

## **Global Green Chemicals Public Company Limited**

Sustainability-Linked Financing Framework August 2024

# **Driving Green Journey to**

Net Zero in 2050

มุ่งมั่นที่จะปล่อยก๊าซเรือนกระจกสุทธิให้เป็นศูนย์ในปี 2050



## Section 1: GGC at a glance Introduction

Global Green Chemicals Public Company Limited ("GGC", the "Company") is the Green Flagship Company of PTT Global Chemical (GC) Group and is the first Oleochemical manufacturer in Thailand. The Company vision is to be a Leading Green Chemical Company by Creating Sustainable Value by focusing in 3 strategic business of Bio-Energy, Biochemicals, and Foods Ingredients & Pharmaceuticals, while contributing to Thailand's agricultural and industrial economic sustainability through the use of local palm and sugarcane products as the primary raw material.

GGC's production bases are located within the WHA Eastern Industrial Estate (Map Ta Phut), Rayong Province and in the Thai Eastern Industrial Estate, Chonburi Province. The Company produces bio-based chemicals, with core products comprising of: (1) Methyl Ester, a component of high speed diesel fuel, with a production capacity of 500,000 tons per year, (2) Fatty Alcohol, a main ingredient in cosmetics, surfactants, and various pharmaceuticals, with a production capacity of 100,000 tons per year, and (3) Refined Glycerin, a common ingredient widely used in cosmetics and pharmaceuticals, with a production capacity of 51,000 tons per year. GGC's products are commercially distributed to both domestic and international customers in 3 main industries including automotive fuel industry, pharmaceutical industry, and sanitation chemical industry.

To enhance its competitiveness and position as a leading producer of green chemical, GGC vertically integrated its supply chain through investment in Thai Ethoxylate Company Limited ("TEX"). TEX is a 50:50 joint venture with BASF (Thai) Company Limited and produces Fatty Alcohol Ethoxylates from Fatty Alcohol.

Furthermore, GGC established GGC Biochemical Company Limited ("GGC Bio"), a wholly owned subsidiary, on 24 December 2018. GGC Bio, along with its joint venture partner KTIS Bioethanol Company Limited ("KTBE"), established a 50:50 joint venture, GGC KTIS Bioindustrial Co., Ltd. ("GKBI"), on 11 January 2019. GKBI started commercial operation in Q1 2023, operating sugarcane milling, ethanol plant and biomass powerplant.



#### GGC's vision is to be a leading green chemicals company by creating sustainable value

GGC's mission is:

- Customers: Innovate and provide excellent quality products and services for long-term partnership.
- Stakeholders: Maximize sustainable value for shareholders with transparency and integrity.
- Employee: Create a work-life balance environment and high performance organization by investing in human resources.
- Society: Responsible and care for sustainable development of environment and society.
- Green Flagship: Green Flagship for GC Group.

### **GGC Business Strategy**

As a leader in green chemical products, GGC strives to achieve our vision on sustainable development, guided by the United Nations (UN) Sustainable Development Goals. Through the consideration of factors within the economic, social and environmental dimensions, GGC has developed a Sustainable Business Strategy. Through this strategy, GGC is confident in achieving sustainable business growth, creating value, and elevating business standards a nationally and internationally accepted level. The Sustainable Business Strategy is as follows:

Enhance Competitiveness	Growth Portfolio	Sustainability Development	Organization Transformation	Enabler
<ul> <li>Operational</li> </ul>	<ul> <li>BioEnergy Business</li> </ul>	ESG Framework	<ul> <li>Capability Building</li> </ul>	● Effective
Excellence	expand and add value	<ul> <li>Environment</li> </ul>	through digitalization and	Financial
to achieve business	to Methyl Ester (B100)	1. Climate Strategy	working process.	Management
stability, efficiency,	and Ethanol (E100)	<b>Decarbonization</b>	<ul> <li>Applied the concept of</li> </ul>	to support
and product quality	products by conducting	<u>Pathway:</u>	GGC DNA	investment
in accordance with	various research on	Efficiency Driven	consists of G: Green as	opportunities in
relevant standards	products in order to	Portfolio Driven	adding value to agricultural	projects that
aligned with GC	add value by	Compensation	raw materials, G: Growth as	create growth
Group's	collaboration with	2. BCG Integration	growing new products, and	potential.
Occupational Safety	partners along the	Bio-Economy/	C: Compliance as a good	<ul> <li>Integrated</li> </ul>
and Environment	supply chain.	Circular Economy/	governance.	framework of
standards, as well as	<ul> <li>Biochemical</li> </ul>	Green Economy	<ul> <li>Organization Structure</li> </ul>	
energy optimization	Business	<ul> <li>Social</li> </ul>	Transformation	Governance,
and Green House	Operate in the	1. Contribution to	Transformation	Risk
Gas (GHG)	biochemical product			Management,
Reduction.	business and has plans	Society		and
		Creating Shared		



Enhance Competitiveness	Growth Portfolio	Sustainability Development	Organization Transformation	Enabler
Supply Chain	to expand operations	Value and Social		Compliance
Management &	by focusing on two	Enterprise Projects		or GRC
Integration	approaches	Expansion		
-	1. Investing in	2. Human Rights		
has adjusted and	Nakonsawan	<ul> <li>Governance</li> </ul>		
improved the cost	Biocomplex Phase 2	1. GRC		
efficiency within the	2. Studying the	Strengthen GRC		
supply chain from procurement and	feasibility of investment	-		
	projects to explore new	2. Compliance with		
sourcing, transportation,	opportunities.	International &		
production,	<ul> <li>Food Ingredients &amp;</li> </ul>	Domestic		
marketing, and	Pharmaceutical	Standards		
inventory	Expand investment into			
management.	new ventures in			
	response to growing			
<ul> <li>Strengthen Home</li> </ul>	trend of consumers who			
Base Market &	are increasingly			
Transform to High	interested in			
Value Business	maintaining their health			
Focusing on a	through food and			
strategy to	pharmaceutical			
strengthen marketing	products.			
and expand the				
product range. This				
involves				
implementing a				
strategy to enhance				
the market for				
downstream high-				
value products for				
Methyl Ester				
products, Fatty				
Alcohol products,				
Refined Glycerin				
products and Ethanol				
products.				



GGC has announced a net-zero target, with the objective of achieving net zero emissions of Scope 1 and 2 by 2050, alongside a 50% decrease in Scope 3 emissions with the 2020 baseline year. GGC has also established an interim target to reduce Scope 1 and 2 emissions by 20% by 2030. The company remains committed to transitioning into a net-zero entity while prioritizing sustainable growth principles.

GGC is committed to becoming a role model business for all three dimensions of the Bio-Circular-Green (BCG) Economy Model, improving clean energy use as part of its decarbonization pathway, and reiterating our commitments to The Paris Agreement under the United Nations Framework Convention on Climate Change (UNFCCC).

GGC's Net Zero strategy is comprised of the following pillars:

- Efficiency-Driven: Reductions in GHG emissions across the value chain through efficient production processes and waste reduction through the utilization of low-carbon technologies and renewable energy. Example projects include utilities saving via pump impeller coating, steam reduction, advanced process control for steam reduction and alternative catalyst.
- Portfolio-Driven: Development of environmentally friendly products to restructure our business and transition towards becoming a low-carbon business by increasing low-carbon investments and expanding the range of low-carbon products within the product portfolio. GGC, in partnership with KTIS BioEthanol Company Limited and Kaset Thai International Sugar Corporation Public Company Limited, invested in the development of the Nakornsawan Biocomplex to produce fuels and bioenergy using raw materials from domestic agricultural products. This will create value for biochemical products and bioplastics which is consistent with GGC's business strategy to drive growth in the respective markets.
- **Compensation-Driven**: Sequestration and offsetting of GHG to drive the management of GHG emissions and achieving GHG reduction targets through Nature-Based Solutions and Technical-Based Solutions.

Furthermore, GGC has set a long-term target to reduce 50% of Scope 3 GHG emissions by 2050. In 2023, GGC embarked on developing a decarbonization roadmap for Scope 3 emissions, which involved analyzing the key drivers of Scope 3 and developing initiatives for emission reduction. The main contributor of Scope 3 emissions are from Category 1: Purchased Goods and Services, which accounts for more than 90% of its overall Scope 3 emissions. Other categories, namely upstream and downstream transportation and distribution (Categories 4 and 9), as well as waste disposal and logistics (Category 5) were also identified as priority sectors.



GGC has developed the following drivers to achieve its Scope 3 reduction target by 2050:

- 1) Low carbon feedstock
  - To increase and utilize organic palm oil with low emission factors and RSPO certified feedstock. This strategy contributes to bolstering sustainability.
  - To utilize low carbon feedstock or chemical instead of conventional substance producing from fossilbased which emits fewer green house gases and influences the overall carbon footprint of biodiesel production. For example to replace fossil-based methanol with green methanol.
- Sustainability suppliers for transportation to engage suppliers in switching to low carbon fuels and enhancing vehicle efficiency, which includes both upstream and downstream transportation.
- Waste management to reduce waste from production and aim for zero waste through a circularity approach.

### **GGC Sustainability Policy**

GGC is committed to conducting business in accordance with sustainable development guidelines. We aim to maintain our position as the leader of green chemical products business by building confidence among stakeholders through operational excellence, transparency and fairness, promoting continuous innovational development, and establishing a sustainability management framework. The framework aligns with international standards and will be used as a guideline for GGC's sustainability management, covering 3 dimensions: Economy, Society and Environment.



Economy

GGC complies with the laws and regulations which are enforced in the countries where the GGC operates and respects international practices, as well as adheres to transparent business operations according to the principles of good corporate governance and business ethics. GGC also promotes the application of sustainable practices throughout the value chain.



Society

GGC shows responsibility for the community and society through operational process according to the principles of being a good citizen of society along with knowledge, expertise, and experience from previous business operations. GGC takes part in improving the quality of life for society.



Environment

GGC recognizes the importance and value of showing responsibility towards the environment through continually promoting the development of innovations and products that are environmentally friendly to help reduce environmental impacts throughout the supply chain, which leads to sustainable conservation and restoration of the environment.



## **GGC Sustainable Development**

GGC strongly supports the United Nation Sustainable Development Goals (SDGs), which are a global guideline of goals to drive sustainability development. GGC commits to contribute to 4 major goals, including SDG 1, SDG 7, SDG 12 and SDG 13, and a supporting goal, which is SDG 11. The detailed contributions are as follows.





#### Major Goals

SDGs	Target	Business Operation and Strategy	Sustainability Projects and Products	
1 POVERTY	1.4	GGC focuses on improving the quality of life of	<ul> <li>Nakonsawan Biocomplex.</li> </ul>	
∕ĨŧŧŦŧŤ		people in the community and society by	<ul> <li>SE Project Health &amp; Personal</li> </ul>	
		creating careers and enhancing the income of	Care product project with Koh	
		farmers and people in the community so that	Kok Community Enterprise in	
		they can have access to basic products.	Rayong Province such as Rice	
			Me Project.	
7 AFFORDABLE AND CLEANEDIERDY	7.1, 7.2,	GGC is committed to promoting communities	• GGC's products, consisting of	
÷@÷	7.3	and society to access renewable energy since	Methyl Ester (B100).	
		GGC is a major producer of renewable energy	<ul> <li>Nakonsawan Biocomplex.</li> </ul>	
		in Thailand. GGC's main product is methyl ester	• GGC's Methyl Ester (B100)	
		(B100).	production enhancement project	
			and increase the potential to use	
			resources efficiently, such as the	
			Fatty Alcohol distillation tower	
			energy saving project as well as an Optimized Cooling Fan in	
			cooling tower, etc.	
12 RESPONSIBLE CONSUMPTION AND PRODUCTION	12.1,	GGC promotes the national policy to enter	Nakonsawan Biocomplex	
00	12.2,	sustainable production and consumption by	• GGC's products, consisting of	
	12.4,	supporting innovation. There are also plans to	Methyl Ester (B100)	
	12.5,	add value to products that are in line with	• Sustainable palm oil production	
	12.6	government policies based on the BCG model,	and procurement (SPOPP)	
		which supports the Bioeconomy, Circular	project.	
		Economy, and Green Economy.	<ul> <li>Product development projects</li> </ul>	
		For example, the Bioeconomy Development	through innovation and value	
		Project policy drives Thailand to become the Bio	creation, such as Development	
		Hub of ASEAN by enhancing the	of Less Flammable Bio-	



SDGs	Target	Business Operation and Strategy	Sustainability Projects and Products
		competitiveness of the biofuel and	Transformer Oil from Palm Oil
		environmental chemical industries, both	and Integrated Pilot Field Test
		domestically and internationally. Furthermore,	Project, and Sustainable Aviation
		GGC applies the principles of the Circular	Fuel (SAF) Project, etc.
		Economy by bringing innovation and	• Environmental management
		technology into its production process, utilizing	projects, such as projects for
		resources with maximum efficiency, as well as	converting waste into soil
		reducing waste, emissions of pollution, and	improvers, project to reduce the
		hazardous waste that may affect the	ratio of Purge ME Residue, etc.
		environment and society from GGC's business	
		operations. The implementation of the	
		principles of the Green Economy emphasizes	
		investment, both domestically and from foreign	
		countries, for the production of biofuels and	
		focuses on creating value-added agricultural	
		products to further develop into bioplastics and	
		biochemicals.	
13 CEIMATE	13.2	GGC is a major producer of bioenergy in the	Nakonsawan Biocomplex
		country, which supports climate change	<ul> <li>GGC's products, consisting of</li> </ul>
		management through business operations and	Methyl Ester (B100) and
		production processes. In addition, GGC also	Sustainable Aviation Fuel (SAF)
		formulates strategies and operates for the	project, etc.
		reduction of greenhouse gas emissions from	• Energy Efficiency Improvement
		production and corporate operations.	Project: Advance Process
			Control at the Fractionation
			Column of FAOH Plant Project,
			Pre-treatment Vacuum Ejector
			Motive Steam Optimization
			Project, etc.



#### Supporting SDGs Goals

SDGs	Target	Business Operation and Strategy	Sustainability Projects and Products
11 SUSTAINABLE CITIES	11.6	GGC builds relationships with stakeholders to	<ul> <li>Sustainable palm oil production</li> </ul>
		promote sustainability in urban areas.	and procurement (SPOPP)
			project.
			<ul> <li>Projects to promote the</li> </ul>
			efficiency of transportation,
			such as project to reduce
			backhaul.
			Corporate social responsibility
			promotion projects, such as the
			Green Health Project.



## **GGC's Sustainability Management Structure**

GGC has established a Sustainability Management Structure, covering from Board of Directors various Management Committees through operational level, to enable integration and efficiency in all processes. In this regard, GGC has appointed the Board Chair to define corporate vision, mission, direction, and strategies. The Corporate Governance and Sustainability Development Committee (CG&SD) and the Risk Management Committee (RMC) are in charge of monitoring and evaluating the efficiency of Sustainability risks and opportunities governance. Meanwhile, the Sustainability Development Committee (SDC) has been tasked with determining and reviewing sustainability policies, approaches and goals as well as consider implementing guidelines based on GGC's sustainability strategies framework and directions which included Environment (E) Social (S) and Governance (G). Subsequently, the SDC summarizes and reports its performance to the Corporate Governance and Sustainability Development Committee (CG&SD) every three months.





## Section 2: GGC's Sustainability-Linked Financing Framework

GGC's Sustainability-Linked Financing Framework ("Framework") is aligned with the following principles:

- Sustainability-Linked Bond Principles 2023 ("SLBP")<sup>1</sup> as published by the International Capital Market Association ("ICMA")
- Sustainability-Linked Loan Principles 2023 ("SLLP")<sup>2</sup> as published by the Loan Market Association ("LMA"), Loan Syndications and Trading Association ("LSTA") and the Asia-Pacific Loan Market Association ("APLMA")
- ASEAN Sustainability-Linked Bond Standards 2023 ("ASEAN SLBS")<sup>3</sup> as published by the ASEAN Capital Markets Forum ("ACMF")

The Framework has been formed in accordance with the following five pillars, in line with the SLBP, SLLP and ASEAN SLBS:

Pillar 1: Selection of Key Performance Indicators (KPIs)Pillar 2: Calibration of Sustainability Performance Targets (SPTs)Pillar 3: Financial characteristicsPillar 4: ReportingPillar 5: Verification

The following sustainability-linked financing instruments ("SLF Instruments") may be raised by GGC pursuant to this framework:

- Sustainability-linked bonds
- Sustainability-linked loans

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 $<sup>^{1}\ {\</sup>rm https://www.icmagroup.org/sustainable-finance/the-principles-guidelines-and-handbooks/sustainability-linked-bond-principles-slbp/$ 

<sup>&</sup>lt;sup>2</sup> https://www.lsta.org/content/sustainability-linked-loan-principles-sllp/

<sup>&</sup>lt;sup>3</sup> https://www.theacmf.org/initiatives/sustainable-finance/asean-sustainability-linked-bond-standards



#### 2.1 Selection of Key Performance Indicators (KPIs)

#### KPI 1: Reduction of Absolute Scope 1 and 2 Greenhouse Gas emissions (tCO2e)

SDG 13: Climate Action

#### Definition of KPI

Greenhouse Gas ("GHG") emissions is expressed as Total GHG Emissions (Scope 1 and 2). GHG Emissions are calculated as per "GHG Protocol Corporate Accounting and Reporting Standard" by World Resources Institute (WRI) and World Business Council for Sustainable Development (WBCSD).

KPI 1 covers the absolute emission reduction of scope 1 and 2 of GGC's manufacturing operations and is expressed in tonnes of CO2 equivalent.

- Scope 1 emissions are direct GHG emissions that occur from sources that are owned or controlled by the Company, for example, emissions from combustion in owned or controlled boilers, furnaces, and vehicles.
- Scope 2 accounts for GHG emissions from the generation of purchased electricity and steam consumed by the Company. Purchased electricity and steam are defined as electricity and steam that are purchased or otherwise brought into the organizational boundary of the Company. GGC adopts a market-based approach for Scope 2 emissions.

#### Scope of KPI

The scope of the KPI covers the operations over which GGC has operational control, excluding joint ventures<sup>4</sup>. GGC utilizes the Operational Control approach for GHG accounting, which accounts for GHG emissions from operations where it has authority to introduce and implement relevance GHG policies. Acquisitions may be considered as of January 1st of reported year to the extent possible or as of the following year. GHG emissions for Scope 1 and 2 will be measured and reported on annual basis.

#### Rationale for selection

GHG emissions into the atmosphere is the major contribution to global warming. As a result of the increasing GHG emissions from both existing manufacturing operations and new opportunity investment projects, climate is becoming warmer with wide-reaching impacts. Climate change has an increasingly negative impact on GGC's manufacturing operation which, in turn, impact to agricultural feedstock (palm tree, sugarcane) on which the

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<sup>&</sup>lt;sup>4</sup> Currently, GGC's joint ventures in GGC KTIS Bioindustrial Company (GKBI) and Thai Ethoxylate Company Limited (TEX) are excluded from the scope of the KPI.



company depends. Therefore, reduction of GHG emission plays an important role in GGC's sustainability strategy, contributing to the collective effort to build environmental sustainability for communities, societies, and nations. This initiative is driving the company towards becoming a global leader in sustainability.

The KPI covers 100% of GGC's operational emissions, without exclusion of any significant sources of emissions. The KPI accounts for ~15% of GGC's overall GHG emissions (across Scopes 1, 2 and 3) in 2023.

#### KPI 2: CDP Climate Score

SDG 13: Climate Action

#### Definition and Background of the KPI

CDP is a non-profit organization that runs the global environmental disclosure system for investors, companies, cities, states, and regions to manage their environmental impacts. Initially set up as the 'Carbon Disclosure Project' in 2000, CDP started as a platform for companies to disclose their climate impact, but has since expanded the scope of environmental disclosure, to incorporate deforestation and water security, As of 2023, 18,700+ companies worth over half of the global market capitalization currently disclose via CDP, while more than 740+ institutional investor with a combined US\$136 trillion in assets are currently signatories of CDP.<sup>5</sup> Furthermore, 330+ major companies use CDP to track their suppliers' environmental performance, which contributes to their own Scope 3 emissions across the supply chain. CDP is regarded as the gold standard for corporate environmental reporting, and is fully aligned with Task Force on Climate-Related Financial Disclosures (TCFD) recommendations, which are regarded as the market best practice, since 2018. CDP has also committed to integrating the International Sustainability Standards Board (ISSB) climate disclosure standard from 2024 onwards.

Improving corporate awareness through measurement and disclosure is essential to the effective management of carbon and climate change risk. CDP provides three types of questionnaires, namely Climate Change, Forests and Water Security. The KPI is focused on CDP's Climate Change ("CDP Climate") questionnaire, which requests information on climate risks and low carbon opportunities. Based on its responses to the questionnaire, a company's climate disclosure will be assigned a score in the range of "D-" to "A"<sup>6</sup>.

<sup>&</sup>lt;sup>5</sup> https://www.cdp.net/en/climate

<sup>&</sup>lt;sup>6</sup> https://www.cdp.net/en/scores/cdp-scores-explained

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#### Rationale for selection

GGC is committed to operating on the foundation of sustainability, actively participating in solving problems and mitigating the impacts of climate change. This includes working towards the Sustainable Development Goals (SDGs) as outlined by the United Nations, reflecting its responsibility to society and the environment. GGC also commits to improving its climate disclosures as well as benchmark its environmental performance against industry peers and receive feedback on its progress every year. CDP scores indicate the level of action reported by the company to assess and manage its environmental impacts during the reporting year. Furthermore, given CDP regularly evolves its disclosure system in line with international standards, this also requires GGC to continually remain ahead of the curve in terms of its climate disclosure.

#### 2.2 Calibration of Sustainability Performance Targets (SPTs)

#### SPT 1: Reduction of GGC's scope 1 & 2 manufacturing operations' absolute emission by 20% in 2030

Based on the target observation period (2020 as base year to 2030), absolute CO2 reduction is targeted to be 20% in 2030, respectively.

#### SPT Observation Date 2030

Base year: 2020 - actual GHG emission of 92,814 TonCO2e

2020 is used as a base year as GGC's new methyl ester production plant has been operating with a Commercial Operation Date (COD) since April 2019. Consequently, the data from the year 2020 is deemed to be a more accurate representation of the current assets, in comparison to historical data.

GGC Historical Performance and SPT

	Historical Performance			SPT	
Year	2020 (baseline)	2021	2022	2023	2030
Absolute Scope 1 & 2 GHG Emissions Reduction (%)	-	1%	-5.3% ( <i>increase)</i>	-10.1% (increase)	20%
Absolute Scope 1 & 2 GHG Emissions (tCO2e)	92,814	91,867	97,771	102,158	



SPT 1 will support the company to meet GGC's GHG emissions reduction. The absolute GHG emissions reduction numbers shown are based on the assumptions that

i) total production volume will be based on annual production plan to maintain market share and competitiveness

- ii) GHG emission from new opportunity investment projects will be included in the GHG emission profile with consideration for GGC's GHG emission reduction against base year in 2020
- iii) GGC's GHG emissions to be reduced by 2.2% annually.

Note that GGC's is in the process to develop for scope 3 GHG emissions reduction which contributes to GGC's sustainability strategy and risk management. This attempt will consequently lead to GGC reducing scope 3 reduction (mainly contributed from i) acquisition of raw material, ii) raw materials & products logistics and iii) wastes management) by at least 5.4% annually up till 2050.

#### SPT 2: Achieve CDP Climate Score A by 2030

SPT Observation Date 2030

GGC Historical Performance and SPT

	His	SPT		
Year	2021	2022	2023	2030
CDP Climate Score	С	A-	A-	А

- In 2022, 18,636 companies are disclosed on CDP Climate and 229 companies made the 2022 Climate Change A List.<sup>7</sup> As such, by committing to achieve CDP Climate Score A, GGC is benchmarking itself to be among the Top ~1% of companies globally in terms of climate change disclosures.
- Achieving the CDP score of "A" would necessitate GGC to achieve overall improvement in its environmental disclosures.
- A CDP score of "A" would put GGC in the position of "Leadership" in disclosing its action on climate change. GGC would have to demonstrate best practice in strategy and action as recognized by frameworks such as the TCFD, Accountability Framework and others.

<sup>&</sup>lt;sup>7</sup> https://www.cdp.net/en/companies/companies-scores



#### 2.3 Financial characteristics

GGC will set out the relevant KPI, SPT, as well as financial implications in the event of its failure to achieve or achieve the SPT in the documentation of the financial instrument. The implications may include, but are not limited to:

- Coupon/margin rate variation via step-ups and step-downs
- Specific performance obligations which may include committing funding towards pre-defined projects with specific ESG objectives, purchase (and forthwith cancellation) of carbon credits etc.

The exact financial mechanism and subsequent impacts of the achievement/ failure to reach pre-defined SPTs will be detailed fully in the documentation of each specific financial transaction. GGC will notify the holders of the instrument or the lenders whether the SPT is met or not, as soon as possible after the calculation date (as defined in the instrument's terms and conditions). If for any reason the KPI cannot be calculated, observed, or reported in a timely and satisfactory manner (as defined in the instrument's documentation), the defined bond or loan characteristic change will be triggered as if the SPT was not met.

If the specified SPT(s) have been met, and the specified reporting is available publicly, the financial characteristics of the sustainability-linked instrument either remains unchanged, or changes (in the case that a margin benefit is applicable as defined in the instrument's terms and conditions).

#### Fallback mechanisms / Amendments to the Framework and Recalculation

The relevant documentation of any SLF Instrument may stipulate that the SPTs and/or the historic values of KPIs may be subject to recalculation based on specific circumstances, such as changes in the calculation methodology or significant changes in GGC's corporate structure (e.g., acquisition, divestiture, mergers, insourcing or outsourcing).

In event of changes to the calculation methodology of the KPI, in data due to data accessibility; or change in the corporate structure (i.e. in the event of any acquisition or disposal of assets or any other relevant re-organizations), which, individually or in aggregate, has a significant impact on the level(s) of the historic value(s) of the KPI and/or the level of the SPT(s), GGC may review the Framework and the SPT(s) may be recalculated, without the prior consultation of the holders of GGC's SLBs and the lenders of SLLs, in good faith to reflect such change, provided that:

- the rationale for such change will be disclosed in the annual reporting on the KPIs; and
- an external verifier confirms that the proposed revision is in line with or more ambitious than the initial level of ambition of the SPT(s).

Any such change will be communicated as soon as reasonably practicable by GGC in accordance with the terms and conditions of the SLF Instruments.



#### 2.4 Reporting

Annually, GGC commit to report the KPI performance within our annual report, sustainability report, or standalone report, accessible to investors/lenders through GGC's website: <u>https://www.ggcplc.com/en/home</u> or deliver to lenders (subject to agreed terms and conditions) each year until the maturity of the sustainability-linked instrument.

- Up-to-date information on the performance of the selected KPI, including the baseline where relevant
- a verification assurance report relative to the SPT as laid out in section 2.5; and
- any other relevant information which may enable investors to monitor the progress of the selected KPI.

Information may also include when feasible and possible:

- a qualitative or quantitative explanation of the contribution of the main factors towards the evolution of the performance/KPI on an annual basis;
- where suitable data is available, an illustration of the positive sustainability impacts of the performance improvement; and/or
- any re-assessment of KPIs and/or restatement of the SPT and/or adjustments of baselines or KPI scope, where applicable (e.g. in case of extreme events)

#### 2.5 Verification

**KPI 1**: Annually, and in any case for any date/ period relevant for assessing the KPI performance against the SPT leading to a potential financial adjustment, such as a step-up coupon or a premium payment on the instrument, until the KPI trigger event of the relevant SLF Instrument has been reached, GGC will seek independent and external verification of the performance level for the stated KPI by the Assurance Provider.

"Assurance Provider" means any qualified provider of third party assurance or attestation services appointed by GGC, who will provide a verification assurance report in the form of a "Limited Assurance". The verification of the performance of the KPI, along with the Assurance Provider's verification report, will be made publicly available on GGC's website: <a href="https://www.ggcplc.com/en/home">https://www.ggcplc.com/en/home</a>.

**KPI 2**: The results of KPI 2 will be announced in Q1 of the following year and be publicly available on CDP's website<sup>8</sup>.

<sup>&</sup>lt;sup>8</sup> https://www.cdp.net/en/responses?queries%5Bname%5D=

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#### 3. Second Party Opinion

This GGC Framework has been reviewed by DNV (Thailand), Co., Ltd. in the form of a Second Party Opinion. The objective of the Second Party Opinion is to provide an independent assessment of the Framework's transparency and governance as well as its alignment with the SLBP and SLLP.

The Second Party Opinion is published on the GGC's website: <u>https://www.ggcplc.com/en/home</u>