 15% interest per year from the litigation date until the complete amount has been repaid. GGC's view was that it was not guilty and provided testimony to contest the case.

On June 10, 2020, the Civil Court ruled that GGC must reimburse the plaintiff a sum of Baht 289.56 million together with 15% interest per year beginning from the date of default. On January 20, 2022, the Appeal Court gave a verdict in agreement with the lower court. Nevertheless, GGC disagreed with the verdict of the Appeal Court and on March 9, 2023, exercised its right to petition the Supreme Court's deliberation. The Supreme Court accepted the petition on February 20, 2023, Then on September 3, 2024, the Supreme Court rendered a final judgment ordering GGC to pay damages to the plaintiff in the amount of 289.56 million baht, together with interest at the rate of 7.5% per annum from the date of default under each contract until April 10, 2021, and at the rate of 5% per annum from April 11, 2021, until full payment is made. The case is now final, and GGC has fully complied with the judgment by settling the debt in its entirety.

2. Thai Bio Innovation Co., Ltd. (1) (Civil Case)

On April 8, 2020, Thai Bio Invention Co., Ltd., sued GGC in the Civil Court for default over an agreement on the trading of crude palm oil and palm kernel oil, thus harming the plaintiff's interests worth Baht 595. 10 million together with 7.5% interest per year. GGC viewed, it was not obliged to plead guilty as charged, it would provide testimony to contest the case in court. Subsequently, on November 29, 2024, the Civil Court rendered a judgment dismissing the case. The matter is currently pending the plaintiff's decision on whether to exercise the right to appeal.

3. Thai Bio Innovation Co., Ltd. (2) (Civil Case)

On June 24, 2020, Thai Bio Innovation Co., Ltd., as a plaintiff, filed a lawsuit in the Civil Court against GGC as the first defendant, along with two other companies. It was claimed that the defendants were in default and in breach of a contract regarding the purchase and sale of crude palm oil and crude palm kernel oil, thus causing damage to the plaintiff in the amount of Baht 109.42 million with 7.5% interest per year. GGC believes that since it was not obliged to plead guilty as charged, it would provide testimony to contest the case in court. The litigation was now under the witness interrogation stage of the lower court.

4. Thai Bio Innovation Co., Ltd. (3) (Civil Case)

On September 3, 2020, Thai Bio Innovation Co., Ltd., as the plaintiff, filed a lawsuit in the Civil Court against a company as the first defendant and GGC as the second defendant. The plaintiff alleged that the defendants breached a contract related to the purchase and sale of crude palm kernel oil, causing damages to the plaintiff in the amount of 364.71 million baht, with 7.5% interest per year. GGC contested the claim, asserting that it had no liability as alleged, and submitted a defense to the court. Subsequently, on September 21, 2023, the Civil Court rendered a judgment dismissing the case on the grounds that the disputed contract did not constitute a legitimate debt and that the plaintiff had not exercised its rights in good faith. The plaintiff has since exercised its right to appeal, and the case is currently under consideration by the Court of Appeal.

5. Global Inter Co., Ltd. (Civil Case)

On June 18, 2021, Global Inter Co., Ltd. filed a lawsuit against GGC as the defendant in the Civil Court, alleging breach of contract, failure to fulfill commitments, and tortious conduct related to a product storage tank service agreement. The plaintiff sought damages totaling 449.77 million baht, with 7.5% interest per year. GGC contested the claims, asserting that it had no liability as alleged, and filed a defense with the court. On March 21, 2022, the Civil Court rendered a judgment dismissing the case on the grounds that it constituted a duplicate proceeding, as the issues raised were identical to those in a prior case filed by GGC against the plaintiff. Both parties exercised their right to appeal in July 2022. Subsequently, on May 29, 2023, the Court of Appeal upheld the judgment of the lower court. In September 2023, the plaintiff sought leave to appeal to the Supreme Court. However, on August 22, 2024, the Supreme Court issued an order denying the plaintiff's petition for leave to appeal, rendering the case final.

6. Criminal Cases

GGC filed a complaint against former executives and related business partners and parties to the Economic Crime Suppression Division (ECD) in the third quarter of 2018. Currently, the legal proceedings are as follows: three cases are under consideration by the Criminal Court (two of which have reached adjudication), one case is under review by the Public Prosecutor, and four cases remain in the evidence-gathering stage under investigation by law enforcement authorities.

02 Corporate Governance



The Board of Directors



Mr. Narongsak Jivakanun
Chairman



Prof. Dr. Kumchai Jongjakapun
Chairman of Independent Director /
Chairman of Audit Committee



Mrs. Kannika Ngamsopee
Independent Director /
Chairman of Risk Management Committee /
Director to Audit Committee



Pol. Gen. Suchart Theerasawat
Independent Director /
Chairman of Corporate Governance
and Sustainable Development Committee



Mr. Jarun Wiwatjesadawut
Independent Director /
Chairman of Nomination and Remuneration Committee /
Director to Risk Management Committee



Lt.Gen. Titawat Satiantip

Independent Director /
Director to Nomination and Remuneration Committee /
Director to Corporate Governance
and Sustainable Development Committee



Mr. Kajohn Srichavanotai

Independent Director /
Director to Corporate Governance and
Sustainable Development Committee



Mrs. Sommai Siriudomset

Independent Director /
Director to Audit Committee /
Director to Corporate Governance and
Sustainable Development Committee



Mr. Saroj Putthammawong

Director / Director to Nomination and
Remuneration Committee /
Director to Risk Management Committee



Mr. Thanakorn Manoonpol

Director /
Director to Risk Management Committee



Mr. Kridsada Prasertsuko

Director /
Director to Risk Management Committee

Executives



Mr. Kridsada Prasertsuko
Managing Director



Mr. Teerasak Na Chiangmai
Deputy Managing Director,
Operational Excellence



Mr. Piya Suri
Deputy Managing Director,
Commercial Excellence



Mr. Jittasak Soonthornpan
Vice President,
Corporate Finance and Accounting



Mrs. Kunakorn Witthayapaisarn
Vice President,
Internal Audit



Mrs. Boodsada Seema
Vice President,
Corporate Affairs and
Corporate Secretary



Ms. Pakawan Kamonchaivanich
Vice President,
Corporate Strategy



Mr. Jiruss Rianchaiwanich
Vice President,
Human Resource and
Corporate Support



Mr. Sutthisarn Khongaphirak
Vice President,
Corporate Legal



Mr. Ekaphong Govitgoongrai
Vice President,
Supply Planning and
Feedstock Sourcing



Mrs. Tanyarut Boonthekul
Vice President,
Business and Product Development



Mr. Kawin Kaewkong
Vice President,
Sales and Marketing-Biofuels



Mr. Suwit Chongkasemwong
Vice President,
Sales and Marketing-Biochemicals



**Mr. Phromphron
Isarankura Na Ayutthaya**
Vice President,
Operations



Ms. Chompunuch Liamprawat
Vice President,
Process Technology



Mr. Thodsaphorn Phienchob
Vice President,
Engineering and Maintenance



Mrs. Wacharee Hanwongpaiboon
Vice President,
Reporting to Managing Director



Mr. Jakrit Rungsimanop
Vice President,
Reporting to Managing Director



Mr. Suchet Deemangmee
Vice President,
Reporting to Managing Director



Mr. Chanasiri Vanit
Vice President,
Reporting to Deputy Managing Director,
Operational Excellence



6. Corporate Governance Policy

The Company continuously revises and enhances its policies and the Corporate Governance and Business Code of Conduct (CG Handbook) to ensure alignment with laws, regulations, and best business practices. It mandates that Directors, Executives, and employees at all levels acknowledge and adhere to these guidelines as part of their duties, committing to operate the business under exemplary management, responsible and ethical practices, and good corporate governance. These efforts aim to maximize shareholder value and consider the interests of all stakeholders, thereby fostering confidence and sustainable growth. The policies for good corporate governance are outlined as follows:

- (1) The Board will adhere to universal practices and is committed to continually improving governance in accordance with international standards. This includes respecting shareholders' rights, treating all shareholders equally, recognizing the role of stakeholders, ensuring transparency, and being accountable.
- (2) The Board, Executives, and all employees are dedicated to following the key principles of good corporate governance, namely Creation of long-term value, Responsibility, Equitable treatment, Accountability, Transparency, and Ethics (CREATE). They are committed to adhering strictly to legal and related requirements in every country of investment.
- (3) The Board shall arrange for an administrative structure with fair relationship between the Board of Directors, the Executives and the Shareholders. They shall play a vital role in the determination of visions, strategies, policies and key plans. They shall ensure that a performance monitoring and evaluation system is in place, that risks are efficiently managed, and corporate resilience is managed that they are responsible for their discharge of duties in accordance with the Corporate Governance Principles.

The Board and Executives will lead by example in ethics and compliance with the Company's corporate governance and business code of conduct policies, promoting a culture of good governance, accountability to stakeholders, and conducting business with consideration for human rights, consumer rights, and fair labor practices. Additionally, systems will be in place for monitoring, evaluation, and review to ensure all employees fully and sustainably adhere to these governance policies.

6.1 Overview of Corporate Governance Policy and Guidelines

The Board of Directors plays a key role in determining GGC's visions, strategies, policies and key work plans as well as providing a performance - tracking system and effective risk management under the corporate governance code to strengthen the management system to be transparent and fair to all stakeholders in compliance with applicable law, rules, regulations and requirements of government agencies and international standards. These moves enable GGC to appropriately adapt itself to the changes and increase its competitive potential and prevent any conflict of interests as well as gaining investors' and the public's trust. That way, the Company can contribute to the increasing value of the Company's shares while taking into account the benefits, rights, and equality of all shareholders and stakeholders. To achieve this, the Board has defined a corporate governance policy for the Directors, management, and employees within GGC group in performing their work and in line with local and

international practices such as SEC's Corporate Governance Code for Listed Companies 2017 (CG Code), ASEAN Corporate Governance Scorecard and S&P Global Corporate Sustainability Assessment (CSA) for continuous corporate governance development while taking into account the equal rights of all stakeholders, roles of stakeholders, information disclosure and transparency, and responsibility of the Board.

6.1.1 Policy and Guidelines for the Board of Directors

(1) Board of Directors

The Board constitutes the core of corporate governance. The management of GGC Group's business operations, as stipulated by laws, rests with the Board, and business conduct must be under the law, GGC's objectives and articles of association, as well as the resolutions of the shareholders' meeting. The Board is appointed by the shareholders at the AGM. All Directors are fully qualified and do not have prohibited characteristics stipulated by law and applicable rules and regulations. GGC has defined a policy of diversity of the Board and considers it part of its nomination and selection process to ensure that the composition of the Board is suitable, diverse, and consistent with GGC's Corporate Governance and Business Code of Conduct Handbook (CG Handbook). Consideration of the candidates is based on their credentials, knowledge, abilities, and experience, in a variety of fields that are beneficial to GGC (Board Skills Matrix), such as engineering, energy, petrochemicals, oleochemical products, agriculture and natural resources, economics, finance, business administration, accounting, law, internal audit, corporate governance, social and environmental responsibility, sustainability development, and IT, regardless of race, nationality, color, ethnicity, or religion including gender diversity in order to combine diverse knowledge, abilities and perspectives essential to GGC's business strategy.

At present, the Board consists of 11 directors, of whom one is an Executive Director and 10 are non-executive directors, and 7 are independent directors. Each Director has the roles, duties, and responsibility based on the laws, and GGC's rules and regulations, articles of association, resolutions of the shareholders' meetings, and the corporate governance code. The roles, duties, and responsibility of the Board have been clearly defined. The Chairman is responsible for ensuring that the functioning of the Board is efficient and independent of management. Details are shown in the report under "Board of Directors".

(2) Sub-Committees

To ensure the careful and effective review of critical operations in accordance with the principles of good corporate governance, the Board of Directors has established four sub-committees: the Audit Committee, the Nomination and Remuneration Committee, the Corporate Governance and Sustainability Development Committee, and the Risk Management Committee. These Committees are tasked with the thorough vetting of operations in their respective areas as assigned, and they have well-defined qualifications, terms of office, and scopes of responsibilities as stipulated in the charter of each committee. Each member of these special committees possesses the requisite knowledge, abilities, and sufficient experience to fulfill their roles as assigned by the Board. Furthermore, each committee regularly reports their performance to the Board meetings to ensure consistent awareness and discloses their annual performance to the regulatory authorities, shareholders, and the public in the Form 56-1 One Report. This report annually details the names of the committee members, their responsibilities, the number of meetings held, and other relevant information under the section "Sub-Committees."

(3) Nomination and Appointment of Directors, Independent Directors and Top Executives

The nomination and appointment of Directors is undertaken through the consideration process of the Nomination and Remuneration Committee and the Board. The Committee considers the nomination of suitable Directors with sufficient background information for decision-making under GGC's nomination and appointment criteria, taking into account the candidates' full qualifications, with no prohibited characteristics stipulated by law and applicable regulations, such as Public Limited Companies Act of B.E. 2535 (1992), Securities and Exchange Act of B.E. 2535 (1992), Organic Act on Supplementing the Constitution Relating to the Prevention and Suppression of Corruption of B.E. 2561 (2018), SEC's Notifications on the Principles of Good Corporate Governance (CG Code) for Listed Companies of B.E. 2560 (2017), and GGC's CG Handbook, including independence, absence of conflicts of interest, as well as Board diversity, namely the proportion of female directors (gender diversity), skill diversity covering knowledge, abilities, expertise, and experience as well as specific qualifications that are useful and consistent with GGC's business strategy (Board Skills Matrix), regardless of gender, race, nationality, color, ethnicity, or religion, to ensure that the composition of the Board is diverse, appropriate, and consistent with the policy on variety for appointment at the shareholders' meeting under the articles of association. Directors must perform their duties with responsibility and care (Duty of Care) and loyalty and honesty (Duty of Loyalty). New Directors replacing those who have resigned before the end of their terms and the Managing Director were appointed by the Board Meeting as stated in the articles of association with systematic and transparent selection and nomination criteria and process:

Nomination and appointment of Directors to replace those due to retirement by rotation

GGC allowed shareholders to nominate Directors before the Annual General Meeting (AGM). The Nomination and Remuneration Committee is responsible for the selection and nomination of qualified candidates as defined in the selection and nomination criteria for submission to the Board Meeting for approval and then to the AGM for appointment. The resolution on the appointment of the Directors must receive a majority of votes of shareholders attending the meeting and exercising their voting rights. The shareholders shall vote for each individual Director. For the reappointment of Directors, performance of the previous years and time devotion and engagement in activities of each Director will be presented to support the consideration.

Nomination and appointment of Directors to fill vacancies caused by reasons other than by rotation retirement

The Nomination and Remuneration Committee is responsible for the selection and nomination of qualified candidates as defined in the selection and nomination criteria for submission to the Board Meeting for consideration and appointment as Directors to fill the vacancies, except where the remaining term of the previous Director is less than two months. The acting Director must secure at least three-quarters of the votes of the remaining Directors. The Director who is appointed to the seat shall remain in office for the remaining term.

Nomination of Directors as members of the Sub-Committees

The Nomination and Remuneration Committee is responsible for the selection and nomination of Directors whose qualifications meet the selection criteria and subcommittee charter for submission to the Board Meeting for consideration and appointment as Directors to the Sub-Committees for a three-year tenure. The resolution for the appointment of Directors to the Sub-Committees must receive a majority of votes, and Directors may be reappointed by the Board Meeting. If the position is vacant for reasons other than retiring by rotation, the elected Director shall remain in office for the remaining term of the Sub-Committees.

Consideration of the qualifications of Independent Directors

GGC has defined the qualifications of Independent Directors in the CG Handbook and published them on GGC's website. Those qualifications are more stringent than those under the notifications of SEC's Capital Market Supervisory Board, that is, their shareholding ratios which must not be over 0.5% of all the voting shares of the parent company, subsidiaries and associated companies, major shareholders, or persons having controlling power over the Company, including shareholding of persons related to Independent Directors. The tenure of the Independent Directors shall not be more than nine consecutive years from the date of GGC's registration with SET, or from the date of first appointed as Independent Directors, as specified in the Charter of Independent Directors and disclosed on GGC website. Details of the Independent Director Charter are shown in "Appendix 5: Corporate Governance Policy and Guidelines and Business Code of Conduct".

Nomination and Appointment of the Managing Director

If the position of Managing Director becomes vacant, the Nomination and Remuneration Committee is responsible for the selection and nomination of his or her successor by considering the list of GGC's Directors who have the skills, experiences, professions, and specific qualifications that are necessary and appropriate for business operations according to the Board Skills Matrix, namely knowledge, ability in business management and experience in related fields and possess leadership qualities as well as experience in being a leader of an organization, and taking into account potential conflicts of interest with GGC Group for submission to the Board Meeting for approval and appointment.

Details of the nomination, development and assessment of the Board and Sub-Committees during this year appear in the report titled "Nomination, Development, and Performance Assessment of the Board".

(4) Board Meeting

GGC has established a schedule for Board meetings and set the agenda in advance for each year. The Corporate Secretary notifies the Directors of the meeting dates and the regular agenda for the entire year, typically informing them towards the end of the year before the next year's meetings begin. Normally, there is one meeting per month, and this scheduling is intended to allow each Director to plan their attendance without it conflicting with their regular professional roles. Additional meetings may be scheduled as appropriate and necessary. Directors receive a meeting invitation, the agenda, and related materials at least 7 days in advance to allow ample time for review before the meeting. In urgent cases, the Company expedites this process. Information is delivered through a digital document management system (Digital Join Application) to facilitate quick access and reduce paper use. This system is secure, and Directors can request further information from the Corporate Secretary as needed.

The Chairman of the Board presides over these meetings and accords all Directors the opportunity to participate and express their opinions freely. The number of Directors in attendance must not be less than two-thirds of the Board to constitute a quorum, which will be maintained until the resolutions are reached by a majority of the votes. One Director carries one vote. If the number of votes is equal, the Chairman will cast the decisive vote. The Board highly values the managing of conflicts of interest of related parties with prudence, fairness, and transparency through full disclosure of information on such matters. If a Director has a stake and interest in the matter under consideration, he/she will not be allowed to take part in the decision-making on that issue.

Upon completion of the meeting, the Corporate Secretary is responsible for preparing the meeting report, which is then submitted to the Board for review within 14 days from the date of the meeting. This report is to be ratified at the subsequent meeting, and the Chairman of the Board signs off on it to certify its accuracy. Once approved, the meeting report, along with various supporting documents related to the agenda, is systematically stored in electronic format according to the Company's confidential document classification to facilitate easy retrieval and reference. Additionally, to adhere to the principles of good corporate governance, the Board has established annual meetings specifically for Independent Directors to exchange ideas, review roles, and continuously assess the performance of the Independent Directors. There are also meetings among Non-Executive Directors to provide insights and directions for the management and operation of the Company.

(5) Remuneration of Directors and Executives

Remuneration of Directors

The Board has prescribed a policy on the remuneration of Directors fairly and reasonably under the corporate governance code. The Nomination and Remuneration Committee reviews the appropriateness and consistency with GGC's performance and compares the current economic situations of related businesses, the duties and responsibility of the Board, the criteria approved by the shareholders' meeting, the dedication of time, the annual performance assessment of the Board, (Board's KPIs) as well as the patterns and rates of remuneration of Directors of other peer listed companies of similar size. The remuneration paid to Directors must be approved by the shareholders' meeting. It is divided into monthly remuneration and meeting allowance for attendance of each subcommittee, details as shown in the report titled "Director's Meeting Attendance and Remuneration".

Remuneration of Executives

GGC evaluates Executives' performance annually, based on Key Performance Indicator (KPIs), including financial performance, implementation of long-term strategic objectives, management performance, corporate performance, comparison of practices with peer SET-listed companies of similar sizes, and in proportion to the duties, responsibility, management development, and the overall economic conditions. The remuneration of the Managing Director is determined under clear, transparent, fair, and reasonable criteria, considering his or her duties, responsibility, and performance. The Nomination and Remuneration Committee will determine the remuneration of the Managing Director and submit it to the Board for approval. The Managing Director is entitled to earn other remuneration and benefits as the Top Executive in addition to those received as a Director. Details are under "Management".

(6) Development of Directors and Executives

The Board determines the development policy for Directors and Executives to enhance/develop their knowledge, understanding, and skills, in the nature of GGC's business and other courses that are beneficial to their continued performance by defining the models and methods of such development from the orientation, reception of news, information, and knowledge essential to the performance, including in-house training. External experts and consultants were regularly invited to provide information useful for business operations. GGC encourages external training, such as training organized by Thai Institute of Directors (IOD) and other institutes for GGC's newly appointed and current Directors, Executives, as well as Executives have been appointed as Directors of GGC Group and those involved in GGC's corporate governance system, namely the secretaries to the Sub-Committees, the Corporate Secretary, and personnel responsible for investor relations. Details appear under "Development of Directors, Executives, and Corporate Secretary".

(7) Board Performance Assessment

The Board conducts its annual self-assessment, entire board assessment, and cross-assessment (peer assessment) as the framework to inspect the performance of the Board, and consider and review work performance, problems, and obstacles during the past year. It is an opportunity to consider the dedication of time for duties and to improve the relationship between the Board and Executives, aligned with the CG Code and international assessment standards. Furthermore, all Sub-Committees conduct their annual self-assessment and the entire subcommittee assessment. The result of the annual performance assessment of the Board and the Sub-Committees will be submitted to the Board Meeting to provide useful suggestions for the improvement and development of the Board and Sub-Committee performance, establish a benchmark which will be methodically used to compare the performance, and disclose it in the Form 56-1 One Report. The Nomination and Remuneration Committee will use it as part of their decisions on the annual remuneration of Directors, in addition to GGC's performance. Detail appears under "Nomination, Development, and Performance Assessment of the Board".

(8) Supervision of the Company's and Subsidiaries' Operations

GGC operates the green chemical business and expands its investments through itself and GGC Group, namely subsidiaries, joint ventures, and indirect joint ventures. The Board gave consent to establish supervision guidelines to ensure that the operational direction and management are consistent with the organization's business framework and long-term strategy. Reviews are conducted on the operation of GGC Group according to the Way of Conduct as mutual agreement between the Top Executives and related parties of GGC Group and teams in operating under the Way of Conduct to achieve the objectives. Details are under "Governance of Subsidiaries and Associates".

6.1.2 Policies and Guidelines Related to Shareholders and Stakeholders

GGC's operations engage a diverse range of stakeholders, including employees, shareholders, customers, suppliers/vendors, creditors, competitors, government agencies, as well as the broader community and environment. The Board of Directors has established robust policies and best practices to guide the Company's responsibilities toward these stakeholders. These guidelines are comprehensively detailed in the Corporate Governance and Business Code of Conduct, which are available on GGC's official website. The following section outlines the Company's approach to managing relationships with shareholders and other key stakeholders.

Rights of Shareholders

The Board values equitable protection and exercise of both the major and minor shareholders' rights and includes this matter in the CG Handbook and ensures that GGC complies with it.

1. Material information disclosed to shareholders must be accurate and complete. The information, positive as well as negative, must be clear and current. Though some issues are not a legal requirement for disclosure, if GGC considers it essential to shareholders, it will disclose such information via its website and through SET's information disclosure channels (SET Link).

2. The Board encourages shareholders' participation and exercise of their voting rights in the meeting or their authorized proxies to attend the meeting and invites shareholders to express their opinions or ask their questions equitably.

GGC held the 2024 Annual General Meeting of Shareholders on April 2, 2024, at 13:30 hours via electronic means (E-AGM), utilizing the electronic meeting control system provided by Inventech Systems (Thailand) Co., Ltd., a shareholder meeting service provider that complies with relevant meeting regulations and has completed self-assessment certification from the Electronic Transactions Development Agency (ETDA). The meeting was conducted in accordance with the Emergency Decree on Electronic Meetings B.E. 2563 (2020) and the Ministry of Digital Economy and Society's Announcement regarding Security Standards for Electronic Meetings, as well as other relevant laws and regulations. The 2024 Annual General Meeting of Shareholders was recorded in video format, which was made available for participants to view later through GGC's website. GGC provided care and convenience to participating shareholders in various aspects as follows:

Before the Meeting

- GGC set criteria and a procedure to give the rights to minor shareholders to propose meeting agenda items and/or nominate qualified Directors in advance of the AGM so that they will have an opportunity to set operational directions and select candidates with appropriate qualifications as Directors. The Board set the agenda items of the AGM, and shareholder(s) with no less than 4% of the shares with voting rights were invited to propose meeting agenda and nominate qualified Directors before the AGM, and the submission period was from October 1, 2023 to December 31, 2023. These criteria and procedure were posted on SET's and GGC's website.

- Nominated candidates or proposed agenda items would be considered under the criteria previously set. The Nomination and Remuneration Committee screened the qualifications of the candidates, and the Corporate Governance and Sustainable Development Committee screened the agenda items to be included on the meeting agenda before submitting them to the Board for consideration. The Board informed the shareholders at the AGM of the results of such consideration along with reasons, no meeting agenda item or director for 2024 AGM nomination was received.
- The Board Meeting No. 2/2024, on February 9, 2024 approved the date of the 2024 AGM. Accordingly, GGC informed SET to disseminate the meeting's resolution on the date of the 2024 AGM, the record date and agenda items on the same day, about two months before the AGM. The record date for the 2024 AGM was set on February 23, 2024 for shareholders to exercise their right to attend the 2024 AGM.
- The meeting notices, along with agenda items, supporting information including the opinions of GGC's Directors for each proposed agenda item, supporting documents, proxy forms, and instructions on the 2024 AGM registration procedures and methods (in both Thai and English), were published on GGC's website no less than 28 days before the meeting date. The publication was made on March 1, 2024. Additionally, GGC provided the meeting invitation form, which included a QR code for downloading the Form 56-1 One Report 2023 and the Integrated Sustainability Report 2023 in digital format.
- Proxy Appointment: In cases where shareholders wish to appoint a representative to attend and vote on their behalf, or if they are unable to attend the meeting in person, the Company has provided a proxy form. This form allows shareholders to specify their voting preferences—approve, disapprove, or abstain—for each agenda item. Additionally, it includes detailed information about the names and profiles of the Company's Independent Directors as an option for shareholders when appointing a proxy. Clear instructions, steps, and a list of required documents for proxy appointment are also provided, ensuring convenience and ease of participation. These materials are sent along with the meeting invitation in both Thai and English.
- The AGM Invitation letter was delivered to shareholders by mail on March 8, 2024, or 21 days in advance.
- Shareholders sent their queries about the meeting agenda in advance of the meeting to GGC via: corporategovernance@ggcplc.com or ir@ggcplc.com
- GGC provided an E-AGM registration system for shareholders or their proxies from March 20, 2024 until the date of the AGM, and arranged Call Center staff to assist shareholders in any queries they might have or any questions relating to the registration method or meeting attendance.

On the day of the meeting

- The 2024 AGM was held via the electronic means (E-AGM) in compliance with the Emergency Decree on Electronic Meetings of B.E. 2563 (2020) and the Ministry of Digital Economy and Society's Announcement regarding Security Standards for Electronic Meetings, as well as other relevant laws and regulations. Before proceeding, the Company informed the meeting of the registration methods and process. Those entitled to attend the meeting would confirm their identification to receive username and password as defined by GGC and detailed in the meeting notice. Meeting attendants must also comply with E-Meeting requirements and file for meeting registration.
- A total of 10 directors out of 11 attended the 2024 AGM, together with Executives, auditors, legal advisers, shareholders who volunteered as ballot-counting witnesses and shareholders' rights protection volunteers from the Thai Investors Association to evaluate the meeting quality via E-AGM.
- Before starting the meeting, GGC explicitly explained the method of voting and counting procedures for each agenda and ballots for each agenda item. Voting through "Approve", "Disapprove" or "Abstain" would be conducted for each item.
- The Chairman proceeded with the AGM under the agenda items. Shareholders were invited to ask questions and express opinions equitably. During each agenda item, shareholders or proxies could raise questions in advance and staffs will gather and submit them to the Board for response. Shareholders could also raise questions through the Conference System. The Chairman of each Sub-Committee, the Managing Director, and the Executives answered the questions raised by shareholders. Essential questions and opinions were recorded in the minutes of the meeting.



After the Meeting

- GGC disclosed the resolutions passed at the 2024 AGM and the voting – Approve, Disapprove, and Abstain – and the outcomes of every meeting agenda item through SET’s information disclosure channels.
- GGC prepared the minutes of the AGM, which included the names of Directors and Executives in attendance, other relevant attendees, key explanations, a list of questions and answers, and a summary of opinions expressed, in both Thai and English. These minutes were submitted to the SET within 14 days after the meeting and published on GGC’s website at www.ggcplc.com for shareholders to review. Additionally, copies of the AGM minutes were mailed to shareholders, who were given 30 days from the meeting date to raise any objections or disagreements.

GGC received an “Excellence” rating for its 2024 Annual General Meeting, achieving a perfect score of 100 points for five consecutive years. This reflects GGC’s commitment and dedication to protecting shareholders’ rights and fully complying with international corporate governance principles.

Equitable Treatment of Shareholders

GGC ensure equitable treatment of all shareholders, whether majority, minority, Thai or foreign. The equitable treatment of shareholders is summarized as follows:

- GGC recognizes the importance of all shareholders and has defined fair and equitable supervisory guidelines to protect the fundamental rights of shareholders in order to foster trust and confidence in investing with GGC with continued provision of appropriate returns.
- Providing Essential Information to Shareholders: All critical and necessary information related to GGC’s business operations must be clear, timely, and up-to-date for shareholders. Even if certain matters are not legally required to be disclosed, the Company will share such information if deemed necessary. This is done through GGC’s website and through SET’s information disclosure channels.
- Minor shareholders can express their opinions, provide suggestions, or file complaints to the Board, the Chairman of the Corporate Governance and Sustainable Development Committee, or the Corporate Secretary through the GGC website under the “Corporate Governance” menu, or via email at corporategovernance@ggcplc.com. The Chairman of the committee will review and consider the matters received to ensure they are appropriately addressed. Additionally, investors can request information or share their opinions via email: ir@ggcplc.com. The Investor Relations Unit is responsible for responding to and providing information to investors.
- The 2024 AGM was held in full compliance with the laws as well as applicable rules and regulations. Care and facilitation were provided to attendants before, during, and after the meeting.

Consideration for Stakeholders Role

GGC prioritizes the rights of all stakeholder groups. The Company has compiled principles concerning stakeholder rights and impacts into formal written guidelines, which are published on the Company's website. Stakeholders can submit their feedback through various channels provided by the Company. The policies and practices for different stakeholder groups are summarized as follows:

- (1) Shareholders and Investors:** GGC respects the fundamental rights of all shareholders and ensures equal treatment for every shareholder. It strives to maximize shareholder satisfaction by upholding rights such as attending the annual general meeting, voting, nominating Directors, and submitting opinions and suggestions. Shareholders are provided with direct communication channels through GGC's website at www.ggcplc.com and via email at ir@ggcplc.com.

Furthermore, GGC extends its support to both institutional and retail investors by organizing quarterly financial performance briefings through Facebook Live or Microsoft Teams. Virtual roadshows are also conducted via online platforms, with an Online Booking system in place to allow interested institutional investors to schedule direct meetings with GGC. Additionally, GGC participates in the Opportunity Day program on a quarterly basis, enabling both retail and institutional investors to access critical information more effectively. To align with the Investors Relations Code of Conduct, GGC refrains from engaging with investors during the 14 days prior to financial results announcements, ensuring the confidentiality of undisclosed company information. Due to GGC's Free Float being non-compliant with the required criteria, Public Presentation meetings are organized. These meetings adopt an interactive format and include participants such as analysts, investors, shareholders, and other interested parties, who are encouraged to pose questions directly to Executives. GGC notifies participants of the meeting schedule at least seven working days in advance and submits the meeting minutes to the Stock Exchange of Thailand through the SET's information distribution channels after the event, ensuring that key points are comprehensively disseminated to the public.

- (2) Customers:** GGC has committed to maximum satisfaction and confidence of customers in our quality products and services, and consistently upgrade standards through the systematically operated Customer Voice system to develop products and services to meet customers' various requirements and to create continued sales opportunities as follows:

- **Delivery of quality products and services in response to customers' needs:** The Company has committed to delivering products and render services of the best quality with international safety and environmentally friendly standard guaranteed to customers. GGC conducts quality checks on products and issues a Certificate of Analysis (COA) before delivering them to ensure quality reliability for safe use in processes. Moreover, GGC has strictly complied with its obligations agreed with the customers. If GGC cannot fulfill any condition, GGC will inform the customers in advance to jointly find a solution.

- GGC regularly disseminates comprehensive, timely, and accurate information about its products and services through sales agents and various media, including promotional articles, newsletters, and GGC's website.
- GGC also provides channels for receiving feedback and complaints regarding its products and services to facilitate continuous improvement. An independent third party is engaged annually to conduct customer satisfaction surveys on GGC's products and services. In addition to communication via sales agents, GGC has established a whistleblower channel on GGC's website to handle complaints. This ensures transparency, fairness, and the protection of whistleblowers' confidentiality.
- GGC has implemented an appropriate pricing mechanism to ensure reasonable profitability. Product prices and production costs are compared using reliable references, such as the Energy Policy and Planning Office's (EPPO) reference price for ME (B100), and the globally recognized reference prices for FA and Glycerine from www.icis.com, which widely trusts in the oleochemicals. GGC also ensures fair pricing by comparing the quality and cost of similar products and services available in the market.
- Build and maintain good relationships and protect customers' interests through regular communication and joint activities with customers via sales representatives and marketing activities, such as customer appreciation events with GC Group companies and business relationship-building activities.
- GGC adheres to the principles of equal and fair treatment of customers, with strict protection of customer confidentiality. Customer information is never used for the benefit of the Company or related parties.
- No gifts, souvenirs, or other benefits are given to or received from customers, in accordance with the GC Group's "No Gift Policy."

Additionally, GGC has implemented the Personal Data Protection Act B.E. 2562 (2019) in marketing and sales processes. The Company has communicated operational guidelines to stakeholders involved with customers and relevant employees, and conducts monitoring and verification to ensure proper implementation of processes related to customers' personal data. In 2024, GGC received no complaints regarding violations of customers' personal data usage.

- (3) Suppliers/Vendors:** GGC procures to deliver quality products and services that meet customer needs by utilizing the shared services of PTT Global Chemical Public Company Limited (GC). This process aligns with the GGC's procurement policy, which emphasizes efficiency, transparency, fairness, and legal compliance, while adhering to the GGC's Business Code of Conduct. These measures aim to maximize benefits for all stakeholders. The following actions are undertaken to achieve this objective:

- **Procurement Process Development:** GGC has implemented digital systems and technology to enhance work processes, making them more convenient, faster, cost-effective, transparent, and fair. These include the Vendor Management System (VMS), which facilitates new vendor registration, manages product and service information for approved vendors, and conducts vendor performance evaluations in a single system; AI Spend Analysis, a tool for analyzing procurement values to improve purchasing and hiring plans; and E-Procurement, an exploration of a modern procurement platform designed to streamline processes, eliminate non-value-adding steps, and mitigate various risks, with the ultimate goal of creating a comprehensive One Platform solution.
- **Vendors Management:** GGC has established fair and transparent standards for vendor selection, evaluation, and auditing. The Company prioritizes product and service quality, business stability, vendor reliability, and the ability to meet GGC's requirements. During vendor registration, GGC communicates its Supplier Code of Conduct (SCoC), emphasizing human rights and labor practices, safety and occupational health, environmental management, and good corporate governance. All newly registered vendors are required to acknowledge and sign these Business Code of Conduct Guidelines. GGC conducts annual vendor performance evaluations based on three key areas: 1) Product and service quality, 2) Corporate Social Responsibility (CSR), Thai labor standards, and on-time delivery, and 3) Compliance with safety, occupational health, and environmental standards.
- **Sustainable Procurement:** GGC has adopted sustainable procurement practices to align with its strategies and goals. Activities supporting these practices include the development of a strategy to reduce greenhouse gas emissions (Decarbonization), divided into short-term, medium-term, and long-term plans. The short-term plan focuses on educating procurement staff and target suppliers, as well as guiding suppliers in developing plans that align with GGC's goals. The medium-term plan incorporates greenhouse gas reduction criteria into procurement processes by utilizing suppliers' Greenhouse Gas (GHG) data or plans as part of the evaluation. Continuous monitoring and process improvements are undertaken to ensure tangible GHG reductions while maintaining competitive pricing. GGC also emphasizes green procurement, focusing on creating a green network and encouraging suppliers to join the Green Industry (GI) initiative. It establishes environmentally friendly product and service specifications, promotes the use of products with green labels, and prioritizes sourcing goods and services from suppliers accredited with Green Industry and ISO 14001 certifications.
- **Vendor Relationship Management and Capacity Building:** GGC builds strong relationships and collaborates with suppliers to enhance supply chain management through joint activities under the Integrated Intelligence Supply Chain Management (IISCM) framework. For instance, feasibility studies are conducted to expand waste disposal capacity for GGC, complemented by visits to suppliers' waste management facilities. These efforts have increased local waste disposal options and reduced greenhouse gas emissions through shorter transportation distances. GGC has also implemented a No Gift Policy, communicated to employees and suppliers involved in procurement, to ensure ethical practices and promote fairness and integrity in operations. Equal treatment of suppliers is a priority, and GGC

emphasizes the importance of listening to feedback and addressing complaints from both internal and external stakeholders through its Whistleblower system. GGC has also maintained its long-standing commitment to procuring goods and services from local communities. Supplier conferences are held annually in collaboration with the GC group, providing a vital platform for suppliers to share feedback and suggestions for improving business operations.

GGC complies with the Personal Data Protection Act, B.E. 2562 (2019), in its procurement processes. Relevant guidelines have been communicated to stakeholders, suppliers, users, and procurement staff. Regular monitoring and verification are conducted to ensure compliance with established procedures. In 2024, GGC received no complaints regarding violations of suppliers' personal data.

(4) Business Competitors: GGC has established a policy to treat business competitors under international principles within the framework of laws on trade competition and with adherence to the rules on fair competition. GGC included this in the Business Code of Conduct to promote fair, transparent, and non-discriminatory competition. The Company does not take undue advantage by seeking confidential information of business competitors, nor does the Company degrade the reputation of business competitors with malicious accusations.

(5) Creditors: GGC treats trade creditors with equality and fairness by strictly adhering to the terms and conditions agreed upon with them. For institutional creditors, GGC ensures equal opportunities to offer their financial services. The Company treats all creditors equally and manages loan agreements fairly, maintaining independence in decision-making based on integrity, without any dishonest demands, receipts, or payments of benefits in dealings with institutional creditors. Business information is disclosed regularly and transparently.

Additionally, GGC is dedicated to conducting business sustainably and plans to drive growth through investments in various projects aligned with its long-term business strategy. As part of its Business Transformation plan, GGC requires additional funding. To address this need, it has developed a financial strategy that includes securing loans through the issuance and offering of debentures and/or borrowing from commercial financial institutions in the form of Sustainable Financing. This approach aims to foster sustainable relationships with stakeholders while adhering to principles of good governance and transparency, with a strong focus on environmental, social, and governance (ESG) considerations. Currently, GGC is in the process of developing a Sustainable Finance Framework to serve as a guideline for implementing and managing Sustainable Financing initiatives.

(6) Public Sector: GGC has established guidelines for best practices in its interactions with the public sector to prevent any negative consequences arising from inappropriate actions. These guidelines are included in the CG Handbook. Additionally, GGC is committed to conducting business in strict compliance with applicable laws, rules, and regulations set by government agencies. For example, the application for permits or licenses is conducted in accordance with legal requirements and prescribed procedures, ensuring transparency and the disclosure of complete and accurate information as mandated.

- (7) Employees:** GGC takes responsibility for its employees in alignment with good corporate governance principles and business code of conduct by fostering a positive work experience throughout every stage of their careers. The Company emphasizes diverse learning opportunities for employees to apply in their roles, supported by a self-directed learning system via digital platforms. Additionally, GGC has updated its welfare and labor relations policies to better meet employees' diverse needs. These include introducing flexible benefit options that allow employees to choose benefits tailored to their specific requirements and improving the healthcare coverage plans for employees and their families to better suit individual medical needs and practices. To adapt to current trends, GGC has revised policies to accommodate Work from Anywhere (WFA) arrangements, providing employees with greater flexibility. The Company also prioritizes the promotion of human rights and aims to enhance employee engagement by improving working conditions, the workplace environment, and integrating information technology and innovative solutions to maximize operational efficiency.

GGC is dedicated to fostering a learning organization through various initiatives, such as leadership skill training and supporting employees' professional development via the Company's e-Learning system. This enhances employees' knowledge and analytical skills, enabling them to adapt to changing business contexts and strategies. GGC also instills a strong organizational culture with a global perspective (Global Mindset Culture), ensuring standardized processes and practices through its 4 Core Behaviors, Global Mindset GREEN DNA, and CARE principles. These values are promoted via activities such as the annual GGC SEEK Day event, where employees showcase their achievements, raise awareness of knowledge management (KM), and focus on energy conservation, safety, occupational health, and environmental protection (QSHE). The event also provides employees with opportunities to exchange best practices, fostering behaviors and a corporate culture centered on collaboration and shared learning.

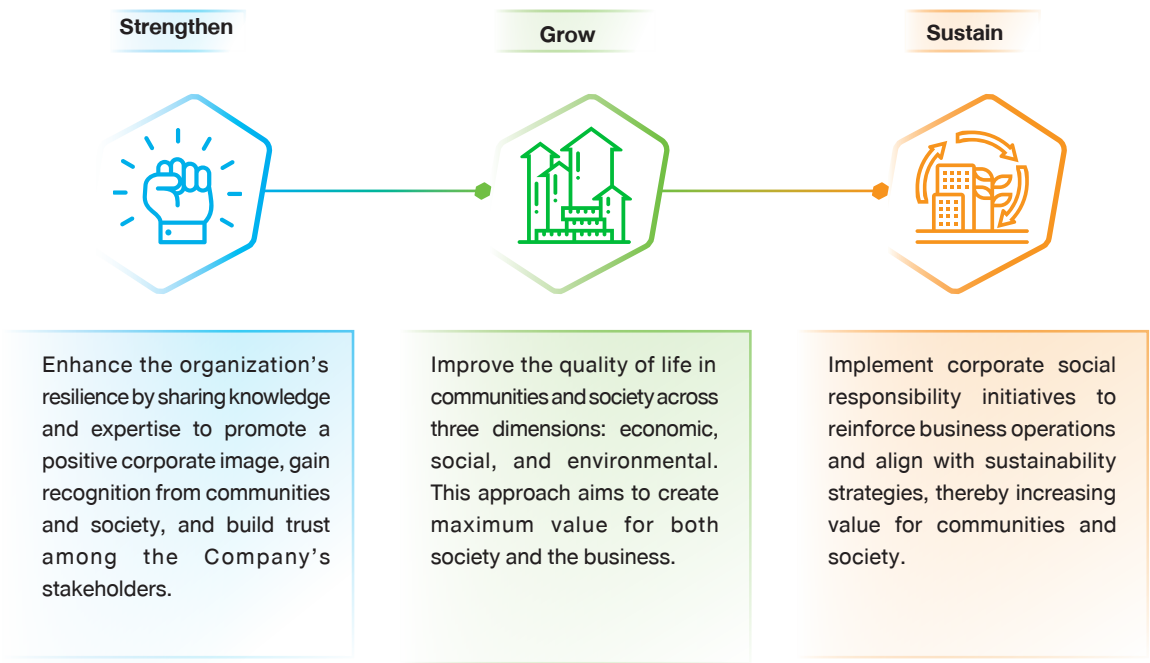
- (8) Society, Community, and Environment:** GGC drives the organization toward achieving its sustainable business strategy, aligning with the United Nations' Sustainable Development Goals (SDGs). This approach encompasses economic, social, and environmental dimensions to ensure sustainable business growth, create value, and elevate operational standards to gain recognition both nationally and internationally.

In the social and community aspect, GGC has developed strategies consistent with its business operations and the UN's SDGs. GGC focuses on conducting the business alongside creating shared value with communities and society to maintain a balance between business activities and stakeholder expectations. GGC is dedicated to improving the quality of life, economy, society, and environment through active engagement with communities and ongoing social responsibility initiatives. These efforts involve collaboration with stakeholders to achieve stable and sustainable growth under its CSR Strategy of "Strengthen, Grow, Sustain."

On the environmental front, GGC prioritizes balancing its growth strategy with achieving sustainable outcomes. GGC is firmly committed to addressing climate change challenges, with an ambitious goal of achieving net-zero greenhouse gas emissions by 2050. GGC aims to become a global leader in sustainability by collaborating with all sectors and implementing its Decarbonization Pathway, details of which are available in the “Integrated Sustainability Report 2024.”

Compensation for Violation of Rights

GGC maintains guidelines for the protection of rights of stakeholders who are affected by the violation of their rights by its business. Compensation of an amount no lower than that required by law will be considered.



Prevention of the Use of Inside Information

GGC has established a policy to ensure equitability and fairness to relevant stakeholders, including all shareholders. Information or news that is material to changes in securities prices, not yet disclosed to the public, is considered inside information for business operations and is considered confidential information. If disclosed, it could affect GGC Group, especially its stock value, as well as its image. Therefore, Directors, Executives, and all employees of GGC Group must keep it confidential. They must not abuse the inside information obtained from executing their duties to inform others or use it to seek their own gain from unlawful securities trading or cause GGC Group's loss of benefits, whether directly or indirectly. Thus, GGC has formulated the following guidelines:

1. The Board of Directors and Executives, as defined by the SEC, are required to notify the Corporate Secretary of any changes in their holdings of the Company's securities at least one day prior to the transaction. This requirement aligns with good corporate governance principles. Additionally, they must report the transaction to the SEC via the electronic system within three business days of the transaction date. Reports must be submitted under the following conditions or timeframes: 1) The total value of the transactions reaches 3 million baht or more, or 2) Six months have passed since the date of the first transaction. In either case, the report must be filed within three business days from the date the condition or timeframe is met, in compliance with SEC regulations. The Corporate Secretary will subsequently prepare a summary report for presentation to the Board of Directors during their meeting and disclose the information in the Form 56-1 One Report.
2. The Board monitors the use of inside information on a monthly basis. The Corporate Secretary reports any changes in the shareholding of Directors and Executives to the Board. GGC discloses such information at the beginning and end of the year, as well as any changes occurring during the year.
3. Notify Directors and Executives of the blackout period policy at least 30 days prior to the disclosure of quarterly financial statements, 45 days prior to the disclosure of annual financial statements, or before the disclosure of other information that may affect GGC's share price. During this period, they are required to refrain from trading GGC's securities until at least 24 hours after the public disclosure.
4. All employees and related parties are strictly prohibited from using inside information for personal benefit in trading or persuading others to buy, sell, or offer to buy or sell GGC's shares, whether directly or through a broker, while in possession of GGC Group's non-public information. This includes sharing such inside information with others for the purpose of trading GGC's shares. The Stock Exchange of Thailand (SET) classifies such actions as speculative trading or gaining an undue advantage.
5. Informs Directors, Executives, and employees about the policy and rules regarding inside information to ensure awareness and compliance. Clear disciplinary actions are defined and communicated for violations of these rules.

Anti-Corruption

The Board places significant importance on anti-corruption practices, as demonstrated by the formal declaration of an anti-corruption policy on February 14, 2018. This policy is regularly reviewed and updated to ensure alignment with current applicable laws, regulations, corporate governance (CG) guidelines from local regulatory agencies, and international standards. To promote and instill awareness among all personnel in combating all forms of corruption, the policy includes clear penalties for violations and incorporates anti-corruption measures into the CG Handbook for Directors, Executives, and employees to follow. GGC has also established guidelines for a No-Gift Policy, prohibiting employees and personnel from soliciting, receiving, or giving gifts to any parties or companies that could lead to fraud or corruption. Since 2017, GGC has been a member of the Thai Private Sector Collective Action against Corruption (CAC). Its membership was renewed for the second time on March 31, 2024, and will require renewal again by March 30, 2027.

GGC has implemented a “No Gift Policy,” applicable to all festive occasions, outlining practices related to the giving and receiving of gifts, entertainment, or other benefits. This policy aligns with GGC’s anti-corruption measures and aims to establish high standards of conduct for its personnel. The objective is to ensure that employees at all levels perform their duties to the best of their ability without expecting personal benefits in return. GGC has communicated the details of this policy to the business partners and external organizations and has publicized it within the office spaces and through various channels. Additionally, GGC continuously communicates and trains its personnel to raise awareness and provide a thorough understanding of anti-corruption measures, GGC’s expectations, and the penalties for non-compliance. Initiatives include orientation programs for new employees, GRC Day courses, and GGC’s e-Learning platform. Furthermore, GGC encourages Executives and employees to participate in activities and training programs related to anti-corruption organized by external organizations. Detailed information on these initiatives is included in the report section titled “Monitoring Compliance with Corporate Governance Policies and Practices.”



Prevention of Conflicts of Interest

GGC mandates the disclosure of transactions involving conflicts of interest between individuals and the GGC Group to prevent activities that may result in conflicts of interest, illegal actions, or inappropriate behavior. The Board of Directors has established policies and guidelines for handling transactions with potential or actual conflicts of interest, as outlined in GGC's Corporate Governance and Business Code of Conduct Handbook. These guidelines stipulate that all decisions made by personnel at any level in conducting business activities must serve the best interests of GGC. It is the duty of all personnel to continually assess themselves for any personal stake or conflict of interest in their work and to abstain from participating in related decision-making processes. GGC also ensures that personnel involved in such matters do not hold authority to approve or participate in transactions where a conflict of interest may arise.

GGC requires Directors, Executives, and employees to exercise caution in adhering to the guidelines for related-party transactions to prevent violations of SEC and Stock Exchange regulations. Directors and Executives, as defined by the SEC, are obligated to report their own and related parties' interests to GGC. Additionally, GGC has developed a handbook on related-party transactions and has communicated these principles to relevant departments within GGC and its subsidiaries. Furthermore, GGC has compiled a database of such transactions for internal use, enabling relevant departments to reference it as a guideline for evaluating company transactions. This measure is designed to minimize the risk of errors in operations and ensure compliance with established practices.

At the Board meeting, if some agenda might involve conflicts of interest, each Director with such conflict(s) must not take part in the decision whether to consider engagement in the transaction. The Chairman will request the cooperation of GGC's Directors to follow this policy in considering items with potential conflicts of interest by allowing them to notify the meeting and abstaining from voting or giving viewpoints-or leaving the meeting altogether during the relevant agenda. The Chairman also supervises accurate and complete disclosure of information on such transactions.

In addition, GGC has established measures to prevent conflicts of interest by requiring Directors, Executives, and all employees to report conflicts of interest annually or when such transaction occurs, which must be immediately reported to GGC by using the conflict of interest report form (for Directors) or by the conflict of interest reporting system via the intranet (for Executives and employees) for their supervisors' acknowledgment and further action.

6.2 Business Code of Conduct

The Corporate Governance and Business Code of Conduct (CG Handbook)

The Board has approved the making of the Corporate Governance and Business Code of Conduct Handbook (CG Handbook), which consists primarily of two sections: 1) the corporate governance structure and rules aligned with the corporate governance policy, and 2) the Business Code of Conduct, which outlines principles and best practices for conducting business with ethics and integrity. These include respect for laws and regulations, anti-corruption, responsibility to stakeholders, human rights principles, Prevention of the Use of Inside Information, Prevention of Conflicts of Interest, and other best practices that define a standard scope of behavior within a framework of ethics, integrity, and honesty. The Board expects Directors and Executives to lead by example in instructing and promoting an understanding among personnel to strictly comply with the Business Code of Conduct. GGC has distributed the handbook to Directors, Executives, and employees, requiring their acknowledgment and signatures as a commitment to adhere to these principles in their work. The CG Handbook has also been shared with GGC's subsidiaries and affiliates and is available on the Company's website at www.ggcplc.com under the "Corporate Governance" section, ensuring easy access for shareholders, investors, and other interested parties. Additionally, GGC has circulated a Supplier Code of Conduct to key customers and suppliers, requesting their acknowledgment of GGC's Business Code of Conduct and signatures to confirm their shared commitment to operating in a consistent and ethical direction. Further details are provided in the attachment "Corporate Governance Policy and Guidelines and Business Code of Conduct."

The Board has also established a process to review the appropriateness of the handbook annually to ensure consistency with current rules and practices of local regulatory and assessment agencies and international standards. Each year, GGC reviews and updates the Corporate Governance and Business Code of Conduct Handbook to ensure it remains current and aligns with the Company's strategies and operations. Additionally, GGC communicates topics related to corporate governance, risk management, internal control, and compliance with laws, regulations, and policies (GRC) to its employees. This communication is carried out through platforms such as the MD Townhall, Management meetings, and other key organizational meetings. The aim is to instill these principles as habits in daily operations and embed them as part of GGC's corporate culture.

6.2.1 Corporate Compliance

GGC recognizes that compliance with laws—or exceeding established regulatory standards—fosters sustainable development. As a result, GGC prioritizes adherence to both domestic and international laws and regulations. The Company has adopted the international standard ISO 37301: Compliance Management System (2021) and developed Compliance Management System (CMS) Guidelines as an operational framework for employees. Additionally, GGC incorporates internal control principles to enable employees to identify and assess compliance risks related to their work processes. These risks are documented in a database for conducting Compliance Assessments for GGC and GGC Group. This process facilitates the identification and evaluation of deviations or non-compliance with relevant laws and regulations. GGC also manages and monitors overall compliance oversight across the organization, ensuring comprehensive governance. The outcomes of these activities are reported to the Corporate Governance and Sustainability Development Committee, which provides feedback to enhance governance efficiency and ensure alignment with international standards. To promote awareness of legal and regulatory compliance among its employees, GGC conducts various initiatives, such as GRC Day for employees and personnel within the group. GGC also produces educational video content on topics such as anti-competitive practices, intellectual property, anti-money laundering, and complaint management. Additionally, knowledge assessments are conducted to evaluate employees' understanding of compliance topics relevant to their roles. Furthermore, GGC ensures clear communication from Executives to employees through a Tone at the Top approach.

6.2.2 Communication of Good Corporate Governance

In 2024, GGC established a Corporate Governance Roadmap aimed at enhancing knowledge and understanding to support compliance with the CG Policy and CG Handbook. This roadmap includes guidelines for effectively communicating corporate governance principles to Directors, Executives, and employees through various activities. The vision focuses on creating long-term value for the organization (Creation of Long-Term Value), fostering responsibility in performing duties (Responsibility), ensuring equitable and fair treatment of all stakeholders (Equitable Treatment), promoting accountability in decision-making and justification of actions (Accountability), and encouraging transparent and accountable operations (Transparency). This includes the accurate, complete, and timely disclosure of information through appropriate and equitable channels, as well as a commitment to integrity and business ethics (Ethics). These principles apply to all employees, starting from their first day of work, as they are expected to adhere to and comply with them. To consistently reinforce these values, GGC provides regular training, seminars, and various activities, as outlined below:

1. Learning the Corporate Governance and Business Code of Conduct Handbook via GGC's e-Learning Platform: All Executives and employees must acknowledge their understanding by signing a confirmation and completing an assessment to evaluate their comprehension of these guidelines. The assessment results will be utilized by GGC to refine communication strategies and further enhance employees' awareness of these principles.
2. Every orientation session for new Executives, and new employees was required to include "Corporate Governance and Business Code of Conduct" as a main topic.
3. Communicate the Corporate Governance and Business Code of Conduct Handbook to business partners and customers, requiring their acknowledgment and signature to confirm their recognition and consent to adopt the principles, policies, and code of conduct outlined in the handbook as a standard for their operations.

4. Share best practices in corporate governance with all employees through company email newsletters and the Line Application on a regular basis, following initial communication with Executives during Management meetings. These channels are designed to make the information more accessible to employees.
5. Enhance understanding of the Business Code of Conduct by sharing it through Microsoft Stream and the Company's e-Learning system, offering additional channels for easier access and greater convenience for employees.
6. Promote awareness and understanding of anti-corruption through various company activities. Additionally, communicate GGC's No Gift Policy to employees and business partners to ensure widespread understanding of the Company's commitment to declining gifts.
7. Assessment of compliance with criteria set by external supervisory authorities such as SEC, SET, Thai Institute of Directors Association (IOD), and Thai Investors Association (TIA) to measure the efficiency of the implementation under corporate governance and elevate GGC's corporate governance practices to international standards.
8. GRC Health Check survey was conducted to assess perception and understanding before organizing integrated training for Executives and employees to measure their basic knowledge of corporate governance in line with risk management and compliance processes. It would help drive the organization to develop its corporate governance as well as the efficiency of work planning, monitoring, and assessment of performance within the framework of sufficient internal control to completely achieve the objectives, goals and strategies set by GGC. Under the survey, most employees had good understanding of internal control, and commendable understanding of anti-corruption, and communication of corporate governance, including rules, regulations, and requirements. GGC would use the feedback to further improve and relay the principles of GRC to employees later.

6.3 Significant Changes and Developments in the

Corporate Governance Policies, Guidelines and System in 2024

6.3.1 Recognition of the Board's Role and Responsibilities as Organizational Leaders in Creating Sustainable Business Value

- Improvement of Anti-Corruption Policies and Practices: Enhancements were made to ensure the content is more comprehensive and aligned with both domestic and international standards, aiming to elevate the Company's operations to greater transparency and fairness. These improvements were presented to the Corporate Governance and Sustainable Development Committee for approval and subsequently to the Audit Committee for acknowledgment of the policy review and updates, before being submitted to the Board of Directors for final approval.
- Revision of the Corporate Governance and Business Code of Conduct Handbook: The updated handbook was presented to the Corporate Governance and Sustainable Development Committee for approval before submission to the Board of Directors for endorsement.

- Revision of the Audit Committee Charter: Revisions have been made to enhance clarity and ensure alignment with best practices set by the SEC. These revisions refine the Committee's responsibilities in preventing and addressing inappropriate conduct, making them more precise and applicable in practice. Additionally, the Charter has been expanded to provide greater comprehensiveness, including the review of self-assessment measures related to the CAC and ensuring compliance with duties and data usage under the Personal Data Protection Act (PDPA)

6.3.2 Setting Business Objectives and Goals for Sustainability

- Enhancement of Communication, Awareness, and Integration: Governance, Risk, Internal Control, and Compliance (GRC) principles were integrated into work processes through various Company initiatives, including Risk and Control Self-Assessment (RCSA), GRC Day activities, and the development of an e-Learning system. These initiatives aim to equip employees with the knowledge to embed these principles into their daily workflows, making them a fundamental part of the GGC Culture.

6.3.3 Strengthening Board Effectiveness

- Training sessions were organized for the Board of Directors on the topic of "Decarbonization and Carbon Credit Management" to support GGC's strategic direction. This aligns with GGC's commitment to becoming a globally recognized sustainable organization and presents an opportunity to drive the Company toward sustainable growth. Additionally, training was conducted on the topic of "Global & Thailand Economic Outlook" to provide insights into overall global and Thai economic trends. These trends are key factors or variables that influence the needs of producers, consumers, and markets and have a direct impact on GGC's strategic planning and business direction.
- A Director Certification Program (DCP) was organized for new Directors to educate them on their roles and duties under the CG Code and applicable laws. Key training programs were also conducted for members of Sub-Committees to enhance their skills and efficiency in performing their roles as Directors, such as the Advanced Audit Committee Program (AACP).

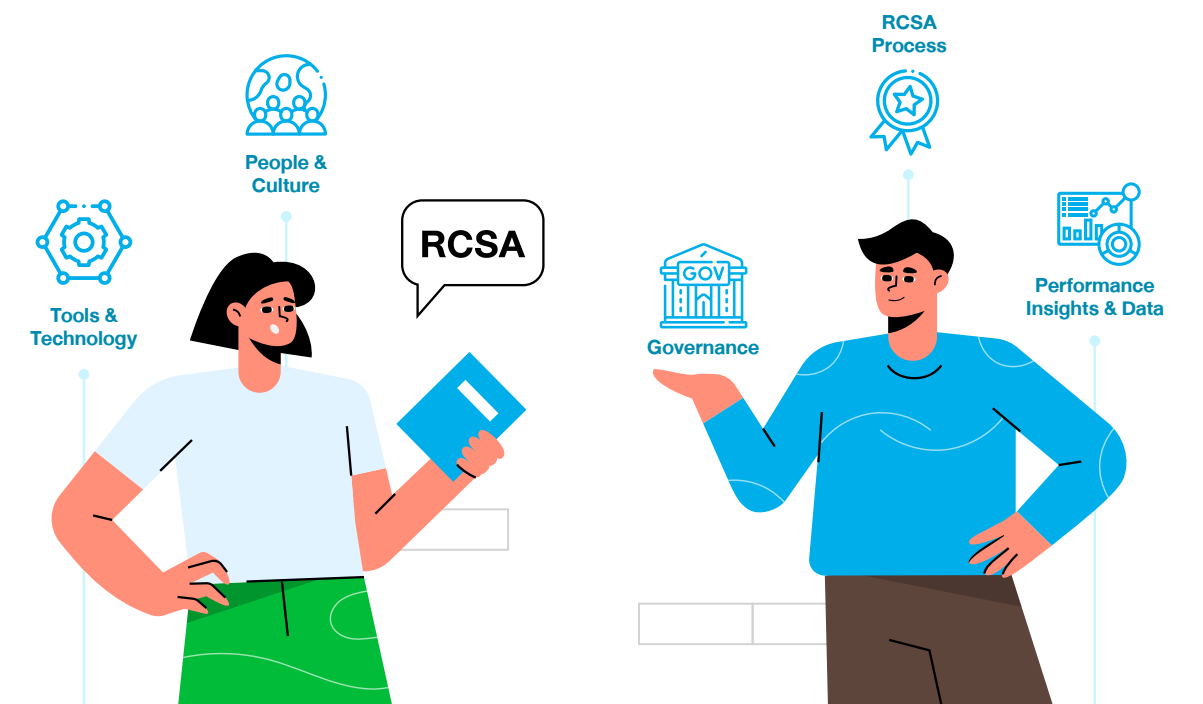
6.3.4 Nomination and Development of Executives and Personnel Management

- Preparing Personnel to Support Business Growth: GGC has developed policies to manage organizational structure, review roles and responsibilities at all employee levels, and streamline work processes. This includes integrating digital tools into workflows and optimizing workforce management for greater efficiency. Additionally, GGC focuses on maximizing cost efficiency in personnel management by utilizing an HR Dashboard to compare personnel costs with those of similar businesses.
- Enhancing Salary Structures: GGC has adjusted its salary structure to improve competitiveness and attract highly capable employees. Key policies have been established regarding employee benefits and labor relations, such as introducing flexible benefits and revising health coverage plans. These measures aim to meet the diverse needs of employees and strengthen their engagement with the Company.

- **Developing Employee Skills and Capabilities:** GGC emphasizes skill development at all levels, particularly among Executives and supervisors. The Company has implemented a Leadership Development Model, and in 2024, it selected high-potential employees to participate in the Outward Mindset training program. The program included 15 Executives and 36 high-potential employees.

6.3.5 Risk Management and Internal Control

GGC conducts an annual Risk and Control Self-Assessment (RCSA) for 17 processes, comprising 6 Core Business Processes and 11 Support and Management Processes. Detailed documentation is prepared for each process, outlining all steps from initiation to completion, to ensure alignment with current operational workflows and to maintain effective and sustainable internal controls. In 2024, GGC introduced the RCSA Effectiveness initiative to enhance the analysis, prioritization, and efficiency of RCSA processes. Additionally, an e-Learning module was developed through the SuccessFactors platform to equip employees across the organization with the knowledge and understanding required to conduct self-assessments of risks and internal controls. The Company also evaluates the RCSA Maturity Level and has established a comprehensive development plan addressing five key dimensions: Governance, People and Culture, RCSA Process, Tools and Technology, and Performance Insights and Data, following recommendations from external independent experts. These measures ensure that RCSA operations are both effective and sustainable. Furthermore, GGC leverages technology to enhance data visualization for risk assessment and continues to explore system enhancements to further optimize the RCSA process. These initiatives align with GGC's Integrated Governance, Risk, and Compliance (GRC) framework, which integrates good corporate governance, risk management, internal control, and compliance with laws, regulations, and policies. This approach supports the organization in achieving its business objectives efficiently, transparently, and in an auditable manner, while minimizing risks that could impact business operations.



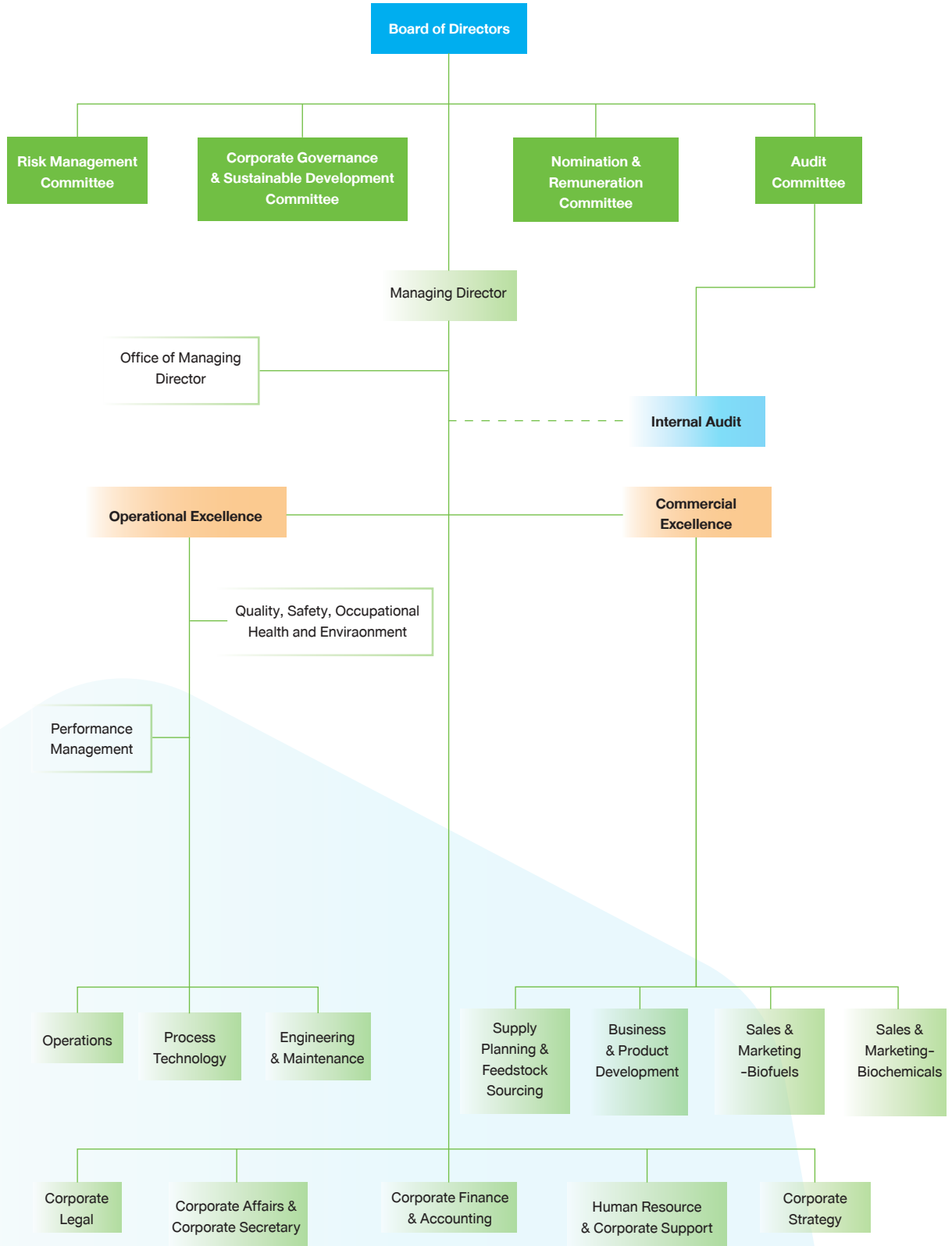
The Board recognizes its role as the governing body and has established a process to review and assess the adoption of the Corporate Governance Code for Listed Companies 2017 (CG Code). This review is conducted at least once a year to tailor the principles to GGC's specific context. The Board also evaluates the implementation of the CG Code to ensure that practices are appropriate and that development plans are in place to maintain ongoing alignment with GGC's business objectives. The 2024 review and assessment of GGC's compliance with the CG Code revealed that GGC has successfully applied the majority of the principles under the Apply or Explain approach. For principles that have not yet been implemented or adopted, the reasons have been documented as part of the Board's resolutions. The findings are summarized as follows:

CG Code Principles	GGC's Practice
Clause 3.2.1: The Chairman of the Board should be an independent director.	<ul style="list-style-type: none"> The Chairman of the Board is a non-executive director and does not participate in GGC's daily operations. The responsibilities of the Chairman are clearly defined in GGC's Good Corporate Governance Handbook and Form 56-1 One Report. The Chairman performs these duties fully in accordance with the defined responsibilities More than half of GGC's Board of Directors are Independent Directors.
Clause 3.9.5: Succession Plan	<ul style="list-style-type: none"> GGC conducts annual performance evaluations and development assessments for the Managing Director and senior Executives. GGC has also established a learning and development plan to guide the selection of suitable candidates for Managing Director and senior executive positions in case of vacancies.
Clause 4.2.1 in sub-clause (1): The Board should oversee the establishment of a compensation structure that considers appropriate proportions between base salary, short-term performance rewards (such as bonuses), and long-term performance rewards (such as Employee Stock Ownership Plans - ESOP).	<ul style="list-style-type: none"> GGC evaluates and designs an appropriate compensation structure that links rewards with long-term performance, taking into account favorable business conditions and the Company's overall readiness.

7. Governance Structure and Key Information about the Board of Directors, Sub-Committees, Executives, Employees, etc.

7.1 Governance Structure

As of December 31, 2024



7.2 Board of Directors

Details of the Board of Directors as of December 31, 2024.

Name	Position	Date of Appointment
1. Mr. Narongsak Jivakanun ⁽¹⁾	Chairman	May 15, 2024
2. Prof. Dr. Kumchai Jongjakapun	Chairman of Independent Directors / Chairman of Audit Committee	February 17, 2016
3. Mrs. Kannika Ngamsopee	Independent Director / Chairman of Risk Management Committee / Director to Audit Committee	February 17, 2016
4. Pol. Gen. Suchart Theerasawat	Independent Director / Chairman of Corporate Governance and Sustainable Development Committee	December 23, 2020
5. Mr. Jarun Wiwatjesadawut	Independent Director / Chairman of Nomination and Remuneration Committee / Director to Risk Management Committee	April 2, 2021
6. Lt. Gen. Titawat Satiantip ⁽²⁾	Independent Director / Director to Nomination and Remuneration Committee / Director to Corporate Governance and Sustainable Development Committee	September 11, 2019
7. Mr. Kajohn Srichavanotai	Independent Director / Director to Corporate Governance and Sustainable Development Committee	April 3, 2023
8. Mrs. Sommai Siriudomset ⁽³⁾	Independent Director / Director to Audit Committee / Director to Corporate Governance and Sustainable Development Committee	November 22, 2023
9. Mr. Saroj Putthammawong ⁽⁴⁾	Director / Director to Nomination and Remuneration Committee / Director to Risk Management Committee	January 17, 2024
10. Mr. Thanakorn Manoonpol	Director / Director to Risk Management Committee	June 15, 2022
11. Mr. Kridsada Prasertsuko	Director / Director to Risk Management Committee	January 1, 2023

Remarks: (1) At the Board of Directors' meeting No. 5/2024 on May 15, 2024, a resolution was passed to appoint Mr. Narongsak Jivakanun as the Chairman of the Board, replacing Mr. Kongkrapan Intarajang, effective from May 15, 2024.

(2) At the Board of Directors' meeting No. 4/2024 on April 24, 2024, a resolution was passed to restructure the composition of the Audit Committee, resulting in a reduction of its members. Consequently, Lt. Gen. Titawat Satiantip no longer holds the position of Audit Committee member, effective from April 24, 2024.

(3) At the Board of Directors' meeting No. 4/2024 on April 24, 2024, a resolution was passed to appoint Mrs. Sommai Siriudomset as a member of the Corporate Governance and Sustainable Development Committee, effective from April 24, 2024.

(4) At the Board of Directors' meeting No. 1/2024 on January 17, 2024, a resolution was passed to appoint Mr. Saroj Putthammawong as a member of the Nomination and Remuneration Committee and the Risk Management Committee, replacing Mr. Varit Namwong who had resigned. His tenure began on January 17, 2024.

(5) Directors No.1 to 10 are Non-Executive Directors. No. 11 is an Executive Directors. No. 2 to 8 are independent Directors.

Changes in Directors in 2024

Directors who resign during the year

Name	Position	Service Period
1. Mr. Kongkrapan Intarajang	Chairman	November 6, 2019 – May 13, 2024

The current Board consists of 11 directors, 10 of whom are non-executive directors, and 7 are independent directors. The Chairman is not an Independent Director, but is independent of management in compliance with the best practices of the CG Code and is not involved in day-to-day operations. The Chairman and the Managing Director are not the same person and have different roles and duties. The roles and duties of the Chairman and the Managing Director appear under “Scope of Authority of the Chairman” and “Scope of Authority of Managing Director”.

The contact address of the Directors and Executives is 555/1 Energy Complex Building A, 4th Floor, Vibhavadi Rangsit Road, Chatuchak District, Bangkok 10900.

Securities Held in the Name of Directors, Their Spouses or Cohabiting Partners and Minors

Securities Holder*	Shareholding (Shares)				Changes during the year (Shares)
	As of January 1, 2024		As of December 31, 2024		
	Direct	Indirect	Direct	Indirect	
1. Mr. Narongsak Jivakanun ⁽¹⁾	N/A	N/A	15,000	-None-	N/A
2. Prof. Dr. Kumchai Jongjakapun	-None-	15,000 (Spouse)	-None-	15,000 (Spouse)	No Change
3. Mrs. Kannika Ngamsopee	-None-	20,000 (Spouse)	-None-	20,000 (Spouse)	No Change
4. Pol. Gen. Suchart Theerasawat	-None-	-None-	-None-	-None-	No Change
5. Mr. Jarun Wiwatjesadawut	-None-	-None-	-None-	-None-	No Change
6. Lt. Gen. Titawat Satiantip	-None-	-None-	-None-	-None-	No Change
7. Mr. Kajohn Srichavanotai	-None-	-None-	-None-	-None-	No Change
8. Mrs. Sommai Siriudomset	-None-	-None-	-None-	-None-	No Change
9. Mr. Saroj Putthammawong ⁽²⁾	N/A	N/A	-None-	-None-	N/A
10. Mr. Thanakorn Manoonpol	-None-	-None-	-None-	-None-	No Change
11. Mr. Kridsada Prasertsuko	-None-	-None-	-None-	-None-	No Change

Securities Holder*	Shareholding (Shares)				Changes during the year (Shares)
	As of January 1, 2024		As of the audit date		
	Direct	Indirect	Direct	Indirect	
Directors who resigned in 2024 (as of each director's last day of work)					
1. Mr. Kongkrapan Intarajang ⁽¹⁾	-None-	-None-	-None- (May 13, 2024)	-None- (May 13, 2024)	No Change

Remarks: In compliance with SEC's notification No. TorChor. 17/2008 on the Determination of Definitions in Notifications relating to the Issuance and Offer for Sale of Securities, Clause 2 (16)
 *Direct securities holder refers to shares held by Directors, whereas Indirect securities holder refers to shares held by Directors' spouses or cohabiting partners and minors.

(1) At the Board of Directors' meeting No. 5/2024 on May 15, 2024, a resolution was passed to appoint Mr. Narongsak Jivakanun as the Chairman of the Board, replacing Mr. Kongkrapan Intarajang, effective from May 15, 2024.

(2) At the Board of Directors' meeting No. 1/2024 on January 17, 2024, a resolution was passed to appoint Mr. Saroj Putthammawong as a member of the Nomination and Remuneration Committee and the Risk Management Committee, replacing Mr. Varit Namwong who had resigned. His tenure began on January 17, 2024.

7.2.1 Authorized Signatory

GGC's duly authorized signatories, according to GGC's Articles of Association and Certificate of Incorporation at the Department of Business Development, Ministry of Commerce, dated November 14, 2024, are two of the three Directors, namely, Mr. Narongsak Jivakanun, Mr. Saroj Putthammawong and Mr. Kridsada Prasertsuko, jointly signing with the company seal affixed.

7.2.2 Composition of the Board

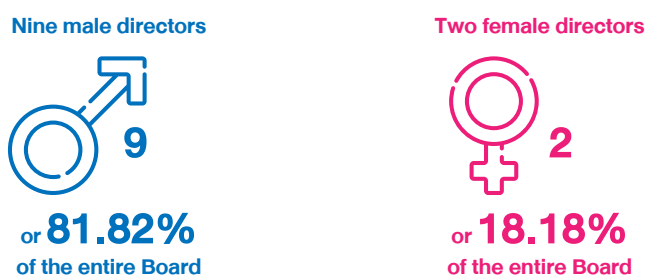
Under GGC's Articles of Association and the CG Handbook, the Board shall consist of a minimum of five directors and a maximum of eleven directors, appointed or dismissed by the shareholders' meeting, each serving a three-year term. One-third or at least three of the Board members must be Independent Directors, and at least half of the entire Board must reside in the Kingdom of Thailand. Additionally, all Directors must possess the required qualifications and have no prohibited characteristics stipulated by law, and must not be older than 70. The Board shall nominate one director as Chairman and may appoint a Vice Chairman as appropriate. The composition and qualifications of the Board align with GGC's Articles of Association, Corporate Governance Code, Business Code of Conduct, and applicable laws, and are free from gender discrimination. The Board consists of Directors with diverse knowledge, expertise, and experience that are beneficial to GGC's operations. Directors should not hold more than five directorships in listed companies and not more than three in state enterprises or companies that have state enterprise(s) as a shareholder(s), in accordance with the resolution of the Cabinet.

The current Board consists of 11 members, a number deemed appropriate for the size and type of GGC's business. GGC ensures that none of Directors hold board positions in more than five listed companies simultaneously. The composition of the Board is as follows:

Composition of the Board:
Number of directors and their independence



Gender Diversity



7.2.3 Authority and Responsibility of the Board

The Board takes a proactive role in fulfilling their duties in decision-making and in defining corporate directions and compliance to ensure the efficiency and best interests of GGC as follows:

1. Perform duty and ensure that GGC's operations are conducted in strict compliance with laws, GGC's objectives and Articles of Association, and resolutions of shareholders' meetings, adhering to the SET's "Code of Best Practices for Directors of Listed Companies".
2. Dedicate time and value the defining of GGC's vision, mission, directions and strategies. The meeting attendance of each Director should not be less than 75% of the total meetings scheduled in advance for each year, excluding the meetings called after setting the year's schedule. The Board should freely express their views and seek information which will be useful for defining GGC's directions.
3. Review and approve important policies and strategies, including GGC's objectives, major plans and financial goals, promote innovation and technology and apply them to GGC's operations, ensure that Management conducts business in line with the defined direction and strategy on an annual basis, and that Management effectively drives the defined vision, directions and strategy into practice, and is able to promptly respond to changing situations.

4. Define corporate governance policy and business ethics which shall consist of principles and good practices for Directors, Management, and employees to raise awareness among them in performing the duties with responsibility and in strict compliance with these practices as well as GGC's rules and regulations, with due regard for equitable treatment for all stakeholders.
5. Delegate approving authority, besides those already made under the Articles of Association, to the Managing Director, namely, the authority to approve budget, investment, implementation of projects of GGC and GGC Group, and engagement in contract of significance, including the authority to appoint directors to replace those that resigned during the year, appoint directors to the sub-committees, designate authorized signatories, set the date of the AGM and interim dividend payment.
6. Ensure that GGC commands an effective and reliable accounting system, financial reporting and auditing, and effective and efficient internal-control and internal-audit assessment process.
7. Consider potential risk and define comprehensive risk management guidelines, and ensure that Executives is equipped with an efficient risk management system or process, and seek business opportunities from such risk, and institute adequate and efficient internal-control system.
8. Oversee supervise and manage issues regarding potential conflicts of interest and related- party transactions with emphasis on key transactions to ensure the best interests of shareholders and stakeholders.
9. Ensure suitable communicating channels with each group of shareholders, and oversee information disclosure to ensure its accuracy, clarity, transparency, reliability, and high standard.
10. Assess and review the performance of the Board and the Managing Director regularly.
11. Ensure a suitable compensation system or mechanism for senior Executives which corresponds to their performance to induce short-term and long-term motivation.
12. Express leadership and exemplify corporate governance and business ethics in line with GGC's CG policy.
13. Ensure that the assessment of compliance with the corporate governance policy and business ethics is carried out at least once a year.
14. Ensure that a recruitment system is in place and that GGC has qualified personnel to fill important positions appropriately under transparent and fair procedures. Appointment of Executives from Vice President upward, who report directly to the Managing Director, require majority votes from the Board.
15. Report vested interests of the Board as well as those of related parties related to the management of GGC or GGC Group.

16. Attend every meeting of the Board and the Meeting of Shareholders or if, under any circumstance, attendance is impossible, the Chairman of the Board must be notified.
17. Emphasis on conducting business in a socially and environmentally responsible manner, promote the sustainable well-being of society, starting from improving and elevating the livelihoods of people in the communities surrounding GGC's facilities for sustainable co-existence.
18. Support the implementation of anti-corruption of all forms for sustainable growth and prosperity.

In addition, the Board's operation that require approval from shareholders' meetings are:

- Engagement in a related transaction, or acquisition or sale of major assets of GGC as stipulated by the laws and SEC.
- Selling or transferring GGC's business, either in its entirety or partially, to another party.
- Acquiring or accepting the transfer of another party's business.
- Drafting, amendment, or termination of contracts related to a full or partial lease of GGC's business, appointment of a proxy to act on behalf of GGC, or merging of the business with another party for profit-sharing.
- Addition or amendment of the Memorandum of Association or Articles of Association.
- Increase or decrease of GGC's authorized capital.
- Debenture issuance offered to sell to the public.
- Company dissolution or a merger with another company.
- Announcement of dividend payment.
- Other matters which are required to approve from the shareholders' meeting as defined under the laws and GGC's Articles of Association.

7.2.4 Appointment and Removal of Directors

The appointment, removal and resignation of Directors are defined in GGC's Articles of Association, summarized as follows:

(A) Appointment of Directors

1. Shareholders at a shareholders' meeting shall elect director(s) through majority voting according to the following rules and procedures:
 - (1) Each shareholder shall have one vote per share held.
 - (2) If the number of candidates for the election does not exceed the number of vacant positions, shareholders shall vote on these eligible candidates. Each shareholder exercises all votes applicable under (1) in electing one or more persons as directors, provided that no vote is divisible.
 - (3) If the number of candidates exceeds the number of vacant positions, the meeting can elect directors individually. In the voting, shareholders with voting rights will cast all their votes applicable under (1) to one candidate or more persons as directors, provided that no vote is divisible. The candidates with the most votes are to be appointed directors up to the order of voting result. If more candidates receive equal votes than the number of directors required, the Chairman of the meeting must cast a deciding vote.
2. The Board shall elect one director as the Chairman of the company. The decision of the meeting shall be made by a majority of votes of directors attending the meeting. In the event of a tie, the Chairman of the meeting must cast a deciding vote.
3. If a director's position is vacant due to other reasons besides term completion, the Board may elect a qualified person without the prohibited characteristics under the laws to fill the vacancy at the next shareholders' meeting, except if the remaining term of the previous director is less than two months. The elected director can stay in office only for the remaining term of the predecessor. The acting director must secure at least three-quarters of the votes of the remaining Directors.
4. If the meeting fails to achieve quorum due to the Board's composition, the remaining directors will perform their duties on behalf of the Board only in calling a shareholders' meeting to appoint directors to fill all the vacancies within one month from the date the number of directors become insufficient to constitute a quorum. The elected directors can stay in office only for the remaining term of the predecessor.

(B) Removal or Retirement of Directors

1. At Annual General Meeting (AGM), one-third of the directors must retire. If this number is not a multiple of three, then the number nearest to one-third applies.

The directors who retired during the first and second year after GGC was registered are on a voluntary basis. If the number of directors to be retired still exceeds the positions, then the retiring directors are to be drawn by lots. For subsequent years, those with the longest terms must retire. The retired directors can be re-elected.

2. Other besides term completion, a director may retire upon death, resignation, lack of qualifications, possession of prohibited characteristics specified under the laws, resolution of the shareholders' meeting or the court order.
3. Any director who has intention to resign from directorship must tender his or her resignation to GGC. Such resignation will take effect from the date the resignation letter reaches GGC, and the director may notify the Registrar of his/her resignation.
4. In voting to remove any director from directorship before the completion of his/ her term, a three-quarter (3/4) vote of eligible shareholders present at the meeting is required. The number of shares represented by the three-quarter votes of at least half of the total number of shares represented by the eligible shareholders present at the meeting is also required.

7.2.5 Independent Directors

According to GGC's Corporate Governance and Business Code of Conduct Handbook, at least one-third and no fewer than three directors on the entire Board must be Independent Directors. Each Director may serve up to nine consecutive years from the date GGC was registered on SET or from the date of the first appointment as Independent Director, or both. The re-appointment of Independent Directors will be based on the necessity and appropriateness. The Independent Directors must possess knowledge as well as competency and be legally independent as specified in SEC's notification.

Independent Directors must express their own points of view freely at the meetings, regularly attend the meetings and have access to financial and other business data to support their independent views to protect the interests of those involved and prevent potential conflicts of interest between GGC and Top Executives, Directors, major shareholders, or other companies with the same group of Directors, Executives, or major shareholders.

Furthermore, Independent Directors shall self-verify their independence upon their appointment and report such information, as well as any change to it, to GGC annually for disclosure in the Form 56-1 One Report. Thus, GGC's Independent Directors must command the qualifications under SEC's regulations as follows:

1. Must not hold more than 0.5% of the voting shares of GGC, its parent company, subsidiary, associated company, major shareholder, or controlling person of GGC, including the shares held by persons related to the Independent Director.

2. Must not be or have been an executive director, an employee, a member of staff, salaried consultant, or controlling person of GGC, its parent company, subsidiary, associated company, sister company, major shareholder, or controlling person, unless such status has ceased for at least two years. However, the prohibited roles do not include cases where the independent director used to be a government official or an adviser in government agencies that are major shareholders or controlling persons of GGC.
3. Must not be a related family member or by legal registration as the father, mother, spouse, sibling, or offspring, or spouse of the offspring of any other director, executive, major shareholder, controlling person, or any person who is to be nominated as a director, executive, or controlling person of the GGC or its subsidiary.
4. Must not have or have had any business relationship with GGC, its parent company, subsidiary, associated company, major shareholder, or controlling person in the manner that may obstruct the exercise of independent judgment of the director, and must not be or have been a key shareholder or controlling persons of a person with business relationship with GGC, its parent company, subsidiary, associated company, major shareholder, or controlling persons, unless such status has ceased for at least two years.

The mentioned "Business Relationship" shall include conducting ordinary business transactions in offering or taking on leases of any immovable properties, conducting transactions relating to assets or services, or granting or accepting any financial support by way of offering or taking on loans, guarantees, asset-based collaterals, including other similar actions, which result in GGC or the counterparty being indebted to the other party in the amount of 3% or more of the net tangible assets of GGC or Baht 20 million or more, whichever is lesser, based on the calculation of the related transaction value under the notification of the Securities and Exchange Commission (SEC), where the consideration of such indebtedness shall include any indebtedness taking place during a period of one year before the commencement date of the business relationship with such person.

5. Must not be or have been the auditor of GGC, its parent company, subsidiary, associated company, major shareholder, or controlling persons, must not be a key shareholder (holding more than 10% of the voting shares of GGC, including the shares held by related persons), or controlling persons or a partner of an auditing firm of which the auditor is attached to GGC, its parent company, subsidiary, associated company, major shareholder, or controlling persons, unless such status has ceased for at least two years.
6. Must not be or have been a provider of any professional services, including providing legal services or financial services with service fees of more than Baht 2 million a year from GGC, its parent company, subsidiary, associated company, major shareholder, or controlling person, and must not be a key shareholder, a controlling person, or a partner of such professional services provider, unless such status has ceased for at least two years.
7. Must not be a director appointed to represent GGC, a major shareholder, or a shareholder connected to a major shareholder.
8. Must not engage or involve in a business of the same nature as and in significant competition with the business of GGC or its subsidiaries, and must not be a key partner in a partnership, an executive director, an employee, a staff member, or salaried consultant, or hold more than 1 % of the voting shares of a company that engages in the business of the same nature as and in significant competition with GGC or its subsidiaries.

9. Must not have any other characteristics that may hinder expression of independent views on GGC's operations.

After being appointed an independent director, such director may be assigned by the Board to decide on the business operations of GGC, its parent company, subsidiary, associated company, sister company, major shareholder or controlling person, provided that such decision shall be a collective decision and such independent director shall not be regarded as an executive director.

GGC's current Board comprises seven independent directors, more than one-third of the entire Board and more than stipulated by law, and exceeds half of the entire Board. No Independent Director exceeds the term limit set for their position. In addition, Independent Directors have prepared "Charter of the Independent Directors" to ensure their clear and concrete performance in line with GGC's CG code and gain shareholders' and stakeholders' trust. The Charter must be reviewed annually as follows:

- Consider and provide recommendations and opinions to the Board on significant matters that should be implemented and are been beneficial to GGC, shareholders and stakeholders.
- Promote compliance with GGC's comprehensive anti-corruption measures.
- Promote GGC's business conduct in a socially and environmentally responsible manner.
- Independent Directors can seek advice from an external independent consultant if necessary at the expense of GGC.
- Review to ensure GGC's compliance with the rules and regulations of applicable listed company regulatory bodies concerning Independent Directors. Review the definition of an Independent Director to ensure that it is appropriate and complete according to the law.
- Review the appropriateness of the Charter of Independent Directors annually and present it to the Board for approval for any proposed amendment.
- Perform any other task assigned by the Board which must not affect the independent performance of duties.

Details of the Charter of Independent Directors appear under "Appendix 5: Corporate Governance Policy and Guidelines, and Business Code of Conduct".

7.2.6 Scope of Authority of the Chairman

It is the duty of the Chairman of the Board to support Management's business execution. While he is not an Independent Director, he plays no part in day-to-day business management. The Chairman oversees the Board's efficiency and independence of Management, defines meeting agenda in collaboration with the Managing Director in line with the Board's responsibility, and efficiently presides over the Board and shareholders' meetings, encourages all Directors to participate in these meetings, allocates sufficient time for Management to present information, express their views on key issues, and fosters good relations between Executive Directors and Non-Executive Directors and between Directors and the Management team. The Chairman plays a key role in encouraging Directors to abide by their scope of authority and legal responsibility, GGC's Corporate Governance and Business Code of Conduct, along with the responsibility for shareholders and related stakeholders.

7.2.7 Scope of Authority of the Managing Director

The Managing Director is the Top Executive of the organization, selected and appointed by the Board under the Articles of Association to manage the Company under the policies and directions set by the Board within the framework of authority specified in the Articles of Association and regulations. Additionally, the Managing Director serves as secretary to the Board. Also, under GGC's Articles of Association, the Managing Director is entitled to additional compensation and benefits commensurate with his role as the Top Executive performing the duties of Managing Director in addition to those received as a Director. He or she is permitted to hold directorship positions in up to five companies listed on SET and serve as a director in no more than three state enterprises or legal entities in which state enterprises hold shares.

The duties and responsibility of the Managing Director, as defined by the Board and as Top Executive, are to manage the Company under the policy, business plans and budget approved by the Board. The Managing Director performs under GGC's objectives and Articles of Association, the resolutions of the Board, and GGC's regulations. The authority and duties of the Managing Director assigned by the Board is based on GGC's four regulations approved by the Board:

- (1) Regulation on finance, accounting, and budget.
- (2) Regulation on procurement.
- (3) Regulation on HR management.
- (4) Regulation on marketing, procurement and product distributing and services.

7.3 Sub-Committees

In compliance with the corporate governance code, the Board, at Meeting No. 1/2016 held on February 26, 2016, approved the establishment of two Sub-Committees, the Audit Committee and the Nomination and Remuneration Committee, and at Meeting No. 1/2017 on January 13, 2017, approved the establishment of two more Sub-Committees, the Corporate Governance and Sustainable Development Committee and the Risk Management Committee, with a three-year term, or a term ending upon termination of GGC's directorship status, or resignation or removal. Directors appointed to the Sub-Committees who have completed their terms may be re-elected by the Board.

All Directors of the Sub-Committees possess the required diverse knowledge and expertise to perform their duties in screening key specific implementation as assigned. The qualifications, terms of office and scopes of duties and responsibility are prudently and effectively defined in the charter of each subcommittee. The performance of the Sub-Committees will be regularly presented to Board meetings for acknowledgment, and the performance of the past year will be reported to the shareholders' meeting in Form 56-1 One Report. The names of the Directors and the roles, duties and responsibility of each subcommittee are:

7.3.1 Audit Committee

Name	Position	Date of Appointment
1. Prof. Dr. Kumchai Jongjakapun	Chairman of the Audit Committee (Independent Director)	January 1, 2018
2. Mrs. Kannika Ngamsopee ⁽¹⁾	Director of the Audit Committee (Independent Director)	February 26, 2016
3. Mrs. Sommai Siriudomset ⁽²⁾	Director of the Audit Committee (Independent Director)	November 22, 2023

Remark: (1), (2) Mrs. Kannika Ngamsopee and Mrs. Sommai Siriudomset possess adequate knowledge and experience in finance and accounting to review the creditability of financial statements.

Ms. Kunakorn Witthayapaisarn, Vice President, Internal Audit, serves as Secretary to the Audit Committee.

The Audit Committee consists of at least three independent directors, with a three-year term of office, or term ending upon termination of GGC's directorship status, or resignation or removal.

The Audit Committee performs its duties independently within the scope of responsibilities as assigned by the Board and under the Audit Committee Charter to ensure accuracy and reliability of GGC's financial reports of financial reporting standards and as required by the law and applicable regulations, with adequate disclosure of information beneficial to the users. The Committee also considered, selected, nominated, and determined remuneration for auditors who are reliable, experienced and independent to audit the internal control of the organization under the auditing project and internal-audit plans designed based on each different risk, and reviewed the procedures and progress of corporate risk management. In addition, the Committee monitored complaint procedures to ensure its efficiency and effectiveness, and enhance the efficiency of GGC's CG compliance process, an essential role of the Committee under its scope of duties and responsibility and in compliance with the CG code to foster confidence of all stakeholders. The Committee provided opinions on the engagement in related transactions or transactions of potential conflicts of interest, if needed, in compliance with the law and SET's notifications, to ensure that they are reasonable and in the best interests of GGC. The Committee also ensured that GGC has an appropriate, independent and effective internal-audit system and that Corporate Internal Audit follows the International Standards for the Professional Practice of Internal Audit.

In 2024, the Audit Committee held a total of 11 meetings, including both scheduled meetings and special meetings convened to address urgent and critical matters requiring immediate attention. These included dedicated meetings with the Company's auditors and separate meetings with the Managing Director. The committee performs its duties under the Audit committee charter as assigned by the Board and submitted the report on its performance to the Board quarterly and a summary report to the shareholders in the Form 56-1 one report.

Details of the performance of the Audit Committee in 2024 appear under "Appendix 6: Sub-Committees Reports". Details of the Charter of the Audit Committee appear under "Appendix 5: Corporate Governance Policy and Guidelines and Business Code of Conduct".

7.3.2 Nomination and Remuneration Committee

Name	Position	Date of Appointment
1. Mr. Jarun Wiwatjesadawut	Chairman of the Nomination and Remuneration Committee (Independent Director)	April 19, 2023
2. Lt. Gen. Titawat Satiantip	Director of the Nomination and Remuneration Committee (Independent Director)	September 11, 2019
3. Mr. Saroj Putthammawong	Director of the Nomination and Remuneration Committee	January 17, 2024

Mrs. Boodsada Seema, Vice President, Corporate Affairs and Corporate Secretary, serves as Secretary to the Nomination and Remuneration Committee.

The Nomination and Remuneration Committee consists of at least three directors and at least half of them must be Independent Directors. The Chairman must also be an Independent Director. Members have a three-year term of office, or term ending upon termination of GGC's directorship status, or resignation or removal.

The Committee is responsible for nominating qualified candidates as Directors to the Board and the Sub-Committees, including recruitment of the Managing Director, under the systematic and transparent selection criteria and process. The Committee also reviews the guidelines for the determination of remuneration for the Directors and the Managing Director, taking into consideration GGC's current economic situation and related businesses and the Board's and Sub-Committee duties and responsibility. The Committee, in the recruitment and nomination of Directors, considers the candidates' experience, profession, variety of skills and specific qualifications essential to GGC's business under the Board Skills Matrix to ensure a balance of technical knowledge in the best interests of the Company. Moreover, the Committee plays a part in defining assessment indices and assesses the performance of the Managing Director as well as reviewing the Board Skills Matrix as appropriate, based on the Directors' Pool of recognized organizations, before submitting the candidates to the Board and/or the AGM for approval and further appointment. In addition, the Committee takes a part to define the key Performance Indicators and assess the performance of the Managing Director and also reviews Board Skills Matrix of the Board.

The Board has approved the Charter of the Nomination and Remuneration Committee, which outlines the composition, qualifications, terms of office and scope of authority and responsibility under the CG Code and disclosed it in the CG Handbook and on GGC's website. The charter must be reviewed annually.

In 2024, in performing its duties under the Charter and as assigned by the Board, the Committee held a total of six meetings and submitted the reports on its performance to the Board quarterly and a summary report to the shareholders in the Form 56-1 One Report.

Details of the performance of the Nomination and Remuneration Committee for 2024 appear under "Appendix 6: Sub-Committees Reports". Details of the Charter of the Nomination and Remuneration Committee appear under "Appendix 5: Corporate Governance Policy and Guidelines and Business Code of Conduct".

7.3.3 Corporate Governance and Sustainable Development Committee

Name	Position	Date of Appointment
1. Pol. Gen. Suchart Theerasawat	Chairman of the Corporate Governance and Sustainable Development Committee (Independent Director)	April 28, 2021
2. Lt. Gen. Titawat Satiantip	Director of the Corporate Governance and Sustainable Development Committee (Independent Director)	September 11, 2019
3. Mr. Kajohn Srichavanotai	Director of the Corporate Governance and Sustainable Development Committee (Independent Director)	April 19, 2023
4. Mrs. Sommai Siriudomset ⁽¹⁾	Director of the Corporate Governance and Sustainable Development Committee (Independent Director)	April 24, 2024

Remarks: Mrs. Sommai Siriudomset, at the Board of Directors' meeting No. 4/2024 on April 24, 2024, was appointed as a member of the Corporate Governance and Sustainable Development Committee, effect from April 24, 2024.

Mrs. Boodsada Seema, Vice President, Corporate Affairs and Corporate Secretary, serves as Secretary to the Corporate Governance and Sustainable Development Committee.

The Corporate Governance and Sustainable Development Committee consists of at least three directors and at least one of them as well as the Chairman must be an Independent Director. The current members are all Independent Directors, with a three-year term of office, or term ending upon termination of GGC's directorship status or resignation or removal.

The Committee performed its duties as assigned by the Board in defining guidelines, providing recommendations on policy and guidelines for the code of conduct and business ethics, and in line with the CG Code, before submitting the performance report to the Board and Management. The Committee also monitored CG implementation, provided consultation, conducted assessment, and reviewed related policies and procedures in compliance with the CG Code and in line with those of SEC, SET and leading organizations. These actions ensured that GGC's practices are up to international standards. The Committee also supervised and provided guidance for the sustainable development of the Company, ensuring appropriateness and transparency, and fostering ESG (Environmental, Social and Governance) balance. This is crucial for confidence and credibility among stakeholders.

In 2024 the Committee held five meetings in total in carrying out their tasks as stated in the Charter and as assigned by the Board. It reported progress of the implementation under the CG policy to the Board quarterly and submitted a summary report to the shareholders in the Form 56-1 One Report.

Details of the performance of the Committee for 2024 appear under "Appendix 6: Sub-Committee Reports". Details of the Charter of the Corporate Governance and Sustainable Development Committee appear under "Appendix 5: Corporate Governance Policy and Guidelines and Business Code of Conduct".

7.3.4 Risk Management Committee

Name	Position	Date of Appointment
1. Mrs. Kannika Ngamsopee	Chairman of the Risk Management Committee (Independent Director)	January 13, 2020
2. Mr. Jarun Wiwatjesadawut	Chairman of the Risk Management Committee (Independent Director)	April 28, 2021
3. Mr. Saroj Putthammawong	Chairman of the Risk Management Committee	January 17, 2024
4. Mr. Thanakorn Manoonpol	Chairman of the Risk Management Committee	April 19, 2023
5. Mr. Kridsada Prasertsuko	Chairman of the Risk Management Committee	January 1, 2023

Miss Pakawan Kamonchaivanich Vice President, Corporate Strategy, serves as Secretary to the Risk Management Committee.

The Risk Management Committee consists of at least three directors, at least one of whom must be an Independent Director. Members have a three-year term of office or term ending upon termination of GGC's directorship status or resignation or removal.

The Committee shall defines and reviews the policy, risk appetite and the scope of risk management to be applied as an operational framework for the corporate risk management process to ensure that GGC's business is moving in the same direction and in line with the business strategy and goals in the short term and the long term. Its emphasis is on early warning signs and assessment of risk mitigation measures for emerging risks. Its work ensures that risks are duly identified and ranked through the assessment of risk impacts and risk likelihoods, and ensures pursuit of business opportunities during the crisis. The Committee defines appropriate risk management methods and guidelines that can effectively mitigate risk impacts, monitors and evaluates the effectiveness of risk management, and provides comments and suggestions on potential risks to impact on GGC's business operations and reputation, and ensures that the GGC's business conduct complies with the law and the operations are of international standard.

In 2024, the Committee, in performing their duties under the scope of responsibility as stipulated in its Charter and as assigned by the Board, held six meetings and submitted its performance report to the Board quarterly, and summary reports to the shareholders in the Form 56-1 One Report.

Details of the performance of the Committee for 2024 appear under "Appendix 6: Sub-Committees Reports". Details of the Charter of the Risk Management Committee appear under "Appendix 5: Corporate Governance Policy and Guidelines and Business Code of Conduct".

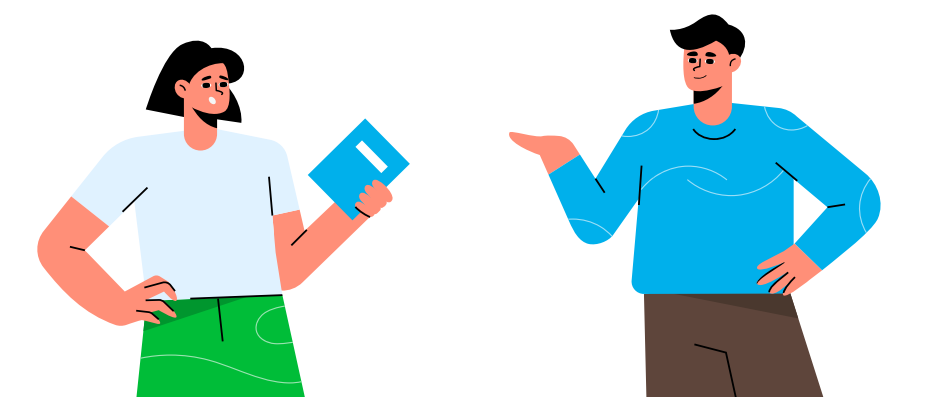
7.4 Detail of Executives

To manage GGC with efficiency and in compliance with GGC's policies and directions mandated by the Board, the Managing Director, in accordance with GGC's Articles of Association, appointed the Executive Committee (Ex-Com), consisting of the Managing Director, Deputy Managing Director, Vice President of the Corporate Finance and Accounting, and Vice President of the Corporate Affairs and Corporate Secretary, and the Corporate Management Committee (CMC), consisting of Executives ranking at the level of Vice President or higher, with the authority and duty to manage GGC's operations in line with the policy, business plans and budgets approved by the Board.

The Ex-Com defines GGC's business direction and guidelines consistent with the strategy and policy set by the Board, considers, screens, and offers opinions and suggestions on GGC's policy, operational guidelines, corporate development to support business growth, and on matters which might cause substantial changes to the operation of the organization such as business expansion and project implementation. The Ex-Com also comments and screens agenda of the meetings and relevant information before submitting to the Board meeting, as well as matters on compliance with laws, rules, and regulations of relevant regulatory organizations as well GGC's rules, and regulations and legal actions to ensure that GGC's business operations complies with the CG Code and international standards.

The Corporate Management Committee (CMC) considers and filters suggestions and opinions regarding the alignment of GGC's policy and operational guidelines of various departments, including production management, marketing and commerce, business group risk management, products, human resource management, quality, safety, occupational health, environmental management, and social responsibility. Furthermore, the CMC acknowledges and monitors the performance of the departments, as well as the progress on innovation and technology, to ensure the efficient operation of GGC.

The Ex-Com holds at least three meetings a month. In 2024 the Ex-Com held a total of 47 meetings. The CMC holds at least one meeting a month or 12 meetings a year. The Vice President of Corporate Affairs and Corporate Secretary acts as the Ex-Com and the CMC's secretary and prepares the minutes and maintains reports of the meetings.



7.4.1 Executives

The list of GGC's Executives under SEC's notification on the Determination of Definitions in Notifications concerning the Issuance and Offer for Sale of Securities, and GGC's organizational structure as of December 31, 2024 are detailed below.

Name	Position
1. Mr. Kridsada Prasertsuko	Managing Director
2. Mr. Teerasak Na Chiangmai	Deputy Managing Director, Operational Excellence
3. Mr. Piya Suri	Deputy Managing Director, Commercial Excellence
4. Mr. Jittasak Soonthornpan	Vice President, Corporate Finance and Accounting
5. Mrs. Kunakorn Witthayapaisarn	Vice President, Internal Audit
6. Mrs. Boodsada Seema	Vice President, Corporate Affairs and Corporate Secretary
7. Miss Pakawan Kamonchaivanich ⁽¹⁾	Vice President, Corporate Strategy
8. Mr. Jiruss Rianchaiwanich	Vice President, Human Resource and Corporate Support
9. Mr. Sutthisarn Khongaphirak	Vice President, Corporate Legal

Name	Position
10. Mr. Ekaphong Govitgoongrai	Vice President, Supply Planning and Feedstock Sourcing
11. Mrs. Tanyarat Boontheekul	Vice President, Business and Product Development
12. Mr. Kawin Kaewkong	Vice President, Sales and Marketing (Biofuels)
13. Mr. Suwit Chongkasemwong	Vice President, Sales and Marketing (Biochemicals)
14. Mr. Thodsaphorn Phienchob	Vice President, Engineering and Maintenance
15. Ms. Chompunuch Liamprawat	Vice President, Process Technology
16. Mr. Phromphorn Isarankura Na Ayutthaya	Vice President, Operations
17. Mrs. Wacharee Hanwongpaiboon ⁽²⁾	Vice President, Reporting to Managing Director
18. Mr. Chanasiri Vanit	Vice President, Reporting to the Deputy Managing Director, Operational Excellence
19. Mr. Suchet Deemangmee	Vice President, Reporting to Managing Director
20. Mr. Jakrit Rungsimanop ⁽³⁾	Vice President, Reporting to Managing Director

Remarks: (1) Miss Pakawan Kamonchaivanich was appointed as Vice President, Corporate Strategy, replacing Mr. Jakrit Rungsimanop, effect from May 1, 2024.
(2) Mrs. Wacharee Hanwongpaiboon was appointed as Vice President, Reporting to Managing Director, replacing Mr. Krit Treenutchakorn, who reassumed his position at PTT Global Chemical Plc, effect from May 1, 2024.
(3) Mr. Jakrit Rungsimanop was appointed as Vice President, Reporting to Managing Director, effect from May 1, 2024.

Change in Executives in 2024

Name	Position
1. Mr. Krit Treenutchakorn ⁽¹⁾	Vice President, Reporting to Managing Director

Remarks: (1) Mr. Krit Treenutchakorn ended his tenure as Vice President, Reporting to Managing Director and reassumed his position at PTT Global Chemical Plc, effect from May 1, 2024.

Executives Assigned to Perform Secondment Duties

Name	Position
1. Mrs. Wacharee Hanwongpaiboon ⁽¹⁾	Vice President, Reporting to Managing Director
2. Mr. Chanasiri Vanit ⁽²⁾	Vice President, Reporting to the Deputy Managing Director, Operational Excellence
3. Mr. Suchet Deemangmee ⁽³⁾	Vice President, Reporting to Managing Director

Remarks: (1) Full-time seconded as the Managing Director of Thai Ethoxylate Co., Ltd. (TEX), effect from May 2, 2024
(2) Full-time seconded at GGC KTIS BioIndustrial Co., Ltd (GKBI), effect from February 1, 2023
(3) Full-time seconded at Thai Ethoxylate Co., Ltd. (TEX), effect from September 1, 2022

7.4.2 Remuneration Policies of Executive Directors and Management

GGC bases its performance assessment of its Executives annually on KPIs, financial performance, performance in compliance with long-term strategic objectives, performance results, GGC's performance, comparison of practices with peer listed companies, and consistency with duties, responsibility and management development and economic situations.

7.4.3 Executive Directors and Management Remuneration

The remuneration of the Managing Director has been appropriately determined under clear, transparent, fair and reasonable criteria, with due regard for responsibility and performance. The Nomination and Remuneration Committee considers the remuneration and proposes it to the Board for consideration. The Managing Director receives remuneration and other benefits as the Top Executive of GGC aside from those received as director.

Remuneration for Executives under SEC's Definitions for 2024

Item	Executive Remuneration for 2024 (Baht)	
	Managing Director	Executives under SEC's Definitions (Managing Director excluded)
Monthly Salary	5,860,872.00	65,637,331.00
Bonus	2,025,693.60	16,654,486.82
Provident Fund	879,130.80	6,597,286.68
Total	8,765,696.40	88,889,104.50

Remarks: (1) Mr. Kridsada Prasertsuko, for his service as Managing Director from January 1 to December 31, 2024.
(2) The number of Executives under SEC's Definitions (Managing Director excluded): 21

Remuneration for Directorship at Subsidiaries and Joint Ventures/ Indirect Joint Ventures (as of December 31, 2024)

GGC's Directors serve at subsidiaries and joint ventures/indirect joint ventures to ensure that the businesses are operated under GGC's policies.

Name	Position	Total Remuneration (Baht)
GGC Biochemicals Company Limited (GGC Bio)		
Mr. Kridsada Prasertsuko	Chairman	None
Mr. Teerasak Na Chiangmai	Director	None
Mr. Piya Suri	Director/Managing Director	None
Thai Ethoxylate Company Limited (TEX)		
Mr. Piya Suri	Director	360,000
Mrs. Wacharee Hanwongpaiboon ⁽¹⁾	Director/Managing Director	240,000
Mr. Krit Treenutchakorn ⁽²⁾	Director/Managing Director	120,000

Name	Position	Total Remuneration (Baht)
GGC KTIS Bio Industrial Company Limited (GKBI)		
Mr. Kridsada Prasertsuko	Director	60,000

Remarks: *Total remuneration is subject to withholding tax.

(1) At the Board of Directors' meeting of Thai Ethoxylate Company Limited, No. 2/2024, held on May 2, 2024, a resolution was passed to appoint Mrs. Wacharee Hanwongpaiboon as a director, replacing Mr. Krit Treenutchakorn, who resigned. The appointment took effect on May 2, 2024. Mr. Krit Treenutchakorn received remuneration for his service as a director (from January 1 to April 29, 2024) amounting to 120,000 baht.

(2) Mr. Krit Treenutchakorn resigned from his position as a director of Thai Ethoxylate Company Limited, effective April 30, 2024.

Securities Held in the Names of Executives, Their Spouses or Cohabiting Partners, and Minors as of December 31, 2024

Securities Holder*	Shareholding (Shares)				Change during the year (Shares)
	As of January 1, 2024		As of December 31, 2024		
	Direct	Indirect	Direct	Indirect	
1. Mr. Kridsada Prasertsuko	- None -	- None -	- None -	- None -	No Change
2. Mr. Teerasak Na Chiangmai ⁽¹⁾	- None -	- None -	- None -	- None -	No Change
3. Mr. Piya Suri	- None -	- None -	- None -	- None -	No Change
4. Mr. Jittasak Soonthornpan ⁽²⁾	- None -	- None -	- None -	- None -	No Change
5. Mrs. Boodsada Seema	- None -	- None -	- None -	- None -	No Change
6. Miss Pakawan Kamonchaivanich ⁽³⁾	N/A	N/A	- None -	- None -	N/A
7. Mr. Jiruss Rianchaiwanich	- None -	- None -	- None -	- None -	No Change
8. Mr. Sutthisarn Khongaphirak	- None -	- None -	- None -	- None -	No Change
9. Mr. Ekaphong Govitgoongrai	- None -	- None -	- None -	- None -	No Change
10. Mrs. Tanyarat Boontheekul	- None -	- None -	- None -	- None -	No Change
11. Mr. Kawin Kaewkong	- None -	- None -	- None -	- None -	No Change
12. Mr. Suwit Chongkasemwong	- None -	- None -	- None -	- None -	No Change
13. Mr. Thodsaphorn Phienchob	- None -	- None -	- None -	- None -	No Change
14. Ms. Chompunuch Liamprawat	- None -	- None -	- None -	- None -	No Change
15. Mr. Phromphorn Isarankura Na Ayutthaya	2,000	- None -	2,000	- None -	No Change
16. Mrs. Wacharee Hanwongpaiboon ⁽⁴⁾	N/A	N/A	- None -	- None -	N/A
17. Mr. Chanasiri Vanit	3,000	- None -	3,000	- None -	No Change

Securities Holder*	Shareholding (Shares)				Change during the year (Shares)
	As of January 1, 2024		As of December 31, 2024		
	Direct	Indirect	Direct	Indirect	
18. Mr. Suchet Deemangmee	- None -	- None -	- None -	- None -	No Change
19. Mr. Jakrit Rungsimanop ⁽⁵⁾	- None -	- None -	- None -	- None -	No Change
Executives who resigned in 2024 (as of each executive's last day of work)					
1. Mr. Krit Treenutchakorn	- None -	- None -	- None - (April 30, 2024)	- None - (April 30, 2024)	No Change

Remarks: In compliance with the SEC's Notification No. TorChor. 17/2008 on the Determination of Definitions in Notifications Relating to the Issuance and Offer for Sale of Securities, Clause 2 (16).

*Direct securities holders refer to shares held directly by Executives, whereas Indirect securities holders refer to shares held by Executives' spouses, cohabiting partners, and minors.

(1) Mr. Teerasak Na Chiangmai was appointed as Deputy Managing Director, Operational Excellence, replacing Mr. Kumpol Chaikitkosi, effect from January 1, 2024.

(2) Mr. Jittasak Soonthornpan was appointed as Vice President, Corporate Finance and Accounting, replacing Ms. Wanlapa Sophisakhuankhan, effect from January 1, 2024.

(3) Miss Pakawan Kamonchaivanich was appointed as Vice President, Corporate Strategy, replacing Mr. Jakrit Rungsimanop, effect from May 1, 2024.

(4) Mrs. Wacharee Hanwongpaiboon was appointed as Vice President, Reporting to Managing Director, replacing Mr. Krit Treenutchakorn, who reassumed his position at PTT Global Chemical Plc, effect from May 1, 2024.

(5) Mr. Jakrit Rungsimanop was appointed as Vice President, Reporting to Managing Director, effect from May 1, 2024.

7.5 Detail of Personnel

7.5.1 Human Resource Management and Development Policy

Strong organizational and personnel management is a critical mechanism for enhancing competitive potential and strengthening GGC's business capabilities to operate efficiently. This foundation supports investment expansion and enables sustainable growth, aligning with the goal of becoming "To be a Leading Green Chemical Company by Creating Sustainable Value".

GGC is dedicated to preparing its organization and personnel to meet future business needs and execute planned strategies successfully. This includes the establishment of human resources strategic plan aligned with its business direction and goals, focusing on four key areas to ensure efficient and effective implementation.

1. Employee Capabilities

1.1 Personnel Development and Growth GGC has adopted a long-term strategy to transform the employee learning culture into "Self-Directed Learning." Under this approach, employees design their own learning journeys by analyzing their development needs, setting personal development goals, and selecting appropriate learning resources. Employees may consult with supervisors, coaches, or mentors when designing their learning plans. GGC believes this learning culture will help employees rapidly develop the skills needed to keep pace with organizational changes. To standardize employee development, GGC has established three key knowledge and skill groups:

1. Corporate Courses: Annual training on legal requirements and basic company policies, such as Basic Fire Fighting training for all new employees.

2. Leadership Learning Solutions: Leadership skill development programs, including the Leadership Competency Development Program, designed in collaboration with external institutions. This program integrates hands-on workshops and coaching, involving 33 participants. Additionally, e-learning courses are offered through the SuccessFactors Platform, such as “Influencing Leader,” “Successful Mindset,” and “The Essential Leadership Skills for the 21st Century,” which have engaged over 100 employees.
3. Functional Learning Solutions: Courses focused on skills aligned with specific job roles and responsibilities. In 2024, GGC emphasized Data Visualization by organizing a “Workshop: Basic Power BI for Business Analytics” for 45 employees. Post-project surveys revealed that employees reduced their work time by nearly 50% through the use of Power BI. Furthermore, GGC is committed to providing diverse learning opportunities that enable practical application through Individual Development Plans (IDPs).

2. Employee Competitiveness

- 2.1 Recruitment Strategies To drive the success of organizational strategies and ensure business operations align with the anti-corruption policy, GGC refrains from hiring government officials or civil servants currently holding such positions as permanent employees. Recruitment efforts focus on bringing in personnel for roles critical to the business, particularly individuals with new skills and knowledge. GGC also prioritizes the integration of technology into operations to enhance efficiency. GGC builds strong relationships with educational institutions to prepare the younger generation through opportunities such as internships and study visits. Human rights principles are upheld and respected at both national and international levels, supported by a written Human Rights Policy. Equitable treatment is a core principle at GGC, ensuring that all employees, regardless of origin, race, gender, age, skin color, religion, disadvantaged status, or disabilities unrelated to job performance, are treated fairly. GGC is committed to avoiding involvement in human rights violations, refrains from employing illegal labor, and ensures that activities throughout the supply chain do not negatively impact human rights. Additionally, GGC actively adopts practices that contribute positively to global society.
- 2.2 GGC’s policy is that its compensation and benefits must be competitive with leading peer businesses. GGC participated in the Remuneration Survey, conducted annually by a pay and benefits specialist, among its group of chemical business. Information from the survey will be used to maintain GGC’s competitiveness. Moreover, compensation must correspond with performance to ensure maximum efficiency and effectiveness of GGC and employees. GGC has based salary structures on job levels and positions, taking into consideration fair compensation for male and female employees alike. GGC has the compensation ratio for 65% male employees and 35% female employees.

GGC provides various benefits to employees as required by laws, such as social security and a provident fund. In addition to legal requirements, GGC has improved its benefits and welfare to nurture positive experience in working with the Company for employees of different groups with different needs by way of various benefits to accommodate their needs, such as medical benefit for parents of GGC's single employees. Moreover, GGC has provided information for salary structuring preparation to GGC Group and GGC's joint ventures to support their operation and ensure that compensation under these companies' policies is competitive with peer companies and aligns with GGC Group's direction.

3. Employee Engagement

3.1 Workforce Planning and Allocation: Workforce planning and allocation are carefully designed to align employee resources with the needs of each department. This approach enables effective recruitment and development strategies, ensuring that employees acquire the necessary skills and capabilities within an appropriate timeframe. These efforts are in line with the GGC's business direction and goals, while also enhancing the organization's competitive edge. Additionally, GGC has developed workforce plans and implemented controls to address employee replacements in cases of resignation or retirement. This ensures the Company maintains an optimal and sufficient workforce to sustain continuous business operations. The planning process considers current circumstances, the organization's vision, and strategic goals, while also addressing the transition into the digital era to maximize business efficiency and effectiveness.

3.2 Employee Wellbeing: To ensure the quality of work life of GGC's employees and their work-life balance and foster their engagement so that they can work with competency and happiness, GGC has set guidelines for taking care of employees in their physical health, financial management (wealth) and mindfulness through the Well-Being program, encompassing the following:

- Organized communication initiatives to enhance understanding of existing employee benefits, specifically focusing on reviewing knowledge and awareness of medical benefits and entitlements.
- Conducted quarterly meetings with the Welfare Committee to foster positive relationships and mutual understanding between GGC and employees. These efforts were complemented by relationship-building activities between the Welfare Committee and GGC, such as VPs Meet Welfare Committee sessions, training on the roles and responsibilities of the Welfare Committee, and CSR activities.

In addition, GGC has a policy to foster morale among long-serving employees. Honorary awards and recognition are presented to employees who have completed their years of service and other efforts to ensure happy retirement included:

- The employee turnover rate in 2024 was 4.93%. GGC has conducted Exit Interviews to gather opinions from departing employees for the improvement and development of employees' benefits and welfare.
- Knowledge Sharing was arranged to transfer the knowledge and experience of retiring employees to current staff.

GGC recognizes the importance of improving the quality of life for people with disabilities and providing them opportunities to demonstrate their capabilities. This enables them to earn income, become self-reliant, and reduce the burden on families and society while empowering them to become vital contributors to their families' and the nation's economy. In accordance with the Persons with Disabilities Quality of Life Promotion and Development Act B.E. 2550 (2007), which aims to establish key measures for promoting employment and protecting work opportunities for people with disabilities, particularly those of working age, GGC has taken action. In 2024, GGC fulfilled its legal obligations under Section 35 by providing rights to three persons with disabilities or their caregivers. This was achieved through internal coordination within the company and collaboration with communities to select eligible individuals with disabilities for career promotion. The process included income assessment and coordination with experts to provide vocational knowledge and training to both disabled individuals and their caregivers.

3.3 Employee Engagement: GGC conducts an annual employee engagement survey through external experts to gather feedback from employees on various aspects. Insights from these surveys are used to develop action plans tailored to employee needs. In 2024, GGC implemented an organizational-level plan focusing on five key areas: Performing, Developing, Leading, Connecting, and Enabling. The following improvements were made:

1. Retain refers to ensuring employees have a manageable workload by streamlining processes, eliminating unnecessary steps or reports, and enhancing meeting efficiency. These efforts aim to provide employees with more time to manage their work and personal activities.
2. Revisit involves fostering employee motivation by creating cultural alignment, ensuring employees understand shared goals and work collaboratively. This approach emphasizes building networks and strong relationships to inspire employees and drive organizational success collectively.
3. Reskill focuses on enhancing employees' capabilities to support organizational growth. Supervisors are equipped with effective people management skills to develop their teams efficiently. Career paths are also reviewed to support professional growth and progression.

To strengthen employee engagement, GGC communicated the importance of the engagement survey across the organization. Employees were encouraged to provide meaningful feedback, emphasizing that their input is valued and integral to developing plans that address their needs. These efforts have resulted in engagement scores comparable to leading companies in the same industry and globally. In 2024, GGC achieved an engagement score of 52%.

4. Employee Experience

4.1 GGC emphasizes Lean Process Improvement by streamlining end-to-end processes to enhance efficiency, productivity, and agility. These improvements contribute to optimizing workforce allocation and achieving outcomes as follows:

- Efficient management of work processes
- Improved data integration and analysis across the organization
- Faster and more accurate decision-making
- Skilled personnel equipped to adapt to change

4.2 GGC leverages digital technology to execute various projects aimed at maximizing value creation and achieving the 4 Smart Goals: 1) Smart Plant 2) Smart Sales & Marketing 3) Smart Work Process, and 4) Smart Workplace. The Company also modernized its IT infrastructure to support business needs while continuously developing employees' digital skills and fostering a digital culture.

4.3 GGC drives its organizational culture towards strength and globality through GGC 4 Core Behaviors, communicating and promoting these behaviors through various activities and foundational systems. This ensures employees understand and apply these principles in their work and daily lives, contributing to organizational goals.

In 2024, GGC continued to reinforce its organizational culture initiatives across all levels, focusing on managers as role models. Activities included workshops for Executives to review the implementation of the GGC 4 Core Behaviors. The theme for 2024, "Conviction to Change: Speed to Global Mindset," emphasized elevating standards to an international level. Executives shared their visions, missions, and operational strategies to inspire employees and drive organizational transformation to global standard.

GGC also measured the effectiveness of its organizational culture initiatives to ensure alignment with the planned roadmap, enabling tangible changes across all levels of the organization. A Culture Survey and 360-Degree Assessments of the GGC 4 Core Behaviors were conducted, gathering feedback from supervisors, direct reports, peers, and external stakeholders. These assessments provided a comprehensive perspective on behavioral alignment, identified areas for improvement, and guided employee development.

GGC is committed to ensuring employee well-being, safety, and occupational health while continually enhancing its organizational and personnel management capabilities. Employees are regarded as a valuable resource, essential for fostering strong and sustainable growth for the organization.

7.5.2 Number of Employees

As of December 31, 2024, GGC employed a total of 284 personnel, including 6 full-time employees secondment from GC, who hold full-time positions at GGC. Of these, 162 employees are based at manufacturing sites. None of GGC's employees are members of labor unions. Since its establishment, GGC has never experienced a strike or business disruption due to labor disputes, reflecting a healthy and positive relationship with its workforce. The breakdown of GGC's headcount is presented in the table below (as of December 31, 2024).

Business Unit	Number of Employees
Reporting to the Managing Director	7
Corporate Legal	5
Corporate Strategy	11
Corporate Finance and Accounting	16
Corporate Affairs and Corporate Secretary	10
Internal Audit	5
Human Resource and Corporate Support	18
Operational Excellence	2
Quality, Safety, Occupational Health and Environment	6
Performance Management	2
Process Technology	14
Operation	106
Engineering and Maintenance	32
Commercial Excellence	3
Sales and Marketing – Biochemicals	14
Sales and Marketing – Biofuels	12
Business and Product Development	8
Supply Planning and Feedstock Sourcing	13
Total	284
Seconded at GGC Subsidiaries / Joint Ventures / Indirect Joint Ventures (Secondment)	5

7.5.3 Employees' Remuneration

a) Monetary Remuneration

Monetary remuneration for GGC's employees and Sub-contracts for 2024 comprised salary, bonus, wages and welfare, which amounted to about Baht 362.39 million. The Company has defined a policy on employees' remuneration which reflects its performance in the short term and the long term and applied the Balanced Scorecard in performance assessment. Annual salary rises of employees are based on the assessment of individual performances and at levels which can compete with peer companies.

b) Other Remuneration

GGC, in compliance with Thailand's labor laws, contributes to the Social Security Fund for employees and provides retirement benefits and other benefits such as training and accident & life insurance. These remuneration and benefits totaled about Baht 46.1 million.

c) Provident Fund

GGC, in collaboration with PTT Global Chemical Plc (GC)'s and its Subsidiaries (15 Companies), established provident funds for its employees. Contributions are made monthly by the employees at a minimum rate of 2 percent and up to 15 percent of their base salaries, while the Group contributes a minimum rate of 5 percent and up to 15 percent. GGC's contributions to the provident fund totaled about Baht 19.33 million.

The ratio of GGC's employees joining the fund is 93% (265 from the total 284 employees). The Provident Fund Committee is responsible for nominating the Fund Manager, who must comply with the Investment Governance Code. Past performance (Investment Performance) will be also taken into consideration.

Employees' Remuneration Paid in 2024

Item	Remuneration in 2024 (Baht)
Salary, bonus, wages, and other welfares	374,972,837.81
Other compensations, e.g. social security, employee training, health insurance	28,175,764.16
Retirement benefits	14,482,886.00
Other long-term benefits	3,455,977.00
Contributions to provident fund	19,332,900.77
Total	440,420,365.74

Employees' Mean and Median Annual Remuneration, and Ratio of the Mean and Median Annual Remuneration of the Managing Director and the Employees for 2024

Item	Amount
Mean annual remuneration of all employees (Managing Director excluded) (Baht)	1,443,445.06
Median annual remuneration of all employees (Managing Director excluded) (Baht)	1,212,168.64
Ratio of the mean annual remuneration of the employees and the Managing Director (Times)	6.07
Ratio of the median annual remuneration of the employees and the Managing Director (Times)	7.23

Directorships in Subsidiaries / Joint Ventures / Related Companies of GGC's Directors / Executives

Directorships in Subsidiaries / Joint Ventures / Related Companies of GGC's Directors / Executives																
Name	GGC	GGC Bio	TEX	GKBI	PTT	GC	GCP	WGCL	GCM	GC Inter	GC BV	GCAS	GCA Corp	GCA	HMC	PTTAC
1. Mr. Narongsak Jivakanun	●				●	●				●	●	●	●	●		
2. Mr. Saroj Putthammawong	●					●	●	●	●						●	●
3. Mr. Kridsada Prasertsuko	●	●		●		●										
4. Mr. Teerasak Na Chiangmai	●	●														
5. Mr. Piya Suri	●	●	●													
6. Mrs. Wacharee Hanwongpaiboon	●		●	●		●										

Remarks: Directorship tenure information for subsidiaries / associates / related companies for GGC's Directors / Executives as of January 15, 2025.

Subsidiary
GGC Bio = GGC Biochemicals Co., Ltd.

Joint Venture
TEX = Thai Ethoxylate Co., Ltd.

Indirect Joint Venture
GKBI = GGC KTIS Bioindustrial Co., Ltd.

Related Companies
PTT = PTT Plc
GC = PTT Global Chemical Plc
GCP = GC Polyols Co., Ltd.
WGCL = WHA GC Logistics Co., Ltd.
GCM = GC Marketing Solution Co., Ltd.
GC Inter = PTTGC International Private Limited

GC BV = PTTGC International (Netherlands) B.V.
GCAS = GC America Sustainability Corporation
GCA Corp = PTTGC America Corporation
GCA = PTTGC America LLC
HMC = HMC Polymers Co., Ltd.
PTTAC = PTT Asahi Chemicals Co., Ltd.

Remark:
● = Chairman
● = Director
● = Executive

7.6 Other Key Information

7.6.1 Corporate Secretary

In compliance with Section 89/15 and Section 89/16 of the Securities Exchange of Thailand Act (No.4) B.E. 2551 (2008), the Board of Directors' meeting No. 8/2021 of August 6, 2021 appointed Mrs. Boodsada Seema as Corporate Secretary, to perform the duties as required under the laws in preparing and maintaining key corporate documents such as director registration, notices of the meeting, minutes of the meeting of the Board and of the AGM, annual reports and reports on the vested interests of Directors and Executives. The Corporate Secretary oversees the arrangements for the Board meetings and of the AGM, and informs the Board and Executives about the rules and regulations of their interest. The Corporate Secretary has also attended training courses beneficial for her in performing her duties and participates in other training annually. The qualifications of the Corporate Secretary appear under "Appendix 1: Details of the Board of Directors, Executives, Controllers, Assigned Top Executives of the Finance and Accounting Function, Assigned Personnel Directly in Charge of Account Preparation and Company Secretary".

7.6.2 Chief of Compliance

In 2024 GGC assigned Mrs. Boodsada Seema, Vice President, Corporate Affairs and Corporate Secretary, to be responsible for its compliance with applicable laws, rules and regulations. It also set up Corporate Governance, Compliance and Corporate Secretary to promote clear and effective work procedures. GGC has formulated a Compliance Policy and implemented a GGC Compliance Program to ensure that its Executives and employees are aware of and recognize the importance of conducting business under the CG Code consistent with laws, rules and regulations. The policy and program are regularly reviewed and audited by the Corporate Governance and Sustainable Development Committee.

7.6.3 Chief of Internal Audit

Audit Committee Meeting No. 8/2017 on December 21, 2017 appointed Mrs. Kunakorn Witthayapaisarn Vice President, Internal Audit, and Secretary to the Audit Committee, with effect from January 1, 2018. Mrs. Kunakorn Witthayapaisarn, a certified internal auditor (CIA), has professional qualifications and extensive experience in internal audit. She also attended training courses on internal audit and corporate governance. Her profile appears under "Attachment 3: Details of Vice President of Internal Audit and Vice President of Corporate Affairs (Compliance)".

The appointment, removal, and transfer of the Vice President of Internal Audit must be approved by the Audit Committee, as stated in the Charter of the Audit Committee.

7.6.4 Chief of Investor Relations

Mr. Jittasak Soonthornpan, Vice President, Corporate Finance and Accounting, and Ms. Paveena Ovararint, Division Manager of Investor Relations and Accounting Management, were assigned to oversee Investor Relations. This unit centralizes communication and disclosure of information for shareholders, investors, both institutions and retail, analysts, and applicable supervisory authorities. It also ensures the quality of the financial reporting process and that of material information which might impact the prices of GGC's stocks, such as financial statements, presentation of corporate performance, quarterly and annual Management's Discussion and Analysis (MD&A), which show GGC's performance and outlook, including other information disclosed to the public via the SET channel to local and foreign investors.

Investor Relations contact channels: Investors or the public can contact Investor Relations via phone: +66 (0) 2558-7395, +66 (0) 2558-7345, email: IR@ggcplc.com, or website, www.ggcplc.com.

7.6.5 Accounting Controller

GGC appointed Ms. Phunnapa Homyen as Division Manager, Accounting and Budgeting, with effect from March 1, 2022 to supervise and control GGC's corporate accounting in compliance with applicable standards, rules and regulations. Her qualifications appear under "Appendix 1: Details of the Board of Directors, Executives, Controllers, Assigned Top Executives of the Finance and Accounting Function, Assigned Personnel Directly in Charge of Account Preparation and Company Secretary". Ms. Phunnapa Homyen possesses the qualifications of an accountant, as specified in the Notification of the Department of Business Development, Ministry of Commerce.

7.6.6 Audit and Non-Audit Fees

1. Audit Fee

GGC and subsidiaries paid an audit fee of Baht 2,100,900 to KPMG Phoomchai Audit Co., Ltd. for Fiscal Year 2024. GGC paid Baht 1,500,900, Subsidiary paid Baht 200,000, and Joint Venture paid Baht 400,000.

2. Non-Audit Fee

For Fiscal Year 2024, GGC paid KPMG Phoomchai Audit Co., Ltd. Baht 150,000 for BOI consultation.

8. Report on Key Action under Corporate Governance

8.1 Summary of Board Performance in 2024

8.1.1 Nomination, Development, and Performance Assessment of the Board

(1) Recruitment and Nomination of Directors of the Board, Sub-Committees, and Managing Director

The Nomination and Remuneration Committee, which comprises three directors, two of whom are independent directors, is responsible for the recruitment and nomination of qualified candidates without prohibited characteristics under applicable laws and applicable rules and regulations, along with GGC's Articles of Association, taking into consideration diverse qualifications which professional directors should possess, structure, size, and composition of the Board, variety of desired knowledge, competency, expertise, and experience as well as the number of independent and female directors. The Committee proposes names to the Board for approval and then to the Shareholders' Meeting for appointment in compliance with the law. Recruitment and nomination of Directors fall into:

Nomination and appointment of Directors to replace those due to retirement by rotation

The Nomination and Remuneration Committee nominated Directors to replace those due to retire by rotation at the 2024 AGM for the Board's and the AGM's approval. To this end, it also allowed shareholders to nominate Directors with complete qualifications three months before the AGM. As no nomination was forthcoming, the Nomination and Remuneration Committee subsequently considered and proposed the reappointment of the following Directors for another term: Pol. Gen. Suchart Theerasawat, Mr. Jarun Wiwatjesadawut, Lt.Gen. Titawat Satiantip and Mr. Thanakorn Manoonpol. All of them are fully qualified, without prohibited characteristics under the law and applicable criteria, and are knowledgeable, competent, with experience relevant to GGC's business strategies. The Board and the 2024 AGM duly approved the proposal. GGC's Articles of Association concerning the Shareholders' meeting and voting stipulated that in the voting to appoint Directors, the shareholders shall use the ballots prepared to vote for each individual director. Each shareholder shall exercise all votes held in electing each individual candidate nominated for directorship in compliance with good corporate governance principle.

Nomination of Directors as members of Sub-Committees

The Committee nominated Directors whose qualifications met the selection criteria and Sub-Committee Charters for submission to the Board for approval and appointment as Directors of the Sub-Committees, namely the Audit Committee, Corporate Governance and Sustainable Development Committee, Nomination and Remuneration Committee, and Risk Management Committee. The Board approved the proposal submitted by the Nomination and Remuneration Committee.

Nomination and appointment of Independent Directors

The number of Independent Directors on the Board is taken into consideration in compliance with SEC's notification. As of December 31, 2023, the Board comprised seven independent directors out of the total of 11 directors, which exceeded the number required by SEC. GGC's definitions and qualifications of Independent Directors are prescribed in its Corporate Governance and Business Code of Conduct (CG Handbook) disclosed on GGC's website. Moreover, it is required that an Independent Directors' Meeting be held once a year. The 2024 meeting was held on September 17, 2024 via the electronics platform. All Independent Directors, with independency qualifications as required by SET, attended the meeting chaired by Prof. Dr. Kumchai Jongjakapun, Chairman of the Independent Directors. The meeting provided recommendations on and guidelines for GGC's business operations covering critical issues such as review of the Charter of Independent Directors, and the importance of appointing Executives to ensure the continuity of the Company's business operations.

(2) Development of Directors, Executives, and Corporate Secretary**Directors' Development and Training**

GGC has set up procedures to support Directors' continuing development. In 2024 the development included:

- New Directors' Orientation: GGC has organized an orientation session for new Directors who have been appointed under SET's guidelines, which consists of:
 1. A briefing on the CG code, relevant rules and regulations, GGC Group's nature of business, composition of the Board, relevant policies, rules and regulations on Directors, vision, strategy, and business goals of GGC and GGC Group as well as their financial status, and other information considered important and essential for their performance before assuming duties at their first Board Meeting.
 2. New Directors receive key documents and related handbooks, such as the corporate strategy plan, Articles of Association, Memorandum of Association, annual report, relevant rules and regulations, and the CG Handbook for performing the duties as Directors.
- The Board received training on the topic of "Decarbonization and Carbon Credit Management" conducted by the Management team. The training aimed to support GGC's strategic direction in sustainability and environmental initiatives. As GGC is committed to becoming a globally recognized sustainable organization, this training addressed both the challenges and opportunities associated with achieving this ambitious goal, driving the organization toward sustainable growth. Additionally, the Board participated in training on "Global & Thailand Economic Outlook" delivered by an expert in economic policy. This session was designed to provide insights into global business trends and the Thai economy, which are key factors influencing the needs of producers, consumers, and markets. These insights have a direct impact on GGC's strategic planning and business direction.

- GGC supports Directors in attending training programs/seminars essential for fulfilling their duties as Directors, as follows

No.	Directors	Training Program/Institute
1.	Lt. Gen. Titawat Satiantip	<ul style="list-style-type: none"> • Advanced Audit Committee Program (AAPC) 52/2024 Thai Institute of Directors (IOD)
2.	Mrs. Sommai Siriudomset	<ul style="list-style-type: none"> • Director Certification Program (DCP) 355/2024 Thai Institute of Directors (IOD) • Advanced Audit Committee Program (AAPC) 52/2024 Thai Institute of Directors (IOD)

- Training programs/seminars for Directors in 2024

No.	Directors	Training Program/Institute
1.	Mr. Narongsak Jivakanun	<ul style="list-style-type: none"> • Decarbonization and Carbon Credit Management • Global & Thailand Economic Outlook
2.	Prof. Dr. Kumchai Jongjakapun	<ul style="list-style-type: none"> • Liability Protection for Directors and Executives and Director and Officer Insurance (D&O) • Global & Thailand Economic Outlook
3.	Mrs. Kannika Ngamsopee	<ul style="list-style-type: none"> • Liability Protection for Directors and Executives and Director and Officer Insurance (D&O) • Decarbonization and Carbon Credit Management • Global & Thailand Economic Outlook
4.	Pol. Gen. Suchart Theerasawat	<ul style="list-style-type: none"> • Liability Protection for Directors and Executives and Director and Officer Insurance (D&O) • Decarbonization and Carbon Credit Management • Global & Thailand Economic Outlook
5.	Mr. Jarun Wiwatjesadawut	<ul style="list-style-type: none"> • Liability Protection for Directors and Executives and Director and Officer Insurance (D&O) • Decarbonization and Carbon Credit Management • Global & Thailand Economic Outlook
6.	Lt. Gen. Titawat Satiantip	<ul style="list-style-type: none"> • Liability Protection for Directors and Executives and Director and Officer Insurance (D&O) • Decarbonization and Carbon Credit Management • Global & Thailand Economic Outlook
7.	Mr. Kajohn Srichavanotai	<ul style="list-style-type: none"> • Global & Thailand Economic Outlook
8.	Mrs. Sommai Siriudomset	<ul style="list-style-type: none"> • Liability Protection for Directors and Executives and Director and Officer Insurance (D&O) • Decarbonization and Carbon Credit Management • Global & Thailand Economic Outlook
9.	Mr. Saroj Putthammawong	<ul style="list-style-type: none"> • Decarbonization and Carbon Credit Management • Global & Thailand Economic Outlook
10.	Mr. Thanakorn Manoonpol	<ul style="list-style-type: none"> • Decarbonization and Carbon Credit Management • Global & Thailand Economic Outlook
11.	Mr. Kridsada Prasertsuko	<ul style="list-style-type: none"> • Liability Protection for Directors and Executives and Director and Officer Insurance (D&O) • Decarbonization and Carbon Credit Management • Global & Thailand Economic Outlook

Remark: The Training programs were In-House Programs and Board members, 15 executives and relevant employees participated in the Decarbonization and Carbon Credit Management training program.

Training Programs/Seminars Essential for Fulfilling Their Duties as Directors are as follows:

No.	Name	DCP	DAP	ACP	BNCP	RCP	RCL	AACP	DLCP	CMA	TEA	NDC
1.	Mr. Narongsak Jivakanun ⁽¹⁾	165 / 2012									Class 8	
2.	Prof. Dr. Kumchai Jongjakapun	128 / 2010		38 / 2012		34 / 2014				Class 9		Class 50
3.	Mrs. Kannika Ngamsopee	21 / 2002			7 / 2019		13 / 2018	36 / 2020		Class 3		Class 52
4.	Pol. Gen. Suchart Theerasawat	329 / 2022	184 / 2021									Class 59
5.	Mr. Jarun Wiwatjesadawut	98 / 2008	9 / 2004							Class 9	Class 14	Class 26
6.	Lt. Gen. Titawat Satiantip	285 / 2019			18 / 2023			52 / 2024				Class 66
7.	Mr. Kajohn Srichavanotai											Class 61
8.	Mrs. Sommai Siriudomset	355 / 2024						52 / 2024				Class 60
9.	Mr. Saroj Putthammawong	220 / 2016									Class 11	
10.	Mr. Thanakorn Manoonpol	324 / 2022			18 / 2023		33 / 2023	48 / 2023	12 / 2023			
11.	Mr. Kridsada Prasertsuko	269 / 2019										

Remark: (1) Mr. Narongsak Jivakanun was appointed director with effect from May 15, 2024.

Training Courses

DCP = Director Certification Program

DAP = Director Accreditation Program

ACP = Audit Committee Program

BNCP = Board Nomination and Compensation Program

RCP = Role of the Chairman Program

RCL = Risk Management Program for Corporate Leaders

AACP = Advanced Audit Committee Program

DLCP = Director Leadership Certification Program

CMA = Executive Program at the Capital Market Academy

TEA = Executive Program in Energy Literacy for a Sustainable Future (Thailand Energy Academy)

NDC = National Defence Course

Corporate Secretary's Training

The Corporate Secretary participated in training and development programs to enhance her knowledge and competencies, enabling her to perform her duties effectively. These efforts ensure the Board operates smoothly with access to the necessary and appropriate information to support its performance in line with the CG Code. The Corporate Secretary, Mrs. Boodsada Seema, attended various training courses organized by the Thai Institute of Directors (IOD), including the Company Secretary Program (CSP), Class 18/2006, Effective Minutes Taking (EMT), Class 3/2006, Board Reporting Program (BRP), Class 11/2013, and Company Secretary Refreshment Training Program (RFP), Class 4/2021. She also participated in training courses organized by the Thai Listed Companies Association (TLCA), including the Corporate Secretaries Professional Development Program, Class 1/2021, the Company Secretary Professional Program 2020 (Advanced Corporate Secretaries Program), and Selection of Directors in Compliance with the CG Code. In 2024, Mrs. Boodsada Seema attended the "Director's Guide to Legal Obligations and Duties (DLD) 3/2024" program organized by Thai-IOD and the "Roles and Duties of Corporate Secretaries" seminar hosted by TLCA.

(3) Board's Performance Assessment

The Board of Directors

The CG Code requires that the Board undergo annual performance assessment, using three Board Performance Assessment Forms, namely group assessment, individual assessment, and cross-assessment. The Assessment Forms comply with the Corporate Governance Code for Listed Companies 2017 (CG Code), S&P Global Corporate Sustainability Assessment (CSA) and ASEAN Corporate Governance Scorecard. In 2024, all 11 incumbent Directors underwent the assessment as shown below:

Assessment of the Board's Performance	Assessment Topics	Average Score (%)
Group Assessment	1. Board Policy 2. Board Performance 3. Board Structure, Composition, and Qualifications 4. Board Practices 5. Board Meeting 6. Board Development	96.54
Individual Assessment	1. Knowledge and Expertise in Specific Fields, Self-Development, and Teamwork 2. Directors' Performance 3. Time Devotion and Meeting Attendance	93.33
Cross-Assessment	1. Knowledge and Expertise in Specific Fields, Self-Development, and Teamwork 2. Directors' Performance 3. Time Devotion and Meeting Attendance	97.56

Sub-Committees

GGC's four sub-committees are the Audit Committee, Nomination and Remuneration Committee, Corporate Governance and Sustainable Development Committee, and Risk Management Committee. The performance assessment of these committees, both group and individual, was conducted for all. In 2024, each committee reviewed and improved assessment topics and criteria to cover performance in compliance with corporate governance as shown below:

Audit Committee

Performance Assessment of the Audit Committee	Assessment Topics	Average Score (%)
Group Assessment	1. Charter of the Audit Committee 2. Composition and Qualifications of the Committee 3. Performance Assessment 4. Relationship with the Vice President of Internal Audit, External Auditors, and Management 5. Board Meeting 6. Self-development 7. Reporting to the Board and the Shareholders 8. Performance Quality Maintenance	97.55
Individual Assessment	1. Responsibility for Duties 2. Time Devotion and Self-development	94.83

Nomination and Remuneration Committee

Performance Assessment of the Nomination and Remuneration Committee	Assessment Topics	Average Score (%)
Group Assessment	1. Board Structure and Qualification 2. Board Performance 3. Board Practice 4. Board Meeting Attendance 5. Board Reporting and Assessment	99.56
Individual Assessment	1. Board Expertise 2. Board Performance 3. Board Practice 4. Time Devotion and Meeting Attendance	98.83

Corporate Governance and Sustainable Development Committee

Performance Assessment of the Corporate Governance and Sustainable Development Committee	Assessment Topics	Average Score (%)
Group Assessment	1. Board Structure and Qualification 2. Board Performance 3. Board Practice 4. Board Meeting 5. Board Reporting and Assessment	97.96
Individual Assessment	1. Board Expertise 2. Board Performance 3. Board Practices 4. Time Devotion and Meeting Attendance	91.98

Risk Management Committee

Performance Assessment of the Risk Management Committee	Assessment Topics	Average Score (%)
Group Assessment	1. Board Composition and Qualifications 2. Roles, Duties and Responsibilities 3. Board Meeting	98.92
Individual Assessment	1. Performance Responsibility 2. Compliance with CG and Business Code of Conduct 3. Time Devotion and Self-development	96.00

8.1.2 Director's Meeting Attendance and Remuneration

The Board's Meetings

Regarding meeting attendance in the year 2024, the Board, Sub-Committees, Independent Directors, and Non-Executive Directors attended the meetings scheduled in advance each year. Directors who had unexpected engagement and were unable to attend any meeting must submit a leave of absence letter to the Chairman along with reasons. The Chairman would then inform the meeting accordingly before proceeding with the meeting. In the previous year, the format of the Board Meetings was modified to suit changing situations. The meetings were held at GGC's Head Office and via an electronic channel, using Microsoft Teams Meeting for facilitation and in strict compliance with the Emergency Decree on Electronic Meetings B.E. 2563 (2020).

The Board of Directors establishes an annual meeting schedule in advance. The Corporate Secretary notifies Directors of all meeting dates and regular agenda items for the entire year by the end of the preceding year. Meetings are typically held monthly, allowing Directors to plan their attendance without interfering with their regular responsibilities. Each Director contributes their experience, knowledge, and skills to fulfill their roles, supporting the Company's vision of being a leader in environmentally friendly chemical products and its mission of creating sustainable value for stakeholders while maintaining social and environmental responsibility. Additional special meetings may be convened as deemed appropriate and necessary. Board members receive meeting invitations, draft minutes, and supporting documents for agenda items at least seven days prior to each meeting. These materials are distributed through the Digital Join Application, ensuring convenience, speed, and reduced paper usage while maintaining data security. In 2024, the Board held a total of 14 meetings. Directors unable to attend due to urgent or unavoidable business submitted written notifications to the Chairman, explaining the reasons for their absence. The Chairman informed the meeting of these absences prior to the start of each session.

The Chairman presided over the meetings by according all Directors the opportunity to participate and express their opinions freely. As a rule, the number of Directors in attendance must not be less than two-thirds of the total number of the Board to constitute a quorum, which will be maintained until the resolutions are reached. The Chairman may designate the directors to participate in the meeting via electronics media and the meeting must be conducted in compliance with the security criteria and standards for meetings via electronics media stipulated by the law and relevant government agencies. The resolutions of the meeting will be reached by a majority of the votes. One director carries one vote. If the numbers of votes are equal, the Chairman will cast the decisive vote. The Board highly values management of conflicts of interest among stakeholders with prudence, fairness, and transparency through full disclosure of information on such matters. If a Director has a stake and an interest in the matter under consideration, Director will not be allowed to take part in the decision-making on that issue.

After the meeting, the Corporate Secretary is responsible for preparing the minutes of the meeting for submission to the Board for approval at the next meeting, and for the Chairman's signature to certify the accuracy. As a rule, the approved minutes of the meetings together with supporting documents for various meeting agendas will be systematically stored electronically under the levels of GGC's confidentiality to facilitate search and reference.

In addition, to comply with the CG Code, the Board has scheduled meetings for Non-Executive Directors to share opinions and provide guidelines for managing GGC's business operations, as well as meetings for Independent Directors to exchange views and review their roles and responsibilities on an annual basis. In 2024, one meeting of the Independent Directors was held on September 17, 2024, and one meeting of the Non-Executive Directors was held on December 18, 2024. The minutes of these meetings were submitted to the Board.

The 2024 meetings of the Board, Independent Directors, Non-Executive Directors, and Sub-Committees, as well as meeting attendance of each Director are as detailed below:

Board Meetings in 2024

Name	Board ⁽¹⁾			Independent Directors	Non- Executive Directors	Audit Committee	Nomination and Remuneration Committee	Corporate Governance and Sustainable Development Committee	Risk Management Committee	2024 Shareholders Meeting
	15 meetings	In-Person	Electronic Channel	1 meeting	1 meeting	11 meetings	6 meetings	5 meetings	6 meetings	1 meeting
1. Mr. Narongsak Jivakanun ⁽²⁾	10/10	8	2	-	1/1		-	-	-	-
2. Prof. Dr. Kumchai Jongjakapun	14/14	5	9	1/1	1/1	11/11	-	-	-	1/1
3. Mrs. Kannika Ngamsopee	14/14	3	11	1/1	1/1	11/11	-	-	6/6	1/1
4. Pol. Gen. Suchart Theerasawat	14/14	2	12	1/1	1/1	-	-	5/5	-	1/1
5. Mr. Jarun Wiwatjesadawut	14/14	2	12	1/1	1/1	-	6/6	-	6/6	1/1
6. Lt. Gen. Titawat Satiantip	13/14	5	8	0/1	1/1	2/2	6/6	4/5	-	1/1
7. Mr. Kajohn Srichavanotai	9/14	-	9	1/1	1/1	-	-	3/5	-	0/1 ⁽⁶⁾
8. Mrs. Sommai Siriudomset ⁽³⁾	14/14	5	9	1/1	1/1	11/11	-	4/4	-	1/1
9. Mr. Saroj Putthammawong ⁽⁴⁾	13/13	8	5	-	1/1	-	5/5	-	6/6	1/1
10. Mr. Thanakorn Manoonpol	14/14	3	11	-	1/1	-	-	-	6/6	1/1
11. Mr. Kridsada Prasertsuko	14/14	13	1	-	-	-	-	-	6/6	1/1

Director who resigned in 2024

1. Mr. Kongkrapan Intarajang ⁽⁵⁾	4/4	1	3	-	-	-	-	-	-	1/1
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Remarks: (1) The total number of Board meetings in 2024 was 14, consisting of 13 scheduled meetings and 1 extraordinary meetings convened to consider the Company's major issues. The meetings were held at meeting rooms (on-site) 13 and online 1.

(2) Mr. Narongsak Jivakanun was appointed as Chairman of the Board and a Director, replacing Mr. Kongkrapan Intarajang, who resigned. The appointment became effective on May 15, 2024. He participated in the Board of Directors meeting starting from No. 5/2024 on May 15, 2024.

(3) Mrs. Sommai Siriudomset was appointed as a member of the Corporate Governance and Sustainable Development Committee, effect from April 24, 2024. She began participating in the Corporate Governance and Sustainable Development Committee meeting starting from No. 2/2024 on June 25, 2024.

(4) Mr. Saroj Putthammawong was appointed as a Director, replacing Mr. Varit Namwong, who resigned. His tenure began on January 17, 2024. He participated in the Board of Directors meeting starting from No. 2/2024 on February 9, 2024. Additionally, he was appointed as a member of the Nomination and Remuneration Committee, with effect from January 17, 2024, and began attending the Committee meeting starting from No. 2/2024 on January 30, 2024. Furthermore, he was appointed as a member of the Risk Management Committee, effect from January 17, 2024, and began participating in the Risk Management Committee meetings starting from No. 1/2024 on March 29, 2024.

(5) Mr. Kongkrapan Intarajang resigned from his positions as Chairman of the Board and a Director, effect from May 13, 2024.

(6) Mr. Kajohn Srichavanotai was unable to attend the 2024 Annual General Meeting due to urgent matters.

Directors' Remuneration

GGC has a fair and appropriate policy on remuneration of the Directors of the Board and the Sub-Committees for 2024, in line with the CG Code. The Nomination and Remuneration Committee is responsible for the review and determination of the remuneration, in view of GGC's performance and financial status, and comparison with the economic situations of related businesses, including the duties of the Board and the Sub-Committees, and remuneration of Directors of peer companies.

Directors' remuneration must have the approval of the Shareholders' Meeting. The 2024 AGM of April 2, 2024 approved the proposed pay for the Board and the Sub-Committees for 2024 and the bonuses for 2023 performance as follows:

(a) The Board and Sub-Committee Remuneration

Remuneration	Rate
1. Board	Monthly Allowance <ul style="list-style-type: none"> Chairman Baht 37,500/Month Director Baht 30,000/Month/Person
2. Sub-Committees <ul style="list-style-type: none"> Audit Committee Nomination and Remuneration Committee Corporate Governance and Sustainable Development Committee Risk Management Committee 	Meeting allowance (only those in attendance) <ul style="list-style-type: none"> Chairman Baht 25,000/ Meeting Director Baht 20,000/Meeting/Person
3. Other Remuneration	None

(B) Bonus

For the 2023 performance, the entire Board was to receive bonus payment. If GGC pays out dividends for a given year, the Board shall receive a bonus payment of 0.5% of the net profit but not over Baht 10 million per year. The bonus portion is based on the term of each director in 2023. The Chairman of the Board shall receive an amount which is 25% higher than other Directors. Due to GGC's net loss in 2023 and the decision to forgo dividend payments to shareholders for that year, no bonuses were distributed to the Directors. This action aligns with the principles approved by the 2024 Annual General Meeting of Shareholders on April 2, 2024.

(c) Director's Remuneration in 2024

Name	Monthly Allowance (Baht)	Sub-Committee Meeting Allowance (Baht)			
		Audit Committee	Nomination and Remuneration Committee	Corporate Governance and Sustainable Development Committee	Risk Management Committee
1. Mr. Narongsak Jivakanun ⁽¹⁾	283,064.56	-	-	-	-
2. Prof. Dr. Kumchai Jongjakapun	360,000	250,000	-	-	-
3. Mrs. Kannika Ngamsopee	360,000	200,000	-	-	150,000
4. Pol. Gen. Suchart Theerasawat	360,000	-	-	125,000	-
5. Mr. Jarun Wiwatjesadawut	360,000	-	150,000	-	120,000
6. Lt. Gen. Titawat Satiantip	360,000	40,000	120,000	80,000	-
7. Mr. Kajohn Srichavanotai	360,000	-	-	60,000	-
8. Mrs. Sommai Siriudomset ⁽²⁾	360,000	200,000	-	80,000	-
9. Mr. Saroj Putthammawong ⁽³⁾	344,516.13	-	100,000	-	120,000
10. Mr. Thanakorn Manoonpol	360,000	-	-	-	120,000
11. Mr. Kridsada Prasertsuko	360,000	-	-	-	120,000
Total	3,867,580.69	690,000	370,000	345,000	630,000

Director who resigned in 2024 and received remuneration in 2024 ⁽⁴⁾

1. Mr. Kongkrapan Intarajang	164,516.13	-	-	-	-
Total	164,516.13	-	-	-	-

Remarks: * Bonuses for the 2023 performance, payable in 2024, were not issued as GGC reported a net loss for the fiscal year 2023 and did not declare an annual dividend for shareholders. Consequently, no bonuses were paid to Directors.

(1) Mr. Narongsak Jivakanun assumed the roles of Chairman and Director effective May 15, 2024, with remuneration payments commencing in May 2024.

(2) Mrs. Sommai Siriudomset was appointed as a member of the Corporate Governance and Sustainable Development Committee effective April 24, 2024. Meeting attendance fees were paid on a per-meeting basis starting from her participation in the Corporate Governance and Sustainable Development Committee meeting No. 2/2024, held on June 25, 2024.

(3) Mr. Saroj Putthammawong was appointed as a Director effective January 17, 2024, with remuneration payments beginning in January 2024. He also assumed the role of Nomination and Remuneration Committee Member effective January 17, 2024, with meeting attendance fees paid starting from his participation in the Nomination and Remuneration Committee meeting No. 2/2024, held on January 30, 2024. Additionally, he was appointed as a Risk Management Committee Member effective January 17, 2024, with meeting attendance fees paid starting from his participation in the Risk Management Committee meeting No. 1/2024, held on March 29, 2024.

(4) One director resigned during 2024: Mr. Kongkrapan Intarajang, who stepped down from his position as Director effective May 13, 2024.

(d) Remuneration of Seconded Directors to GGC's Affiliates and Joint Ventures / Indirect Joint Ventures

GGC's Directors are seconded to its affiliates and joint ventures / indirect joint-venture companies as Directors to oversee their operations and ensure alignment with GGC Group's business policy.

Name	Position	Total Remuneration (Baht)
GGC Biochemicals Company Limited (GGC Bio) (wholly owned by GGC)		
Mr. Kridsada Prasertsuko	Chairman	None
GGC KTIS Bioindustrial Company Limited (holds 50% of the shares)		
Mr. Kridsada Prasertsuko	Chairman	60,000

Remark: Total remuneration is subject to withholding tax.

8.1.3 Governance of Subsidiaries and Associates

The Board has formulated mechanisms for the governance of its group of companies to oversee its investment interests as follows

- The Managing Director is authorized to define policies, rules, regulations, methods, and management guidelines and delegate approval authority to Executives as seen necessary, as well as assigning any employee or any person to the position of Director of GGC Group companies under the selection and nomination criteria with office terms in compliance with GGC's Articles of Association and the terms of the joint-investment agreement with such company, including deciding an appropriate number of companies where each executive can hold directorship.
- GGC's Executives undergo relevant training to enhance their knowledge and competency prior to their positions of director in GGC Group companies to ensure their readiness and potential for appropriately supervising GGC's policies in line with the changing rules, regulations, situations, and trends.
- Ensure that implementation of GGC Group companies is under key policies, such as the CG policy, whistleblowing policy, fraud and anti-corruption guidelines, internal control system, compliance, including other policies aligning with those of GGC and with SEC's and SET's rules and regulations, as well as other applicable laws.
- GGC prepares the GGC Way of Conduct to be applied in the management and monitoring of its invested companies appropriately through those persons assigned to serve as Directors and Executives to ensure a congruent and uniform direction based on standards of operations, accurate and transparent disclosure of information, and good management toward sustainable business operation in line with GGC Group, as well as Multi-Level Governance on the Apply & Explain principle to standardize GGC Group's overall operations.

- Subsidiary companies under GGC Group are required to report significant progress in implementing the policies established by GGC to the Management team and/or the Board of Directors. GGC has established the Corporate Management Committee meeting, which comprises senior Executives and Management representatives from subsidiary companies. This committee aims to facilitate discussions and drive group-wide management initiatives to ensure effective outcomes. The meetings serve as a platform for providing feedback, collaboratively setting operational directions, and reviewing the performance of subsidiary companies. These discussions support the monitoring and enhancement of efficiency and effectiveness in operational execution.
- In 2024 GGC conveyed the GGC Way of Conduct to GGC Group, which is ready to align and standardize the monitoring and management of the operations of the Group for better connection and ensure that the operations are moving in a uniform direction. The performance of the GGC Way of Conduct was also assessed to investigate compliance and the standards of operations of its group.

8.1.4 Monitoring Compliance with Corporate Governance Policies and Practices

GGC has conducted its business in strict compliance with corporate governance through corporate governance policies and practices as well as those in the CG Handbook. In 2024 GGC monitored the practices of corporate governance, the results of which revealed full execution of each issue as follows

Disclosure of Information and Transparency

GGC appreciates the significance of disclosure of information and transparency and sets this among best practices and includes them in the CG Handbook and publishes it on GGC's website for all shareholders and interested parties. GGC ensures that disclosed information is accurate, complete, sufficient, reliable and timely and that the information which includes financial and non-financial data is disclosed in strict compliance with laws and applicable rules and regulations via the SETLink of SET and GGC's website www.ggcplc.com. Investor Relations (IR) and Corporate Affairs and Corporate Secretary monitor information and handle queries. The actions taken are as follows:

Disclosure of GGC's material information in the Form 56-1 One Report:

- Financial data: This has been reviewed and audited for accuracy in line with accounting standards and approved by the Audit Committee and the Board before disclosure to shareholders and the public. To ensure transparency, the Board includes the Responsibility for Financial Statements together with the report of the external auditor, which includes connected transactions and Management Discussion and Analysis (MD&A) as well as financial risk management, in the Form 56-1 One Report.
- Non-Financial data: GGC discloses GGC Group's business structure, which consists of the major shareholding structure and number of shares, institutional shareholder ratios, free-float ratios, reports on interests of Directors and Executives and those of parties related to GGC Group's business and management filed when they first take up the positions and with each change. This includes monthly shareholding reports and, at the year-end, internal control and risk management audit reports, the Charter of each Sub-Committees, declaration of independence of Independent Directors, and performance reports of the Sub-Committees in the previous year.

Disclosure of GGC's material data in Thai and English is made through

- SETLink of the Stock Exchange of Thailand
- GGC's website: www.ggcplc.com. Corporate information is regularly updated and completely specifies formal communication channels of each department and Director.
- Disclosure of information to all stakeholders through quarterly Analyst Meetings, Roadshows, Ex-Com meetings, E-mail, LINE application, and others.

GGC sets up Investor Relations to centralize all communication and disclosure of essential information to shareholders, institutional financial and minor investors, financial analysts, and applicable supervisory authorities. Investor Relations ensures the quality of the financial reporting process, including material information which might impact the prices of securities, such as financial statements, performance presentations, and quarterly/annual MD&A, which represent GGC's performance and outlooks, including information disclosed to the public via SETLink to local and foreign investors alike. In addition, the "Investor Relations Code of Conduct" is instituted to define roles and best practices of Investor Relations in treatment of shareholders, as seen in the CG Handbook and on GGC's website.

In 2024 GGC Executives regularly met shareholders, security analysts, investors, and employees through various activities via online platform to present performance results such as Analyst Meetings, Roadshows, and meetings with minor investors.

Investors' Meetings	
Domestic Investors	-
SET Opportunity Day	4
Analyst Meeting	4
Teleconference	37
Information disclosure	
Disclosure via SETLink and GGC's website	104

GGC discloses information via www.ggcplc.com for other stakeholders equitably. Interested parties can access the information via channels provided below:

- 1) Mail : Investor Relations, Global Green Chemicals Public Company Limited,
555/1 Energy Complex Building A, 4th Floor, Vibhavadi Rangsit Road,
Chatuchak Subdistrict, Chatuchak District, Bangkok 10900
- 2) Phone : +66 (0) 2558-7395, +66 (0) 2558-7345
- 3) E-Mail : ir@ggcplc.com
- 4) Fax : +66 (0) 2558-7301
- 5) Website : www.ggcplc.com

Moreover, shareholders, investors, and interested parties can contact the Corporate Secretary for enquiries about GGC and information on corporate governance and sustainable development at E-mail: corporategovernance@ggcplc.com.

Safety, Occupational Health, and Environmental Management

GGC highlights the importance of Quality, Safety, Occupational Health, and Environment through the formulation of the policies and objectives of quality, safety, occupational health, and environmental management for stakeholders to ensure that its operations will not impact the community, the society, and the environment. GGC also operates projects on the environment, safety, and occupational health to ensure ongoing alignment with the policy of quality, safety, occupational health, and environment, as well as objectives.

1. Environment

GGC is committed to business operation based on CSR principles with a focus on business operation that does not impact the environment in the entire value chain through the drive of its environmental management policy, formulation of a biodiversity management policy, and promotion of development of environment-friendly and sustainable products and services. GGC formulates the policy of Quality, Security, Safety, Occupational Health, Environment, and Business Continuity (QHSEB). It consists of a systematic environmental management policy in line with national and international laws, regulations, and standards encompassing factors of the integrated environmental dimensions such as energy, air, water, and waste management, including efficient and sustainable use of resources based on the Circular Economy, as well as maintenance of biodiversity and rich ecosystem to reduce impacts on the environment, society, and value chain. Moreover, GGC disseminates knowledge, understanding, and supports employees and stakeholders to recognize and participate in sustainable environmental management.

GGC is certified with ISO 14001 (Environmental Management System) to ensure stakeholders that GGC follows the practices and operations in line with environmental management standards at the international level. External agencies also conduct annual inspection of environmental performance by a transparent and reliable certifying institute. In 2024, the environmental performance included:

Indicator	Goal in 2024	Performance
Energy consumption per ton of product (MWh/Ton of product)	GGC1 <1.12 (Elec + Steam) GGC2 <0.023 (Elec)	GGC1 = 1.16 GGC2 = 0.049
GHG emission Scopes 1 and 2 (Tons of CO2 equivalent)	<89,101	96,257*
Amount of waste in landfill (%)	0	0
Water consumption per product (Cubic m./Ton of product)	GGC1 <1.38 GGC2 <0.58	GGC1 1.30 GGC2 1.00

Remarks: *Data on GHG emission Scopes 1 and 2 (Tons of CO2 equivalent), for the period from January 1 to December 31, 2024, was derived from the PTT GHG Tool (L1). Please note that this data has not yet undergone the annual verification process.

GGC conducts energy management by adhering to ISO 50001 with numerous energy reduction projects to mitigate the impact of climate change and demonstration of a stance on participation in the operation according to the 26th UN Climate Change Conference of the Parties (COP26) through numerous energy and climate change projects :

- 1.1 Coating Pump for Reducing Energy in Cooling Water Pump Project** This project aims to reduce electricity consumption in the cooling water system by coating the internal surface of the cooling water pump. The coating reduces friction and ensures a smoother surface compared to the original material. Initiated in September 2023 and currently ongoing, the project has achieved annual electricity savings of 121,721 kilowatt-hours, equivalent to a reduction of over 52 tons of carbon dioxide equivalent per year. Since its inception, the project has generated energy cost savings exceeding 450,000 THB.
- 1.2 Energy Saving by Optimizing Cooling Fan Mode Project** This project focuses on reducing electricity consumption in the cooling water system by ceasing operation of one cooling fan during periods of low ambient temperatures (rainy and winter seasons) while maintaining the temperature above the set point. Launched in July 2023 and ongoing, the project has achieved annual electricity savings of 197,040 kilowatt-hours, corresponding to a reduction of over 83 tons of carbon dioxide equivalent per year. To date, the project has saved over 729,000 THB in energy costs.
- 1.3 Optimizing Bottom Temperature of Methyl Ester Drying (1401/2E002) Project** The goal of this project is to reduce steam consumption in the Methyl Ester Drying Unit (1400) by optimizing the bottom temperature of the heat exchanger to minimize fuel oil carryover and energy usage. Initiated in January 2023 and currently ongoing, the project has reduced annual steam consumption by 534 tons. This reduction translates to over 93.29 tons of carbon dioxide equivalent per year and has generated cost savings exceeding 1,254,000 THB.
- 1.4 Advanced Process Control at Methanol Rectification (Unit 1600) Project** This project aims to reduce steam consumption in the Methanol Rectification Unit (1600) by implementing Advanced Process Control (APC) software for continuous optimization of the distillation column. The APC system ensures column balance and maintains the desired distillation quality while maximizing steam energy savings. Initiated in October 2023 and ongoing, the project has successfully reduced steam consumption by 4,870 tons annually, equivalent to a reduction in greenhouse gas emissions of 850.79 tons of carbon dioxide equivalent annually, and has generated cost savings of 8,665,000 THB since its implementation.
- 1.5 Stop Circulation Transesterification Reactor Pumps Project** The objective of this project is to reduce steam consumption in Unit 1100 by ceasing the operation of the circulation pumps in the Transesterification Reactor. Launched in January 2024 and ongoing, the project has reduced electricity consumption by 116,880 kilowatt-hours annually, equivalent to a reduction in greenhouse gas emissions of 42.11 tons of carbon dioxide equivalent annually, and has resulted in cost savings of 440,000 THB since its initiation.

- 1.6 Optimize Steam at Unit 1700 Project** This project focuses on reducing steam consumption in Unit 1700 through the application of Advanced Process Control (APC) software for continuous optimization of the distillation column. The APC system ensures column balance and maintains the required distillation quality while achieving maximum steam energy savings. Initiated in January 2024 and ongoing, the project has reduced steam consumption by 563 tons per year, equivalent to a reduction in greenhouse gas emissions of 98.36 tons of carbon dioxide equivalent annually, and has delivered cost savings of 844,500 THB since its implementation.

Moreover, GGC manages waste generated from its operations by applying the 5Rs concept (Reduce, Reuse, Recycle, Refuse, and Renewable), resulting in minimized environmental impacts and waste disposal costs. In 2024, GGC continues striving for zero waste disposal to landfill (Zero-Waste to Landfill) with the following major projects:

Environmental Culture by 5Rs

น้องปกป้องมีตัวอย่าง Initiative ในงานหยุดซ่อมบำรุงที่
GGC ชลบุรี

ใช้ทรัพยากรอย่างรู้คุณค่า ช่วยลดผลกระทบต่อสิ่งแวดล้อม

1 REDUCE ลดการใช้

ใช้ทรัพยากรอย่างมีประสิทธิภาพ และลดผลกระทบต่อสิ่งแวดล้อม

ลดปริมาณของเสียส่งกำจัดภายนอก

- ✓ **ลดปริมาณของเสียที่ต้องส่งไปกำจัด** โดยการเพิ่ม Retention time ให้กับ Glycerin residue ที่เกิดจากการบวนการกลั่นกลีเซอริน เพื่อให้เกิดการแยกชั้นระหว่าง Liquid และ Solid phase ซึ่ง Glycerin residue liquid สามารถนำไปขายเป็นผลิตภัณฑ์ฟอสโฟไรต์ (Technical Glycerin Grade B) สร้างมูลค่าเพิ่ม **816,000 บาท** และลด Glycerin residue sludge ที่ต้องส่งกำจัดคิดเป็นร้อยละ **66** คิดเป็นค่าใช้จ่ายในการส่งกำจัดที่ลดได้ **1,428,000 บาท**
- ✓ ค่อยลดน้ำของเสียที่เกิดขึ้นกลับไปในกระบวนการบำบัดทางชีวภาพ เพื่อผลิตเป็นก๊าซชีวภาพ (Biogas) ต่อไป เนื่องจากเป็นของเสียที่มี Glycerin ซึ่งมีความร้อน สามารถผลิต Biogas ได้

3 RECYCLE

แปรรูปเพิ่มมูลค่า

การบริหารจัดการทรัพยากร

- ✓ **Regeneration Spent Activated Carbon** ลดการส่ง Activated Carbon ไปกำจัดด้วยวิธีการนำไปทำเชื้อเพลิงผสม (รหัสกำจัด 042) โดยเลือกวิธีการกำจัดที่เหมาะสมและสามารถนำกลับไปยังระบบได้ โดยนำไป Regenerate (รหัสกำจัด 059) แล้วส่งกลับมาใช้งานเป็น Regenerated Activated Carbon เพื่อลดการสั่งซื้อ Fresh Activated Carbon สามารถนำ **Regenerated Activated Carbon** กลับมาใช้ได้ปีละ **48 ตัน** คิดเป็นการลดค่าใช้จ่ายในการส่งกำจัดได้ **72,000 บาทต่อปี**

2 REUSE ใช้ซ้ำ

หมุนวนใช้อย่างรู้ค่า

- ✓ นำ **Insulation** กลับมาใช้ใหม่

เป้าหมายและ Lesson learned ของกิจกรรมการรื้อถอน Insulation จากโรงงานระยองมาปรับใช้ในช่วงซ่อมบำรุง เพื่อให้สามารถนำกลับมาใช้ซ้ำได้ โดยดำเนินการสื่อสารผู้เกี่ยวข้องผ่าน Contractor Commitment และปฏิบัติตามแนวทางที่ระบุใน Procedure โดยจำแนกสภาพของ **Insulation** และทำการติดสติกเกอร์ที่ถูกรับรอง แยกจัดเก็บในพื้นที่ที่มีหลังคาปิดคลุมตามจุดที่กำหนด เพื่อให้การจัดเก็บมีประสิทธิภาพและนำกลับมาใช้ใหม่ได้ เมื่อเทียบกับปี 2023 สามารถนำ **Insulation** กลับมาใช้งานได้มากกว่าร้อยละ **70** คิดเป็นน้ำหนักของเสียที่ลดได้ **10,600 กิโลกรัม** ค่ากำจัดที่ลดได้ **169,000 บาท**

4 REFUSE ปฏิเสธการใช้สารอันตรายต่อสิ่งแวดล้อม

ใช้สารเคมีที่มีผลกระทบต่อสิ่งแวดล้อมน้อยที่สุด

- ✓ **เปลี่ยนชนิดของดินฟอสฟอริกจาก Acid type เป็น Natural type** โดยทบทวนชนิดของดินฟอสฟอริกที่ใช้ในการดองสิ่งสกปรกออกจากน้ำมันปาล์ม ทำการวิเคราะห์และทดลองใช้ Natural type ซึ่งมีค่า pH 6-8 สามารถนำมาใช้งานได้ **100%** ส่งผลให้ลดค่าใช้จ่ายสารเคมีได้ **1,000,000 บาทต่อปี** และลดความเสี่ยงด้านสุขภาพต่อผู้ปฏิบัติงานจากการเปลี่ยนมาใช้สารทดแทนชนิด Natural type

5 RENEWABLE เลือกได้ใช้แบบหมุนเวียน

พลังงานคาร์บอนต่ำ

- ✓ ใช้ **Biogas** เป็นเชื้อเพลิงทดแทนน้ำมันเตา เปลี่ยนแปลงเชื้อเพลิงที่ Hot Oil Boiler และ Steam Boiler จากน้ำมันเตาเป็นแบบ Mix-mode อัตราส่วนน้ำมันเตา : Biogas ที่ 30 : 70 ส่งผลให้ปริมาณการใช้น้ำมันเตาที่ใช้ลดลง **2.6 ล้านลิตรต่อปี** คิดเป็น **GHG Reduction 8,604 tCO₂eqต่อปี** โดยจะเริ่มใช้งานจริงตั้งแต่ พ.ย. 2024 เป็นต้นไป

ติดต่อสอบถาม : paris.a@pttgcgroup.com

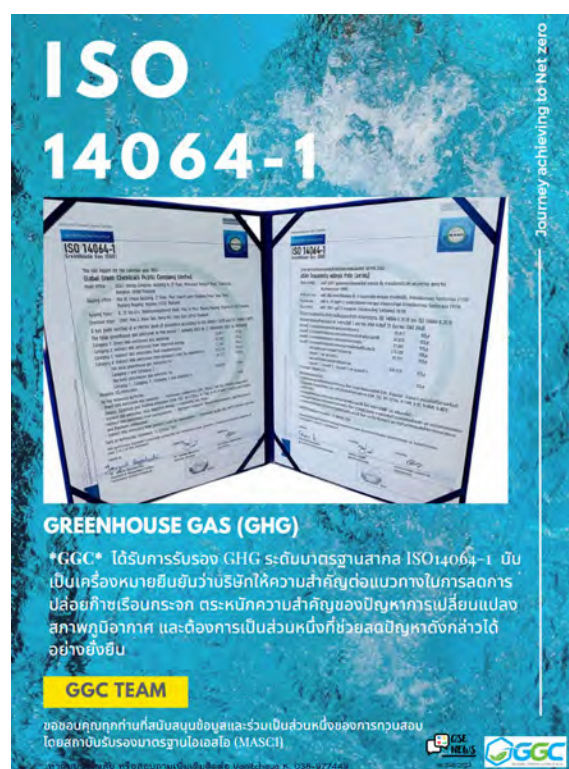
#EnvironmentalCultureby5Rs #GCCircularLiving #togethertonetzero

- 1.7 Material Improvement for Process Pipeline Project** The project employs the principle of reduction by upgrading pipeline materials from stainless steel, which experienced issues of corrosion and erosion, to PTFE-lined carbon steel. This enhancement extends the material lifespan from less than 5 years to over 15 years. The ongoing implementation of this initiative has resulted in significant cost savings in maintenance and operational expenses, totaling 900,000 THB per maintenance cycle or 1.8 million THB annually. Additionally, the project has reduced the volume of waste requiring off-site disposal.
- 1.8 Wastewater Treatment Reliability Improvement to Sustain On-Spec Wastewater under IEAT Regulation** This project adopts the principle of reduction to enhance GGC's wastewater treatment system, enabling it to process high-COD wastewater while maintaining compliance with discharge quality standards before entering the central treatment system managed by the Industrial Estate Authority of Thailand (IEAT). By reducing the volume of wastewater requiring off-site treatment or disposal, this initiative, which has been ongoing since 2022, has achieved annual cost savings of 16.3 million THB. Additionally, it has reduced Scope 3 greenhouse gas emissions by 103.6 tons of carbon dioxide equivalent per year.
- 1.9 Reduction of Wastewater from Maintenance Activities Project** This initiative applies the principle of reduction to decrease the volume of wastewater generated from maintenance activities requiring off-site disposal. By assessing wastewater concentration and composition before maintenance, storage tanks are prepared to segregate wastewater at the source and gradually introduce it into the treatment system within controlled parameters. This approach has reduced off-site wastewater disposal by 550 cubic meters, representing a 90% decrease compared to 2022 under similar maintenance activity levels, and has saved over 300,000 THB in costs.
- 1.10 Maximizing Water Efficiency in the Clean Plate Methanol Condenser Project** This project leverages the principle of reduction by collecting baseline data on water usage during cleaning activities. Water is drained into IBC tanks and routed to the wastewater treatment system in a controlled sequence to optimize processing. Approximately 2.3 cubic meters of oil-contaminated water from the cleaning process are managed efficiently, allowing for improved wastewater treatment planning. As a result, off-site wastewater disposal has been completely eliminated, saving 17,000 THB per cleaning cycle.
- 1.11 Glycerin Residue (Sludge) Reduction Project** Retention time for Glycerin Residue from the glycerin distillation process has been increased to enhance the separation between liquid and solid phases. The separated Glycerin Residue (Liquid) is sold as a by-product (Technical Glycerin Grade B), generating additional value of 816,000 baht. This initiative has reduced the volume of Glycerin Residue (Sludge) requiring disposal by 66%, resulting in cost savings of 1,428,000 baht.
- 1.12 Wastewater and Waste Utilization for Biogas Production Project** Wastewater and waste have been converted into biogas through biological treatment. Since these materials contain glycerin and oil components with sufficient heating value for biogas production, this initiative has reduced waste disposal costs by 1.6 million baht annually. Additionally, Scope 3 greenhouse gas emissions have been reduced by 4,411.73 tonnes of CO₂ equivalent compared to disposing of waste as alternative fuel

- 1.13 Insulation Reuse Project** Guidelines for insulation reuse were communicated to relevant parties through Contractor Commitment activities, adhering to specified procedures. The process involves classifying insulation conditions, labeling storage bags, and storing them in designated covered areas for efficient management and reuse. A key lesson learned from this activity was the importance of evaluating insulation-related packaging from the start to establish better data collection methods and ensure continuous implementation. This initiative achieved a 100% reduction in waste sent to landfills. Specifically, during steam boiler maintenance, which requires significant amounts of insulation, over 70% of insulation was reused compared to 2023, resulting in disposal cost savings of 169,000 baht.
- 1.14 Increase Time for Back Wash Side Stream Filter Project** Recycle principles and low-carbon energy usage principles (Renewable) have been applied in this project, which aims to reduce clarified water makeup consumption in the Cooling Water system by extending the operating time of the Side Stream Filter. Initiated in January 2024 and ongoing, the project has reduced clarified water consumption by 1,747.40 cubic meters annually, resulting in cost savings of 41,000 baht per year on clarified water purchases.
- 1.15 Recycle Cooling Blowdown Project** Recycle principles were utilized to reduce clarified water consumption by substituting Cooling Blowdown water in mixing with urea for the wastewater treatment system. This has decreased clarified water usage by an average of 1 cubic meter per day, leading to annual cost savings of 9,000 baht.
- 1.16 Regeneration Spent Activated Carbon Project** By applying recycle principles, an appropriate disposal method for Activated Carbon was implemented, allowing for its reuse. Spent carbon is regenerated and reused as Regenerated Activated Carbon, minimizing the need to purchase Fresh Activated Carbon. This initiative facilitates the reuse of 48 tons of Regenerated Activated Carbon annually, yielding disposal cost savings of 72,000 baht per year.
- 1.17 Sodium Hydroxide (NaOH) Reduction in Plate Flushing Project** GGC has applied the principle of eliminating environmentally harmful substances (Refuse) by finding an alternative method for cleaning methanol and fatty acids from the Plate Methanol Condenser. The team conducted comparative testing of different cleaning agents – hot water, regular water, oil, and sodium hydroxide (NaOH). Test results showed that hot water at 50–60°C was 100% effective for plate flushing without causing raw material degradation. Furthermore, this method allows for the recovery of fatty acids back into the production process (reprocessing), reducing both raw material losses and chemical waste disposal to zero.
- 1.18 Automated Rack Warehouse Project** This initiative applies the principle of utilizing low-carbon, renewable energy by transitioning from Drive-in Racks, which rely on forklifts for product storage and handling, to an Automated Rack system. This transition has significantly reduced diesel consumption by forklifts, resulting in a Scope 1 greenhouse gas emissions reduction of 148.05 tons of CO₂ equivalent per year.

1.19 Biogas as a Substitute for Heavy Fuel Oil Project This project implements the principle of utilizing low-carbon, renewable energy by converting the fuel used in Hot Oil Boilers and Steam Boilers from 100% heavy fuel oil to a mixed-mode system with a 30:70 ratio of heavy fuel oil to biogas. This change has achieved an estimated reduction in heavy fuel oil consumption of 4.7 million liters annually, corresponding to a Scope 1 greenhouse gas emissions reduction of 15,300 tons of CO₂ equivalent per year compared to 2023 consumption levels.

Biogas is also being utilized as a substitute fuel in Hot Oil Boilers and Steam Boilers through a biogas purchase agreement with Thai Eastern Bio Power Co., Ltd. (TEBP), a biogas producer located in the same industrial estate as GGC's Methyl Ester Plant 2. This initiative further decreases heavy fuel oil consumption and reduces Scope 1 greenhouse gas emissions. A complementary initiative involves repurposing production waste for biogas production via biological treatment processes. Waste from both the Rayong and Chonburi plants has been incorporated into this project. This approach has lowered waste disposal costs by over 70% compared to conventional disposal methods and reduced Scope 3 greenhouse gas emissions by 4,400 tons of CO₂ equivalent annually, achieving a reduction rate of 98.97%.



2. Safety and Occupational Health

GGC has formalized a policy for managing safety, occupational health, and environment (SHE) through the Operational Excellence Management System (OEMS) to develop personal safety and process safety comprehensively and continuously, while forging confidence among stakeholders such as employees, suppliers, and community in its performance. In addition, it has formulated a Five-Year SHE Plan (2021 - 2025) including integrates operations with international safety standards. Further, as GGC places emphasis on the safety and occupational health of employees, it provides them with training programs, such as the annual safety orientation for newcomers, refresher SHE regulations & procedures, PSM awareness, and basic fire training. In 2024 GGC defined the goal and implemented safety and occupational health as seen below:

Indicator	Goal	2024 Performance
Lost Time Injury Frequency Rate (case/per million hours)	0	0
Tier 1 production process accidents (case)	0	0
Tier 2 production process accidents (case)	0	0

Remark: Although there were no accidents at GGC during 2023–2024, efforts have been made to foster a safety-oriented work culture. This includes encouraging employees to develop safe work habits, be confident in stopping work when necessary, issue warnings, and ask questions when they lack understanding. To promote leadership in safety practices, the B-CAREs culture has been introduced. This initiative aims to establish proactive measures for hazard anticipation and prevention before work begins. To support this safety culture, programs such as B-CAREs by 3 Brave Actions and B-CARE Smart SWO have been implemented.

GGC continues implementing Process Safety Management (PSM) for the fifth consecutive year, allowing external auditors to review and strengthen process safety in its operations. A Process Safety Management (PSM) Taskforce has been established to oversee and monitor safety standards related to production processes. Additionally, the Occupational Health, Safety, and Environment Committee manages and inspects safety, health, and environmental standards within the organization. These initiatives align with international standards and support GGC's goal of becoming an accident-free organization.

Moreover, GGC adopts the B-CARES strategy to enhance its safety culture. This strategy incorporates a pyramid structure within the Leadership Model, starting from policy deployment at the leadership level (Top Executives) who serve as role models by inspecting work sites (GGC Genba). It extends to Ownership (work and area owners), who actively implement tools such as B-CARES JSEA and B-CARES KYT, and to Partnership (contractors), who must comply with policies and apply the 5S workplace method consistently. Partnerships are structured to ensure effective policy deployment. Engineering design within the B-CARES strategy utilizes Fail Safe & Fool Proof principles, focusing on critical loops, conducting Top Risk Bow-tie Protection Layer analyses, and driving the Partnership (contractors) to use special tools during operations. In 2024, personal safety projects were initiated to further strengthen these efforts as follows:

- 3 Brave Man
- B-CAREs Smart SWO
- Refresh SHE Procedure Regulation and PSM Awareness Training

Moreover, in 2024 GGC operated these key process safety projects:

- Bow-Tie Barrier Validation Checklist
- Field Risk Assessment (FRA) & Smart SWO
- e-Permit to work (e-PTW)

Details of the personal safety projects and process safety projects appear under “Safety and Occupational Health Management”.

Compliance with policies on quality, security, safety, health, environment, and business continuity underscores GGC’s commitment as an international leader in the oleochemical industry, advancing towards a model organization characterized by sustainable development and growth, with careful consideration of economic, social, and environmental factors. To achieve this, GGC actively promotes knowledge on safety, health, and environmental care among all employees through training and internal communication, ensuring awareness and understanding of the importance of occupational health and environmental safety. In 2024, GGC organized training on occupational health and environment through the “Refresh SHE Procedure Regulation & PSM Awareness” program, which required all employees to participate and pass an examination. Additionally, GGC values environmental stewardship, including management of air, water, energy, and waste, incorporating the 5Rs principle. This training is part of the Environmental Management module included in the aforementioned program, which achieved 100% employee participation and examination pass rate. Employees are encouraged to apply the knowledge gained from the training in annual maintenance activities and other initiatives to reduce environmental impact, thereby delivering continuous benefits to GGC.

IT Governance and Cybersecurity Management

GGC uses IT services (shared services) of PTT Global Chemical Plc (GC). The services are provided for GC Group with OEMS and the TPM management framework, relying on Integrated Management System, COBIT 5 (IT Framework), TQA (Thailand Quality Award) and GC Way of Conduct to define IT standards with emphasis on key aspects in the information system, such as information quality, security and readiness, hardware and software specifications, as well as cybersecurity and information readiness in emergency situations. The IT service provider has divided IT management into three levels.

Governance

- The Digital and IT Steering Committee (DISC) of GC Group defines GGC Group’s policy directions and digital goals to ensure alignment with international standards and parity with leading international peer companies. The Chief Executive Officer and President of GC serve as the Chairman of the DISC committee.
- The Information Security Management System Committee (ISMS Committee) monitors and oversees information security, cybersecurity, and cloud security consistent with international standards.

- The Enterprise Architecture Committee (EA Committee) considers GGC's IT management structure consistent with the needs and modern, international standards in the best interests of the application.
- The Chief Information Security Officer (CISO) defines a security policy and goals consistent with strategic plans, develops a policy, procedures, and standards for information confidentiality, integrity, and availability, coordinates IT control, and reports cyberthreats to Top Executives and the National Cybersecurity Agency (NCSA).

Management

- Formulate information management policies for information security (IS), cybersecurity, cloud security, service level agreements (SLAs), secure system development life cycle (SSDLC), and data protection, among others.
- Adopt the ISO Series (ISO 27001, ISO 27701, and ISO 22301), and NIST Cybersecurity Framework as frameworks in the operation and control of users to ensure accuracy, precision, and readiness of the information. External and internal tracking systems track and review the processes to ensure accurate, reliable, and stable information.

Operation

- Define systems, procedures, and services for users to comply with, announce and store these on the Internet for users' additional study, and distribute IT news via E-mail every two weeks and immediately in case of emergencies.
- Monitor the progress of implementation, the findings from which will be used to improve IT management and services, and improve and update IT security. Regularly report progress of the implementation to the responsible executives and committee.
- Raise awareness among users and regularly organize training on information security for users to mitigate the risk of cyberattacks and threats from malicious parties. Users must take a test on information security awareness. If they fail, responsible units will report the results to their superiors for acknowledgment.
- Conduct an IT resource risk assessment annually to ensure the adequacy of resources to guard information and maintain the accuracy, reliability, stability, and currency of the information.

Furthermore, in the management of IT, the service provider and GGC have jointly taken actions summarized below.

- **Information Readiness**

Plan preparation on GGC's use of information consistent with its strategic plans by conducting a survey on the needs of all groups and preparing an IT strategic plan. For an emergency, GGC has a DR Site for 24-hour storage of critical information which can be immediately recovered and used. An IT Disaster Recovery Plan consistent with Business Continuity Management (ISO 22301) has been put in place. Work procedures have been prepared to cope with emergencies which might affect essential information systems. GGC conducted a related emergency drill annually.

- **Hardware and Software Specifications and Standard Control**

A policy on specifications and standard control is formulated which covers, for example, replacement of IT equipment every three years, quarterly preventive maintenance, and installation of an around-the-clock server-tracking system which will send out an SMS on any malfunction and an E-mail to the controller for immediate problem-solving. Scanning for vulnerabilities in the computer system (Vulnerability Assessment: VA) is conducted annually, any vulnerabilities which might expose GGC to threats will be cleared, and an anti-virus program is installed at the server's and clients' machines. The program is regularly updated and the data backed up daily, weekly, and monthly, and so on.

- **Higher efficiency in IT and Cybersecurity and Safety Maintenance System**

The current business environment demands increased application of digital technology, including production systems and operational networks that must connect to the internet. Additionally, employees must adapt to a work-from-anywhere approach. These factors may expose GGC to cyberthreats, such as the theft of sensitive information, disruption of production systems that affect business continuity, and potential harm to GGC's credibility, image, and reputation. To address these challenges, GGC has established an IT safety management process aligned with its IT security and safety policy. GGC promotes knowledge, understanding, and awareness among employees by encouraging them to participate in IT security and safety training. This ensures appropriate conduct when dealing with cyberthreats. The process also includes supervision of control mechanisms, as well as regular reviews and monitoring of IT and cybersecurity operations.

- **Supervision of IT and Cybersecurity and Safety**

To clearly define the work direction and encourage transparency in management from policy to operation levels, GGC supervises and manages the IT security and safety system in line with the ISO/IEC 27001:2013 and the framework on cybersecurity and safety developed by the National Institute of Standards and Technology (NIST) in USA. GGC's supervision of IT and cybersecurity and safety covers five aspects of management according to the NIST Cybersecurity Framework.

- **IT and Cybersafety Control process**

GGC devises the policy and measures on the IT and cybersafety based on the international standard of ISO 27001, raises awareness among employees to strengthen security and stability of IT and cybersecurity and the safety management system for preventing the violation of the Computer Crime Act. In 2024, GGC extended the scope of the certification application of IT security and safety management system ISO 27001 to cover Cloud Storage and Internet Gateway, and developed the IT security and safety system on personal data involving the recruitment process of new employees, divided into three additional major parts:

1. Cloud Infrastructure as a Service
2. Cyber Zone / Internet Zone Network
3. Application Supporting Recruitment Process such as SAP HCM, Success Factor etc.



Moreover, GGC makes preparation to reduce the risks of cyberthreats and theft by setting up and monitoring the Key Risk Indicator (KRI) in three aspects, namely individual, business, and technology. Knowledge on the safe use of IT is promoted along with the awareness raised on the risks about cyberthreats and thefts through Infographics and e-Learning to ensure employees' application at work and in their daily lives.

- **Review and Monitoring of IT and Cybersecurity and Safety Processes**

GGC conducts annual reviews and inspections of its IT security and safety systems and practices in accordance with ISO/IEC 27001:2013 standards, performed by external agencies. The assessment from the past year confirmed that GGC's IT and cyber processes, as well as infrastructure, fully complied with the standards, with no violations detected throughout its operations. In 2024, GGC effectively maintained the security of its information and that of its business partners, as evidenced by the low number of reported cyber threats and complaints related to information safety.

Abuse of Inside Information

The Company has defined a policy on the use of inside information and included in the CG Handbook, disclosed it on GGC's website for investors' information, and disseminated it among the Directors, Executives, and employees to observe and refrain from exploiting material inside information not yet disclosed to the public for personal or others' gain, or from causing loss to the Company, directly or indirectly. Details of the policy are under "Corporate Governance Policy and Guideline and Business Code of Conduct".

In 2024, GGC monitored the use of inside information in compliance with applicable laws, policies, and internal practices. The Company communicated guidelines on the use of inside information to Executives and employees through GRC Day activities, emails, and the LINE application within the employee group. GGC ensured that all employees and Executives were required to familiarize themselves with the policies and practices concerning the use of inside information and acknowledge their commitment by signing via GGC's Hook Acknowledgment & Learning system. Additionally, the Corporate Secretary sent emails to all Directors, Executives, and relevant employees to reinforce the policies and practices governing the use of inside information. There were no reports of violations by GGC's Directors, Executives, or relevant employees regarding the implementation of these policies and practices. Furthermore, there were no reports of securities trading by GGC's Directors or Executives during blackout periods in 2024. Changes in the securities holdings of Directors, Executives, their spouses, and minor children are disclosed under "Board of Directors" and "Detail of Executives".

Prevention of Conflicts of Interest

GGC takes very seriously the policy on conflicts of interest and has included it in the "Corporate Governance and Business Code of Conduct Handbook". The policy prohibits Directors, Executives, and employees from exploiting their positions for personal gain which might lead to transactions of conflicts of interest with GGC. If the transaction is necessary, Directors, Executives, and employees with such transactions must refrain from participating in the approval process for transactions defined as Related Party Transactions (RPT) under SEC's and SET's notifications and criteria. Furthermore, GGC has established strict prohibitions and regularly issues reminders to ensure that its Directors, Executives, and employees do not exploit their positions to engage in insider trading or disclose non-public, pending information to others for personal gain related to the trading of GGC's shares. Moreover, Directors and Executives from the vice president level upward and those in finance-related positions under SEC's criteria must submit reports on their interests or those of their related persons. All employees are also required to report their conflicts of interest via GGC's intranet annually or file such reports promptly upon potential conflicts of interest concerning any consideration process or decision-making of GGC's projects.

Moreover, to forge its shareholders' and investors' confidence, GGC's Directors follow the practical guidelines for potential conflicts of interest as seen below:

- (1) The Board determines the policy and practices regarding conflicts of interest or potential ones between shareholders, Directors, Executives, and parties with other potential conflicts, directly or indirectly. In the case of Related Party Transaction under the approval authority of the Board or shareholders, they must go through the screening process of the Audit Committee to ensure fairness, validity, and benefits to shareholders and consistency with laws and SEC's regulations.
- (2) The Board oversees the procedural practice based on reason and mutual independence, with caution and transparency, in approving the transactions, with due regard for GGC's best interests and in compliance with SEC's criteria.
- (3) The Directors who are stakeholders must take no part in decision-making on the transactions. At every Board Meeting, the Chairman will seek cooperation from Directors to comply with the policy of consideration of potential conflicts of interest by requiring them to declare to the meeting to refrain from voting, giving opinions, or leaving the meeting room during each related agenda item.
- (4) The Board oversees accurate and complete disclosure of the transactions of potential conflicts of interest in Form 56-1 One Report.

Moreover, GGC determines the best practice which reflects its commitment to transparent and accountable business operation, which is the duty of Directors, Executives, and all employees, including relevant and related parties to adhere to, by avoiding connections that may lead to conflicts of interest. If they cannot be avoided, the responsible unit must oversee the transactions with transparency and clarity for GGC's maximum benefit. GGC therefore devises these measures and practical guidelines for potential conflicts of interest.

1. Avoid any action that may lead to conflicts of interest with GGC, whether from business connection with GGC Group or from the abuse of positions in GGC for personal gain, business competition with GGC Group, and avoid work in other capacity apart from doing so for GGC Group which impacts duty and responsibility.
2. If GGC's employees or relevant parties need to engage in transactions with GGC Group for the benefit of the Group, the transactions must be made as if with external parties with the same conditions as general business partners.
3. The consideration process and information disclosure of the connected transactions or conflicts of interest require strict and prudent compliance with laws and SEC's and SET's criteria. The Directors, Executives, and/or employees who are interested parties must not participate in the consideration. If they are required to provide relevant information or details, they must refrain from voting or giving any opinions on the approval of such transactions to ensure independent consideration.

4. The transactions must be conducted with honesty, integrity, validity, and independence based on ethics and GGC's best interests.
5. In case of any action or under any suspicious circumstance or if others view it as a conflict of interest with GGC Group, the employee must disclose a written report of the transaction on a provided form, inform the supervisor in the chain of command, and promptly submit the report to the Corporate Affairs and Corporate Secretary of GGC. The report will enter the consideration process to determine if it constitutes a conflict of interest with GGC Group and the action that should be taken. Moreover, GGC values the report with or without incident which may be a conflict of interest by requiring annual reporting to forge confidence of shareholders and investors in its commitment to transparent business operation.

In 2024, GGC's actions in preventing conflicts of interest are summarized below:

- (1) Followed up on Directors', Executives', and employees' annual reporting of conflicts of interest through GGC's system, achieving a 100% submission rate.
- (2) Ensured compliance with the Capital Market Supervisory Board's notification by monitoring Directors and Executives to report conflicts of interest upon their initial appointment, conducting annual reviews, and tracking any changes during the year.
- (3) Monitored and ensured that Executives and employees fulfilled their responsibility to learn about the policy and preventive practices regarding conflicts of interest and acknowledged their 100% commitment by signing through GGC's Hook Acknowledgment & Learn system.
- (4) Reviewed and updated the Related Party Transaction Manual to ensure its comprehensiveness and alignment with GGC's operational guidelines. Additionally, conducted training courses on related party transactions for Executives and employees to communicate the criteria, procedures, and practices for executing related party transactions between GGC or its subsidiaries and GGC's related parties, as outlined in the manual.
- (5) Reviewed the information on related parties to oversee, monitor, and verify internal transactions that qualify as related party transactions. The list of related parties was utilized to screen transactions prior to execution, ensuring compliance with the criteria and procedures specified in GGC's Related Party Transaction Manual.
- (6) Prepared quarterly reports summarizing transactions and activities qualifying as related party transactions for the Board of Directors. These reports provided the Board with an overview of all related party transactions.

CG NEWS

ฉบับที่ 4/2567

ความขัดแย้งทางผลประโยชน์ (Conflict Of Interest : COI)

COI คือ สถานการณ์ที่บุคคลมีส่วนได้เสียหรือขัดแย้งทางผลประโยชน์กับองค์กร ซึ่งอาจเกิดขึ้นได้หลายรูปแบบ ได้แก่

- **การถือผลประโยชน์ต่อทรัพย์สินและพวกพ้อง** : การรับซื้อสินค้าของญาติที่มีราคาต่ำกว่าหรือสูงกว่า ราคารายอื่น โดยมีการใช้ข้อมูลภายใน หรือใช้อำนาจหน้าที่เพื่อให้สามารถเข้าทำธุรกรรมกับบริษัท
- **การได้รับผลประโยชน์จากความสัมพันธ์ส่วนตัว** จาก หัวหน้า เพื่อนร่วมงาน หรือ ผู้เกี่ยวข้องทางธุรกิจ : การอาศัยอำนาจของหัวหน้าในการกระทำความผิดจนบริษัท เสียหาย
- **การนำข้อมูลภายในไปใช้เพื่อประโยชน์ส่วนตัว** : การนำข้อมูลบริษัทฯ ไปใช้ในกิจการส่วนตัว หรือนำไปแลกกับผลประโยชน์ส่วนตัว
- **การนำทรัพยากรของบริษัทฯ มาใช้ในเรื่องส่วนตัว** : การใช้คอมพิวเตอร์สำนักงานมาใช้ ในการขายของออนไลน์ เป็นต้น

การขัดแย้งทางผลประโยชน์นำไปสู่ การกระทำผิดต่างๆ ผลกระทบ

การรับมือกับความขัดแย้งทางผลประโยชน์

- ต้องปฏิบัติตามจรรยาบรรณธุรกิจ นโยบาย และแนวปฏิบัติที่ดีเกี่ยวกับความขัดแย้งทางผลประโยชน์ของบริษัทฯ
- **หลีกเลี่ยงการกระทำใดๆ** ที่จะทำให้เกิดความขัดแย้งทางผลประโยชน์กับบริษัทฯ ไม่ว่าจะเป็นการ การติดต่อผู้ที่เกี่ยวข้องทางธุรกิจของบริษัทฯ หรือจากการใช้โอกาสหรือข้อมูล ที่ได้รับจากการเป็นพนักงานในการหาประโยชน์ส่วนตัว
- **เปิดเผยข้อมูลทันที** หากอยู่ในสถานการณ์ที่อาจนำไปสู่ความขัดแย้งทางผลประโยชน์ โดยการจัดทำรายงานผ่านระบบ COI ของบริษัทฯ เพื่อเข้าสู่กระบวนการพิจารณาว่ามีความขัดแย้งทางผลประโยชน์กับกลุ่มบริษัทฯ หรือไม่ และควรดำเนินการอย่างไร

การเปิดเผยข้อมูลและความโปร่งใส ถือเป็นหน้าที่รับผิดชอบของพวกเราทุกคน

บริษัทฯ ให้ความสำคัญกับการรายงาน ทั้งในกรณีที่มี และไม่มีเหตุการณ์ ซึ่งจะเป็นการป้องกันการขัดแย้งทางผลประโยชน์ โดยกำหนดให้ รายงานเป็นประจําทุกปี เพื่อสร้างความเชื่อมั่นให้กับผู้ถือหุ้นและ นักลงทุน เพื่อแสดงให้เห็นถึงเจตนาของบริษัทในการดำเนินธุรกิจด้วยความโปร่งใส

หากมีข้อสงสัย สามารถปรึกษา ผู้บังคับบัญชา หรือ สอบถาม คุณเอกวิทย์ (G-CC-CG) Email : Ekkawit.j@ggcplc.com

GLOBAL GREEN DNA

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED

Anti-Corruption

GGC and its group of companies are committed to conducting business with a strong emphasis on combating fraud and corruption. Compliance with laws related to the prevention and suppression of fraud, corruption, and bribery involving both domestic and foreign government officials, as well as private sector representatives, is upheld as a fundamental principle. Additionally, GGC actively supports and promotes awareness at all levels of personnel to foster a strong sense of integrity and a commitment to combating all forms of fraud and corruption. The Board formulates the anti-corruption policy as part of the Corporate Governance Policy of GGC Group to ensure that the group complies with the determined policy and that Directors, Executives, employees, contractors, or any persons whose action benefiting GGC Group adhere to this policy as a norm for performing their duties. Any violation of the policy is considered disciplinary offence and must be subjected to disciplinary action and punishable under applicable laws.

Principles

Directors, Executives, employees, contractors, as well as other parties contributing to the benefit of GGC are responsible for complying with the laws, rules, regulations on anti-corruption, and the Corporate Governance and Business Code of Conduct Handbook, policies, practices, and guidelines stipulated by GGC. They must discharge their duties with transparency, without engaging in any activity that may be considered fraud or corruption. They must not demand, proceed to, or tolerate any corruption to gain benefits of their own or those of relevant parties, including friends and acquaintances, and must always be available and ready for performance assessment conducted by an authorized party or related agencies. In this regard, subsidiaries can apply the same policy and measures set forth by GGC as deemed appropriate.

Measures and Operational Guidelines

1. GGC appointed an Anti-Corruption Committee responsible for effectively enhancing anti-corruption measures in line with GGC's declaration of intent to join the Thai Private Sector Collective Action Against Corruption (CAC).
2. A regular process is in place to review, audit, and update policies and practices related to anti-corruption. These updates are reported annually to the Corporate Governance and Sustainable Development Committee, the Audit Committee, and the Board of Directors. This process aims to assess effectiveness, refine measures, and enhance practices to align with evolving corruption risks.
3. GGC conducts corruption risk assessments and has risk management measures in place, focusing on operational, environmental, and financial control.
4. GGC employs audit procedures to monitor the internal control system, particularly in areas related to financial documentation, accounting procedures, and data storage, with established reporting processes to ensure prompt and urgent reporting to senior Executives and the Board.
5. GGC has a political neutrality policy, explicitly prohibiting any monetary, resource, or material support—whether directly or indirectly—to any politician, political party, or political group for their benefit.
6. GGC has a strict policy against facilitation payments in any form, either directly or indirectly. No action will be taken or accepted in exchange for business facilitation.
7. Clear and appropriate guidelines are in place for hiring government officials, ensuring that such processes are not used as a means of granting compensation in exchange for any benefits. Measures are also established to disclose information regarding the hiring of government officials to the public, ensuring transparency.
8. Personnel management procedures concerning nomination and recruitment, performance assessment, compensation, and promotion comply with GGC's commitment to anti-corruption.
9. No demotion, punishment, or negative reinforcement will be employed against personnel who refuse to tolerate corruption, even if such actions result in lost business opportunities. Clear communication procedures are in place to support this principle.
10. Regular training on anti-corruption measures is provided to enhance the knowledge and understanding of GGC personnel.
11. GGC has communicated its anti-corruption policy and practices to subsidiaries, affiliates, regulated companies, customers, suppliers, business partners, stakeholders, and the public through various communication mechanisms to ensure acknowledgment and compliance.
12. GGC adheres to the No-Gift Policy guidelines of the GGC Group regarding the acceptance and offering of gifts, hospitality, or similar rewards. These guidelines serve as a framework for employees to ensure compliance in the performance of their duties.
13. The implementation of this policy follows the guidelines outlined in the Corporate Governance and Business Code of Conduct Handbook, along with rules, policies, regulations, requirements, and other guidelines established by GGC.
14. Annual reviews of the anti-corruption policy are conducted to ensure alignment with changes in relevant laws, regulations, and guidelines. These reviews are approved by the Corporate Governance and Sustainable Development Committee and acknowledged by the Audit Committee before being submitted to the Board of Directors for consideration and final approval.

Penalties

1. GGC has established penalties for Directors, Executives, and employees who fail to comply with its anti-corruption measures. These penalties include removal from office for Directors, termination of employment for Executives and employees, and legal action, as deemed necessary by GGC.
2. In cases where individuals associated with GGC, such as customers, suppliers, or business partners, fail to comply with its anti-corruption measures, GGC may consider terminating any transactions or relationships with them.

Since 2017, GGC has declared its commitment to anti-corruption under the Thai Private Sector Collective Action Against Corruption (CAC) initiative. GGC was certified as a member of the CAC in 2018. Additionally, in the first quarter of 2019, the CAC Board recommended that GGC enhance risk management and internal controls related to anti-corruption. These enhancements were completed, and GGC's Board of Directors submitted the improvements for CAC Board approval. In 2024, GGC successfully renewed its CAC membership for the second time, effective from March 31, 2024, with the next renewal due on March 30, 2027.

In 2024, GGC implemented its anti-corruption policy as follows:

- The Anti-Corruption Committee, in collaboration with responsible and relevant agencies, reviews anti-corruption measures, assesses corruption risk management in GGC's operational process, as well as updates individual assessment forms, references, and corruption risk management table.
- Determined the process to monitor connected transactions with caution by setting up appropriate control to devise appropriate practical guideline in reporting risk of potential corruption, as well as regularly following up transactions with the public sector.
- Continuous transfer of knowledge and communication.

Internal Operation

- Hook Acknowledgment and Learning" through the e-Learning system to all employees to study and learn about corporate governance, monitoring of work in compliance with laws, rules, regulations, and GGC's business code of conduct.
- Communications were conducted across all employee levels through E-mail and the LINE application. Short video presentations were created to inform employees about the Company's anti-corruption policy and practices under the topic of anti-corruption measures. Additionally, collaboration with relevant departments was undertaken to identify risks associated with corruption in work processes and to establish appropriate controls for each department to mitigate such risks effectively.
- Provided communication (Tone of the Top) on GGC's business code of conduct through a VDO clip ("Hook Talk") every month at important meetings (including the Townhall) and before meetings within GGC such as conflicts of interest, confidential information, whistleblower, anti-corruption policy, No-Gift Policy.



An example of communication through the e-learning system on the topic of anti-corruption.

External Stakeholders

- Inform stakeholders about GGC Group's practices on the anti-corruption policy and the No-Gift Policy whereby GGC Group will not solicit/accept gifts, receptions, or any compensation from its business partners to avoid discrimination or conflicts of interest, but will maintain transparent and efficient work standards.
- As part of GGC's anti-corruption drive, an announcement is clearly made to outsiders concerning the No-Gift Policy on its website, and boards are installed at office buildings and plants for visitors to clearly see.



Promotional poster designs for the No Gift Policy created by employees.

- Provide channels for external parties for enquiries or recommendations on corporate governance and the business code of conduct through E-mail at corporategovernance@ggcplc.com
- Executives and employees of the Company participated in an anti-corruption event organized with the GC group on September 6, 2024. The event was held online to unite the Executives and employees of the group in a collective campaign against corruption.
- Provided a channel for reporting policy violations or instances of corruption, with measures to protect whistleblowers. Details appear under “Whistleblowing”.

Whistleblowing

GGC values all stakeholders' roles and participation in monitoring the business when confronted with actions against the Business Code of Conduct, Fraud and Corruption, or any misconduct. They can forward tips or evidence or complaints directly to the Vice President of Internal Audit, the Corporate Secretary, or to other channels provided below.

1. Vice President of Internal Audit or the Corporate Secretary	Mail to the Corporate Secretary or the Vice President of Internal Audit, 555/1 Energy Complex Building A, 4th Floor, Vibhavadi Rangsit Road, Chatuchak Sub-district, Chatuchak District, Bangkok 10900
2. E-mail	GGCVoice@ggcplc.com
3. Website	www.ggcplc.com (under Corporate Governance section)

Upon Receiving Complaints

GGC establishes and announces a Whistleblower Policy Procedure to serve as guidelines for the handling of complaints:

1. Screening of complaints: Designated units consider significant information under GGC's policy. The complainants or whistleblowers do not have to identify themselves. If there is sufficient reason and evidence, consideration will proceed. If the complainants or whistleblowers state their names or contact addresses, GGC will respond to them.
2. Investigation: Based on substantiated complaint, the Managing Director may set up an investigation committee under GGC's regulations for investigation and factfinding as well as consideration of penalty under GGC's regulations to ensure fairness to all.
3. Reporting: Resolved complaints will be reported to the complainants who provided their contact information. Additionally, the outcomes will be reported to the Corporate Governance and Sustainable Development Committee and the Audit Committee, both of which are fully Independent Directors.



Measures to protect whistleblowers and informants

GGC commands measures to protect whistleblowers and informants who contribute to the examination and investigation. They will be protected under the whistleblowing criteria and policy as follows:

1. Whistleblowers, stakeholders, or informants who cooperate in goodwill in every step of the examination and investigation process will be put under protection and non-retaliation.
2. The information on whistleblowers or related persons will be kept strictly confidential as classified by GGC regulation on Information Confidentiality Classification and Document Security.
3. Whistleblowers or affected parties will be duly compensated under GGC's process.

Complaint Statistics

In 2024, GGC is not have case of complaint. The complaint topics were divided into ten issues.

Complaint Topic	No.	Follow-up on Rectifications
Business Code of Conduct	None	-
Non-Comply	None	-
Fraud and Corruption	None	-
Insider Trading	None	-
Conflict of Interest	None	-
Society and Community	None	-
Employees*	None	-
Safety, Health, and Environment	None	-
Human Rights and Labor	None	-
Business Competitors	None	-

Remarks: *At the end of 2023, there was 1 employee complaint, which was considered and completed in 2024. After the investigation, it was found that the employee was not guilty as stated in the complaint.

Responsibilities of the Board

The Board has defined a policy concerning its duties. In 2024, the Board's actions included the following:

(1) Definition of policies, business strategies, and directions

The Board considers, reviews, and establishes policies, vision, mission, work plans, budgets, and organizational development strategies in line with evolving business situations, defines business indicators and goals, provides recommendations for management to achieve goals, and assigns the Managing Director to regularly report to it. In 2024, the Board of Directors held a meeting on August 24, 2024, to discuss the long-term direction and strategies of the organization, as well as the five-year business plan.



(2) Corporate Governance and Business Code of Conduct

The Board establishes a policy on corporate governance for Directors, Executives, and employees to observe as guidelines for the operation of GGC Group to ensure standards, transparency, efficiency, and accountability of operations based on business ethics and integrity, with due regard for equitable benefits and rights of all stakeholders. Corporate Affairs and Corporate Secretary has been assigned as the central unit to oversee related matters. Details of corporate governance compliance appear under “Corporate Governance”.

In 2024, at the No. 5/2024 meeting of the Corporate Governance and Sustainable Development Committee held on December 9, 2024, the Committee approved the revisions to CG Handbook. These revisions are scheduled to be presented to the Board of Directors for approval in January 2025. The revised handbook will be more consistent with the rules and best practices of local regulatory bodies, international standards, applicable law and SEC’s and SET’s criteria, as well as practices of GC Group to ensure that the CG Handbook is up to date and consistent with GGC’s business strategies and directions as well as local and international CG codes. The Directors, Executives, and employees signed their names for acknowledgment, understanding, and consent to abide the principles, policy, and code of conduct in the “Corporate Governance and Business Code of Conduct Handbook” as the standardized guidelines for their work.

(3) Internal Control and Internal Audit

The Board values internal control and internal-audit systems and has mandated that GGC Group be equipped with a standardized internal-control system aligning with risk appetite by considering appropriate control environment factors, compliance with relevant laws, rules, and regulations, including anti-corruption, by defining an internal-control system policy to ensure that the Board, Executives, and employees adhere to the implementation. Internal Audit has been tasked with a review of the systems and monitoring of the implementation and is to report the progress to the Audit Committee and the Board to ensure that GGC can achieve its goals on operations, reporting, and compliance with applicable laws, rules, and regulations to foster stakeholders’ confidence. Details appear under “Internal Control”.

(4) Risk Management

The Board, with its commitment to value-added creation and security for sustainable business in line with the corporate governance code, set up a Risk Management Committee at the Board level to identify policies and guidelines for efficient and effective risk management to match GGC’s risk appetite. The Board ensures that the entire organization complies with the risk management framework, gives advice on the management of major risks, reviews risk management reports, and monitors key risks to identify sufficient and appropriate risk management as shown under “Risk Management”.

9. Internal Control & Connected Transactions

9.1 Internal Control

Global Green Chemicals Public Company Limited values an internal-control system under the international standard of The Committee of Sponsoring Organizations of the Treadway Commission or COSO Internal Control (2013) in pursuit of efficient operations in three aspects, namely Operations, Reporting, and Compliance. These ensures righteous and transparent business in line with its objectives.

At the Board Meeting No. 2/2025 of February 10, 2025, the Board assessed GGC's internal-control system. Consideration was given to management's assessment referring by SEC on the adequacy of the system and the Audit Committee's report of its review on such adequacy. The Board's view was that the system was both adequate and appropriate. To elaborate, GGC had assigned a unit to monitor system efficiency for efficient implementation as well as for accurate and credible reports so that GGC may comply with applicable laws and regulations. The other purpose is to sufficiently prevent Company assets from the malfeasance of authorized officers and related parties as well as transaction engagement with parties of conflicts and related parties. Internal Audit reviewed the internal-control system against risk-based audit plans, making several recommendations for improvement. Management took these to heart and accelerated corrective actions without finding significant system deficiencies that could affect GGC's key objective achievement.

GGC has adopted COSO's internal control framework as a tool for internal control management:

- 1) Control Environment
- 2) Risk Assessment
- 3) Control Activities
- 4) Information & Communication
- 5) Monitoring and Reporting Activities

In 2024, GGC improved processes and systems for greater efficiency of internal control to strengthen the governance process and identify risks and issues efficiently and rapidly. GGC's internal-control system is summarized below.

Control Environment

The Board and Executives ensure that GGC operates its businesses in a righteous and ethical manner while cultivating among its personnel corporate values in support of the corporate culture that focus on integrity, ethics, and responsibility. GGC is committed to providing a good, appropriate, and efficient control environment as follows:

- To ensure the efficiency of operations, the Board works independently of Executives in overseeing GGC's overall business and comments on its strategic directions to guide business plans and action plans. At the same time, the Board regularly monitors GGC's performance and the performance of Sub-Committees to ensure achievement of goals.

- GGC's structure, reporting lines, authority, and responsibilities are clearly defined and transparent. The organizational structure has been reviewed and approved by the Board of Directors to ensure efficient cross-review mechanisms. This structure aligns with GGC's strategic growth plans while adhering to GGC's regulations, the Corporate Governance, and Business Code of Conduct Handbook.
- The Board has established policies on good corporate governance, compliance, internal control, and anti-corruption, along with corresponding guidelines. GGC has reviewed these policies to ensure they are observed by the Board, Executives, and employees in the performance of their duties. Additionally, GGC has distributed the Corporate Governance and Business Code of Conduct Handbook, accompanied by communications requiring acknowledgment and signatures from all members across the GGC Group, serving as a pledge to adhere to these guidelines under good corporate governance practices.
- GGC has defined a Whistleblowing Policy, stating procedures for the complaint scope and adding complaint channels for diversity, including whistleblower protective measures and fair, transparent treatment of whistleblowers. These establish credibility for the whistleblower system and complainant's confidence. Every month GGC has educated its employees to raise awareness of good corporate governance, business ethics, conflicts of interest, and anti-corruption through communication channels. Executives and employees also participated in training on corporate governance and compliance.
- Every month GGC has educated its employees to raise awareness of good corporate governance, business code of conduct, conflicts of interest, and anti-corruption through communication channels. Executives and employees also participated in training on corporate governance and compliance.
- GGC's corporate culture is engrained for employees' awareness of ethical business conduct and alignment with good practices through the emphasis on examples of behavior and illustrate key behavior across the corporation to guide all employees. To this end, our communication relies on the likes of GGC DNA, the Change Idol taskforce and GRC Day activities.
- GGC's human resource management process defines the qualifications of each job position in line with the criteria for personnel recruitment and selection. It provides knowledge and skill development for staff, with close monitoring and fair, transparent appraisal of their performances.
- GGC has defined policies on internal control for the Board, Executives, and employees to become aware of its importance and to observe in performing their duties to achieve its objectives and goals. GGC has adopted the Three Lines of Defense Model, an internationally accepted model, as a framework for overseeing and defining the role and duties of the operators of the organization, that is, the process owner or risk owner (1st Line of Defense), who performs duties under GGC's policy and guidelines with Corporate Risk Management and Internal Control and other supporting units (2nd Line of Defense) providing advice and recommendations and supporting other units for systematic operation consistent with the standard. Internal Control (3rd Line of Defense) reviews and independently provides opinions on the findings of the internal-control system adequacy and efficiency or other measures defined for the risk management by process owners or risk owners and supporting units, to strengthen risk monitoring and management.

Risk Assessment

GGC emphasizes fostering a corporate risk management culture by promoting risk management as a core responsibility for all employees. The Company integrates risk management into the formulation of its strategic plans, as well as its short-term and long-term business plans. The Risk Management Committee (RMC), appointed by the Board, is responsible for devising and reviewing policies, objectives, and the scope of risk management. The RMC also monitors and evaluates compliance with these scopes and provides recommendations on GGC's corporate risk management and project investment risks. The Enterprise Risk Management Committee (ERMC), comprising GGC's senior Executives and chaired by the Managing Director, ensures the efficient management of risks across the organization, contributing to the achievement of GGC's business objectives. Outlined below are GGC's risk management approaches:

- The Board and the RMC focus on promoting the risk management corporate culture by defining a policy requiring everyone to become aware of and understand risk management as part of the culture, comply with the risk management policy, and make risk management everyone's mandate.
- GGC promotes the mastery of corporate risk management by training with experts on enterprise risk Executives, involving the Board, Executives, and other employees by setting risk management as part of everyone's job description.
- GGC defines clear objectives and goals linking to vision and mission.
- GGC manages enterprise risks under the ISO 31000:2018 - Risk Management Scope and COSO Enterprise Risk Management Guidelines (2017) and institutes a risk management policy for all.
- GGC manages risks by defining the framework and guidelines. The risk appetite is stated in the risk profile criteria. The risk profiling process starts from identifying, analyzing, and assessing risks at the corporate and unit levels that could compromise enterprise goal achievement, embracing year-round risks. At GGC, in place are risk criteria, containing six aspects of impacts, namely financial, goal achievement, corporate image, safety-health-environment, legal and regulations, and customer/ business partner/supplier; the likelihood of each risk event is also determined. Finally, GGC specifies risk mitigation plans to systematically manage risks.
- GGC assesses risks by recognizing changes in factors and emerging risks, monitors the management of corporate risks against the risk appetite, and defines key risk indicators (KRI) to track changes hindering the achievement of objectives, with a quarterly submission of risk management reports to the ERMC for acknowledgment and reporting to the Board and the RMC every quarter.
- At GGC, business continuity plan drills take place annually through simulated incidents that could cause business disruption or affect business continuity. The drills prepare everyone to cope with and mitigate impacts of real-life incidents. The outcomes of the drills help plan improvement ahead of such incidents.

Control Activities

In place are control activities spanning all major processes, including risk management, to mitigate risks to the achievement of objectives:

- GGC has designed control activities with due regard for sound internal-control principles. These include segregation of duties and systematic authorization of approval to groups of employees for checks and balances. In place are policies and good practices for conflict-of-interest transactions. In addition, GGC's transactions have been conducted in a transparent, fair, and auditable manner. Approval of transactions takes into account GGC's utmost benefit.
- GGC has established written rules and regulations, requirements, corporate policies, and job manuals, which define the scopes of authority and duties of the Managing Director, Executives, and employees by level along with clear work procedures as guidelines for their job performances. GGC also regularly reviews to ensure that business has been conducted in compliance with rules and regulations, requirements, corporate policies, and job manuals.
- GGC has specified risk prevention and mitigation plans in line with risk assessment outcomes to manage risks at GGC's risk appetite level. The Company monitors and reports the implementation of these plans to the RMC and the Board for acknowledgment.
- GGC commands internal control of processes, both by the processes set out in the manual control system and by automated control systems defined in the automated control system, for greater efficiency of business as well as more careful and accurate internal control, including a process to manage feedstock and goods inventory together with a system to record and store inventory items. Both systems embrace directive control, preventive control, detective control, and corrective control.
- GGC reviews IT-based control activities, including an authorization matrix based on duties and responsibility, meaning the management of access to information safely and the ability to efficiently keep critical data. GGC also devises requirements for the IT security policy and conducts drills for possible cyberthreats and information system salvaging to ensure that IT system is appropriate and secure. In addition, GGC has instituted assessment under the NIST Cybersecurity Framework (CSF) for the corporation's planning to prevent, detect, and address threats in a quick and systematic way and for continued operations. In addition, GGC continuously communicates and provides knowledge to employees across the organization regarding risks and the prevention of information technology threats. It also conducts regular assessments of employees' knowledge and understanding through the SuccessFactors system, the Company's e-Learning platform. These efforts aim to elevate the organization's IT security standards, ensuring alignment with evolving circumstances.
- GGC has put in place processes to supervise its invested affiliates in individual businesses so that subsidiaries and associates may have compatible business guidelines that conform to GGC's policies, guidelines, and strategic directions while being able to track the work of these subsidiaries and associates regularly and continually. Additionally, the Company conducts evaluation to duly improve GGC Group management efficiency, with outcomes reported to senior Executives.

- GGC has implemented information technology systems to enhance operational efficiency across various areas, including the management of legal compliance related to safety, occupational health, energy, the environment, and other organizational requirements. These initiatives aim to improve the efficiency of managing legal and regulatory compliance within GGC. Additionally, GGC has developed and upgraded systems for storing and managing digital documents to further optimize document management processes.
- In 2024, GGC continuously enhanced its internal control system by streamlining key processes across the organization, clearly assigning responsibilities, and outlining improvement plans. Significant progress has been achieved, with Internal Control closely monitoring these improvement efforts and regularly reporting updates to the relevant Sub-Committees as appropriate. Additionally, the Governance, Risk Management, and Compliance (GRC) working team operate through an integrated framework that incorporates three key components: Good Governance, Risk Management, and Compliance. The GRC Taskforce implemented plans to communicate and educate employees on the importance of these components and to revise key processes for integrated GRC practices. This initiative aims to advance GGC's governance development while enhancing the efficiency of planning, monitoring, and assessment under robust internal controls, ensuring the achievement of the company's strategies and goals. Key measures include the implementation of an annual GRC Health Check assessment form to ensure employees' proficiency and the integration of GRC principles into the operations of Executives and employees at all levels. The assessment outcomes are analyzed and used to plan and refine GRC activities for improved efficiency.

Since GGC is an affiliate of GC, it was also directed to observe the GC Way of Conduct, which is GC's guidance for conduct and affiliate supervision. GGC itself has followed suit. In 2024, GGC defined a GGC Way of Conduct for its own affiliates and communicated it to internal units and subsidiaries as well as assessing the operations of affiliated companies in which GGC holds shares.

Information & Communication

GGC values the quality of information and communication. Internal and external channels are provided for employees to access the information required for their efficient operation as follows:

- GGC prepares various reports for submission to the Board by including analyzes of relevant data from internal and external sources, showing changes, trends, sales performance, production outputs, and inventory in support of presentations, including financial statements and performance reports. The Company prepares adequate supporting data for the Board's decision-making. Meeting documents are sent ahead of Board meetings for their scrutiny and decision-making. The Board can request additional information from applicable units in support of their deliberation. GGC applies the D JOIN system as a tool for delivering information to the Board via a system with information security and speed suitable for the delivery of information and meeting documents.
- Diverse elements of the internal communication process are provided, taking into account their compatibility with the types of data and communication objectives. For example, GGC's business directions, goals, and key policies are communicated through the MD Town Hall, orientation for new employees, cross-functional team meetings, HR Communication activities, the intranet and e-mail, and through GRC News as well GRC Talk, and others.

- GGC values shareholders' rights and equitability under the corporate governance code. It gives shareholders an opportunity to propose agenda that are useful to GGC for review and inclusion on the AGM agenda and to nominate suitable Directors in advance. This year GGC held its AGM in the form of E-AGM under the Emergency Decree on Electronic Meeting B.E. 2563(2020), analyst meetings to present quarterly company performance, and publicize company information on the quarterly Opportunity Day.
- GGC communicates information to stakeholders through various channels, including corporate website and designated departments that serve as central platforms for disseminating Company information. These include Investor Relations and Managerial Accounting Division and Corporate Branding and CSR Division. In addition, GGC communicates sustainability management efforts, covering all three dimensions—economic, social, and environmental—via corporate website. To publicize sustainable operations, reinforcing its commitment to advancing toward sustainable green chemical business practices.

Monitoring and Reporting Activities

In ensuring the adequacy and efficiency of internal control, GGC undertakes the following monitoring and assessment processes:

- GGC has put in place a Risk and Control Self-Assessment (RCSA) process to assess risks at the process level. Corporate Risk Management and Internal Control reviews the adequacy and appropriateness of the assessment and provides advice for the improvement of deficiencies detected in the internal control system, and duly reports to Executives in appropriate period to promote achievement of all three aspects of internal control operation, reporting, and compliance for RCSA's operations to become efficient and sustainable.
- GGC has assigned a unit to take charge of managing internal control to support management's assessment, development, implementation, and review of the adequacy and appropriateness of the system as well as giving opinions about the 2nd Line of Defense. The outcomes of internal control assessment are reported to the Ex-Com to ensure efficient internal control.
- The Internal Audit Department operates independently and reports directly to the Audit Committee. It performs audit duties to ensure that internal controls are sufficient, appropriate, and consistently applied. To achieve this, the department conducts audits and evaluates internal controls across various activities in accordance with the audit plan approved by the Audit Committee. This plan aligns with GGC's strategic directions and addresses key risks affecting operations. Additionally, the department provides recommendations to enhance the efficiency of internal controls. In collaboration with Management, it establishes guidelines for internal control improvements. The Internal Audit Department reports its findings to the Audit Committee and submits quarterly updates on the implementation progress of the audit plan. Assessments related to accounting and finance are conducted by the external auditor, who presents findings and reviews to the Audit Committee on a quarterly and annual basis. To further enhance audit efficiency and support corporate governance, the Internal Audit Department has adopted IT systems to streamline internal audit processes and improve operational effectiveness.

- GGC has secured the membership status of CAC (Private Sector Collective Action against Corruption) and must review its status every three years to report its assessment findings, signed by the Audit Committee to guarantee the existence of policies, guidelines, and measures for risk assessment and corruption prevention. GGC's mandate is to run its business in line with CAC's Corporate Governance Code.

In 2024, GGC assessed internal control under the five internal-control components. The findings indicated no material shortcomings in GGC's transactions or items that may involve conflicts of interest, corrupt practices, or violation of laws on securities and exchange, SET regulations, or other applicable laws.

9.2 Connected Transactions

In Fiscal Year 2024, GGC engaged in business transactions with various companies that have common shareholders or Directors. In cases where reference market prices were unavailable, connected transactions with entities that could present potential conflicts of interest were conducted based on market prices or contractual terms. Details of the relationships and connected transactions with these companies are provided below.

Company	Relationship (As of December 31, 2024)	Connected Transaction	2022	2023	2024
(Million THB)					
PTT Plc (PTT)	<ul style="list-style-type: none"> • PTT (a major shareholder of GC, which is GC's major shareholder), holds 45.18% shares • Members of the Board of Directors also serves as an executive of PTT: 1. Mr. Narongsak Jivakanun • Sales/purchase transactions of products and services 	Statement of Income			
		Sales of goods and services	0.281	17	-
		Purchase of good and services	1	257	67
		Other incomes	-	-	-
		Other expenses	0.039	0.018	0.005
		Interest expenses	0.059	0.057	0.054
		Financial Statements			
		Trade receivables – related business	-	5	0.114
		Trade payables – related business	-	-	0.007
		Other payables – related business	-	0.487	-
		1-year term of financial lease liabilities- related business	-	0.026	0.031
		Financial lease liabilities – related business	2	2	2

Company	Relationship (As of December 31, 2024)	Connected Transaction	2022	2023	2024
(Million THB)					
PTT Global Chemical Plc (GC)	<ul style="list-style-type: none"> GC (a major shareholder of GGC) holds 72.29% shares Common Director: 1. Mr. Narongsak Jivakanun Members of the Board of Directors also serves as an executive of GC: 1. Mr. Narongsak Jivakanun 2. Mr. Saroj Putthammawong 3. Mr. Kridsada Prasertsuko Sales/purchase transactions of products and services 	Statement of Income			
		Sales of goods and services	2,700	2,641	2,503
		Purchase of goods and services	177	189	204
		Other incomes	0.069	0.050	0.516
		Other expenses	68	69	78
		Interest expenses	9	8	9
		Financial Statements			
		Trade receivables – related business	147	149	98
		Other receivables – related business	-	0.047	0.027
		Trade payables – related business	13	32	15
		Other payables – related business	22	23	14
		Payables to contractors – related business	-	-	-
		1-year term of financial lease liabilities – related business	21	15	23
		Financial lease liabilities – related business	236	223	227
GC Glycol Co., Ltd. (Glycol)	<ul style="list-style-type: none"> GC wholly owns this company Sales/purchase transactions of products and services Registered for dissolution on August 31, 2022 	Statement of Income			
		Sales of goods and services	2	-	-
		Purchase of goods and services	1	-	-
		Other expenses	0.057	0.001	-
		Interest expenses	5	-	-
		Financial Statements			
		Other payables – related business	-	-	-
		1-year term of financial lease liabilities – related business	-	-	-
		Financial lease liabilities – related business	-	-	-

Company	Relationship (As of December 31, 2024)	Connected Transaction	2022	2023	2024
(Million THB)					
Solution Creation Co., Ltd. (SUN)	<ul style="list-style-type: none"> GC wholly owns this company Sales/purchase transactions of products 	Statement of Income			
		Sales of goods and services	83	12	-
		Purchase of goods and services	-	93	0.433
		Other incomes	2	2	-
		Other expenses	0.112	0.431	-
		Financial Statements			
		Trade receivables – related business	3	-	-
		Other receivables – related business	0.316	-	-
		Trade payables - related business	-	38	-
Global Power Synergy Plc (GPSC)	<ul style="list-style-type: none"> PTT holds 47.27%, GC holds 10.00%, and TOP holds 10.00% shares Service transactions 	Statement of Income			
		Purchase of goods and services	665	643	544
		Financial Statements			
		Trade payables - related business	68	103	49
GC Maintenance and Engineering Co., Ltd. (GCME)	<ul style="list-style-type: none"> GC wholly owns this company Service transactions 	Statement of Income			
		Purchase of goods and services	87	85	76
		Other expenses	1	0.093	-
		Financial Statements			
		Trade receivables – related business	-	-	-
		Other payables- related business	27	16	21
		Payables to contractors - related business	21	1	2

Company	Relationship (As of December 31, 2024)	Connected Transaction	2022	2023	2024
(Million THB)					
WHA GC Logistics Co., Ltd. (WGCL)	<ul style="list-style-type: none"> GC holds 50% shares (GC shareholding in GCL, as its subsidiary changed to shareholding in a joint venture on December 21, 2023) Common Director: 1. Mr. Saroj Putthammawong Service transactions GC Logistics Solutions Co., Ltd. (GCL) was renamed on September 5, 2024. 	Statement of Income			
		Purchase of goods and services	1	13	12
		Other incomes	0.031	0.005	0.014
		Other expenses	25	19	15
		Financial Statements			
		Other receivables - related business	-	0.002	-
		Trade payables - related business	0.343	0.439	0.425
		Other payables- related business	7	9	6
		Payables to contractors - related business	1	-	-
PTT Digital Solution Co., Ltd. (PTT Digital)	<ul style="list-style-type: none"> GC holds 20% (GC reduced its shareholding from 40% to 20% on June 25, 2024), PTT holds 20%, TOP holds 20%, PTTEP holds 20%, and Modulus Venture Co., Ltd. (in which or holds 20% shares) holds 20% shares Service transactions 	Statement of Income			
		Other expenses	4	8	12
		Financial Statements			
		Other receivables - related business	0.004	0.004	0.004
		Other payables- related business	9	2	9
		Payables to contractors - related business	1	1	-
NPC Safety and Environmental Service Co., Ltd. (NPC)	<ul style="list-style-type: none"> GC wholly owns this company Service transactions 	Statement of Income			
		Purchase of goods and services	22	22	17
		Other expenses	2	3	1
		Financial Statements			
		Other payables - related business	6	5	3
		Payables to contractors - related business	-	1	0.285

Company	Relationship (As of December 31, 2024)	Connected Transaction	2022	2023	2024
(Million THB)					
Thai Oil Plc (TOP)	<ul style="list-style-type: none"> PTT holds 45.03% shares Sales/purchase transactions of products and services 	Statement of Income			
		Purchase of goods and services	2,531	2,154	2,102
		Other expenses	-	-	-
		Financial Statements			
		Trade receivables – related business	94	93	84
		Other receivables – related business	-	-	-
		Other payables- related business	-	-	-
PTT Oil and Retail Business Plc (OR)	<ul style="list-style-type: none"> PTT holds 75% shares Sales/purchase transactions of products 	Statement of Income			
		Sales of goods and services	3,006	3,111	3,685
		Purchase of goods and services	131	134	112
		Other incomes	-	-	-
		Other expenses	0.045	0.029	0.037
		Financial Statements			
		Trade receivables – related business	147	168	261
		Trade payables – related business	13	12	3
		Other payables- related business	-	0.017	0.018
		Payables to contractors - related business	-	-	-

Company	Relationship (As of December 31, 2024)	Connected Transaction	2022	2023	2024
(Million THB)					
Energy Complex Co., Ltd. (ENCO)	<ul style="list-style-type: none"> PTT holds 50% and PTTEP (in which PTT holds 63.79% shares) holds 50% shares Service transactions 	Statement of Income			
		Other expenses	10	6	6
		Interest expenses	0.035	0.093	0.108
		Financial Statements			
		Other receivables – related	3	-	-
		Other payables – related business	1	0.201	2
		1 – year term of financial lease liabilities – related business	4	2	4
		Financial lease liabilities – related business	2	-	6
IRPC Plc (IRPC)	<ul style="list-style-type: none"> PTT holds 45.05% shares Sales/purchase transactions of products and services 	Statement of Income			
		Sales of goods and services	1,552	921	978
		Financial Statements			
		Trade receivables – related business	19	86	96
		Other receivables – related business	-	-	-
Business Services Alliance Co., Ltd. (BSA)	<ul style="list-style-type: none"> PTT wholly owns this company GC holds 25% preferred stocks Service transactions 	Statement of Income			
		Purchase of goods and services	2	3	5
		Other expenses	12	10	10
		Financial Statements			
		Other payables – related business	3	4	4
NPC S&E Security Guard Co., Ltd. (NPCSG)	<ul style="list-style-type: none"> NPC wholly owns this company Service transactions 	Statement of Income			
		Purchase of goods and services	7	7	7
		Other expenses	-	-	-
		Financial Statements			
		Other payables– related business	0.156	-	0.107

Company	Relationship (As of December 31, 2024)	Connected Transaction	2022	2023	2024
(Million THB)					
Advanced Biochemical (Thailand) Co., Ltd. (Advanced Biochemical)	<ul style="list-style-type: none"> AGC Vinythai Plc (in which GC holds 32.72% shares) wholly owns this company Sales/purchase transactions of products 	Statement of Income			
		Sales of goods and services	1,165	261	-
		Financial Statements			
		Trade receivables – related business	44	-	-
GC Polyols Co., Ltd. (GCP)	<ul style="list-style-type: none"> GC holds 82.1 % shares Purchase transactions of products or services Common Director: 1. Mr. Saroj Putthammawong 	Statement of Income			
		Sales of goods and services	117	34	51
		Other incomes	0.009	-	-
		Other expenses	-	-	0.044
		Statement of Income			
		Trade receivables – related business	2	4	11
Emery Oleochemicals LLC (EOMUSA)	<ul style="list-style-type: none"> Emery Oleochemicals UK Ltd (UK) (GC wholly owns PTTGC International Private Limited, which holds 50% shares in Emery Oleochemicals UK Ltd (UK)), wholly owns this company Sales transactions of products 	Statement of Income			
		Sales of goods and services	80	25	41
		Financial Statements			
		Trade receivables – related business	-	2	3
PTT Phenol Co., Ltd. (PPCL)	<ul style="list-style-type: none"> GC wholly owns this company Purchase transactions of products or services Registered for dissolution on March 31, 2023 	Statement of Income			
		Sales of goods and services	0.068	-	-
		Other incomes	-	-	-
		Other expenses	-	-	0.019
		Financial Statements			
		Other payables-related business	0.073	2	3
GC Oxirane Co., Ltd. (GCO)	<ul style="list-style-type: none"> GC wholly owns this company Purchase transactions of products or services Registered for dissolution on March 31, 2023 	Statement of Income			
		Sales of goods and services	-	-	-
		Other income	-	-	-

Company	Relationship (As of December 31, 2024)	Connected Transaction	2022	2023	2024
(Million THB)					
GC Estate Co., Ltd. (GCEC)	<ul style="list-style-type: none"> GC wholly owns this company Service transactions 	Statement of Income			
		Purchase of goods and services	0.066	0.066	0.066
		Other expenses	3	3	3
		Interest expenses	0.187	0.169	0.296
		Financial Statements			
		Other payables-related business	0.018	0.033	0.017
		1-year term of financial lease liabilities - related business	3	5	5
		Financial lease liabilities - related business	-	8	3
PTT Asahi Chemical Co., Ltd. (PTTAC)	<ul style="list-style-type: none"> GC holds 50% shares Common Director: 1. Mr. Saroj Putthammawong Sales transactions of products or services The Extraordinary General Meeting of Shareholders of PTTAC resolved to approve the plan to cease operations on November 5, 2024. 	Statement of Income			
		Sales of goods and services	76	-	-
		Financial Statements			
		Trade receivables – related business	7	-	-
Kuraray GC Advanced Materials Co., Ltd. (KGC)	<ul style="list-style-type: none"> GC holds 33.40% shares Sales transactions of products or services 	Statement of Income			
		Sales of goods and services	6	7	12
		Financial Statements			
		Trade receivables – related business	2	3	4
AGC Vinythai Plc (AVT)	<ul style="list-style-type: none"> GC holds 32.72% shares Sales transactions of products and services Purchase transactions of products or service 	Statement of Income			
		Sales of goods and services	-	218	447
		Purchase of goods and services	1	2	2
		Financial Statements			
		Trade receivables – related business	-	42	47
		Trade payables – related business	0.310	0.195	0.273

Company	Relationship (As of December 31, 2024)	Connected Transaction	2022	2023	2024
(Million THB)					
Eastern Fluid Transport Co., Ltd. (EFT)	<ul style="list-style-type: none"> GC holds 15%, and TTT holds 15% shares Service transactions 	Statement of Income			
		Purchase of goods and services	0.186	0.193	-
		Interest expenses	0.019	0.035	-
		Financial Statements			
		1-year term of financial lease liabilities - related business	-	0.056	-
		Financial lease liabilities - related business	1	1	-
Emery Oleochemicals GmbH.	<ul style="list-style-type: none"> Emery Oleochemicals UK Ltd (UK) (GC wholly owns PTTGC International Private Limited, which holds 50% shares in Emery Oleochemicals UK Ltd (UK)), wholly owns this company Sales transactions of products 	Statement of Income			
		Sales of goods and services	-	5	-
PTT Retail Management Co.,Ltd (PTTRM)	<ul style="list-style-type: none"> OR wholly owns this company Purchase transactions of products 	Statement of Income			
		Other expense	-	-	0.019
GC Treasury Center Company Limited (GCTC)	<ul style="list-style-type: none"> GC wholly owns this company Service transactions 	Statement of Income			
		Other expense	-	-	0.027
		Financial Statements			
		Other payables- related business	-	-	0.056

Justification and Sensibility of Connected Transactions

The connected party transactions for the fiscal year ending December 31, 2024, were conducted as part of GGC's normal business operations. These transactions adhered to terms and conditions that were fair, reasonable, and free from the transfer of undue benefits. They were executed in the same manner that a prudent individual would engage with unrelated third parties under similar circumstances, ensuring fair bargaining power and without influence from the counterparty's status as a potentially conflicted party (Arm's Length Basis).

In engaging in connected transactions where GGC produced goods for related companies, the objective was to enable the buyers to process or manufacture their own products. To achieve this, GGC's pricing was based on contractual formulas or market prices (as applicable), ensuring that the interests of both parties were considered. The pricing was referenced to market rates, free from any transfer of mutual benefits or irregularities.

Similarly, service transactions with GGC's related companies were intended to support their routine business operations. The service fees were determined based on market conditions, taking into account the interests of both parties and referencing market prices, without any transfer of undue benefits or irregularities.

Purchases of goods, feedstock, or services (or all of these) from related companies were conducted as part of GGC's normal business operations. The volumes of goods, feedstock, or services corresponded to GGC's demand and operational requirements. Pricing was based on contractual agreements that ensured mutual benefit without any transfer of undue benefits or irregularities. Furthermore, GGC occasionally leases certain properties from related companies, such as office buildings and land. Each leasing arrangement was carefully evaluated to ensure it met GGC's specific needs and was in the Company's best interests, with no intention of transferring undue benefits between parties.

Measures or Approval Procedures for Connected Transactions

In engaging in transactions with related parties, GGC reviews the suitability of all transactions and set prices and terms on an arm's length basis.

When GGC or its subsidiaries have engaged in connected transactions under applicable Stock Exchange of Thailand (SET) and Securities and Exchange Commission (SEC) notifications on information disclosure and actions by listed companies on related-party transactions, the Board of Directors strictly ensures that such actions strictly conform to the criteria, conditions, and procedures of the notifications. The Board also discloses the transactions in GGC's Form 56-1 One Report for the transparency of related-party transactions and to eliminate conflicts of interest.

If GGC Director buys or sells its properties or engages in business with it by himself or herself or on behalf of others, the Articles of Association clearly state that the transaction must secure a prior consent from the Board before its binding on GGC. In any case, any Director with vested interests in buying or selling properties or engaging in any business with GGC is barred by the Articles of Association from voting on such matter.

Apart from the approval of the Audit Committee and the Board, if the engagement of GGC or that of its subsidiaries in related-party transactions or actions result in the acquisition or sale of their key assets under the criteria of SEC notifications on related transactions of listed companies or the acquisition or sale of assets of listed companies, GGC or its subsidiaries (or both) must conform to the rules and procedures under such announcements. The Audit Committee must express its views on the measures or procedures for engagement in connected transactions. If the committee has a dissenting opinion, they must state it.

GGC commands control measures over connected transactions to control, audit, and execute random checks of actual transactions' conformance to contracts, policies, or terms. Any transactions with related parties must be undertaken for regular business. To this end, the volumes of goods or feedstock traded, or services received by GGC from such related parties, must match its needs and business operations. In addition, the prices, as well as the giving or acceptance of services by related parties, must conform to contractual provisions and benefit the businesses of both GGC and the related parties without any transfer of such benefits or any irregular items. Moreover, Internal Audit scrutinizes the transactions to ensure GGC's control measures for such connected transactions in line with the regulations and under the internal-audit plan. Progress is regularly reported to the Audit Committee.

Opinion of Independent Directors

No different opinion from the views of the Board.

Policy or Trends of Connected Transactions

As previously done, future transactions involving GGC are to be conducted as in the normal course of business without irregular items or any transfer of benefits between it and related parties. The pricing policy between GGC and related parties is to be based on the same prices for normal business as for third parties. The prices of goods or feedstock bought from GGC or related parties are to align with contracts or with market prices for such feedstock. In addition, the service fees to be paid to GGC or related parties are to be tied to regular fees paid to other third parties. Finally, the prices of goods charged by GGC to related parties are to be tied to market prices. Disclosure of GGC's related-party transactions conforms to the law and regulations defined by SEC, SET, and accounting standards for related parties defined by the Federation of Accounting Professions under the Royal Patronage.



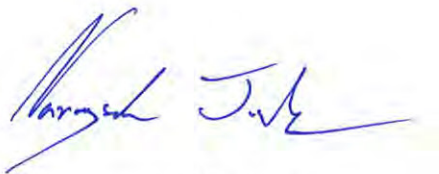
03 Financial Statements



Report of the Board of Directors' Responsibility for a Financial Reports

The consolidate financial statements of Global Green Chemicals Public Company Limited (“GGC”) and its subsidiaries were prepared in accordance with the Securities Exchange Commission under the Securities and Exchange Act B.E. 2535 and Department of Business Development, issued under the Accounting Act B.E. 2543 Section 11 Paragraph 3 in an accordance with the Federation of Accounting Professions’ Thai Financial Reporting Standards.

The Board of Directors is responsible for the Financial report of GGC’s and its subsidiaries in providing responsible assurance that the financial report present fairly financial position, financial performance and cash flows. The accounting data is sufficiently and accurately recorded to preserve GGC’s asset and prevent fraud and irregularity. The financial reports have been prepared accordingly to appropriate accounting policy and in accordance with consistency practices, and in accordance with Thai Financial Reporting standards. Significant information has been adequately disclosed in note of financial statements, where the auditors expressed an opinion on the financial statement of GGC’s and its subsidiaries in the auditor’s report.



(Mr. Narongsak Jivakanun)

Chairman



(Mr. Kridsada Prasertsuko)

Managing Director

Independent Auditor's Report

To the Shareholders of Global Green Chemicals Public Company Limited

Opinion

I have audited the consolidated and separate financial statements of Global Green Chemicals Public Company Limited and its subsidiaries (the “Group”) and of Global Green Chemicals 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, 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.

Valuation of inventories	
Refer to Notes 6 to the consolidated and separate financial statements.	
The key audit matter	How the matter was addressed in the audit
<p>Inventories are significant balances to both the consolidated and separate financial statements. The raw materials and finished goods are commodities that may be subject to significant price volatility. This volatility may impact the valuation of inventories at the end of the reporting period as inventories are measured at the lower of cost or net realisable value. The measurement of net realisable value may involve significant management judgement. This is an area of focus in my audit.</p>	<p>My audit procedures included:</p> <ul style="list-style-type: none"> • Inquiry of the management to obtain understanding of the Group's policy in relation to setting adjustments to the net realisable value. • Reviewing the Group's and the Company's compliance with this policy, assessing the appropriateness of the methodology used to calculate the net realisable value of inventories at the reporting period and considering the reasonableness of the market price used by reference to the expected selling price of commodity. • Testing the accuracy of the calculation and checking samples of the related supporting documents. • Considering the adequacy of disclosure in accordance with the financial reporting standard.

Impairment assessment of Cash-generating units	
Refer to Notes 8 to the consolidated and separate financial statements.	
The key audit matter	How the matter was addressed in the audit
<p>The Group and the Company's operations are exposed to risks from external factors such as the fluctuation in economics, politics and change in environment and climate. Therefore, the Group and the Company are required to assess the impairment of cash-generating units when there is an indication and might result in the assets' carrying value being higher than the recoverable amount.</p> <p>I considered this as the key audit matter because the impairment assessment involved a significant level of management judgment.</p>	<p>My audit procedures included:</p> <ul style="list-style-type: none"> • Understand the management's process of the indicators identification and impairment testing process. • Understand 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 amounts 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 do 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 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 scepticism 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.



(Thanyalux Keadkeaw)
Certified Public Accountant
Registration No. 8179

KPMG Phoomchai Audit Ltd.
Bangkok
10 February 2025

Statements of financial position

Global Green Chemicals Public Company Limited and its Subsidiaries

Assets	Note	Consolidated financial statements		Separate financial statements	
		31 December		31 December	
		2024	2023	2024	2023
<i>(in Baht)</i>					
Current assets					
Cash and cash equivalents		1,056,665,273	1,086,734,715	1,053,868,944	1,082,006,076
Trade accounts receivable	4, 5	2,039,345,725	1,744,156,163	2,039,345,725	1,744,156,163
Other receivables	4	332,823,152	374,252,463	332,948,923	374,487,086
Value-added tax receivable		55,491,568	6,204,524	55,491,568	6,204,524
Inventories	6	2,232,935,978	1,629,496,857	2,232,935,978	1,629,496,857
Current financial assets	7	-	2,000,000,000	-	2,000,000,000
Other current assets		25,514,496	21,766,714	25,514,496	21,766,714
Total current assets		5,742,776,192	6,862,611,436	5,740,105,634	6,858,117,420
Non-current assets					
Investments in subsidiaries	8	-	-	1,565,000,000	1,561,750,000
Investments in joint ventures	9	1,479,698,622	1,953,004,338	690,500,000	690,500,000
Plant and equipment	10	3,626,677,573	3,834,502,128	3,626,677,573	3,834,502,128
Right-of-use assets	11	361,595,213	361,500,335	361,595,213	361,500,335
Intangible assets		80,767,323	84,312,980	47,239,906	50,785,563
Deferred tax assets	17	40,108,468	74,497,317	40,108,468	74,497,317
Deposits at a financial institution pledged as collateral	22	-	503,307,481	-	503,307,481
Other non-current assets		6,420,420	7,327,106	6,420,420	7,327,106
Total non-current assets		5,595,267,619	6,818,451,685	6,337,541,580	7,084,169,930
Total assets		11,338,043,811	13,681,063,121	12,077,647,214	13,942,287,350

The accompanying notes form integral part of these financial statements.

Statements of financial position

Global Green Chemicals Public Company Limited and its Subsidiaries

Liabilities and equity	Note	Consolidated financial statements		Separate financial statements	
		31 December		31 December	
		2024	2023	2024	2023
(in Baht)					
Current liabilities					
Trade accounts payable	4	918,488,691	983,674,598	918,488,691	983,674,598
Other payables	4	364,440,213	237,861,067	364,263,362	237,713,834
Payables to contractors	4	15,548,528	19,294,744	15,548,528	19,294,744
Current portion of long-term borrowings					
from financial institutions	12	-	227,817,636	-	227,817,636
Current portion of lease liabilities	4, 11, 12	55,172,881	41,941,656	55,172,881	41,941,656
Short-term provision	22	-	443,570,129	-	443,570,129
Total current liabilities		1,353,650,313	1,954,159,830	1,353,473,462	1,954,012,597
Non-current liabilities					
Long-term borrowings					
from financial institutions	12	-	1,461,587,142	-	1,461,587,142
Lease liabilities	4, 11, 12	338,733,866	345,656,501	338,733,866	345,656,501
Provision for employee benefits	13	130,627,698	100,505,404	130,627,698	100,505,404
Total non-current liabilities		469,361,564	1,907,749,047	469,361,564	1,907,749,047
Total liabilities		1,823,011,877	3,861,908,877	1,822,835,026	3,861,761,644
Equity					
Share capital:					
Authorized share capital					
(1,023,666,700 ordinary shares, par value at Baht 9.50 per share)		9,724,833,650	9,724,833,650	9,724,833,650	9,724,833,650
Issued and paid-up share capital					
(1,023,666,700 ordinary shares, par value at Baht 9.50 per share)		9,724,833,650	9,724,833,650	9,724,833,650	9,724,833,650
Share premium		89,240,250	89,240,250	89,240,250	89,240,250
Difference arising from business combination					
under common control		(4,134,457)	(4,134,457)	-	-
Retained earnings (deficit)					
Appropriated					
Legal reserve	14	109,234,000	98,692,000	109,234,000	98,692,000
Unappropriated (deficit)		(404,141,509)	(116,536,761)	331,504,288	140,700,244
Other components of equity		-	27,059,562	-	27,059,562
Total equity		9,515,031,934	9,819,154,244	10,254,812,188	10,080,525,706
Total liabilities and equity		11,338,043,811	13,681,063,121	12,077,647,214	13,942,287,350

The accompanying notes form integral part of these financial statements.

Statements of income

Global Green Chemicals Public Company Limited and its Subsidiaries

	Note	Consolidated		Separate	
		financial statements		financial statements	
		Year ended 31 December		Year ended 31 December	
		2024	2023	2024	2023
		(in Baht)			
Revenues from sales	4, 15, 18	19,005,831,739	17,719,089,655	19,005,831,739	17,719,089,655
Cost of sales	4, 16	(17,872,819,006)	(17,118,913,997)	(17,872,818,824)	(17,118,326,356)
Gross profit		1,133,012,733	600,175,658	1,133,012,915	600,763,299
Interest income and dividend income	4	67,491,617	49,924,457	77,931,603	81,816,087
Other income	4	41,068,580	37,438,800	42,485,827	38,591,401
Distribution costs	4, 16	(366,386,838)	(314,978,052)	(366,387,008)	(314,978,052)
Administrative expenses	4, 16	(503,578,784)	(354,943,735)	(503,082,953)	(354,428,044)
Reversal of estimated damage causing by lawsuit	22	42,963,928	-	42,963,928	-
Loss from impairment of investment	8	-	-	(104,000,000)	-
Net foreign exchange gain		17,947,485	37,038,538	17,947,485	37,038,538
Net derivatives loss		(9,402,812)	(29,465,964)	(9,402,812)	(29,465,964)
Profit from operating activities		423,115,909	25,189,702	331,468,985	59,337,265
Finance costs	4	(75,794,811)	(57,247,185)	(75,794,811)	(57,247,185)
Share of loss of joint ventures					
accounted for using equity method	9	(567,417,768)	(87,469,140)	-	-
Profit (loss) before income tax expense		(220,096,670)	(119,526,623)	255,674,174	2,090,080
Tax expense	17	(44,835,259)	(81,991,791)	(44,835,259)	(81,729,505)
Profit (loss) for the year		(264,931,929)	(201,518,414)	210,838,915	(79,639,425)
Profit (loss) attributable to:					
Owners of the Company		(264,931,929)	(201,518,414)	210,838,915	(79,639,425)
		(264,931,929)	(201,518,414)	210,838,915	(79,639,425)
Earnings (loss) per share	19	(0.26)	(0.20)	0.21	(0.08)

The accompanying notes form integral part of these financial statements.

Statements of income

Global Green Chemicals Public Company Limited and its Subsidiaries

	Note	Consolidated		Separate	
		financial statements		financial statements	
		Year ended 31 December		Year ended 31 December	
		2024	2023	2024	2023
		(in Baht)			
Profit (loss) for the year		(264,931,929)	(201,518,414)	210,838,915	(79,639,425)
Other comprehensive income (loss)					
<i>Items that will or may be reclassified subsequently to profit or loss</i>					
Gain (loss) on cash flow hedges	21	(33,824,452)	33,824,452	(33,824,452)	33,824,452
Income tax relating to item that will or may be reclassified subsequently to profit or loss		6,764,890	(6,764,890)	6,764,890	(6,764,890)
Total items that will or may be reclassified subsequently to profit or loss		(27,059,562)	27,059,562	(27,059,562)	27,059,562
<i>Items that will not be reclassified subsequently to profit or loss</i>					
Gain (loss) on remeasurements of defined benefit plans	13	(13,174,391)	28,196,110	(13,174,391)	28,196,110
Share of other comprehensive income (expense) of joint ventures accounted for using equity method	9	(2,637,948)	2,483,482	-	-
Income tax relating to items that will not be reclassified subsequently to profit or loss		3,681,520	(5,639,222)	3,681,520	(5,639,222)
Total items that will not be reclassified subsequently to profit or loss		(12,130,819)	25,040,370	(9,492,871)	22,556,888
Other comprehensive income (expense) for the years, net of tax		(39,190,381)	52,099,932	(36,552,433)	49,616,450
Total comprehensive income (expense) for the year		(304,122,310)	(149,418,482)	174,286,482	(30,022,975)
Total comprehensive income (expense) attributable to:					
Owners of the Company		(304,122,310)	(149,418,482)	174,286,482	(30,022,975)
		(304,122,310)	(149,418,482)	174,286,482	(30,022,975)

The accompanying notes form integral part of these financial statements.

Statements of changes in equity

Global Green Chemicals Public Company Limited and its Subsidiaries

Consolidated financial statements										
	Notes	Issued and paid-up share capital	Share premium	Difference arising from business combination under common control	Retained earnings (deficit)			Other components of equity		Total equity
					Legal reserve	Unappropriated (deficit)	Cash flow hedge reserve	Total other components of equity		
									(in Baht)	
Year ended 31 December 2023										
Balance as at 1 January 2023		9,724,833,650	89,240,250	(4,134,457)	98,692,000	418,224,003	-	-	-	10,326,855,446
Transactions with owners, recorded directly in equity										
Distributions to owners of the parent										
Dividends	20	-	-	-	-	(358,282,720)	-	-	-	(358,282,720)
Total distributions to owners of the parent		-	-	-	-	(358,282,720)	-	-	-	(358,282,720)
Total transactions with owners, recorded directly in equity		-	-	-	-	(358,282,720)	-	-	-	(358,282,720)
Comprehensive income for the year										
Loss		-	-	-	-	(201,518,414)	-	-	-	(201,518,414)
Other comprehensive income (expense)		-	-	-	-	25,040,370	27,059,562	27,059,562	27,059,562	52,099,932
Total comprehensive income (expense) for the year		-	-	-	-	(176,478,044)	27,059,562	27,059,562	27,059,562	(149,418,482)
Balance as at 31 December 2023		9,724,833,650	89,240,250	(4,134,457)	98,692,000	(116,536,761)	27,059,562	27,059,562	27,059,562	9,819,154,244

The accompanying notes form integral part of these financial statements.

Statements of changes in equity
Global Green Chemicals Public Company Limited and its Subsidiaries

	Consolidated financial statements						
	Retained earnings (deficit)			Other components of equity			
	Difference arising from business combination under common control			Legal reserve	Unappropriated (deficit)	Cash flow hedge reserve	Total other components of equity
Notes	Issued and paid-up share capital	Share premium					
				(in Baht)			
Year ended 31 December 2024							
Balance as at 1 January 2024	9,724,833,650	89,240,250	(4,134,457)	98,692,000	(116,536,761)	27,059,562	9,819,154,244
Comprehensive income for the year							
Loss	-	-	-	-	(264,931,929)	-	(264,931,929)
Other comprehensive income (expense)	-	-	-	-	(12,130,819)	(27,059,562)	(39,190,381)
Total comprehensive income (expense) for the year	-	-	-	-	(277,062,748)	(27,059,562)	(304,122,310)
Transfer to legal reserve	-	-	-	10,542,000	(10,542,000)	-	-
Balance as at 31 December 2024	9,724,833,650	89,240,250	(4,134,457)	109,234,000	(404,141,509)	-	9,515,031,934

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The accompanying notes form integral part of these financial statements.

Statements of changes in equity

Global Green Chemicals Public Company Limited and its Subsidiaries

		Separate financial statements						
		Retained earnings			Other components of equity			
		Issued and paid-up share capital	Share premium	Legal reserve	Unappropriated <i>(in Baht)</i>	Cash flow hedge reserve	Total other components of equity	Total equity
	Year ended 31 December 2023							
	Balance as at 1 January 2023	9,724,833,650	89,240,250	98,692,000	556,065,501	-	-	10,468,831,401
	Transactions with owners, recorded directly in equity							
	<i>Distributions to owners</i>							
	Dividends	-	-	-	(358,282,720)	-	-	(358,282,720)
	Total distributions to owners	-	-	-	(358,282,720)	-	-	(358,282,720)
	Total transactions with owners, recorded directly in equity	-	-	-	(358,282,720)	-	-	(358,282,720)
	Comprehensive income for the year							
	Loss	-	-	-	(79,639,425)	-	-	(79,639,425)
	Other comprehensive income (expense)	-	-	-	22,556,888	27,059,562	27,059,562	49,616,450
	Total comprehensive income (expense) for the year	-	-	-	(57,082,537)	27,059,562	27,059,562	(30,022,975)
	Balance as at 31 December 2023	9,724,833,650	89,240,250	98,692,000	140,700,244	27,059,562	27,059,562	10,080,525,706

The accompanying notes form integral part of these financial statements.

Statements of changes in equity

Global Green Chemicals Public Company Limited and its Subsidiaries

Year ended 31 December 2024							
Balance as at 1 January 2024							
	9,724,833,650	89,240,250	98,692,000	140,700,244	27,059,562	27,059,562	10,080,525,706
Comprehensive income for the year							
Profit	-	-	-	210,838,915	-	-	210,838,915
Other comprehensive income (expense)	-	-	-	(9,492,871)	(27,059,562)	(27,059,562)	(36,552,433)
Total comprehensive income (expense) for the year	-	-	-	201,346,044	(27,059,562)	(27,059,562)	174,286,482
Transfer to legal reserve							
	-	-	10,542,000	(10,542,000)	-	-	-
Balance as at 31 December 2024							
	9,724,833,650	89,240,250	109,234,000	331,504,288	-	-	10,254,812,188

The accompanying notes form integral part of these financial statements.

Statements of income

Global Green Chemicals Public Company Limited and its Subsidiaries

	Note	Consolidated		Separate	
		financial statements		financial statements	
		Year ended 31 December		Year ended 31 December	
		2024	2023	2024	2023
(in Baht)					
Cash flows from operating activities					
Profit (loss) for the year		(264,931,929)	(201,518,414)	210,838,915	(79,639,425)
Adjustments to reconcile profit to cash receipts (payments)					
Tax expense		44,835,259	81,991,791	44,835,259	81,729,505
Finance costs		75,794,811	57,247,185	75,794,811	57,247,185
Depreciation and amortisation		498,684,796	502,452,162	498,684,796	502,452,162
Provision for employee benefits		16,517,951	14,905,840	16,517,951	14,905,840
Reversal of damage provision	22	(42,963,928)	-	(42,963,928)	-
Unrealised (gain) loss on exchange rate		(17,675,118)	462,841	(17,675,118)	462,841
Unrealised loss on derivatives		46,597	-	46,597	-
Share of loss of joint ventures accounted for using equity method, net of tax		567,417,768	87,469,140	-	-
Reversal of loss on inventories devaluation		(164,454)	(18,336,518)	(164,454)	(18,336,518)
(Reversal of) loss on obsolete inventories		340,200	(10,207,631)	340,200	(10,207,631)
Loss on write-off of raw materials		91,991	8,148,775	91,991	8,148,775
Reversal of expected credit loss	22	-	(72,240,000)	-	(72,240,000)
Gain on write-off of right-of-use assets		(700,287)	(41,154)	(700,287)	(41,154)
(Gain) loss on disposal of plant and equipment		2,498,932	(89,340)	2,498,932	(89,340)
Gain on disposal of intangible asset		-	(165,806)	-	-
Interest income and dividend income		(67,491,617)	(49,924,457)	(77,931,602)	(81,816,087)
Actuarial (gain) loss		1,420,912	(4,701,557)	1,420,912	(4,701,557)
Loss from impairment of investment	8	-	-	104,000,000	-
		813,721,884	395,452,857	815,634,975	397,874,596
Changes in operating assets and liabilities					
Trade accounts receivable		(281,916,843)	8,471,580	(281,916,843)	8,471,580
Other receivables		3,660,065	(4,046,717)	3,768,810	(4,210,410)
Value-added tax receivable		(49,287,045)	93,182,121	(49,287,045)	93,182,121
Inventories		(603,706,858)	47,787,102	(603,706,858)	47,787,102
Other current assets		(76,085,534)	(53,973,034)	(76,085,534)	(53,973,034)
Deposits at a financial institution					
pledged as collateral	22	503,307,481	-	503,307,481	-
Other non-current assets		330,324	(2,060,729)	330,324	(2,060,729)
Trade accounts payable		(67,010,053)	123,354,333	(67,010,053)	123,354,333
Other payables		127,351,340	(130,143,572)	127,321,721	(130,469,706)
Short-term provision	22	(400,606,201)	-	(400,606,201)	-
Cash paid for provisions for employee benefits		(990,960)	(321,483)	(990,960)	(321,483)
Net cash generated from (used in) operations		(31,232,400)	477,702,458	(29,240,183)	479,634,370
Taxes received (paid)		(143,233)	(120,329,569)	(143,126)	522,633
Net cash from (used in) operating activities		(31,375,633)	357,372,889	(29,383,309)	480,157,003

The accompanying notes form integral part of these financial statements.

Statements of income

Global Green Chemicals Public Company Limited and its Subsidiaries

	Consolidated		Separate	
	financial statements		financial statements	
	Year ended 31 December		Year ended 31 December	
	2024	2023	2024	2023
	<i>(in Baht)</i>			
<i>Cash flows from investing activities</i>				
Cash received from current investments				
in financial assets	2,000,037,458	-	2,000,037,458	-
Cash paid for current investments				
in financial assets	-	(650,000,000)	-	(650,000,000)
Cash paid for investment in a subsidiary	-	-	(107,250,000)	(187,500,000)
Cash paid for investment in a joint venture	(107,250,000)	(187,500,000)	-	-
Acquisition of plant and equipment	(165,046,939)	(170,014,270)	(165,046,939)	(170,014,270)
Proceeds from sale of plant and equipment	923,317	314,300	923,317	314,300
Acquisition of intangible assets	(4,576,111)	(18,387,692)	(4,576,111)	(18,387,692)
Proceeds from sale of intangible asset	-	3,481,991	-	-
Dividend received	10,500,000	31,941,000	10,500,000	31,941,000
Interest received	71,542,187	48,227,300	71,482,173	48,177,929
Net cash from (used in) investing activities	1,806,129,912	(941,937,371)	1,806,069,898	(945,468,733)
<i>Cash flows from financing activities</i>				
Repayments of lease liabilities	(58,407,581)	(61,184,491)	(58,407,581)	(61,184,491)
Proceeds from long-term borrowings				
from financial institutions	-	833,333,333	-	833,333,333
Repayments of long-term borrowings				
from financial institutions	(1,694,666,667)	(86,666,667)	(1,694,666,667)	(86,666,667)
Dividends paid	-	(358,282,720)	-	(358,282,720)
Finance cost paid	(57,779,205)	(42,547,854)	(57,779,205)	(42,547,854)
Net cash from (used in) financing activities	(1,810,853,453)	284,651,601	(1,810,853,453)	284,651,601
Net decrease in cash and cash equivalents,				
before effect of exchange rates	(36,099,174)	(299,912,881)	(34,166,864)	(180,660,129)
Effect of exchange rate changes				
on cash and cash equivalents	6,029,732	3,051,072	6,029,732	3,051,072
Net decrease in cash and cash equivalents	(30,069,442)	(296,861,809)	(28,137,132)	(177,609,057)
Cash and cash equivalents at 1 January	1,086,734,715	1,383,596,524	1,082,006,076	1,259,615,133
Cash and cash equivalents at 31 December	1,056,665,273	1,086,734,715	1,053,868,944	1,082,006,076

The accompanying notes form integral part of these financial statements.

Notes to the financial statements

Global Green Chemicals Public Company Limited and its Subsidiaries

For the year ended 31 December 2024

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Global Green Chemicals Public Company Limited and its Subsidiaries

For the year ended 31 December 2024

These notes form an integral part of the financial statements.

The financial statements issued for Thai statutory and regulatory reporting purposes are prepared in the Thai language. These English language financial statements have been prepared from the Thai language statutory financial statements, and were approved and authorised for issue by the Board of Directors on 10 February 2025.

1 General information

Global Green Chemicals Public Company Limited, (the “Company”), is incorporated in Thailand and was listed on the Stock Exchange of Thailand on 2 May 2017. The Company’s registered offices are as follows:

Head Office	: 555/1, Energy Complex, Building A, 4th Floor, Vibhavadi-rangsit Road, Chatuchak, Chatuchak, Bangkok, Thailand
Branch 1	: 888, 3 rd floor, Map Cha Lood-Laem Son Road, Tumbon Huay Pong, Amphur Mueang Rayong, Rayong, Thailand
Branch 2	: 8, 10 Soi G12, Pakorn Songkhrao-Rat Road, Tumbon Map Ta Phut, Amphur Mueang Rayong, Rayong, Thailand
Branch 3	: 199/1 Moo 2, Tambon Khao Sok, Amphur Nong Yai, Chonburi, Thailand

On 5 June 2024, The Stock Exchange of Thailand ("SET") posted a "CF" (Caution Free Float) sign on the Company's securities traded on the SET because the distribution of small shareholdings does not meet the SET criteria. On 26 November 2024, the Company published a plan to resolve this matter.

The parent and ultimate parent companies of the Group are PTT Global Chemical Public Company Limited and PTT Public Company Limited, respectively. Both are incorporated in Thailand.

The principal activities of the Company are production, distribution and transportation of Oleochemicals products. The Company’s major products are Methyl ester, Fatty alcohol, Fatty acid, Fatty Amine, other Alcohol ester, and other by products. 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.

Notes to the financial statements

Global Green Chemicals Public Company Limited and its Subsidiaries

For the year ended 31 December 2024

The Group has not early adopted a number of revised TFRS, which are effective for the period starting on or after 1 January 2025 in preparing these financial statements. The Group assessed the impact of applying the revised TFRS and has determined it has no material impact to the financial statements.

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 and interpretations 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 (together referred to as the "Group") and the Group's interests in joint ventures.

Subsidiaries are entities controlled by the Group. The Group controls an entity when it is exposed to, or 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. In addition, 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.

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 rather than rights to the assets and liabilities associated with the joint control.

The Group recognised investments joint ventures using the equity method in the consolidated financial statements until the date on which joint control ceases. 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.

Intra-group balances and transactions, and any unrealised income or expenses arising from intra-group transactions, are eliminated on consolidation. Unrealised gains arising from transactions with joint ventures are eliminated against the investment to the extent of the Group's interest in the investee. Unrealised losses are eliminated in the same way as unrealised gains, but only to the extent that there is no evidence of impairment.

Notes to the financial statements

Global Green Chemicals Public Company Limited and its Subsidiaries

For the year ended 31 December 2024

(c) *Investments in subsidiaries and joint ventures*

Investments in subsidiaries 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's 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 or 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 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.

Foreign currency differences are generally recognised in profit or loss.

(e) *Financial instruments*

(e.1) Classification and measurement

Financial assets and financial liabilities (except trade accounts receivables (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.

Regular way of purchases and sales of financial assets are recognised on trade-date, the date on which the Company commits to purchase or sell the asset.

On initial recognition, a 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.

On initial recognition, financial liabilities are classified as measured at amortised cost using the effective interest method or FVTPL. Interest expense, foreign exchange gains and losses and any gain or loss on derecognition are recognised in profit or loss.

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.

(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.

Notes to the financial statements

Global Green Chemicals Public Company Limited and its Subsidiaries

For the year ended 31 December 2024

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 (see note 4(e.4)).

(e.4) Hedging

At inception of designated hedging relationships, the Group documents the risk management objective and strategy for undertaking the risk, the economic relationship between the hedged item and the hedging instrument, including consideration of the hedge effectiveness at the inception of the hedging relationship and throughout the remaining period to determine the existence of economic relationship between the hedged item and the hedging instrument.

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. Any ineffective portion of changes in the fair value of the derivative is recognised immediately in profit or loss.

The Company designates only the change in fair value of the spot element of forward exchange contracts as the hedging instrument in cash flow hedging relationships. The change in fair value of the forward element of forward exchange contracts (forward points) is separately accounted for as a cost of hedging, recognised in OCI and accumulated in cost of hedging reserve..

For financial assets hedged 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.

Notes to the financial statements

Global Green Chemicals Public Company Limited and its Subsidiaries

For the year ended 31 December 2024

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 immediately.

(e.5) Impairment of financial assets other than trade accounts receivables

The Group recognises ECLs equal to 12-month ECLs unless there has been a significant increase in credit risk of the financial instrument since initial recognition or credit-impaired financial assets, in which case the loss allowance is measured at an amount equal to lifetime ECLs.

ECLs are a probability-weighted estimate of credit losses based on forward-looking and historical experience. Credit losses are measured as the present value of all cash shortfalls discounted by the effective interest rate of the financial asset.

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 which have maturities 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 off when the Group has no reasonable expectations of recovering.

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.

Notes to the financial statements

Global Green Chemicals Public Company Limited and its Subsidiaries

For the year ended 31 December 2024

(h) Inventories

Inventories are measured at the lower of cost and net realisable value. Cost is calculated using the weighted average cost principle. In the case of manufactured inventories and work-in-progress, cost includes an appropriate share of production overheads based on normal operating capacity.

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) Plant and equipment

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.

Differences between the proceeds from disposal and the carrying amount of plant and equipment are recognised in profit or loss.

Subsequent costs

The cost of replacing a part of an item of 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 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 assets under construction.

The estimated useful lives are as follows:

Plant, machinery, equipment and factory tools	3 - 35 years
Buildings and building improvements	5 - 25 years
Land improvement	5 - 20 years
Furniture, fixtures and office equipment	3 - 10 years
Vehicles	5 years

(j) 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.

As a lessee

At commencement or on modification of a contract, the Company 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.

Notes to the financial statements

Global Green Chemicals Public Company Limited and its Subsidiaries

For the year ended 31 December 2024

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. 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 Company 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 recorded in profit or loss if the carrying amount of the right-of-use asset has been reduced to zero. The Group remeasured lease liabilities using the original discount rate and recognised the impact of the change in lease liability in profit or loss.

(k) 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, 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 (CGU) exceeds its recoverable amount. The recoverable amount is assessed from the estimated future cash flows 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 or CGU.

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 an 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.

(l) Employee benefits

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, which performed every 3 years by a qualified actuary using the projected unit credit method.

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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 during the period 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.

(m) Provisions

A provision is recognised if, as a result of a past event, the Group has a present legal or constructive obligation that can be estimated reliably, and it is probable that an outflow of economic benefits will be required to settle the obligation. 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.

(n) 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.

Notes to the financial statements

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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.

(o) *Revenue from contracts with customers*

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.

(p) *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.

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 period, 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 or at the time of the transaction (i) affects neither accounting nor taxable profit or loss and (ii) does not give rise to equal taxable and deductible temporary differences; 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.

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.

Notes to the financial statements

Global Green Chemicals Public Company Limited and its Subsidiaries

For the year ended 31 December 2024

Relationships with parent, ultimate parent, subsidiaries 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 / nationality	Nature of relationships
GC Glycol Co., Ltd.	Thailand	Direct subsidiary of the parent company
Solution Creation Co., Ltd.	Thailand	Direct subsidiary of the parent company
GC Maintenance & Engineering Co., Ltd.	Thailand	Direct subsidiary of the parent company
GC Estate Co., Ltd.	Thailand	Direct subsidiary of the parent company
GC Polyols Co., Ltd.	Thailand	Direct subsidiary of the parent company
NPC Safety and Environmental Service Co., Ltd.	Thailand	Direct subsidiary of the parent company
PTT Phenol Co., Ltd.	Thailand	Direct subsidiary of the parent company
GC Treasury Center Co., Ltd.	Thailand	Direct subsidiary of the parent company
NPC S&E Security Guard Co., Ltd.	Thailand	Indirect subsidiary of the parent company
GC Logistics Solutions Co., Ltd.	Thailand	Direct associate of the parent company
Kuraray GC Advance Material Co., Ltd.	Thailand	Direct associate of the parent company
AGC Vinythai Public Co., Ltd.	Thailand	Direct associate of the parent company
PTT Digital Solutions Co., Ltd.	Thailand	Direct associate of the parent company
Emery Oleochemicals LLC.	United States of America	Indirect associate of the parent company
WHA GC Logistic Co., Ltd.	Thailand	Direct joint venture of the parent company
Thai Oil Plc.	Thailand	Subsidiary of the ultimate parent company
PTT Oil and Retail Business Plc.	Thailand	Subsidiary of the ultimate parent company
Energy Complex Co., Ltd.	Thailand	Subsidiary of the ultimate parent company
IRPC Plc.	Thailand	Subsidiary of the ultimate parent company
Business Services Alliance Co., Ltd.	Thailand	Subsidiary of the ultimate parent company
Global Power Synergy Plc.	Thailand	Subsidiary of the ultimate parent company
PTT Retail Management Co., Ltd.	Thailand	Indirect subsidiary of the ultimate parent company

Notes to the financial statements

Global Green Chemicals Public Company Limited and its Subsidiaries

For the year ended 31 December 2024

<i>Significant transactions with related parties</i> <i>Year ended 31 December</i>	Consolidated financial statements		Separate financial statements	
	2024	2023	2024	2023
	<i>(in million Baht)</i>			
Ultimate parent				
Sales of goods	-	17	-	17
Purchases of goods or receiving of services	67	155	67	155
Parent of the Group				
Sales of goods	2,503	2,641	2,503	2,641
Purchases of goods or receiving of services	204	189	204	189
Interest expense	9	8	9	8
Other expense	78	69	78	68
Dividends paid	-	259	-	259
Subsidiary				
Other income	-	-	1	1
Joint ventures				
Sales of goods	1,765	770	1,765	770
Other income	28	24	28	24
Dividend income	-	-	11	32
Other related parties				
Sales of goods	7,315	6,749	7,315	6,749
Purchases of goods or receiving of services	776	1,002	776	1,002
Other income	-	2	-	2
Other expense	47	49	47	49
Expense capitalised to plant and equipment	3	15	3	15
Key management personnel				
Key management personnel compensation				
Short-term benefits	121	99	121	99
Post-employment benefits	-	4	-	4
Total key management personnel	121	103	121	103
Balances with related parties as at 31 December				
	Consolidated financial statements		Separate financial statements	
	2024	2023	2024	2023
	<i>(in million Baht)</i>			
Trade accounts receivable				
Ultimate parent	-	5	-	5
Parent of the group	98	149	98	149
Joint ventures	471	248	471	248
Other related parties	507	399	507	399
Total	1,076	801	1,076	801
Less allowance for expected credit loss	-	-	-	-
Net	1,076	801	1,076	801

Notes to the financial statements

Global Green Chemicals Public Company Limited and its Subsidiaries

For the year ended 31 December 2024

<i>Balances with related parties as at 31 December</i>	Consolidated financial statements		Separate financial statements	
	2024	2023	2024	2023
	<i>(in million Baht)</i>			
<i>Other receivables</i>				
Joint ventures	3	3	3	3
Total	3	3	3	3
Less allowance for expected credit loss	-	-	-	-
Net	3	3	3	3
<i>Trade accounts payable</i>				
Parent of the group	15	32	15	32
Other related parties	54	153	54	153
Total	69	185	69	185
<i>Other payables</i>				
Parent of the group	14	23	14	23
Other related parties	44	35	44	35
Total	58	58	58	58
<i>Payables to contractor</i>				
Other related parties	2	4	2	4
Total	2	4	2	4
<i>Current portion of lease liabilities</i>				
Parent of the group	23	15	23	15
Other related parties	9	7	9	7
Total	32	22	32	22
<i>Lease liabilities</i>				
Ultimate parent	2	2	2	2
Parent of the group	227	223	227	223
Other related parties	9	10	9	10
Total	238	235	238	235

Significant agreements with related parties

The Group has significant agreements with related parties as at 31 December 2024 as follows:

Methyl Ester Purchase and Sales Agreements

The Company has 6 Methyl Ester Purchase and Sales Agreements with the parent company and 3 related parties. Selling prices are determined based on B100 price announced by government and the adjustment as specified in each agreement. These agreements are for periods from 3 months to 1 year commencing from the effective date as specified in each agreement and expiring in December 2024, May 2025 and December 2025. These agreements are renewable until either party terminates the agreement. The Company currently is in the process of renewal of the expired agreement.

Notes to the financial statements

Global Green Chemicals Public Company Limited and its Subsidiaries

For the year ended 31 December 2024

Methanol purchase and Sales Agreements

The Company has 2 Methanol Purchase and Sales Agreements with the ultimate parent company and a related party. Selling prices are determined based on Average Methanol FOB SEA Monthly Spot Prices published by ICIS pricing Methanol (Asia Pacific). These agreements are for periods from 11 months to 1 year commencing from the effective date as specified in each agreement and expiring in December 2024. The Company currently is in the process of renewal of the expired agreements.

Glycerine Purchase and Sales Agreements

The Company has 2 Glycerine Sales Agreements with 2 related parties. Selling prices are determined based on Average Drum Refined Glycerine FOB SEA Weekly Spot Prices published by ICIS pricing Glycerine (Asia Pacific). This agreement is for a period of 1 year and 3 years commencing from the effective date as specified in the agreement and expiring in December 2024 and December 2026. This agreement is renewable until either party terminates the agreement. The Company currently is in the process of renewal of the expired agreement.

Utilities Purchase and Sales Agreements and Other Services Agreements

The Company has Hydrogen Purchase and Sales Agreement with the parent company. Selling price is determined based on Natural Gas price for the industry. This agreement is for the period of 9 years 6 months, commencing from the effective date as specified in the agreement and expiring in December 2028.

The Group has 3 Utilities Purchase Agreements covering steam, electricity and water with a related party at the agreed quantities and prices as stipulated in the agreements. These agreements are for the period of 25 years, commencing from the effective date as specified in each agreement and expiring in June 2033.

The Company has Tank Farm Storage and Service Agreement with the parent company covering tank storage, utilities for product warehouse and transportation of Methanol. This agreement is for the period of 20 years, commencing from the effective date as specified in the agreement and expiring in March 2039, with the service charge as stipulated in the agreement.

The Company has Pipe rack Maintenance Agreement with a related party. The agreement is for the period of 15 years, commencing from the effective date as specified in the agreement and expiring in August 2037, with the service charge as stipulated in the agreement.

The Company has Right to use pipe rack Agreement with the parent company. The agreement is for the period of 15 years, commencing from the effective date as specified in the agreement and expiring in August 2037 with the service charge as stipulated in the agreement.

The Company has Right to use pipe rack Agreement with the ultimate parent company. The agreement is for the period of 15 years 7 months, commencing from the effective date as specified in the agreement and expiring in December 2037 with the service charge as stipulated in the agreement.

The Company has Tank Farm Storage and Service Agreement with the parent company covering tank storage, utilities for product warehouse and transportation of Fatty Alcohol. This agreement is for the period of 4 years, commencing from the effective date as specified in the agreement and expiring in March 2028 with the service charge as stipulated in the agreement.

Notes to the financial statements

Global Green Chemicals Public Company Limited and its Subsidiaries

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Service Agreements

The Company has a Shared Service agreement with a subsidiary for the provision of general services. This agreement is for a period of 1 year, commencing from the effective date as specified in the agreement and expiring in December 2024, with the service charge as stipulated in the agreement. The Company currently is in the process of renewal agreement.

The Company has a Share Service Agreement with a joint venture for Ethanal sales shared service. This agreement is for a period of 1 year, commencing from the effective date as specified in the agreement and renewable for another 1 year until either party terminates the agreement, with the service charge as stipulated in the agreement.

The Group has a Share Service Agreement with the parent company for the provision of administration office, lab and quality service and general services. This agreement is for a period of 1 year, commencing from the effective date as specified in the agreement while share service agreement and lab and quality service and general services expiring in December 2024. The Company currently is in the process of renewal agreement.

The Company has a Share Service Agreement with a related party for finance management services. This agreement is for a period of 1 year, commencing from the effective date as specified in the agreement and expiring in August 2025, with the service charge as stipulated in the agreement.

The Company has a Security and Fire Protection Agreement with a related party for receiving security and fire protection service to assets, employees, and visitors in the Company's location. The agreement is for the period of 2 years, commencing from the effective date as specified in the agreement and expiring in December 2024, with the service charge as stipulated in the agreement. The Company currently is in the process of renewal agreement.

The Company has a Safety Inspector Agreement with a related party. The agreement is to inspect during working and in the Company's location. The agreement is for a period of 2 years, commencing from the effective date as specified in the agreement and expiring in December 2024, with the service charge as stipulated in the agreement.

The Company has 4 Emergency Control and Management Agreements with a related party for consulting and safety training, occupational health & safety and environment, and set up of emergency control centre. The agreements are for periods of 3 years, commencing from the effective date as specified in the agreements and expiring in January 2025, March 2025 and December 2026 with the service charge as stipulated in the agreements.

The Company has an agreement with a related party for Manpower rescue team during plant shutdown to have manpower rescue team and equipment. The period for this agreement is 3 years, commencing from the effective date as specified in the agreement to January 2025, with the service charge stipulated in the agreement.

The Company has a Fire Fighting water agreement with a related party for Fire Fighting Water, Fire Fighting Facility and Maintenance of Fire Fighting at Plant 1. The period for this agreement is 15 years, commencing from the effective date as specified in the agreement to December 2034, with the service charge stipulated in the agreement.

Notes to the financial statements

Global Green Chemicals Public Company Limited and its Subsidiaries

For the year ended 31 December 2024

Rental Agreement

The Company has 3 Land Lease Agreements with the parent company, for periods of 17 years and 30 years, commencing from the effective date as specified in each agreement and expiring in July 2036 with rental rate as stipulated in the agreements. The agreements can be extendable for another 20 years by providing not less than 1 year prior written notice to the lessor.

The Company has Office Rental and Service agreements with 2 related companies. The agreements are for periods of 2 years and 3 years and will expire in August 2026 and September 2027 with rental and service rates and conditions as stipulated in the agreements.

Borrowing and Lending Agreements

The Company has an uncommitted and unsecured short-term Inter-Company Borrowing & Lending agreement (ICBL) for the period of 1 year with a parent with a borrowing credit facility of Baht 1,000 million and a lending credit facility of Baht 200 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.

5 Trade accounts receivable

<i>At 31 December</i>	<i>Note</i>	Consolidated financial statements		Separate financial statements	
		2024	2023	2024	2023
		<i>(in million Baht)</i>			
Related parties	4	1,076	801	1,076	801
Other parties		963	943	963	943
Total		2,039	1,744	2,039	1,744
Less allowance for expected credit loss		-	-	-	-
Net		2,039	1,744	2,039	1,744
Related parties					
Within credit terms		1,076	796	1,076	796
Overdue:					
Less than 3 months		-	5	-	5
Total	4	1,076	801	1,076	801
Other parties					
Within credit terms		923	897	923	897
Overdue:					
Less than 3 months		40	46	40	46
Total		963	943	963	943
Less allowance for expected credit loss		-	-	-	-
Net		2,039	1,744	2,039	1,744

The normal credit term granted by the Group ranges from 15 days to 60 days.

Notes to the financial statements

Global Green Chemicals Public Company Limited and its Subsidiaries

For the year ended 31 December 2024

6 Inventories

	Consolidated financial statements		Separate financial statements	
	2024	2023	2024	2023
	<i>(in million Baht)</i>			
Finished goods	880	503	880	503
Work in progress	410	213	410	213
Raw materials	312	280	312	280
Spare parts and factory supplies	508	487	508	487
Goods in transit	123	146	123	146
Total	2,233	1,629	2,233	1,629
Less Allowance for inventories devaluation	-	-	-	-
Net	2,233	1,629	2,233	1,629
Inventories recognised as an expense and included in cost of sales				
- Cost of sales	17,873	17,137	17,873	17,137
- Reversal of write-down	-	(18)	-	(19)
Net	17,873	17,119	17,873	17,118

As at 31 December 2024 and 2023, the Company's inventories included petroleum legal reserve of 7,780 liters with approximated value of Baht 0.35 million and 2,000 liters with approximated value of Baht 0.07 million, respectively.

7 Current financial assets

	Consolidated financial statements		Separate financial statements	
	2024	2023	2024	2023
	<i>(in million Baht)</i>			
Time deposits with maturity of more than 3 months but not more than 1 year (interest rate of 0.85% to 2.48% per annum)	-	2,000	-	2,000
Total	-	2,000	-	2,000

Notes to the financial statements

Global Green Chemicals Public Company Limited and its Subsidiaries
For the year ended 31 December 2024

8 Investments in subsidiaries

Separate financial statements												
Type of business	Country of operation	Ownership Interest (%)		Cost		Impairment		At cost - net		Dividend income		
		2024	2023	2024	2023	2024	2023	2024	2023	2024	2023	
		(in million Baht)										
Subsidiaries												
Thai Fatty Alcohols Co., Ltd. (in liquidation process)	Production and distribution of biochemical and fatty alcohols products	Thailand	100	100	-	-	-	-	-	-	-	-
GGC Biochemical Company Limited	Holding and operating local business	Thailand	100	100	1,669	1,562	(104)	-	1,565	1,562	-	-
Total					1,669	1,562	(104)	-	1,565	1,562	-	-

All subsidiaries were incorporated and mainly operate in Thailand

Notes to the financial statements

Global Green Chemicals Public Company Limited and its Subsidiaries

For the year ended 31 December 2024

Material movement for the year ended 31 December	Separate financial statements	
	2024	2023
	<i>(in million Baht)</i>	
Subsidiaries		
Increase capital of GGC Biochemical Company Limited	107	188
Loss from impairment of investment	(104)	-

Change in investment in a subsidiary

GGC Biochemical Company Limited

On 10 April 2023, GGC Biochemical Company Limited, a subsidiary of the Company, has called for an increase in paid-up capital of 850,000 shares at Baht 5 per share and 9,500,000 shares at Baht 8 per share, totalling Baht 80.25 million. The capital increase is for investment in sugarcane and sugar business under the subsidiary's joint venture Nakhonsawan Biocomplex Project.

On 25 October 2023, GGC Biochemical Company Limited, a subsidiary of the Company, has called for an increase in paid-up capital of 3,575,000 shares at Baht 30 per share, totalling Baht 107.25 million. The capital increase is for investment in sugarcane and sugar business under the subsidiary's joint venture Nakhonsawan Biocomplex Project.

On 4 April 2024, GGC Biochemical Company Limited, a subsidiary of the Company, has called for an increase in paid-up capital of 3,575,000 shares at Baht 15 per share totalling Baht 53.63 million. The capital increase is for investment in sugarcane and sugar business under the subsidiary's joint venture Nakhonsawan Biocomplex Project.

On 16 October 2024, GGC Biochemical Company Limited, a subsidiary of the Company, has called for an increase in paid-up capital of 3,575,000 shares at Baht 15 per share totalling Baht 53.63 million. The capital increase is for investment in sugarcane and sugar business under the subsidiary's joint venture Nakhonsawan Biocomplex Project.

Impairment loss on investment in a subsidiary

GGC Biochemical Company Limited

During the year 2024, the Company recognised an impairment loss on the investment in GGC Biochemical Company Limited, a subsidiary of the Company, totalling Baht 104 million in the separate statement of income as the recoverable amount of investment in GGC KTIS Bioindustrial Co., Ltd., an indirect joint venture of the Group, was less than its carrying amount.

The recoverable amount of investment in subsidiary was based on value in use, estimated using discounted cash flows. The fair value measurement was categorised as a Level 3 fair value.

The discount rate at 7% 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.

The forecasted growth in EBITDA was derived from future outcomes based on past experience and adjusted for anticipated revenue growth rate in regional and industry trends. With references to external sources of information, raw material and utilities prices, logistic costs to research, innovations and

Notes to the financial statements

Global Green Chemicals Public Company Limited and its Subsidiaries

For the year ended 31 December 2024

The cash flow projections included specific estimates for five years and a terminal value and terminal growth rate thereafter. The terminal growth rate was determined based on management's estimate of the long-term compound annual EBITDA growth rate, consistent with the assumptions that a market participant would make.

The carrying amount of the CGU was determined to be higher than its recoverable amount, hence, an impairment loss of Baht 104 million was recognised and included in income statement during 2024 (2023: nil).

Management is aware that if there were increase in discount rate of 10%, the recoverable amount is expected to decrease around Baht 159 million.

Notes to the financial statements

Global Green Chemicals Public Company Limited and its Subsidiaries
For the year ended 31 December 2024

9 Investments in joint ventures

	Country of operation	Type of business	Ownership Interest 2024 2023 (%)	Consolidated financial statements		Separate financial statements									
				Equity method		Cost method		Impairment		Cost method - net		Dividend income			
				2024	2023	2024	2023	2024	2023	2024	2023	2024	2023		
<i>Direct joint venture</i>															
Thai Ethoxylate Co., Ltd.	Thailand	Production and sale of Fatty Alcohol Ethoxylates	50 50	802	686	691	691	-	-	691	691	11	11	-	32
<i>Indirect Joint venture</i>															
GGC KTIS Bioindustrial Co., Ltd.	Thailand	Production and distribution of electricity and ethanol from sugarcane	50 50	678	1,267	-	-	-	-	-	-	-	-	-	-
Total investment in joint ventures				1,480	1,953	691	691	-	-	691	691	11	11	-	32

(in million baht)

Notes to the financial statements

Global Green Chemicals Public Company Limited and its Subsidiaries

For the year ended 31 December 2024

Material movement Year ended 31 December	Consolidated financial statements		Separate financial statements	
	2024	2023	2024	2023
	<i>(in million Baht)</i>			
Direct joint venture				
At 1 January	686	659	691	691
Share of profit of investment in a joint venture	129	57	-	-
Share of other comprehensive income (expense) of a joint venture	(2)	2	-	-
Dividend income	(11)	(32)	-	-
At 31 December	802	686	691	691
Indirect joint venture				
At 1 January	1,267	1,223	-	-
Increase capital in GGC KTIS Bioindustrial Co., Ltd.	107	188	-	-
Share of losses of investment in a joint venture	(696)	(144)	-	-
At 31 December	678	1,267	-	-
Total investment in joint ventures	1,480	1,953	691	691

GGC KTIS Bioindustrial Co., Ltd.

On 21 February 2023, GGC KTIS Bioindustrial Company Limited, an indirect joint venture of the Group, has called for an increase in paid-up capital of 850,000 shares at Baht 5 per share and 9,500,000 shares at Baht 8 per share, totalling Baht 80.25 million, from GGC Biochemicals Company Limited, a subsidiary of the Company. The amount was fully paid in April 2023.

On 5 September 2023, GGC KTIS Bioindustrial Company Limited, an indirect joint venture of the Group, has called for an increase in paid-up capital of 3,575,000 shares at Baht 30 per share, totalling Baht 107.25 million, from GGC Biochemicals Company Limited, a subsidiary of the Company. The amount was fully paid in November 2023.

On 4 March 2024, GGC KTIS Bioindustrial Company Limited, an indirect joint venture of the Group, has called for an increase in paid-up capital of 3,575,000 shares at Baht 15 per share, totalling Baht 53.63 million, from GGC Biochemicals Company Limited, a subsidiary of the Company. The amount was fully paid in April 2024.

On 4 September 2024, GGC KTIS Bioindustrial Company Limited, an indirect joint venture of the Group, has called for an increase in paid-up capital of 3,575,000 shares at Baht 15 per share, totalling Baht 53.63 million, from GGC Biochemicals Company Limited, a subsidiary of the Company. The amount was fully paid in October 2024.

Material joint ventures

The following table summarises the financial information of joint ventures 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.

Notes to the financial statements

Global Green Chemicals Public Company Limited and its Subsidiaries

For the year ended 31 December 2024

	Thai Ethoxylate Co., Ltd.		GGC KTIS Bioindustrial Co., Ltd.	
	2024	2023	2024	2023
Year ended 31 December	<i>(in million Baht)</i>			
Statements of income				
Revenue	7,110	3,848	2,467	2,456
Profit (loss) from continuing operations	255	83	(1,390)	(288)
Other comprehensive income (expense)	(4)	5	(1)	-
Total comprehensive income (expense) (100%)	251	88	(1,391)	(288)
Total comprehensive income (expense) of the Group's interest	126	44	(696)	(144)
Elimination of unrealised profit downstream	1	15	-	-
The Group's share of total comprehensive income (expense)	127	59	(696)	(144)
	Thai Ethoxylate Co., Ltd.		GGC KTIS Bioindustrial Co., Ltd.	
	2024	2023	2024	2023
As at 31 December	<i>(in million Baht)</i>			
Statements of financial position				
Current assets	2,788	1,880	1,063	1,442
Non-current assets	1,459	898	8,841	8,894
Current liabilities	(1,969)	(1,183)	(2,751)	(2,824)
Non-current liabilities	(661)	(206)	(5,797)	(4,979)
Net assets (100%)	1,617	1,389	1,356	2,533
The Group's share of net assets	809	694	678	1,267
Elimination of unrealised profit downstream	(7)	(8)	-	-
Less loss in excess of investment of the Group's interest	-	-	-	-
Carrying amount of investments in joint ventures	802	686	678	1,267
Remark:				
Cash and cash equivalents	449	284	44	106
Depreciation and amortisation	62	56	372	66
Income tax expense	64	22	(4)	2
Includes current financial liabilities (excluding trade and other payables and provisions)	153	4	2,391	2,289
Includes non-current financial liabilities (excluding trade and other payables and provisions)	616	172	5,641	4,953

Notes to the financial statements

Global Green Chemicals Public Company Limited and its Subsidiaries

For the year ended 31 December 2024

10 Plant and equipment

Consolidated and separate financial statements

	Plant, machinery, equipment and factory tools	Buildings and building improvements	Land improvement	Furniture, fixtures and office equipment (in million Baht)	Vehicles	Assets under construction	Total
Cost							
As at 1 January 2023	9,695	810	62	24	6	199	10,796
Additions	21	4	-	2	-	122	149
Transfers	88	-	-	-	-	(88)	-
Disposals	(1)	-	-	-	(2)	-	(3)
As at 31 December 2023							
As at 1 January 2024	9,803	814	62	26	4	233	10,942
Additions	17	-	-	4	-	140	161
Transfers	201	9	-	-	3	(210)	3
Disposals	(7)	-	-	(1)	(3)	-	(11)
As at 31 December 2024	10,014	823	62	29	4	163	11,095
Accumulated depreciation							
As at 1 January 2023	(6,162)	(507)	(38)	(13)	(4)	-	(6,724)
Depreciation charge for the year	(356)	(23)	(3)	(3)	(1)	-	(386)
Disposals	1	-	-	-	2	-	3
As at 31 December 2023							
As at 1 January 2024	(6,517)	(530)	(41)	(16)	(3)	-	(7,107)
Depreciation charge for the year	(335)	(24)	(3)	(4)	-	-	(366)
Transfer	-	-	-	-	(3)	-	(3)
Disposals	4	-	-	1	3	-	8
As at 31 December 2024	(6,848)	(554)	(44)	(19)	(3)	-	(7,468)
Net book value							
As at 31 December 2023	3,286	284	21	10	1	233	3,835
As at 31 December 2024	3,166	269	18	10	1	163	3,627

Notes to the financial statements

Global Green Chemicals Public Company Limited and its Subsidiaries

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11 Leases

<i>Right-of-use assets As at 31 December</i>	Consolidated financial statements		Separate financial statements	
	2024	2023	2024	2023
	<i>(in million Baht)</i>			
Land	138	147	138	147
Buildings	17	16	17	16
Plant, machinery, factory, tools and equipment	181	164	181	164
Vehicles	26	35	26	35
Total	362	362	362	362

In 2024, additions to the right-of-use assets of the Group and the Company were Baht 52 million and Baht 52 million, respectively (2023: Baht 28 million and Baht 28 million, respectively).

The Company leases land, buildings, pipe racks, storage tanks, equipment and vehicles for 2 - 29 years, with extension options at the end of lease term. The rental fee and payment schedule are as specified in the contract.

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.

12 Interest-bearing liabilities

Long-term borrowings

Long-term borrowings balances as at 31 December 2024 and 2023 were as follows:

	Consolidated financial statements		Separate financial statements	
	2024	2023	2024	2023
	<i>(in million Baht)</i>			
Current				
Current portion of long-term borrowings from financial institutions				
Unsecured	-	230	-	230
Less Current portion of deferred financing service fee	-	(2)	-	(2)
Total current	-	228	-	228
Non-current				
Long-term borrowings from financial institutions				
Unsecured	-	1,464	-	1,464
Less Deferred financing service fee	-	(3)	-	(3)
Total non-current	-	1,461	-	1,461
Total	-	1,689	-	1,689

Notes to the financial statements

Global Green Chemicals Public Company Limited and its Subsidiaries

For the year ended 31 December 2024

In 2024, the Company has fully repaid long-term borrowing before maturity date to financial institutions, totalling Baht 1,580 million.

As at 31 December 2024, the Group had unutilised long-term borrowing facilities totalling Baht 2,000 million (2023: Baht 2,000 million).

As at 31 December 2024, the Group had unutilised short-term borrowing totalling Baht 900 million (2023: Baht 900 million).

As at 31 December 2023, the Group and the Company had long-term and revolving long-term credit facility agreements with several financial institutions totalling Baht 1,689 million and Baht 1,689 million, respectively bearing different interest rates and repayment terms as specified in each agreement. The Company 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.

On 19 December 2023, the Company had entered into a long-term loan agreement with a financial institution amounting to Baht 2,000 million. This long-term loan is a 7-year Sustainability-Linked Loan (or SLL) with floating interest rate. The interest rate will be adjusted down in line with operational achievements of Sustainability Performance Targets or SPTs according to the agreement. As at 31 December 2023, the Company has not drawdown this loan. However, on 3 January 2025, the Company has terminated aforementioned long-term loans agreement.

Details of the Group's borrowings for financial institutions as at 31 December 2024 were as follows:

Currency	Facilities (in million)	Interest Rates (% per annum)	Repayment Terms
Baht	2,000	THOR plus margin	Principal is repayable on semi-annual basis, in 10 instalments commencing from June 2026.

The periods to maturity of interest-bearing liabilities, excluding 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	-	228	-	228
After one year but within five years	-	1,349	-	1,349
After five years	-	112	-	112
Total	-	1,689	-	1,689

Notes to the financial statements

Global Green Chemicals Public Company Limited and its Subsidiaries

For the year ended 31 December 2024

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
	<i>(in million Baht)</i>			
Within one year	67	54	67	54
After one year but within five years	149	139	149	139
After five years	271	297	271	297
	487	490	487	490
Less Deferred interest expense	(93)	(102)	(93)	(102)
Total	394	388	394	388
Classification				
- Current portion of lease liabilities	55	42	55	42
- Lease liabilities	339	346	339	346
	394	388	394	388

Changes in liabilities arising from financing activities

	Consolidated and separate financial statements			
	Accrued interest expense	Borrowings	Lease liabilities	Total
	<i>(in million Baht)</i>			
2024				
As at 1 January	-	1,689	388	2,077
Net financing cash flows	(58)	(1,695)	(58)	(1,811)
Interest expense	51	-	13	64
Others	7	6	51	64
As at 31 December	-	-	394	394
2023				
As at 1 January	-	945	407	1,352
Net financing cash flows	(43)	747	(61)	643
Interest expense	36	-	13	49
Others	7	(3)	29	33
As at 31 December	-	1,689	388	2,077

13 Provisions for employee benefits

	Consolidated financial statements		Separate financial statements	
	2024	2023	2024	2023
	<i>(in million Baht)</i>			
Post-employment benefits	114	86	114	86
Other long-term employee benefits	17	15	17	15
Total	131	101	131	101

Notes to the financial statements

Global Green Chemicals Public Company Limited and its Subsidiaries

For the year ended 31 December 2024

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
	<i>(in million Baht)</i>			
As at 1 January	101	119	101	119
Recognised in profit or loss:				
Current service costs	15	12	15	12
Interest on obligations	2	3	2	3
Actuarial (gain) loss	1	(5)	1	(5)
Recognised in other comprehensive income:				
Actuarial (gain) loss				
- Demographic assumptions	-	(11)	-	(11)
- Financial assumptions	13	(7)	13	(7)
- Experience adjustment	-	(10)	-	(10)
Others				
Benefit paid	(1)	-	(1)	-
At 31 December	131	101	131	101

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
	<i>(%)</i>			
Discount rate	2.4	3.4	2.4	3.4
Future salary increases	5.0	5.0	5.0	5.0
Resignation rate	0 - 10.0	0 - 10.0	0 - 10.0	0 - 10.0
Retirement age	60 years	60 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 is 11 years (2023: 11 years).

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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:

<i>Effect to the defined benefit obligation At 31 December</i>	Consolidated / Separate financial statements			
	1% increase in assumption		1% decrease in assumption	
	2024	2023	2024	2023
	<i>(in million Baht)</i>			
Discount rate	(14)	(11)	15	13
Future salary growth	15	11	(13)	(10)

14 Legal reserve

Section 116 of the Public Limited Companies Act B.E. 2535 (1992) requires that a public company shall allocate not less than 5% of its annual net profit, less any accumulated losses brought forward, 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.

15 Segment information and disaggregation of revenue

(a) Segment information

The Group has significant business which offer 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 of the Group have 2 reportable segments as described below.

Segment 1	Methyl ester
Segment 2	Fatty alcohols
Other	Other segments

For other operations in 2024 and 2023, none of these segments meets the quantitative thresholds for determining additional reportable segments.

Performance of each reportable segment is measured based on profit (loss) before finance cost, income tax, depreciation, amortisation and others which is as included in the internal management reports that are reviewed by the Group's CODM. Management believes that using profit (loss) 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.

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Information about reporting segments for the year ended 31 December 2024

	Methyl ester	Fatty alcohols (in million Baht)	Other	Total
External revenues				
- At a point in time	12,315	6,590	101	19,006
Total segment revenues	12,315	6,590	101	19,006
Cost of sales	(11,620)	(5,708)	(85)	(17,413)
Distribution costs and administrative expenses	(431)	(341)	(16)	(788)
Profit before finance costs, depreciation, amortisation, income tax and others	289	557	-	846
Interest income	15	51	1	67
Finance costs	(41)	(35)	-	(76)
Depreciation and amortisation	(271)	(227)	-	(498)
Share of profit (loss) of joint ventures accounted for using equity method	-	129	(696)	(567)
Others	(1)	8	1	8
Profit (loss) before income tax	(9)	483	(694)	(220)
Net profit (loss) for reportable segment	(24)	453	(694)	(265)

Information about reporting segments for the year ended 31 December 2023

	Methyl ester	Fatty alcohols (in million Baht)	Other	Total
External revenues				
- At a point in time	12,445	5,224	50	17,719
Total segment revenues	12,445	5,224	50	17,719
Cost of sales	(11,948)	(4,589)	(43)	(16,580)
Distribution costs and administrative expenses	(404)	(293)	(9)	(706)
Profit (loss) before finance costs, depreciation, amortisation, income tax and others	121	351	(2)	470
Interest income	16	34	-	50
Finance costs	(32)	(25)	-	(57)
Depreciation and amortisation	(271)	(232)	-	(503)
Share of profit (loss) of joint ventures accounted for using equity method	-	57	(144)	(87)
Others	3	5	-	8
Profit (loss) before income tax	(163)	190	(146)	(119)
Net profit (loss) for reportable segment	(189)	133	(146)	(202)

(b) Geographical segments

In presenting information on the basis of geographical segments, segment sales revenues are based on the geographical location of customers. Segment non-current assets (exclude derivatives and deferred tax) are based on the geographical location of the assets.

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Geographical information

	Revenues	
	2024	2023
	<i>(in million Baht)</i>	
Thailand	14,419	13,539
The People's Republic of China	1,770	2,081
India	1,201	987
Korea	222	157
Other countries	1,394	955
Total	19,006	17,719

The Group is managed and operates principally in Thailand and has no assets located in foreign countries.

(c) Major customers

The Group's revenues from one customer of the Methyl ester segment amount to 19.39% of the total Group revenues. Revenue from this customer for the year ended 31 December 2024 amounted to Baht 3,685 million (2023: amounting to Baht 3,111 million).

16 Expenses by nature

	Consolidated financial statements		Separate financial statements	
	2024	2023	2024	2023
	<i>(in million Baht)</i>			
Changes in inventories of finished goods and work in progress	(574)	265	(574)	265
Raw materials and consumables used	17,259	15,595	17,259	15,595
Depreciation and amortisation	499	502	499	502
Employee benefit expenses	502	439	502	439
Distribution expenses	343	295	343	295

During 2024, the Group and the Company has contributed provident funds for its employees amounting to Baht 24 million and Baht 24 million, respectively (2023: Baht 22 million and Baht 22 million, respectively), which is included in employee benefit expenses.

17 Income tax

<i>Income tax recognised in profit or loss</i>	Consolidated financial statements		Separate financial statements	
	2024	2023	2024	2023
	<i>(in million Baht)</i>			
Deferred tax expense				
Movements in temporary differences	45	82	45	82
Total	45	82	45	82

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Reconciliation of effective tax rate

	Consolidated financial statements			
	2024		2023	
	Rate (%)	(in million Baht)	Rate (%)	(in million Baht)
Loss before income tax expense		(220)		(120)
Income tax using the Thai corporation tax rate	20.00	(44)	20.00	(24)
Expenses deductible at a greater amount		(89)		(7)
Expenses not deductible for tax purposes		3		5
Share of loss of joint ventures accounted for using equity method		113		17
Tax losses carried forward		59		92
Others		3		(1)
Income tax expenses	(20.45)	45	(68.33)	82

Reconciliation of effective tax rate

	Separate financial statements			
	2024		2023	
	Rate (%)	(in million Baht)	Rate (%)	(in million Baht)
Profit before income tax expense		256		2
Income tax using the Thai corporation tax rate	20.00	51	20.00	-
Income not subject to tax		(2)		(6)
Expenses deductible at a greater amount		(89)		(7)
Expenses not deductible for tax purposes		23		4
Tax losses carried forward		59		92
Others		3		(1)
Income tax expenses	17.58	45	4,100	82

Deferred tax	Consolidated financial statements				Separate financial statements			
	Assets		Liabilities		Assets		Liabilities	
At 31 December	2024	2023	2024	2023	2024	2023	2024	2023
				(in million Baht)				
Total	208	217	(168)	(143)	208	217	(168)	(143)
Set off of tax	(168)	(143)	168	143	(168)	(143)	168	143
Net deferred tax assets (liabilities)	40	74	-	-	40	74	-	-

Notes to the financial statements

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Deferred tax**Consolidated and separate financial statements**

	(Charged) / credited to:			
	As at 1 January 2024	Profit or loss	Other comprehensive income	As at 31 December 2024
	(in million Baht)			
Deferred tax assets				
Provision for employee benefits	20	3	4	27
Plant and equipment	1	-	-	1
Lease liabilities	58	9	-	67
Tax loss carry forward	138	(25)	-	113
Total	217	(13)	4	208
Deferred tax liabilities				
Plant and equipment	(23)	(26)	-	(49)
Right-of-use assets	(52)	(9)	-	(61)
Provision for expenses from raw materials derogation	(58)	-	-	(58)
Others	(10)	3	7	-
Total	(143)	(32)	7	(168)
Net	74	(45)	11	40

Deferred tax**Consolidated and separate financial statements**

	<u>(Charged) / credited to:</u>			
	As at 1 January 2023	Profit or loss	Other comprehensive income	As at 31 December 2023
	<i>(in million Baht)</i>			
Deferred tax assets				
Provision for employee benefits	25	1	(6)	20
Plant and equipment	20	(19)	-	1
Lease liabilities	47	11	-	58
Tax loss carry forward	181	(43)	-	138
Others	2	(2)	-	-
Total	275	(52)	(6)	217
Deferred tax liabilities				
Plant and equipment	(21)	(2)	-	(23)
Right-of-use assets	(42)	(10)	-	(52)
Provision for expenses from raw materials derogation	(43)	(15)	-	(58)
Others	-	(3)	(7)	(10)
Total	(106)	(30)	(7)	(143)
Net	169	(82)	(13)	74

As at 31 December 2024, the Group and Company has accumulated taxable loss carry forward of Baht 292 million and Baht 292 million which has not yet recognised the deferred tax assets. As the Group and the Company considered that no sufficient future taxable profit will be available to allow the related deferred tax assets to be utilised (2023: nil).

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18 Promotional privileges

The Company has been granted promotional certificates by the Office of the Board of Investment relating to production and distribution of Methyl ester, Fatty alcohols, Glycerin and Potassium sulfate. 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 certain terms and conditions prescribed in the promotional certificates, which the Company must comply with.

	Separate financial statements					
	2024			2023		
	Promoted	Non-	Total	Promoted	Non-	Total
	Businesses	promoted businesses		businesses	promoted businesses	
	<i>(in million Baht)</i>					
Export sales	354	4,251	4,605	145	4,051	4,196
Local sales	12,116	2,285	14,401	8,780	4,743	13,523
Total revenue	12,470	6,536	19,006	8,925	8,794	17,719

19 Earnings (loss) per share

	Consolidated financial statements		Separate financial statements	
	2024	2023	2024	2023
	<i>(in million Baht / in million shares)</i>			
Profit (loss) attributable to ordinary shareholders of the Company (basic)	(265)	(202)	211	(80)
Weighted average number of ordinary shares	1,024	1,024	1,024	1,024
Earnings (loss) per share (Baht)	(0.26)	(0.20)	0.21	(0.08)

The Company has no potential dilutive ordinary shares during the years ended 31 December 2024 and 2023. Therefore, there are no dilutive earnings per share effect.

20 Dividends

	Approval date	Payment schedule	Dividend rate per share (in Baht)	Amount (in million Baht)
2023				
2022 Annual dividend	3 April 2023	April 2023	0.25	255.92
2023 Interim dividend	8 August 2023	September 2023	0.10	102.36
				358.28

21 Financial instruments

(a) Carrying amounts and fair values

Carrying amounts of cash and cash equivalents, current financial assets, trade accounts receivable, other receivables, trade accounts payable, other payables and payables to contractor, which are measured at amortised cost. They are approximate to their fair values due to their short maturities.

Carrying amounts of long-term loans from financial institutions with floating interest rates and lease liabilities measured at amortised cost. The value is close to the estimated fair value.

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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			Total
	Hedging instruments	Financial instruments measured at FVTPL	Level 1 (in million Baht)	Level 2	Level 3	
At 31 December						
2024						
Financial assets						
Forward exchange contract	-	1	-	1	-	1
Financial liabilities						
Forward exchange contract	-	(1)	-	(1)	-	(1)
2023						
Financial assets						
Forward exchange contract used for hedging	34	-	-	34	-	34

Measurement of fair values

Level 2 fair values for simple over-the-counter 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 Company and counterparty as appropriate.

(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

Credit risk is the risk of financial loss to the Group if a customer or counterparty to a financial instrument fails to meet its contractual obligations, and arises principally from the Group's receivables from customers.

(b.1) Credit risk

Credit risk is risk of failure from a customer or a counterparty to settle its obligations to the Group as and when they fall due.

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(b.1.1) Trade accounts receivables

The Group's exposure to credit risk is influenced mainly by the individual characteristics of each customer. However, management also considers the factors that may influence the credit risk of its customer base, including the default risk associated with the industry and country in which customers operate.

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 accounts receivable, 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) 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.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.

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At 31 December	Consolidated financial statements			
	1 year or less	More than 1 years but less than 5 years (in million Baht)	More than 5 years	Total
2024				
Non-derivative financial liabilities				
Trade accounts payable	918	-	-	918
Other payables	336	-	-	336
Payables to contractors	16	-	-	16
Lease liabilities	55	112	227	394
	1,325	112	227	1,664
2023				
Non-derivative financial liabilities				
Trade accounts payable	984	-	-	984
Other payables	193	-	-	193
Payables to contractors	19	-	-	19
Long-term borrowings from financial institutions	294	1,490	115	1,899
Lease liabilities	42	100	246	388
	1,532	1,590	361	3,483
Separate financial statements				
At 31 December	1 year or less	More than 1 years but less than 5 years (in million Baht)	More than 5 years	Total
2024				
Non-derivative financial liabilities				
Trade accounts payable	918	-	-	918
Other payables	336	-	-	336
Payables to contractors	16	-	-	16
Lease liabilities	55	112	227	394
	1,325	112	227	1,664
2023				
Non-derivative financial liabilities				
Trade accounts payable	984	-	-	984
Other payables	192	-	-	192
Payables to contractors	19	-	-	19
Long-term borrowings from financial institutions	294	1,490	115	1,899
Lease liabilities	42	100	246	388
	1,531	1,590	361	3,482

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.

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(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 financial 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.

In 2023, the Company primarily utilizes forward exchange contracts with maturities of less than one year to hedge such financial assets and liabilities denominated in foreign currencies. The forward exchange contracts entered into at the reporting date also relate to anticipated sales, denominated in foreign currencies, for the subsequent period.

<i>Exposure to foreign currency At 31 December</i>	Consolidated financial statements		Separate financial statements	
	2024	2023	2024	2023
	<i>(in million Baht)</i>			
USD				
Financial assets	917	842	917	842
Financial liabilities	(46)	(116)	(46)	(116)
Statement of financial position exposure	871	726	871	726
Forecast sales	1,035	1,005	1,035	1,005
Net forecast transaction exposure	1,906	1,731	1,906	1,731
Net Derivatives	-	(886)	-	(886)
Net exposure	1,906	845	1,906	845
Euro				
Financial liabilities	(63)	(4)	(63)	(4)
Statement of financial position exposure	(63)	(4)	(63)	(4)
Net exposure	(63)	(4)	(63)	(4)

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.

<i>Impact to profit or loss</i>	Movement (%)	Consolidated financial statements		Separate financial statements	
		Strengthening	Weakening	Strengthening	Weakening
		<i>(in million Baht)</i>			
2024					
USD					
- Net gain (loss) on foreign exchange rate	10	(87)	87	(87)	87

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<i>Impact to profit or loss</i>	Movement (%)	Consolidated financial statements		Separate financial statements	
		Strengthening	Weakening (in million Baht)	Strengthening	Weakening
2023					
USD					
- Net gain (loss) on foreign exchange rate	10	(73)	73	(73)	73
- Other equity - gain on cash flow hedges	10	88	(88)	88	(88)

(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 fixed and floating interest rates for their operations. The Group has managed this risk to ensure the appropriateness to the business operation.

Interest rate 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.

<i>Impact to profit or loss</i>	Consolidated financial statements		Separate financial statements	
	Increase in interest rate 1%	Decrease in interest rate 1%	Increase in interest rate 1%	Decrease in interest rate 1%
	<i>(in million Baht)</i>			
2024				
Finance costs	12	(12)	12	(12)
2023				
Finance costs	10	(10)	10	(10)

(c) Cash flow hedges

In December 2024, the Company identified financial instruments to hedge exposures that were ineffective due to The market exchange rates are subject to volatility and do not adhere to the foreign exchange risk management framework. The hedge ineffective amount has been recorded in profit or loss for the year ended 31 December 2024 amounting to Baht 1 million.

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 "other receivables" (either as asset or as liabilities) within the statement of financial position.

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	Average exchange rate (rate)	Notional value: Foreign currency million (FC)	Notional value: Local currency (million Baht)	Carrying amount of the hedging instruments assets (liabilities) (million Baht)
At 31 December 2023				
<i>Sell (USD)</i>	35.23	26	916	34

The Group assesses effectiveness by comparing the nominal amount of the net assets 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.

22 Commitments, provisions and contingent liabilities with non-related parties

(a) Commitments

	Consolidated financial statements		Separate financial statements	
	2024	2023	2024	2023
	<i>(in million Baht)</i>			
Capital commitments				
Contracted but not provided for plant, machinery and equipment	31	44	31	44
Total	31	44	31	44
Other commitments				
Bank guarantees	40	533	40	533
Other agreements	14	13	14	13
Total	54	546	54	546

Utilities and Other Services Agreements with minimum purchase quantity

The Company has a utility and other services agreement which has minimum purchase quantities with a party. This agreement is for the period from 1 November 2007 to 31 October 2027. The minimum purchase quantity, the selling price of products and the renewal of the contract will be subject as specified in the agreement. At 31 December 2024, the Group had outstanding commitments totalling Baht 22.88 million under this agreement (31 December 2023: Baht 30.28 million).

Raw material purchase agreements

The Company has 2 purchasing raw materials contracts with local company. The Company is obligated to take raw material at the price, quantity and condition specified in the contracts. The total obligated quantity is 14,932.5 tons. The period for these agreements are 1 year and expiring in June 2025.

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(b) Provisions and contingent Liabilities

Expenses from raw materials derogation and relevant lawsuit

As the raw materials used in the production process are volatile commodity materials, the Company has a policy to manage inventory to be at an appropriate level in order to mitigate the impacts from raw material price volatility. During second quarter of 2018, the Company found that the quantity of raw materials recorded in the system was higher than actual quantity stored at the suppliers' facilities. In addition, this also includes the case that the Company delivered the raw materials to the supplier for refining, however, the supplier neither returned back the refined products according to the contract nor the raw materials to the Company.

The Company conducted an in-depth investigation and found misconduct among certain suppliers and some employees in the relevant functions of the Company, in which certain suppliers are related. The Company has already taken legal actions against the parties involved (both external and internal) as well as disciplinary actions against every employee involved.

In consequence, the Company recognised expenses from raw materials derogation in the consolidated and separate statements of profit or loss for the year ended 31 December 2018 amounting to Baht 2,004 million. However, the Company is legally entitled to claim from those involved.

In 2019, the suppliers delivered pending raw materials of Baht 16 million to the Company as per the settlement agreements. In addition, such suppliers registered a mortgage on land to the Company with fair value of Baht 217 million. Consequently, the Company reviewed the provision for expenses from raw materials derogation and reversed such provision amounting to Baht 233 million. In 2023, the fair value of the land increased by Baht 72 million. As a result, the Company reviewed the provision for expense from raw material derogation and reversed the provision amounting to Baht 72 million.

Moreover, on 23 March 2021 the Securities and Exchange Commission ("SEC") filed a criminal complaint to the Economic Crime Suppression Division of the Royal Thai Police against 11 offenders, namely a former director and a former executive of the Company and nine suppliers, for acting with dishonest intent regarding the Company's raw material management to seek unlawful benefits from the Company, which resulted in losses incurred to the Company. In any case, filing a criminal complaint is merely the commencement of the criminal procedure whereby the inquiry official will perform an investigation before deciding whether to recommend the case to the public attorney who has the authority for prosecution. The power to adjudicate whether any person is guilty or not is, however, vested in the Thailand Court of Justice.

Relevant lawsuits arising from raw materials derogation

On 18 August 2017, Anatta Green Company Limited ("Anatta"), later changing its name to Thai Bio Innovation Company Limited, the Company 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 Company 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 Company and the Company has given consent to such transfer.

During the 2nd quarter of 2018, the Company disclosed the material event of inventory issue to the Stock Exchange of Thailand. At the same time, ACAP has demanded that the Company pay for the raw materials purchased from Anatta under the transfer of claim, a total of 11 items. The Company considered the documents received and clarified to ACAP that such documents were not in the Company's system and did not find evidence of the delivery of the raw materials from Anatta as specified.

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Subsequently, on 20 August 2018, ACAP filed a lawsuit in the Civil Court, claiming Anatta and the Company jointly to pay damages totaling Baht 324.65 million and 15% interest per annum. The Company's legal advisor considered the relevant facts and evidence and provided an opinion that the Company is not liable for the allegation. Therefore, the Company appointed a lawyer and submitted a statement to defend itself.

The Court of First Instance issued its judgement on 10 June 2020, requiring the Company 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 Company does not pay the said debt in full, Anatta shall pay the remaining balance. The Company 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 Company 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 Company 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 Company. The Company filed a request to withdraw the execution with the Civil Court. Subsequently, on 17 May 2022, the court has investigated and issued an order granting permission to unfreeze the deposits of the Company. The Company provided a bank guarantee amounting to Baht 503.31 million to the court as guarantee. The Company has pledged certain deposits of the Company as collateral against the guarantee that the Company received from the bank.

On 20 February 2023, the Supreme Court has issued an order accepting the Company's petition. Subsequently, on 3 September 2024, the Supreme Court issued a judgement amending the decision, ordering the Company to pay damages to ACAP in the amounting 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 Company having to pay the plaintiff approximately Baht 400.61 million. The company fully settled the debt according to the judgement on 6 September 2024 and return bank guarantee to the Company. Reversal of lawsuit damage provision is recognized in income statement amounting of Baht 42.96 million.

Civil lawsuit from a former supplier of the Company

A former supplier of the Company, filed lawsuits against the Company in 3 cases. The Company and its legal advisor have considered relevant facts and evidence in all three cases and provided the opinion that the Company has not breached the agreements and has no obligation to pay as claimed. The company is in the process of litigation. Therefore, the Company has not recorded any provision against any losses from such cases. Currently such former supplier has now been placed under receivership, the official receiver has taken control and is managing the former suppliers' business. The Civil Court therefore issued a summons to the official receiver to enter the cases.

- 1) On 8 September 2020, the Company received a summons and a copy of a Civil Court claim, in which such company filed a civil lawsuit against the Company regarding the breach of agreements concerning the reclaiming of the purchase price on raw materials and claiming damages amounting to Baht 470.03 million with interest at the rate of 7.5% per annum on the principal, totaling Baht 595.10 million starting from the date of the lawsuit until the date of completion of payment. Subsequently, on 29 November 2024, the Civil Court issued a judgement dismissing the case. However, this case is not yet final. The plaintiff may exercise its right to appeal within 1 month from the date of the court's judgment or within the extended timeframe permitted by the court.

Notes to the financial statements

Global Green Chemicals Public Company Limited and its Subsidiaries

For the year ended 31 December 2024

- 2) On 8 November 2020, the Company received a summons and a copy of a Civil Court plaintiff, in which such company filed a civil lawsuit against the Company as the first defendant and two other companies as joint defendants regarding the breach of agreements and agency, and claiming damages amounting to Baht 92.29 million with interest at the rate of 7.5% per annum on the principal, totaling Baht 109.42 million starting from the date of the lawsuit until the date of completion of payment. The court has scheduled to issue a judgement on 24 March 2025.
- 3) On 25 December 2020, the Company received a summons and a copy of a Civil Court plaintiff, in which such company filed a civil lawsuit against a supplier and the Company as the second defendant regarding the breach of agreements concerning the reclaiming of the purchase price on raw materials and claiming damages amounting to Baht 305.26 million with interest at the rate of 7.5% per annum on the principal, totaling Baht 364.71 million starting from the date of the lawsuit until the date of completion of payment. On 21 September 2023, the Civil Court issued a judgement dismissing the case. However, this case is not yet final because the plaintiff has exercised its right to appeal on 22 January 2024.

Other lawsuits

- 1) Civil plaintiff regarding tort, breach of agreements, breach of promise and claiming damages occurred in year 2020.

On 5 June 2020, the Company received a summons and a copy of a civil plaintiff, in which a company filed a lawsuit against the Company with the Civil Court regarding breach of agreements, tort and claiming damages in the amount of Baht 22.94 million with interest at the rate of 7.5% per annum. The Company and legal advisor of the Company considered relevant facts and evidence and provided the opinion that the Company has no obligation to pay such claims. Also, the plaintiff's claims are precluded by prescription. Therefore, the Company appointed a lawyer and submitted a file testimony with its defense including a counterclaim regarding undue enrichment, amounting to Baht 8.29 million. Subsequently, on 16 June 2022, the Civil Court rendered its judgment ordering the Company to compensate the plaintiff in the amount of Baht 60,318.54 together with interests until completion of payment (from the damages claimed by the plaintiff in the amount of Baht 22.94 million) and dismissed the counterclaim of the Company. On 10 July 2024, the Court of Appeal upheld the judgement of the Court of First Instance. However, the case is not yet final. The plaintiff filed a petition to the Supreme Court on 2 December 2024. The Supreme Court will consider whether to accept the plaintiff's petition.

- 2) Civil plaintiff regarding tort, breach of agreements, breach of promise and claiming damages occurred in year 2021.

On 28 June 2021, the Company received a summons and a copy of the civil plaintiff in which a company filed a lawsuit against the Company 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 Company and legal advisor of the Company considered relevant facts and evidence and provided the opinion that the issue of this lawsuit is the same as the case that the Company had filed against such company and the Company has not committed a wrongful act and has not breached the agreements against the plaintiff as claimed. The Company appointed a lawyer and submitted 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 judgement of the Civil Court. The plaintiff exercised their right to file a petition to the Supreme Court. On 22 August 2024 the Supreme Court issued an order not to accept the plaintiff's petition, resulting in the case being legally finalized.

Notes to the financial statements

Global Green Chemicals Public Company Limited and its Subsidiaries

For the year ended 31 December 2024

- 3) Civil plaintiff regarding tort, breach of agreements, breach of promise and claiming damages occurred in year 2024.

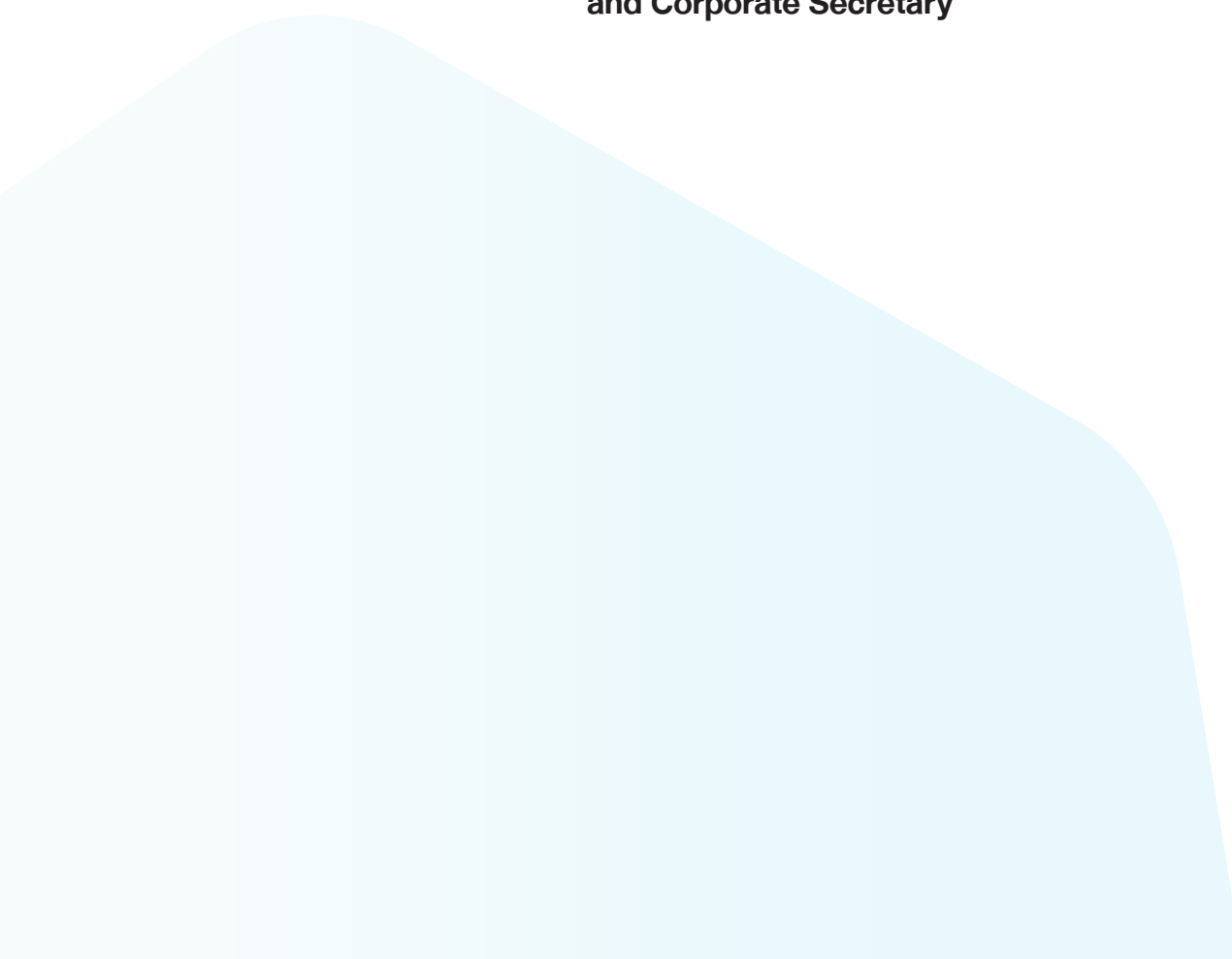
On 25 November 2024 and 27 December 2024, 3 contractors filed a lawsuit against GGC KTIS Bioindustrial Company Limited (“GKBI”), an indirect joint venture of the Group, in court regarding construction contracts for the NBC 2 project, claiming damages amounting to Baht 453 million. However, GKBI has payables and letter of guarantee relate to these lawsuits amounting to Baht 189 million. GKBI and legal advisor considered relevant facts and evidence and conclude that GKBI has not committed a wrongful act and has not breached the agreements against the plaintiff as claimed. The case is currently in the stage of submitting a statement of defense and a counterclaim.

23 Events after the reporting period

At the Board of Directors’ meeting held on 10 February 2025, the Board approved to submit for legal reserve and dividend payment approval for the year 2024 to the Annual General Meeting of the Shareholders of Baht 0.10 per share amounting to Baht 102.4 million. The dividend is subject to the approval of the Shareholders at the Annual General Meeting.

Appendix 1

**Details of the Board of Directors, Executives, Controllers,
Assigned Top Executives of the Finance and Accounting Function,
Assigned Personnel Directly in Charge of Account Preparation
and Corporate Secretary**



The Board of Directors

(as of 15 January 2025)

Mr. Narongsak Jivakanun

Age: 55

Chairman

Date of Appointment:

15 May 2024

Education / Training:

- Master of Science (Chemical Engineering) Oregon State University, Oregon, U.S.A.
- Bachelor of Engineering (Chemical Engineering), Chulalongkorn University
- IMD - TLCA Leadership Development Program (LDP) Class 1/2013, Thai Listed Companies Association (TLCA) and IMD Business School, Switzerland
- 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)

Director Training:

- 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
- 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
- Senior Executive Vice President Reporting to Chief Operating Officer, Downstream Petroleum Business Group, PTT Public Company Limited

Board Member / Management in Non-Listed Company - The Stock Exchange of Thailand: 6

- Chairman and Director, PTTGC International Private Limited
- Chairman and Director, PTTGC International (Netherlands) B.V.
- Chairman and Director, GC America Sustainability Corporation
- Chairman and Director, PTTGC America Corporation
- Chairman and Director, PTTGC America LLC
- Director, Sermkij Textile Company Limited

Positions in Other Company / Organization / Institution / Remarkable Positions: None

Work Experience (in the Last 5 Years):

- 2 September 2020 – 30 June 2024 Chairman, Vencorex Holding
- 1 October 2019 – 30 June 2024 Director, Vencorex Holding
- 24 November 2023 – 31 May 2024 Chairman, Emery Oleochemicals UK Limited
- 12 October 2023 – 31 May 2024 Director, Emery Oleochemicals UK Limited
- 22 April 2022 – 31 May 2024 Director, Kuraray GC Advanced Materials Company Limited
- 1 January 2023 – 31 May 2024 Chairman, NatureWorks LLC
- 3 October 2019 – 31 May 2024 Director, NatureWorks LLC
- 16 February 2022 – 31 May 2024 Chairman, GC International Corporation
- 1 October 2019 – 31 May 2024 Director, GC International Corporation
- 1 October 2019 – 31 May 2024 Managing Director, PTTGC International Private Limited
- 1 October 2019 – 31 May 2024 President, 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
- 24 November 2023 – 31 May 2024 Chairman, Emery Oleochemicals UK Limited
- 12 October 2021 – 31 May 2024 Director, Emery Oleochemicals UK Limited
- 1 February 2022 – 12 May 2024 Chief Operating Officer – International Business, PTT Global Chemical Public Company Limited
- 12 October 2021 – 23 November 2023 Chairman of Executive Committee and Risk & Audit Committees, Emery Oleochemicals UK Limited
- 1 October 2019 – 31 March 2022 President and Secretary, GC International Corporation
- 15 October 2021 – 31 March 2022 Treasurer, GC International Corporation
- 1 October 2019 – 15 February 2022 President and Secretary, PTTGC America Corporation
- 1 October 2020 – 15 February 2022 President, CEO and Secretary, PTTGC America LLC
- 1 October 2019 – January 2022 Executive Vice President – International Business Operations, PTT Global Chemical Public Company Limited
- 2 September 2020 – 31 December 2021 Chairman, NatureWorks LLC
- 24 November 2020 – 30 October 2021 Chairman of Executive Committee, Risk & Audit Committees, Emery Oleochemicals (M) Sdn. Bhd.
- 1 October 2019 – 30 October 2021 Director, Emery Oleochemicals (M) Sdn. Bhd.
- 24 November 2020 – 30 October 2021 Chairman of Executive Committee, Emery Specialty Chemicals Sdn. Bhd.
- 1 October 2019 – 30 October 2021 Director, Emery Specialty Chemicals Sdn. Bhd.

Shareholding: 15,000 Shares (accounting for 0.0014653% of the total shares as of 15 January 2025)

Family Relationship with Other Directors, Executives, Major Shareholders of GGC or its Subsidiaries: None

Prof. Dr. Kumchai Jongjakapun

Age: 64

Chairman of Independent Directors / Chairman of Audit Committee

Date of Appointment:

17 February 2016

15 March 2016 (1st re-elected)

2 April 2019 (2nd re-elected)

1 April 2022 (3rd re-elected)

Education / Training:

- Ph.D. King's College London (KCL), University of London, United Kingdom
- LL.M. in International Business Law (with Merit), University College London (UCL), University of London, United Kingdom
- LL.B., 2nd Class Honors, Thammasat University
- B.A. (Political Science), Ramkhamheang University
- Barrister-at-law, The Thai Bar under the Royal Patronage
- Diploma, National Defence College (The Joint State-Private Sector Class 20, The National Defence Course Class 50), National Defence College of Thailand (NDC)
- Juridical Executives Program (National Juridical Academy Class 15), Juridical Training Institute
- Capital Market Academy Leadership Program (Class 9), Capital Market Academy
- Corporate Governance Program for Directors and Executive of State Enterprises and Public Organizations (Class 12), King Prajadhipok's Institute, State Enterprise Policy Office and Office of the Public Sector Development Commission

Director Training:

- Role of the Chairman Program (RCP) Class 34/2014, Thai Institute of Directors Association (IOD)
- Audit Committee Program (ACP) Class 38/2012, Thai Institute of Directors Association (IOD)
- Director Certification Program (DCP) Class 128/2010, Thai Institute of Directors Association (IOD)

Board Member / Management in Listed Company – The Stock Exchange of Thailand: 1

- Chairman of Independent Directors and Chairman of Audit Committee, Global Green Chemicals Public Company Limited

Board Member / Management in Non-Listed Company – The Stock Exchange of Thailand: None

Positions in Other Company / Organization / Institution / Remarkable Positions: 3

- Chairman, Pearl S. Buck Foundation (Thailand)
- Legal Sub-committee, The Securities Exchange of Thailand
- Member of the Committee of Council of State, Office of the Council of State

Work Experience (in the Last 5 Years):

- 18 April – 16 December 2024 Independent Directors, Thonburi Healthcare Group Public Company Limited
- 2023 Legal Sub-committee, Electronic Transactions Development Agency (ETDA)

Shareholding: 15,000 shares held by Spouse (accounting for 0.0014653% of the total shares as of 15 January 2025)

Family Relationship with Other Directors, Executives, Major Shareholders of GGC or its Subsidiaries: None

Mrs. Kannika Ngamsopee**Age: 68****Independent Director / Director to Audit Committee / Chairman of Risk Management Committee****Date of Appointment:**

17 February 2016

21 March 2017 (1st re-elected)5 June 2020 (2nd re-elected)3 April 2023 (3rd re-elected)**Education / Training:**

- MM, Sasin Graduate Institute of Business Administration of Chulalongkorn University
- M.Acc. (Accounting), Thammasat University
- LL.B. (Law), Thammasat University
- BBA (Accounting), Second-class Honors, Thammasat University
- Capital Market Academy Leadership Program (Class 3), Capital Market Academy
- Diploma, National Defence College, The National Defence Course (Class 52), National Defence College of Thailand (NDC)
- Administration of Public and Private Management Program (Class 1), Royal Thai Police
- Advanced Strategic Management, IMD, Swiss Confederation (2012)
- Certified Public Accountant Licence No. 3156
- Certificate of International Trade Law (Class 1), The Thai Bar Association under the Royal Patronage
- Certification Course in Good Governance for Medical Executives, Class 8, King Prajadhipok's Institute and The Medical Counsel of Thailand

Director Training:

- Director Certification Program (DCP) Class 21/2002, Thai Institute of Directors Association (IOD) and Refreshing Program 2019
- Risk Management Program for Corporate Leaders (RCL) Class 13/2018, Thai Institute of Directors Association (IOD)
- Board Nomination and Compensation Program (BNCP) Class 7/2019, Thai Institute of Directors Association (IOD)
- Advanced Audit Committee Program (AACP) Class 36/2020, Thai Institute of Directors Association (IOD)
- Board Briefing on "CG in New Normal", Thai Institute of Directors Association (IOD)

Board Member / Management in Listed Company – The Stock Exchange of Thailand: 5

- Independent Director, Director to Audit Committee and Chairman of Risk Management Committee, Global Green Chemicals Public Company Limited
- Independent Director, Chairman to Audit Committee, Chairman of the Nomination, Remuneration and Corporate Governance Committee and Director to Risk Management Committee, Scan Inter Public Company Limited
- Independent Director, Chairman to Audit Committee, Director to Risk Management Committee and Director to Nomination and Remuneration Committee, Thonburi Healthcare Group Public Company Limited
- Independent Director and Director to Audit Committee, CP Aextra Public Company Limited
- Chairman to Audit Committee, Bangkok Aviation Fuel Services Public Company Limited

Board Member / Management in Non-Listed Company – The Stock Exchange of Thailand: 3

- Director, Auto X Company Limited
- Director, Thonburi Bamrungmuang Hospital Company Limited
- Director, Thonburi Wellbeing Company Limited

Positions in Other Company / Organization / Institution / Remarkable Positions: 3

- Member, Finance and Budget Sub-Committee, Equitable Education Fund
- Director, ARYU International Hospital, Republic of the Union of Myanmar
- Member, Asset Management Committee, Vajiravudh College

Work Experience (in the Last 5 Years):

- 2023 – 2024 Director, Green Earth Power (Thailand) Company Limited
- 2019 – 2024 Honorary Director (Finance, Accounting and Budgeting, Auditing and Evaluation, Risk Management) / Chairman to Audit Committee, Digital Government Development Agency (Public Organization) (DGA)
- November 2017 – October 2023 Honorary Member, Financial Institutions Policy Committee, Bank of Thailand
- 2019 – 2021 Independent Director, Thonburi Wellbeing Company Limited (An affiliate of Thonburi Healthcare Group)
- 2021 Director, Thonburi Canabiz Public Company Limited
- 2019 – 2021 Sub-Committee Member, Audit and Assessment of Public Sector Administrative Work, Office of Public Sector Development Commission
- 2016 – 2021 Director to Audit Committee, Social Security Office
- 2020 – 2021 Member, Finance and Property Management Committee, Chulabhorn Royal Academy

Shareholding: 20,000 shares held by Spouse (accounting for 0.0019538% of the total shares as of 15 January 2025)

Family Relationship with Other Directors, Executives, Major Shareholders of GGC or its Subsidiaries: None

Police General Suchart Theerasawat

Age: 63

Independent Director / Chairman of Corporate Governance and Sustainable Development Committee

Date of Appointment:

23 December 2020

2 April 2021 (1st re-elected)

2 April 2024 (2nd re-elected)

Education / Training:

- Bachelor's degree, Police Cadet Academy (Batch 36)
- Master's degree of Sociology in Criminology and Justice, Mahidol University
- Course of Police Superintendent (Batch 29)
- Course of Senior Police Administration (Batch 25), Department of Police Development
- Diploma, National Defence College, The National Defence Course Class 59, National Defence College of Thailand (NDC)
- Course of LA Sheriff SWAT, U.S.A.
- Course of Counterattack Technique and Strategy

Director Training:

- Director Certification Program (DCP) Class 329/2022, Thai Institute of Directors Association (IOD)
- Director Accreditation Program (DAP) Class 184/2021, Thai Institute of Directors Association (IOD)

Board Member / Management in Listed Company – The Stock Exchange of Thailand: 1

- Independent Director and Chairman of Corporate Governance and Sustainable Development Committee, Global Green Chemicals Public Company Limited

Board Member / Management in Non-Listed Company – The Stock Exchange of Thailand: None

Positions in Other Company / Organization / Institution / Remarkable Positions: None

Work Experience (in the Last 5 Years):

- October 2022 – September 2023 Advisor, Office of the Narcotics Control Board
- 2021 – 2022 Director of the Fuel Crime Suppression Centre, Royal Thai Police
- 2021 – 2022 Director of the Auto and Motorcycle, The Fuel Crime Suppression Centre, Royal Thai Police
- 2021 – 2022 Director of the Gangster, Gunman, and most Wanted Criminal Suppression Centre, Royal Thai Police
- 2020 – 2021 Director of Deforestation, Natural Resources Prevention and Suppression Centre, Royal Thai Police
- October 2019 – September 2022 Deputy Commissioner General, Royal Thai Police

Shareholding: None

Family Relationship with Other Directors, Executives, Major Shareholders of GGC or its Subsidiaries: None

Mr. Jarun Wiwatjesadawut

Age: 61

Independent Director / Chairman of Nomination and Remuneration Committee / Director to Risk Management Committee

Date of Appointment:

2 April 2021

2 April 2024 (1st re-elected)

Education / Training:

- Bachelor of Political Science, Chulalongkorn University
- Advanced Certificate Course in Politics and Governance in Democratic Systems for Executives Class 13, King Prajadhipok's Institute
- Capital Market Leader Program Class 9, Capital Market Academy
- Senior Executive on Criminal Justice Administration Class 15, Judicial Training Institute
- Advanced Security Management Program Class 3/2012, The Association of National Defence College
- Power of the Kingdom Class 1, Chulalongkorn University
- Diploma, National Defence College, The National Defence Course Class 26, National Defence College of Thailand (NDC)
- Certificate Course in Good Governance for Medical Executives Class 3, King Prajadhipok's Institute and The Medical Council of Thailand
- The Executive Program in Energy Literacy for a Sustainable Future, Class 14, Thailand Energy Academy (TEA)

Director Training:

- Director Certification Program (DAP) Class 9/2004, Thai Institute of Directors Association (IOD)
- Director Certification Program (DCP) Class 98/2008, Thai Institute of Directors Association (IOD)

Board Member / Management in Listed Company – The Stock Exchange of Thailand: 3

- Independent Director, Chairman of Nomination and Remuneration Committee and Director to Risk Management Committee, Global Green Chemicals Public Company Limited
- Director and Chief Executive Officer, J.R.W. Utility Public Company Limited
- Director and Chairman of the Recruitment Committee, Sikarin Public Company Limited

Board Member / Management in Non-Listed Company – The Stock Exchange of Thailand: None

Positions in Other Company / Organization / Institution / Remarkable Positions: 4

- Member, Srinakarin Garden Foundation Under the patronage HRH Princess Srinagarindra
- Member, The Roster Directors Enterprises
- Director of Mahasarakham University Council
- Director of Srinakharinwirot University Council

Work Experience (in the Last 5 Years):

- 2019 – 2021 Member of Social Security Fund, Social Security Office
- 2018 – 2020 Directors, The Metropolitan Electricity Authority
- 1994 – 2020 Director, Sarnti Green Pack Company Limited

Shareholding: None

Family Relationship with Other Directors, Executives, Major Shareholders of GGC or its Subsidiaries: None

Lt.Gen. Titawat Satiantip

Age: 54

Independent Director / Director to Nomination and Remuneration Committee / Director to Corporate Governance and Sustainable Development Committee

Date of Appointment:

11 September 2019

2 April 2021 (1st re-elected)

2 April 2024 (2nd re-elected)

Education / Training:

- Master of Defense Studies, University of New South Wales of Australian Defense Force Academy, Australia
- B.Sc. (Mechanical Engineering), Chulachomklao Royal Military Academy
- Command And General Staff College, Class 80
- Intelligence Analysis Course, the Federal Republic of Germany
- Advanced Security Cooperation (ASC) Course, Asia-Pacific Center for Security Studies (APCSS), U.S.A
- Asia-Pacific Program for Senior National Security Officers (APPSNO) Course, Singapore
- Executive CISO, Class 1, National Cyber Security Agency (NCSA)
- Diploma, National Defence College, The National Defence Course (Class 66), National Defence College of Thailand (NDC)

Director Training:

- Director Certification Program (DCP) Class 285/2019, Thai Institute of Directors Association (IOD)
- Board Nomination and Compensation Program (BNCP) Class 18/2023, Thai Institute of Directors Association (IOD)
- Advanced Audit Committee Program (AACP) Class 52/2024, Thai Institute of Directors Association (IOD)

Board Member / Management in Listed Company – The Stock Exchange of Thailand: 1

- Independent Director, Director to Nomination and Remuneration Committee and Director to Corporate Governance and Sustainable Development Committee, Global Green Chemicals Public Company Limited

Board Member / Management in Non-Listed Company – The Stock Exchange of Thailand: None

Positions in Other Company / Organization / Institution / Remarkable Positions: 1

- Senior Expert, Office of The Permanent Secretary For Defence

Work Experience (in the Last 5 Years):

- November 2023 – April 2024 Director to Audit Committee, Global Green Chemicals Public Company Limited
- 2019 – 2023 Director, Prime Minister Operation Center (PMOC)
- 2022 Assisant Chief of General Staff for Ministry of Defence
- 2019 – 2021 Senior Staff Office for Ministry of Defence

Shareholding: None

Family Relationship with Other Directors, Executives, Major Shareholders of GGC or its Subsidiaries: None

Mr. Kajohn Srichavanotai**Age: 60****Independent Director / Director to Corporate Governance and Sustainable Development Committee****Date of Appointment:**

3 April 2023

Education / Training:

- Master of Political Science, Chulalongkorn University
- Bachelor of Political Science, Chulalongkorn University
- Diploma, National Defence College, The National Defence Course Class 61, National Defence College of Thailand (NDC)
- Executive Development Program (Ministry of Interior), Batch 61
- Community Development Executive Training Program, Batch 26
- Chief of Local Administrative Development Subdivision Training Program, Batch 1
- Assistant Chief District Officer Training Program, Batch 107

Director Training: None**Board Member / Management in Listed Company – The Stock Exchange of Thailand: 1**

- Independent Director and Director to Corporate Governance and Sustainable Development Committee, Global Green Chemicals Public Company Limited

Board Member / Management in Non-Listed Company – The Stock Exchange of Thailand: None**Positions in Other Company / Organization / Institution / Remarkable Positions: 1**

- Deputy Permanent Secretary for Interior

Work Experience (in the Last 5 Years):

- | | |
|--|---|
| • 1 October 2022 – 16 November 2024 | Director-General, Department of Local Administration |
| • 15 December 2021 – 30 September 2022 | Governor of Samut Songkhram Province |
| • 2 November 2017 – 14 December 2021 | Deputy Director-General, Department of Local Administration |

Shareholding: None**Family Relationship with Other Directors, Executives, Major Shareholders of GGC or its Subsidiaries:** None

Mrs. Sommai Siriudomset

Age: 62

Independent Director / Director to Audit Committee / Director to Corporate Governance and Sustainable Development Committee

Date of Appointment:

22 November 2023

Education / Training:

- Master of Business Administration in Management and Organization Administration, Dhurakij Pundit University
- Bachelor of Business Administration in Accounting, Ramkhamhaeng University
- Diploma, National Defence College, The National Defence Course Class 60, National Defence College of Thailand (NDC)
- Corporate Governance Program for Directors and Executive of State Enterprises and Public Organizations (PDI Class 22), King Prajadhipok's Institute
- Senior Anti-Corruption Strategist Course, Class 10, National Anti-Corruption Commission (Thailand)
- The Civil Service Executive Development Program: Visionary and Moral Leadership, Class 82, Office of the Civil Service Commission
- Taxation of SMEs and e-Commerce, The Revenue Department
- Advanced Certificate Course in Public Economic Management for Executives, King Prajadhipok's Institute

Director Training:

- Advanced Audit Committee Program (AACP) Class 52/2024, Thai Institute of Directors Association (IOD)
- Director Certification Program (DCP) Class 355/2024, Thai Institute of Directors Association (IOD)

Board Member / Management in Listed Company – The Stock Exchange of Thailand: 1

- Independent Director, Director to Audit Committee and Director to Corporate Governance and Sustainable Development Committee, Global Green Chemicals Public Company Limited

Board Member / Management in Non-Listed Company – The Stock Exchange of Thailand: None

Positions in Other Company / Organization / Institution / Remarkable Positions: 3

- Director and Director to Audit Committee, Playing Card Factory, Ministry of Finance
- Honorary Director of Accounting, Director to Audit Committee, Chairman of the Planning and Budget Sub-Committee, Financial and Property Management Sub-Committee, and the Screening Subcommittee for Developing Risk Based Capital Framework, Office of Insurance Commission (OIC)
- Financial Liquidity Management Sub-Committee, Public Pawnshop Office

Work Experience (in the Last 5 Years):

- 2019 – 2022 Consultation on Tax Collection Strategies (Energy Business Group) Policy and Planning Analyst, The Revenue Department
- 2018 – 2022 Director and Director to Audit Committee, Public Warehouse Organization Ministry of Commerce Thailand
- 2018 – 2022 Director, Erawan Hotel Public Company Limited
- 2018 – 2021 Chairman of the Relations Affairs Committee, Public Warehouse Organization Ministry of Commerce Thailand

Shareholding: None

Family Relationship with Other Directors, Executives, Major Shareholders of GGC or its Subsidiaries: None

Mr. Saroj Putthammawong**Age: 56****Director / Director to Nomination and Remuneration Committee / Director to Risk Management Committee****Date of Appointment:**

17 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, 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)

Director Training:

- 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 and Director to Risk Management Committee, Global Green Chemicals Public Company Limited
- Chief Operating Officer, Value Added Products (COV), PTT Global Chemical Public Company Limited

Board Member / Management in Non-Listed Company – The Stock Exchange of Thailand: 5

- Chairman, GC Polyols Company Limited
- Chairman, WHA GC Logistics Solutions Company Limited
- Chairman, GC Marketing Solutions Company Limited
- Chairman, PTT Asahi Chemical Company Limited
- Director, HMC Polymers Company Limited

Positions in Other Company / Organization / Institution / Remarkable Positions: None**Work Experience (in the Last 5 Years):**

- | | |
|-------------------------------------|--|
| • 12 January 2024 – 30 July 2024 | Chairman, HMC Polymers Company Limited |
| • 15 January 2024 – 31 May 2024 | Director, PTTGC International Private Limited |
| • 1 January – 30 April 2024 | Acting Senior Executive Vice President, Marketing and Sales – Industry Platforms |
| • 28 January 2021 – 11 January 2024 | Director, HMC Polymers Company Limited |
| • 18 January 2023 – 1 January 2024 | Director, Revolve Group Limited |
| • 1 January – 31 December 2023 | Executive Vice President, Marketing and Sales – Industry Platforms, PTT Global Chemical Public Company Limited |

- | | |
|---------------------------------------|--|
| • 22 February 2022 - 7 February 2023 | Chairman, GC-MPTA Company Limited |
| • 22 February 2022 - 7 February 2023 | Chairman, Thai Pet Resin Company Limited |
| • 17 March 2021 - March 2023 | Director, PTT Phenol Company Limited |
| • 18 December 2017 - 31 December 2022 | Director, GC Treasury Center Company Limited |
| • 2 June 2017 - 31 December 2022 | Director, GC Oxirane Company Limited |
| • 1 October 2019 - December 2022 | Executive Vice President, Marketing and Commercial Excellence and
Production Plan, PTT Global Chemical Public Company Limited |
| • 28 October 2019 - 19 October 2022 | Director, GC Marketing Solutions Company Limited |
| • 27 December 2016 - 25 December 2022 | Director, GC Glycol Company Limited |
| • 29 September 2020 - 28 March 2022 | Committee Member of Industry Standards (ISC), The Federation of
Thai Industries |
| • 27 August 2018 - 2020 | Committee Member of Industrial Excellence Center (IEC),
The Federation of Thai Industries |

Shareholding: None

Family Relationship with Other Directors, Executives, Major Shareholders of GGC or its Subsidiaries: None

Mr. Thanakorn Manoonpol

Age: 35

Director / Director to Risk Management Committee

Date of Appointment:

15 June 2022

2 April 2024 (1st re-elected)

Education / Training:

- Chartered Financial Analyst (CFA)
- The Bachelor of Arts Program in Economics, Faculty of Economics, Chulalongkorn University

Director Training:

- Advanced Audit Committee Program (AACP) Class 48/2023, Thai Institute of Directors Association (IOD)
- Director Leadership Certification Program (DLCP) Class 12/2023, Thai Institute of Directors Association (IOD)
- Risk Management Program for Corporate Leaders (RCL) Class 33/2023, Thai Institute of Directors Association (IOD)
- Board Nomination and Compensation Program (BNCP) Class 18/2023, Thai Institute of Directors Association (IOD)
- Director Certification Program (DCP) Class 324/2022, Thai Institute of Directors Association (IOD)

Board Member / Management in Listed Company – The Stock Exchange of Thailand: 1

- Director and Director to Risk Management Committee, Global Green Chemicals Public Company Limited

Board Member / Management in Non-Listed Company – The Stock Exchange of Thailand: 1

- Chief Investment Officer, GMM Music Public Company Limited

Positions in Other Company / Organization / Institution / Remarkable Positions: None

Work Experience (in the Last 5 Years):

- 2020 – August 2023 Executive Vice President, Group Investment, GMM Grammy Public Company Limited
- November 2017 – April 2020 First Vice President, Head of Investment and Product Solutions, Private Banking, CIMB Thai Bank Public Company Limited

Shareholding: None

Family Relationship with Other Directors, Executives, Major Shareholders of GGC or its Subsidiaries: Yes

- Family Relationship with a Major Shareholder of GGC

Mr. Kridsada Prasertsuko

Age: 59

Director / Director to Risk Management Committee / Managing Director

Date of Appointment:

1 January 2023

3 April 2023 (1st re-elected)

Education / Training:

- Master of Business Administration (International Program) Bangkok University (Joint Study with Ohio University, U.S.A.)
- Bachelor of Science Program (Occupational Health and Safety), Mahidol University
- Executive Education Program, INSEAD Business School, Singapore
- Business Leader, Sasin Institute of Business School
- Inspire Leader, GE Business Training Center
- Leadership Development, DDI Institute
- Leadership Development Program, Thammasat University
- Process Safety, Risk Management and Risk Management Auditing, Process Improvement Institute, U.S.A.
- Diploma in Risk Management, Sedgewick London England
- HAZOP Training, ICI Australia Engineering
- Modern Safety Management and Safety Program Auditing, International Loss Control Institute, Atlanta, U.S.A.
- Subsidiary Governance and Business and Legal Issues for Directors & Executives Class 2022, Director's Legal Liabilities, Ethical Leadership for new Era and High Performing Board & Board Effectiveness Class 2021 (In-house Programs by GC)
- Accelerating to Net-Zero (In-house Programs by GC)
- Financial Statements for Directors and Risk Management for Directors 2023 (In-house Programs by GC and EY Corporate Services Company Limited)
- The Executive Program, Gamified Cyber Simulation Workshop for Board & Executive Resilience 2024 (In-house Programs by GC)
- Crisis Communication for Executive (In-house Programs by GC)

Director Training:

- Director Certification Program (DCP) Class 269/2019, Thai Institute of Directors Association (IOD)

Board Member / Management in Listed Company – The Stock Exchange of Thailand: 2

- Director, Director to Risk Management Committee and Managing Director, Global Green Chemicals Public Company Limited
- Executive Vice President, Reporting to Value Added Products (COV), PTT Global Chemical Public Company Limited

Board Member / Management in Non-Listed Company – The Stock Exchange of Thailand: 6

- Chairman, GGC Biochemicals Company Limited
- Director, GGC KTIS Bio Industrial Company Limited
- Director, Khum Klao Innovation Company Limited
- Director, Khum Klao Convenience Company Limited
- Director, Khum Klao Coffee Garden Company Limited
- Director, Global Best Intertrade Company Limited

Positions in Other Company / Organization / Institution / Remarkable Positions: None**Work Experience (in the Last 5 Years):**

- October 2022 – December 2023 Senior Vice President, Reporting to Value Added Products (COV), PTT Global Chemical Public Company Limited
- 2023 Director, Quantum Technology Company Limited
- August 2018 – September 2022 Managing Director, NPC Safety and Environmental Service Company Limited
- April 2016 – September 2022 Chairman and Managing Director, NPC S&E Security Guard Company Limited

Shareholding: None**Family Relationship with Other Directors, Executives, Major Shareholders of GGC or its Subsidiaries: None**

Executives

(as of 15 January 2025)

Mr. Kridsada Prasertsuko

Age: 59

Managinag Director

Date of Appointment:

1 January 2023

(Details are disclosed in the Board of Directors Information)

Mr. Teerasak Na Chiangmai

Age: 60

Deputy Managing Director, Operational Excellence

Date of Appointment:

1 January 2024

Education / Training:

- Master of Business Administration, General Management – Suan Dusit University
- Bachelor of Science, Industrial Technology – Rajabhat Institute Rambhai Barni
- INSEAD: The Business School for the World: Leadership Communication with Impact Program
- Director Certification Program (DCP) Class 290/2020, Thai Institute of Directors Association (IOD)
- Development Dimensions International (DDI) Assessment Program, DDI Institute
- Leadership Development Program (LDP2), PTT Leadership and Learning Institute
- Management Development Programs (MDPs)
- IMS: Integrated Management System Aware Program
- Anti – Corruption for Executive Program
- Management Safety Leadership Program
- Hazard and Operability Studied Program (HAZOP)
- Enterprise Risk Management Program (ERM)
- Customer Intimacy & CRM In Action Program
- GRC (Governance, Risk, and Compliance) Program

Board Member / Management in Listed Company – The Stock Exchange of Thailand: 1

- Deputy Managing Director, Operational Excellence, Global Green Chemicals Public Company Limited

Board Member / Management in Non-Listed Company – The Stock Exchange of Thailand: 1

- Director, GGC Biochemicals Company Limited

Work Experience (in the Last 5 Years):

- 16 April – December 2023 Vice President, GC Logistics Solutions Company Limited
- 2023 Director, PT GCM Marketing Solutions Indonesia Company
- 2021 - 2023 Chief Operation Officer, GC Polyols Company Limited
- 2017 - 2021 Vice President, HDPE Plant I, PTT Global Chemical Public Company Limited

Shareholding: None

Family Relationship with Other Directors, Executives, Major Shareholders of GGC or its Subsidiaries: None

Mr. Piya Suri

Age: 54

Deputy Managing Director, Commercial Excellence

Date of Appointment:

1 October 2022

Education / Training:

- Master of Engineering in Water Resources, Kasetsart University
- Bachelor of Engineering in Water Resources, Kasetsart University
- 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

- Deputy Managing Director, Commercial Excellence, Global Green Chemicals Public Company Limited

Board Member / Management in Non-Listed Company – The Stock Exchange of Thailand: 2

- Director, Thai Ethoxylate Company Limited
- Director and Managing Director, GGC Biochemicals Company Limited

Work Experience (in the Last 5 Years):

- 2016 – 2022 Managing Director, Thai Ethoxylate Company Limited
- 2016 – 2022 Vice President, Reporting to Managing Director, Global Green Chemicals Public Company Limited

Shareholding: None

Family Relationship with Other Directors, Executives, Major Shareholders of GGC or its Subsidiaries: None

Mrs. Kunakorn Witthayapaisarn
Vice President, Internal Audit

Age: 58

Date of Appointment:

1 January 2018

Education / Training:

- B.A. (Accounting), Thammasat University
- Certified Internal Auditor, The Institute of Internal Auditors, U.S.A.
- Accreditation in Quality Assessment, The Institute of Internal Auditors, U.S.A.

Board Member / Management in Listed Company – The Stock Exchange of Thailand: 1

- Vice President, Internal Audit, Global Green Chemicals Public Company Limited

Board Member / Management in Non-Listed Company – The Stock Exchange of Thailand: None

Work Experience (in the Last 5 Years):

- 2020 – March 2024 Member, Audit Committee, National Higher Education Science Research and Innovation Policy Council

Shareholding: None

Family Relationship with Other Directors, Executives, Major Shareholders of GGC or its Subsidiaries: None

Mrs. Boodsada Seema

Age: 56

Vice President, Corporate Affairs and Corporate Secretary

Date of Appointment:

1 October 2021

Education / Training:

- Master of Art, Language and Communication, National Institute of Development Administration
- Bachelor of Education, Secondary Education (English – French), Chulalongkorn University
- Advances for Corporate Secretaries 2020, Thai Listed Companies Association
- Corporate Secretaries Professional Development Program Class 1/2021, Thai Listed Companies Association
- Company Secretary Program (CSP) Class 18/2006, Thai Institute of Directors Association (IOD)
- Effective Minutes Taking (EMT) Class 3/2006, Thai Institute of Directors Association (IOD)
- Board Reporting Program (BRP) Class 11/2013, Thai Institute of Directors Association (IOD)
- Company Secretary Refreshment Training Program (RFP) Class 4/2021, Thai Institute of Directors Association (IOD)
- Corruption Risk and Control Workshop (CRC) Class 18/2023, Thai Institute of Directors Association (IOD)
- Director's Guide to Legal Obligations and Duties (DLD) Class 3/2024, Thai Institute of Directors Association (IOD)
- APCG & Anti-Corruption Working Paper Briefing, Director's Legal Liabilities, and Ethical Leadership for New Era 2021 (In-house Programs by GC)
- Financial Statements for Directors and Risk Management for Directors 2023 (In-house Programs by GC and EY Corporate Services Company Limited)
- Insight in SET: Knowledge of Growth and Sustainability in the Capital Market Class 2, The Stock Exchange of Thailand

Board Member / Management in Listed Company – The Stock Exchange of Thailand: 2

- Vice President, Corporate Affairs and Corporate Secretary, Global Green Chemicals Public Company Limited
- Vice President, Reporting to Corporate Governance and Legal, PTT Global Chemical Public Company Limited

Board Member / Management in Non-Listed Company – The Stock Exchange of Thailand: None

Work Experience (in the Last 5 Years):

- 2019 – 2021 Division Manager, Subsidiary Board Management, PTT Global Chemical Public Company Limited

Shareholding: None

Family Relationship with Other Directors, Executives, Major Shareholders of GGC or its Subsidiaries: None

Mr. Jittasak Soonthornpan

Age: 45

Vice President, Corporate Finance and Accounting

Date of Appointment:

1 January 2024

Education / Training:

- Master of Science, Financial Analysis and Fund Management – University of Exeter, United Kingdom
- Master of Arts, International Economics and Finance – Chulalongkorn University
- Bachelor of Business Administration, Finance – Thammasat University
- CFO Orientation Course, Stock Exchange of Thailand
- CFO Certification Program Class 23, Federation of Accounting Professions
- Director Certification Program (DCP) Class 329/2022, Thai Institute of Directors Association (IOD)
- TLCA Executive Development Program 2023, Thai Listed Companies Association (TLCA)

Board Member / Management in Listed Company – The Stock Exchange of Thailand: 2

- Vice President, Corporate Finance and Accounting, Global Green Chemicals Public Company Limited
- Vice President, Reporting to Finance and Accounting, PTT Global Chemical Public Company Limited

Board Member / Management in Non-Listed Company – The Stock Exchange of Thailand: None

Work Experience (in the Last 5 Years):

- March 2022 – February 2024 Director, PTT MCC Biochem Company Limited
- 2019 – 2023 Vice President, Corporate Finance & Investor Relations, PTT Global Chemical Public Company Limited

Shareholding: None

Family Relationship with Other Directors, Executives, Major Shareholders of GGC or its Subsidiaries: None

Ms. Pakawan Kamonchaivanich
Vice President, Corporate Strategy

Age: 41

Date of Appointment:

1 May 2024

Education / Training:

- Master of Business Administration (Executive), Business Administration, Sasin Graduate Institute of Business Administration of Chulalongkorn University
- Master of Engineering, Chemical Engineering, Chulalongkorn University
- Bachelor of Science (2nd Class Honours), Chemical Engineering, Chulalongkorn University

Board Member / Management in Listed Company – The Stock Exchange of Thailand: 1

- Vice President, Corporate Strategy, Global Green Chemicals Public Company Limited

Board Member / Management in Non-Listed Company – The Stock Exchange of Thailand: None

Work Experience (in the Last 5 Years):

- 2022 – 2024 Division Manager, Decarbonization Project Management Office, PTT Global Chemical Public Company Limited
- 2022 Division Manager, Office of COO- Value Added Products, PTT Global Chemical Public Company Limited
- 2017 – 2021 Division Manager, Office of COO- Center of Excellence, PTT Global Chemical Public Company Limited

Shareholding: None

Family Relationship with Other Directors, Executives, Major Shareholders of GGC or its Subsidiaries: None

Mr. Jiruss Rianchaiwanich

Age: 51

Vice President, Human Resource and Corporate Support

Date of Appointment:

1 January 2023

Education / Training:

- Doctor Degree in Industrail and Human Resources Development, King Mongkut University of Technology North Bangkok (KMUTNB)
- Master's degree, Science in Human Resource Development and Organization Development, National Institute of Development Administration
- Master of Business in Information System, Victoria University of Technology (VUT), Melbourne, Australia
- Director Certification Program (DCP) Class 219/2016, Thai Institute of Directors Association (IOD)
- Director Certified Program : Public Director Institute by King Prajadhipok's Institute (PDI) Class 23

Board Member / Management in Listed Company – The Stock Exchange of Thailand: 1

- Vice President, Human Resource and Corporate Support, Global Green Chemicals Public Company Limited

Board Member / Management in Non-Listed Company – The Stock Exchange of Thailand: None

Work Experience (in the Last 5 Years):

- 2022 Vice President, Reporting to Managing Director, Global Green Chemicals Public Company Limited
- 2021 – 2022 Vice President, Human Resources, Modernform Group Public Company Limited
- 2020 – 2021 Senior Digital Consultant, Digital Government Development Agency (Public Agency) (DGA)
- 2018 – 2020 Vice President, Human Resources, Zuellig Pharma Company Limited

Shareholding: None

Family Relationship with Other Directors, Executives, Major Shareholders of GGC or its Subsidiaries: None

Mr. Sutthisarn Khongaphirak
Vice President, Corporate Legal

Age: 52

Date of Appointment:

1 January 2023

Education / Training:

- Bachelor of Laws, Thammasat University

Board Member / Management in Listed Company – The Stock Exchange of Thailand: 1

- Vice President, Corporate Legal, Global Green Chemicals Public Company Limited

Board Member / Management in Non-Listed Company – The Stock Exchange of Thailand: None

Work Experience (in the Last 5 Years):

- October 2020 – 2022 Division Manager, Reporting to Managing Director, Global Green Chemicals Public Company Limited
- 2015 – 2022 Division Manager Legal, PTT Global Chemical Public Company Limited
- October 2015 – September 2020 Division Manager, Legal and Compliance, Global Green Chemicals Public Company Limited

Shareholding: None

Family Relationship with Other Directors, Executives, Major Shareholders of GGC or its Subsidiaries: None

Mr. Thodsaphorn Phienchob

Age: 57

Vice President, Engineering and Maintenance

Date of Appointment:

1 July 2023

Education / Training:

- B.Econ., Sukhothai Thammathirat Open University

Board Member / Management in Listed Company – The Stock Exchange of Thailand: 1

- Vice President, Engineering and Maintenance, Global Green Chemicals Public Company Limited

Board Member / Management in Non-Listed Company – The Stock Exchange of Thailand: None

Work Experience (in the Last 5 Years):

- 2020 – June 2023 Vice President, Operations, Global Green Chemicals Public Company Limited

Shareholding: None

Family Relationship with Other Directors, Executives, Major Shareholders of GGC or its Subsidiaries: None

Ms. Chompunuch Liamprawat

Age: 46

Vice President, Process Technology

Date of Appointment:

31 January 2020

Education / Training:

- MBA, National Institute of Development Administration
- M.Eng. (Chemical Engineering), King Mongkut's University of Technology Thonburi
- B.Sc. (Chemical Industrial), 2nd Class Honors, Chiang Mai University
- Certificate Event Marketing, William Angliss Institute, Melbourne, Australia
- Financial Statement for Directors (FSD), 2555

Board Member / Management in Listed Company – The Stock Exchange of Thailand: 1

- Vice President, Process Technology, Global Green Chemicals Public Company Limited

Board Member / Management in Non-Listed Company – The Stock Exchange of Thailand: None

Work Experience (in the Last 5 Years): None

Shareholding: None

Family Relationship with Other Directors, Executives, Major Shareholders of GGC or its Subsidiaries: None

Mr. Phromphron Isarankura Na Ayutthaya **Age: 57**
Vice President, Operations

Date of Appointment:

1 July 2023

Education / Training:

- MBA, National Institute of Development Administration
- B.Sc. (Industrial Chemistry), Chiang Mai University

Board Member / Management in Listed Company – The Stock Exchange of Thailand: 1

- Vice President, Operations, Global Green Chemicals Public Company Limited

Board Member / Management in Non-Listed Company – The Stock Exchange of Thailand: None

Work Experience (in the Last 5 Years):

- 16 August 2022 – June 2023 Vice President, Engineering and Maintenance, Global Green Chemicals Public Company Limited
- January – 15 August 2022 Division Manager, reporting to the Deputy Managing Director, Operational Excellence, Global Green Chemicals Public Company Limited
- July 2018 – December 2021 Division Manager, Quality Management (QMS), PTT Global Chemical Public Company Limited
- January – June 2018 Division Manager, Operational Excellent Management (OEMS), PTT Global Chemical Public Company Limited

Shareholding: 2,000 shares (accounting for 0.0001954% of the total shares as of 15 January 2025)

Family Relationship with Other Directors, Executives, Major Shareholders of GGC or its Subsidiaries: None

Mr. Ekaphong Govitgoongrai **Age: 52**
Vice President, Supply Planning and Feedstock Sourcing

Date of Appointment:

1 December 2020

Education / Training:

- MBA, Chulalongkorn University
- B.Eng. (Chemical Engineering), Chulalongkorn University
- Director Certification Program (DCP) Class 298/2020, Thai Institute of Directors Association (IOD)

Board Member / Management in Listed Company – The Stock Exchange of Thailand: 2

- Vice President, Supply Planning and Feedstock Sourcing, Global Green Chemicals Public Company Limited
- Vice President, Reporting to Strategy, Business Development and Commercial Excellence, PTT Global Chemicals Public Company Limited

Board Member / Management in Non-Listed Company – The Stock Exchange of Thailand: None

Work Experience (in the Last 5 Years):

- | | |
|--------------------------------|---|
| • June 2019 – December 2019 | Vice President, Reporting to the Managing Director, Global Green Chemicals Public Company Limited |
| • December 2019 – January 2022 | Director, Thai Eastern Top Seeds Oil Company Limited |
| • 2020 – 2021 | Director, GGC KTIS Bioindustrial Company Limited |
| • 2020 | Director and Managing Director, Thai Fatty Alcohols Company Limited |

Shareholding: None

Family Relationship with Other Directors, Executives, Major Shareholders of GGC or its Subsidiaries: None

Mrs. Tanyarut Boontheeikul **Age: 44**
Vice President, Business and Product Development

Date of Appointment:

16 August 2023

Education / Training:

- Doctor of Philosophy, Chemical Engineering, University of Michigan, USA
- Master of Science, Chemical Engineering, University of Michigan, USA
- Bachelor of Engineering, Chemical Engineering, Chulalongkorn University
- Director Certification Program (DCP) Class 358/2024, Thai Institute of Directors Association (IOD)
- Environmental Governance for Top Executives Certificates Class 10, Ministry of Natural Resources and Environment
- Certified Post Merger Integration Expert (CPMI), Institute for Mergers, Acquisitions & Alliances, Singapore
- Lay Judge, Intellectual Property and International Trade Court, Court of Justice, Thailand
- Climate Action Leader Forum (CALF) Class 1, Thailand Greenhouse Gas Management Organization (TGO), Ministry of Natural Resources and Environment

Board Member / Management in Listed Company – The Stock Exchange of Thailand: 1

- Vice President, Business and Product Development, Global Green Chemicals Public Company Limited

Board Member / Management in Non-Listed Company – The Stock Exchange of Thailand: None

Work Experience (in the Last 5 Years):

- 2016 – 2023 Division Manager, Downstream Business Development and JV Management, PTT Global Chemical Public Company Limited

Shareholding: None

Family Relationship with Other Directors, Executives, Major Shareholders of GGC or its Subsidiaries: None

Mr. Kawin Kaewkong

Age: 51

Vice President Sales and Marketing – Biofuels

Date of Appointment:

1 January 2023

Education / Training:

- Master Degree – Executive MBA at Sasin Graduated Institute of Business Administration of Chulalongkorn University
- Bachelor Degree – Chemical Engineering at King Mongkut Institute of Technology Thonburi

Board Member / Management in Listed Company – The Stock Exchange of Thailand: 1

- Vice President, Sales and Marketing – Biofuels, Global Green Chemicals Public Company Limited

Board Member / Management in Non-Listed Company – The Stock Exchange of Thailand: None

Work Experience (in the Last 5 Years):

- 2019 – 2022 Vice President for Sale & Marketing, Energy Absolute Public Company Limited

Shareholding: None

Family Relationship with Other Directors, Executives, Major Shareholders of GGC or its Subsidiaries: None

Mr. Suwit Chongkasemwong

Age: 45

Vice President, Sales and Marketing – Biochemicals

Date of Appointment:

1 March 2023

Education / Training:

- Master of engineering Management, University of Technology Sydney (UTS), Australia
- Bachelor of Science (Food Science and Technology) Faculty of Agro-Industry, Kasetsart University
- TLCA Executive Development Program (EDP 22/2022), Thai Listed Companies Association

Board Member / Management in Listed Company – The Stock Exchange of Thailand: 1

- Vice President, Sales and Marketing – Biochemicals, Global Green Chemicals Public Company Limited

Board Member / Management in Non-Listed Company – The Stock Exchange of Thailand: None

Work Experience (in the Last 5 Years):

- February 2018 – February 2023 Division Manager Product Sale and Technical Support, Global Green Chemicals Public Company Limited

Shareholding: None

Family Relationship with Other Directors, Executives, Major Shareholders of GGC or its Subsidiaries: None

Mr. Jakrit Rungsimanop

Age: 49

Vice President, Reporting to Managing Director

Date of Appointment:

1 May 2024

Education / Training:

- M.Eng. (Chemical Engineering), Chulalongkon University
- B.Eng. (Chemical Engineering), Khon Kaen University

Board Member / Management in Listed Company – The Stock Exchange of Thailand: 1

- Vice President, Reporting to Managing Director, Global Green Chemicals Public Company Limited

Board Member / Management in Non-Listed Company – The Stock Exchange of Thailand: None

Work Experience (in the Last 5 Years):

- | | |
|-----------------------------------|--|
| • June 2020 – April 2024 | Vice President, Corporate Strategy, Global Green Chemicals Public Company Limited |
| • 3 November 2020 – 29 April 2024 | Director, GGC Biochemicals Company Limited |
| • 2020 – 2022 | Director, Thai Fatty Alcohols Company Limited |
| • 2016 – 2020 | Division Manager, Strategy, Planning and Portfolio Management, Global Green Chemicals Public Company Limited |

Shareholding: None

Family Relationship with Other Directors, Executives, Major Shareholders of GGC or its Subsidiaries: None

Vice President appointed as Executive of GGC Subsidiaries and Join Venture

1. Mrs. Wacharee Hanwongpaiboon

Vice President, Reporting to Managing Director

Secondment as Managing Director, Thai Ethoxylate Company Limited

2. Mr. Chanasiri Vanit

Vice President, Reporting to the Deputy Managing Director, Operational Excellence

Secondment as Project Manager NBC2, GGC KTIS Bio Industrial Company Limited

3. Mr. Suchet Deemungmee

Vice President, Reporting to Managing Director

Secondment as Vice President, Human Resource and Corporate Support, Thai Ethoxylate Company Limited



Accounting Controller

GGC assigned Ms. Phunnapa Homyen, Division Manager, Accounting and Budgeting since March 1, 2022 to oversee the Company's accounting in accordance with relevant standards, laws and regulations.

Ms. Phunnapa Homyen**Age: 40****Division Manager, Accounting and Budgeting****Date of Appointment:**

1 March 2022

Education / Training:

- MBA, Chulalongkorn University
- B.Acc., Thammasat University
- Certified Public Accountant (CPA)
- Certified Internal Auditor, The Institute of Internal Auditor, U.S.A. (CIA)
- Financial statement analysis training course, Income Training Course (difference between accounting and tax), cash flow statement course and a training course on the changes and key issues of TFRS (22 hours of training)

Board Member / Management in Listed Company – The Stock Exchange of Thailand: 1

- Division Manager, Accounting and Budgeting, Global Green Chemicals Public Company Limited

Board Member / Management in Non-Listed Company – The Stock Exchange of Thailand: None**Work Experience (in the Last 5 Years):**

- | | |
|----------------------------------|---|
| • March 2022 – Present | Division Manager, Accounting and Budgeting, Global Green Chemicals Public Company Limited |
| • January 2021 – February 2022 | Senior Manager, Internal Audit, Thai Beverage Plc |
| • September 2015 – December 2020 | Accounting and Budgeting Manager, Thai Beverage Plc |

Shareholding: None**Family Relationship with Other Directors, Executives, Major Shareholders of GGC or its Subsidiaries:** None

Appendix 2

Details of Directors of Subsidiaries

Directorships in Subsidiaries / Joint Ventures / Related Companies of GGC's Directors / Executives

Directorships in Subsidiaries / Joint Ventures / Related Companies of GGC's Directors / Executives																	
Name		Subsidiary	Joint Venture	Indirect Joint Venture	Related Companies												
	GGC	GGC Bio	TEX	GKBI	PTT	GC	GCP	WGCL	GCM	GC Inter	GC BV	GCAS	GCA Corp	GCA	HMC	PTTAC	
1. Mr. Narongsak Jivakanun	<div></div>				<div></div>	<div></div> <div></div>				<div></div>	<div></div>	<div></div>	<div></div>	<div></div>			
2. Mr. Saroj Putthammawong	<div></div>					<div></div>	<div></div>	<div></div>	<div></div>						<div></div>	<div></div>	
3. Mr. Kridsada Prasertsuko	<div></div> <div></div>	<div></div>		<div></div>		<div></div>											
4. Mr. Teerasak Na Chiagmai	<div></div>	<div></div>															
5. Mr. Piya Suri	<div></div>	<div></div>	<div></div>														
6. Mrs. Wacharee Hanwongpaiboon	<div></div>		<div></div> <div></div>			<div></div>											

Remarks: Directorship tenure information for subsidiaries /associates /related companies for GGC's Directors /Executives as of January 15, 2025.

Subsidiarie

GGC Bio = GGC Biochemicals Co., Ltd.

Joint Venture

TEX = Thai Ethoxylate Co., Ltd.

Indirect Joint Venture

GKBI = GGC KTIS Bioindustrial Co., Ltd.

Remarks:

● = Chairman

● = Director

● = Executive

Related Companies

PTT = PTT Plc

GC = PTT Global Chemical Plc

GCP = GC Polyols Co., Ltd.

WGCL = WHA GC Logistics Co., Ltd.

GCM = GC Marketing Solution Co., Ltd.

GC Inter = PTTGC International Private Limited

GC BV = PTTGC International (Netherlands) B.V.

GCAS = GC America Sustainability Corporation

GCA Corp = PTTGC America Corporation

GCA = PTTGC America LLC

HMC = HMC Polymers Co., Ltd.

PTTAC = PTT Asahi Chemicals Co., Ltd.

Appendix 3

**Details of Vice President of Internal Audit and
Vice President of Corporate Affairs and Corporate Secretary**



Vice President of Internal Audit and Vice President of Corporate Affairs and Corporate Secretary (Compliance)

(1) Vice President of Internal Audit

The Audit Committee No. 8/2017 held on 21 December 2017 has approved the appointment of Vice President Internal Audit and Secretary to the Audit Committee, Mrs. Kunakorn Witthayapaisarn. Her appointment has been effective since 1 January 2018. Mrs. Kunakorn Witthayapaisarn is exceptionally well qualified to perform the duties due to her extensive experience in internal audit, internal control and risk management since 1992. She also attended a comprehensive internal auditor training course which was considered essential to performance of the job.

Thus, the appointment, removal and transfer of an internal auditor will be forwarded to the Audit Committee for consideration and approval as stated in the Charter of the Audit Committee.

Mrs. Kunakorn Witthayapaisarn

Age: 58

Vice President, Internal Audit

Date of Appointment:

1 January 2018

Education / Training:

- B.A. (Accounting), Thammasat University
- Certified Internal Auditor, The Institute of Internal Auditors, U.S.A.
- Accreditation in Quality Assessment, The Institute of Internal Auditors, U.S.A.

Board Member / Management in Listed Company – The Stock Exchange of Thailand: 1

- Vice President, Internal Audit, Global Green Chemicals Public Company Limited

Board Member / Management in Non-Listed Company – The Stock Exchange of Thailand: None

Positions in Other Company / Organization / Institution / Remarkable Positions: None

Work Experience (in the Last 5 Years):

- 2020 – March 2024 Member, Audit Committee, National Higher Education Science Research and Innovation Policy Council

Shareholding: None

Family Relationship with Other Directors, Executives, Major Shareholders of GGC or its Subsidiaries: None

(2) Vice President of Corporate Affairs and Corporate Secretary (Compliance)

GGC has appointed Mrs. Boodsada Seema as Vice President of Corporate Affairs and Corporate Secretary.

Her main responsibilities are to build the corporate profile as a listed company and make sure the Company follow rules and regulations of the Securities and Exchange Commission (SEC), the Stock Exchange of Thailand (SET), Public Limited Companies Act, B.E. 2535 (1992) and Securities and Exchange Act, B.E. 2535 (1992).

Mrs. Boodsada Seema

Age: 56

Vice President, Corporate Affairs and Corporate Secretary

Date of Appointment:

1 October 2021

Education / Training:

- Master of Art, Language and Communication, National Institute of Development Administration
- Bachelor of Education, Secondary Education (English – French), Chulalongkorn University
- Advances for Corporate Secretaries 2020, Thai Listed Companies Association
- Corporate Secretaries Professional Development Program Class 1/2021, Thai Listed Companies Association
- Company Secretary Program (CSP) Class 18/2006, Thai Institute of Directors Association (IOD)
- Effective Minutes Taking (EMT) Class 3/2006, Thai Institute of Directors Association (IOD)
- Board Reporting Program (BRP) Class 11/2013, Thai Institute of Directors Association (IOD)
- Company Secretary Refreshment Training Program (RFP) Class 4/2021, Thai Institute of Directors Association (IOD)
- Corruption Risk and Control Workshop (CRC) Class 18/2023, Thai Institute of Directors Association (IOD)
- Director's Guide to Legal Obligations and Duties (DLD) Class 3/2024, Thai Institute of Directors Association (IOD)
- APCG & Anti-Corruption Working Paper Briefing, Director's Legal Liabilities, and Ethical Leadership for New Era 2021 (In-house Programs by GC)
- Financial Statements for Directors and Risk Management for Directors 2023 (In-house Programs by GC and EY Corporate Services Company Limited)
- Insight in SET: Knowledge of Growth and Sustainability in the Capital Market Class 2, The Stock Exchange of Thailand

Board Member / Management in Listed Company – The Stock Exchange of Thailand: 2

- Vice President, Corporate Affairs and Corporate Secretary, Global Green Chemicals Public Company Limited
- Vice President, Reporting to Corporate and Governance and Legal, PTT Global Chemical Public Company Limited

Board Member / Management in Non-Listed Company – The Stock Exchange of Thailand: None**Work Experience (in the Last 5 Years):**

- 2019 – 2021 Division Manager, Subsidiary Board Management, PTT Global Chemical Public Company Limited

Shareholding: None

Family Relationship with Other Directors, Executives, Major Shareholders of GGC or its Subsidiaries: None

Appendix 4

Assets in Business and Valuation

Assets in Business

Key fixed assets of GGC and its subsidiaries

As of December 31, 2024 Net Book Value in the Company's financial statements is as follows:

List of Asset	Type	Net Book Value as of		
		December 31, 2023	December 31, 2024	Obligation
		(THB)	(THB)	(THB)
Plants, Machinery, Factory tools and Equipment	Property of the entity	3,285,275,061	3,165,713,282	No Obligation
Buildings and buildings improvement	Property of the entity	283,458,122	267,518,967	No Obligation
Land improvement	Property of the entity	21,579,748	19,115,895	No Obligation
Furnitures, fixtures and office equipment	Property of the entity / Leased asset	10,003,767	10,296,421	No Obligation
Vehicles	Property of the entity / Leased asset	1,180,606	780,604	No Obligation
Assets under construction	Property of the entity	233,004,824	163,252,404	No Obligation
	Net Book Value	3,834,502,128	3,626,677,573	

Leasehold

The list of leasehold of GGC and its subsidiaries as of December 31, 2024 is as below:

- (1) Title deed No. 111033 in Tambon Map Ta Phut, Amphoe Mueang Rayong, Rayong, occupying 27 rai 3 ngan 13.598 square wa, owned by PTT Global Chemical Plc. Lease period of 30 years from August 1, 2006, to July 31, 2036. Location of Methyl Ester Plant 1.
- (2) Title deed No. 123254 in Tambon Map Ta Phut, Amphoe Mueang Rayong, Rayong, occupying 9 rai 3 ngan 43.9 square wa, owned by PTT Global Chemical Plc. Lease period of 30 years from August 1, 2006, to July 31, 2036. Location of Methyl Ester Plant 1.
- (3) Title deed No. 126435 in Tambon Map Ta Phut, Amphoe Mueang Rayong, Rayong, occupying 28.70 square wa, owned by PTT Global Chemical Plc. Lease period of 16 years 7 months 15 days from December 17, 2019, to July 31, 2036. Location of Methyl Ester Plant 1.
- (4) Title deed No. 6150 in Tambon Khao Sok, Amphoe Nong Yai, Chon Buri, occupying 27 rai 2 ngan, owned by Thai Eastern Industrial Land Company Limited. Lease period of 30 years from April 1, 2016, to March 31, 2046. Location of Methyl Ester Plant 2.
- (5) Title deed No. 6150 in Tambon Khao Sok, Amphoe Nong Yai, Chon Buri, occupying 2 rai 2 ngan, owned by Thai Eastern Industrial Land Company Limited. Lease period of 30 years from March 1, 2018, to February 29, 2048. Location of Refined Glycerine Plant 2.

- (6) Title deed No. 111033 in Tambon Map Ta Phut, Amphoe Mueang Rayong, Rayong, occupying 2 rai 86.402 square wa, owned by PTT Global Chemical Plc. Lease period of 13 years 10 months from October 1, 2022, to July 31, 2036. Location of Fatty Alcohols Plant.

Other lease rights agreement as of December 31, 2024

- (1) 2 years lease agreement to rent the office building and common areas with Energy Complex Company Limited at No. 555/1 Energy Complex Building A, 4th Floor. The agreement covers 837 square metres and is effective from October 1, 2024 to September 30, 2027.
- (2) 3 years lease agreement to rent the office building with GC Estate Company Limited., at No. 888, 3rd Floor, Map Chalut – Laem Son Road, Tambon Huai Pong, Amphoe Mueang Rayong, Rayong. The agreement covers 750 square metres and is effective from September 1, 2023, to August 31, 2026.

Right of Use Assets

Right of use assets of GGC and subsidiaries as of 31 December 2024 is as follow:

Right of use assets	Net value after cumulative amortization and provision for asset impairment
Land	138,417,493
Building	16,680,200
Plants, Machinery, Factory tools and Equipment	180,535,827
Vehicles	25,961,693
Total net book value	361,595,213

Intangible Assets


Intangible assets of GGC and subsidiaries as of 31 December 2024 is as follow:

Intangible asset	Net value after cumulative amortization and provision for asset impairment
Production process patent fees	9,526,354
Goodwill	33,527,418
Other intangible assets	37,713,551
Total net book value	80,767,323

Trademarks and Service Marks

As of December 31, 2024, the Company own key trademarks for products are shown in the table below:

Service mark / Trademark		THAIOL	For industrial application of Fatty Alcohols
Country	Period		
Thailand	August 21, 2017 - August 21, 2027		
India	August 22, 2017 - August 22, 2027		
South Africa	September 7, 2017 - September 7, 2027		
Mexico	August 23, 2017 - August 23, 2027		
New Zealand	August 20, 2017 - August 20, 2027		
Indonesia	September 7, 2017 - September 7, 2027		
Malaysia	September 19, 2017 - September 19, 2027		
Chile	February 27, 2018 - February 27, 2028		
Philippines	March 10, 2018 - March 10, 2028		
Columbia	April 30, 2018 - April 30, 2028		
Argentina	August 15, 2018 - August 20, 2028		
Brazil	March 24, 2015 - March 24, 2025		
Canada	March 21, 2016 - March 21, 2026		

Service mark / Trademark			For chemical fertilizer products potassium sulfate
Country	Period		
Thailand	September 23, 2019 - September 22, 2029		

Other Intellectual Property Rights

At present, GGC hold no current intellectual property.

GGC engaged in a licensing agreement with UHDE GmbH (Uhde), which effective from September 7, 2006 under Uhde licensed the application of Agrar Technik's technology in the Company's Methyl Ester plants throughout the plants' operating periods. GGC fully paid the license fee as laid out in such agreement.

GGC also engaged in a licensing agreement with a leading Germany technology company for technological application in Fatty Alcohols plant through its operating period. Development of technology for Fatty Alcohols production belongs solely to the Company; in return, GGC is eligible for the rights to upgraded technology in its processes, but such rights are non-transferable and not limited to GGC fully paid the license fee as laid out in such agreement.

GGC engaged into a licensing agreement with PTT Global Chemical Public Company Limited (“GC”), which effective from October 1, 2024. under GC licensed the technology for the production and sale of C12-C14 Alkyl Benzoate for the duration of the contract.

Investment Promotion Certificates

GGC earned investment promotion certificates from the Office of the Board of Investment of Thailand (BOI) in the form of tax privileges, including corporate income tax rebates for net profits applicable to income generation of the business.

The details of GGC’s certificates valid as of December 31, 2024 are as below:

No.	Project	Issuance Date	Product and Production Capacity	Expiration Date	Note
1.	Production of Methyl Ester, Fatty Alcohols, Glycerin, and Potassium Sulfate	June 1, 2022	<ul style="list-style-type: none"> Produce Methyl Ester 300,000 tons annually Produce Fatty Alcohols 120,000 tons annually Glycerine 42,000 tons annually Produce Potassium Sulfate 4,500 tons annually 	June 25, 2026	
2.	Production of Biodiesel Certificate No. 59-1251-1-00-1-0	September 28, 2016	<ul style="list-style-type: none"> Produce Biodiesel or Methyl Ester 23,121,873 litres (or 200,000 tons) 	November 17, 2026	
3.	Production of Glycerin Certificate No. 60-1232-1-18-1-0	October 10, 2017	<ul style="list-style-type: none"> Refined Glycerine (99.5% purity or more), about 26,136 tons per year 	November 23, 2033	
4.	Production of Fatty Alcohols Certificate No. 65-1245-0-00-0-2	October 4, 2022	<ul style="list-style-type: none"> Produce Fractionated Fatty Alcohols 120,000 tons annually By products 1,700 tons of light end hydrocarbon fuels and 1,250 tons of residue 	Earn privileges only for machinery raw material and benefit which are not related to taxation.	Business Transfer from Thai Fatty Alcohols Co., Ltd. (TFA)

Appendix 5

Corporate Governance Policy and Guidelines and Business Code of Conduct

Independent Director Charter

Global Green Chemicals Public Company Limited

1. Objectives

The Independent Director Charter is prepared to identify the composition, qualifications, roles, duties, and responsibilities of the Company's Independent Directors with clarity, transparency, and efficiency, and in compliance with Good Corporate Governance to ensure confidence and reliability for all shareholders and stakeholders.

2. Composition and Qualifications of Independent Directors

- 2.1 Independent Directors must possess all the qualifications as defined in the Company's Corporate Governance and Business Code of Conduct Handbook. Such qualifications are required to be reviewed and endorsed at least once every year throughout their terms.
- 2.2 Independent Directors must comprise more than one-third of the Board of Directors. These Independent Directors must be experienced and fully qualified as per the specifications of the Capital Market Supervisory Board and the Company's Board of Directors.
- 2.3 An Independent Director can serve up to nine consecutive years, with the term of office starting from the date of the Company's listing on the Stock Exchange of Thailand (SET) or from the date of the first appointment as an Independent Director (as applicable).
- 2.4 The Chairman of the Independent Directors serves a term of three years from the day of the appointment. If he or she leaves the position or, under any circumstances, has to vacate his or her position before the term ends, the Independent Directors are to appoint a qualified replacement within three months from the day the position becomes vacant. The term of the appointed replacement will be the same as the remaining term of the former Chairman.

3. Scope of Duties and Responsibilities

Independent Directors are to maintain their neutrality at all times and are required to perform in the best interests of the Company as a whole, to ensure fair treatment for all shareholders. Duties and responsibilities towards the Board of Directors are as follows:

- 3.1 Provide suggestions and opinions to the Board of Directors concerning important issues related to the operations and the interests of the Company and its shareholders as well as other relevant stakeholders.
- 3.2 Encourage the Company to fully comply with the anti-corruption measures.
- 3.3 Encourage the Company to operate business based on social and environmental responsibilities.
- 3.4 Seek external advice from independent consultants if needed, with the Company providing the budget for such expenses.
- 3.5 Ensure that the Company operates according to all the rules and regulations issued by the regulatory body supervising listed companies with respect to Independent Directors. The Independent Directors are also to review the definition of 'Independent Director' to ensure that it is appropriate and complete according to laws.
- 3.6 Annually review the appropriateness of the Independent Director Charter and submit it to the Board of Directors for endorsement if there is any improvement or modification.
- 3.7 Engage in any duties as assigned by the Board of Directors as long as they do not interfere with the independent nature of the Independent Directors.

4. Meetings

- 4.1 At least one meeting of the Independent Directors is to be held in each calendar year. Members of management or any other concerned party in the matters being discussed, or other individuals as deemed fit, can also be invited to join the meetings.
- 4.2 The required quorum for the meeting of the Independent Directors is no less than two-thirds of all mandatory Independent Directors. The Chairman of the Independent Directors is also to act as the Chairman of the meeting. If, under any circumstances, the Chairman cannot chair the meeting, the quorum can appoint one of the Independent Directors present to act on behalf of the Chairman. When a vote is required in such meetings, each Independent Director is eligible for one vote. A majority of the votes are considered the resolution of the meeting. In case of equal votes of both sides, the Chairman of the meeting is to exercise his or her vote to decide the matter.
- 4.3 Independent Directors who may have a conflict of interest in any matter being discussed in a meeting must notify the Board of Directors or the Company about how the conflicts came about and are required to leave the meeting.

5. Reporting

The Independent Directors are required to provide their performance reports or any worthwhile issues to the Board of Directors on a regular basis.

6. Development and Performance Evaluation

The Independent Directors are encouraged to regularly participate in skill development programs or activities that contribute to the development of their knowledge, skills, and performance.

Effective from November 22, 2023.

(Mr. Kongkrapan Intarajang)
Chairman of the Board

Audit Committee Charter

Global Green Chemicals Public Company Limited

1. Objectives

The Board of Directors has deemed it appropriate to prescribe an Audit Committee Charter to compile details relating to composition, duties, responsibilities, and guidelines for the discharge of duties as assigned by the Board of Directors. This allows the Audit Committee to efficiently perform under the Securities and Exchange Act and the Stock Exchange of Thailand requirements. Furthermore, it has been driven as an important mechanism to promote the responsible discharge of duties of the Board of Directors by affording sufficient oversight of the operation of the Company, as well as giving opinions and suggestions freely and fairly to foster confidence and credibility of the Company's stakeholders.

2. Composition and Qualifications of Audit Committee Members

- 2.1 The Audit Committee is comprised of at least three Independent Directors. Their qualifications, duties, and responsibilities need to comply, at the minimum, with the criteria prescribed by the Securities and Exchange Act and the Stock Exchange of Thailand requirements. The Audit Committee needs to serve any other assignment as given by the Board of Directors or required by applicable laws. There shall be at least one of the Audit Committee Members who has adequate expertise and experience to review the credibility of the Company's financial reports.
- 2.2 The member of the Audit Committee shall hold office for a term of three years each. The expiration of the term of office includes the termination as Director of the Board, resignation, or removal.
- 2.3 The member of the Audit Committee who completed a term may be re-appointed by the Board of Directors.
- 2.4 If the member of the Audit Committee wishes to resign before the expiration of the term of office, he or she shall give notice of resignation in advance, including the reason for resignation to the Company. The Board of Directors shall appoint a person who is fully qualified as a substitute member of the Audit Committee within three months so that the number of members of the Audit Committee remains in full and the continuity of the Committee's work is ensured. The appointed member shall retain office for the remaining duration of the full term of the member whom he or she replaces.
- 2.5 The Board of Directors is to select one of the Audit Committee members to be the Chairman of the Audit Committee. The chief Internal Audit executive shall also hold the position of Secretary to the Audit Committee.
- 2.6 The Audit Committee shall receive relevant information related to the scope of duties, responsibilities of the Committee and the Company's operations, including techniques, continuous learning, and new development for internal audit which will increase the Audit Committee's efficient capabilities.

3. Scope of Duties

The Audit Committee has the duty to support corporate governance which promotes sustainable development especially in the process of financial reporting, internal control, risk management, corporate governance, and compliance with relevant laws and regulations with the following details:

3.1 Financial Reports and Audit

- Review financial reporting of the Company with management and the external auditor to ensure that the financial status of the Company is correctly, credibly, and sufficiently illustrated and that the Company complies with the Thai Financial Reporting Standards and other relevant laws.

- Consider, select, and propose the appointment of the Company's external auditor, recommend remuneration of such auditor in order to acquire a qualified, experienced, sufficient time-on and cooling-off periods and independent auditor, recommend the removal due to lack of ability to perform duty, dereliction, or malpractice, and assess the quality of the audit to support the external auditor's efficient operation.
- Consider and approve other non-audit services of the Company's External auditor to ensure that this service will not affect the independence of the auditor.
- Promote the independence of the external auditor and give opinions on the suitability of the auditor.

3.2 Internal Control, Risk Management, and Corporate Governance

- Review to ensure that the Company's internal control, risk management, and corporate governance are efficient, effective, encompassing all important aspects, as well as compliant with international standards.
- Review the Company's anti-corruption procedures to ensure efficient compliance with the guidelines of governing bodies, beginning with raising awareness, risk assessment, preventive systems, auditing, whistleblowing procedures, and others, to ensure that the Company exercises appropriate and efficient anti-corruption systems.

3.3 Internal Audit

- Review to ensure that the internal audit is sufficient and efficient. Internal auditors are applying knowledge and ability to identify significant risk to the Company and that Corporate Internal Audit complies with the professional standards for internal audit, and support an internal audit quality assessment to ensure conformance to international standards.
- Promote the independence of Corporate Internal Audit by providing recommendations in respect to the appointment, the transfer, and the merits of the chief audit executive and review with management and the chief audit executive to ensure an appropriate internal audit function in an organizational structure and internal audit resource sufficiency for the performing of duties in efficient and effective practices. If there are personnel limitations or if it is necessary to resort to specific knowledge and expertise, an external auditor can be hired as appropriate.
- Review and approve the Internal Audit Charter.
- Review and approve the annual audit plan that is consistent with the risk based and to support the Company's strategy.
- Review the audit report with the internal auditor.
- Promote collaboration among the Audit Committee, management, Corporate Internal Audit, and the external auditor to ensure unified direction and mutual assistance.
- Supervise other operations and activities beyond the internal audit by Corporate Internal Audit that will not impact the independence of the internal audit or the integrity of the internal auditor.

3.4 Compliance with Relevant Laws and Regulations

- Review the compliance process to ensure that the Company complies with the Securities and Exchange Act, Stock Exchange of Thailand requirements, and other laws, rules, and regulations relating to the Company's business.
- Review related parties transaction to ensure compliance with the laws and the requirements of the Stock Exchange of Thailand.
- Review the acquisition and disposition of asset transactions of significant value or size to non-related parties which require the Board or the shareholders approval. And to ensure that such transactions are reasonable and to the utmost benefit of the Company.

- Enhance the Company set up a reporting system of all related parties transactions and the acquisition and disposition of asset transactions under management approval authority to the Board regularly.
- Conduct an inspection upon being informed by the external auditor of suspicious circumstances that a director, manager, or any person responsible for the operation of the Company may have committed an offense as prescribed by the Securities and Exchange Act Section 281/2 paragraph two, Section 305, Section 306, Section 308, Section 309, Section 310, Section 311, Section 312, or Section 313, and report the result of preliminary inspection to the Securities and Exchange Commission and the auditor within thirty days after being informed by the auditor.

3.5 Anti-Corruption and Prevention of Conflicts of Interest and Other Corruption-Related Actions

- Review and ensure that the Company sets up measures for external parties, stakeholders, and its staff who can provide relevant information, clues, whistleblowing on corruption and other corruption-related behaviors.
- Review and ensure that the Company has appropriate measures against conflicts of interest and other corruption-related issues such as undue acceptance of assets or other benefits. And review that information provided in the Company Anti-corruption self-evaluation hereby the internal audit audited, is accurate and sufficient for submission to the Thai Private Sector Collective Action Against Corruption (CAC) Council.
- Monitor the progress of the actions following the Whistleblowing Policy and acknowledge the correction and prevention procedures set up by management.

3.6 Other Duties

- Seek the advice of an external consultant or expert, when necessary, at the expense of the Company.
- Review and revise the Audit Committee Charter at least once a year and propose any change to the Board of Directors for approval.
- In performing duties and assessing information, the Audit Committee shall observe and adhere to the Personal Data Protection Act B.E 2562 as well as additional and subsequent amendments and related internal regulations.
- Engage in any other duty as assigned by the Board of Directors in agreement with the Audit Committee.

4. Responsibilities

The Audit Committee is directly responsible to the Board of Directors in accordance with the assigned duties and responsibilities. In addition, the Board of Directors is responsible to third parties for the operation of the Company.

5. Meetings

5.1 The Audit Committee should meet at least six times a year. Members of management, relevant employees of the Company, or the external auditor may be invited to join the meetings to provide information or submit documents deemed relevant or necessary.

5.2 In every meeting of the Audit Committee, a quorum will be met with the presence of at least two-thirds of all Audit Committee Members in position at that time.

5.3 Any Audit Committee Member who may have conflicts of interest on the issue of consideration must report them to the meeting. After reporting and answering questions, he or she must be excluded from that session to allow the rest of the Audit Committee Members to continue with their suggestions and vote freely.

If the meeting resolves to secret voting and two-thirds of the Members view that the issue at stake does not make the Member lose his or her neutrality, then the Member can continue his or her task. But if the meeting resolves that the issue at stake will make the Member lose his or her neutrality, then the Member with conflicts of interest cannot vote. The Secretary to the Audit Committee shall report such conflicts of the Member in the minutes of the meeting.

5.4 Each member of the Audit Committee is entitled to one vote and the decision in the meeting shall be made by a majority vote. The Secretary to the Audit Committee does not have the right to vote. In the case of a tie, the Chairman is to cast a deciding vote.

5.5 The Audit Committee shall organize a meeting at least once a year with the Company's Managing Director and a meeting at least once a year as well with the external auditor without the attendance of management.

6. Reporting

6.1 An Audit Committee report must be prepared and published in the annual report, indicating the items required by the Stock Exchange of Thailand and signed by the Chairman of the Audit Committee.

6.2 The Audit Committee must quarterly and annually report to the Board of Directors the outcome of their performance, significant matters related to the audit report with impact on the Company's performance, as well as their opinions and important recommendations.

6.3 While performing duty, if the Audit Committee detects a questionable transaction or action with potentially significant impact on the Company's financial status and performance as follows:

- (1) Transaction with conflicts of interest.
- (2) Fraud, abnormality, or significant deficiency in the internal-control system
- (3) Violation of laws and regulations on securities and exchange, requirements of the Stock Exchange of Thailand, or other laws pertaining to the Company's business,

In these cases, the Audit Committee is to report to the Board of Directors for improvement or rectification within the timeframe deemed appropriate by the Audit Committee.

If the Board of Directors or management fails to improve or rectify it within the timeframe, the Audit Committee Members may report to the Securities and Exchange Commission or the Stock Exchange of Thailand.

7. Performance Evaluation

The Audit Committee must evaluate and report their performance to the Board of Directors to assure stakeholders of the duties of the Audit Committee based on complete responsibilities and efficiency.

Effective from March 20, 2024.

(Mr. Kongkrapan Intarajang)
Chairman of the Board

Nomination and Remuneration Committee Charter

Global Green Chemicals Public Company Limited

1. Objectives

The Board of Directors has deemed it appropriate to prescribe a Nomination and Remuneration Committee Charter to compile details relating to composition, qualifications, duties, responsibilities, and guidelines for the discharge of duties as assigned by the Board of Directors. This allows the Nomination and Remuneration Committee to fairly, appropriately, and transparently act in accordance with the corporate governance code to forge confidence and credibility for the Company's stakeholders.

2. Composition and Qualifications of Nomination and Remuneration Committee Members

- 2.1 The Nomination and Remuneration Committee is comprised of at least three (3) Directors and more than half of whom must be Independent Directors. The Chairman of the Nomination and Remuneration Committee must be an Independent Director.
- 2.2 The Nomination and Remuneration Committee serves a term of three years. A Nomination and Remuneration Committee Member completing a term may be reappointed by the Board of Directors.
- 2.3 If the position of a Nomination and Remuneration Committee Member becomes vacant for a reason other than completion of term under 2.2, namely termination as Director of the Board, resignation, or removal, reducing the number of the committee members but still more than half, the remaining members of the committee may continue their duty. The Nomination and Remuneration Committee shall appoint a person who are fully qualified to maintain the required number of the members at the first opportunity of a meeting of the committee in order to submit it to the Board. If the remaining members of the committee are fewer than half, making it impossible to hold a meeting, the Board shall appoint a Director with full qualifications as a committee member to maintain the required number of the members. In this case, the member will serve only the remaining term of the committee member whom he or she replaces.

3. Scope of Duties

- 3.1 Select and nominate a fully qualified candidate to fill in the position of a Director of the Board due to expired tenure or reasons other than tenure expiration. The procedure must adhere to the transparent screening and nomination criteria, including the consideration based on experience, profession, board skills matrix, and expertise necessary to the Company's business operation. This is to achieve a balance of different career fields and for the utmost benefit of the Company. The list of nominees may be selected from the Directors' Pool from trusted organizations, which will be presented at the Board of Directors' meeting and/or the Shareholders' meeting for approval.
- 3.2 Nominate Directors with appropriate qualifications as Directors of the Company's Sub-Committees and submit the nomination to the Board of Directors' meeting for approval.
- 3.3 Consider the guidelines and determine the remuneration of the Directors of the Board and Directors of Sub-Committees based on fair and reasonable criteria for further submission to the Board of Directors and the Shareholders' Meeting for approval.
- 3.4 Provide remuneration guidelines and criteria for annual performance of the Board of Directors based on the Board KPIs and prepare the performance evaluation form of the Board of Directors and the performance evaluation form of the Nomination and Remuneration Committee.

- 3.5 Select and nominate a Director of the Board with appropriate qualifications as the Managing Director, based on the criteria of transparency, experience, knowledge, leadership, and skills necessary to the Company's operations to accomplish its objectives and goals before submission to the Board of Directors for approval.
- 3.6 Consider the guidelines and determine the remuneration of the Managing Director by determining the topics and the criteria of the Managing Director's annual performance evaluation and evaluating the performance to determine appropriate remuneration before submission to the Board of Directors for approval.
- 3.7 Annually review the adequacy of the Nomination and Remuneration Charter. Any improvement or rectification shall be submitted to the Board of Directors for approval.
- 3.8 Engage in any other duty as assigned by the Board of Directors.

4. Responsibilities

The Nomination and Remuneration Committee reports directly to the Board of Directors in accordance with the duties and responsibilities ascribed to it, while the Board is responsible for the Company's business to third parties.

5. Meetings

- 5.1 The Nomination and Remuneration Committee should meet at least once a quarter. Member of management, executive, relevant employee of the Company, or another person may be invited to participate in the meeting to give opinions, or submit documents or information deemed relevant or necessary.
- 5.2 For all meetings of the Nomination and Remuneration Committee, a quorum will be met with the presence of at least two-thirds of all Nomination and Remuneration Committee Members in position at that time. In case, the Chairman cannot attend the meeting, the Committee Members attending the meeting shall select a member of the Committee to act as the Chairman of the meeting.
- 5.3 The Nomination and Remuneration Committee Members with a connected transaction on any matter being discussed must be excluded from voting on that matter, except for the determination of remuneration for the entire Board of Directors.
- 5.4 Resolution is passed by means of majority votes where one Nomination and Remuneration Committee Member has one vote. In the case of a tie, the Chairman of the Nomination and Remuneration Committee is to cast a deciding vote.

6. Reporting

The Nomination and Remuneration Committee must report the outcomes of their performance to the Board of Directors and prepare a Nomination and Remuneration Committee report signed by the Chairman of the Committee and disclose the report in the Company's 56-1 One Report.

7. Performance Evaluation

The Nomination and Remuneration Committee shall evaluate its performance and submit the findings of their annual evaluation to the Board of Directors.

Effective from October 14, 2022.

(Mr. Kongkrapan Intarajang)
Chairman of the Board

Corporate Governance and Sustainable Development Committee Charter

Global Green Chemicals Public Company Limited

1. Objectives

The Board of Directors has deemed it appropriate to prescribe a Corporate Governance and Sustainable Development Committee Charter to compile details relating to its composition, duties, responsibilities, and guidelines for the discharge of duties as assigned by the Board of Directors. This allows the Committee to formulate the policies, supervise, and promote sustainable development, and give advice and determine the guidelines according to the Company's corporate governance code and sustainable development appropriately and transparently, with the balance of Environmental, Social, and Governance (ESG) to create value of the Company's business growth, and sustainably create confidence and credibility of the stakeholders.

2. Composition and Qualifications of Corporate Governance and Sustainable Development Committee Members

- 2.1 The Corporate Governance and Sustainable Development Committee comprises at least three (3) Directors and at least one (1) being Independent Director. The Chairman of the Corporate Governance and Sustainable Development Committee must be an Independent Director.
- 2.2 The Corporate Governance and Sustainable Development Committee serves a term of three years. A Corporate Governance and Sustainable Development Committee Member completing a term may be reappointed by the Board of Directors.
- 2.3 In the case where the position of a Corporate Governance and Sustainable Development Committee Member becomes vacant for a reason other than completion of a term under 2.2, namely termination from Directorial position, resignation, or removal, and the number of Committee Members is reduced but more than half, the remaining Committee Members shall continue their duties. In case the number is fewer than half, thus making it impossible to hold a meeting, the Board of Directors may appoint another person with fitting qualifications to maintain the required number of Corporate Governance and Sustainable Development Committee Members as per this Charter. The replacement Member will serve only the remaining term of the Committee Member whom he or she replaces.

3. Scope of Duties

3.1 Corporate Governance

- (1) Prescribe directions and recommend policies or practices concerning the code of business conduct and ethics, as well as anti-corruption policies and measures in accordance with the Corporate Governance system to the Board of Directors and management for use as standardized proper practices of the organization.
- (2) Recommend and review the policies and practices on the responsibilities towards the Company's stakeholders and supervise, offer advice, and monitor the progress of operations concerning the Company's corporate governance, the effectiveness of which will also be evaluated.
- (3) Promote the organization's integrated management and supervise effective Governance, Risk Management, Internal Control, and Compliance (GRC).

3.2 Sustainable Development

- (1) Prescribe and review policies, strategies, and improve the Company's sustainable development goals with the Environmental, Social, and Governance (ESG) balance, in compliance with corporate governance based on national and global standards.
- (2) Offer advice and encourage the determination of the principles, policies, and strategies as well as the Company's operations in compliance with sustainable development principles to accomplish success, and encourage Directors, executives, and employees to effectively comply with the Company's sustainable development guidelines.
- (3) Supervise, monitor, assess, and disclose information on the practices of sustainable development to ensure balance, efficiency as well as maximum benefit for the Company and the stakeholders.

3.3 Others

- (1) Engage in any other duty as assigned by the Board of Directors.
- (2) Review the adequacy of the Charter annually and propose amendments to the Board of Directors for approval.

4. Responsibilities

The Corporate Governance and Sustainable Development Committee is responsible directly to the Board of Directors in accordance with the duties and responsibilities assigned to them. Additionally, the Board of Directors is responsible to third parties for the operation of the Company.

5. Meetings

Regularly report the execution by Independent Directors and any other report that are deemed important to the Board of Directors.

- 5.1 The Corporate Governance and Sustainable Development Committee should meet at least once a quarter. Members of management, executives, employees of the Company, or other relevant persons may be invited to participate in the meeting to provide opinions or submit documents or information deemed relevant or necessary.
- 5.2 For all meetings of the Corporate Governance and Sustainable Development Committee, the quorum will be met with the presence of at least two-thirds of all Committee Members in position at that time. In case the Chairman of the Corporate Governance and Sustainable Development Committee cannot attend a meeting, the Committee members who attend the meeting shall select a Member of the Committee to act as Chairman of the meeting.
- 5.3 The Corporate Governance and Sustainable Development Committee Members with a vested interest in any matter being reviewed must be excluded from the voting on that matter.
- 5.4 Resolution is passed by means of majority votes where one Corporate Governance and Sustainable Development Committee Member has one vote. In case of a tie, the Chairman of the Corporate Governance and Sustainable Development Committee is to cast a deciding vote.

6. Reporting

The Corporate Governance and Sustainable Development Committee must report its operations to the Board of Directors and prepare a committee report, signed by the Chairman of the Committee, in the 56-1 One Report.

7. Performance Evaluation

The Corporate Governance and Sustainable Development Committee must evaluate its performance and submit the findings of the annual evaluation to the Board of Directors.

Effective from October 14, 2022.

(Mr. Kongkrapan Intarajang)
Chairman of the Board

Risk Management Committee Charter

Global Green Chemicals Public Company Limited

1. Objectives

The Board of Directors has appointed the Risk Management Committee for prescribing the risk management policy that shall cover the entire Company. The Committee shall also oversee that the Company has in place systems or procedures of risk management to appropriately mitigate impacts on the Company's business. The composition, scope of duties, and responsibilities are set forth to ensure that the Risk Management Committee can discharge their duties effectively as delegated by the Board of Directors.

2. Composition and Qualifications of Risk Management Committee Members

- 2.1 The Risk Management Committee shall be comprised of at least three (3) Board Members appointed by the Board, of whom at least one (1) shall be an Independent Director. A Corporate Strategy Department executive shall act as the Secretary to the Committee
- 2.2 A member's regular term of appointment shall be three years. The member's expiration of the term of office includes termination as Director of the Board, completion of tenure as member of the Risk Management Committee, resignation, or dismissal.
- 2.3 If the tenure of a member of the Risk Management Committee is vacant due to other reasons than regular tenure completion, and if the remaining members of the committee are reduced but still number more than half, the remaining members of the Committee may continue their duty. If the remaining members are fewer than half or half, making it impossible to hold a meeting, the Board shall appoint a new member with all required qualifications to maintain the required number of members stipulated in this Charter. The appointed member shall retain office for the remaining duration of the full term of the member whom he or she replaces.

3. Scope of Duties

- 3.1 The Committee shall consider and review the policy, objectives, and risk management framework consistent with the goals and strategies of the Company's business, including a risk mitigation plan to ensure the continuity of the Company's business operations. The policy, objectives, and risk management framework are subject to annual review.
- 3.2 The Committee shall identify risks via scrutiny of internal and external factors that may prevent the Company from achieving its objectives. The Committee shall ensure that the impact and likelihood of identified risks are assessed and prioritized and that suitable risk mitigation strategies are used for the Company's efficient operations.
- 3.3 Provide opinions and recommendations on the corporate risk and investment risk management.
- 3.4 Monitor and evaluate the performance against the risk management framework.
- 3.5 Review the adequacy of the Charter annually and propose improvement and rectification to the Board for approval.
- 3.6 Discharge any other duty or responsibilities delegated to the Committee by the Board.
- 3.7 Provide opinions and recommendations on the GRC procedures.

4. Responsibilities

The Risk Management Committee reports directly to the Board of Directors in accordance with the duties and responsibilities ascribed to it while the Board is responsible for the Company's business to third parties.

5.Meetings

5.1 The Risk Management Committee should meet at least once a quarter. A member of management, executive, relevant employee of the Company, or another person may be invited to participate in the meetings to give opinions or submit documents or information deemed relevant or necessary.

5.2 For all meetings of the Risk Management Committee, the quorum will be met with the presence of at least three-quarters of all Risk Management Committee Members in position at that time. In case the Chairman cannot attend the meeting, the Risk Management Committee Members attending the meeting shall select a member of the Committee to act as the Chairman of the meeting.

5.3 The Risk Management Committee Members with a connected transaction on any matter being discussed must be excluded from voting on that matter.

5.4 Resolution is passed by means of majority votes where one Risk Management Committee Member has one vote. In the case of a tie, the Chairman of the Risk Management Committee is to cast a deciding vote.

6.Reporting

The Risk Management Committee shall report its undertakings to the Board of Directors on a quarterly basis. The report shall be signed by the Chairman of the Risk Management Committee and disclosed in the 56-1 One report.

7.Performance Evaluation

The Risk Management Committee shall annually conduct its own performance evaluation and report the results to the Board of Directors at least once a year.

Effective from December 14, 2022.

(Mr. Kongkrapan Intarajang)
Chairman of the Board

Corporate Governance Policy and Guidelines and Business Code of Conduct

Global Green Chemicals Public Company Limited (GGC) 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. GGC recognizes that its adherence to the principles of good corporate governance will contribute to the operational and management efficiency of GGC and a company under GGC. GGC also bolsters its credibility and fosters sustainable growth, not only for GGC itself but also for the society and the nation as a whole in order to achieve its vision “To be a Leading Green Chemical Company by Creating Sustainable Value”

GGC is committed to conforming to the Good Corporate Governance principles, which are in compliance with the Principles of Corporate Governance of the Organization for Economic Co-operation and Development (OECD), the Securities and Exchange Commission (SEC), and the Stock Exchange of Thailand (SET).

This is to ensure that the GGC Group’s businesses are conducted responsibly, ethically, fairly, transparently, and accountably, with a clear focus on the creation of utmost benefits for the shareholders and stakeholders, towards mutual trust and sustainable growth.

GGC disclosed its information via <https://www.ggcplc.com/en/corporate-governance/handbooks>



Scan QR Code

Appendix 6

Sub – Committee Reports

Report of the Audit Committee

Dear Shareholders,

The Audit Committee of Global Green Chemicals Public Company Limited (GGC) consists of Independent Directors who are highly qualified, with diverse knowledge, expertise, and experience. The composition and qualifications of the Audit Committee comply with the requirements of the Notification of the Capital Market Supervisory Board and the Stock Exchange of Thailand (SET). The members are as follows Prof. Dr. Kumchai Jongjakapun, Chairman of the Audit Committee, Mrs. Kannika Ngamsopee, member of the Audit Committee, Mrs. Sommai Siriudomset, member of the Audit Committee, and Lt. Gen. Titawat Satiantip, member of the Audit Committee (serving until April 24, 2024). The Audit Committee is supported by Mrs. Kunakorn Witthayapaisarn, Vice President of the Internal Audit, who serves as secretary to the Audit Committee.

The Committee independently executes its Charter duties in line with laws, rules, best practices, and current situations, and as approved and reviewed by the Board annually to ensure that GGC and its subsidiaries comply with CG Code and focus on sustainability development in line with applicable laws and requirements. It also ensures that GGC commands sufficient and effective risk management and internal control practices, compliance with applicable laws and regulations and disclosure of information as well as issuance of annual reports for stakeholders' confidence and credibility. The Committee remains dedicated to enhancing the efficiency and effectiveness of internal audit capabilities in line with international standards of the internal audit profession. This commitment aims to foster confidence, add value to GGC, and prioritize the best interests of all stakeholders.

In 2024 there were 11 Audit Committee meetings, eight of which were pre-scheduled and three were extraordinary sessions as requested to examine GGC's critical matters. Attendance details are as follows:

Name	Position	Attendance (out of eleven total)
Prof. Dr. Kumchai Jongjakapun	Chairman of the Audit Committee (Independent Director)	11/11
Mrs. Kannika Ngamsopee	Director to the Audit Committee (Independent Director)	11/11
Lt. Gen. Titawat Satiantip ⁽¹⁾	Director to the Audit Committee (Independent Director)	2/2
Mrs. Sommai Siriudomset	Director to the Audit Committee (Independent Director)	11/11

Remark: (1) At the Board of Directors' meeting No. 4/2024 on April 24, 2024, a resolution was passed to restructure the composition of the Audit Committee by reducing the number of its members. As a result, Lt. Gen. Titawat Satiantip ceased to hold the position of Audit Committee member, effective from April 24, 2024

The key highlights of the Audit Committee's duties and performance in 2024 are summarized as follows:

1. Review of Financial Reports

The Committee examined key information of the quarterly and annual financial statements and the consolidated financial statements of GGC Group. It reviewed the potential conflicts of interest, material issues, special items, and received clarification from the external auditor and Management to ensure accurate, complete, and credible financial statements, prepared under financial report standards, including sufficient disclosure of notes to these statements as well as benefit to users. Accordingly, GGC approved these financial statements, which have been reviewed and audited by the external auditor, who issued an unqualified opinion.

The Audit Committee also reviewed and approved the provision of Non-Audit Services (NAS) by the external auditor to ensure that such services would not impair the auditor's independence in their work with GGC. Furthermore, the Committee conducted private sessions with the external auditor, without the presence of Management or the internal audit function, to facilitate independent discussions. These discussions focused on the adequacy of information provided, the examination of material information used in the preparation of financial statements, and the accuracy and compliance of disclosures with financial reporting standards to ensure their utility to financial statement users. Key Audit Matters (KAM) and the auditor's independence in performing their duties were also addressed. The external auditor confirmed full cooperation from management during the review and audit processes, noted no material issues, and reported no indications of suspicious behavior by the management team.

2. Appointment of the External Auditor and Audit Fees

The Committee considered, selected, and proposed the appointment and the audit fees of GGC's external auditor, based on independence, qualifications, skills, competence, business experience – which were recognized and remarkable – and the independence of the external auditor against the code of ethics for professional accountants and the Securities and Exchange Commission (SEC)'s regulations, including its appropriate audit fees. The Committee submitted its recommendations for the appointment and audit fees to the Board of Directors for approval, which were subsequently presented to the Annual General Meeting of Shareholders for final consideration.

For the fiscal year 2024, the shareholders approved the appointment of KPMG Phoomchai Audit Ltd. (KPMG) as GGC's external auditor.

3. Review of Risk Management Process

The Committee monitored information on corporate risk management covering the implementation of risk mitigation plans and risk management framework set by GGC for efficient risk mitigation. These efforts are guided by risk management performance reports, which are submitted regularly to the Risk Management Committee for specialized oversight in alignment with the established reporting schedule. Additionally, the Committee evaluates the effectiveness of risk management practices within operational processes, as outlined in internal audit reports. This ensures that GGC upholds a robust risk management system with clearly defined responsibilities and the adoption of appropriate mitigation measures.

4. Review of Internal Control System

The Committee reviewed the internal control systems of GGC's and GGC Group's based on risk-based audit reports and Management's implementation of improvements recommended by the Internal Audit Department. The Committee also assessed internal controls over accounting and financial processes, as audited by the external auditor, with no material deficiencies identified. Furthermore, the Committee evaluate the GGC's self-assessment of internal control adequacy in accordance with the Securities and Exchange Commission (SEC) guidelines and considered feedback from the Internal Audit Department. The Committee concludes that GGC's internal control systems are adequate and effective in supporting its operations and achieving its objectives.

5. Review of Corporate Governance Practices

The Committee reviewed GGC's whistleblower process to ensure its efficiency and fairness, emphasizing the importance of employee awareness and transparent complaint handling. Additionally, the Committee assessed internal audit reports on fraud risk, confirming that GGC's internal controls are adequate to effectively mitigate such risks.

The Committee acknowledged the GGC's updated Anti-Corruption Policy and Guidelines for 2024, which were revised with the approval of the Corporate Governance and Sustainability Committee. These updates were designed to align with the criteria outlined in the Self-Evaluation Checklist (CAC Checklist) and the guidelines established by PTT Global Chemical Public Company Limited (GC). Upon evaluation, the Committee concluded that the revised policy and guidelines are appropriate, comprehensive, and effective in supporting GGC's anti-corruption objectives.

6. Oversight of Internal Audit

The Committee established an Internal Audit Policy that defined the scope, qualifications, independence, and framework for audit activities, ensuring alignment with international standards and operational efficiency. The Internal Audit Charter was reviewed annually to maintain independence and effectiveness, reinforcing stakeholder confidence. The Committee approved the annual audit plan, which focused on key risks and supported strategic objectives. It reviewed findings, provided recommendations, and monitored corrective actions to strengthen governance and internal controls. A quality assurance program was in place to ensure ongoing compliance with international standards. To uphold independence, the Committee, in collaboration with the Managing Director, conducted an annual performance evaluation of the Vice President of Internal Audit based on KPIs aligned with the GGC's performance assessment criteria.

7. Review of Compliance Practices

The Committee reviewed and commented on GGC's engagement in related-party transactions, both acquisition and sale, or those with potential conflicts of interest to ensure compliance with laws and SET's requirements so that such transactions would be reasonable, fair, transparent, and in the best interests of GGC and shareholders, and that disclosure of information might be thorough. Additionally, the Committee ensured that the Company established a reporting process for transactions approved by Management, with regular updates provided to the Board of Directors. The Committee acknowledged the external auditor's confirmation that related party disclosures were complete, with no irregularities identified.

Internal audit reviews similarly found no instances of legal or regulatory non-compliance affecting the Company. Furthermore, there were no reports from the auditor, external complaints, or Management disclosures indicating significant non-compliance with applicable laws.

8. Audit Committee's Quality Assurance

The Committee reported its performance outcomes to the Board for acknowledgment quarterly and annually. At the end of each year, it conducted group and individual self-assessment and then reported the findings for the Board's acknowledgment and helpful recommendations on its performance. The Committee also stayed updated on key business directions, including sustainability initiatives such as Decarbonization and Carbon Credit Management, as well as other operational matters. This ensured the Committee executes its responsibilities efficiently and aligns with the Company's strategic objectives.

The Committee's overall opinion was that GGC commanded financial reports that were both accurate and credible under generally acceptable accounting principles. These reports disclosed adequate data and benefited users of financial statements. GGC complied with applicable business laws, corporate governance, risk management practices, and an adequate and effective internal control system. In addition, Internal Audit successfully executed its plans and conformed to the international scope of the internal-audit profession with commitment to a code of conduct and independence, thus enabling the unit to fully support the Committee's duties while generating value added for GGC.

In summary, the Audit Committee performed its duties and responsibilities as specified by the Audit Committee Charter by applying competence, caution, prudence, and sufficient independence as well as providing comments and suggestions, with due regard to the equitable treatment of all stakeholders and to their utmost interests. In performing its duties, the Audit Committee received excellent cooperation from the Board, Management, the external auditor, Internal Audit, and all parties involved.

On behalf of the Audit Committee

(Professor Dr. Kumchai Jongjakapun)
Chairman of the Audit Committee

Report of the Nomination and Remuneration Committee

Dear Shareholders,

The Nomination and Remuneration Committee consists of three members, more than half of whom are Independent Directors, for transparent performance in line with the corporate governance code. It is chaired by Mr. Jarun Wiwatjesadawut, with Mr. Saroj Putthammawong and Lt. Gen. Titawat Satiantip serving as members.

In 2024 the Committee provided useful recommendations for Board Skills Matrix revision that proved suitable for the Board, performance assessment, and compensation-setting for the Board and the Managing Director completely in line with the mission specified in the Committee's own charter and as assigned by the Board. A total of 6 meetings were held, with the following attendance records.

Name	Position	Attendance (out of six total)
Mr. Jarun Wiwatjesadawut	Chairman of the Nomination and Remuneration Committee (Independent Director)	6/6
Lt. Gen. Titawat Satiantip	Director to the Nomination and Remuneration Committee (Independent Director)	6/6
Mr. Saroj Putthammawong ⁽¹⁾	Director to the Nomination and Remuneration Committee	5/5

Remark: (1) At the Board of Directors' meeting No. 1/2024 on January 17, 2024, a resolution was passed to appoint Mr. Saroj Putthammawong as a member of the Nomination and Remuneration Committee, replacing Mr. Varit Namwong, who resigned. The appointment took effect on January 17, 2024.

The key highlights of the Nomination and Remuneration Committee's duties and performance in 2024 are summarized as follows:

1. Nomination and Selection of Directors and Sub-Committees

- The Board Skills Matrix was reviewed and refined to ensure its appropriateness and alignment with both national and international assessment standards, including the assessment criteria of S&P Global, the Corporate Governance Code for Listed Companies 2017 (CG Code) issued by the Securities and Exchange Commission (SEC), best practices for nomination committees recommended by the Thai Institute of Directors Association (IOD), and the Global Industry Classification Standard (GICS). The updated matrix supported the nomination and selection of Board Directors and Sub-Committees, ensuring a diverse range of expertise, skills, and experience to effectively contribute to GGC future operations.
- Nominated Directors in place of those due to retire at the 2024 AGM for the Board's and the AGM's approval under transparent criteria on the nomination process. The recommendations, aligned with legal, regulatory, and corporate governance standards, considered the Board Skills Matrix, as well as nominees' expertise, diversity, and relevance to GGC's business strategy. Candidates were also reviewed from the Thai Institute of Directors Association (IOD) Director's Pool, and shareholders were invited to propose qualified nominees over a three-month period. As no nominations were received, the Committee therefore

recommended the reappointment of Pol. Gen. Suchart Theerasawat, Mr. Jarun Wiwatjesadawut, Lt. Gen. Titawat Satiantip, and Mr. Thanakorn Manoonpol. All of them were fully qualified, without prohibited characteristics under applicable laws and criteria, with knowledge, competence, and experience relevant to GGC's business strategies. The 2024 Annual General Meeting of Shareholders approved the Committee's proposal.

- Nominated and selected a qualified candidate, Mr. Narongsak Jivakanun, to replace a Director who resigned during 2024. The selection process adhered to legal and regulatory requirements, the articles of association, and the CG code. The evaluation also considered the candidate's expertise, professional qualifications, and alignment with the diverse skill sets outlined in the Board Skills Matrix. The Board, following the Committee's recommendation, approved the appointment.
- Nominated qualified candidates to the Board to fill the vacant position and strengthen the composition of the specialized committee. The proposed candidates were submitted to the Board of Directors for approval, in compliance with SEC and SET regulations, the articles of association, and committee charters. Candidate evaluation prioritized qualifications, expertise, skill diversity (Board Skills Matrix), and specialized experience to support the Committee's effectiveness and responsibilities.

2. Remuneration of Directors, Sub-Committees, and the Managing Director

- Determined the remuneration-setting for the Board and Sub-Committees for 2024 and bonus-setting for 2023 for approval by the Board and the AGM by reviewing suitability under the CG Code, namely GGC's performance in comparison with the current economics of businesses related to petrochemical and oleochemicals, principles and policies approved by shareholders, duties and responsibility, the Board's annual performance assessment outcomes, and Board compensation data of companies of industry peer. In light of GGC's decision to forgo dividend payments for 2023, it was proposed that no directors' bonuses be paid. The proposal was subsequently approved by the Board and the 2024 Annual General Meeting of Shareholders.
- Determined the 2024 compensation for the Managing Director based on performance outcomes and assigned responsibilities, applying transparent and fair criteria aligned with annual performance outcomes against KPIs, and submitted for the Board's approval.

3. Performance Assessment of the Board and Top Executive

- Reviewed the 2024 performance assessment forms for the Board, including group assessments, individual assessments, and peer assessments, to ensure they were comprehensive, up-to-date, and aligned with the Corporate Governance Code for Listed Companies 2017 (CG Code), S&P Global assessment criteria, and the ASEAN Corporate Governance Scorecard. The assessment outcomes formed part of the review of the Board's annual compensation in addition to GGC's performance outcomes.
- Defined the criteria for the Managing Director's 2024 performance assessment and proceeded with the assessment to decide proper and fair compensation before tabling it for the Board's approval, acknowledgment, and recommendations on his annual performance outcomes.

4. Performance Development of the Nomination and Remuneration Committee

- Scheduled five meetings in advance for 2025 with additional meetings as seen fit so that the Directors may be fully prepared for the meetings and devote their time to consider and acknowledge GGC's operations and make recommendations to the Board and Management
- Reviewed and refined the Board Skills Matrix to ensure alignment with the CG Code, IOD's best practices for nomination committee, S&P Global assessment criteria, the Global Industry Classification Standard (GICS), and the Skills Matrix guidelines issued by the State Enterprise Policy Office. The updated Board Skills Matrix was applied in the nomination and selection of Directors and Sub-Committees, ensuring that the Board's composition reflected a diverse range of knowledge, expertise, and experience, effectively supporting GGC's business strategy.
- Reviewed the performance assessment form of the Committee for 2024 for completeness and compliance with current benchmarks and reported the assessment outcomes to the Board.
- Ensured the disclosure of all nomination and selection criteria for Directors as well as their compensation figures in the annual report and at the AGM in fulfillment of CGR criteria.

The Nomination and Remuneration Committee is committed to executing its duties with prudence and transparency in compliance with the CG Code to foster confidence among shareholders and all stakeholders in GGC's best interests to supplement long-term values.

On behalf of the Nomination and
Remuneration Committee

(Mr. Jarun Wiwatjesadawut)
Chairman of the Nomination and
Remuneration Committee

Report of the Corporate Governance and Sustainability Committee

Dear Shareholders,

The Corporate Governance and Sustainability Committee places a high priority on ensuring that the Company adheres to the principles of good corporate governance and sustainable development. The Committee is committed to conducting business with integrity, transparency, and a zero-tolerance policy toward fraud and corruption in all forms. It has incorporated the principles of good corporate governance, compliance with laws and regulations, and risk management (Governance, Risk, and Compliance: GRC) into operations at all levels. Additionally, the Committee strives to enhance its responsibilities toward society, communities, and the environment, thereby fostering trust among all stakeholders. The Corporate Governance and Sustainability Committee is made up of Pol. Gen. Suchart Theerasawat, Chairman, Lt. Gen. Titawat Satiantip, Mr. Kajohn Srichavanotai and Mrs. Sommai Siriudomset, members.

In 2024, the Committee fully executed its duties under the Charter of the Corporate Governance and Sustainable Development Committee and as assigned by the Board. A total of five meetings were held, with attendance details as follows:

Name	Position	Attendance (out of five total)
Pol. Gen. Suchart Theerasawat	Chairman of the Corporate Governance and Sustainable Development Committee (Independent Director)	5/5
Lt. Gen. Titawat Satiantip	Director to the Corporate Governance and Sustainable Development Committee (Independent Director)	4/5
Mr. Kajohn Srichavanotai	Director to the Corporate Governance and Sustainable Development Committee (Independent Director)	3/5
Mrs. Sommai Siriudomset ⁽¹⁾	Director to the Corporate Governance and Sustainable Development Committee (Independent Director)	4/4

Remark: (1) At the Board of Directors' meeting No. 4/2567 on April 24, 2024, appointed Mrs. Sommai Siriudomset to the Corporate Governance and Sustainable Development Committee, effective from April 24, 2024.

The key highlights of the Corporate Governance and Sustainable Development Committee's duties and performance in 2024 are summarized as follows:

1. Good Corporate Governance, Risk Management, and Compliance with Laws, Rules, and Regulations (GRC)

- Oversaw and monitored the Corporate Governance practices (CG) of GGC and GGC Group in line with domestic regulators and international standards:
 - Tracked GGC's corporate governance performance under the requirements and regulations of domestic regulators and international standards, including the strategies and business directions of the organization as well as approving the Good Corporate Governance Plan to concretely determine operational guidelines, monitoring, and assessment of GGC's corporate governance performance.
 - Supervised the organization of the Annual General Meeting of Shareholders (AGM) for the year 2024 via Electronic Means ensure a smooth and efficient meeting that aligned with the law, AGM Checklist practices and CG Codes. As a result, in 2024 GGC earned an "Excellent" rating (Perfect score) given by the Thai Investors Association.
 - Provided an approach to defining criteria for shareholders to propose agenda items for the shareholders' meeting and nominate directors in advance of the 2025 AGM.
 - Followed up and provided recommendations on the review of GGC's compliance with the Corporate Governance Code for listed companies 2017 of SEC (CG Code) to be presented to the Board and disclosed GGC's operations in Form 56-1 One Report.
 - Oversaw GGC's disclosure for completeness and alignment with regulators' requirements, namely the Form 56-1 One Report, integrated sustainability report, and information on GGC's website. Additionally, monitored and provided counsel on the preparation of GGC's self-assessment form for participation in the Corporate Governance Report (CGR) Project, using assessment criteria developed from the Organization for Economic Cooperation and Development (OECD). As a result, in 2024, the Company received an "Excellent" rating for the 7th consecutive year from the Thai Institute of Directors (IOD).
- Considered approving the revised Anti-Corruption Policy and the Corporate Governance and Business Code of Conduct Handbook.
- Promoted and strived the process of ensuring legal and regulatory compliance within the organization, aiming to prevent and minimize the occurrence of non-compliant practices. In 2024, no complaints or incidents of significant non-compliance with the law were identified, which could have impacted the organization.
- Oversaw GGC's compliant management through whistleblower channels to conform to the Whistleblower. Tracked complaints through quarterly report presentation, and provided recommendations to improve the efficiency of the complaint-handling process.
- Advised and promoted integrated organizational management embracing Governance, Risk Management & Internal Control and Compliance (GRC)
- Reviewed and approved the Governance, Risk Management & Internal Control and Compliance (GRC) plan for 2025 to establish clear operational guidelines, monitoring strategies and measurable performance indicators for GGC's operations.

2. Compliance with the Corporate Governance that Promotes Equitable Care and Accountability toward All Stakeholder Groups

- Ensured that GGC's business commanded stewardship of and responsibility for all stakeholders, including customers, suppliers, creditors, employees, communities, investors, shareholders, government agencies, society, the environment, safety and health through report presentation from responsible units every quarter. Furthermore, the Committee advised and constantly tracked performances to plan responses to the expectations of each stakeholder group.

3. Pursuit of Sustainable Development

- Developed a long-term strategic framework for sustainable development (2025–2030) to guide the GGC's progress in line with the United Nations' Sustainable Development Goals (SDGs). This strategy encompasses economic, social, and environmental dimensions to build confidence in sustainable business growth, create value, and elevate operational standards for recognition at both national and international levels. Additionally, it included monitoring and guiding sustainable development initiatives to ensure they aligned with the defined strategic objectives.
- Followed up on GGC's sustainable development operations in line with national and international standards. This included undergoing evaluations and attaining recognition, such as being listed as an S&P Yearbook Member, participating in assessments by the Carbon Disclosure Project (CDP), submitting Communication on Progress (CoP) reports to the United Nations Global Compact (UNGC), and engaging in supply chain sustainability evaluations (EcoVadis), among others. Action plans have been established to achieve future certifications and recognition, ensuring alignment with the GGC's strategy, global societal trends, and rapidly evolving challenges.
- Promoted the integration of Corporate Social Responsibility (CSR) initiatives with GGC's business operations. For example, the Sustainable Palm Oil Production and Procurement Project for Climate Mitigation and Adaptation (SPOPP CLIMA), which aimed to reduce the impacts of climate change. This project enabled 1,000 farmers, certified under the RSPO standard, to cultivate palm oil while reducing greenhouse gas emissions in agriculture and supporting carbon credit assessments. These efforts contributed to GGC's progress toward achieving its Net Zero goal by 2050. Another example was the Health & Personal Care Product (SE Project), which fostered livelihoods for the Koh Kok community enterprise, enhancing the quality of life for local communities. The project obtained licenses for product manufacturing, storage facilities, and product formulations from the Food and Drug Administration (FDA).
- Oversaw GGC's disclosure of materiality issues and salient actions on sustainability in the Form 56-1 One Report, the integrated sustainability report, and GGC's communication channels.

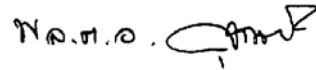
4. Execution of Duties, Assessment and Development of Directors

- Reported its own performance and performance assessment (group and self-assessment) for 2024 for the Board's acknowledgment.
- Reviewed the Corporate Governance and Sustainable Development Committee Charter for alignment with the duties and responsibility as well as conformance to relevant requirements, rules and regulations.

- Monitored and supervised the ongoing development of Directors under the Corporate Governance Code by encouraging Directors to attend IOD's various training courses.
- Reviewed the quality of its assessment form (group and self-assessment) to ensure conformance to the current situation, international standards and domestic regulators.
- Set a meeting plan in advance throughout the year, at least quarterly, with additional meetings as seen fit, to consider and acknowledge outcomes, and submitted reports/recommendations to the Board and Management.

The Corporate Governance and Sustainable Development Committee has prioritized ensuring that GGC adheres to policies on CG Policy, Business Code of Conduct, and strict compliance with Corporate Compliance Policy, as well as sustainable development initiatives. The Committee remains committed to continuously advancing the corporate governance of GGC and its affiliates to align with international standards. The committee collectively agrees that good corporate governance is a vital factor in driving GGC's operations efficiently and fostering sustainable business practices. This approach is aimed at building trust among all stakeholders and achieving recognition at the international level.

On behalf of the Corporate Governance
and Sustainable Development Committee



(Pol. Gen. Suchart Theerasawat)
Chairman of the Corporate Governance
and Sustainable Development Committee

Report of the Risk Management Committee

Dear Shareholders,

In 2024, GGC faced significant challenges stemming from various internal and external uncertainties. Key issues included geopolitical conflicts, such as the Russia-Ukraine crisis, the war between Israel and Hamas, and tensions between Taiwan and China, alongside the implications of the U.S. presidential election outcome. Furthermore, both domestic and global economic uncertainties added complexity to the operating environment. These factors collectively posed risks to the supply chain, drove raw material price volatility, and created exposure to exchange rate fluctuations, among other challenges.

GGC implemented measures to mitigate risks and monitored risk management across the organization, addressing internal operations and external challenges such as domestic and global economic volatility and a rapidly changing surrounding situation. Still, other factors gave GGC business opportunities, including domestic and international economic stimulus measures, requirements and promotion of green businesses resulting from global greenhouse gas (GHG) reduction measures, and demand for green products. These issues have attracted GGC's attention to enable it to survive these challenging times as well as business transition to clean energy and low-carbon products, pursue business opportunities, and enhance its competitiveness and foster sustainable growth. In 2024, GGC significantly improved its global sustainability score in the S&P Global Corporate Sustainability Assessment (CSA) for Risk & Crisis Management, reflecting its commitment to effective risk management and adherence to international standards. The Risk Management Committee continually monitored and commented on GGC's approaches and advice concerning risk management and mitigation measures for various crises, embracing key issues and short-term as well as long-term goals. The Committee also advocated integrated Governance, Risk and Compliance (GRC) actions so that these systematically linked elements may form one process. This integration enabled proactive and efficient responses to risks. With cooperation from all Executives and employees, GGC overcame obstacles and challenges, demonstrating resilience and strengthening its risk management framework to adapt to an evolving business landscape.

GGC values risk management, cultivation of a risk management culture across the organization, supervision of corporate risk management at an appropriate level under the corporate governance code, and implementation of an efficient risk management process to enable the organization to achieve its business goals and foster confidence among shareholders. GGC also assesses risks from external factors or unforeseen incidents that could impact operations. It regularly refines mitigation strategies and risk management frameworks to ensure they are comprehensive and effective in addressing challenges.

The Risk Management Committee performed its duties within the scope of authority, duties, and responsibility as assigned by the Board, as fully defined in the Risk Management Committee Charter. In 2024, the Committee convened a total of six meetings, with details of attendance as follows:

Name	Position	Attendance (out of six total)
Mrs. Kannika Ngamsopee	Chairman of the Risk Management Committee (Independent Director)	6/6
Mr. Jarun Wiwatjesadawut	Director to the Risk Management Committee (Independent Director)	6/6
Mr. Saroj Putthammawong ⁽¹⁾	Director to the Risk Management Committee	6/6
Mr. Thanakorn Manoonpol	Director to the Risk Management Committee	6/6
Mr. Kridsada Prasertsuko	Director to the Risk Management Committee	6/6

Remark: (1) At the Board of Directors' meeting No. 1/2024 on January 17, 2024, a resolution was passed to appoint Mr. Saroj Putthammawong as a member of the Risk Management Committee, effective from January 17, 2024.

The key highlights of the Risk Management Committee's duties and performance in 2024 are summarized as follows:

1. The Committee constantly steered, monitored, provided opinions, and made recommendations on corporate risk and crisis management for 2024, embracing risks arising from external and internal factors. It also valued risk factors and opportunities concerning sustainable business to ensure that GGC commanded adequate measures for risk factors and crises efficiently and promptly. This enabled it to maintain its risk appetite. Additionally, the Committee offered insights on strategies to mitigate the impact of emerging risks. Performance reports were submitted to the Board on a quarterly basis or as needed when risks were identified that could significantly impact GGC's short-term objectives (corporate KPI) or long-term goals (corporate business plans).
2. The Committee considered and commented on the improvement and review of the risk management framework in various aspects for alignment with situations, namely risk management of the volatility of feedstock and product prices, inventory management amid volatile feedstock prices, and risk management of foreign exchange rates amid volatile global financial markets.
3. The Committee provided strategic insights and recommendations for managing risks related to the GGC's product market. It closely monitored the implementation of inventory risk management frameworks and tracked foreign exchange rate movements. To mitigate exchange rate risks effectively, GGC utilized financial tools from commercial banks, ensuring alignment with established targets. These measures were designed to remain flexible and adaptable to prevailing conditions, minimizing potential impacts on GGC's financial performance. Moreover, the Committee made suggestions on risk management and the pursuit of business opportunities for key projects as well as risk management for affiliates' performances, cyberthreats, and sustainable development.

4. The Committee evaluated and provided strategic insights and recommendations on GGC's long-term organizational objectives, ensuring alignment with significant global trends and GGC's business growth strategy. Also, it reviewed risk factors impacting financial strategies for GGC's business transformation.
5. The Committee reviewed, provided insights, and offered recommendations on the results of the Risk and Control Self-Assessment (RCSA). This assessment served as a key tool for evaluating and strengthening the adequacy and effectiveness of internal controls at the process level across the organization.
6. The Committee reviewed and provided recommendations on the implementation of an integrated Governance, Risk, and Compliance (Integrated GRC) framework. This initiative aligned corporate governance, risk management, internal controls, and regulatory compliance, strengthened governance standards, and enhanced the efficiency of planning, monitoring, and evaluation processes. It ensured GGC effectively achieved its objectives and strategic goals.
7. The Committee scrutinized and approved the risk factors and the corporate risk management measure for 2025 and suggested guidelines for the preparation of mitigation plans in line with economic conditions, industrial trends, uncertainty, and approaches to sustainable business development to ensure that GGC can achieve its strategic and business goals. It also monitored the progress of remaining 2024 risk management initiatives, ensuring their efficient implementation in line with GGC's plans.
8. The Committee reviewed and revised the Risk Management Policy, the Risk Management Committee Charter, the organization's Risk Appetite, and Risk Tolerance to ensure alignment with the enterprise-wide risk management framework (COSO ERM 2017 "Enterprise Risk Management"). It also provided updates on the assessment results to the Board and disclosed the information in the Form 56-1 One Report.

In summary, the Risk Management Committee effectively fulfilled its chartered responsibilities, managing key organizational risks and enhancing risk management and internal control systems to align with standards, economic conditions, industry dynamics, and future trends. The Committee reviewed and updated critical risk management frameworks to remain adaptive to changing circumstances, emphasized fostering a strong risk management culture, and provided strategic guidance on business opportunities and risk mitigation. This comprehensive approach addressed both short-term and long-term strategic objectives while anticipating emerging risks. By maintaining a robust and effective risk management framework, the Committee ensured risks remained at acceptable levels, supporting the achievement of GGC's goals and sustainable long-term value creation.

On behalf of the Risk
Management Committee

(Mrs. Kannika Ngamsopee)
Chairman of the Risk
Management Committee

Abbreviations

Abbreviations	Detail
SET	The Stock Exchange of Thailand
The Company	(1) Global Green Chemicals Public Company Limited or (2) Global Green Chemicals Public Company Limited and TFA (as the case may be)
PTT Group, PTT affiliates	PTT and its subsidiaries or associates
GC Group, GC affiliates	GC and its subsidiaries or associates
PTT	PTT Public Company Limited
Securities and Exchange Act	Securities and Exchange Act B.E. 2535 (A.D. 1992) (and its amendment)
Public Limited Companies Act	Public Limited Companies Act B.E. 2535 (A.D. 1992) (and its amendment)
SEC	The Securities and Exchange Commission, Thailand
EPPO	Energy Policy and Planning Office
ONEP	Office of Natural Resources and Environmental Policy and Planning
AVT	AGC Vinythai Public Company Limited
Advanced Biochemical	Advanced Biochemical (Thailand) Company Limited
B5	Having a biodiesel content of 5% and diesel 95%
B7	Having a biodiesel content of 7% and diesel 93%
B10	Having a biodiesel content of 10% and diesel 90%
B15	Having a biodiesel content of 15% and diesel 85%
B20	Having a biodiesel content of 20% and diesel 80%
B30	Having a biodiesel content of 30% and diesel 70%
B35	Having a biodiesel content of 35% and diesel 65%
B40	Having a biodiesel content of 40% and diesel 60%
Bangchak Biofuel	Bangchak Biofuel Company Limited
BASF (Thai)	BASF (Thai) Company Limited
BCP	Bangchak Corporation Public Company Limited
BSA	Business Services Alliance Company Limited
Bio Complex	Biochemical Industrial Estate Project

Abbreviations	Detail
BOI	The Board of Investment Thailand
Cargill	Cargill Incorporated
Chevron	Chevron (Thailand) Limited
EIA	Environmental Impact Assessment
EFT	Eastern Fluid Transport Company Limited
Emery	Emery Oleochemicals LLC. and Emery Oleochemicals GmbH.
ENCO	Energy Complex Company Limited
EPO	Eastern Palm Oil Company Limited
EPS	Eastern Pipeline Services Company Limited
PTTGC, GC	Global Chemical Public Company Limited
GC BV	PTTGC International (Netherlands) B.V.
GCA	PTTGC America LLC
GCA Corp	PTTGC America Corporation
GCAS	GC America Sustainability Corporation
GCEC	GC Estate Company Limited
GCM	GC Marketing Solutions Company Limited
GCO	GC Oxirane Company Limited have already registered their dissolutions on March 31 st , 2023
GCP	GC Polyols Company Limited
GCME	GC Maintenance and Engineering Company Limited
GCI	GC International Corporation
GC Inter	PTTGC International Private Limited
GCTC	GC Treasury Center Company Limited
GGC Bio	GGC Biochemicals Company Limited
Glycol	Glycol Company Limited have already registered their dissolutions on August 31 st , 2022
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

Abbreviations	Detail
GKBI	GGC KTIS Bioindustrial Company Limited
GPSC	Global Power Synergy Public Company Limited
HMC	HMC Polymers Company Limited
HPC	Home and Personal Care products
ICIS	Independent Chemical Information Service, a unit of Reed Business Information Limited, a service provider of intelligence on chemical market prices and analyses, including those of petrochemicals and oleochemicals
IOD	Thai Institute of Directors
IRPC	IRPC Public Company Limited
KGC	Kuraray GC Advanced Materials Company Limited
KTBE	Ktis Bioethanol Company Limited
KTIS	Kaset Thai International Sugar Corporation Public Company Limited
Linde	Linde (Thailand) Public Company Limited
LMC International	LMC International Limited
MD&A	Management discussion and analysis
Modulus	Modulus Venture Company Limited
NatureWorks	NatureWorks LLC
NBC (Nakhonsawan Biocomplex)	Nakhonsawan Biocomplex Project
NPC	NPC Safety and Environmental Service Company Limited
NPCSG	NPC S&E Security Guard Company Limited
OR	PTT Oil and Retail Business Public Company Limited
PTTAC	PTT Asahi Chemical Company Limited (PTTAC), The Extraordinary General Meeting of PTTAC's Shareholders approved the business withdrawal plan
PTTEP	PTT Exploration and Production Public Company Limited
PTTT	PTT International Trading Pte Ltd
PTT Digital	PTT Digital Solutions Company Limited
PTT MCC	PTTMCC Biochem Company Limited

Abbreviations	Detail
PTTRM	PTT Retail Management Co.,Ltd
PPCL	PTT Phenol Company Limited have already registered their dissolutions on March ^{31st} , 2023
Shell	The Shell Company of Thailand Limited
SPRC	Star Petroleum Refining Public Company Limited
SUN	Solution Creation Company Limited
TEX	Thai Ethoxylate Company Limited
TETSO	Thai Eastern Top Seeds Oil Company Limited
TFA	Thai Fatty Alcohols Company Limited
TOP	Thai Oil Public Company Limited
Uhde	Uhde GmbH Germany, now known as ThyssenKrupp Industrial Solutions
Unilever	Unilever Thai Holdings Company Limited
UN	United Nation
WGCL	WHA GC Logistics Company Limited, WGCL has changed the company's name from GC Logistics Solutions Company Limited (GCL) since September 5 th , 2024

Glossary

Glossary	Detail
Palm Fatty Acid Distillate (PFAD)	By-product of the RBD Palm Oil refining process and the Methyl Ester process.
Palm Kernel Fatty Acid Distillate	By-product of the Crude Palm Kernel Oil refining process.
Free Fatty Acid (FFA)	Fatty acid that is not a molecular composition of Triglyceride.
Hydrogenation	Process of adding hydrogen to precursors, part of the Fatty Alcohols process.
Transesterification	Chemical reaction between fat or oil with alcohols to obtain Methyl Ester and Glycerine in the presence of catalysts.
Crude Glycerine	By-product of the process for Methyl Ester and Fatty Alcohols.
Refined Glycerine	Refined Crude Glycerine that is a precursor of personal care products.
Yellow Glycerine	Refined Crude Glycerine with impurities and a low boiling point.
Fatty Alcohol Residue	Product derived at the bottom of the Fatty Alcohols distillation tower, with a higher boiling point than those of C ₁₈ Fatty Alcohols.
Methyl Ester Residue	Product derived at the bottom of the Methyl Ester distillation tower, consisting of partially reacted oil, Methyl Ester with longer molecules than C ₁₈ , and other impurities.
Debottlenecking	Processes designed to solve problems or limitations for a given piece of machinery or equipment or a given procedure, resulting in greater capacity.
Nameplate Capacity	The maximum production rate when running at full capacity.
Base Diesel Fuel or Petroleum Diesel Fuel	Diesel obtained from Crude Oil (Petroleum) refining.
High Speed Diesel or Retail Diesel or Diesel	Diesel meant for domestic retail sale, a blend between base diesel and Methyl Ester at a proportion announced by the Department of Energy Business for use in high-revolution diesel engines, including passenger cars, trucks, tractors, and heavy machinery with over 1,000 revolutions per minute.
Crude Palm Oil (CPO)	Oil obtained from the pressing of fresh fruit bunches, a raw material for Methyl Ester or RBD Palm Oil.
RBD Palm Oil (RBDPO)	Oil obtained from CPO refining, a raw material for Methyl Ester.
Crude Palm Kernel Oil (CPKO)	Oil obtained from Palm Kernel Extraction, refinable into RBD Palm Kernel Oil.
RBD Palm Kernel Oil (RBDPKO)	Oil obtained from RBD palm kernel refining, a raw material for Fatty Alcohols.
Lauric Oil	Oil whose main composition contains Lauric Acid, a saturated Fatty Acid with 12 carbon atoms, commonly found in Crude Palm Kernel Oil and coconut oil.

Glossary	Detail
Biodiesel	Fuel obtained from natural products like vegetable oil and animal fats, whether used or new, for use in diesel engines. Biodiesel bears similar physical characteristics to petroleum diesel, but is classified as an alternative energy. As a rule, it may include Methyl Ester (called B100).
Palm Stearin	Edible palm fat derived from the separation of grease from the Palm Oil process, used for consumption.
Potassium Sulfate	Inorganic compound with formula K_2SO_4 , a white water-soluble solid. It is commonly used in fertilizers, providing both potassium and sulfur.
Fatty Acid	Basic Oleochemicals that are acidic, a precursor for many downstream industries, including food and personal-care industries (like soaps and cosmetics) and the rubber industry.
Fatty Alcohols	Basic Oleochemicals that are alcohol, a precursor of surfactants and personal-care products.
Pre-Cut Fatty Alcohols	Fatty Alcohols with short molecule chains, consisting of $C_6 - C_{10}$ Fatty Alcohols, that are not yet refined into grades of pure Fatty Alcohols.
Main-Cut Fatty Alcohols	Fatty Alcohols with $C_{12} - C_{18}$ molecule chains, consisting of $C_{12} - C_{14}$ (medium-long) and $C_{16} - C_{18}$ (long), that are not yet refined into grades of pure Fatty Alcohols.
Short-Chain Fatty Alcohols	Refined Fatty Alcohols containing short molecule chains. Upon refining, they yield C_6 , C_8 , and C_{10} Fatty Alcohols.
Mid-Chain Fatty Alcohols	Refined Fatty Alcohols containing medium-long molecule chains. Upon refining, they yield $C_{12} - C_{14}$ Fatty Alcohols.
Long-Chain Fatty Alcohols	Refined Fatty Alcohols containing long molecule chains. Upon refining, they yield C_{16} , C_{18} , or $C_{16} - C_{18}$ Fatty Alcohols.
Methyl Ester	Also called B100, Methyl Ester can blend with basic diesel into retail diesel as announced by the Department of Energy Business, and can be processed into downstream Oleochemicals.
Main-Cut Crude Methyl Ester	Medium-long and long-molecule Methyl Ester ($C_{12} - C_{18}$), an intermediate product group derived from Methyl Ester distillation for Fatty Alcohols.
Methanol	Chemical used in the Trans-esterification process.

Glossary	Detail
Raw Materials	Palm product, including Crude Palm Oil, RBD Palm Oil, Palm Kernel Oil, Crude Palm Kernel Oil, or RBD Palm Kernel Oil for production processes. Raw materials include chemical precursors, namely Hydrogen and Methanol.
Catalyst	Chemical used in the Methyl Ester process, namely Potassium Hydroxide or Sodium Methylate, designed to speed up Transesterification, and used in the Fatty Alcohols process, namely Hydrogenation Catalysts to speed up Hydrogenation.
Transesterification Unit	Methyl Ester production unit, where Palm Oil or Palm Kernel Oil reacts with Methanol in the presence of catalysts (Potassium Hydroxide or Sodium Methylate).
Utilization Rate	Actual capacity in percent of the nameplate capacity.
Oleochemicals	Chemicals derived from oil or natural fats (plant and animal fats). Oleochemicals, including Methyl Ester and Fatty Alcohols, can be converted into assorted downstream products.
Ethanol	Alcohols naturally produced by the fermentation process of agricultural such as sugar cane, sugar, molasses, bagasse, etc. Ethanol has a high octane which can be used to blend with gasoline to be gasohol which is a volatile and flammable.
RSPO (Roundtable on Sustainable Palm Oil)	Standard for sustainable palm oil production that is environmentally friendly and responsible to communities.
TOPSA (Thailand Oil Palm Smallholder Academy)	Thai smallholder development course for sustainable palm oil production
SCOPP	Sustainable and Climate - Friendly Palm Oil Production and Procurement in Thailand



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