

GS ENERGY SUSTAINABILITY REPORT 2022

TOTAL ENERGY SOLUTION

GS ENERGY

GSE to ESG

Overview

GS Energy has published its second sustainability report this year for continuous communication with various stakeholders. This report is categorized into environmental (E), social (S), and governance (G) following ESG classification, and it includes the company's management approach (MA) to material issues identified according to business impact and social interest. This report is published in both Korean and English, and GS Energy will publish a report every year as a channel for continuous communication with its stakeholders.

Reporting Period and Scope

This report is based on GS Energy's activities from January 1 to December 31, 2022. For certain activities and performances, the report covers material issues through the first half of 2023. For the quantitative performance in the APPENDIX, however, data from 2020 to 2022 are presented to show trends. This report covers all business of GS Energy, both domestic and overseas, as well as the activities and performance of its power generation and energy subsidiaries (GS Power and Incheon Total Energy) in the Environmental section. We will continue to expand the scope of ESG management to disclose the activities and performance of these subsidiaries in the Social and Governance sections as well. Where the reporting period and scope require particular attention, it is indicated by a note.

Reporting Principle

This report complies with the Core Option of the GRI Standards 2021, which are international sustainability standards, and it satisfies the four accountability principles (inclusivity, materiality, responsiveness, and impact) outlined in the AA1000AP guidelines for report verification. Financial data is prepared on a consolidated basis in accordance with K-IFRS, and non-financial data is presented in accordance with our disclosure system for the fiscal year. Notes are included for items requiring particular attention.

Reporting Assurance

This report was verified by an independent assurance institute, the Korea Management Registrar, to enhance fairness in the preparation of the report and the credibility of its contents. Please refer to page 98 for the detailed verification statement.

Point of Contact | For further information or questions regarding this report, please contact us using the contact information below. Valuable feedback from our stakeholders is always appreciated.

Sustainability Report, GS Energy | TEL. 82-2-2005-0966 | E-mail. esg@gsenergy.co.kr

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Interactive User Guide

GS Energy's Sustainability Report has been created as an interactive PDF to enhance the reader's convenience and understanding. It includes icons that provide easy navigation to relevant pages and shortcuts to related web pages.



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MESSAGE FROM THE CEO



Dear stakeholders,

I would like to convey my deepest gratitude to you for the unwavering interest and support you have extended to us in our endeavors to achieve growth and development.

Last year, GS Energy achieved steady growth despite increased internal and external uncertainties, and it continues to sustain this progress.

We delivered remarkable achievements in our core business areas of electric power, district heating, LNG and E&P while actively pursuing the transition to our differentiated new business strategy, the “BEYOND” portfolio, which includes establishing an EV charging value chain, entering into the battery recycling business, and investing in hydrogen, SMRs, and new energy technologies. GS Energy is making proactive efforts to strengthen the foundation of these new businesses, which will be essential pillars of the company’s future growth, in line with changes in the energy market.

We aim to establish an “ESG risk assessment system for new businesses” to comprehensively evaluate and manage new business investments from an ESG perspective.

As ESG becomes mainstream in the capital market, the level of ESG risk identification by investors and other key stakeholders continues to increase. In response to this, GS Energy will develop ESG investment principles for new businesses and an evaluation checklist to review ESG-related risks, and formulate management plans, thus advancing ESG investment standards to ensure the effective allocation of limited resources.

We are actively pursuing carbon neutrality through a gradual transition to eco-friendly businesses such as EV charging and waste battery recycling.

To build a complete value chain for EV charging, GSEnergy has invested in the entire process, from energy supply to charger maintenance. In addition, we are building a closed loop for waste battery recycling through investments and partnerships with outstanding companies. GS Energy will never cease its efforts to discover and develop sustainable energy sources, including reviewing the feasibility of CCUS and developing GHG reduction projects.

Based on the “agile, open & challenge, one team” mindset, we are making efforts to spread positive energy in our society.

“Agile, open & challenge, one team” represents GS Energy’s way of working. This year, we are particularly focusing on the “team” aspect, providing ample support in terms of spaces and education, to allow our employees to maximize their capabilities while increasing performance and synergy. In addition, GS Energy aims to be an upright company that practices energy sharing and helps vulnerable social groups, including those who are energy-disadvantaged.

We have witnessed persistent growth over the past 10 years. With our firm determination and organizational capabilities, we are fully committed to establishing a sustainable portfolio and strengthening our foundation even amidst increasing uncertainties. I would like to ask for your unwavering support and encouragement as we move forward as a pioneer in both society and the energy market.

Thank you.

CEO Huh Yongsoo

MESSAGE FROM THE ESG COUNCIL



Amidst uncertainties such as the COVID-19 pandemic, the crisis in Ukraine, and the global economic slowdown, companies are witnessing the growing importance of managing and taking responsibility for ESG activities, including establishing an ESG strategy, responding to climate risk, and disclosing information.

In response, GS Energy has established a systematic decision-making process by setting up the ESG Council to manage ESG risks and deliver outcomes for its subsidiaries. We aim to promote internal collaboration and facilitate effective communication with external stakeholders through the council.

The ESG Council's priorities include:

First, the establishment and implementation of an ESG performance management system for subsidiaries.

The ESG performance of subsidiaries is closely related to the sustainable growth of GS Energy. Therefore, to ensure sustainable management, it is necessary to systematically manage and enhance the ESG performance of subsidiaries. To achieve this, the ESG Council is currently planning to select ESG performance indicators for subsidiaries, collect quantitative DB sets, and evaluate and monitor the ESG performance. We will periodically manage the status and trends of the indicators to improve the sustainability of our subsidiaries.

Second, carbon reduction strategies.

GS Energy is exploring ways to reduce GHG emissions in the mid-to long-term to achieve a carbon-neutral society. In line with this, the ESG Council is examining various approaches, such as improved efficiency in the power generation facilities of subsidiaries the use of unutilized energy, co-firing of hydrogen, CCUS, and securing of carbon credits. We will continuously strive to meet the expectations of various stakeholders, including the government, financial institutions, and local communities, and maintain effective communication with them.

Third, the advancement of ESG management through reviewing the progress of ESG strategy initiatives.

ESG strategy initiatives are ESG management tasks that are implemented gradually. They are crucial to maintaining sustainable relationships with stakeholders, and to this end, we have established a human rights management system and a supplier management plan and now share updates on the ongoing ESG strategy initiatives within each company as we work together to find solutions to related issues. During this process, we will explore various initiatives, such as integrated social contribution activities where GS Energy and its subsidiaries can participate together to create synergies.

The ESG Council of GS Energy is a key body for ESG management. The ESG Council will lead sustainable management through practical and meaningful activities and strive to develop GS Energy into an environmentally friendly energy company that has a positive impact on our society.

Thank you.



ABOUT GS ENERGY

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GS ENERGY PROFILE



GS Energy Corporation was established as the energy holding company of GS Group in 2012, and all members of the company have made determined efforts to contribute to the development of the energy industry, which is the mainstay of the national economy, and to lead the energy paradigm shift for the future. Currently, GS Energy is actively engaged in the development of overseas resources, particularly in the Middle East, and is taking the lead in improving the energy self-sufficiency rate and energy security of Korea, which has limited domestic resources. Furthermore, we are striving to create a happy society for all through the stable supply of energy based on eco-friendly natural gas, thereby fostering a clean and convenient living environment. For this, we have established an LNG value chain encompassing LNG imports, the operation of LNG regasification terminals, and electric power and district heating utilizing LNG as fuel, thereby reinforcing our capabilities.

In addition, in order to contribute to the realization of a carbon-neutral society through energy transition, we will continuously explore new businesses that incorporate new energy technologies, establish an EV charging value chain and promote the development of a closed loop system for our waste EV battery recycling business, and thus achieve sustainable growth.

(as of Dec. 31, 2022)

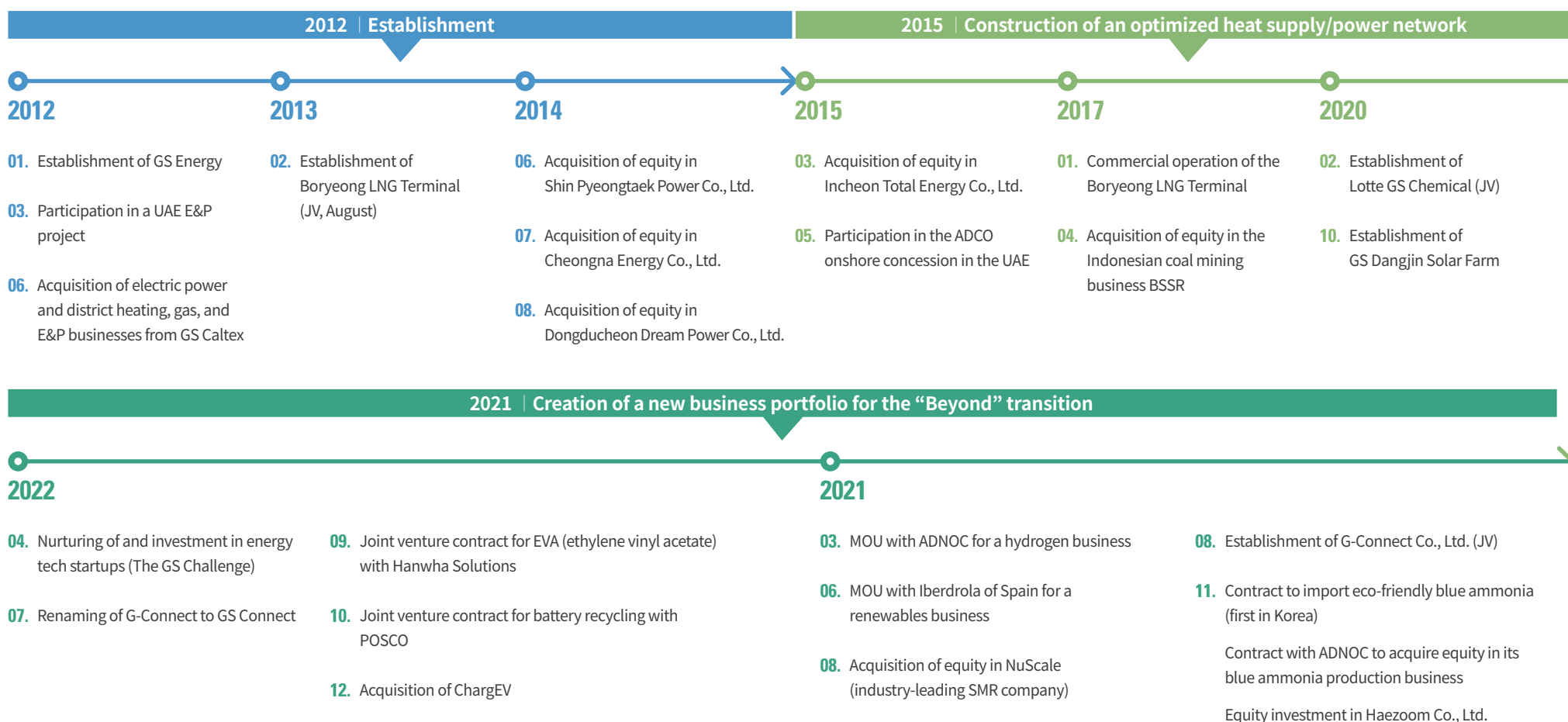
<div>Company Name</div> <div>GS Energy</div>	<div>Affiliate Business Group</div> <div>GS</div>	<div>Foundation Date</div> <div>Jan. 3, 2012</div>	<div>CEO</div> <div>Huh Yongsoo</div>
<div>Address</div> <div>508 Nonhyeon-ro, Gangnam-gu, Seoul</div>	<div>Industry</div> <div>Holding company</div>	<div>Total Assets</div> <div>KRW 15.3 trillion</div>	<div>Revenue and equity-method income</div> <div>KRW 7.8 trillion</div>
<div>Operating Profit</div> <div>KRW 3.8 trillion</div>	<div>No. of Employees</div> <div>199</div>	<div>Domestic Subsidiaries</div> <div>GS Caltex (50%) GS Power (51%) Boryeong LNG Terminal (50%) Incheon Total Energy (70%) GS Dangjin Solar Farm (100%) GS Connect (85.5%) ChargeEV (86.1%)</div>	
<div>Credit Rating</div> <div>Debenture AA (Jan. 5, 2023) Commercial paper A1 (Sep. 15, 2022) Corporate credit rating AA (Jun. 17, 2022)</div>			



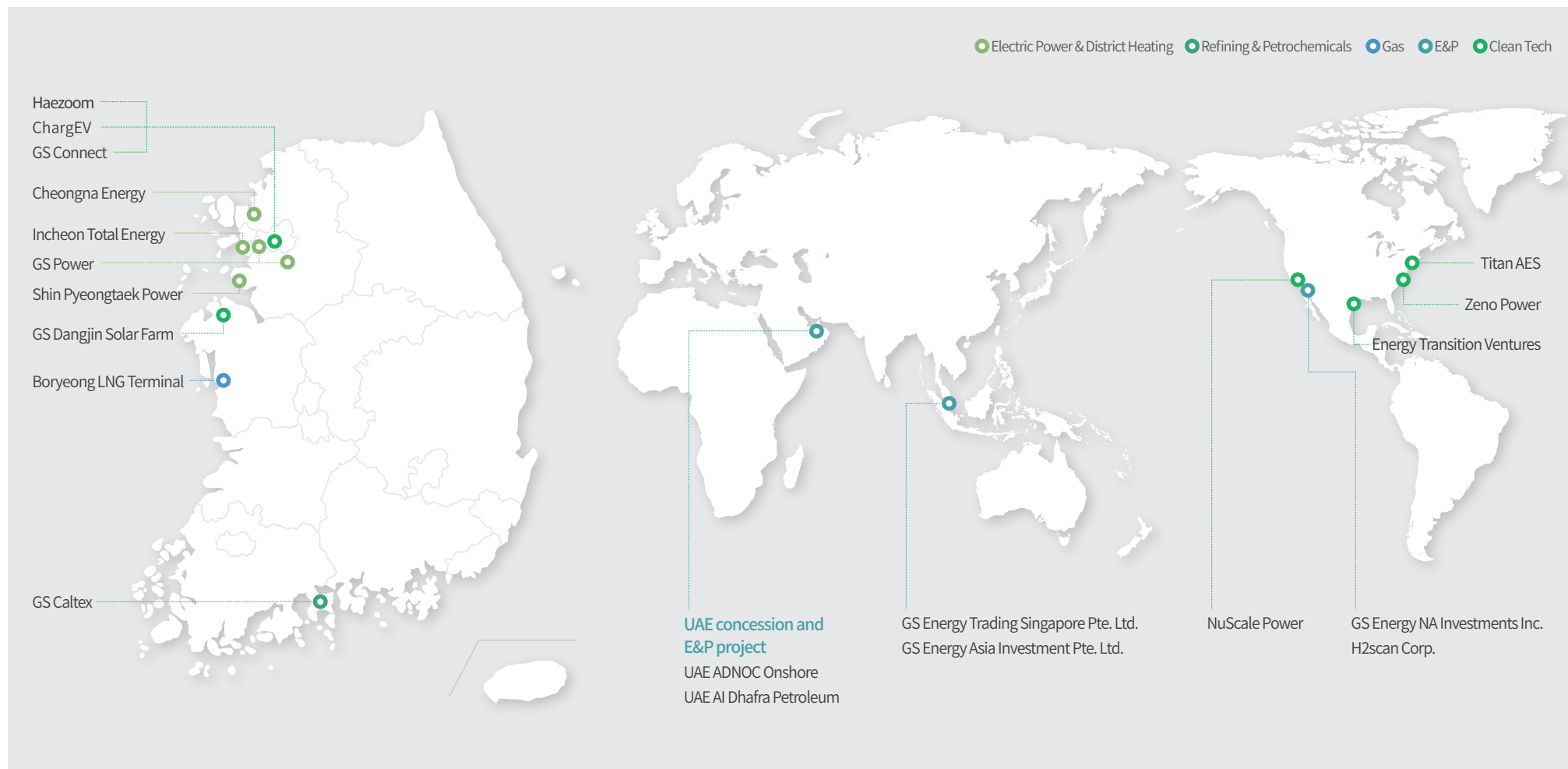
GS ENERGY PROFILE

GS Energy History

GS Energy has created a new portfolio called “BEYOND” that reflects future energy trends and is now establishing a foundation for new businesses that can embrace changes in the energy market and sustainable growth.



GS ENERGY NETWORK



2022 ACHIEVEMENTS

GS Energy's Economic Value Performance

Despite ongoing economic uncertainty, GS Energy has delivered an excellent financial performance. However, we remain focused on securing future growth engines by exploring new business opportunities through active investment in renewable and next-generation energy businesses.

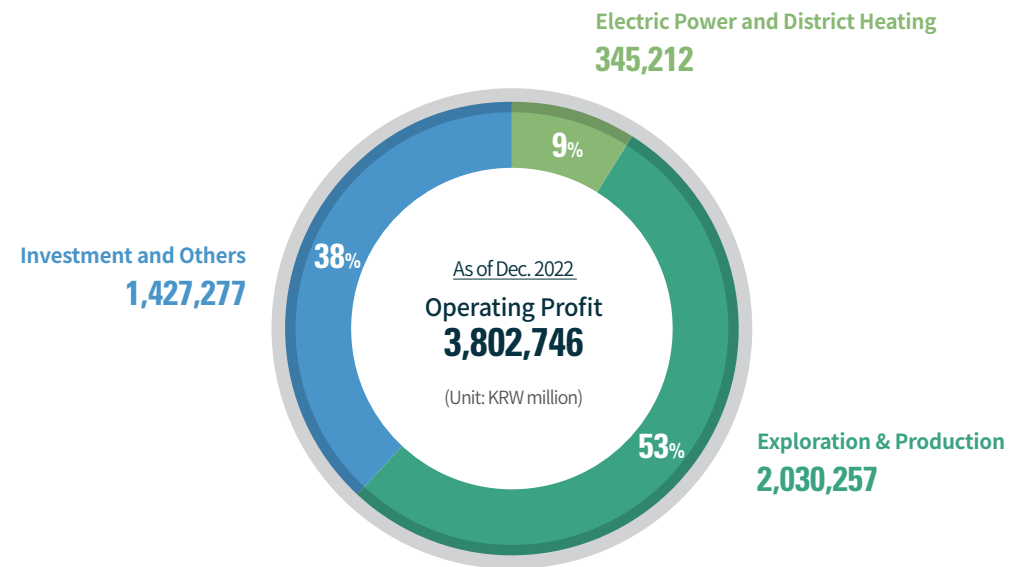
Summary of Consolidated Income Statement

Classification	Unit	2020	2021	2022
Revenue	KRW million	1,641,866	3,769,589	7,753,634
Cost of sales	KRW million	1,249,072	1,805,229	3,834,139
Gross profit (loss)	KRW million	392,794	1,964,360	3,919,495
Operating profit (loss)	KRW million	341,598	1,866,115	3,802,746
Net income before tax (loss)	KRW million	291,666	1,947,592	3,738,440
Net income (loss)	KRW million	(238,747)	912,613	1,827,726

Summary of Consolidated Financial Statement

Classification	Unit	2020	2021	2022
Assets	Current assets	KRW million	734,198	1,495,872
	Non-current assets	KRW million	8,205,386	11,636,892
Total	KRW million	8,939,584	13,132,764	15,289,552
Liabilities	Current liabilities	KRW million	797,791	1,237,178
	Non-current liabilities	KRW million	2,475,954	4,166,864
Total	KRW million	3,273,745	5,404,042	5,924,321
Shares held by holding company	KRW million	5,339,132	6,795,278	8,376,602
Non-controlling interest	KRW million	326,707	933,444	988,629
Total	KRW million	5,665,839	7,728,722	9,365,231

Performance by Business



Business	Goods and Services
Electric Power & District Heating	Power and heat production
Exploration & Production	Oil and gas development and sales
Investment and Others	Investments in associates

2022 ACHIEVEMENTS

Environmental

Eco-friendly business



Operation of EV chargers

36,590 units

GHG reduction



EV rentals

6 units

Waste reduction



Use of reusable cups

29,600 pieces

Social

Human rights



Complaints handled

NONE

Diversity



Share of female employees

23.6%

Social contribution



Total donations

KRW **237.15** million

Governance

BOD



BOD meetings, BOD agendas

16 times, **53** items

Ethical management



Violations of the Code of Ethics and laws

NONE

Privacy



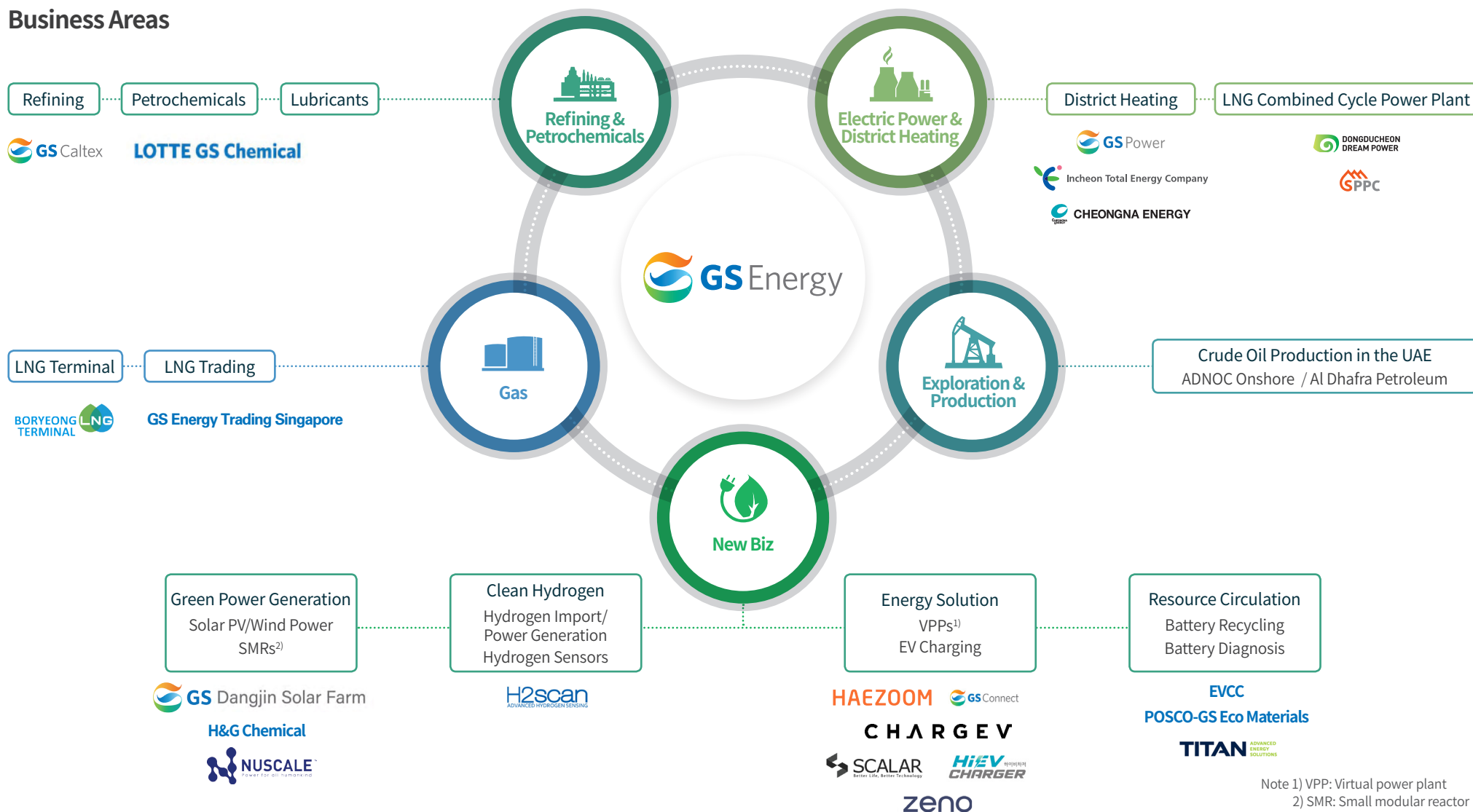
Leakage of personal or corporate data

NONE



BUSINESS PORTFOLIO

Business Areas



Note 1) VPP: Virtual power plant
 2) SMR: Small modular reactor

BUSINESS PORTFOLIO

Electric Power & District Heating

GS Energy produces electricity and heat through GS Power's combined heat power plants. The heat generated from the Anyang/Bucheon combined heat power plants is supplied to Anyang, Bucheon, and surrounding areas. By acquiring shares in Cheongna Energy and Incheon Total Energy, we have also established a large-scale network that supplies heat to 700,000 households, mainly in the southwestern part of the metropolitan area. Through these subsidiaries, we are maximizing the effects of our district heating business, which include large-scale energy savings and GHG reductions through energy efficiency improvements, diversification of the national power supply through distributed energy resources, and convenience in energy use for residential and industrial sectors. Furthermore, GS Energy has expanded its electric power business by acquiring shares in Shin Pyeongtaek Power and Dongducheon Dream Power, which own LNG-fueled combined-cycle power plants. We are also exploring various new businesses to respond flexibly to the electric power market, which is undergoing rapid change, to cope with climate change. We will continue to expand our power business and establish a foundation for stable profits by continuously identifying opportunities both at home and abroad, including in Southeast Asia.



GS Power was selected as the successful bidder in competitive bidding for the Anyang/Bucheon CHP (combined heat and power) plants and district heating facilities, which was conducted by the government as part of the sale of the power generation business of the Korea Electric Power Corporation and the privatization of the Korea District Heating Corporation. The company signed an asset transfer contract on June 22, 2000, and commenced operations of the facilities on September 1 of the same year. GS Power operates a natural gas-fueled combined-cycle power plant with a total capacity of 1,430 MW, producing both electricity and heat. The electricity is sold to the Korea Power Exchange while the heat generated at its heat source facilities and resource recovery facilities is supplied to over 400,000 households in Anyang and Bucheon as a district cooling/heating service.



2022 (Unit: KRW million)

Category	Amount
Revenue	2,020,517
Operating income	264,897
Assets	2,761,905

Contact Information

100 Burim-ro, Dongan-gu, Anyang, Gyeonggi-do
82-31-420-2590 | www.gspower.co.kr



Incheon Total Energy Company

Through Incheon Total Energy, GS Energy is contributing to the smooth supply of district heating and cooling to the Incheon area, particularly to Songdo International City, and national energy conservation. Incheon Total Energy has made continuous efforts to supply convenient and safe district heating and cooling while reducing the cost of heat production. Furthermore, the company is striving to provide high-quality energy services to a larger number of citizens by expanding its supply area beyond Songdo International City to include the old downtown of Incheon.



2022 (Unit: KRW million)

Category	Amount
Revenue	292,102
Operating income	22,183
Assets	503,445

Contact Information

51-37 Academy-ro, Yeonsu-gu, Incheon
82-1577-1079 | www.e-inteco.co.kr

Electric Power

A combined heat and power plant in a pleasant environment | A CHP plant produces both electric power and heat. It is a comprehensive plant system designed to maximize energy efficiency by flexibly supplying electricity and heat generated from a single heat source to users as needed. GS Energy sells the electricity produced at the LNG-fueled CHP plants of GS power (Anyang 935 MW, Bucheon 450 MW) and Incheon Total Energy (Incheon 200 MW) to the grid, providing a stable source of power supply to the metropolitan area.

District Heating & Cooling

Convenient and economical district heating and cooling | Our district heating and cooling business provides 24/7 heating and cooling services across a district by utilizing heat produced economically at concentrated, large-scale facilities such as CHP plants. This eliminates the need for individual buildings to run their own cooling/heating facilities. In addition to the heat generated in the cogeneration process, GS Power utilizes waste heat from incinerators to offer eco-friendly and stable district heating and cooling services to approximately 400,000 households in the metropolitan area.

Renewable Energy

Solar PVs | GS Power operates solar power generation facilities with a total capacity of 10,000 kW at its Anyang/Bucheon CHP plants and GS Retail logistics center.
Fuel Cells | Fuel cells convert the chemical energy of hydrogen and oxygen into electricity and dramatically reduce carbon emissions (capacity of 15 MW).
Small-scale Hydro Power and Wind Power | GS Power operates a small-scale hydropower plant at its water purification plant in Gwangju and a wind power plant at the Gyeongju Industrial Complex.
ESS (Energy Storage System) | GS Power operates ESSs at its CHP plants to reduce peak load.

Energy Efficiency

Our energy efficiency business provides optimal energy-saving solutions for recovering unutilized energy and improving the energy efficiency of facilities that consume energy. GS Power's optimal energy efficiency solutions for facilities and processes draw on its experience in the design, construction, and follow-up management of user facilities. Through this, we contribute to energy savings and GHG reductions at user facilities, such as Incheon Total Energy, the Anyang incinerator, and the Banwol Dyeing Complex.

District Cooling

Our district cooling business converts hot water, economically produced from large-scale heat production facilities, into cold water at conversion facilities, and uses this cold water to provide district-wide cooling services. This advanced cooling system helps reduce peak power load in the summer by utilizing alternative energy sources such as the residual heat of power plants. Furthermore, as water is used as a refrigerant instead of GHGs, which cause global warming, it contributes to improving air quality and protecting the ozone layer.

District Heating

Our district heating business supplies heat (hot water), economically produced from concentrated large-scale heat source facilities, to a district through buried heat pipelines. This means that individual buildings in the district, such as apartments, houses, shopping malls, and offices, don't have to operate their own heating facilities.

BUSINESS PORTFOLIO

Electric Power & District Heating



Established in 2005, Cheongna Energy is jointly owned by GS Energy (49.9%) and Korea Western Power (50.1%). It supplies electric power to 155,000 households across Incheon and Gimpo by utilizing waste heat from processes, fuel cells, and unused heat from incinerators.

2022 (Unit: KRW million)

Category	Amount
Revenue	100,200
Operating income	8,088
Assets	385,921

Contact Information

1045 Wondang-daero, Seo-gu, Incheon
82-32-565-2800 | www.e-cheongna.co.kr



Shin Pyeongtaek Power Co., Ltd., was jointly established by GS Energy, Korea Western Power, and KB Asset Management in 2014. Since October 2019, it has been operating a 950MW gas-fired combined-cycle power plant, and it now supplies electric power to the metropolitan area, including Pyeongtaek and Hwaseong.

2022 (Unit: KRW million)

Category	Amount
Revenue	957,062
Operating income	156,494
Assets	1,203,406

Contact Information

271 Gyeonggi-daero, Pyeongtaek, Gyeonggi-do
82-31-612-2900 | www.sppc.co.kr



GS Energy acquired shares in Dongducheon Dream Power in 2014. Dongducheon Dream Power operates an LNG-fueled combined-cycle power plant with a total capacity of 1,716 MW (two units of 858 MW each) located in Gwangam-dong, Dongducheon, Gyeonggi-do. This power plant started commercial operation in March 2015 and has since been a reliable power supplier to the northern part of the metropolitan area.

2022 (Unit: KRW million)

Category	Amount
Revenue	2,240,227
Operating income	90,317
Assets	1,522,062

Contact Information

110 Soemok-gil, Dongducheon, Gyeonggi-do
82-31-8082-3000 | www.iddp.co.kr

BUSINESS PORTFOLIO

Refining & Petrochemicals

GS Energy has achieved global competitiveness in the oil refining, petrochemical, and lubricant businesses through its subsidiary, GS Caltex, which is a world-class refining and petrochemical company. In addition, the company established Lotte GS Chemical as a joint venture with Lotte Chemical, adding to its competitiveness in the oil refining and petrochemical businesses, and has plans to establish a joint venture called H&G Chemicals with Hanwha Solutions with the aim of entering the renewable energy market through the production of EVA, a solar module material. Building upon its accumulated experience and capabilities, GS Energy will continue to generate sustainable profits and enhance competitiveness through the stable operation of its refining and petrochemical businesses both at home and abroad.



GS Caltex operates crude refining facilities with a capacity of 800,000 barrels per day (bpd) and an HOU (heavy oil upgrading) facility with a capacity of 274,000 bpd, the largest in Korea. GS Caltex generates 70% of its revenue from exports.

Petrochemicals

GS Caltex has expanded its production capacity and competitiveness to a world-class level through continuous facility investments and now has an annual production capacity of 2.8 million tons of aromatics. It has also secured an annual polypropylene production capacity of 180,000 tons and is growing into a global composite resin manufacturer with its composite resin (composite PP) production subsidiaries in China, the Czech Republic, and Mexico.

GS Caltex commenced the MFC (mixed feed cracker) process in the third quarter of 2021, and has secured an annual production capacity of 750,000 tons of ethylene and 500,000 tons of polyethylene. This has allowed the company to secure a more balanced portfolio in its chemicals business and establish a bridgehead to provide various functional materials that meet customer needs. GS Caltex is committed to growing into a global energy company in the chemical industry by developing an eco-friendly business in the composite resin field.

2022 (Unit: KRW million)

Category	Amount
Revenue	58,532,071
Operating income	3,979,518
Assets	26,038,743

Contact Information

508 Nonhyeon-ro, Gangnam-gu, Seoul
82-1544-5151 | www.gscaltex.com

Base Oil and Lubricants

GS Caltex has expanded its production capacity for base oil to 26,000 bpd and exports more than 79% of its total production. Furthermore, it produces 9,000 barrels of lubricant products and 9,000 tons of grease products per day. The company has been recognized for its excellent products and technologies, and ranks first in market share and sales volume in the domestic market for finished lubricants. Based on its competitiveness in the domestic market, GS Caltex has been making forays into overseas lubricant markets in China, Russia, and elsewhere, and has established subsidiaries in India, China, and Russia.

BUSINESS PORTFOLIO

Refining & Petrochemicals

LOTTE GS Chemical



2022 (Unit: KRW million)

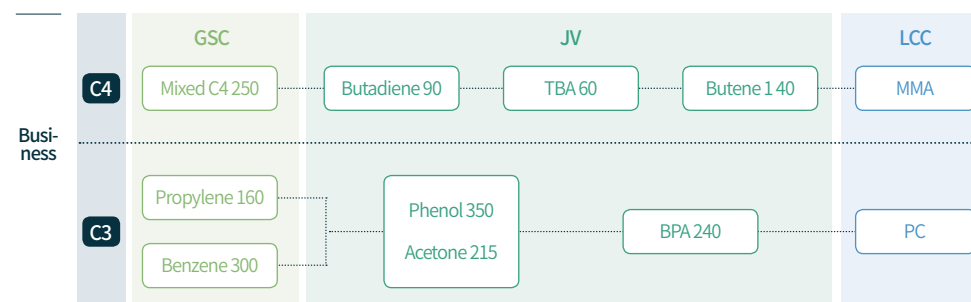
Category	Amount
Revenue	148,056
Operating income	(13,591)
Assets	528,107

Contact Information

69 Baekjegobun-ro, Songpa-gu, Seoul
82-2-440-0114 | www.lottegchem.net

Lotte GS Chemical was established on February 12, 2020, as a joint venture between GS Energy and Lotte Chemical. Its C4 fraction plant in the Yeosu Industrial Complex began operation in July 2022, and additional facilities are under construction for the commercial production of phenol, acetone, and BPA, slated to begin in the second half of 2024. The company has an annual production capacity of 130,000 tons for butadiene, a raw material of high-value-added synthetic rubber, and 60,000 tons of TBA, an artificial marble material. By the second half of 2024, it will have a production capacity of 350,000 tons of phenol and 240,000 tons of BPA, which are important materials for highly transparent conductive plastics and new and renewable energy. Lotte GS Chemical receives feedstock such as propylene, benzene, and C4 fraction from GS Caltex, and supplies finished products such as butadiene, TBA, phenol, acetone, and BPA to customers, including Lotte Chemical.

Overview



Investment structure

GS Energy (49%) + LOTTE CHEMICAL (51%) = **Lotte GS Chemical** (100%)

History

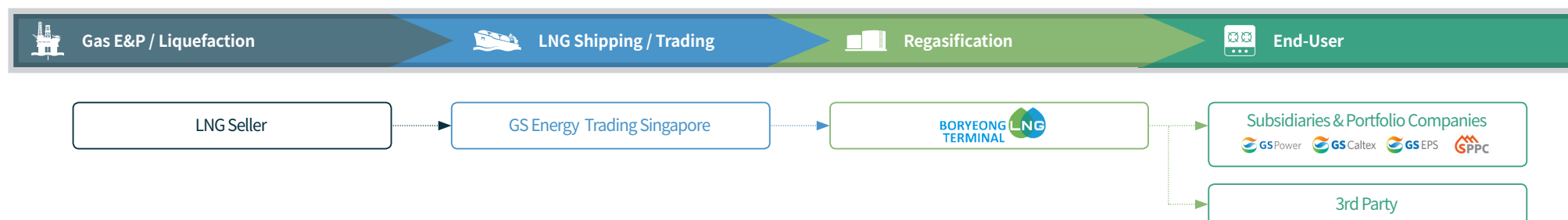


BUSINESS PORTFOLIO

Gas

GS Energy has built a foundation for its LNG business by establishing a trading corporation for direct LNG imports and operating an LNG regasification terminal. Currently, we supply natural gas for power generation, industrial use, and self-consumption to direct LNG importers in Korea through the Boryeong LNG Terminal. We plan to expand our competitive fuel supply system in line with the demand for direct natural gas imports and further enhance our LNG business capabilities by adding more storage tanks and expanding the terminal. In addition, the establishment of an integrated LNG value chain through entry into the upstream sector and the expansion of our business model into overseas markets is expected to solidify the foundation for GS Energy's growth as a global player.

GS Energy LNG Value Chain



GS ENERGY TRADING SINGAPORE PTE. LTD



GSETS (GS Energy Trading Singapore) is a trading subsidiary in Singapore that was established in February 2014 to secure LNG at competitive prices and supply it to end users at home and abroad. GSETS has secured a supply volume of over 1.3 million tons annually under long-term contracts as well as a competitive spot volume to accommodate the market environment, and supplies LNG through the Boryeong LNG Terminal to Korea. In addition, the company is actively responding to the increasing demand for LNG by diversifying its LNG supply chain with various domestic LNG importers and ensuring timely procurement and supply of competitively priced LNG, thereby contributing to the energy industry in Korea. Located in Singapore, an international LNG hub, GSETS will monitor the market environment, including global LNG supply and demand, and strengthen its trading capabilities to contribute to a stable energy supply.

2022 (Unit: KRW million)

Category	Amount
Revenue	1,564,286
Operating income	80,223
Assets	198,477

Contact Information

5 Temasek Boulevard #15-06, Suntec City Tower 5,
Singapore 038985
+65 6884 5509

BUSINESS PORTFOLIO

Gas



Work on the Boryeong LNG Terminal commenced in February 2013 through a joint venture between GS Energy (50%) and SK E&S (50%) to construct and operate an LNG regasification terminal and supply natural gas for self-consumption. The terminal began commercial operation in January 2017 with a total storage capacity of 600,000 kℓ. As of August 2023, its storage capacity had been increased to 1.4 million kℓ and it was supplying about 7 million tons of natural gas annually for power generation and industrial use. In the future, the Boryeong LNG Terminal will gradually expand its supply to meet the demand for direct natural gas imports for self-consumption and continue to make efforts to ensure a stable energy supply for the country and reduce energy costs.

2022 (Unit: KRW million)

Category	Amount
Revenue	347,528
Operating income	80,755
Assets	1,690,361

Contact Information

333 Ocheonhaean-ro, Ocheon-myeon,
Boryeong-si, Chungcheongnam-do
82-41-939-9955 | www.lng-tml.com

Phase 1 Commercial Operation | Jan. 1, 2017

Phase 2-1 Commercial Operation | Jul. 1, 2019

Phase 2-2 Commercial Operation | Oct. 1, 2021

Phase 2-3 Commercial Operation | Aug. 1, 2023

- LNG Tank: #1-3 (200,000 kℓ * 3 units)
- LPG Tank: #1 (77,000 kℓ)
- Re-gasification & transmission facility: 490 ton/h
- Jetty #1 (180,000 kℓ)

- LNG Tank: #4 added (200,000 kℓ * 1 unit)
- Re-gasification & transmission facility: 780 ton/h (290 ton/h added)

- LNG Tank: #5-6 added (200,000 kℓ * 2 units)
- Re-gasification & transmission facility: 1,040 ton/h (260 ton/h added)
- Jetty #2 added (2 berths in total)

- LNG Tank: #7 added (200,000 kℓ * 1 unit)

BUSINESS PORTFOLIO

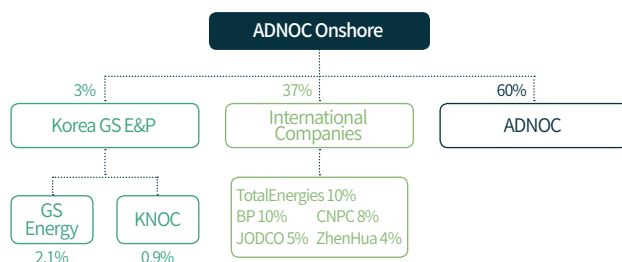
Exploration & Production

In March 2012, GS Energy became the first Korean company to participate in the development of a crude oil field in the UAE, which had previously been dominated by major global oil companies, and thus laid the groundwork for advancing into the Middle East. In May 2015, the company took part in the UAE's largest oil field development, securing daily crude oil production of about 50,000 bpd, or 800 million barrels of equity crude oil production¹⁾ over 40 years. This is the largest single E&P business in the history of Korea. GS Energy's daily oil production in Abu Dhabi accounts for about 1.5%²⁾ of Korea's daily oil consumption, and the crude oil produced is all sold to major overseas companies. GS Energy will continue to advance E&P as a key pillar of its business by leveraging its global network and strategic partnerships, and thereby contribute to securing energy resources for the nation.

UAE ADNOC Onshore

In May 2015, GS Energy achieved the milestone of participating in the ADNOC Onshore Concession, which has been led by major global oil companies for the past 75 years. The concession as a whole produces about 1.8 million barrels of oil per day, and our equity production is 37,800 bpd based on our 2.1% stake. We are participating in the ADNOC Onshore Concession through Korea GS E&P Pte. Ltd, a joint venture with the Korea National Oil Corporation.

Investment structure



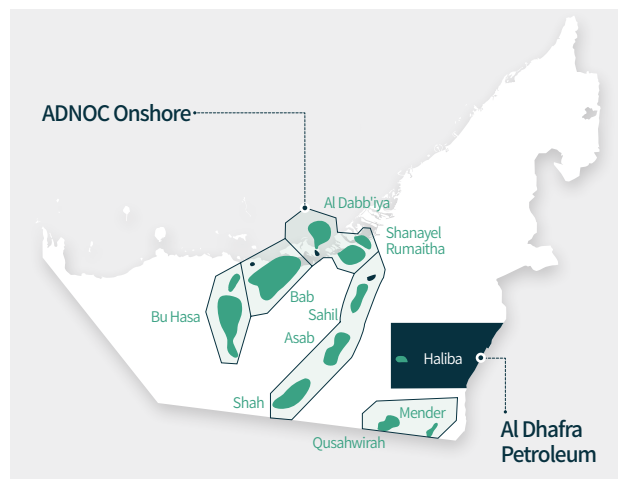
Overview

- Stake: 2.1%
- Period of petroleum rights: 2015 - 2054 (40 years)
- Reserves: 28.3 billion barrels (Equity reserves: Approx. 590 million barrels)
- Daily production: Approx. 1.8 million barrels/day (Equity oil production: Approx. 37,800 barrels/day)

Korea GS E&P Pte. Ltd.

2022 (Unit: KRW million)

Revenue	2,709,311	Operating income	1,951,096	Assets	2,052,768
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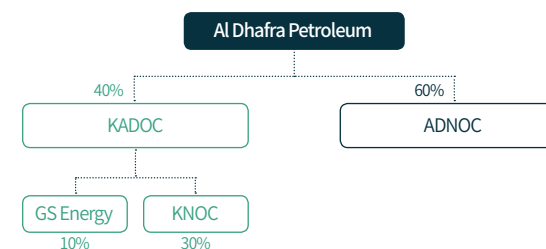
A drilling site of Haliba reservoir at Al Dhabra Petroleum concession

- Note 1) Based on the time of participation and Korea GS E&P's stake
 2) Domestic daily oil consumption: 2.6 million barrels (source: Petronet), Al Dhabra 4,000 barrels/day, ADNOC Onshore 37,800 barrels/day
 3) Korea Abu Dhabi Oil Corporation Ltd.

UAE Al Dhabra Petroleum

UAE Al Dhabra Petroleum started commercial production in June 2019. Our production volume is 4,000 barrels of crude oil per day based on our 10% stake. UAE Al Dhabra Petroleum is continuously exploring ways to increase production by discovering and developing additional structures within the concession area. GS Energy is taking part in UAE Al Dhabra Petroleum through KADOC Ltd.,³⁾ a joint venture with the Korea National Oil Corporation.

Investment structure



Overview

- Stake: 10%
- Period of petroleum rights: 2012 - 2042 (30 years)
- Reserves: 213 million barrels (Equity reserves: 21.3 million barrels)
- Daily production: Approx. 40,000 barrels/day (Equity oil production: Approx. 4,000 barrels/day)

KADOC

2022 (Unit: KRW million)

Revenue	697,489	Operating income	526,126	Assets	962,254
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NEW BUSINESS PORTFOLIO

Sustainable Growth with ESG

GS Energy has created synergies by expanding its business portfolio into new eco-friendly business areas alongside its existing energy business. In the areas of green power generation, clean hydrogen, electric power solutions, and resource circulation, we are laying the groundwork for new businesses that can achieve sustainable growth and respond to changes in the energy market. Moreover, we are exploring new business opportunities and securing future growth engines by proactively identifying and investing in cutting-edge overseas technologies for each of these energy trends. GS Energy is taking the lead in the Korean energy industry by continuously striving to discover energy sources that contribute to the future of humanity and the environment and constantly pursuing new energy businesses that incorporate various emerging technologies.

Green Power Generation



Clean Hydrogen



Electric Power Solution



Resource Circulation



NEW BUSINESS PORTFOLIO

Sustainable Growth with ESG

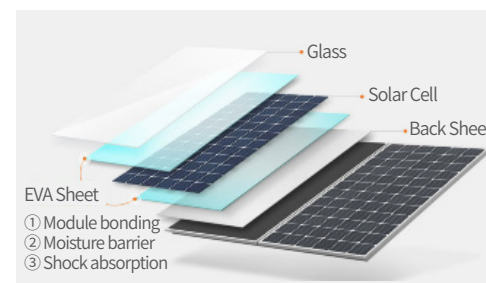
GS Dangjin Solar Farm



GS Dangjin Solar Farm is a fully-owned subsidiary of GS Energy established in October 2020 to operate and manage a solar power plant that is currently under construction on low-grade agricultural land in Chorakdo-ri, Seokmun-myeon, Dangjin, Chungcheongnam-do. It is slated to start commercial operation in early 2025, with an annual production of about 210,000 MWh of electricity. GS Dangjin Solar Farm will make continuous efforts to contribute to the stable supply of renewable energy in line with the government's renewable energy expansion policy.

Location	Chorakdo-ri, Seokmun-myeon, Dangjin, Chungcheongnam-do
Capacity	160 MW
Area	about 1.58 million m ²
Investment	about KRW 250 billion
Annual power generation	about 210,000 MWh
Annual GHG reduction	about 96,200 tCO ₂ -eq
History	Oct. 2020: Established SPC Dec. 2020: Acquired a power generation business license Dec. 2022: Completed an environmental impact assessment 3Q 2023: Obtain permission for development activities (planned) Dec. 2023: Groundbreaking (planned) Mar. 2025: Complete construction and commercial operation (planned)

H&G Chemical

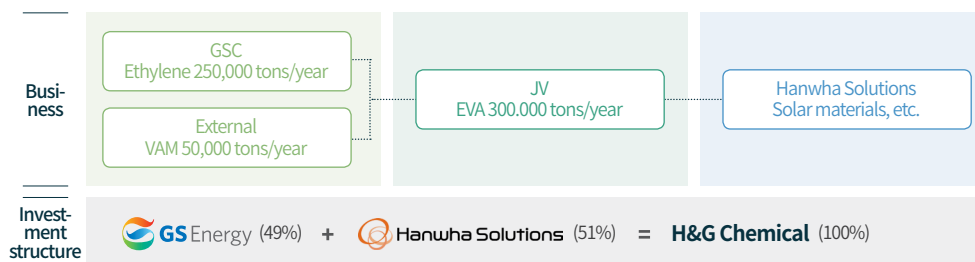


Contact Information

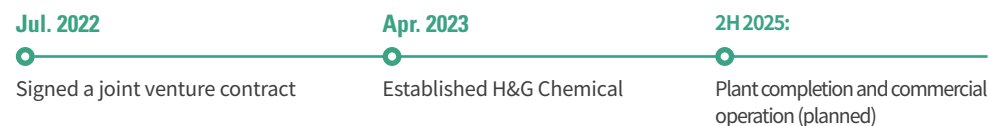
1721-1, Jungheung-dong, Yeosu-si, Jeollanam-do
82-61-680-5204 | ※ Website to be built

H&G Chemical is a joint venture established under an agreement signed in September 2022 between GS Energy and Hanwha Solutions. The plant construction is underway, with the goal of commencing commercial production in the second half of 2025. H&G Chemical will have a production capacity of 300,000 tons per year for EVA (ethylene vinyl acetate) a crucial material used in solar module sheets. The company will receive a stable supply of ethylene through GS Caltex and supply EVA to global solar component manufacturers through Hanwha Solutions. GS Energy's investment in solar material and component production will contribute to the implementation of carbon-neutral policies to respond to climate change.

Overview



History



NEW BUSINESS PORTFOLIO

Sustainable Growth with ESG



CHARGE V



GS Connect and ChargeEV provide an integrated charging solution for the establishment and operation of EV chargers for both slow and fast charging. As of the end of 2022, the companies were operating approximately 40,000 EV chargers.

2022 (Unit: KRW million)

Category	Amount
Revenue	15,057
Operating income	(4,559)
Assets	41,748

Contact Information

117 Seochojungang-ro 8-gil, Seocho-gu, Seoul
82-1544-4279 | www.gsconnect.co.kr

2022 (Unit: KRW million)

Category	Amount
Revenue	24,250
Operating income	(3,973)
Assets	22,794

Contact Information

117 Seochojungang-ro 8-gil, Seocho-gu, Seoul
82-1600-4047 | www.chargev.co.kr



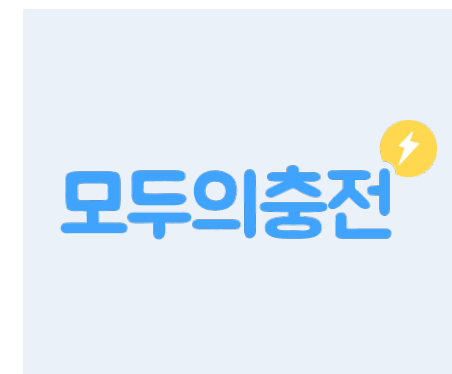
HiEV CHARGER is an EV charger manufacturer established jointly by GS Energy, GS Neotec and LG Electronics. The company is committed to supplying a range of chargers with world-class quality and competitiveness.

2022 (Unit: KRW million)

Category	Amount
Revenue	12,986
Operating income	2
Assets	47,025

Contact Information

1st floor, 222 G2-dong, LG-ro, Jinwi-myeon,
Pyeongtaek-si, Gyeonggi
82-70-4348-3705 | www.hievcharger.co.kr



SCALAR DATA operates an integrated platform for EV chargers called "EV Modu." The company has integrated complex EV charging payment methods and provides EV charging services for individuals and the My Car Service for the convenient use of EVs.

2022 (Unit: KRW million)

Category	Amount
Revenue	786
Operating income	(584)
Assets	3,266

Contact Information

515 Nonhyeon-ro, Gangnam-gu, Seoul
82-2-6953-1507 | evmodu.kr

NEW BUSINESS PORTFOLIO

Sustainable Growth with ESG

HAEZOOM



2022 (Unit: KRW million)

Category	Amount
Revenue	20,476
Operating income	36
Assets	34,176

Contact Information

128 Beobwon-ro, Songpa-gu, Seoul
82-2-889-9941 | www.haezoom.com

As a satellite data and artificial intelligence technology-based energy IT company, Haezoom is accelerating the development of technologies for its energy platform and VPP businesses. It is also conducting an R&D project worth over KRW 20 billion to advance power generation forecasting and electricity analysis technologies for its VPP business. Currently, the company is participating as one of the leading energy companies in a real-time market demonstration project on Jeju Island.

With its "Haezoom Platform," which has over two million users, the company has established itself as a prominent solar power and energy enterprise and actively engages in third-party PPA transactions.

Recently, it has developed a new business by linking its DR (demand response) business with EV charging providers to generate revenues and contribute to the development of VPP technology. Moving forward, Haezoom plans to promote its IT-based cleantech business for cleaner energy and more sustainable growth.

POSCO-GS Eco Materials

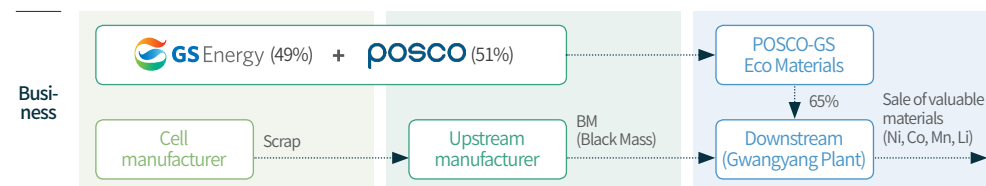


Contact Information

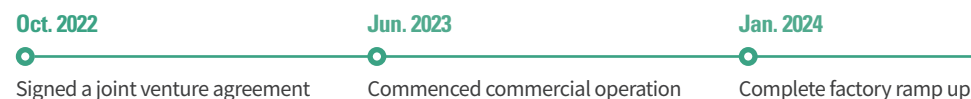
440 Teheran-ro, Gangnam-gu, Seoul
82-2-3457-1413

To launch an EV battery recycling business where lithium, nickel, cobalt, and manganese extracted from waste EV batteries are recycled as cathode battery materials, GS Energy established POSCO-GS Eco Materials, a joint venture with POSCO, in December 2022. Through this partnership, we aim to establish a foundation for our battery recycling business. POSCO-GS Eco Materials is 51% owned by POSCO Holdings and 49% by GS Energy, with a total investment of KRW 170 billion. In addition to battery recycling, the company will also venture into BaaS (battery as a service) which includes battery diagnosis, evaluation, and reuse.

Overview



History

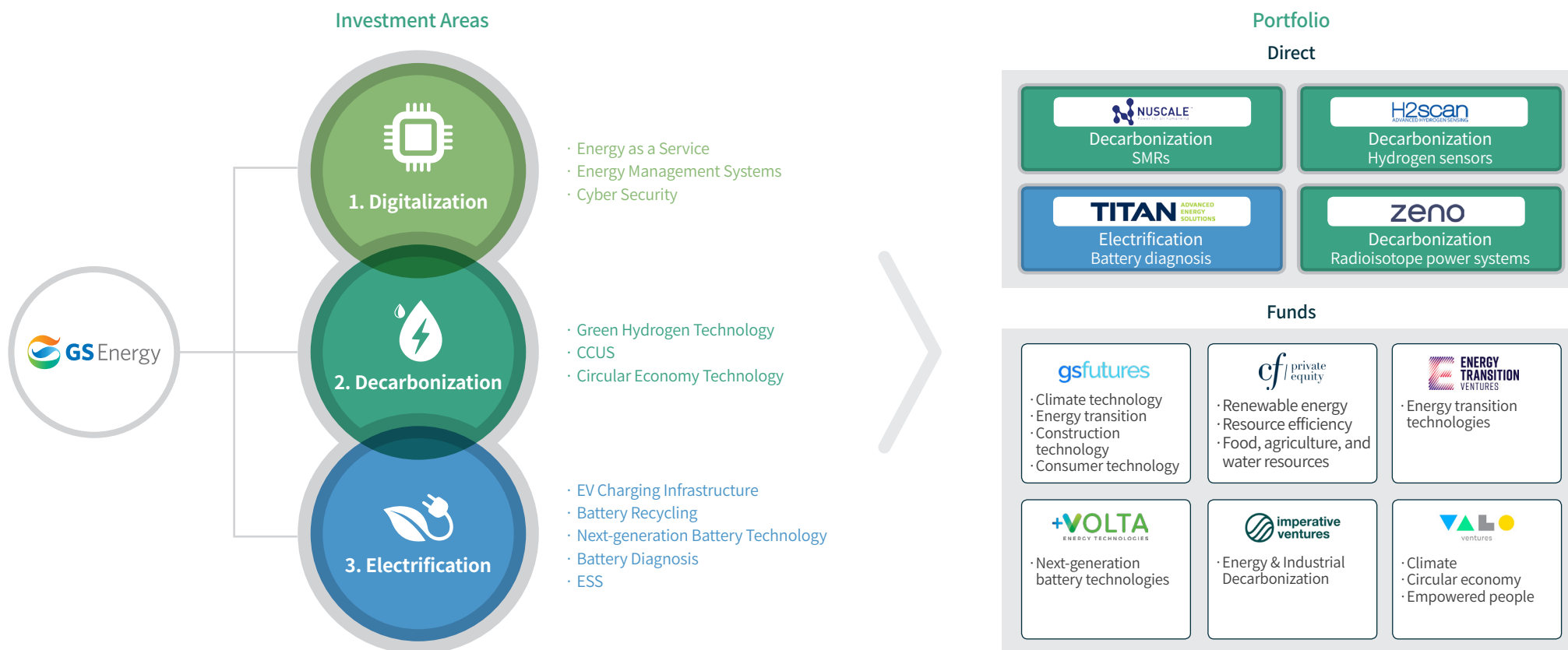


CLEAN TECH

Overseas Investments

The Global Investments Group is the overseas investment arm of GS Energy. We support emerging companies that provide data-based insights and are helping to lower emissions and electrify the energy system. By leveraging its network of GPs and venture teams in the U.S., GIG aims to drive innovation and reinvent GS Energy as an integrated energy company that accelerates the energy and mobility transformation.

The Global Investments Group focuses on significant minority stakes in growth-stage companies that will strengthen and extend GS Energy's core businesses as well as open up new opportunities for addressing future energy demands. As a strategic partner, we seek to help companies scale and disrupt new markets.



CLEAN TECH

BEYOND Strategy for ESG

#1. Expanding the Company's Green Power Generation Portfolio

GS Energy is promoting large-scale solar and wind power generation in Korea as one of its future growth engines as it seeks to implement ESG management. We are pushing ahead with a 160 MW solar power generation project in Dangjin, Chungcheongnam-do, which will begin commercial operation in early 2025, and at the same time exploring domestic opportunities for offshore wind power generation. In June 2021, GS Energy signed a business agreement with Iberdrola, the world's second-largest renewable energy company, thereby establishing a foothold for entering the global renewable energy market beyond Asia.

Green Energy

- Large-scale solar power generation in Korea
- Selective entry into the wind power generation industry in Korea / Establishment of a foundation for entering overseas markets

Background

- Growing need for carbon-free energy to achieve GHG reduction targets and meet increasing demand for corporate ESG portfolios
- Increasing policy support under the government's renewable energy promotion plan

Renewable Energy

GS Energy is entering the renewable energy industry to respond to climate change and striving to contribute to the energy transition towards carbon neutrality. In addition, we plan to advance into the global renewable energy industry by promoting various renewable energy businesses, including wind and solar power generation.



Solar Power

- Solar power generation project on low-grade agricultural land (160 MW GS Dangjin Solar Farm, COD 2025)
- Exploration of additional opportunities to realize large-scale solar power generation



Wind Power

- Exploration of opportunities to enter the domestic wind power market



Overseas Markets

- Ongoing network building with global energy companies
- Analysis of the renewable energy markets in North America and Vietnam and discovery of business opportunities

SMRs

SMRs (small modular reactors) are future-oriented reactors that are eco-friendly, safe and stable. They are expected to play a key role in achieving carbon neutrality by 2050. Currently, nuclear power generation is classified by the EU Taxonomy as a "green" economic activity that is friendly to the environment and climate. Accordingly, in June 2021, GS Energy invested in NuScale Power, which has the world's most advanced SMR technology, and secured exclusive business rights on the Korean Peninsula. GS Energy will make continuous efforts to ensure a reliable and eco-friendly energy supply.



NuScale Power received design certification approval from the US NRC (Nuclear Regulatory Commission) in 2020 and its FOAK (first-of-a-kind) plant funded by the US Department of Energy, is expected to be completed in 2029. GS Energy will continue to expand its clean energy portfolio and pursue technological innovations such as SMRs, which will become a key technology in achieving carbon neutrality.

Size of Scale

- About 40% of the land for a conventional power plant is needed.
- The size can be adjusted according to the number of modules required

37%
23m



Construction period

- It takes about four years, as key equipment is manufactured and then transported to the construction site for installation.

CLEAN TECH

BEYOND Strategy for ESG

#2. Leading the Reorganization of Infrastructure for the Clean Hydrogen Economy

GS Energy is entering the hydrogen business as one of its growth engines through ESG management. Following an eco-friendly blue ammonia development project with ADNOC, the company is looking to participate in more clean hydrogen and ammonia projects overseas and pushing ahead with the construction of infrastructure to import these fuels. GS Energy aims to take a leading role in the reorganization of hydrogen infrastructure at home and abroad in preparation for the emergence of a clean hydrogen economy.

New CCUS business

CCUS (carbon capture, utilization and storage) is essential for achieving carbon neutrality. It involves capturing carbon dioxide from various emission sources and transporting it to a sequestration point, such as a depleted gas field or aquifer, for utilization or storage. GS Energy is working with various stakeholders to explore the option of capturing domestically emitted carbon dioxide and storing it in depleted gas fields overseas. In particular, the company has signed an MOU with PETRONAS to jointly develop the Shepherd CCS Project, a cross-border project between Korea and Malaysia to capture, transport, and store carbon dioxide. In addition, GS Energy is conducting a feasibility study of a CCUS cluster in Korea together with GS Caltex.

Import of Clean Hydrogen and Ammonia

GS Energy has been participating in an eco-friendly blue ammonia project of ADNOC, a state-owned oil company in the UAE, with an annual production capacity of 1 million tons. As one of the participants in the project, GS Energy signed a shareholder's agreement in late 2022 and secured supply of 200,000 tons of clean ammonia. In addition to this project, the company is considering participating in various projects in North America, the Middle East, and Australia to import clean hydrogen and ammonia from diverse suppliers.



Construction of Hydrogen and Ammonia Supply Infrastructure

GS Energy is promoting projects to build clean hydrogen and ammonia supply infrastructure, including terminals and pipelines, to ensure a reliable supply of these clean fuels. In addition, the company is actively discussing clean hydrogen and ammonia supply and infrastructure projects with various users to create synergies with other key assets and businesses of GS Group.

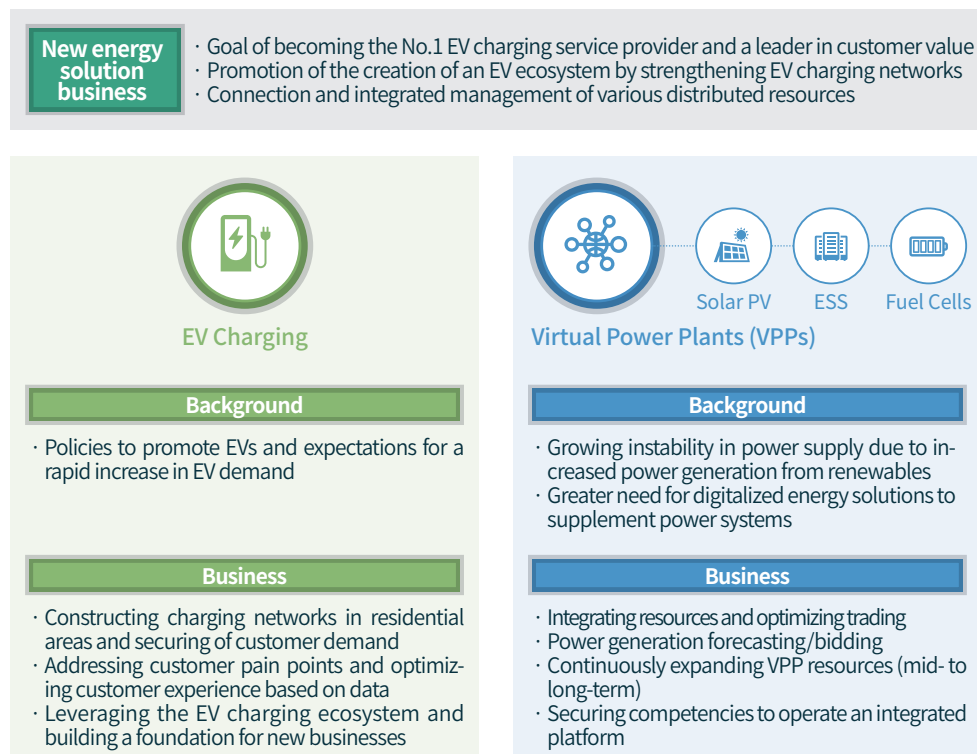


CLEAN TECH

Beyond Strategy for ESG

#3. Leading the Smart Energy Solution Market

GS Energy has made a foray into the EV charger business. In August 2021, the company established G-Connect, a joint venture with GNTel. It was renamed GS Connect in July 2022, signaling GS Energy's intention to grow it as a core business. Through the acquisition of ChargeEV in November 2022, the company now operates around 40,000 EV chargers nationwide, and has thus secured a leading position in the slow charger market. In addition, GS Energy is laying the foundation for a VPP (virtual power plant) business.



CLEAN TECH

Beyond Strategy for ESG

#4. Creating an Ecosystem of Resource Circulation

GS Energy is actively exploring business opportunities in EV battery recycling. In June 2021, we signed MOUs with MinTech, a company specializing in battery diagnosis and evaluation, and GS Mbiz, which has a nationwide automobile maintenance network. These MOUs enabled us to promote the development of a BaaS business model for EVs. Based on this, we plan to launch a battery recycling business, thereby contributing to the creation of an ecosystem for resource circulation.

To launch an EV battery recycling business where lithium, nickel, cobalt, and manganese extracted from EV waste batteries are recycled as cathode battery materials, we have made investments in ECO RNS, a company with pyrometallurgy technology for lithium recovery from waste batteries by dry process and EVCC, which can produce black powder and has a network for securing waste battery materials. Furthermore, GS Energy established POSCO-GS Eco Materials, a joint venture with POSCO, in December 2022 to create a closed-loop for its battery recycling business.

Battery Recycling

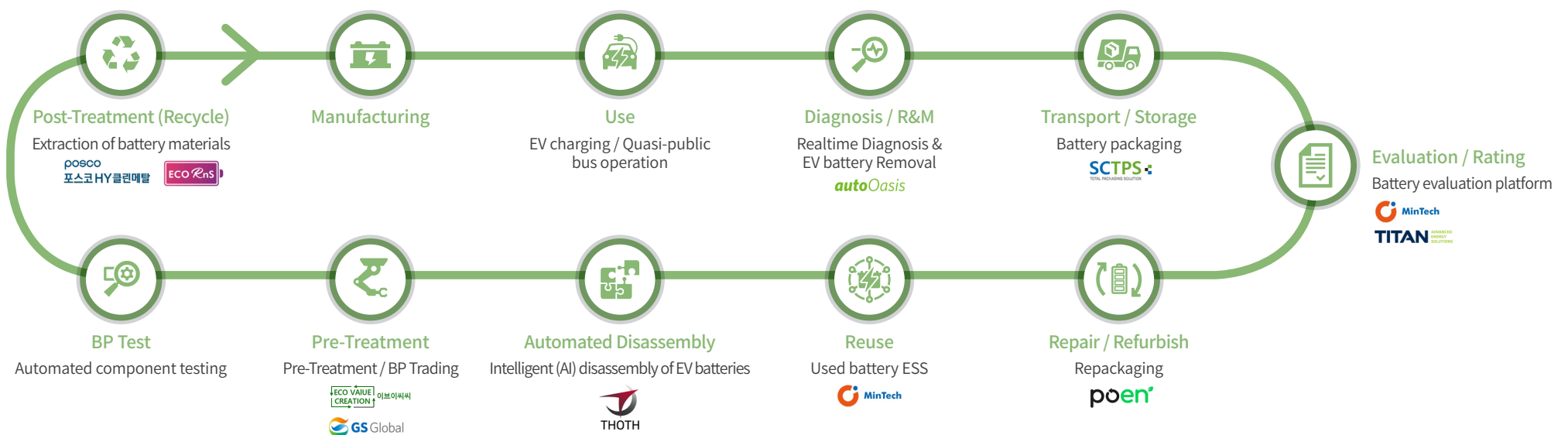
- Efficient collection of waste batteries through existing nationwide networks
- Creation of new value through the diagnosis and evaluation of collected batteries
- Creation of a resource circulation ecosystem through EV battery recycling for battery materials

Background

- Increase in end-of-life batteries due to the expansion of EVs and ESS
- Growing need for an entity to diagnose, evaluate, and manage batteries to further expand EVs
- Growing social interest in a circular economy for battery materials

GSE Business in the EV Battery Circular Economy

Establishing a closed loop through investments and partnerships with outstanding companies in the EV battery value chain



CLEAN TECH

Startup Discovery and Support Program

The GS Challenge

The GS Challenge. SEASON 3

FUTURE ENERGY

차세대 에너지 기술로 만드는 지속 가능한 미래

GS에너지와 블루포인트가 함께 지원하는 액셀러레이팅 프로그램 The GS Challenge. Future Energy 에 참여할 에너지 분야 테크 스타트업을 찾습니다.



모집 분야

차세대 에너지 기술로 만드는 지속가능한 미래

그린에너지 생산과 활용	탄소포집/활용 및 수소경제	신모빌리티와 배터리 연관사업
<p>차세대 에너지 기술로 만드는 청정 에너지 세상</p> <p>차세대 에너지 기술을 활용하여</p> <ul style="list-style-type: none"> • VPP 인프라/솔루션/플랫폼 서비스 • 스마트그리드/신재생에너지 관련 기술 <p>의 솔루션을 제안하는 스타트업</p>	<p>차세대 에너지 기술로 만드는 깨끗한 환경</p> <p>차세대 에너지 기술을 활용하여</p> <ul style="list-style-type: none"> • 온실가스 Credit 감축 사업 관련 플랫폼/서비스 • 탄소활용 기술(CCU) • 수소생산/운송/저장/활용 관련 기술 및 서비스 <p>의 솔루션을 제안하는 스타트업</p>	<p>차세대 에너지 기술로 만드는 에코 모빌리티 미래</p> <p>차세대 에너지 기술을 활용하여</p> <ul style="list-style-type: none"> • 전기차 충전 관련 기술 및 서비스 • 전기차 활용 에너지 솔루션/플랫폼 • BaaS 사업을 위한 차세대 기술 • 배터리 재활용/재사용 사업을 위한 차세대 기술 <p>의 솔루션을 제안하는 스타트업</p>
<p>예 설비 감시/진단, 지능형 CCTV, EMS, 수요관리 솔루션, 발전량 예측, 실시간 거래 등</p> <p>협력기업사 GSE너지, 해중, 인천종합에너지, GS파워</p>	<p>예 Hydrogen blending, 수전해, LOHC, 암모니아 합성/분해, CCU 등</p> <p>협력기업사 GSE너지, GS칼텍스 기술연구소, 인천종합에너지, GS파워, 보령LNG터미널</p>	<p>예 EV 스마트충전, 무선충전, 충전 데이터 분석, 배터리 진단, 잔존수명 평가를 위한 디지털 솔루션 등</p> <p>협력기업사 GSE너지, GS커넥트, 민테크</p>

GS Energy operates “The GS Challenge,” a program designed to support green and energy startups.

The GS Challenge was launched in 2021 to search for promising startups that can collaborate with GS Energy in creating a sustainable future based on next-generation energy technologies. The program targets early-stage startups and pre-startups with next-generation energy technologies. Selected startups are offered various growth opportunities, such as discussing strategic collaboration with GS Energy and attracting investment through a five-month accelerator program. In May 2023, the third co-host ended with a “Demo-Day” event where each startup presented their commercialization progress. GS Energy will continue to foster collaboration with startups to realize “growth through sustainability” through active, open innovation.



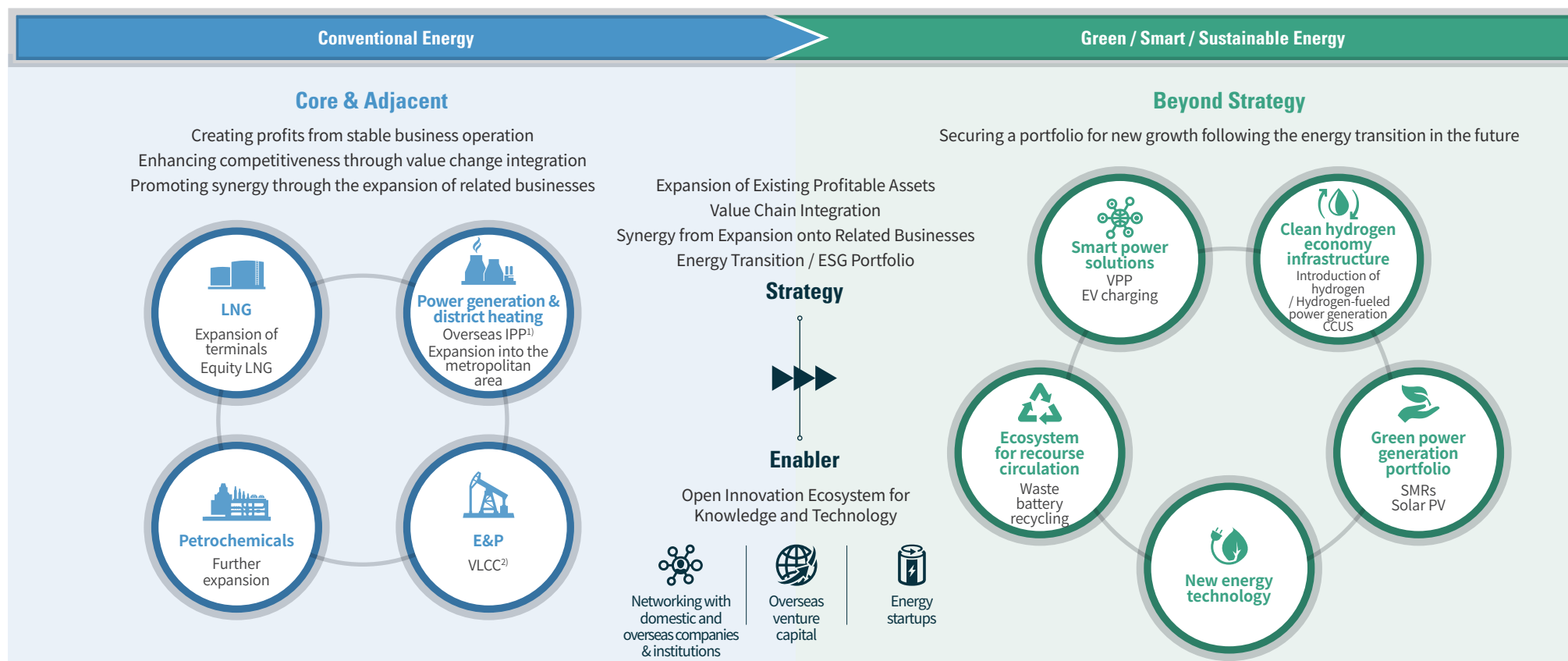
GSE'S ESG STRATEGY

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MID- TO LONG-TERM STRATEGIC DIRECTION

GS Energy Strategic Direction

GS Energy has established a mid- to long-term strategic roadmap for sustainable growth and is carrying out tasks focused on the continuous innovation of its business portfolio, the reinforcement of its human capabilities, the promotion of ESG management, and digital transformation. In particular, we have implemented four ESG strategies in earnest since 2021: expanding our green power generation portfolio, leading the smart power solution market, establishing an ecosystem for resource circulation, and leading the reorganization of infrastructure for the clean hydrogen economy. We aim to achieve future growth through these strategies by “reinforcing our digital competencies and promoting eco-friendly management.”

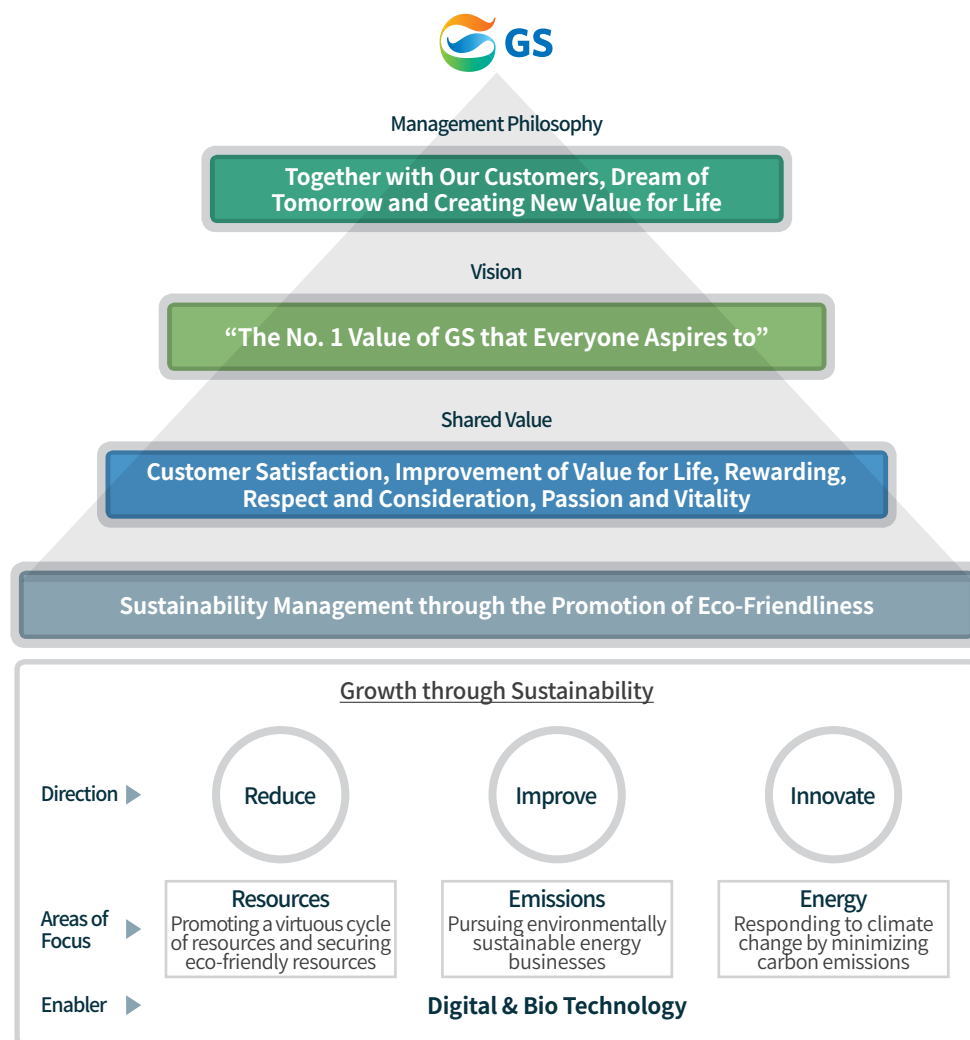


Note 1) Overseas IPP (independent power plant): Overseas power plant project in the private sector

2) VLCC: Very large crude oil carrier

ESG GOVERNANCE

Strategic Structure of GS Group



ESG Council of GS Group

GS Group conducted an ESG assessment at the group level and developed various improvement tasks in 2021 to meet societal demand for ESG management. In February 2022, we reorganized the Eco-friendly Business Council into the ESG Council to enhance the efficiency of ESG-related decision-making and ESG task implementation. GS Energy participates in GS Group's ESG Council and reports on ESG issues in the power generation and energy industries, which include its main subsidiaries (GS Power and Incheon Total Energy). To manage the growing number of its subsidiaries and portfolio companies, we have also established the "ESG Council of GS Energy," which covers GS Energy and its main subsidiaries. The ESG Council of GS Energy will lead and support the ESG management of its subsidiaries.

ESG Council of GS Energy

Background

The ESG Council of GS Energy is dedicated to proactively managing the ESG risks of its subsidiaries in advance and delivering ESG performance. The council promotes internal collaboration for the management of strategic tasks to advance ESG management and effective communication with external stakeholders. In addition, it has established an integrated ESG DB to manage indicators and prepare for external ESG evaluations conducted by organizations such as the Korea Institute of Corporate Governance and Sustainability, Sustainvest, and Daishin Economic Research Institute, with a specific focus on unlisted companies.

Operation

Four companies currently participate in the ESG Council: GS Energy, GS Power, Incheon Total Energy, and Boryeong LNG Terminal. Following discussions on ESG issues for each company during the working group meeting, the ESG Council prepares plans for key ESG issues and reports them to the CEO. Typically, the working group meeting is held once a month while the council meets quarterly. However, the council is convened when any material issue arises. In March 2023, the ESG Council meeting was held to review the progress and plans for implementing ESG strategic issues of each company. GS Energy plans to expand the participation of its subsidiaries in the ESG Council.

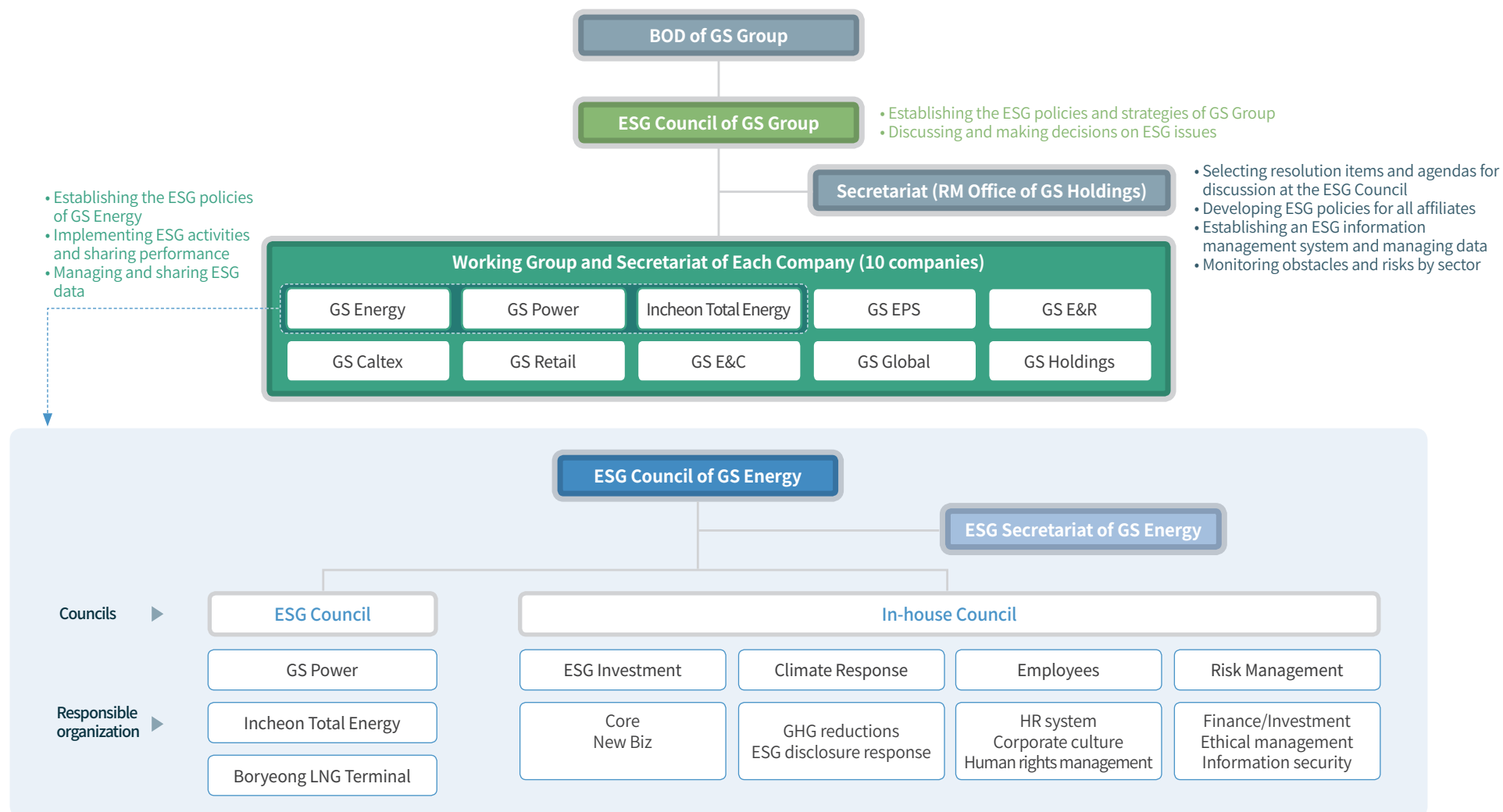
Composition

The ESG Council is composed of one CGO (chief green officer) from GS Energy, four ESG executives from each company, and eight working-level officers. The composition of the council is designed to ensure the efficiency of its operation and decision-making process.

Category	Members
Executive Council	GS Energy CGO (1), ESG executives of each affiliate (4)
Working Group	ESG Team leaders (4) and working-level officers (4) from each company

ESG GOVERNANCE

ESG Council



ESG GOVERNANCE

ESG Council of GS Energy

Main Agenda

● Ongoing ● Completed

Response to External Evaluation and Management of ESG Performance	Details	Status
Response to 2022 ESG Evaluation	(Sustainvest) Management of the ESG performance of GS Energy and its subsidiaries and portfolio companies	●
Establishment of an ESG performance management system	Preparation of ESG performance evaluation and monitoring plans	●
Promotion and review of the ESG strategic tasks of each company	All three companies: Establishment of a environmental policy, the Human Rights Charter, and the Code of Conduct for suppliers and preparation of the ESG report	●
	GS Energy: Introduction of an ESG evaluation process for new businesses, a human rights management system, and social contribution activities	●
	GS Power/Incheon Total Energy: Establishment of a human rights management system and preparation of a supplier management plan	●
	Boryeong LNG Terminal: Promotion of the disclosure of ESG data	●
Carbon reduction (neutrality) strategy	Exploration of ways to reduce GHG emissions in the mid-to long-term	●
	Communication among carbon-neutral stakeholders	●

Monitoring of ESG/Carbon Neutrality Policies

In response to the revised roadmap for achieving the national GHG reduction target for 2030 and the announced 100 core technologies for achieving carbon neutrality in 2023, GS Energy examined their impact on the company and its subsidiaries, as well as associated business risks and opportunity factors. GS Energy will continue to monitor policies and discuss countermeasures at the ESG Council level.

Preparation of Measures to Respond to ESG Evaluations

The ESG Council of GS Energy is actively preparing various measures to respond to the trends of mandatory disclosure and advanced evaluation of ESG data. In line with this, we have established an ESG performance management system for our subsidiaries to monitor the ESG status of each company in an integrated manner and provide support in internalizing ESG management practices. In addition, GS Energy is committed to meeting the needs of stakeholders through strategic ESG disclosure by planning and organizing the content of its annual sustainability report.

ESG Performance Management System for Subsidiaries and Support for ESG Implementation

GS Energy is deriving ESG performance indicators by examining the internal and external ESG status of its subsidiaries. Based on these findings, we are collecting quantitative data and developing implementation metrics that can manage long-term goals. GS Energy plans to establish an integrated management system to monitor future improvements.

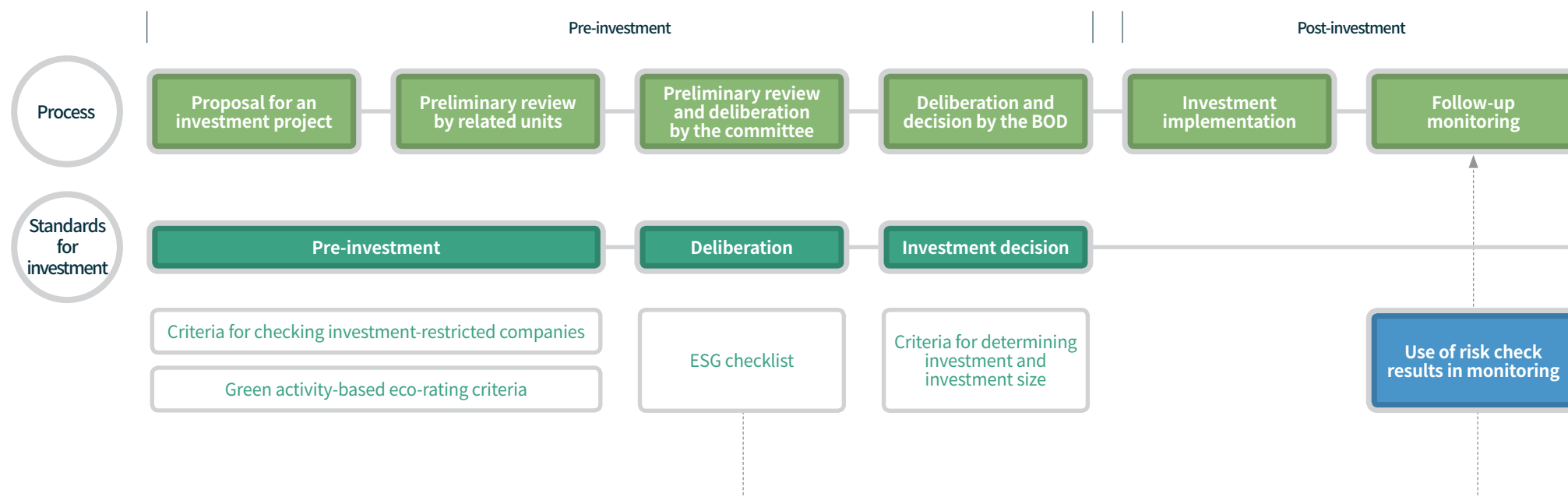
GS Energy's Five Big Steps for Leading ESG Management	Objective
STEP 1. Identifying common ESG tasks for the holding company and its subsidiaries	Structuring ESG strategic tasks such as carbon neutrality, social contributions, and BOD diversity
STEP 2. Establishing common policies and integrated governance to promote integrated ESG tasks	Expanding the scope of support to shared growth, where economic value and social value are pursued together
STEP 3. Establishing an ESG performance evaluation system for GS Energy and its subsidiaries	Maximizing the effectiveness of ESG performance management by designing systems for ESG performance management and implementation status review
STEP 4. Establishing a computer system for real-time monitoring of the integrated ESG management system	Real-time monitoring of ESG performance management
STEP 5. Expanding the scope of subsidiaries covered by the integrated ESG management system	Reducing the ESG risks of subsidiaries and pursuing shared sustainable growth

ESG GOVERNANCE

Establishment of an ESG Risk Assessment System for New Businesses

GS Energy has established an ESG risk assessment system within the investment and deliberation process to block ESG risk factors in advance and make responsible investments when promoting a new business. The ESG risk assessment process consists of two stages: pre-investment and post-investment. In the pre-investment stage, following the proposal of an investment project, the related unit reviews the ESG investment restriction criteria and eco-rating criteria. Then, the Investment Deliberation Committee reviews the ESG checklist during the preliminary review and deliberation, and finally, the Board of Directors makes the ultimate decision on whether and how much to invest based on the ESG standards. The post-investment stage involves the implementation of the investment and follow-up monitoring. The results obtained from the monitoring process are used to provide recommendations for improvements in the ESG management of the portfolio companies and to support the reduction of ESG risks.

Investment Review and Deliberation Process

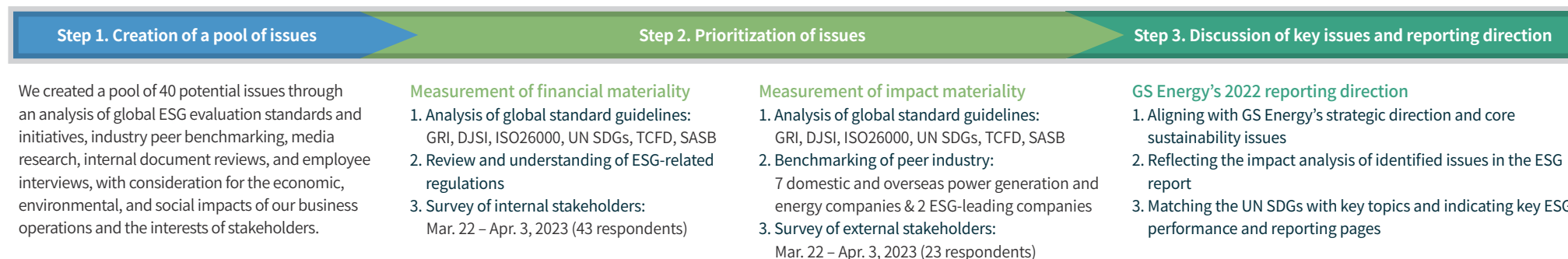


DOUBLE MATERIALITY ASSESSMENT

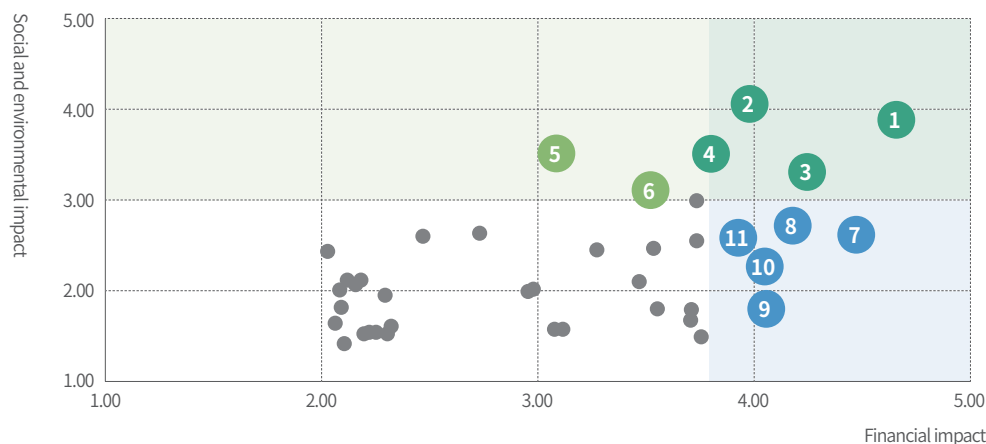
Double Materiality Assessment Process

GS Energy determined the priorities of issues by considering the perspectives of both internal and external stakeholders, and based on this, conducted a double materiality assessment. In deriving the results, we have ensured a comprehensive understanding of the key issues for stakeholders from both sides and selected the identified these key issues as priority reporting topics. GS Energy will continue its efforts to identify issues by focusing on both internal and external stakeholders.

GS Energy's Double Materiality Assessment Process



Double Materiality Assessment



Double Materiality

GS Energy actively utilized global sustainability initiatives and assessment systems such as the GRI, SDGs, SASB, and TCFD to identify material issues related to sustainability management. Specifically, we incorporated the concept of double materiality, which measures both the impact materiality and financial materiality, to identify potential impacts on the company and its stakeholders.




















Environmental and Social Materiality (Impact Materiality)

The extent of the positive and negative impacts that the company's operations can have on the environment and society, considered from an outside-in perspective

Financial Materiality

The extent of the positive and negative impacts that sustainability-related factors can have on the company's financial position, considered from an inside-out perspective

CRITICAL ISSUES

No.	Topic	Performance	UN SDGs	GRI Index	Page
1	Expansion of renewable energy business and portfolio diversification	<ul style="list-style-type: none"> - Business expansion through acquisitions (acquiring ChargeEV in Nov. 2022) - Portfolio diversification through the establishment of joint ventures (H&G Chemical, POSCO-GS Eco Materials, etc.) 	 	Non-GRI	20-29
2	Transition to carbon neutrality (e.g., power generation from renewables, phase-out of coal, etc.)	<ul style="list-style-type: none"> - Active participation in the carbon credit market - EV leases for GS Energy executives (6 units in 2022 → 11 units in 2023) 	 	Non-GRI	47-48, 56
3	Economic performance (creation and distribution of economic value)	<ul style="list-style-type: none"> - Creation of economic value of KRW 7,860 billion in 2022 - Distribution of economic value of KRW 6,488 billion in 2022 	 	GRI 201-1	42
4	Contribution to communities	<ul style="list-style-type: none"> - Support for the National Assembly Forum on Climate Change to raise awareness of climate change and seek solutions - Support for a housing improvement project for the descendants of independence patriots 	 	GRI 413-1~2	72-73
5	Ethical management and anti-corruption	<ul style="list-style-type: none"> - Zero violations of ethical management in 2022 - All employees signing the pledge to comply with business ethics 	 	Non-GRI	77-78
6	Climate change response	<ul style="list-style-type: none"> - Strengthening of the new business portfolio as well as climate change response activities - Promotion of environmental management 	 	GRI 201-2	46-54, 55-60
7	Financial soundness	<ul style="list-style-type: none"> - Revenue and equity-method income more than double compared to the previous year - Advancement of the management of financial risks and investment risks 		GRI 201-1, GRI 2-25	42, 79
8	BOD composition and activities	<ul style="list-style-type: none"> - 16 BOD meetings held in 2022 with 53 items resolved - Composed of one executive director, the CEO, and four non-executive directors 		GRI 2-9, GRI 2-10, GRI 2-11, GRI 2-14	75
9	Transparency, reliability, specificity and timeliness of the disclosure of ESG indicators	<ul style="list-style-type: none"> - Disclosure of the sustainability report on the website - Promotion of ESG-related communication with stakeholders 		Non-GRI	36, 43
10	ESG management	<ul style="list-style-type: none"> - Formation and operation of the ESG Council, which includes subsidiaries - Promotion of company-wide ESG strategic tasks 	 	Non-GRI	32-35
11	GHG and energy management	<ul style="list-style-type: none"> - Reduction of total GHG emissions (Incheon Total Energy) - Reduction of total energy consumption (GS Power & Incheon Total Energy) 	 	GRI 302-1~2, GRI 305-1~2	52

MANAGEMENT APPROACH

Expansion of Renewable Energy Business and Portfolio Diversification



With the increasing global concern and response to climate change, an energy paradigm shift is underway. As a result, there is growing interest in renewable energy sources such as solar power, wind power, and hydropower, as well as emerging new energy technologies such as fuel cells and hydrogen, and the share of these energy sources is steadily increasing.

In order to respond proactively to these environmental changes, GS Energy aims to move away from the traditional energy paradigm reliant on fossil fuels and expand its renewable energy business to pursue efficient and sustainable power generation. In line with this objective, we are expanding our business portfolio into green sectors such as green power generation, clean hydrogen, electric power solutions and resource circulation, and creating synergies.

Moving forward, we aim to lead the energy sector in Korea by expanding and diversifying our eco-friendly business, which includes renewable energy, and actively exploring new markets. Furthermore, GS Energy will respond to climate change and protect ecosystems by promoting harmonious development between the economy and the environment, and thereby contribute to the creation of a sustainable future.

2022 Performance

Operation of EV Chargers



36,590 units

Joint Venture Contracts for Business Expansion



2 contracts

MANAGEMENT APPROACH

Transition to Carbon Neutrality



The goal of carbon neutrality is to achieve net zero carbon emissions by 2025 to limit global warming to 1.5 degrees Celsius. This is an ambitious goal that requires a societal shift, including reducing fossil fuel use and increasing the use of renewable energy. Failure to achieve carbon neutrality could lead to severe consequences from climate change due to rising global temperatures, resulting in loss of life and property, reduced food production, and ecosystem degradation. Therefore, to prevent the adverse impacts of climate change and create a sustainable future, active participation in carbon reduction efforts is imperative for nations, businesses, and individuals. Only through such proactive engagement is carbon neutrality possible. To contribute to achieving carbon neutrality, GS Energy is reducing GHG emissions from its subsidiaries by introducing high-efficiency power generators and using unutilized energy such as waste heat while actively exploring external carbon offset projects to secure carbon offset credits. Furthermore, we are undertaking various initiatives to reduce GHG emissions, such as replacing executive vehicles with electric cars and promoting the use of reusable cups. Moving forward, GS Energy will pursue diverse projects and initiatives to achieve carbon neutrality by expanding its eco-friendly business, which includes renewable energy, and further increasing the adoption of electric vehicles for executives.

2022 Performance

EVs for Executive Vehicles



6 units

Use of Reusable Cups



29,600 pieces

MANAGEMENT APPROACH

Economic Performance



The creation of economic value is crucial for companies for many reasons, such as ensuring their survival and growth, satisfying stakeholders, and generating social value. GS Energy consistently generates profits through diverse energy businesses and by expanding into new energy sectors such as renewable energy and eco-friendly businesses. This enables us to satisfy our shareholders and investors while contributing to the development and prosperity of society.

In addition to the creation of economic value, the distribution of economic value is also essential for companies. By appropriately distributing economic value, companies can efficiently utilize funds to enhance their competitiveness and contribute to the creation of social value, thereby fulfilling their social responsibility and supporting sustainable social development. This enables them to gain trust and build positive relationships with various stakeholders, including customers, shareholders, employees, and suppliers. By distributing economic value to its stakeholders, GS Energy fulfills its social responsibility and maintains a positive relationship with them.

2022 Performance

Created Economic Value



KRW **7.8605** trillion

Distributed Economic Value



KRW **6.4886** trillion

MANAGEMENT APPROACH

Contribution to Communities



A community is composed of various stakeholders, including a company's customers, shareholders, employees, and suppliers. The prosperity and well-being of the community directly impact the prosperity of the company's stakeholders, and this exerts a positive influence on the company. Based on GS Group's social contribution vision, GS Energy is also carrying out a range of social contribution activities for the prosperity of local communities, thereby fulfilling its social responsibility.

In 2022, the company provided donations to support the victims of wildfires in the city of Donghae while helping to create a forum to raise awareness about climate change and discuss related issues. In addition, the company participated in a housing improvement project for the descendants of independence patriots and assisted in promoting and preserving Korean history and culture through donations to the arts and culture.

GS Energy remains committed to engaging in meaningful social contribution activities to create a better world and enhance local communities.

2022 Performance

Total Donations



KRW **237.1** million

Total Number of Donations



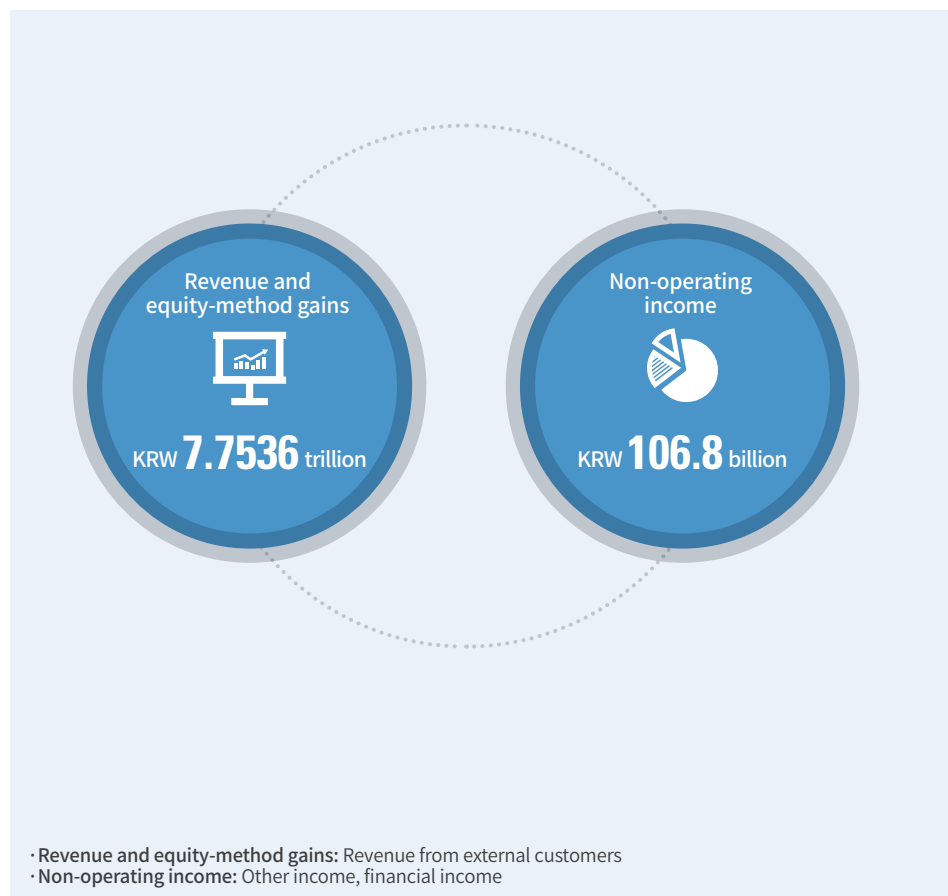
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STAKEHOLDER ENGAGEMENT

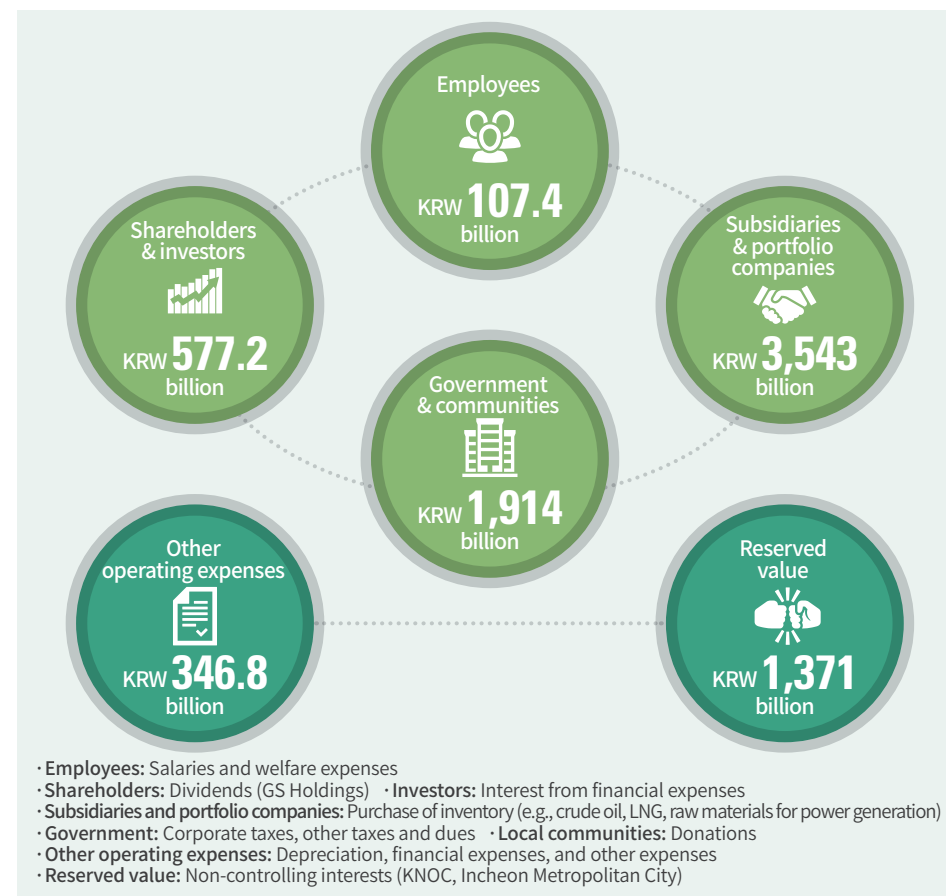
Promotion of Stakeholder Value

Through the operation of its subsidiaries and companies it has invested in, GS Energy is at the forefront of the power generation and energy industries, and is creating economic value. In 2022, the company achieved KRW 7.8605 trillion in consolidated financial performance. The economic value we created is distributed among various stakeholders, both directly and indirectly, and as such, GS Energy is striving to fulfill the core principles of sustainability management by dedicating itself to enhancing stakeholder value.

Economic Value Creation



Economic Value Distribution

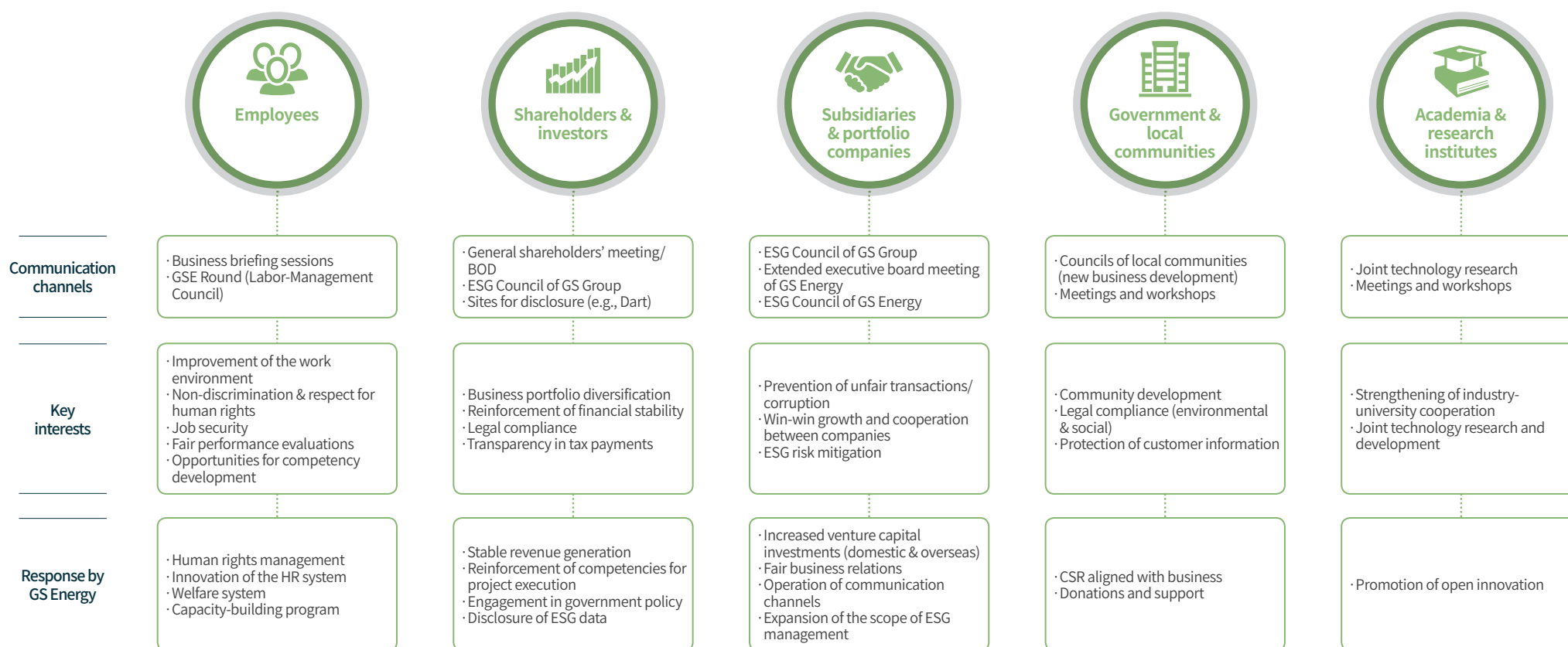


STAKEHOLDER ENGAGEMENT

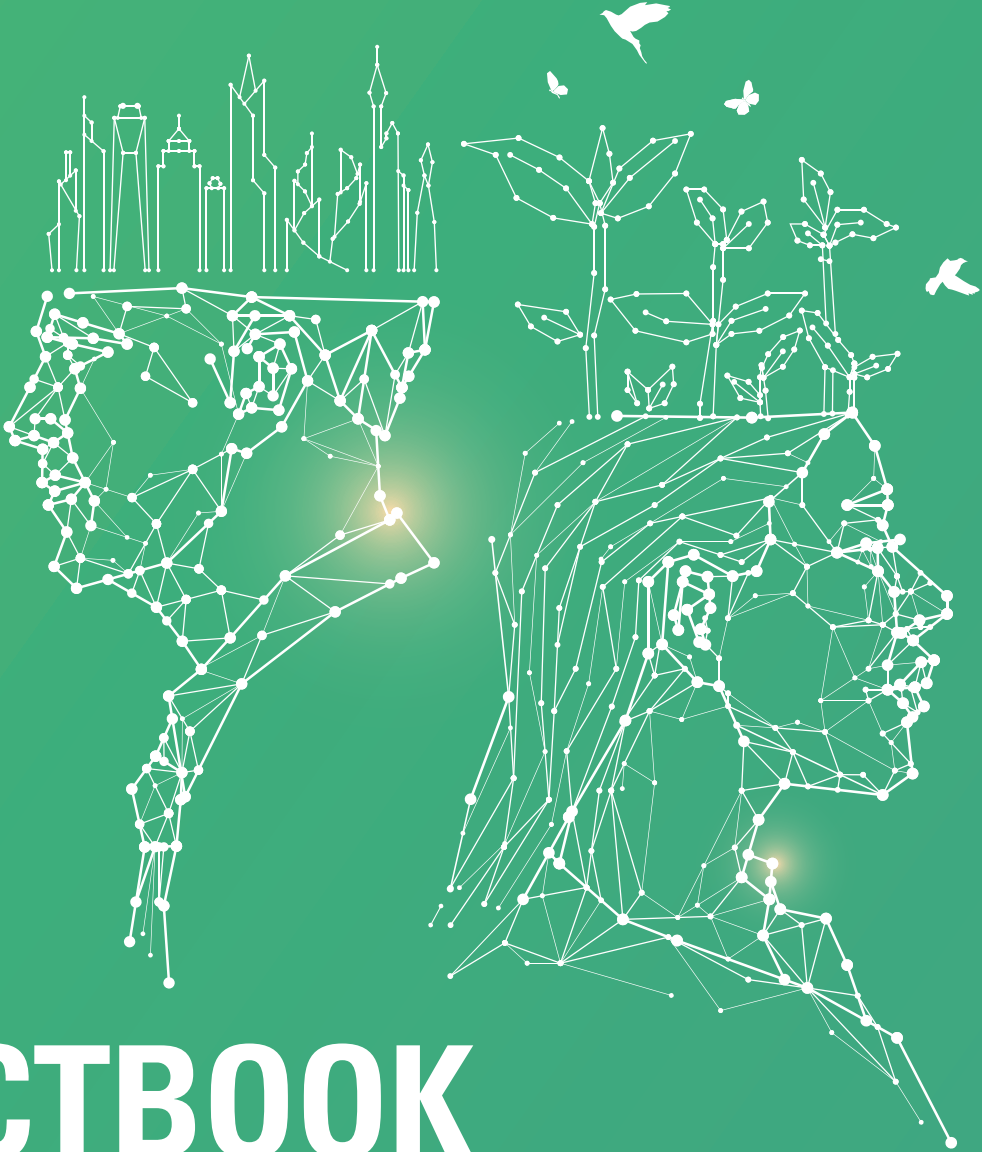
Stakeholder Communication

GS Energy communicates with its both internal and external stakeholders, including shareholders, customers, employees, and local communities, to collect diverse opinions and reflect them into its management activities as it aims for sustainable development. To achieve this, we identify a range of stakeholders who are associated with our business activities or services or who share economic, environmental or social impacts with us. GS Energy has classified its stakeholders into customers, employees, and local communities according to internal standards and identifies their expectations through its continuous and reliable communication channels.

Stakeholders and Key Communication Channels



GSE'S ESG FACTBOOK



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ENVIRONMENTAL MANAGEMENT

Preemptive Response to Climate Change

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PREEMPTIVE RESPONSE TO CLIMATE CHANGE



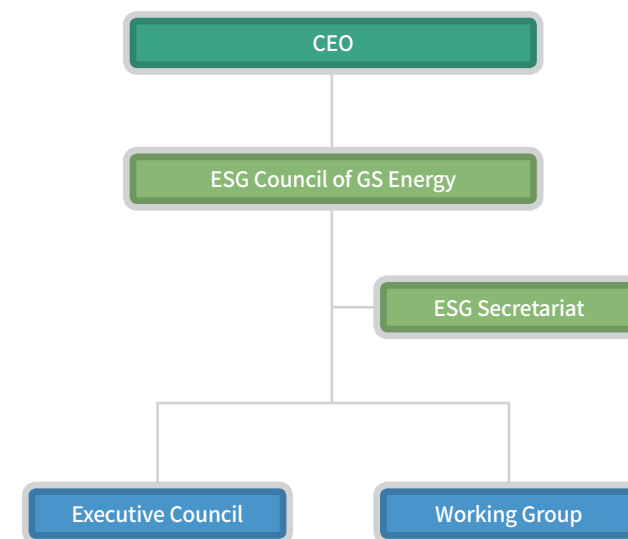
GS Energy has been actively implementing the recommendations of the TCFD to respond systematically to climate change. The company has established a reporting system based on TCFD guidelines and has disclosed its climate change response activities in the order of governance, strategy, risk management, reduction, and goals in this sustainability report. GS Energy analyzes relevant factors to identify and manage the impact of risks and opportunities associated with climate change on its businesses and is developing a climate change response system. GS Energy will strengthen its new business portfolio by leading the smart electric power solution market and building market ecosystem of resource circulation power solutions as it strives to contribute to the realization of a net-zero society.

Governance

GS Energy's Response to Climate Change

GS Energy reports risk and opportunity factors associated with climate change to the CEO, the company's top decision-maker. Then, the CEO deliberates on risk management and plans related to the company's climate change response. Since 2023, the ESG Council of GS Energy has been operating under the leadership of the ESG Secretariat with the participation of relevant departments and major subsidiaries. The ESG Council is in charge of establishing the company's climate change response strategy and developing action plans. It discusses climate change-related issues such as GHG emissions and the emissions reduction status of subsidiaries and reports them to management while managing risks and opportunities. The council holds one working-level meeting and one meeting of executives in charge of ESG at subsidiaries to discuss the progress of ESG strategic tasks, including the climate change response. GS Energy will develop an ESG database to identify three-year trends in water quality, GHGs, waste water, and other waste, and monitor and discuss climate change-related risks and opportunities. In 2023, GS Energy established mid- to long-term carbon reduction plans, climate-related disclosure plans, and action plans for each subsidiary, and it is currently implementing them.

Climate Change Response System



PREEMPTIVE RESPONSE TO CLIMATE CHANGE

Opportunities and Risks Associated with Climate Change

GS Energy recognizes the close relationship between power generation and energy businesses and climate change and continuously analyzes the opportunities and risks associated with climate change. In terms of opportunities, we aim to exploit new markets in four key areas in preparation for the era of carbon neutrality starting in 2050: our green power portfolio infrastructure for the clean hydrogen economy, smart electric power solutions, and an ecosystem for resources circulation. We are also proactively responding to risks associated with climate change by recovering unutilized energy, adopting energy-efficient equipment, reviewing the introduction of CCUS technology, and reducing GHG emissions at our major subsidiaries (GS Power and Incheon Total Energy).

Opportunities Associated with Climate Change

Item	Impact
Opportunities	Energy Source <ul style="list-style-type: none"> - Increase in business opportunities related to low-carbon, zero-carbon, and renewable energy due to the energy transition - Increased generation and supply of low-carbon energy - Growth in demand for renewable energy to achieve carbon neutrality and RE100
	Products and Services <ul style="list-style-type: none"> - Growth in demand for products and services to address the intermittency of renewable energy - Increased demand for ICT-based products and services such as power solutions - Expansion of carbon credit management solutions, including scope 3
	Market <ul style="list-style-type: none"> - Increased investment in climate tech-related start-ups and venture capital - Promotion of eco-friendly business investment due to the expansion of green finance - Promotion of the carbon credit development and trading market
	Resource Efficiency <ul style="list-style-type: none"> - Promotion of resource reuse and recycling markets - Growth in demand for improved the efficiency of building energy and transportation modes
	Resilience <ul style="list-style-type: none"> - Establishment of a business investment strategy considering the impact of climate change - Financing that takes climate risks into consideration - Portfolio improvement to reinforce the capacity to adapt to climate change - Introduction of energy efficiency measures for subsidiaries



Reinforced New Business Portfolio of GS Energy

※ Short-term: 1-3 yrs. Mid- to long-term: 3+ yrs.

Strategy	Activity	Term	
		ST	M-LT
Expanding the company's green power generation portfolio	<ul style="list-style-type: none"> - Power generation using renewable energy (solar PV) - Investment in SMR (small modular reactor) technology - Provision of solutions for solar PV-based RE100 implementation 	●	●
Leading the reorganization of infrastructure for the clean hydrogen economy	<ul style="list-style-type: none"> - Preemptive introduction of clean hydrogen and ammonia - Construction of hydrogen/ammonia supply infrastructure - Investment in hydrogen leakage detection systems 		●
Leading the smart electric power solutions market	<ul style="list-style-type: none"> - Securing of a full value chain of EV charging solutions - Securing of operational capabilities and a foundation for VPPs - Development of high-efficiency and eco-friendly EV charging facilities 	●	●
Creating an ecosystem of resource circulation	<ul style="list-style-type: none"> - EV battery service (BaaS) - EV waste battery recycling and reuse - Investment in battery diagnosis and next-generation battery technologies - Investment in a power system that reuses radioactive waste 	●	●

PREEMPTIVE RESPONSE TO CLIMATE CHANGE

Opportunities and Risks Associated with Climate Change

Risks Associated with Climate Change

Item	Financial Impact	
Transition Risk	Laws and regulations	<ul style="list-style-type: none"> - Risks of carbon credit shortages and rising prices due to tighter GHG reduction targets - Risk of climate change-related litigation
	Technology	<ul style="list-style-type: none"> - Investment risk for the development of preemptive GHG reduction technology - Decreased sales and investment loss due to failures in the demonstration and commercialization of eco-friendly technology
	Market	Deterioration of profitability due to increasing raw material costs during the fuel transition
	Reputation	Growing interest of stakeholders, such as customers and investors, in the transition of fuels used by the power generation industry
Physical Risk	Short-term	Damage to production facilities caused by short-term disasters, such as heat waves, wildfires, and floods, and increased maintenance costs
	Long-term	Disruption of operations at production facilities due to the long-term impacts of climate change, such as a rise in sea levels



Response to Climate Change Risks

※ Short-term: 1-3 yrs. Mid- to long-term: 3+ yrs.

Subsidiaries & Portfolio Companies	Response to Climate Change Risks	Term	
		ST	M-LT
GS Energy	<ul style="list-style-type: none"> - Securing of domestic and overseas offset credits linked to new businesses - Participation in a joint CCUS feasibility project 		●
GS Power	<ul style="list-style-type: none"> - Direct LNG imports to save fuel costs - Recovery of unutilized energy - Supply of energy-efficient equipment - Response to the emissions trading system and reduction of GHG emissions 	●	●
Incheon Total Energy	<ul style="list-style-type: none"> - Recovery of unutilized energy - Obtainment of green and low-carbon product certifications - Response to the emissions trading system and reduction of GHG emissions - Review of the applicability of carbon capture technology 	●	●
Shin Pyeongtaek Power Co., Ltd	<ul style="list-style-type: none"> - Direct LNG imports to save fuel costs - Response to the emissions trading system - Reduction of fine dust 		●
Dongducheon Dream Power	<ul style="list-style-type: none"> - Improvement of energy efficiency at power generation facilities 	●	●
Cheongna Energy	<ul style="list-style-type: none"> - Recovery of unutilized energy 		●

PREEMPTIVE RESPONSE TO CLIMATE CHANGE

Climate Change Risk Response System

GS Energy is primarily engaged in power generation and energy, which may face various risks associated with climate change due to the nature of the business. To proactively respond to such risks, the company identifies risk and opportunity factors using its ESG checklist and establishes a response system. When climate change-related risks arise, we address both risk and opportunity factors through the response system, report the process to management, and comprehensively manage the risks through the existing risk management system.

Risk monitoring

- Risk monitoring led by each working group of the ESG Council of GS Energy



Identification of risk and opportunity factors

- Identification of factors (risk & opportunity) that could affect businesses by using the ESG checklist

Response to risk and opportunity factors

- Monitoring and analysis of related DB indicators
- Discussion of risk factor management and opportunity factors

Reflection of the risk management process

- Reporting on risk and opportunity factors associated with climate change
- Integrated management using the risk response system and the existing risk management system

PREEMPTIVE RESPONSE TO CLIMATE CHANGE

Response to Climate Change Risks

Recovery of Unutilized Energy



Recovering unutilized energy and recycling it for district heating services is expected to create synergies by cutting heat production costs and, with the implementation of carbon neutrality policies, securing carbon credits. GS Power has been actively developing technologies to efficiently harness unutilized energy and currently owns seven patents in this field. The company has also concluded agreements with the local governments of Bucheon and Anyang, where district heating is provided, to use unutilized energy from urban infrastructure. In addition, GS Power offers technology consulting services for the recovery and supply of unutilized energy and is participating in a national R&D project called "Smart Zero Energy City," which aims to explore next-generation energy supply solutions for cities.



Unutilized energy recovery project for the Gulpo sewage treatment plant in Bucheon



Smart Zero Energy City, a national R&D task



The power plants in Incheon supply 60,000 GWh of energy annually, contributing to a sustainable life for the citizens of Incheon. However, about 66 million tons of GHGs are emitted into the air during the power generation process. Incheon Total Energy is committed to continuously exploring, investing in, and operating new, external sources of heat in order to recover and recycle unutilized energy that is released into the air. Through these activities, the company has successfully reduced gas turbine operation, resulting in a decrease in LNG usage by 37,000 tons and GHG emissions by 65,000 tons per year.



Energy Efficiency Improvement Project



PREEMPTIVE RESPONSE TO CLIMATE CHANGE

Response to Climate Change Risks

Installation of Equipment to Improve Energy Efficiency (Heat Pumps)



A heat pump is a device that recovers low-temperature energy to provide medium or high-temperature heat, and the technology is emerging as a method of reducing carbon emissions around the world. GS Power installed heat pumps in its combined heat and power plants in Anyang and Bucheon in November 2010, the first installation of such devices in Korea. These heat pumps utilize the cooling water from the power plants as a heat source for the evaporators, allowing them to produce 9 Gcal/h (equivalent to supplying 7,000 households). Moreover, GS Power has successfully developed and commercialized a new technology for recovering unutilized heat and recycling it for district heating by using a medium-temperature water absorption heat pump, the first of its kind in the world.



Low-temperature heat recovery from fuel cells in Bucheon



Green and Low-carbon Certification



Low-carbon product certification is a system that discloses the carbon emission information of products, contributing to the promotion of low-carbon consumption culture. Only products that meet the low-carbon standards among "Environmental Product Declaration" certified products can receive the certification. Incheon Total Energy is also striving to obtain these certifications for the carbon reduction effects it has achieved through the excellent energy production efficiency of its LNG combined heat and power plants and its use of external water heat. Specifically, the company aims to obtain the Environmental Product Declaration certification in 2023 and the low-carbon product certification in 2024. Incheon Total Energy expects that obtaining these certifications will meet its customers' demand for eco-friendly products and demonstrates the value of the company's district heating as a means of reducing GHG emissions.



PREEMPTIVE RESPONSE TO CLIMATE CHANGE

Response to Climate Change Risks

GHG Emissions and Energy Use



After being designated as a business entity eligible for the allocation of emission permits, GS Power has fulfilled its obligations for the first commitment period (2015-2017) and the second commitment period (2018-2020) of the emissions trading system. Currently, the company is fulfilling its obligations for the third commitment period (2021-2025). Every year, the company submits statements of GHG emissions and energy consumption to the government, and these are verified by an independent verification institution. Every year, GS Power has improved its GHG emissions calculation plan in order to measure energy consumption and GHG emissions with greater accuracy and collect supporting data and measure parameters in a more systematic manner. It has also established a GHG inventory to monitor and manage monthly GHG emissions. GS Power is committed to making continuous efforts to reduce energy consumption by adopting energy-efficient facilities at its combined heat and power plants to lower GHG intensity.

GHG Emissions

Item	Unit	GS Energy			GS Power			Incheon Total Energy		
		2020	2021	2022	2020	2021	2022	2020	2021	2022
Total GHG emissions		238	249	291	1,953,049	2,198,431	2,987,955	323,596	382,327	373,840
Direct emissions (scope 1)	tCO ₂ eq	82	95	78	1,931,348	2,174,034	2,967,293	319,988	379,251	370,696
Indirect emissions (scope 2)		157	154	213	21,704	24,402	20,662	3,608	3,076	3,144

Energy Use

Item	Unit	GS Energy			GS Power			Incheon Total Energy		
		2020	2021	2022	2020	2021	2022	2020	2021	2022
Total energy use		2.7	2.9	3.1	37,298	42,046	58,361	6,386	7,545	7,496
Direct use*	TJ	1.5	1.7	1.4	36,851	41,536	57,821	6,362	7,523	7,344
Indirect use**		1.2	1.2	1.7	446	509	540	24	21	152

* Fuel consumed by renewable energy facilities such as power plants and fuel cells: LNG for both GS Power and Incheon Total Energy

** Energy use other than fuels, a main energy cost item

※ Due to an error in the energy use data reported in the 2021 report, the data for GS Power's indirect energy use for the years 2020 and 2021 has been revised.



Incheon Total Energy is fulfilling its obligations to reduce GHG emissions in accordance with the Framework Act on Low Carbon, Green Growth, and the Act on the Allocation and Trading of Greenhouse Gas Emission Permits. The company has implemented mid- to long-term plans to reduce carbon emissions, such as strengthening energy efficiency through the installation of energy-efficient power generation facilities and improvements to existing processes and promoting the acquisition of low-carbon product certification for the carbon emission reduction effects of its district heating products (electric power and heating energy). Furthermore, Incheon Total Energy has secured sufficient carbon credits by applying and upgrading BM coefficients for the rational allocation of carbon credits while maximizing its profits by trading surplus carbon credits based on continuous monitoring of revisions to relevant laws and market trends. In this way, Incheon Total Energy is responding efficiently to the emissions trading system. In 2022, the company secured an additional emissions quota of 36,484 tons in preparation for an increased supply of heat.

PREEMPTIVE RESPONSE TO CLIMATE CHANGE

Response to Climate Change Risks

Response of Portfolio Companies to Climate Change Risks



Shin Pyeongtaek Power Co., Ltd., has laid the foundation for stable system implementation by complying with the procedures of the emissions trading system in a timely manner and promptly responding to the policies of the Ministry of Environment. The company has ensured the reliability of data through internal reviews of GHG inventory tools and data, energy consumption measurements, periodic inspections of control facilities, and verification by an independent agency within a unified MRV (monitoring, reporting, and verification) system. Meanwhile, the company has successfully reduced GHG emissions by approximately 20,000 tons through measures to improve the operation of power generation facilities, including improving the method of supplying steam for startup and optimizing the commissioning schedule. To proactively respond to the increase in the NDCs (nationally determined contributions), it has also secured the availability of emission permits for 2023 and 2024 by carrying over permits as much as possible. Moreover, Shin Pyeongtaek Power is minimizing NOx emissions by optimizing SCR operation in anticipation of the government's issuing of emergency measures to reduce ultrafine dust.



As part of its efforts to address climate change risks, Dongducheon Dream Power has actively reduced energy consumption by avoiding the unnecessary operation of rotating equipment (e.g., high voltage motors, auxiliary boilers) during the installation of a fan motor inverter in its cooling tower, as well as during startup and shutdown processes. The company plans to carry out various activities to reduce carbon emissions so as to contribute to the government's goal of achieving carbon neutrality by 2050.



CHEONGNA ENERGY

Instead of using fossil fuels, Cheongna Energy recycles energy from waste heat, such as the waste heat from power plant smokestacks, waste-burning heat from resource recovery facilities, and waste steam heat from fuel cells, in order to provide district cooling and heating services. In this way, the company contributes to not only reducing national energy costs but also improving air quality.

Cheongna Energy Resource is also involved in GHG reduction activities. For instance, since 2016, it has obtained 5,500 tons of external project-based carbon offset credits annually for its effective reduction of fossil fuel consumption achieved by supplying the waste-burning heat from resource recovery facilities to district heating and cooling.

HAEZOOM

Haezoom is focused on expanding the supply of renewables through various solar PV and power services, and has directly installed and is managing more than 10,000 renewable power generation facilities including solar power plants.

Recently, the company conducted over 100 RE100 consultations based on "HaezoomR," the first RE100 platform in Korea, to assist large domestic and global companies in implementing RE100, thereby helping them to have a positive influence on the environment. Furthermore, through CSR activities such as "Hope Haezoom" and the energy sharing project, Haezoom supports the energy poor by installing solar PV facilities and covering electricity bills, and by donating solar lanterns to Africa for each solar power plant installation, thereby exerting a good influence on the environment.

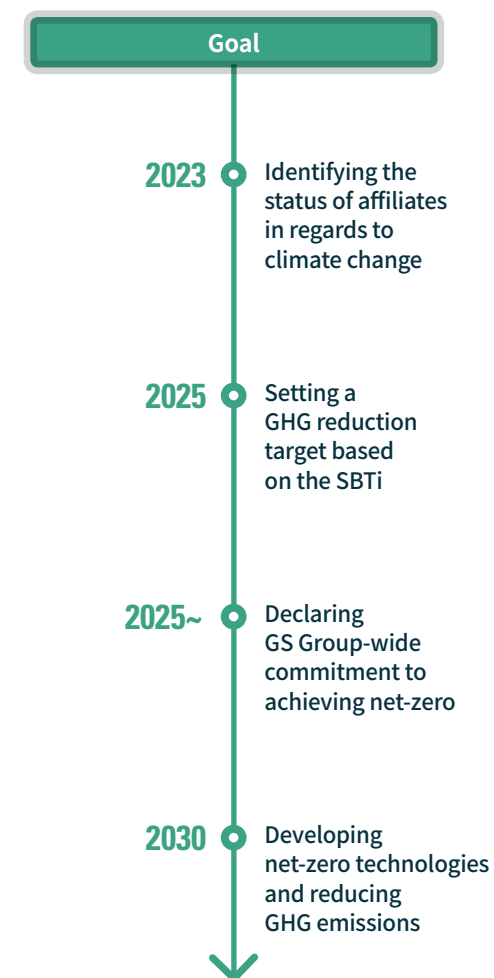
PREEMPTIVE RESPONSE TO CLIMATE CHANGE

Strategy for Net-Zero

GS Energy aims to set the direction for a sustainable future by promoting carbon neutrality (net-zero). We actively promote low-carbon energy generation and eco-friendly businesses, while addressing climate change with a focus on improving energy efficiency, developing renewable energy, and introducing carbon-neutral technologies. We also focus on creating social value by providing differentiated services for strengthening our environmental management system and sustainable management. GS Energy is fulfilling its responsibility to transform into a sustainable energy company and cope with climate change through its net-zero strategy while seeking a future where it positively impacts both society and the environment.



Roadmap for Net-Zero



REINFORCED ENVIRONMENTAL RESPONSIBILITY

Environmental Management System

GS Energy aims to participate in the transition to low-carbon and eco-friendly operations in response to the growing social demand for companies to address climate change and minimize their environmental impact. We have established specific mid- to long-term action plans in line with GS Group's direction for environmental impact management and the promotion of environmental management, with a focus on the "BEYOND strategy." In particular, GS Energy monitors the environmental impact of its major subsidiaries, such as GS Power and Incheon Total Energy, to fulfill its environmental responsibility as a holding company.



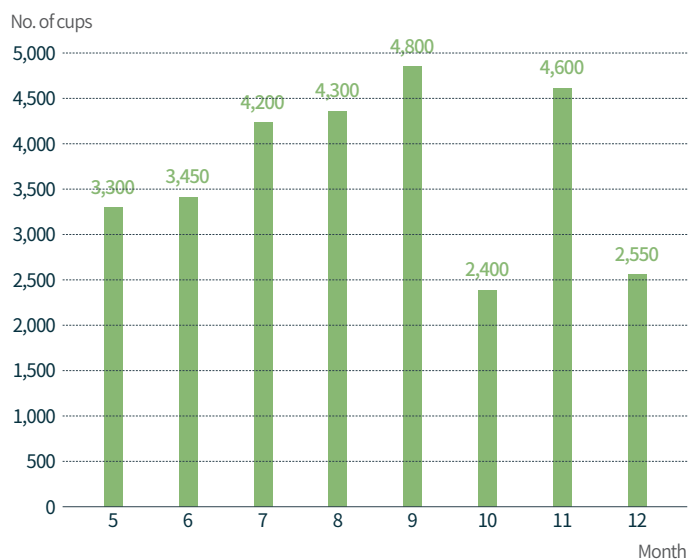
REINFORCED ENVIRONMENTAL RESPONSIBILITY

Environmental Impact Management

Promotion of the Use of Reusable Cups

GS Energy is promoting the internalization of a culture of practicing ESG to facilitate the transition to an eco-friendly office environment. To this end, we are actively encouraging the use of reusable cups in our offices, thereby reducing the use of disposable cups. The entire process of renting, collecting, and washing reusable cups for this initiative is carried out by Trash Busters, a social venture that provides services to replace disposable items.

GS Energy will continue to promote eco-friendly management in various ways to minimize negative impacts on the environment, and thereby contribute to the creation of a sustainable society.



Transition of Company Cars to Green Vehicles

Many companies are switching their company cars to green vehicles as part of their commitment to environmental protection and sustainability. GS Energy is also joining such efforts by adopting eco-friendly vehicles to reduce GHG emissions and air pollution, thereby fulfilling its corporate social responsibility and contributing to the creation of a sustainable future.

To reduce GHG emissions from our business vehicles, we are promoting the transition to green vehicles. As of 2022, we have already replaced six vehicles with electric cars, and in 2023, we plan to replace an additional eleven vehicles with EVs.



REINFORCED ENVIRONMENTAL RESPONSIBILITY

Management of the Environmental Impact of Subsidiaries

Water Resources



A combined heat and power plant produces and supplies both electric power and heat. It utilizes an HRSG (heat recovery steam generator) to convert water into steam, which is then used to generate electricity. A portion of the steam is also used for heating purposes through heat exchange. This type of system requires a significant amount of water. GS Power's combined heat and power plants are situated inland, leading to over 90% of water usage for cooling purposes. Water consumption fluctuates considerably depending on the amount of power generated, particularly during the summer months. For this reason, GS Power aims to minimized water consumption and reduce water pollutant emissions by minimize wastewater discharge. Moreover, the company collects and recycles wastewater with good water quality.



Incheon Total Energy operates wastewater treatment facilities to protect water resources and reduce the consumption of water and wastewater. The company also utilizes reclaimed water to recycle water resources and minimize water consumption. In 2022, Incheon Total Energy recycled 10,931 tons of reclaimed water, achieving a water recycling rate of 15%.

Water Data

Item	Unit	GS Power			Incheon Total Energy		
		2020	2021	2022	2020	2021	2022
Water intake		2,078	2,358	3,436	54	81	64
Total water use	1,000 tons	2,462	2,750	3,938	64	89	75
Wastewater discharge		231	266	244	19	24	18
Water reuse		384	392	502	10	8	11
Water reuse rate	%	15.6	14.3	12.7	15.0	8.7	15

Waste



GS Power transparently manages the entire process of waste management, from waste generation to storage, transportation, and final disposal through the Allbaro System, an IT-based comprehensive waste management system operated by the Korea Environment Corporation. Furthermore, the company is minimizing waste generation by saving resources and increasing recycling rates. All waste generated is entrusted to authorized waste disposal companies for proper handling. Meanwhile, non-industrial waste generated at the company's facilities is collected using separate bins to facilitate recycling. In particular, all waste fluorescent lamps are sent to the Korea Lighting Recycling Association for recycling in order to minimize waste generation.



The entire process of waste management, from waste generation to storage, transportation, and final treatment is managed digitally or using RFID* through the waste information service of the Allbaro System operated by Korea Environment Corporation. Incheon Total Energy strives to minimize the amount of general waste, designated waste, and construction waste generated from its business sites at the source and classifies waste by type and characteristics to maximize waste reuse and recycling. Designated waste and recyclable waste adsorbents are sent to specialized companies for recycling and reuse.

* RFID: A technology for identifying objects or persons using RF (radio frequency)

Waste Generation and Recycling

Item	Unit	GS Power			Incheon Total Energy		
		2020	2021	2022	2020	2021	2022
Total amount of waste		764	734	1,025	22	42	11
General waste	Ton	748	714	997	9	18	10
Designated waste		15	20	28	13	24	1
Waste recycled		415	331	582	17	27	1
Waste recycling rate	%	54.3	45.1	56.8	77.3	64.3	6

* Due to differences in decimal point handling, there are discrepancies in the reported "Total amount of waste" and "Waste recycled" of GS Power in 2020 between the 2021 report and this year's report.

REINFORCED ENVIRONMENTAL RESPONSIBILITY

Management of the Environmental Impact of Subsidiaries

Water Pollutants



GS Power purifies wastewater discharged from its power plants through physical and chemical processes at wastewater treatment facilities and then sends the purified water to nearby sewage treatment plants. In addition, the company conducts a regular analysis of wastewater to ensure water quality and enhance transparency in environmental management. GS Power maintains the quality of discharge wastewater at approximately 10% of the legal limit.



Wastewater from Incheon Total Energy's business sites undergoes physical and chemical processes at its wastewater treatment plant before being discharged to a sewage treatment facility in Songdo, Incheon. Incheon Total Energy efficiently manages wastewater quality through regular measurements and continuous monitoring. The concentrations of water pollutants in its discharged wastewater are kept below 10% of the legal limit.

Discharge of Water Pollutants

Item	Unit	GS Power			Incheon Total Energy		
		2020	2021	2022	2020	2021	2022
COD (chemical oxygen demand)	kg	815	990	793	102	102	38.5
SS (suspended solids)		308	387	574	1	14	22

Item	Unit	GS Power			Incheon Total Energy		
		2020	2021	2022	2020	2021	2022
COD (chemical oxygen demand)	ppm	3.6	3.8	3.65	5.35	4.3	2.1
SS (suspended solids)		1.35	1.5	2.85	0.05	0.6	1.2

Air Pollutants



GS Power operates air pollution prevention equipment such as low NOx burners and SCRs to reduce air pollutant emissions and effectively respond to the air pollution cap. The company has achieved a 13.3% reduction of NOx emissions compared to 2021 through regular facility inspections and process improvements. It monitors air pollutants 24 hours a day through a TMS (tele-monitoring system), thereby enhancing transparency in air quality management. Through a national research project, GS Power's Bucheon Power Plant developed an SCR (selective catalytic reduction) technique using metal that improved the limitations of existing catalysts and addresses problems related to reducing NOx emissions. Based on these achievements, GS Power remains committed to continuously contributing to the improvement of air quality in the metropolitan area.



Incheon Total Energy uses LNG, a clean fuel, to manage and reduce air pollutants, and operates facilities optimized to reduce air pollutants such as NOx. Its TMS (tele-monitoring system) monitors air pollutant emissions 24/7 and sends real-time data to the Korea Environment Corporation, ensuring transparency in environmental data management. Furthermore, the company has preemptively installed air pollution prevention equipment using new technologies (DI SCR, oxidized steel dust collector) to keep air pollutant emissions below the integrated environmental permit. In 2022 in particular, the company achieved an average NOx emission level of 6 ppm, which was lower than the integrated environmental permit of 8 ppm and about 48% of its emissions quota. In addition, Incheon Total Energy entered into the Blue Sky Agreement with Incheon Metropolitan City and a voluntary agreement to reduce fine dust as part of its endeavors to decrease fine dust in the local community and minimize environmental impacts.

Air Pollutant Emissions

Item	Unit	GS Power			Incheon Total Energy		
		2020	2021	2022	2020	2021	2022
NOx (nitrogen oxide)	ton	549	680	589	75	67	60.4

REINFORCED ENVIRONMENTAL RESPONSIBILITY

Management of the Environmental Impact of Subsidiaries

Chemical Substances



GS Power utilizes chemicals in its water treatment process to produce pure water and cooling water for its power generation and heating facilities. The amount of chemicals used depends mainly on the water quality from the sources of industrial water, such as the Baekun reservoir and the Lake Paldang, which supply water to Anyang and Bucheon, and Chemical usage is expected to steadily increase as expanded heat supply to nearby districts requires an increase in pure water consumption. All chemicals are lawfully managed in accordance with relevant laws such as the Chemical Substances Control Act and the Occupational Safety and Health Act. GS Power has successfully reduced the concentration of chemicals used in its combined heat and power plants in Anyang and Bucheon and has closed its business that involved the use of hazardous chemicals. Furthermore, the company has committed to chemical management by applying the GHS (Globally Harmonized System of Classification and Labelling of Chemicals) for some of its chemicals. Since 2013, GS Power has contributed to the formation of an industrial community that includes both large companies and SMEs in the western (Bucheon Power Plant) and southern (Anyang Power Plant) regions of the metropolitan area and has provided full support to SMEs to help them comply with the Chemical Substances Control Act. The company also participates in government-led emergency response drills.



Incheon Total Energy has lowered the concentrations of hazardous chemical substances used and generated at its business sites in order to protect its employees. Its business sites are subject to PSM,* and hence it manages chemical substances efficiently through regular MSDS** updates.

* PSM (process safety management system): Companies submit a process safety report for evaluation in order to prevent serious industrial accidents caused by the leakage of hazardous substances, fires, explosions, etc.

** MSDS (material safety data sheet): A table containing data necessary for the safe use and management of chemical substances

REINFORCED ENVIRONMENTAL RESPONSIBILITY

Management of the Environmental Impact of Subsidiaries

Preemptive Actions to Minimize Environmental Impacts

Environmental Impact Assessment

GS Power makes efforts to predict and minimize potential impacts on surrounding areas and ecosystems resulting from the construction and operation of a power plant through EIAs (environmental impact assessments). When constructing a power plant, the company conducts an EIA to examine the existing conditions in advance, predict the impacts that might arise after construction, and come up with measures to minimize environmental impacts. After a power plant is completed the company monitors the impact of the plant's operation and continues to track and manage the environmental impact of the project after it has completed its EIA. We conduct preliminary EIAs for new projects and those to be expanded in the future and the EIA Team prepares an EIA table for each process in accordance with the EIA Procedure. Environmental impacts are graded based on their severity and are recorded in the environmental impact register. Then, targets and actions for environmental management are established in accordance with the identified impacts.

Major Environmental Impact Assessments

Environmental Impact Assessment	Schedule	Assessment Items
Assessment of the area surrounding the power plant	Before construction	Items set forth in Article 24 of the Environmental Impact Assessment Act
Post-assessment	Groundbreaking to five years after construction is completed	Items set forth in Article 36 of the Environmental Impact Assessment Act
Noise assessment around the power plant	Occasional	Noise
Environmental impact assessment according to ISO14001	Occasional	Processes, products, and services
Pre-assessment	Before initiating a new project (planned, preventive maintenance, etc.)	All types of construction and processes

Environmentally Friendly Products

GS Power installs heat exchangers between the HRSG (heat recovery steam generator) and the main stack of its power plants to recover additional heat. The company has added a CHP system to the LP economizer at its new unit in the Anyang power plant, and is producing heat energy from the DH Economizer and recovering additional energy from the exhaust gas. The company recovers heat generated from the water cooling and start-up processes of its power generation facilities for heating purposes. In addition, it is making efforts to recover waste heat from its resource recovery facilities in Gwangmyeong and Daejang-dong (Bucheon) and from the thermal power plant of Korea Midland Power in Incheon. To this end, GS Power has installed heat pipelines to reduce fuel consumption for heat production, resulting in a reduction in GHG emissions and other air pollutants.



Establishment of a Net-Zero Strategy

The COP26 (2021 UN Climate Change Conference) held in Glasgow reaffirmed the international community's goal of and consensus on preventing a temperature rise of 1.5°C compared to pre-industrial levels, which is a step further than the Paris Agreement adopted at the COP21. In line with this, Korea has taken steps towards achieving carbon neutrality with the establishment of the Presidential Commission on Carbon Neutrality and Green Growth in 2022 and the announcement of the Carbon-Neutral and Green Growth Strategy. Carbon neutrality is not only a social responsibility for companies in response to the global climate crisis, but also an opportunity for their sustainable growth and a survival strategy. As the "clean energy provider with the No.1 value" GS Power is preparing to formulate a carbon neutrality (net-zero) strategy to secure sustainable competitiveness and enhance its adaptability, accuracy, and transparency in achieving the carbon neutrality goal. The company aims to take a leading role in responding to the global climate crisis by presenting specific strategies and measures to reduce GHG emissions, establishing a climate governance system, and developing a trustworthy and differentiated carbon neutrality strategy.

SOCIAL RESPONSIBILITY

Elevation of the Employee Experience

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HUMAN RIGHTS MANAGEMENT

Human Rights Roadmap of GS Energy

GS Energy supports the human rights standards of international organizations such as the UN and OECD and has established the Charter of Human Rights of GS Energy, which follows the principles set forth in the Charter of Human Rights of GS Group. We plan to develop detailed operational guidelines based on the assessment of material issues and communication with various stakeholders, starting from the stage of identifying human rights issues. GS Energy will make continuous efforts to improve the level of human rights for its stakeholders by incorporating the results of human rights due diligence and human rights impact assessments, which will be implemented in 2024, into the detailed operational guidelines.

Objective

To build a human rights-centered corporate culture by promoting human rights management based on respect for human rights

Direction for Advancement

Raising the level of human rights by systemizing the human rights due diligence and improvement process

Action Plan



Human Rights Due Diligence and Improvement Process

1. Establishment of the human rights policy

- Establishing a human rights policy for GS Energy that encompasses the UN Universal Declaration of Human Rights, the recommended areas of the UN Global Compact, and the Charter of Human Rights of GS Group

2. Development of the human rights due diligence process and checklist

- Developing a human rights due diligence process and a specific checklist for each process
- Reviewing the checklist with the consultation of external experts

3. Internal Human Rights Due Diligence Diagnosis

- Conducting a self-diagnosis of human rights due diligence for GS Energy
- Checking the appropriateness of the checklist

4. Improvement of Assessment, Analysis, and Diagnosis

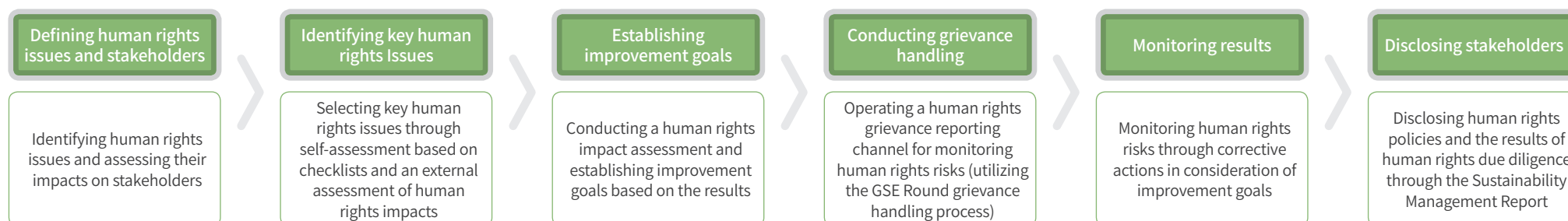
- Conducting a self-assessment of human rights due diligence diagnosis for GS Energy and analyzing root causes
- Identifying improvement items

5. Expansion of the Scope to Subsidiaries and Portfolio Companies and Outsourcing the Human Rights Impact Assessment

- Conducting a self-assessment of human rights due diligence diagnosis for subsidiaries and portfolio companies and analyzing root causes
- Identifying improvement items

HUMAN RIGHTS MANAGEMENT

Human Rights Due Diligence Process



Human Rights Education

GS Energy provides training programs to all executives and employees every year to raise their awareness of human rights. These programs include “disability awareness training” aimed at eliminating workplace prejudices against individuals with disabilities and fostering a positive and healthy corporate culture, as well as “workplace bullying and sexual harassment prevention training” to prevent such behaviors and promote a safe and happy workplace (online/offline, at least once a year). In particular, for the prevention of workplace bullying and sexual harassment, additional training is provided to employees in managerial positions to enhance their understanding of relevant laws and organizational management. Furthermore, GS Energy shares its “Guidelines to Prevent Workplace Bullying” through its groupware, ensuring that employees are informed about the procedures and standards for preventing and handling any incidents. This creates a sense of security and promotes a safer working environment for all employees.

Grievance Handling Process

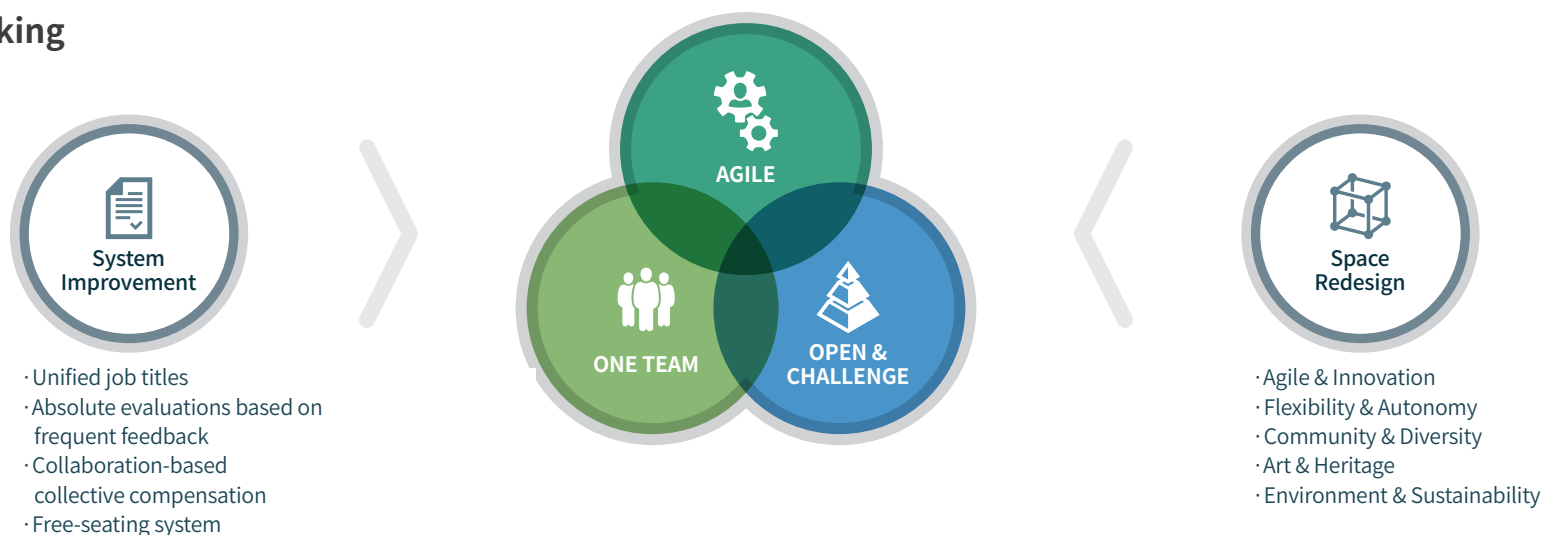
GS Energy operates a two-track process to handle grievances, including both grievances reported directly through the hotline and grievances reported to the grievance handling committee, which is composed of employees. In addition to these official channels, employees can also report grievances through small-group meetings with the CEO, the GSE Round, or via e-mail, phone call, or written communication. Once a grievance case is reported, an investigation is promptly initiated to ensure swift resolution. Any violations that cannot be resolved through the grievance handling committee are forwarded to the personnel committee or discipline committee and resolved according to our internal regulations. Sexual harassment and workplace bullying incidents are handled with confidentiality according to strict processes and policies, taking into account the gravity of each case. In addition, GS Energy collects a wide range of human rights grievances in addition to those of employees, assesses the mindset of its employees proactively through the EAP (Employee Assistance Program), and offers various coaching and counseling services to help them maintain a healthy mindset and grow together with the company.

Grievance Handling

Classification	Unit	2020	2021	2022
Grievance cases reported	Cases	0	0	0
Grievance cases resolved		0	0	0

INNOVATION IN THE WAY WE WORK

New Way of Working



At GS Energy, the way we work is represented by “Agile,” “Open & Challenge,” and “One Team.”

- ① “Agile” is about staying responsive to changes in our business, actively identifying issues, and concentrating company-wide resources on troubleshooting, thereby trialing and verifying small and fast solutions. It involves defining issues from the customers’ perspective and resolving them by repeating small and quick verifications.
- ② “Open & Challenge” means a way of working where we voluntarily challenge ourselves to take on work we have never done before. It involves setting targets on our own and expanding expertise and influence through experiences and learning in various roles and fields.
- ③ “One Team” means all members of GS Energy work as one team, pursuing common goals under the premise that no one can grow and innovate alone, and we grow and ceaselessly innovate through collaboration.

GS Energy reshuffled job titles and its performance management system in 2020 to support these new ways of work and redesigned its working spaces from 2021 to 2022. In 2023, we are making further efforts to bring about detailed changes in working spaces and performance management and support team-based change

management as we attempt to make improvements from various perspectives to ensure that the new ways of work are well-established.

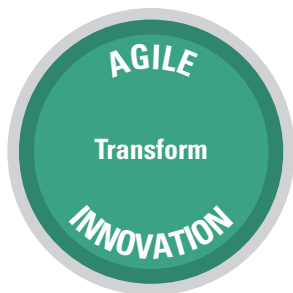
For this, all job titles were unified as “manager” in a bid to foster a non-authoritarian, horizontal corporate culture, and an absolute evaluation system based on frequent feedback was introduced. Furthermore, we have decoupled performance evaluations from compensation to recognize performance from various perspectives and strengthen recognition for collaboration.

Meanwhile, we have brought about changes in the traditional vertical and uniform working spaces, represented by keywords such as “Agile & Innovation,” “Flexibility & Autonomy,” “Community & Diversity,” “Art & Heritage,” and “Environment & Sustainability.” In the new working spaces, both formal interactions and various forms of casual interactions enable the fulfillment and expression of both community and individual creativity and allow the members of GS Energy to freely concentrate on their work. The new community spaces allows for the coexistence of the community and individuals, as well as concentration and relaxation, so our employees can experience a sense of belonging and pride. In 2022, GS Energy implemented a free-seating system to promote collaboration and the One Team spirit, and encourage chance encounters. In 2023, we redefined the subject of performance as the team and now operate the free-seating system by business area to maximize team performance.

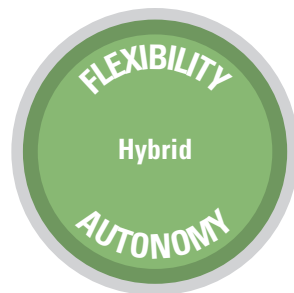
INNOVATION IN THE WAY WE WORK

New Values for GS Energy's Working Spaces

New Values for GS Energy's Working Spaces



A space where formal and casual interactions coexist in harmony, and the creativity of both the community and individuals are simultaneously fulfilled and expressed



An efficiency-enhancing platform that accommodates the diverse needs of employees by providing flexible workspace arrangements and diverse work environments



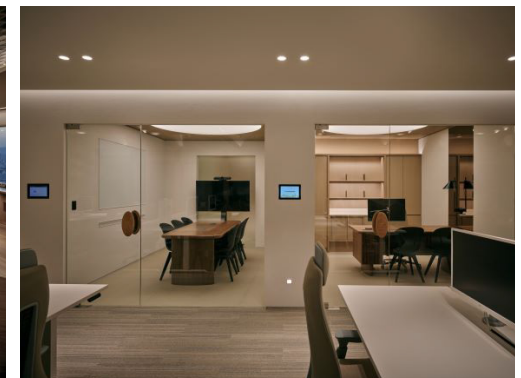
A space where extroversion and introversion, individuals and groups, concentration and relaxation, and nature and the digital world coexist in balance, enabling various encounters



A space where the artistic sensibility, which incorporates Korean aesthetics in a contemporary way, provides a sophisticated rewards such as emotional motivation and a sense of belonging



A space that reflects sustainability and stability in the era of the new normal, where employees can gain an awareness of eco-friendliness and a sense of healing



PEOPLE SYSTEM

Manpower

GS Energy respects diversity in its workforce and prohibits discrimination by reason of nationality, race, gender, religion, educational background, region of birth, or social status in hiring and promotion. In particular, socially disadvantaged individuals, such as persons with disabilities, and persons of national merit are granted additional points during recruitment.

Employees

Classification		Unit	2020	2021	2022
Total No. of employees			154	168	199
Gender	Male		126	133	152
	Female		28	35	47
Age	Under 30		17	21	24
	30-50		110	116	139
	50 and above		27	31	36
Employment status	Regular workers*	Persons	145	157	190
	-Male		124	129	148
	-Female		21	28	42
	Contract workers**		9	11	9
	-Male		2	4	4
Socially disadvantaged	-Female		7	7	5
	Disabled persons		1	1	1
	Persons of national merit		2	4	4

*Regular workers: No limit set for the employment period (including executives) ** Contract workers: Fixed-term for employment

Diversity of Employees

Classification		Unit	2020	2021	2022
Ratio of females to all employees			18.2	20.8	23.6
Ratio of females in managerial positions			6.1	6.1	7.7
Salary level of females vs. males*	General gobs	Persons	90	89	76
	Managerial jobs		98	108	104

* Due to changes in the calculation criteria, the diversity data for persons of national merit in 2020 and the data for the diversity of employees for the years 2020 and 2021 have been revised.

Ideal Employees

GS Energy sets and implements strategies to secure a talented workforce that will lead the future of the energy industry with strong passion and a spirit of innovation and promotes its ways of work as follows.



Employees mobilize functions and business capabilities companywide and have no fear of performing various trials and verifications



Employees are willing to collaborate for the common goals of innovation and growth



Employees voluntarily take on new projects and work they have never done before

Recruitment and Turnover

Classification		Unit	2020	2021	2022
Total No. of hires			21	27	56
Gender	Male		14	17	38
	Female		7	10	18
Age	Under 30		7	9	12
	30-50		10	17	37
	50 and above	Persons	4	1	7
Total turnover			10	16	15
Gender	Male		9	13	8
	Female		1	3	7
Age	Under 30		1	3	5
	30-50		6	10	9
	50 and above		3	3	1
Total turnover rate		%	6.5	9.5	7.5
Voluntary turnover rate			1.3	6.0	6.0

* Total number of hires: Executives, regular employees, contract employees, and others who joined the company for any reason (excluding dispatched employees)

** Voluntary turnover rate: Excluding retirement due to retirement age, service termination, dismissal, etc.

PEOPLE SYSTEM

Role-based Job Ranks

GS Energy is pursuing the implementation of HR systems based on roles and collaboration. For this, job ranks are set on the basis of roles and promotions are granted after candidates' readiness to assume higher-level roles are evaluated from various angles, rather than simply based on seniority and performance.



Senior

- Taking on important tasks and making key contributions to the organization
- Using expertise to define common goals and issues and develop ways to work together
- Exploring new approaches to different processes
- Recognizing the opinions and abilities of others, collaborating with them, and learning from them



Junior

- Taking on and carrying out independent tasks
- Persuading/Understanding others by providing evidence of your own work



Entry

- Meeting work deadlines and instructions
- Learning basic knowledge and questioning and communicating necessary information

Job Titles Unified as “Manager”

All employees are addressed as “manager” at GS Energy to promote a horizontal work culture. Job ranks are classified based on roles, and evaluations, rewards, and promotions are aligned with the explicit expectations for each role.

Promotions

Candidates are evaluated from various angles based on whether they are “ready to perform a higher role,” rather than on seniority and performance.



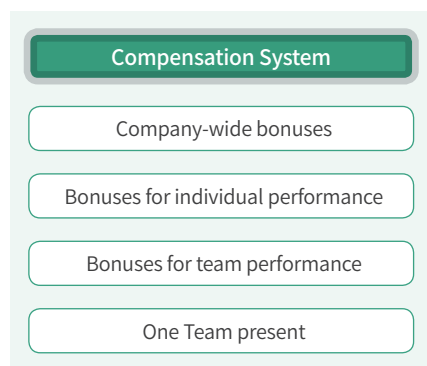
PEOPLE SYSTEM

Performance Evaluations and Compensations

GS Energy aims to ensure the growth of the organization and its members go hand in hand, enabling them to experience various roles and enhance their practical expertise and influence. Performance management is conducted through continuous, multi-faceted, and observation-based absolute evaluations, rather than relative evaluations of annual goals.



GS Energy ensures fairness and competitiveness in compensation based on the size of the role and recognizes and rewards diverse contributions. Employees voluntarily set individual goals aligned with the goals of the organization and can continuously grow through ongoing feedback from their superiors and colleagues. A goal can be created or closed at any time of the year, and closed goals and performance are recorded together with reviews from supervisors and colleagues. The goals promoted throughout the year are evaluated in comprehensive terms by considering objective output and expectations compared to competency, and the evaluations are absolute.



The results of evaluations are utilized as indicators for nurturing and feedback, and they are generally decoupled from compensation except for some high performers. For promotions, candidates undergo comprehensive evaluations that include performance compared to their expected roles and peer reviews. There are no restrictions on promotions, except that a minimum of two years of tenure is required for each job position. From the perspective of collaboration, we provide various incentives and compensation at the organizational level. In addition to company-wide bonuses, we offer incentives such as performance bonuses for individuals and teams, and the One Team presents to express mutual appreciation for collaboration.

CULTURE & EDUCATION

Culture & Communication

GS Energy listens to the voices of its members and has built a strong community based on the One Team spirit.

Ground Rules

GS Energy selects a representative from each team every quarter to establish a specific code of conduct, including work methods, rules, and agenda by time period, in order to bring about changes in the way they work and foster a proactive organizational culture.

Tailored Workshop Design and Operational Support

Professional facilitators design and support workshops tailored to the needs of GS Energy, its subsidiaries, and portfolio companies, using various tools and insights aligned with the organization's agenda.

Discussion with Management

GS Energy holds regular company-wide business briefings every year to share performance updates and directions for growth and have an open discussion on various topics with the CEO and the heads of divisions.

Small-group Talk

GS Energy holds a monthly interaction session where about 10 persons, including the CEO, get together to understand each other and share opinions on various topics.

CULTURE & EDUCATION

GSE Round (Labor-Management Council)

The GSE Round is a labor-management council of GS Energy where management communicates and forms consensuses with employee representatives on various issues, including management status, the work environment, and system improvements. As such, the GSE Round contributes to fostering healthy development and communication within the company.

EAP (Employee Assistance Program)

GS Energy has implemented an EAP (employee assistance program) to proactively manage the mental and physical stress experienced by its employees in the rapidly changing business environment, protect their human rights from an ESG perspective, and effectively address and resolve various issues within the organization in a timely manner. The EAP consists of profiling and analysis based on workplace-specific assessments, as well as 1:1 coaching and counseling.

Reader's Club

GS Energy supports e-book subscriptions to enable employees to acquire knowledge in various fields, share insights, and grow together.

Employees' Club

GS Energy supports its employees in pursuing their diverse interests and hobbies within the company to facilitate networking. Club activities, which were temporarily suspended due to the COVID-19 pandemic, resumed in 2023.

Education System

GS Energy's education system is centered on team performance and has a variety of educational support programs in place based on voluntary participation.

On-Boarding

GS Energy's on-boarding program ensures that new employees feel like they are part of the company from the moment they join. Prior to the joining day (D-Day), a "Welcome Survey" is conducted to gather information such as preferred IT devices and email addresses in order to ensure a smooth start on the first day. On D-Day, we celebrate the arrival of new employees and their joining the company. All new employees participate in various programs with an assigned "buddy" in order to familiarize themselves with the company's spaces, systems, and networks. Over time, they themselves become buddies and assist other new employees. In this way, we instill a sense of pride in the company.

Job Training

Given its diverse and evolving business portfolio, GS Energy allocates a budget to each department to support necessary job-specific learning. We offer a basic energy course every year, and allow employees to attend freely as needed.

Job Rank-based Education

GS Energy operates a "reverse mentoring program" that matches executives with new employees. The program helps executives understand the perspectives of the younger generation and improve communication with them while helping new employees to gain insights into the company and build a network. We also provide various educational content tailored to specific roles, career paths, and the latest trends through irregular education programs based on years of service.

Wednesday Lecture

GS Energy holds a "Town Hall" lecture on various topics such as humanities, energy history, digital transformation, communication, healing, personal finance, and business-related interests every Wednesday in an open space to provide employees with diverse insights.

CULTURE & EDUCATION

Education System

Degree Program Support

GS Energy selects employees to participate in degree programs at outstanding domestic and international universities to enhance their professional expertise and strengthen their professional networks.

E-Learning, Foreign Language Learning, and Learning CoP Support

Considering the significance of its global business, GS Energy provides support for foreign language learning through various channels, including online, phone, video, face-to-face, and individual learning. In the case of E-learning, we offer unrestricted access to the courses. In addition, voluntarily formed learning CoPs (communities of practice) receive diverse support for their learning. Typically, around 10 learning CoPs are set up each year.

Open Innovation

In line with the digital transformation, training courses on data and DX (digital transformation) are provided to employees with learning needs, and various issues and solutions are identified through hackathons. Catalysts and facilitators are nurtured through training programs by 52g, an open innovation group of GS Group. Through these, GS Energy discovers problems in the field, comes up with various projects, and develops and implements solutions.

Training of Employees

Classification	Unit	2020	2021	2022
No. of trainees	Persons	154	168	199
Total training cost*	KRW million	275	276	399
Training cost per person	KRW million/person	1.78	1.64	2.00

* Total training cost: All costs earmarked for education and training accounts (excluding new employees)

BENEFITS

GS Energy provides various welfare benefits to improve the quality of life of its employees, including stable livelihood, self-development, health care, and leisure benefits. To promote work-life balance in particular, we are striving to develop programs to support the happy family life of employees and make investments to raise work efficiency.

Flexitime System

Under our flexitime system, employees can set their own working hours on a monthly basis within the legal working hour limit.

Financial Support for Retirees

Retirement pensions are accumulated with compound interest under two pension plans: DB (defined benefit) or DC (defined contribution). GS Energy also supports IRPs (individual retirement pensions) by offering matching grants. We introduced a DC payment system for bonuses at the end of 2021 to relieve the tax burden of our employees.

Retirement Pension System

Classification	Unit	2020	2021	2022
Amount		1,852	3,447	5,741
Type	DB (defined benefit)	KRW million	1,800	3,400
	DC (defined contribution)		52	47
	Company grants to IRPs		390	436
No. of subscribers*	Persons	151	167	147

* Due to changes in the calculation criteria, the data for the pension operating amounts and contributions to IRPs for the years 2020 and 2021 has been revised.

Congratulations on Long-term Service and Retirement

Congratulatory money and vacation time are offered as a token of appreciation to employees with long years of service or who have reached retirement age. In particular, GS Energy guarantees retirement leave to provide support for employees as they prepare for their life after retirement while also expressing gratitude for their years of service.

BENEFITS

Selective Welfare System

GS Energy operates a welfare mall and a welfare point system where employees can choose from various benefits for self-development, leisure activities, health care, and more.

Support for Leisure Activities

Our employees can enjoy membership prices at resorts and condominiums nationwide throughout the year, and winter and summer resorts are provided free of charge (except for some resorts) to support the leisure of employees.

Health Care Support

With the aim of improving the health of its employees, as well as their spouses and children, GS Energy pays a certain amount of the medical expenses of its employees so as to reduce their financial burdens and ensure a stable livelihood. Furthermore, our employees are covered by collective medical insurance, and comprehensive medical examinations are provided to them and their spouses as a preemptive health care measure.

Support for Living (Loans, In-house Daycare, and Tuition)

GS Energy offers low-interest loans to its employees to help them with house purchases, marriage, or living expenses with the aim of ensuring a stable livelihood and promoting employee welfare. We also operate an in-house daycare center near the GS Tower to help our employees with child-rearing. Furthermore, we cover university tuition for the children of employees and provide congratulatory money upon their entrance into elementary, middle, and high school and university. For preschoolers, we offer schooling subsidies for a certain period.

Support for Family Events and Funerals

GS Energy provides support for the family events and funerals of its employees to share in their joys and sorrows.

Welfare Benefits

Classification	Unit	2020	2021	2022
Amount	KRW million	2,421	6,100	3,336

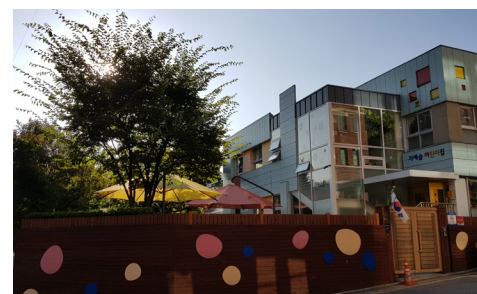
* Due to changes in regulatory requirements and contributions (KRW 5.05 billion for the 2021 welfare fund), the data for the amount of welfare benefits for the years 2020 and 2021 has been revised.

Parental Leave

Classification	Unit	2020	2021	2022
On parental leave	Male	3	1	0
	Female	0	0	2
Returnees	Male	2	0	1
	Female	1	0	0
Return rate*	%	75	-	100
Retention rate**		100	100	100

* Return rate: Ratio of employees returning from parental leave in the following year

** Retention rate: Ratio of employees working for 12 months or more after returning



Jiyeoul Day Care Center

CONTRIBUTION TO THE DEVELOPMENT OF LOCAL COMMUNITIES

CSR Promotion System

CSR System

Vision

Creating a clean earth, a warm society, and a happy future
by supplying clean energy

Slogan

Energy to add happiness to our precious lives

Area of focus

**Energy and
Eco-friendliness**
Sustainable
energy

**Support for
Local
Communities**
A partner of local
communities

**Culture
and the Arts**
Sharing happiness
with all members
of society

Charity Activities

As a socially responsible corporate citizen fulfilling the CSR vision of GS Group, Energy is committed to contributing to the development of local communities through sharing and volunteering based on its capabilities and resources.

We contributed KRW 273.15 million in 2022 and will continue our donations and sponsorship to grow in harmony with local communities.



Donation to the city of Donghae for the wildfire victims

Total donations



KRW **237.15** million

Donations in 2022

Area	Recipient	Amount (KRW)
Energy and eco-friendliness	National Assembly Forum on Climate Change	35 million
	Korea University ESG Development Fund	4 million
Support for local communities	Habitat for Humanity Korea 815 Run	8.15 million
	Donation to the city of Donghae for wildfire victims	100 million
	Korea-U.S. Alliance Foundation	30 million
Culture and the arts	National Museum of Modern and Contemporary Art	20 million
	Friends of the National Museum of Korea	20 million
	Seoul Philharmonic Orchestra	20 million

CONTRIBUTION TO THE DEVELOPMENT OF LOCAL COMMUNITIES

Major CSR Activities

Support for Local Communities

Habitat for Humanity Korea 815 Run

The “2022 Virtual 815 Run” is a campaign to promote the significance of Korea’s Liberation Day, express gratitude for independence activists, and convey the positive message, “It will be all right, Korea!” Funds raised through this campaign are used for home improvements for the descendants of independence activists.

Donation for Wildfire Victims in the City of Donghae

GS Energy donated funds through the Community Chest of Korea to support the victims of the devastating wildfires in Donghae city. We comforted the affected residents and helped them return to their normal lives as soon as possible.



Energy and Eco-friendliness

National Assembly Forum on Climate Change

This forum provides a venue for healthy discussions among various stakeholders on climate change issues, raises public awareness of climate change across society, and seeks solutions at the national level. By sponsoring this forum, GS Energy is contributing to the climate change response as it strives to build an eco-friendly environment for society.



Culture and the Arts

National Museum of Modern and Contemporary Art

GS Energy sponsors performances, exhibitions, and in an effort to expand the foundation of culture and the arts and consolidate the status of the National Museum of Modern and Contemporary Art as a cultural icon of Korea.

Friends of the National Museum of Korea

GS Energy is carrying out various museum sponsorship projects, including academic research, education, artifact acquisition, donations and exhibitions, to widely promote and carefully preserve the history and culture of Korea. In addition, we are involved in diverse support activities such as social education programs for citizens and exchange activities with domestic and foreign museum support groups.

Seoul Philharmonic Orchestra

GS Energy sponsored the European tour performances of the Seoul Philharmonic Orchestra, covering four cities in three countries, Austria, the Netherlands, and the United Kingdom. In this way, we are doing our best to promote Seoul's image as a city of culture and the arts to the international community.



CORPORATE GOVERNANCE

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SOUND CORPORATE GOVERNANCE

Board of Directors

Roles of the BOD

The BOD (board of directors) supports management in the conduct of responsible governance and demands corrections for problems with management standards, procedures, or methods, if necessary, so as to ensure reasonable management activities. The BOD makes resolutions on agenda items delegated by the general meeting of shareholders and important matters related to the basic management policies and business operations of the company and supervises the work performance of the directors and management.

BOD Composition and Independence

GS Energy ensures independence, diversity, and expertise in the composition of the BOD. To secure the independence of the BOD, all directors are elected at the general meeting of shareholders from among candidates who meet the qualifications specified in the relevant laws and regulations. Furthermore, to ensure the diversity of the BOD, there is no discrimination based on gender in the election of directors. The chairperson of the BOD is elected based on his or her experience and expertise in the energy business. As of March 2023, the BOD consisted of one executive director (the CEO) and four non-executive directors.

BOD Composition

(as of Mar. 2023)

Classification	Name	Gender	Date of birth	Term of office	Expertise	Major career & role
Executive director (CEO)	Huh Yong-soo	M	Oct. 16, 1968	Mar. 14, 2025	Management	CEO of GS Energy (current) CEO of GS EPS (former)
Non-executive director	Huh Jun-hong	M	Aug. 21, 1975	Mar. 21, 2026	Management	CEO of Samyang Tongsang (current) Vice President of GS Caltex (former)
	Hong Soon-ki	M	Mar. 1, 1959	Mar. 19, 2024	Finance	CEO of GS Corp. (current) CFO of GS Corp. (former)
	Huh Se-hong	M	Nov. 21, 1969	Mar. 14, 2025	Management	CEO of GS Caltex (current) CEO of GS Global (former)
	Jung Chan-soo	M	Nov. 26, 1962	Mar. 14, 2025	Management	CEO of GS EPS (current) CEO of GS E&R (former)

Transparency of the BOD

Directors are appointed by resolution of the shareholders at the general meeting of shareholders in accordance with Article 382 of the Commercial Act. Internal directors are appointed from among candidates recommended by the BOD. The term of office for directors is three years, and they are eligible for re-appointment by the general meeting of shareholders after the expiry of their term.

BOD Operation

GS Energy operates the BOD in accordance with its BOD operation regulations. The BOD chairperson can convene BOD meetings and set the date, and all directors should be notified in writing or verbally at least 12 hours in advance. BOD meetings may also be held if agreed upon by all directors, in which case the aforementioned procedure does not apply. In 2022, a total of 16 BOD meetings were held to discuss 53 agenda items, with an attendance rate of 94.3%.

Board of Directors

Classification	Unit	2020	2021	2022
No. of meetings	Meetings	15	15	16
No. of resolved agendas	Cases	35	50	53
Attendance rate	%	97.78	98.89	94.31

BOD Performance Evaluation and Compensation

The BOD establishes the remuneration policy for key executives in line with the interests of shareholders and the long-term interest of the company and transparently discloses the details. The activities of the executive director within the BOD are evaluated through objective and comprehensive criteria, including quantitative indicators, leadership, core competencies, and other contributions to the company.

BOD Remuneration

Classification	No. of persons	Unit	Total remuneration	Average Remuneration per person
Registered director	1	KRW million	2,045	2,045

SOUND CORPORATE GOVERNANCE

Audit System

Internal Audits

GS Energy appoints a person who is qualified under the Commercial Act as an internal auditor. The auditor conducts audits of financial statements and evaluations of the design and operation of the internal accounting management system. Furthermore, we provide annual training to enhance the auditor's expertise and improve the efficiency of auditing work with support from the Accounting Team for internal accounting management.

Training of Auditors

Date	Training institute	Main content
Aug. 18, 2022	PwC Korea	- Internal control over financial reporting, and the role of auditors - Supervision of subsidiaries and the assessment of internal control and consolidated financial reporting - Fraud investigation and reporting obligation of auditors (committee)
Apr. 30, 2022	Online Edu (online education platform)	- Components and principles of internal control over financial reporting - Practical guidelines for internal control over financial reporting
Jun. 30, 2021	Korea Listed Companies Association	- Internal control over financial reporting and the role of auditors
May 31, 2020	Korea Exchange	- Prevention of unfair transactions

Internal Audits

Classification	Name	Gender	Date of birth	Term of office	Expertise	Major career & roles
Auditor	Lee Tae-hyung	M	Nov. 1970	Mar. 14, 2025	Management	University of Washington MBACFO & PM Director of GS Corp. (current), Executive Director of M&P of GS Energy (former), CEO of Incheon Total Energy (former)

External Audits

GS Energy ensures the fairness and transparency of accounting information through regular audits by an independent, external auditor. Its external auditor and the Internal Audit Team engage in regular communication regarding the audit plan, independence, and external audit results. In 2022, the audit opinion was "Unqualified," and no issues were pointed out in the audit results.

Following the expiry of the contract with the existing auditor, GS Energy changed its external auditor from Samjong LLC (KPMG) to Anjin LLC (Deloitte) for the 11th term (Jan. 1, 2022, to Dec. 31, 2022) in accordance with Article 12 of the Act on External Audit of Stock Companies and Article 18 of the Enforcement Decree of the same act. This substitution of the auditor for GS Energy and its major subsidiaries was to ensure the audit scope for consolidated financial statements and effectively perform the audit of the internal control over consolidated financial reporting.

Audit Opinion

Year	Auditor	Audit opinion	Note
2022	Deloitte Anjin	Unqualified	None
2021	KPMG Korea	Unqualified	None
2020	KPMG Korea	Unqualified	None

Audit Expenses

Year	Auditor	Unit	Amount
2022	Deloitte Anjin	KRW million	290

ADVANCED RISK MANAGEMENT

Ethics and Compliance Risks

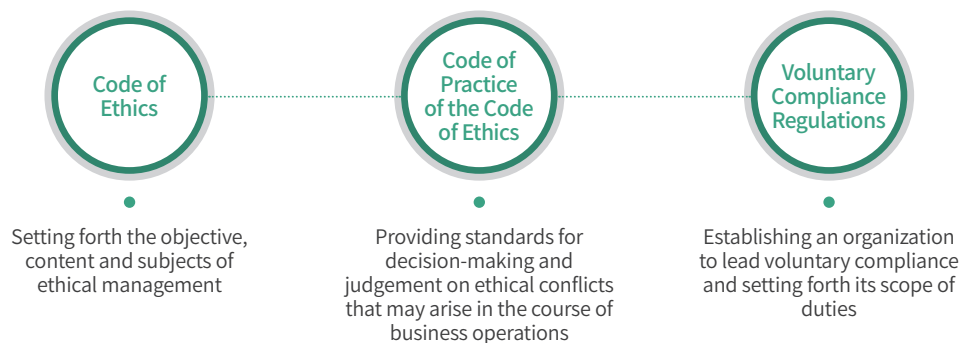
Compliance and Ethical Management Principles

As a global leading company, GS Energy practices ethical management, which serves as the standard for decision-making in management activities and guides the conduct of its employees, while complying with laws and regulations, and considering various stakeholders for sustainable growth.

We will achieve sustainable growth and development by enhancing customer satisfaction, respecting our employees, protecting the interests of shareholders, ensuring the safe operation of our businesses, and actively engaging in environmental and CSR activities.

GS Energy's commitment to compliance and ethical management goes beyond fulfilling its corporate social responsibility. The company also contributes to preserving universal human rights and the value of human coexistence.

Code of Ethics



Code of Ethics of GS Energy

Chapter 1. Management for Customer Satisfaction

We recognize that customers form the foundation for the profits and growth of the Company and provide the genuine value customers want, thereby realizing customer satisfaction.

Chapter 2. Coexistence and Co-prosperity with Suppliers

We build mutual trust and cooperative relationships with our suppliers through transparent and fair transactions.

Chapter 3. Respect for Employees and Compliance with Basic Ethics

The company and its employees fulfill their obligations for mutual growth and development based on trust and respect.

Chapter 4. Protection of Shareholders' Interests

We protect the interests of shareholders through efficient and transparent management activities so that shareholders can invest in the company with confidence.

Chapter 5. Contributions to the Country and Society

As a corporate citizen, we comply with government policies and laws and fulfill our social responsibilities.

Chapter 6. Environmental, Health, and Safety Management

We make the utmost efforts to protect the environment and pursue an accident-free workplace.

※ The link to the Code of Ethics will be included in the next report due to the renewal of the GS Energy website.

ADVANCED RISK MANAGEMENT

Ethics and Compliance Risks

Ethics and Compliance Risks

GS Energy has established and operates a compliance management system to prevent various non-compliance risks that may arise during business operations, such as violations of the Fair Trade Act or misconduct.

Ethics and Compliance Risk Management System

For company-wide ethical management, GS Energy has established the Code of Ethics and guidelines on ethical behavior to be followed by all executives and employees. We uphold ethics and compliance risk management by carrying out activities to practice compliance management, such as operating channels to receive reports on non-compliance and handle grievances, and by collecting a pledge of voluntary compliance from executives and employees.



Ethical Management Tools

Direct Reporting Channel

GS Energy operates direct reporting channels (e-mail, telephone) through which its stakeholders, including employees, customers, and suppliers, can report corruption such as misconduct by employees or unfair transactions with suppliers.

Grievance Handling Channel

GS Energy also operates a grievance handling channel, whereby anyone who has fallen victim to a human rights violation or discovered a risk of such may make a report. Human rights violations such as workplace harassment or sexual harassment can be reported via a direct telephone line.

Whistleblower Protection

Upon receiving a report of non-compliance or a grievance, the department in charge takes responsibility for protecting the whistleblower from any potential disadvantages and ensures confidentiality.

Pledge of Compliance with the Code of Ethics

GS Energy collects a pledge of voluntary compliance from all executives and employees to promote a corporate culture of ethics and compliance. By signing the pledge, all members of GS Energy promise to comply with and take responsibility for corporate regulations, the Code of Ethics, and fair-trade laws in the course of performing their duties.



Compliance Pledge

Violations of Ethical Management

※ No. of ethical management violations at GS Energy, excluding its subsidiaries

Classification	Unit	2020	2021	2022
Violations of the Code of Ethics	Cases	0	0	0
Violations of fair-trade-related laws and regulations	Cases	0	0	0

ADVANCED RISK MANAGEMENT

Financial Risks

Financial Risk

GS Energy defines liquidity risk, financial market fluctuation risk (interest rates and FX rates), credit rating risk, and internal control risk as financial risks. We review and implement a variety of measures optimized for coping with these financial risks.

Management of Liquidity Risk

To manage liquidity risk, GS Energy maintains stable liquidity management by thoroughly forecasting its balance of funds while holding cash reserves above an appropriate level and securing credit lines. In addition, we continuously review various financing schemes and diversify our borrowing portfolio to minimize refinancing risk in the event of a financial crisis caused by unpredictable financial market fluctuations. In particular, we proactively manage potential risks by monitoring the financial market's response to recent changes in the ESG environment and analyzing the impact of government and financial institutions' ESG-related policies and guidelines on our financing, and implement countermeasures across all areas of investment and business operations.

Management of Credit Rating Risk

GS Energy is making efforts to maintain a stable credit rating to secure the confidence of investors and customers. In order to minimize negative impacts on our credit rating, we verify mid- to long-term financial ratios as part of the decision-making process of top management during the deliberation and approval of business and investment plans. We also implement systematic measures to maintain adequate financial ratios, including detailed scenario-based analyses of how our borrowings are affected by various factors such as the direction of GS Energy and changes in the financial market.

Management of Financial Market Fluctuation Risk

GS Energy constantly monitors key financial indicators to make timely responses to risks arising from financial market volatility in interest rates, FX rates, etc. We adopt optimal response measures to minimize the impact on our business plans by closely analyzing the causes of financial market fluctuations and preemptively identifying future movements. In line with this, we adjust the proportions of fixed/ floating interest rates on borrowings in consideration of the risk of interest rate fluctuations, and optimize hedging against potential FX rate risks based on a thorough analysis of our FX positions.

Management of Internal Control Risk

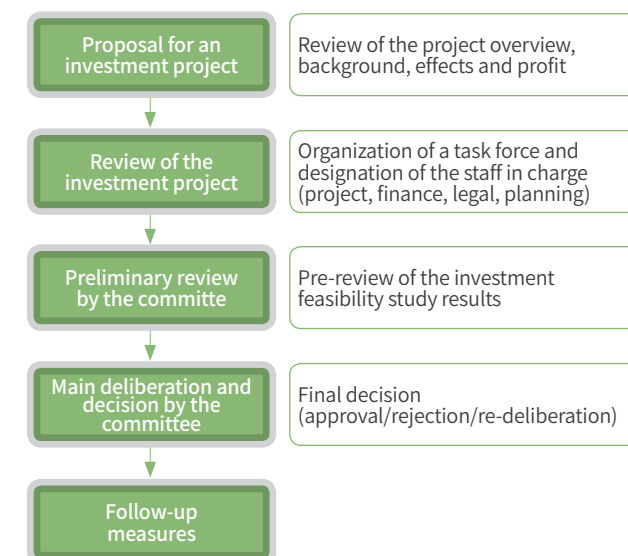
GS Energy operates internal control over financial reporting in compliance with relevant laws and promotes transparency and reliability across its financial reporting processes, from the calculation to the disclosure of financial information. By adopting reasonable and consistent accounting policies, we ensure the reliability of financial information and provide objective information for investment decision-making.

Investment Risks

Investment Risk Management System

GS Energy operates its Investment Deliberation Committee to manage investment risks. The Investment Deliberation Committee reviews the economic feasibility of investment projects and their alignment with the directions of the company's investment portfolio and examines the feasibility of financing schemes and the risks associated with investment structures. To cope with the rapidly changing business environment and the volatility of different industries, we mandate the committee's approval for any investment or disposal of assets worth KRW 5 billion or more to minimize financial risks.

Investment Deliberation Process



ADVANCED RISK MANAGEMENT

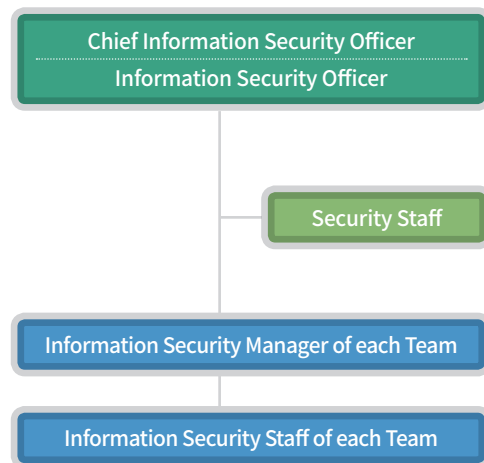
Information Security Management System

Information Security Risk

As the digital transformation continues there is an increasing occurrence of information security breaches such as cyberattacks and hacking. GS Energy recognizes the importance of reinforcing information security management and is taking preemptive actions to establish an information protection system.

Information Security Risk Management System

GS Energy operates an information security management system in accordance with its internal regulations, and conducts annual inspections of information protection and implements appropriate improvement measures.



- Compliance with legal requirements such as the Personal Information Protection Act
- The information security manager of each team and security staff review and archive records of personal information use and destruction.

Pledge of Information Protection

GS Energy collects a pledge to comply with internal regulations on information protection from all executives and employees.

1. I will keep the confidentiality of the business information, technical information, management information, and trade secrets of the company and any other information of economic value and will not use such information for any purposes other than performing my duties.
2. In order to protect confidential information, I will not bring in unauthorized equipment or software without the approval of the company.
3. In order to protect confidential information, I hereby agree to the Information Security Department gathering and searching information of the company.
4. Upon retirement, I will return the originals and copies of all confidential information I have managed along with my ID card to the company.
5. I will not illegally bring any information managed as confidential by a third party into the company. I will not leak confidential information of third parties for which the company has an obligation to maintain confidentiality nor use such information for purposes other than performing my duties.
6. I will comply with all regulations and work instructions related to the information security of the company.

Information Security Education for Employees

GS Energy provides education courses on information security, including privacy protection, to new hires and the employees of its suppliers once a year.

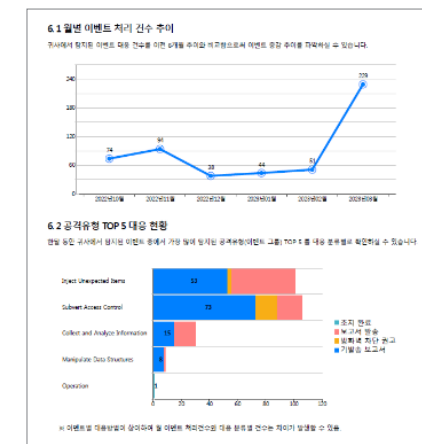
Education on Information Security

Classification	Unit	2020	2021	2022
No. of trainees	Persons	155	169	200
Training hours	Hours	155	169	200

Technical Safeguards

GS Energy rigorously manages information security by blocking all penetration paths for external service provision other than the DMZ* through a firewall. The DMZ is controlled by a specialized information protection agency. Furthermore, we monitor internal data taken out from the company and have taken precautions for security breaches such as ransomware by operating a backup system and conducting simulation drills for disaster recovery. When building a new external system, we conduct simulated hacking to verify its robustness.

*DMZ (Demilitarized Zone): A zone where access is restricted between the internal network and the external network to protect internal resources when services are provided to the outside



Cases of Data Leakage/Theft/Loss

Classification	Unit	2020	2021	2022
Personal data	Cases	0	0	0
Corporate data	Cases	0	0	0



ESG Data	82
GRI Standards Index	88
SASB Index	90
TCFD Index	91
Commitment to the UN SDGs	92
Environmental Management Policy	93
Charter of Human Rights	94
Code of Conduct for Partners	95
Independent Assurance Statement	98

ESG DATA

ECONOMIC

Consolidated Statement of Financial Position

Description	Unit	2021	2021	2022
Assets				
I. Current assets	KRW million	734,198	1,495,872	1,520,007
Cash and cash equivalents	KRW million	179,104	317,143	697,843
Accounts receivable and other receivables	KRW million	144,102	438,787	731,095
Financial assets	KRW million	405,000	674,575	27,104
Non-financial assets	KRW million	2,435	53,005	24,811
Income tax receivable	KRW million	14	-	52
Inventories	KRW million	3,543	12,362	39,102
II. Non-current assets	KRW million	8,205,386	11,636,892	13,769,545
Non-current accounts receivable and other receivables	KRW million	8,798	15,820	13,503
Non-current financial assets	KRW million	521	70,090	452,539
Investments in joint ventures and associates	KRW million	6,080,834	6,321,954	7,672,655
Property and equipment	KRW million	1,280,707	3,833,903	4,057,972
Investment property	KRW million	32,064	18,903	19,798
Intangible assets	KRW million	794,493	1,324,850	1,481,560
Non-current non-financial assets	KRW million	7,969	20,526	23,350
Defined benefit assets	KRW million	-	70	10,421
Deferred income tax assets	KRW million	-	30,776	37,747
Total assets	KRW million	8,939,584	13,132,764	15,289,552

Description	Unit	2021	2021	2022
Liabilities				
I. Current liabilities		797,791	1,237,178	1,675,775
Accounts payable and other payables	KRW million	125,043	305,684	534,818
Financial liabilities	KRW million	616,753	733,978	899,981
Non-financial liabilities	KRW million	30,638	66,122	75,808
Income tax liabilities	KRW million	25,357	131,394	165,168
II. Non-current liabilities		2,475,954	4,166,864	4,248,546
Non-current accounts payable and other payables	KRW million	2,023	9,038	1,451
Non-current financial liabilities	KRW million	1,965,036	3,183,006	3,163,112
Non-current non-financial liabilities	KRW million	239,795	419,230	407,722
Defined benefit liabilities	KRW million	2,283	2,585	436
Deferred income tax liabilities	KRW million	266,817	553,005	675,825
Total liabilities	KRW million	3,273,745	5,404,042	5,924,321
Equity				
I. Equity attributable to shareholders of the parent company				
Share capital	KRW million	250,000	250,000	250,000
Capital surplus	KRW million	1,351,452	1,814,714	1,812,718
Accumulated other comprehensive income	KRW million	-127,062	-21,966	82,446
Retained earnings	KRW million	3,864,742	4,752,530	6,231,438
Total equity attributable to shareholders of the parent company	KRW million	5,339,132	6,795,278	8,376,602
II. Non-controlling interests	KRW million	326,707	933,444	988,629
Total equity	KRW million	5,665,839	7,728,722	9,365,231
Total liabilities and equity	KRW million	8,939,584	13,132,764	15,289,552

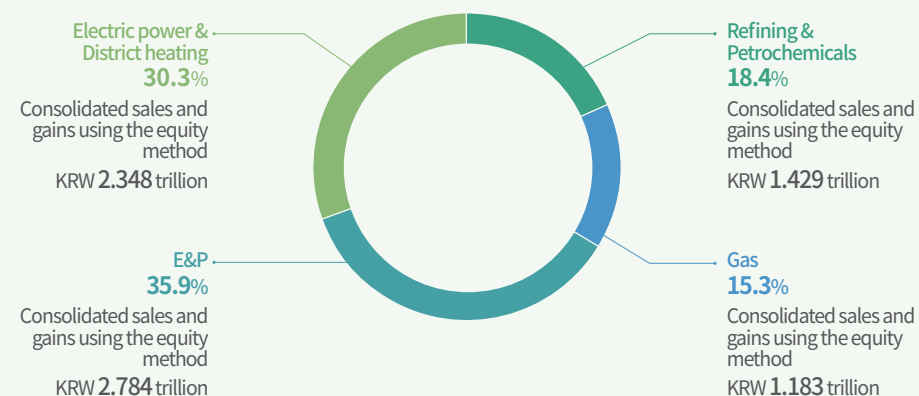
ESG DATA

ECONOMIC

Consolidated Statements of Comprehensive Income

Description	Unit	2021	2021	2022
I . Sales and gains using the equity method	KRW million	1,641,866	3,769,589	7,753,634
II . Cost of sales and losses using the equity method	KRW million	1,249,072	1,805,229	3,834,139
III. Gross profit (loss)	KRW million	392,794	1,964,360	3,919,495
Selling and administrative expenses	KRW million	51,196	98,245	116,749
IV. Operating income (loss)	KRW million	341,598	1,866,115	3,802,746
Financial revenues	KRW million	36,208	19,118	58,918
Financial expenses	KRW million	86,223	116,052	159,116
Other revenues	KRW million	15,435	195,492	65,000
Other expenses	KRW million	15,352	17,081	29,108
V . Income before income tax expenses (loss)	KRW million	291,666	1,947,592	3,738,440
VI. Income tax expenses	KRW million	530,413	1,034,979	1,910,714
VII. Profit from continuing operations	KRW million	-238,747	912,613	1,827,726
VIII. Net income (loss)	KRW million	-238,747	912,613	1,827,726
Equity attributable to shareholders of the parent company	KRW million	-250,703	889,989	1,705,199
Non-controlling interests	KRW million	11,956	22,624	122,527

Economic Value Creation Ratios



ESG DATA

ENVIRONMENTAL

Energy Use

Item	Unit	GS Energy		
		2021	2021	2022
Total energy use		2.7	2.9	3.1
Direct use	TJ	1.5	1.7	1.4
Indirect use		1.2	1.2	1.7

GHG Emissions

Item	Unit	GS Energy		
		2021	2021	2022
Total GHG emissions		238	249	291
Direct emissions (scope 1)	tCO ₂ eq	82	85	78
Indirect emissions (scope 2)		157	154	213

Water Consumption

Item	Unit	GS Energy		
		2021	2021	2022
Total water consumption	Ton	5,474	5,718	4,610

SOCIAL

Grievance Handling

Classification	Unit	2021	2021	2022
Grievance cases reported	Cases	0	0	0
Grievance cases resolved		0	0	0

Employees

Classification	Unit	2021	2021	2022
Total No. of employees		154	168	199
Gender	Male	126	133	152
	Female	28	35	47
Age	Under30	17	21	24
	30-50	110	116	139
	50 and above	27	31	36
Employment status	Regular workers*	145	157	190
	-Male	124	129	148
	-Female	21	28	42
	Contract workers**	9	11	9
	-Male	2	4	4
	-Female	7	7	5
Socially disadvantaged	Disabled persons	1	1	1
	Persons of national merit	2	4	4

* Regular workers: No limit set for the employment period (including executives)

Diversity of Employees

Classification	Unit	2021	2021	2022
Ratio of females to all employees		18.2	20.8	23.6
Ratio of females in managerial positions	%	6.1	6.1	7.7
Salary level of females vs. males*		90	89	76
	Managerial jobs	98	108	104

*Ratio of rewards for women when those for men are set at 100

ESG DATA

SOCIAL

Recruitment and Turnover

Classification		Unit	2021	2021	2022
Total No. of hires			21	27	56
Gender	Male		14	17	38
	Female		7	10	18
Age	Under 30		7	9	12
	30-50		10	17	37
	50 and above	Persons	4	1	7
Total turnover			10	16	15
Gender	Male		9	13	8
	Female		1	3	7
Age	Under 30		1	3	5
	30-50		6	10	9
	50 and above		3	3	1
Total turnover rate		%	6.5	9.5	7.5
Voluntary turnover rate			1.3	6.0	6.0

* Total number of hires: Executives, regular employees, contract employees, and others who joined the company for any reason (excluding dispatched employees)

** Voluntary turnover rate: Excluding retirement due to retirement age, service termination, dismissal, etc.

Training of Employees

Classification	Unit	2021	2021	2022
No. of trainees	Persons	154	168	199
Total training cost*	KRW million	275	276	399
Training cost per person	KRW million/person	1.78	1.64	2.00

* Total training cost: All costs earmarked for education and training accounts (excluding new employees)

Welfare Benefits

Classification	Unit	2021	2021	2022
Amount	KRW million	2,421	6,100	3,336

Retirement Pension System

Classification		Unit	2021	2021	2022
Amount			1,852	3,447	5,741
Type	DB (defined benefit)	%	1,800	3,400	5,660
	DC (defined contribution)		52	47	81
	Company grants to IRPs		390	436	513
No. of subscribers*		Persons	151	167	147

Parental Leave

Classification		Unit	2021	2021	2022
On parental leave	Male		3	1	0
	Female	Persons	0	0	2
Returnees	Male		2	0	1
	Female		1	0	0
Return rate*		%	75	-	100
Retention rate**			100	100	100

* Return rate: Ratio of employees returning from parental leave in the following year

** Retention rate: Ratio of employees working for 12 months or more after returning

Donations in 2022

Area	Recipient	Amount (KRW)
Energy and eco-friendliness	National Assembly Forum on Climate Change	35 million
	Korea University ESG Development Fund	4 million
Support for local communities	Habitat for Humanity Korea 815 Run	8.15 million
	Donation to the city of Donghae for wildfire victims	100 million
	Korea-U.S. Alliance Foundation	30 million
Culture and the arts	National Museum of Modern and Contemporary Art	20 million
	Friends of the National Museum of Korea	20 million
	Seoul Philharmonic Orchestra	20 million

ESG DATA

GOVERNANCE

Board of Directors

Classification	Unit	2021	2021	2022
No. of meetings	Meetings	15	15	16
No. of resolved agendas	Cases	35	50	53
Attendance rate	%	97.78	98.89	94.31

BOD Remuneration

Classification	No. of persons	Total remuneration	Remuneration per person
Registered director	1	2,045	2,045

Training of Auditors

Date	Training institute	Main content
2022.08.18	PwC Korea	- Internal control over financial reporting, and the role of auditors - Supervision of subsidiaries and the assessment of internal control and consolidated financial reporting - Fraud investigation and reporting obligation of auditors (committee)
2022.04.30	Online Edu (online education platform)	- Components and principles of internal control over financial reporting - Practical guidelines for internal control over financial reporting
2021.06.30	Korea Listed Companies Association	- Internal control over financial reporting and the role of auditors
2020.05.31	Korea Exchange	- Prevention of unfair transactions

Audit Expenses

Year	Auditor	Unit	Amount
2022	Deloitte Anjin	KRW million	290

Audit Opinions

Year	Auditor	Audit opinion	Note
2022	Deloitte Anjin	Unqualified	None
2021	KPMG Korea	Unqualified	None
2020	KPMG Korea	Unqualified	None

Violations of Ethical Management

Classification	Unit	2021	2021	2022
Violation of the Code of Ethics	Cases	0	0	0
Violation of fair-trade-related laws and regulations	Cases	0	0	0

※ No. of ethical management violations at GS Energy, excluding its subsidiaries

Education on Information Security

Classification	Unit	2021	2021	2022
No. of trainees	Persons	155	169	200
Training hours	Hours	155	169	200

Cases of Data Leakage/Theft/Loss

Classification	Unit	2021	2021	2022
Personal data	Cases	0	0	0
Corporate data	Cases	0	0	0

ESG DATA

Membership in Associations/Organizations

Classification	Organization	Position	Joined in
Energy in general	National Assembly Forum on Climate Change	Co-representative	2014
	KBCSD (Korea Business Council for Sustainable Development)	Steering Committee member	2016
	Energy Future Forum	BOD member	2014
	Energy Alliance	BOD member	2021
E&P/Gas	Energy and Mineral Resources Development Association	Vice Chairman	2008 (GSC)
	Korea Gas Union	Vice Chairman (2022 WGC Executive Committee member)	2008 (GSC)
	Private LNG Industry Association	Co-chairman	2021
Electric power/district heating	Independent Power Producer Association	Special member	2014
Hydrogen	H2KOREA	Associate member	2021
	K-CCUS Association	General member	2022
	Clean Ammonia Council	General member	2021
Business community/others	Korea Chamber of Commerce and Industry	EX officio member	2017
	Seoul Forum for International Affairs	Regular member	2019

GRI STANDARDS INDEX

Universal Standards

GRI 2 : General Disclosures 2021				
Topic	Index	Disclosure	Page	Note
Organization and its reporting practices	2-1	Organization details	7,9	
	2-2	Entities included in the organization's sustainability reporting	2	
	2-3	Reporting period, frequency, and contact point	2	
	2-4	Restatements of information	52, 62, 66, 70, 71	
	2-5	External assurance	98	
Activities and workers	2-6	Activities, value chain, and other business relationships	8, 12-29	
	2-7	Employees	66	
	2-8	Workers who are not employees	66	
Governance	2-9	Governance structure and composition	75	
	2-10	Nomination and selection of the highest governance body	75	
	2-11	Chair of the highest governance body	75	
	2-12	Role of the highest governance body in overseeing the management of impacts	32-35	
	2-13	Delegation of responsibility for managing impacts	75	
	2-14	Role of the highest governance body in sustainability reporting	32-35, 75	
	2-15	Conflicts of interest	75	
	2-16	Communication of critical concerns	33, 46, 48, 75	
	2-17	Collective knowledge of the highest governance body	34-35	
	2-18	Evaluation of the performance of the highest governance body	75	
	2-19	Remuneration policies	75	
	2-20	Process to determine remuneration	75	
	2-21	Annual total compensation ratio	75	
Strategy, policies, and practices	2-22	Statement on sustainable development strategy	4-5	
	2-23	Policy commitments	77, 94-98	
	2-24	Embedding policy commitments	63, 78	
	2-25	Processes to remediate negative impacts	63, 77-80	
	2-26	Mechanisms for seeking advice and raising concerns	63, 78	
	2-27	Compliance with laws and regulations	77-78	
	2-28	Membership associations	87	
Stakeholder engagement	2-29	Approach to stakeholder engagement	43	
	2-30	Collective bargaining agreements	-	GS Energy has a labor-management council but there has been no reported collective bargaining or collective agreements

GRI 3 : Material Topics 2021				
Topic	Index	Disclosure	Page	Note
Disclosure on material topics	3-1	Process to determine material topics	36	
	3-2	List of material topics	37	

Material Topics Index

Expansion of renewable energy business and portfolio diversification				
Topic	Index	Disclosure	Page	Note
GRI 3 : Material Topics 2021	3-3	Management of material topics	38	

Carbon neutrality commitment (renewables-fueled power generation, zero-coal, etc.)				
Topic	Index	Disclosure	Page	Note
GRI 3 : Material Topics 2021	3-3	Management of material topics	39	

Economic performance (generation and distribution of economic value)				
Topic	Index	Disclosure	Page	Note
GRI 3 : Material Topics 2021	3-3	Management of material topics	40	
GRI 201: Economic Performance 2016	201-1	Generation and distribution of direct economic value	10, 42, 82-83	

Contribution to local communities				
Topic	Index	Disclosure	Page	Note
GRI 3 : Material Topics 2021	3-3	Management of material topics	41	
GRI 413: Local Communities 2016	413-1	Operations with local community engagement, impact assessments, and development programs	72-73	
	413-2	Operations with significant actual and potential negative impacts on local communities	-	GS Energy is a holding company with only a head office and no business site.

GRI STANDARDS INDEX

Topic-specific Standards

GRI 200 : Economy Disclosures

Topic	Index	Disclosure	Page	Note
GRI 201: Economic Performance 2016	201-1	Direct economic value generated and distributed	10, 42, 82-83	
	201-2	Financial implications and other risks and opportunities due to climate change	47-48	
	201-3	Defined benefit plan obligations and other retirement plans	70	
	201-4	Financial assistance received from government	-	May be reported in the next year's report
GRI 203: Indirect Economic impacts 2016	203-1	Infrastructure investments and services supported	72-73	
GRI 205: Anti-corruption 2016	205-1	Operations assessed for risks related to corruption	-	GS Energy is a holding company with only a head office and no business site.
	205-2	Communication and training about anti-corruption policies and procedures	77-78	
	205-3	Confirmed incidents of corruption and actions taken	78	

GRI 300 : Environmental Disclosures

Topic	Index	Disclosure	Page	Note
GRI 302: Energy 2016	302-1	Energy consumption within the organization	52	
	302-2	Energy consumption outside of the organization	52	Determining the scope of subsidiary reporting based on the sales proportion and ESG management level of each subsidiary
	302-3	Energy intensity	-	May be reported in the next year's report
	302-4	Reduction of energy consumption	-	Reporting on the energy consumption reductions of subsidiaries on pages 51 and 52
	302-5	Reductions in energy requirements of products and services	-	Reporting on relevant subsidiary activities on page 52
GRI 303: Water and Effluents 2018	303-1	Interactions with water as a shared resource	57	
	303-2	Management of water discharge-related impacts	57	
	303-3	Water withdrawal	57	
	303-4	Water discharge	57	
	303-5	Water consumption	57, 84	
GRI 306: Waste 2020	305-1	Direct (Scope 1) GHG emissions	57, 84	
	305-2	Energy indirect (Scope 2) GHG emissions	57, 84	

GRI 300 : Environmental Disclosures

Topic	Index	Disclosure	Page	Note
GRI 306: Waste 2020	305-3	Other indirect (Scope 3) GHG emissions	-	Determining the scope of subsidiary reporting based on the sales proportion and ESG management level of each subsidiary. Reporting the emissions of subsidiaries this year and planning to report scope 3
	305-4	GHG emissions intensity	-	May be reported in the next year's report
	305-5	Reduction of GHG emissions	-	Reporting on the GHG emissions reductions of subsidiaries on pages 49, 51, and 52
	305-6	Emissions of ozone-depleting substances (ODS)	-	Not applicable
	305-7	Nitro oxides (NOx), sulfur oxides (SOx), and other significant air emissions	58	
GRI 306: Waste 2020	306-1	Waste generation and significant waste-related impacts	57	
	306-2	Management of significant waste-related impacts	57	
	306-3	Waste generated	57	
	306-4	Waste diverted from disposal	57	

GRI 400 : Social Disclosures

Topic	Index	Disclosure	Page	Note
GRI 401: Employment 2016	401-1	New employee hires and employee turnover	66	
	401-3	Parental leave	71	
GRI 403: Occupational Health and Safety 2018	403-3	Occupational health services	71	
	403-5	Worker training on occupational health and safety	63	
	403-6	Promotion of worker health	69, 71	
	403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	63, 69	
GRI 404: Training and Education 2016	404-1	Average hours of training per year per employee	69	
	404-2	Programs for upgrading employee skills and transition assistance programs	69-70	
GRI 405: Diversity and Equal Opportunity 2016	405-1	Diversity of governance bodies and employees	66, 75	
	405-2	Ratio of basic salary and remuneration of women to men	66	
GRI 406: Non- discrimination 2016	406-1	Incidents of discrimination and corrective actions taken	63	
GRI 413: Local Communities 2016	413-1	Operations with local community engagement, impact assessments, and development programs	72-73	
	413-2	Operations with significant actual and potential negative impacts on local communities	-	GS Energy is a holding company with only a head office and no business site.

SASB INDEX

Industry – Electric Utilities & Power Generators + Gas-related Industries

Topics and Accounting Metrics

Topic	Code	Accounting Metric	Page	Note
GHG Emissions & Energy Resource Planning	IF-EU-110a.1	(1) Gross global Scope 1 emissions (2) Percentage covered under emissions-limiting regulations (3) Percentage covered under emissions-reporting regulations	52	
	IF-EU-110a.2	(1) GHG emissions associated with power deliveries	52	
	IF-EU-110a.3	(1) Discussion of long-term and short-term strategy or plan to manage scope 1 emissions, (2) emissions reduction targets and an analysis of performance against those targets	54	
Air Quality	IF-EU-120a.1	(1) NOx	58	
Water Management	IF-EU-140a.1	(1) Total water withdrawn (2) Total water consumed	57, 84	
	IF-EU-140a.3	(1) Description of water management risks and discussion of strategies and practices to mitigate those risks	57	

TCFD INDEX

Pillar	Framework	Page
Governance	a. Board's oversight of climate-related risks and opportunities	46
	b. Management's role in assessing and managing climate-related risks and opportunities	46
Strategy	a. Climate-related risks and opportunities over the short, medium, and long term	47-48
	b. Impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning	47-48
	c. Resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario	-
Risk Management	a. Organization's processes for identifying and assessing climate-related risks	49
	b. Organization's processes for managing climate-related risks	49
	c. How processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management	49
Metrics and Targets	a. Metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process	54
	b. Scope 1, Scope 2, and, if appropriate, Scope 3 GHG emissions, and the related risks	54
	c. Targets used by the organization to manage climate-related risks and opportunities and performance against targets	54

COMMITMENT TO THE UN SDGS

SDGs	Commitment in 2022	Page
	GS Energy provides health support services for employees and their families to promote their well-being. GS Energy has also implemented an EAP (employee assistance program) to manage the mental and physical stress experienced by its employees.	69, 71
	GS Energy offers various education programs to improve the job skills of its employees and provide insights. GS Energy supports education programs on Korean history and culture to deepen the public's understanding of culture.	69, 73
	GS Energy does not discriminate against employees based on gender or age and grants paternity leave to its male employees.	71, 85
	GS Energy is making efforts to supply sustainable energy through its renewable energy, district heating and cooling, and energy efficiency businesses in preparation for the carbon-neutral era.	13, 50-53
	GS Energy is moving towards eco-friendly, sustainable growth by expanding its business into the renewable energy sector, including solar PV and electric vehicle charging, and strengthening its business portfolio.	20~29
	GS Energy's employees have signed a pledge of compliance with the Code of Ethics, committing to complying with the code and fair-trade practices and taking responsibility for them.	77-78
	GS Energy contributes to the creation of sustainable cities and communities by engaging in various social contribution activities for local communities.	72-73
	GS Energy is promoting its waste EV battery recycling business to contribute to the establishment of an ecosystem of resources circulation.	27
	GS Energy has developed a response strategy, implemented various activities, and established mid- and long-term goals for climate change. GS Energy supports the National Assembly Forum on Climate Change to raise awareness of climate change and facilitate discussions on solutions.	46-54, 73
	GS Energy has enhanced its ESG management by forming and operating the ESG Council, which includes its subsidiaries, and strengthening communication with stakeholders to promote a peaceful and inclusive corporate culture.	32-35, 42-43

ENVIRONMENTAL MANAGEMENT POLICY

※ The link to the Environmental Management Policy will be included in the next report due to the renewal of the GS Energy website.

Environmental Management Policy of GS Energy

Philosophy

GS Energy recognizes that environmental sustainability is an essential value in the lives of its customers as well as a globally significant issue and pursues sustainable management through environmental preservation and improvement.

Scope of Application

This policy applies to all business areas of GS Energy (including its subsidiaries). GS Energy recommends implementing this policy within a scope that does not compromise autonomous management.

Objectives

1. Production

- GS Energy will strive to minimize environmental pollution arising from the operation, maintenance, and repair of its production facilities. In addition, the Company will make efforts to establish and implement processes for the efficient management of production and business facilities for environmental management.

2. Development of Products and Services

- GS Energy should recognize the risks and opportunities that various environmental issues may pose to business and make efforts to develop products and services that have a minimal environmental impact.

3. Distribution and Logistics

- GS Energy should implement internal regulations to minimize environmental pollution arising from the transportation of products and services.

4. Waste Management

- GS Energy should manage its facilities related to waste generation, collection, storage and disposal through inspection and monitoring to reduce waste generation. Furthermore, the Company will make efforts to improve the recyclability of the waste it produces by considering recycling from the design phase of products and services, and share information about waste recovery and recycling with stakeholders.

5. Evaluation of Suppliers, Contractors, and Service Providers

- GS Energy should make efforts to minimize environmental impacts by conducting environmental management assessments when selecting partners.

6. New Projects

- GS Energy should make efforts to minimize any potential negative effects caused by new projects by assessing and thoroughly managing their environmental impact before commencing them.

7. Due Diligence before M&As

- GS Energy should make efforts to identify environmental risks through due diligence prior to executing M&As and address them before acquiring or merging with a company.

8. Compliance

- GS Energy will comply with international environmental/energy agreements and regulations and continuously strive for environmental improvement.

9. Information Disclosure

- GS Energy will disclose the results of its environmentally friendly management activities internally and externally to ensure transparency and pursue sustainability.

10. Operation of a Dedicated Environmental Management Body and Council

- GS Energy will establish a highest decision-making body and a dedicated body for environmental management, if necessary, to share the environmental management status of each subsidiary and jointly explore improvement measures.

CHARTER OF HUMAN RIGHTS

Human Rights Management

※ The link to the Charter of Human Rights will be included in the next report due to the renewal of the GS Energy website.

Charter of Human Rights of GS Energy

Purpose

GS Energy recognizes the importance of universal human rights and corporate social responsibility in the management of the company and pursues sustainable growth and development by respecting the human rights of all stakeholders, including employees, consumers, partners, and local residents. GS Energy has established this Charter of Human Rights to actively implement human rights management, as well as to minimize and prevent human rights violations that may arise from corporate activities.

Scope of Application

The Charter of Human Rights applies to the executives and employees of GS Energy (including GS Energy Corp. and its subsidiaries). However, in the event that any provision of this Charter conflicts with the laws and regulation of a host country, the local laws and regulations take precedence. GS Energy recommends implementing this Charter within a scope that does not compromise autonomous management.

Basic Principles

1. Prohibition of Discrimination

- GS Energy does not discriminate against any executives or employees without justifiable cause on the basis of race, gender, ethnicity, nationality, religion, disability, age, family status, social status, or political beliefs during recruitment, hiring, promotion, education, or wage or welfare provision, and nurtures an organizational culture that respects the diversity of its employees.

2. Compliance with Labor Conditions

- GS Energy complies with the statutory working hours of the host countries where it operates and pays all employees reasonable compensation for their labor. Furthermore, the Company provides sufficient training opportunities and a suitable work environment for job performance to enhance their capabilities and improve their quality of life.

3. Humane Treatment

- GS Energy respects the privacy of all employees, thoroughly protects their personal information, and does not engage in coercion, abuse, or unreasonable treatment, either mentally or physically.

4. Guarantee of the Freedom of Association and Collective Bargaining

- GS Energy recognizes the freedom of association and the right to collective bargaining guaranteed by the laws and regulations of each host country and region and ensures an environment where employees can communicate with the Company smoothly. Furthermore, the Company does not engage in any unfair treatment based on the formation, membership, or activities of a labor union.

5. Prohibition of Forced/Child Labor

- GS Energy does not impose any form of forced labor on its employees against their free will and complies with the minimum legal age for employment set by the host country and regional laws and regulations when hiring workers.

6. Guarantee of Occupational Safety

- GS Energy provides all employees with a safe and hygienic working environment, and for those working in hazardous conditions, the Company offers separate safety equipment and safety training.
- GS Energy takes prompt action, such as providing appropriate compensation, for accidents or illnesses that occur in the workplace.

7. Responsible Supply Chain Management

- GS Energy and its subsidiaries recommend that major suppliers and partners comply with the obligation to protect human rights and take appropriate actions, if necessary, to ensure the implementation of human rights management by suppliers and partners.

8. Protection of the Human Rights of Local Residents

- All employees of GS Energy take care to ensure that the human rights of local residents are not violated during the performance of their duties and, in particular, they respect and protect their rights to life, health and safety, and freedom of residence.

9. Protection of the Human Rights of Customers

- All employees of GS Energy should ensure that the provision of products and services does not harm the health and safety of consumers, and they should not exaggerate or mislead consumers in advertising or marketing.
- GS Energy respects consumer privacy as much as possible and takes the most effective measures to protect the personal information collected and stored by the Company.

CODE OF CONDUCT FOR PARTNERS

※ The link to the Code of Conduct for Partners will be included in the next report due to the renewal of the GS Energy website.

Code of Conduct for GS Energy Partners

Purpose

GS Energy recognizes the importance of its sustainable management principles and philosophy for the sustainable growth of GS Group and makes efforts to put them into practice, and the Company recognizes the value of its partner companies sharing an understanding and commitment to these principles. GS Energy respects the autonomy and independence of its partners and recommends that they faithfully implement and comply with this Code of Conduct to align with GS Group's management principles and philosophy.

Scope of Application

GS Energy (including GS Energy Corp. and its subsidiaries) may recommend that all its partners, regardless of the location of their business operations, voluntarily implement this Code of Conduct.

Respect for the Human Rights of Workers

1. Voluntary labor

- All labor activities of GS Energy's partner companies shall be based on the voluntary consent of workers and workers shall be free to change jobs or resign at any time.

2. Protection of minor workers and vulnerable workers

- GS Energy's partner companies shall comply with the legal age for employment set by the laws and regulations of the countries and regions where they operate their businesses.
- Youth workers above the legal minimum age for employment may be hired, but workers under the age of 18 shall not perform tasks deemed hazardous from a health and safety perspective.

3. Compliance with working hours

- GS Energy's partner companies shall comply with the standards for working hours set forth in applicable laws, and their workers shall not exceed the statutory working hours except in emergencies or special circumstances. Furthermore, all overtime work shall be voluntary, and in the event of unavoidable overtime, appropriate compensation shall be provided.

4. Wages and benefits

- GS Energy's partner companies shall pay wages to workers that are equal to or higher than the minimum wages set forth in applicable laws and implement benefit systems to improve the quality of life of their workers. In addition, wages shall be paid in a timely manner through appropriate methods.

5. Privacy protection and humanitarian treatment

- GS Energy's partner companies shall protect the privacy of workers, including their personal information, and shall not engage in treatment that may undermine their dignity. In addition, they shall not subject workers to physical or mental abuse, including sexual harassment, corporal punishment, and verbal abuse.

6. Non-discrimination

- GS Energy's partner companies shall provide equal opportunities to workers and shall not unfairly discriminate against workers on the basis of nationality, gender, religion, social status, or any other grounds in matters such as employment, promotion, compensation, and training opportunities.

7. Establishment of procedures to prevent human rights violations

- GS Energy's partner companies shall make every effort to prevent human rights violations by establishing and implementing relevant systems and procedures.

CODE OF CONDUCT FOR PARTNERS

Code of Conduct for GS Energy Partners

Workplace Safety and Health

1. Occupational safety

- GS Energy's partner companies shall eliminate hazards that could threaten the safety of their workers. To achieve this, they shall provide workers with appropriate personal protective equipment, install technical control equipment, establish safe work procedures, and continuously conduct safety training for workers.

2. Industrial accident and disease management

- GS Energy's partner companies shall establish systems and procedures for the prevention and manage of industrial accidents and diseases.

3. Industrial hygiene and health

- GS Energy's partner companies shall provide workers with a hygienic working environment and facilities and make continuous efforts to improve their working conditions to prevent damage to the health of workers due to excessive fatigue or stress.

Environment

1. Compliance with environmental laws and regulations

- GS Energy's partner companies shall faithfully comply with all applicable environmental laws and regulations and obtain, maintain, and manage the environmental permits and registrations required by such laws and regulations.

2. Waste reduction and efficient use of resources

- GS Energy's partner companies shall strive to reduce or eliminate all forms of waste through process changes, material substitution, recycling, and reuse, and they shall expand the use of environmentally friendly energy and water and make efforts to improve the efficiency of resource use.

3. Prevention of environmental pollution

- GS Energy's partner companies shall identify hazardous substances that may be harmful to human health or cause environmental pollution and make every effort to handle and manage them safely.

CODE OF CONDUCT FOR PARTNERS

Code of Conduct for GS Energy Partners

Business Ethics

1. Fair and honest business practices

- GS Energy's partner companies shall ensure that their employees refrain from engaging in unfair trade practices or actions that undermine fair market order, and they shall manage and supervise them so that perform their duties with honesty and transparency.

2. Anti-bribery and anti-corruption

- GS Energy's partner companies shall present policies and guidelines regarding anti-bribery and anti-corruption, and they shall manage and supervise their employees to ensure compliance.

3. Protection of personal information

- GS Energy's partner companies shall protect personal information, including that of customers, in accordance with applicable laws and regulations, and take necessary physical and technical measures for this purpose.

4. Win-win partnership with partner companies

- GS Energy's partner companies shall pursue mutually respectful and cooperative relationships with their respective partner companies and shall not compel unfair practices by taking advantage of their dominant position.

5. Contribution to the local community

- GS Energy's partner companies shall recognize their responsibility to contribute to the communities in which they operate their businesses, and they shall share their social responsibilities with stakeholders in the local community and actively participate in CSR activities.

Management System

1. Risk identification

- GS Energy's partner companies shall make efforts to identify risks that may arise in the areas of ethics, the environment, labor/human rights, and safety/health during their business operations.
- If significant risks are identified, GS Energy's partner companies shall develop and implement measures to mitigate these risks.

2. Compliance with the Code of Conduct

- GS Energy's partner companies shall provide information on their compliance with this Code of Conduct and the level of implementation in the event of a document inspection or on-site inspection by a third party designated by GS Energy.
- GS Energy's partner companies shall create and manage appropriate documents that demonstrate their compliance with this Code of Conduct, and these documents shall be based on actual and factual information related to their business operations.
- GS Energy's partner companies shall make efforts to establish and implement plans for the timely improvement of any deficiencies or violations identified through a document inspection or on-site inspection of their compliance with this Code of Conduct.

3. Education and communication

- GS Energy's partner companies shall provide education to their employees on the matters presented in this Code of Conduct and covered by relevant laws and systems.
- GS Energy's partner companies shall share the implementation plans for the matters specified in this Code of Conduct and the performance results with their employees.

4. Management of partner companies (subcontractors)

- GS Energy's partner companies shall recommend that their contracted partners (subcontractors) manage ethical, environmental, labor/human rights, and safety/health aspects in the planning, design, sale, and manufacture of products and services.
- If GS Energy's partner companies confirm that their partners (subcontractors) have violated ethical, environmental, labor/human rights, or safety/health laws or regulations, or become aware of related risks, they shall make efforts to advise and guide them for improvement.

INDEPENDENT ASSURANCE STATEMENT

To readers of GS Energy Sustainability Report 2022

Introduction

Korea Management Registrar (KMR) was commissioned by GS Energy to conduct an independent assurance of its SUSTAINABILITY REPORT 2022 (the "Report"). The data and its presentation in the Report is the sole responsibility of the management of GS Energy. KMR's responsibility is to perform an assurance engagement as agreed upon in our agreement with GS Energy and issue an assurance statement.

Scope and Standards

GS Energy described its sustainability performance and activities in the Report. Our Assurance Team carried out an assurance engagement in accordance with the AA1000AS v3 and KMR's assurance standard SRV1000. We are providing a Type 2, moderate level assurance. We evaluated the adherence to the AA1000AP (2018) principles of inclusivity, materiality, responsiveness and impact, and the reliability of the information and data provided using the Global Reporting Initiative (GRI) Index provided below. The opinion expressed in the Assurance Statement has been formed at the materiality of the professional judgment of our Assurance Team.

Confirmation that the Report was prepared in accordance with GRI standards 2021 was included in the scope of the assurance. We have reviewed the topic-specific disclosures of standards which were identified in the materiality assessment process.

- GRI Sustainability Reporting Standards 2021
- Universal Standards
- Topic Specific Standards
 - GRI 201: Economic Performance
 - GRI 302: Energy
 - GRI 305: Emissions
 - GRI 413: Local Communities

As for the reporting boundary, the engagement excludes the data and information of GS Energy's partners, suppliers and any third parties.

KMR's Approach

To perform an assurance engagement within an agreed scope of assessment using the standards outlined above, our Assurance Team undertook the following activities as part of the engagement:

- reviewed the overall Report;
- reviewed materiality assessment methodology and the assessment report;
- evaluated sustainability strategies, performance data management system, and processes;
- interviewed people in charge of preparing the Report;
- reviewed the reliability of the Report's performance data and conducted data sampling;
- assessed the reliability of information using independent external sources such as Financial Supervisory Service's DART and public databases.

Limitations and Recommendations

KMR's assurance engagement is based on the assumption that the data and information provided by GS Energy to us as part of our review are provided in good faith. Limited depth of evidence gathering including inquiry and analytical procedures and limited sampling at lower levels in the organization were applied. To address this, we referred to independent external sources such as DART and National Greenhouse Gas Management System (NGMS) and public databases to challenge the quality and reliability of the information provided.

Conclusion and Opinion

Based on the document reviews and interviews, we had several discussions with GS Energy on the revision of the Report. We reviewed the Report's final version in order to make sure that our recommendations for improvement and revision have been reflected. Based on the work performed, it is our opinion that the Report applied the GRI Standards. Nothing comes to our attention to suggest that the Report was not prepared in accordance with the AA1000AP (2018) principles.

Inclusivity

GS Energy has developed and maintained different stakeholder communication channels at all levels to announce and fulfill its responsibilities to the stakeholders. Nothing comes to our attention to suggest that there is a key stakeholder group left out in the process. The organization makes efforts to properly reflect opinions and expectations into its strategies.

Materiality

GS Energy has a unique materiality assessment process to decide the impact of issues identified on its sustainability performance. We have not found any material topics left out in the process.

Responsiveness

GS Energy prioritized material issues to provide a comprehensive, balanced report of performance, responses, and future plans regarding them. We did not find anything to suggest that data and information disclosed in the Report do not give a fair representation of GS Energy's actions.

Impact

GS Energy identifies and monitors the direct and indirect impacts of material topics found through the materiality assessment, and quantifies such impacts as much as possible.

Reliability and Specific Sustainability Performance Information

In addition to the adherence to AA1000AP (2018) principles, we have assessed the reliability of economic, environmental, and social performance data related to sustainability performance. We interviewed the in-charge persons and reviewed information on a sampling basis and supporting documents as well as external sources and public databases to confirm that the disclosed data is reliable. Any intentional error or misstatement is not noted from the data and information disclosed in the Report.

Competence and Independence

KMR maintains a comprehensive system of quality control including documented policies and procedures in accordance with ISO/IEC 17021:2015 - Requirements for bodies providing audit and certification of management systems. This engagement was carried out by an independent team of sustainability assurance professionals. KMR has no other contract with GS Energy and did not provide any services to GS Energy that could compromise the independence of our work.

June 2023 Seoul, Korea



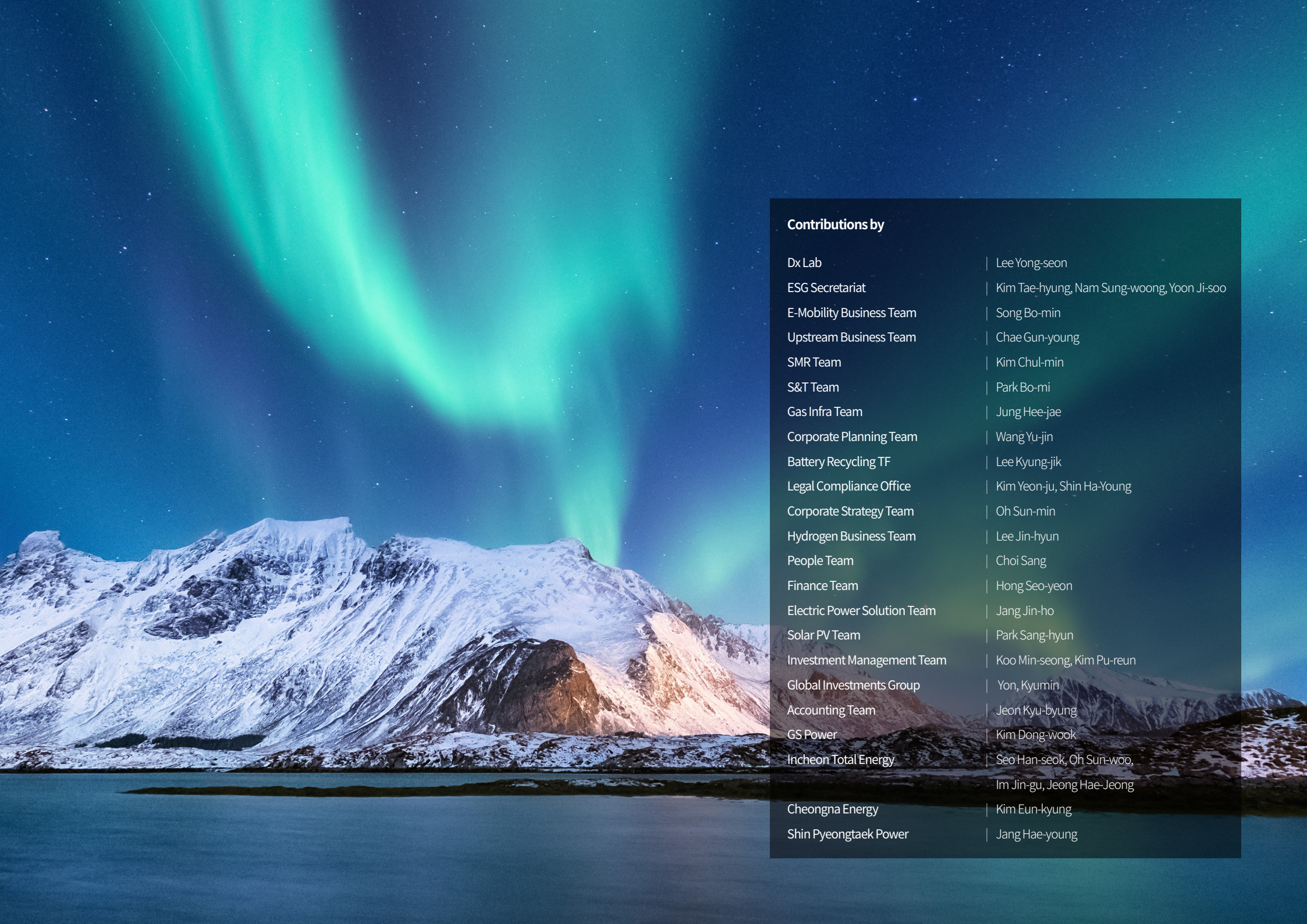
SRV1000
Sustainability Committee Assurance



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CEO

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