



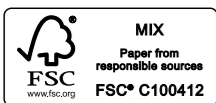
Value No.1 Energy & Chemical Partner

GS Caltex 2016 Sustainability Report



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ABOUT THIS REPORT

At **GS Caltex**, we share insights into our business plan and the progress we have made towards achieving the highest level of sustainability in terms of finance, environment, and social value creation with our stakeholders through our sustainability report. This is our 12th sustainability report since 2006.

Reporting Period

This report covers our sustainability performance from January 1, 2016 to December 31, 2016. For the key quantitative performance, the results of the past three years (from 2014 to 2016) are shared for comparative analysis while newly disclosed quantitative and qualitative performances are separately indicated. Some of the highlights over the first half of 2017 are included in this report to ensure their timely disclosure.

Scope of Report

The scope of this report encompasses the **GS Caltex** headquarters and major business operations including the Yeosu Complex. A certain part of the data was derived from the terminal, lubricant plant, gas stations, filling stations and affiliated companies. Any parts that require special attention are indicated accordingly.





Reporting Guidelines

The **GS Caltex** 2016 Sustainability Report was prepared in line with the Core Option of the GRI(Global Reporting Initiative) and designed to incorporate feedback from stakeholders in compliance with AA1000SES. The content of this report has been internally reviewed by GRI certified professionals and third parties. There are no significant changes in terms of its scope, boundaries, and measuring processes from the previous report.

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More information about **GS Caltex** can be found on our company website(www.gscalex.com).
Please contact us through the following channels if you require more details.

 CSR Team, **GS Caltex**  **GS Tower**, 508 Nonhyeon-ro, Gangnam-gu, Seoul  +82-2-2005-1614  c16895@gscalex.com



CEO Message

Dear valued customers,

With the increasing need for transparency in companies' ESG (Environmental, Social, Governance) data and legislation of CSR disclosure in the EU, sustainability has become more important than ever.

At **GS Caltex**, we are committed to our social responsibility toward our customers, shareholders, employees, partners, local communities, and other stakeholders. This is our 12th sustainability report since its first publication in 2006. Through this report, we share our progress in maintaining the highest level of sustainability in the areas of ESG.

In 2016, we focused all our resources on strengthening our competitive advantages and were able to gain some meaningful results despite uncertainties in the business environment.

We are preparing for future success by building a new business portfolio to create a growth engine and continuing our investment in existing business sectors.

GS Caltex celebrates its 50th anniversary in 2017. For the last 50 years, we have overcome many challenges and grown into a global company. We are committed to innovation and proactively respond to changes. I would like to take this opportunity to express my sincere appreciation for all our stakeholders.

We promise to continue our sustainability efforts to achieve our vision of becoming a 'Value No.1 Energy & Chemical Partner'. I appreciate your continued interest and support for us as we continue to create a sustainable and better future. Thank you.

Jin-Soo Huh Chairman & CEO





Corporate Overview

Founded in 1967 as Korea's first private oil refiner, **GS Caltex** set a new standard in the petroleum industry in Korea and plays a critical role in driving the export of oil and petroleum products. Through continuous investment and commitment to the petroleum & petrochemical business, we are taking major steps toward becoming a leading energy enterprise in the global market.

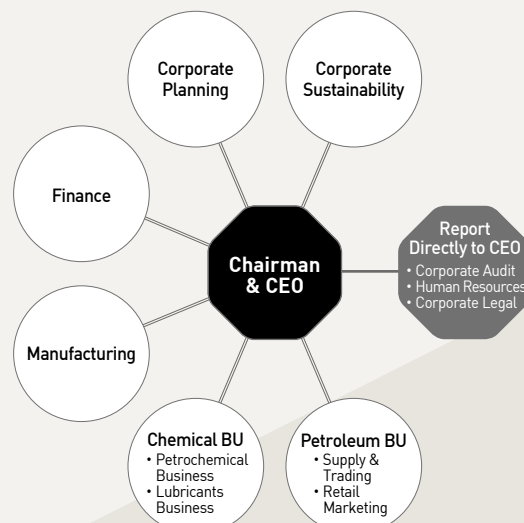
Corporate Profile

(As of December, 2016)

Profile	Description
Name of company	GS Caltex Corporation
Date of incorporation	May 19, 1967
Address	GS Tower, 508, Nonhyeon-ro, Gangnam-gu, Seoul
Overseas offices (branches)	China, Czech, India, Singapore, Mexico, London, etc.
No. of employees	3,000
Industries	Crude Oil Refining Industry
Areas of business	Petroleum, Petrochemicals, Base Oil & Lubricants

Organization

(As of May, 2017)



Overseas Network

(As of May, 2017)



Business Areas



Refining capacity (barrels/day)

790,000

Upgrading Ratio

35%

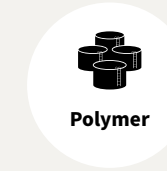
GS Caltex supplies petroleum products in the domestic market through 2,569 gas stations and 402 filling stations nationwide. About 70% of our sales comes from the overseas market. With a daily refining capacity of 790,000 barrels, we are expanding upgrading facilities in response to changing market conditions. High value-added products such as gasoline, kerosene, and diesel are produced from low price bunker C oil using our RFCC(94,000 barrels/day) and HCR(61,000 barrels/day). In the 4th quarter of 2010, we produced high value-added products from low price asphalt using our VRHCR. This resulted in a significant increase in our profitability. In 2013, our conversion ratio reached the highest level in Korea with 35% after we started operating VGOFFCC(53,000 barrels/day) at full capacity.



Production capacity(tons/year)

2,800,000

Our aromatic production facilities were built in 1990 with an annual capacity of 200,000 tons of paraxylene and a half million tons of aromatic products for full scale production. We are continuing our investment in production facilities and process optimization. Our current production capacity reached 2.8 million tons a year including 1.35 million tons of paraxylene, 0.93 million tons of benzene, 170,000 tons of toluene, and 350,000 tons of mixed-xylene.



Production capacity(tons/year)

476,000

Our polypropylene production facilities were completed in 1988 with an annual production capacity of 120,000 tons. The current production capacity is about 180,000 tons a year. We have an annual production capacity of 470,000 tons of propylene, which is a material for polypropylene, thanks to our RFCC process developed in 1995 and VGOFFCC in 2013. Our facilities in Korea, China, and the Czech Republic produce polymer compound, which is used for high value-added products such as automobiles and electronics. Their annual production capacity is 260,000 tons. In early 2017, a new plant with an annual capacity of 30,000 tons was completed in Mexico.



Production capacity(tons/year)

1,300,000

Our base oil production started in November 2007 when our BOP (Base Oil Plant) with a daily capacity of 16,000 barrels (800,000 tons/year) was completed. Since then, we increased our capacity to 23,000 barrels per day(1.15 million tons/year) in 2010, followed by a further increase to 26,000 barrels(1.3 million tons/year) through additional improvement in our production facilities.



Production capacity(barrels/day)

9,000

For our lubricant business, we are maintaining a daily capacity of 9,000 barrels of lubricants with 9,000 tons of grease per year. As a leading producer in the market, we are recognized for our superior quality and technological expertise in the industry. Our product portfolio ranges from automobiles and industrials to ships and special oils, including more than 200 product types with Kixx engine oil as our flagship brand.



GS Caltex Vision & GSC Way

In January 2014, we unveiled our new vision for the future, 'Value No. 1 Energy & Chemical Partner'. With **GSC Way** as our guiding principles as well as commitment for excellence, we are expanding our global presence in the energy and chemical industries. We make sure that all members of **GS Caltex** align their vision with our corporate goals and apply the **GSC Way** into their daily practice.

GS Caltex Vision

Value No.1 Energy & Chemical Partner

Vision Statement

Our mission is to deliver quality products and services by developing the potential of energy & chemical resources.

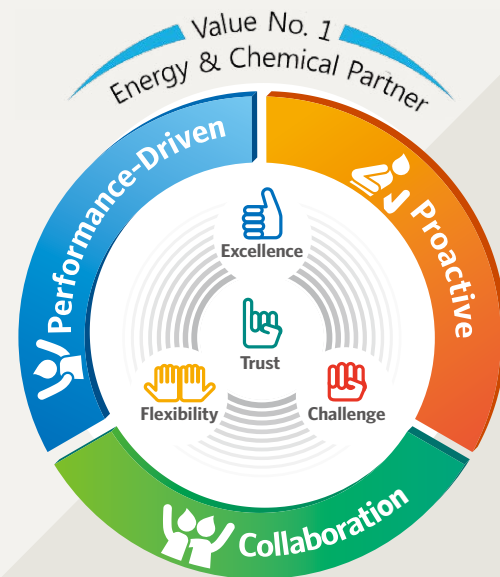
We are committed to increasing our capacity to generate environmentally responsible and innovative new values.

As a global energy & chemical company, we are passionate about growing with our partners and helping the world move forward.

Strengthen Vision and GSC Way Practice

At **GS Caltex**, we share with our management and employees on how the **GSC Way** is implemented in relation to our vision. The challenges we face in our business operation and actions we took to overcome them are introduced in line with the **GSC Way** Corporate Values and Core Behaviors. In addition, we keep our employees informed of our performance and lessons we learned in the course of our business to help them promote the **GSC Way**. Based on the **GSC Way**, we select and award those who displayed excellent performance and set an example for others in the previous year. In 2016, 36 employees were selected based on their performance.

GSC Way



Corporate Values

- Trust** Fulfill one's role, and trust and respect one another.
- Flexibility** Welcome diversity with an open mind and behavior.
- Challenge** Set high goals and pursue them aggressively.
- Excellence** Strive for excellence in individual and organizational performance.

Core Behaviors

- Proactive** Think ahead and be the first to act.
- Collaboration** Strategically utilize external resources and capabilities.
- Performance-Driven** Deliver tangible results.

GSC Way Statement

We will take the following actions to maintain the highest level of Trust, Flexibility, Challenge, and Excellence.

- Think ahead and be the first to act.
- Strategically utilize external resources and capabilities.
- Deliver tangible results.

We achieve our vision by applying the **GSC Way** in practice.



Corporate Governance

GS Caltex operates an independent Board of Directors (BOD) for enhanced management efficiency and transparency. The BOD makes decisions on key management policies and issues based on the expertise of the Board members.

Composition of the BOD

The **GS Caltex** Board of Directors comprises of executives from **GS** and **Chevron** with professional expertise and risk management skills. As of June 2017, there are two inside directors and eight non-standing directors. They are appointed each year at the General Meeting of Shareholders based on their professional qualifications in accordance with our internal policies.

BOD Management & Prevention of Conflict of Interest

As our Board members are executives from each company, their compensation schemes follow the internal policies of their respective company, and no additional compensation is granted for their Board-related activities. The Board resolutions require an affirmative vote of more than two-thirds of all registered directors, as stated in the Articles of Incorporation. In order to guarantee the independent operation of the BOD and prevent possible conflicts of interest, any Board members who have a special interest in the agenda will be prohibited from voting in regard to that particular issue. The Board Support Office provides support to the directors on all Board matters, including preparation of the agenda for Board meetings, through proactive communication and cooperation with related divisions. Board members are provided with meeting materials at least one week before the actual meeting to ensure enough time to review the agenda items. Seven Board meetings were held in 2016 to review and approve key agenda items such as the 2017 Business Plans, VRHCR Revamp Project, and the sale of gas station companies in China.

Operation of Committees in Support of the BOD

The BOD operates separate committees including the Accountability Committee, Audit Committee (different from the Audit Committee under the commercial code), and LNG Procurement Management Committee. The members of each committee provide support based on their responsibilities and roles to ensure the reliable and transparent operation of the BOD.

< BOD Members >

(As of June 2017)

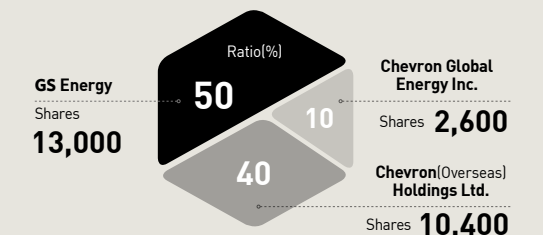
Director	Name	Job Title
Inside Directors	Jin-Soo Huh	Chairman & CEO GS Caltex Corporation
	Byong Yol Kim	President, Petroleum Business GS Caltex Corporation
Non-standing Directors	Young-Bong Ha	Vice Chairman & CEO GS Energy Corporation
	Taik Keun Jung	Vice Chairman & CEO GS Holdings Corporation
	Saehong Hur	Executive Vice President & CEO GS Global Corporation
	A. B. Walz	President Chevron International Products
	N. K. Mahajan	Vice President Chevron Downstream & Chemicals
	W. L. Stone	CEO Star Petroleum Refining Company
	W. J. Miner	Country Chairman Chevron Korea
	J. J. Kuehn	General Manager Chevron Value Chain Optimization AP

< Roles of the Board Committees >

Title	Composition	Role
Accountability Committee	2	Review and discussion of governance-related issues
Audit Committee	4	Review and discussion of compliance program and major audit issues
LNG Procurement Management Committee	2	Review and discussion of LNG-related issues

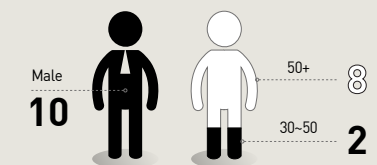
< Ownership Structure >

(Unit: 1,000 shares)



< Composition of the BOD >

(As of June 2017)

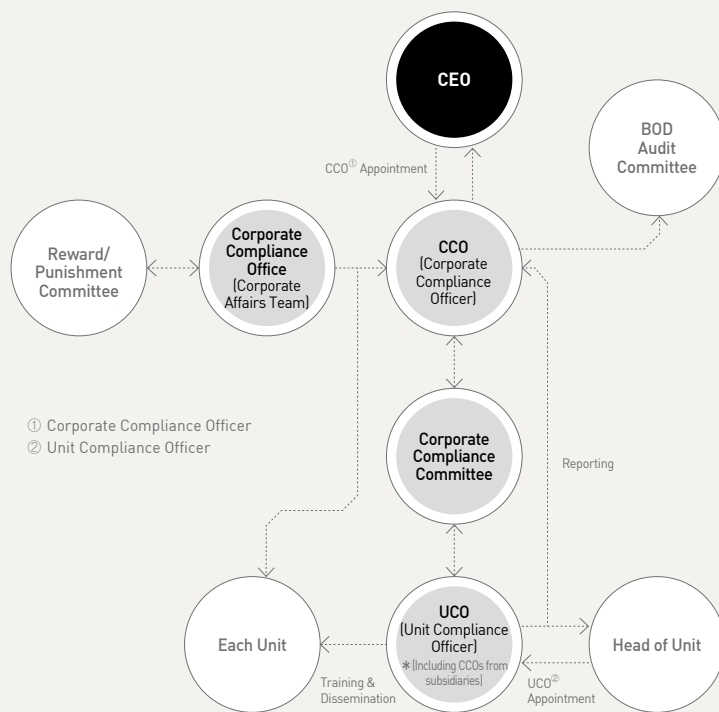


Ethics Management

At GS Caltex, the Code of Ethics established in 1994 has been laid as the foundation for the ethical business practices in every aspect, and the Corporate Compliance Program introduced in 2001 further improved ethical standards in GS Caltex. The voluntary compliance management policies begin with the CEO but are deeply-rooted throughout

the company together with appointment of Corporate Compliance Officers and reporting system in place. The ethical management is closely monitored and regularly presented to the Audit Committee under the Board of Directors twice a year.

< Compliance Organizational Structure & Reporting Process >



For a more effective and efficient corporate compliance management, Corporate Compliance Officers and Unit Compliance Officers are appointed at each Business Division and subsidiary respectively. Activities for corporate compliance management are reported to the Board of Directors, and the CCO and UCOs meet biannually for the Corporate Compliance Committee meetings to oversee and encourage the ethical practices at the work.

Any and all GS Caltex employees are obliged to take the Corporate Compliance Program that consists of subjects essential to day-to-day business such as ethical principles, fair trade, prevention of sexual harassment, information security, SHEQ (Safety, Health, Environment, and Quality) and CCM (Consumer Centered Management). Add to that, each employee signs and submits the Pledge of Compliance every year to reaffirm their commitment to ethical practice. A web magazine named 'Ethics Virus' is issued quarterly to further elevate the level of ethics awareness in the workplace.

Anti-corruption and Bribery Prevention System in Supply Chain

At GS Caltex, we promote shared and sustainable growth by ensuring that our customers, shareholders, and employees, as well as other stakeholders such as partners, local communities, and environment, fulfill their ethical and social responsibility throughout the entire business process. We post our ethics management initiatives and the full Code of Ethics on our Ethics Management website (<http://ethics.gscaltex.com>), while providing specialized counseling service for inquiries and ethical dilemmas that they may face in the course of business. In addition, we have established an anonymous ethics management reporting line to make it easy for our employees and stakeholders to report any violations and corruptive and unfair practices.

- ☎ Ethics Management Reporting Line. +82-2-2005-6011
- ☎ Sexual Harassment Reporting Line. +82-2-2005-6012
- ✉ E-mail. ethics@gscaltex.com

Way Forward

We will continue to provide training programs and reporting and management system to ensure that our employees fully comprehend and comply with the Improper Solicitation and Graft Act. We will never be contented until raising awareness about ethical conduct for voluntary compliance.

In 2016, a series of employee training programs were given to GS Caltex employees to educate the Improper Solicitation and Graft Act. Relevant corporate regulations such as the Code of Ethics and Corporate Compliance Guideline have been revised to incorporate the requirements of the new Act. The Corporate Compliance Program runs also in the overseas subsidiaries, and is further expanded to our business partners enabling those recommended by partners may receive the training under the Program. A total 5,694 letters were sent to our valued customers and partners around national holidays to request kind cooperation in the ethical management of GS Caltex.

< Ethics Management Result >

Classification		2014	2015	2016
No. of GS Caltex employees trained	Online	3,197	1,963	2,052
	Offline	137	871	833
No. of partner employees trained	Online	-	-	-
	Offline	12	20	-
No. of letters sent for work ethics		3,130	6,148	5,964

Fair Trade

At GS Caltex, we are making consistent efforts to create a fair and transparent business environment in compliance with the Fair Trade Act. To minimize the possibility of violating the law, we take a proactive approach in our management system while providing internal and external training programs to raise employees' awareness.

Consultative Bodies and Organizations for Fair Trade

Fair Trade Review Committee The Fair Trade Review Committee was organized to review the compliance with the laws and regulations prior to undertaking any business practices. Under the committee, there are the Internal Trade Review Committee, which reviews dealings with businesses in which we are in a special relationship such as affiliates, and the Subcontractor Review Committee, which reviews business dealings with small and medium-sized companies.

Fair Work Process Team At GS Caltex, we have the Fair Work Process Team specialized in ensuring fair business practice. This team offers consultation to our business departments and monitors compliance with laws such as the 'Monopoly Regulation and Fair Trade Act' and the 'Fair Trade Practices Act for Subcontractors'. The team is also in charge of communication with government bodies such as the Fair Trade Commission.

Joining Associations and Initiatives As a member of the Korea Fair Competition Federation, we attend various lectures and seminars given by public officials and attorneys from the Fair Trade Commission.

*The Korea Fair Competition Federation: Licensed by the Fair Trade Commission (November, 1994), the federation was established to provide online and offline training, legal counseling, and suggestions for improving the government policies.

Key Activities

Internal Trade Review Committee The Internal Trade Review Committee was organized to ensure fair practice in internal business dealings. The committee reviews the compliance with internal trade laws (e.g. Fair Trade Act, Commercial Act, Tax Act, etc.) and keeps our business departments informed of compliance issues as they take the necessary follow-up measures based on the result.

*Internal trade: Business dealing with businesses in which we are in a special relationship (e.g. affiliates)

Subcontractor Review Committee The Subcontractor Review Committee is operated to ensure fair business dealings with subcontractors. The committee reviews the compliance with the Fair Trade Practices Act for Subcontractors before dealing with small and medium-sized companies.

Employee Training At GS Caltex, we organize mandatory employee training on an annual basis to ensure fair business practice while providing offline training programs for new employees, as well as those with job experience.



Sustainability Management

In response to the fast-changing global business environment, we are managing financial, social, and environmental aspects of our business to ensure sustainable business practice. Since our establishment of the Four CSR Strategies and CSR Committee Meeting in 2010, we have continued developing our sustainability management system.

Building Sustainability Management System

(2010 - Present)

2010 ~ 2011

Foundation for CSR Activities

- 1st CSR Committee Meeting(2010)
 - Discuss/ make decisions on CSR issues
- Establishment of CSR Strategy System(2010)
 - Identify areas of strategic implementation and manage issues
- Development of ISO 26000 Indicators(2010)
 - Develop 8 subjects and 86 indicators
 - Perform CSR analysis and improvement activities (by 2012)
- Participation in UNGC(2010)

2012 ~ 2015

Enhancement of Internal CSR Performance

- CSR Management System(2012)
 - Select/manage 30 indicators based on ISO 26000
- Areas of CSR Management(2014)
 - Select/manage the 'Areas of CSR Management' based on global CSR standards and initiatives and business environment.

2016 ~

Establishment of Global CSR Response System

- Sustainability Report Manual(2016)
- Response to Global CSR Assessment(2016)
 - Respond to the Ecovadis CSR Assessment
- Development of ESG DB(2016 - 2017)
 - Develop ESG DB for risk control in response to the CSR assessment and increase in data sharing among investors/global companies.

CSR Committee

With the CEO as chairman, **GS Caltex** holds a CSR committee meeting on a regular basis. Since its first meeting in 2010, it has convened 18 times so far. The committee discusses and makes decisions on key financial, social and environmental CSR issues. In the 18th CSR Committee Meeting held in December 2016, we discussed our plans to build ESG(Environmental, Social, Governance) database and Mom Talk Talk, which is our social contribution campaign. **GS Caltex** holds a variety of committee meetings in relation to sustainability management, including the CSR Committee, in order to strengthen our sustainability management system on a corporate-wide level. Each committee undertakes the following activities.

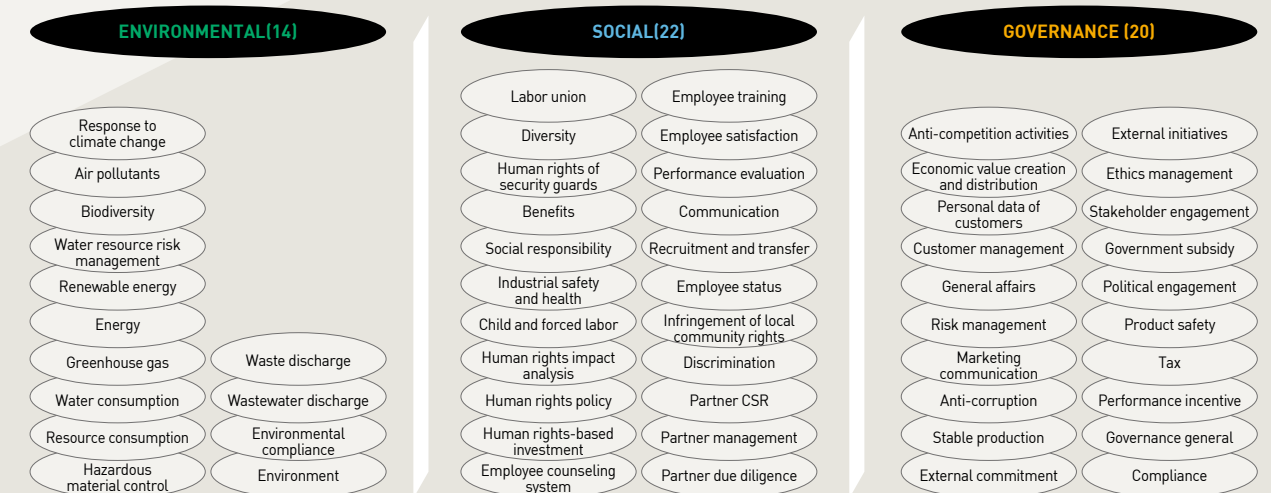
< Status of Sustainability Management Committee >



Building ESG(Environmental, Social, Governance) Database

Lately, there is an increasing trend for legislation of CSR. For Example, the Indian Government legislated to make corporate CSR activities as mandatory in 2014, the EU legislated to disclose Corporate ESG from 2018, and in Korea, the discussion on the legislation of social responsibility investment of public pension funds is ongoing. As a result, global investors and corporations require transparent disclosure of non-financial information from its trading partners. At **GS Caltex**, we are establishing an ESG(Environmental, Social, Governance) database since the second half of 2016 as an integrated ESG initiative that encompasses everything from policies to performance evaluation in response to the increasing need for evaluation and management of CSR performance. Together with the Sustainability Management Center of the Korea Productivity Center, we are building the '**GS Caltex ESG Database**' by analyzing global ESG standards such as GRI Standards, DJSI, UNGC, ISO 26000, and IPIECA.

< GS Caltex ESG Database Index Title >



The '**GS Caltex ESG Database**' consists of 56 index titles, 166 requirements, and 849 types of data in categories under the Environment, Society, and Governance fields. The 849 types of data will be divided into CSR international standards, management system(principle, strategy, governance), and qualitative and quantitative data. Each data item is classified into three categories according to their level of importance. In 2017, we plan to collect data from 849 indicators based on their level of importance.

Plan for the Future

At **GS Caltex**, we will continue to build our ESG database. ESG data is gathered on an annual basis, and the quality and reliability of data will be assessed each year by a third-party assurance system. Based on the analytical result, we plan to make necessary improvements from the long-term perspective. We will also consistently raise awareness in our sustainability management and internalize it in our business practice to ensure it is implemented at a corporate-wide level.

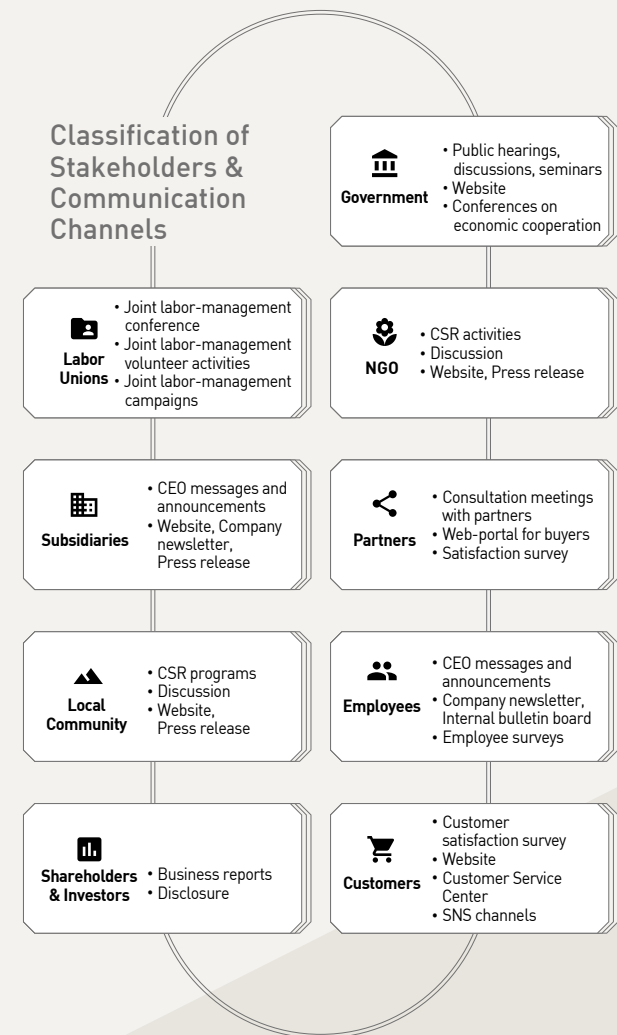


Selection of Topics

The topics of this report have been selected according to the GRI Standards in consideration of Stakeholder Inclusiveness, Sustainability Context, Materiality, and Completeness. GS Caltex responds to each topic as follows.

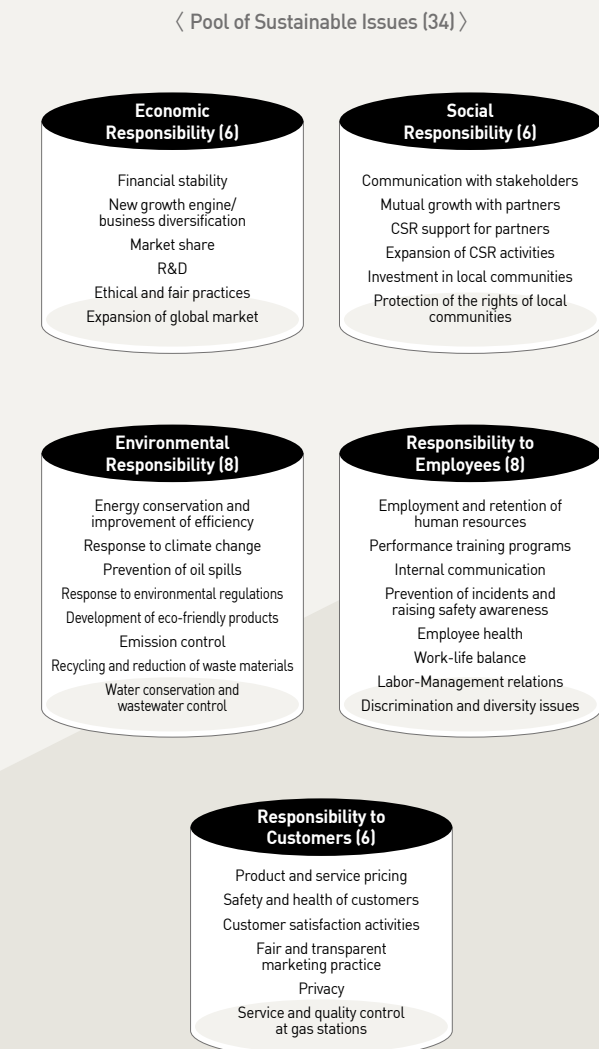
Stakeholder Inclusiveness

At GS Caltex, we consider communication with our stakeholders as the foundation for our sustainable growth, and we are diversifying our efforts to ensure active communication with them. This report focuses on the key areas of their interests that we recognize through various channels, and we classified them into 9 categories including government, customers, local community, and employees as follows.



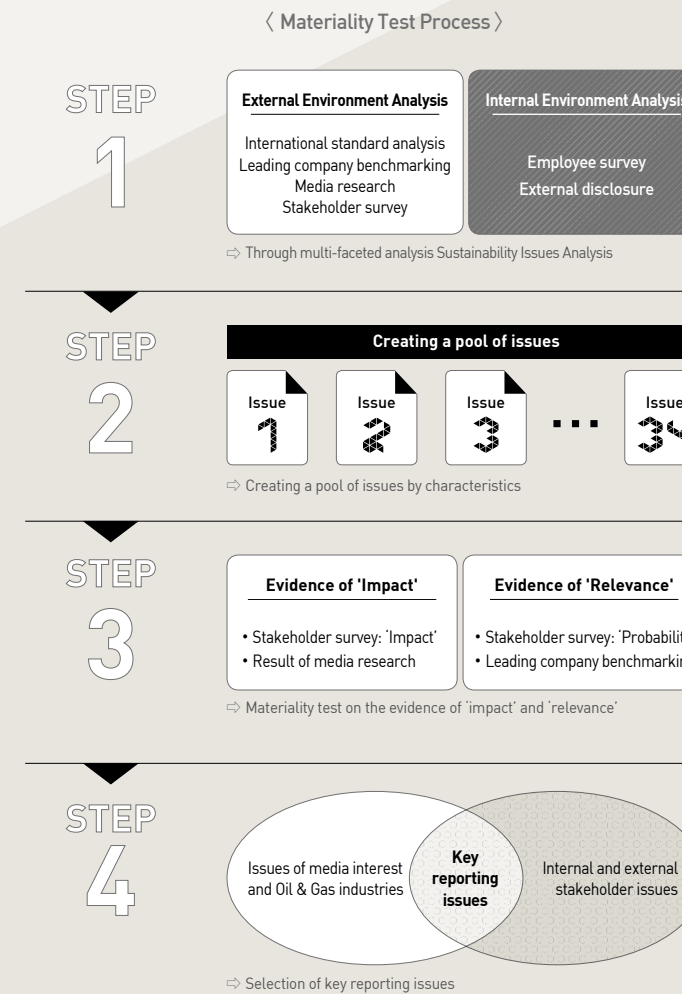
Sustainability Context

Our pool of sustainability issues consists of 34 issues based on the review of global guidelines and initiatives (e.g. GRI Standards, ISO 26000, UNGC), review of our internal issues and information, and analysis of the external environment (e.g. benchmarks on leading companies, media research).



Materiality

The materiality is evaluated based on 'Relevance' and 'Impact'. The material issues identified based on the 'Relevance' may have an impact on our business performance if they are not managed properly. Those based on the 'Impact' have major impact on business performance and stakeholders. Based on these criteria, we conducted a materiality test through comprehensive review of employee surveys, external stakeholder surveys, industrial benchmarking, and media research. We then selected 11 key issues from the pool of 34 sustainability issues.



Top 10 Probability VS. Impact

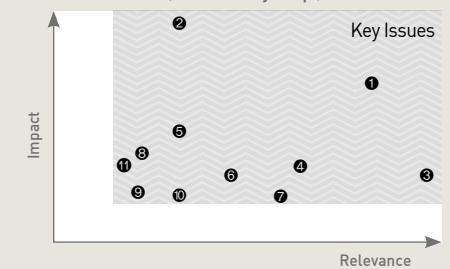
Top10 Probability Issues

New growth engine/business diversification	5.00	High Probability/Impact
Prevention of incidents and raising safety awareness	4.76	High Probability/Impact
Mutual growth with partners	4.50	High Probability/Impact
Response to environmental regulations	4.39	High Probability/Impact
Labor-Management relations	3.90	High Probability
Communication with stakeholders	3.86	High Probability/Impact
Ethical and fair practice	3.29	High Probability
Privacy	2.98	High Probability
Investment in local communities	2.90	High Probability/Impact
Prevention of oil spill	2.65	High Probability

Top10 Impact Issues

New growth engine/business diversification	5.00	High Probability/Impact
Mutual growth with partners	4.35	High Probability/Impact
Energy conservation and improvement of efficiency	3.86	High Impact
Product and service pricing	3.72	High Impact
Communication with stakeholders	3.29	High Probability/Impact
Investment in local communities	2.90	High Probability/Impact
Customer satisfaction activities	2.69	High Impact
Prevention of incidents and raising safety awareness	2.62	High Probability/Impact
Expansion of global market	2.43	High Impact
Response to environmental regulations	2.40	High Probability/Impact

Materiality Map



Key Issues

Categories	Issues
Economic Responsibility	1 New growth engine/business diversification
Social Responsibility	2 Investment in local communities
Responsibility to Employees	3 Prevention of incidents and raising safety awareness
Responsibility to Customers	4 Product and service pricing
Social Responsibility	5 Mutual growth with partners
Social Responsibility	6 Communication with stakeholders
Economic Responsibility	7 Ethical and fair practice
Environmental Responsibility	8 Energy conservation and improvement of efficiency
Responsibility to Employees	9 Employment and retention of human resource
Environmental Responsibility	10 Response to environmental regulations
Responsibility to Customers	11 Customer satisfaction activities

Business Model Summary

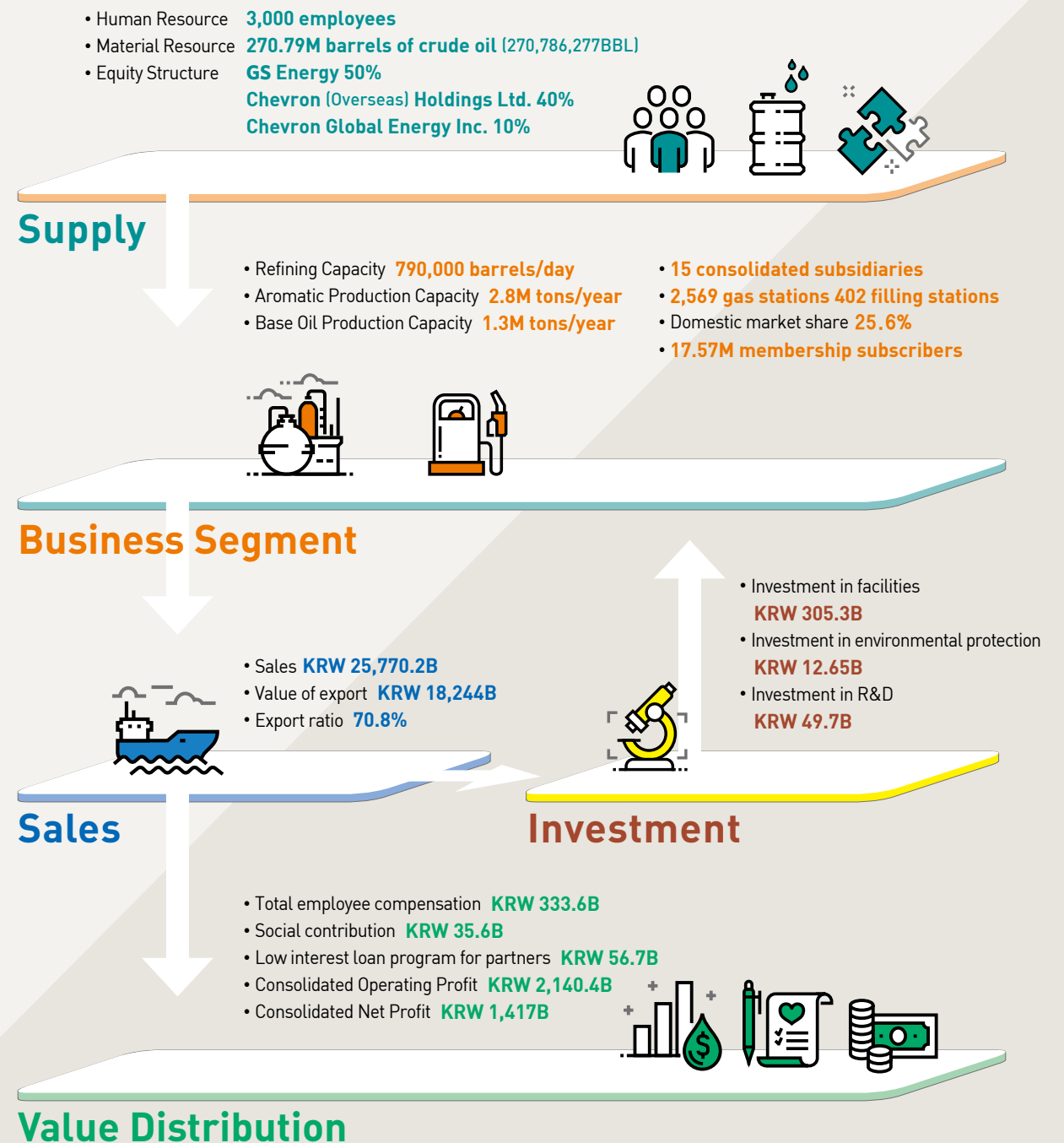
Completeness

We identified 11 key issues in terms of their completeness (2 from Economy, 3 from Society, 2 from Environment, 2 from Employees, and 2 from Customers). Among those 11 key issues, we applied 'Communication with stakeholders' to the overall content of this report, and 'Ethical and fair practice' was reported in the Overview section. The remaining 9 issues and other issues related to our sustainability activities were divided into 6 topics for reporting.

Categories	Areas of Reporting		Page
	Key Areas	Areas of Reporting	
Issue 1. Sustainable Value Creation	<ul style="list-style-type: none"> New growth engines/business diversification Mutual growth with partners 	<ul style="list-style-type: none"> Financial stability R&D CSR support for partners 	18-23
Issue 2. Providing the Best Quality Products and Services	<ul style="list-style-type: none"> Product and service pricing Customer satisfaction activities 	<ul style="list-style-type: none"> Fair and transparent marketing Privacy Development of eco-friendly products 	24-30
Issue 3. Environmental Management and Response to Climate Change	<ul style="list-style-type: none"> Response to environmental regulations Energy conservation and improvement of efficiency 	<ul style="list-style-type: none"> Response to climate change Emission control Recycling and reduction of waste materials Water conservation and wastewater control 	31-37
Issue 4. Reinforcement and Dissemination of Safety System	<ul style="list-style-type: none"> Prevention of incidents and raising safety awareness 	<ul style="list-style-type: none"> Employee health 	38-42
Issue 5. Employee Value Enhancement	<ul style="list-style-type: none"> Employment and retention of human resource 	<ul style="list-style-type: none"> Labor-Management relations Discrimination and diversity issues Work-life balance Performance training programs Internal communication 	43-48
Issue 6. Corporate Social Responsibility Activities	<ul style="list-style-type: none"> Investment in local communities 	<ul style="list-style-type: none"> Expansion of CSR activities Protection of the rights of local communities 	49-52

Analysis on Change in Key Issues

When compared to the materiality assessment in 2015, 'Investment in local communities', 'Ethical and fair practices', and 'Customer satisfaction activities' were added as key issues in 2016. This is mainly due to the social trend that places a strong emphasis on corporate social and ethical responsibilities. On the other hand, 'Prevention of oil spills', 'Financial stability', 'Labor-Management relations', and 'Protection of personal information' were excluded due to the changing business environment and their declining probability. Meanwhile, 'Communication with stakeholders', 'Mutual growth with partners', 'New growth engines and business diversification', 'Response to environmental regulations', 'Energy conservation and efficiency', and 'Employment and retention of human resources' remained as key issues since 2013. These issues are considered important for our mid and long-term sustainable growth.



CORE ISSUES



Sustainable Value Creation

Context & Challenge

Increasing political uncertainties, production cut by OPEC, the development of shale oil in the U.S., and intensifying competition in the market with business expansions will have unpredictable impact on our business practice. The global market is more competitive and volatile than ever with the increase of refineries and exports in China, Asia, and the Middle East. As a result, our earning has fluctuated significantly. To achieve sustainable growth, we have to strengthen our internal competence while proactively responding to this changing environment.

Contents of Report	Relevant Issues	Importance	Major Stakeholder	GRI Standards Disclosure Title (Scope of Topic)
<ul style="list-style-type: none"> Strengthening internal competence based on V-Project Diversification of portfolio and financial soundness Creating new growth engine through R&D projects Supporting sustainable growth of partners 	New growth engine/ business diversification	Key Issues	<ul style="list-style-type: none"> Shareholders and investors Employees Partners 	<ul style="list-style-type: none"> GRI 201: Economic Performance (internal) GRI 204: Procurement Practices (internal/external) GRI 308: Supplier environmental assessment (internal/external)
	Financial stability	Reporting Issues		
	R&D	Reporting Issues		
	Mutual growth with partners	Key Issues		
	CSR support for partners	Reporting Issues		

Highlights



Our Progress

V-Project Financial Performance
 ※ Including the projected performance in 2017

KRW 1,114.6B



Investment in Facilities

KRW 305.3B



Key Areas of Investment

- No.3 Product Wharf
- Incheon Terminal Reinforcement
- Biobutanol Demo Plant

Strengthening internal competence based on V-Project

Since 2013, **GS Caltex** has established a company-wide cross-functional organization to maximize its profitability by strengthening the value chain and streamlining our production facilities in the refinery, petrochemicals, and lubricant sectors as part of our V-Project. The V-Project focused on more than 100 tasks including the reduction of cost through Opportunity Crude, optimization of the heavy oil upgrading facilities, increase in the sales of high value-added products, and utility and energy efficiency from 2013 - 2015. In 2016, we worked on building a foundation for sustainable revenue generation as well as short-term profitability. Thanks to the V-Project, we managed to generate KRW 273 billion in financial performance, and this figure is expected to reach KRW 316 billion in 2017.

V-Project Areas of Improvement & Financial Performance (Unit: KRW 1B)

Areas of Improvement	V-Project (Year of Implementation)	2013	2014	2015	2016	2017
		Actual	Actual	Actual	Actual	Projection
1. Competitiveness of Feed Stock	Wave1(2013)	64.2	99.2	153.9	108.4	107.3
	Wave2(2014)	-	61.0	117.0	72.0	62.9
2. Optimization of process operation	Wave3(2015)	-	-	30.7	65.6	66.7
3. Maximization of product value	Wave4(2016)	-	-	-	27.0	48.7
4. Optimization of energy/utility	Wave5(2017)	-	-	-	-	30.0
5. Mid-term competitiveness						
Grand Total		64.2	160.2	301.6	273.0	315.6

In 2017, we are focusing on improving our mid to long-terms strategies as well as short-term profitability by expanding our areas of business for improvement. Through the optimization of process operation, our response to external changes will be more effective. The production of aromatic products is also increasing through improvements in our process operation scheme. In addition, we are going to invest in revamping the existing process and introduce new facilities to gain competitive advantages in the market.

Diversification of portfolio and financial soundness

Expansion of Petrochemicals & Lubricant Business

GS Caltex is expanding its business in the polymer compound sector. We are increasing our production base and developing new markets around the world with **GS Caltex(Rangpang) Co., Ltd.** in China established in 2006, **GS Caltex(Suzhou) Co., Ltd.** in China in 2010, **GS Caltex Czech Corporation** in 2011, polymer compound plant in Gyeongnam Jinju in 2013, and our polymer compound production company in Mexico 2016(beginning operation in 2017).

In the base oil business, we have increased the production of Group III base oil through optimization of our production mode. In addition, we are exporting more than 70% of our total production volume to customers around the world while increasing our presence in the global market by expanding our sales network and securing new customers in China, India, and Southeast Asia.

In the lubricant sector, we entered the overseas market based on global OEM supply and increased our export over the years. Currently, we have operations in China and India and branch offices in Russia and are expanding our distribution network in Southeast Asia and Southwest Asia.

In the aromatics business, we are gaining more competitive advantages in the market through cost reduction and process optimization. By establishing sales networks in overseas markets such as China, Japan, and Southeast Asia, we are going to strengthen our global presence and sustain our growth through the development and sales of high value-added solvent products.

Initiatives for financial stability

GS Caltex is committed to secure financial stability in response to increasing volatility and uncertainties in the business environment. While our cash flow remains robust on the back of strengthened business competitiveness, we maintain appropriate level of cash and borrowings in consideration of our short and long-term business plans. The maturity structure of our borrowings is optimized based on our cash flow. We are also securing more bank credit lines around the world to secure stable source of funding.

Credit Ratings (As of March 2017)

Classification	Issuer	Credit Rating
Domestic Credit Rating	KIS Ratings	AA+
	Korea Ratings	AA+
	NICE Ratings	AA+
Overseas Credit Rating	S&P	BBB
	Moody's	Baa2

Crude oil price risk management

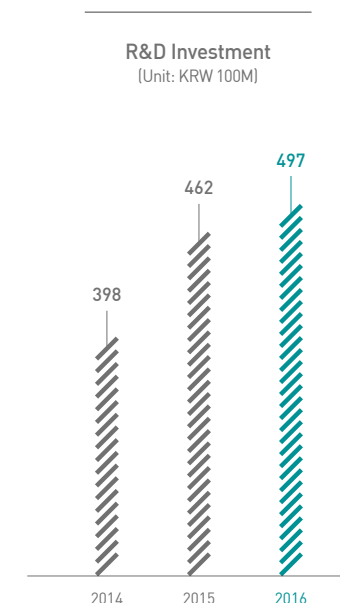
There is a risk of fluctuating profit or loss and cash flow due to changes in crude oil and petroleum product prices. GS Caltex hedges against these types of risks by trading derivative instruments based on the market forecasts to keep risks under control. We have organized a risk management team and hold quarterly risk management committees chaired by the CEO.

Risk Management Teams

Team	Key Activities
RM Operation Team	Report on issues and current agenda through daily market monitoring, and propose and implement derivatives trading
RM Strategy Team	Analyze market and price, conduct risk assessment, and trade derivatives on a weekly/monthly basis
Accounting Team	Monitor and report internal risk management activities and compliance

Risk Management Committee Profile

Position	Description
Chairman	CEO
Committee Members	General Manager of Petroleum BU, General Manager of Chemical BU, Finance Office Manager, Managing Director of Supply & Trading, Singapore Regional Head
Board Members	Head of Corporate-wide Optimization Division, Head of Aromatics Division, Head of Crude Oil Product Division, Head of Base Oil Division, Head of Financial Resource Division
Secretary/Secretariat	Head of RM Division, Head of Accounting Division / RM Strategy Team, Accounting Team
Activities	Provide guidelines on risk management and review performance
Frequency	4 times a year (quarterly basis)



Creating new growth engine through R&D projects

At GS Caltex, we are undertaking R&D projects to diversify our business portfolio and gain competitive advantages in our existing business operations. In particular, eco-friendly biochemical products and high value-added derivatives and materials are under development. In addition, we are developing more energy-efficient and clean technologies to improve our product and service quality. We will continue our R&D projects and create values for our society, environment, and customers through technological innovation.

Key R&D Projects

R&D Sector	Description
Biochemical	Industrial Base Materials Biochemical refers to the sustainable chemical production of eco-friendly products using biomass as a base material. We are in the process of reviewing the commercialization of the technologies we developed through R&D projects by building a biochemical demo plant.
	Cosmetics and Healthcare
	Agriculture
High Value-added Derivatives and Materials	Functional Textile We are developing functional fibers and eco-friendly special solvents as high value-added derivatives to produce bio and functional premium products. Our high thermal resistant/high performance specialty polymer is also under development.
	Eco-friendly Special Solvent
	Specialty Polymer
Refining and Petrochemical	We are developing high-efficiency energy and low-carbon technologies to gain competitive advantages in the market and take the initiative in environmental sustainability. In response to customers' demands, we are making progress in quality improvement and new product development.
Key Performance	Intellectual Property Rights Over the past 3 years, we have registered 44 domestic patents on biochemical, high value-added derivatives, and materials, and 15 overseas patents to protect our core technologies.
	Award/Certification Certificate of Green Technology: Technology for biobutanol production using cellulosic waste (June 2, 2016, Ministry of Environment)

Supporting sustainable growth of partners

Shared growth with partners is a key element of sustainable management. At GS Caltex, we promote sustainable growth with our partners. We ensure fair, safe, and transparent business practice and ethical, environmental, and social compliance in accordance with our guiding principles to maintain the highest level of ethical partnership. Our partner support program also includes stable and sustainable management activities through cash settlement and long-term contracts, technology development, and training.

Financial support

We have implemented an array of financial support programs for small and medium-sized companies with which we are doing business. When making purchases, we ensure 100% cash settlement and payment is made within 7 days upon receipt of invoices. In addition, a KRW 100 billion shared growth fund was raised jointly with financial institutions for our partners that joined our shared growth program. As a result, a low interest loan of KRW 56.7 billion was provided for 77 partners by the end of 2016. We also introduced a program where we make advance payment up to 20% of the projected monthly expenses for major shipping companies.

Mutual Growth Policies



Fair

Promote mutually beneficial business arrangement based on fairness and transparency.



Stable

Pay partners in cash, form long-term partnerships, and adjust prices to promote sustainable business operation for partners.



Practical

Provide practical and effective management support including technological cooperation, training, and consulting programs.

Technological development support

To secure technologies we need in the mid and long-term and help our partners overcome their technical challenges, we have joined the Productivity Innovation Partnership Support Program. The polymer and lubricant materials are under development, and technical training support and new product presentation are provided through seminars. The localization of imported materials and long-term contracts are also supported to ensure more stable supply.

Education and training

At GS Caltex, we provide 8 training programs(783 trainees from 223 companies in 2016) for the maintenance partners of our Yeosu Complex to improve their job performance, safety and management expertise through the Technical Training Support Center. Our Marine Transportation Safety Support Center conducts safety training for our marine transportation partners on a quarterly basis. In addition, we help our partners establish ethics management training and a compliance program(Corporate Compliance Program) for the mutual growth and development of the company and employees. We also provide an internal control system such as a code of ethics and regulatory requirement design system.

Result of Partner Support Programs

	Classification	Training Program	Result (Companies/Participants)
Yeosu Complex	Partner Training by Category	Construction safety training program for supervisors	28/41
		TA safety supervision certification	3/57
		Practice training for signalmen	54/242
		Safety training for managers/supervisors	34/100
		Training program for safety managers	49/244
		Safety training for cargo crane operators	39/65
		Human error prevention/rescue program	11/24
		Performance improvement program for managers	5/10
Headquarters	Safety Training	Safety training for ship owners/crews	4 times for a total of 9 companies (250 persons / times)
		Safety training for partner companies related to shut down inspection	Safety managers from 4 companies
	Customer Service Improvement	Safety training on open inspection	600 from 15 companies
Low-Interest Loan Support			77 companies/KRW 56.7B (as of December 2016)

At GS Caltex, we are creating sustainable values by :

- ◆ Increasing revenue through the mid and long-term improvement and facilities investment based on the V-Project
- ◆ Diversifying our business portfolio and securing financial stability
- ◆ Creating social, environmental, and customer values based on technological innovation through R&D projects
- ◆ Building a foundation for mutual growth with partners
- ◆ Discover new businesses and new growth engines

Core Issue 1. ESG Data

Category	ESG Indicators	Data Summary	Report Page	Global ESG Standards
Company General	• Changes in the location of partners, supply chain structure, or selection and termination of partners	No significant changes	-	• GRI 102-10
Environment	• Amount of alternative/renewable energy for internal use and vendors	Not applicable	-	• GRI 302-1 • ISO26000 6.5.4 • UNGC Advanced 9~11
Society	• Documentation of supply chain strategies and policies	Work process and procedure for purchase available	-	• DJSI 1.5.1
	• Minimum ESG requirements needed for partner review • Minimum ESG requirements needed for new partner review • Inclusion and scope of ESG in contract • CSR monitoring on partners • Ratio of new partners reviewed for environmental compliance	Additional points for ISO9001 and ISO14001 certification when selecting partners for materials and service	22	• GRI 308-1 • ISO26000 6.3.5/6.6.6 • UNGC Advanced 2/9~11 • DJSI 1.5.2~4 • EU Directive Art.19a(1)(e)
	• Official process of identifying sustainability risk in supply chain • Supply chain management information disclosed externally • Activities for the enhancement of partner performance • Incentive for partners • Corporate policies, programs, and procedures for procuring products, services, and human resources • Strategies, programs, and procedures for the reinforcement of local partners and contractors	• Items for the evaluation of partners' management performance (trading performance/credit rating) • Sustainability improvement activities e.g. financial and technical support and safety and ethics training support	22	• DJSI 1.5.6 • IPECA SE5 C1/SE7 C1 /SE9 S1
	• Ratio of contracts for the prevention of corruption in a specific language (%)	100%(work process regulations covering legal compliance, fair practice, and transparency in Korean)	-	• IPECA SE12 S1
	• Senior executive officer for the strategic goal of Purchase Division (incl. ESG) • Executive officer for practical ESG goal • Availability of reporting line between officers in charge of strategic goals and implementation	• Senior executive officer : CPO • Performance executive officer : Head of Strategic Purchase Division and each team manager	-	• DJSI 1.5.4
• Availability and specifications of standards/policies/code of ethics for partners	• Ethics training program support for partners • Specification of mutual success with partners in GS Caltex Code of Ethics	10~11 64	• DJSI 1.5.3	
• Joint initiative activities and programs	Shared Growth Committee	10~11 64	• DJSI 1.5.3 • ISO26000 6.3.5	
• Ratio/number of key partners (direct supply of products/services) among Tier 1 partners • Ratio of expenditure paid to local partners in key markets	• Definition of partners in the purchase guidelines • 1,204 companies with business history in 2016 • Purchase amount KRW 947.5B	-	• GRI 102-9/204-1 • ISO26000 7.3.1 • DJSI 1.5.1	
• Ratio of partners whose partnerships have ended due to actual or potential impact on environment and reporting their causes • Ratio of partners with terminated contracts due to social impact and reporting their causes	Not applicable	-	• GRI 308-2/414-2	
Governance	• Senior executive officer, committee • Reporting line in risk management	Risk Management Committee chaired by CEO is operated	20	
	• Number of outside directors who are experts in risk management • Regular training programs for outside directors	There is no outside director	-	• DJSI 1.2.1
	• Independence of risk management function from the business management	There is a separate risk management division	20	
	• Description of major impact, crises, and opportunities	There is a risk in the cash flow and price fluctuation of crude oil and petrochemical products	20	• GRI 102-15

※DJSI corresponds to Oil&Gas Refining&Marketing sector

CORE ISSUES



Providing the Best Quality Products and Services

Context & Challenge

Today, gaining competitive advantages and momentum for growth is the most important aspect for a company to survive amid the global recession and low oil prices. Customers are now more sensitive to prices, services, and personal data protection due to strong market competition and the growing social interest in consumers' rights. When it comes to motor fuel, quality control is crucial as it has significant impact on atmospheric environment and vehicle performance. As engine technology makes advances along with driving performance while consumer interest and knowledge grows, product quality control has become more important than ever. When using low-quality products, consumers experience the effects on their vehicles and fuel efficiency. It is important for the energy industry to achieve sustainable growth to improve customer satisfaction and gain competitive advantages in the global market.

Contents of Report	Relevant Issues	Importance	Major Stakeholder	GRI Standards Disclosure Title (Scope of Topic)
<ul style="list-style-type: none"> Consumer Centered Management Information protection activities Production and management competitive products 	Product and service pricing	Key Issues	<ul style="list-style-type: none"> Customer Local Communities NGO Subsidiaries 	<ul style="list-style-type: none"> GRI 410: Security Practices (internal/external) GRI 416: Customer Health and Safety (internal/external) GRI 417: Marketing and Labeling (internal) GRI 418: Customer Privacy(internal)
	Customer satisfaction activities	Key Issues		
	Fair and transparent marketing practice	Reporting Issues		
	Privacy	Reporting Issues		
	Development of eco-friendly products	Reporting Issues		

Highlights

NCSI (National Customer Satisfaction Index)
Ranked 1st for 8 consecutive years



First in the Industry
CCM(Consumer Centered Management)
Recertified for 4 consecutive years



Gas stations/filling stations quality inspections
4,865 Times



Our Progress

Consumer Centered Management

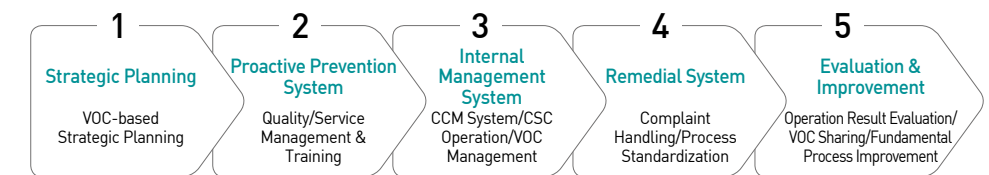
At **GS Caltex**, we established a systematic and independent pricing system to align our price to the market price and exchange rate. By doing so, we have maintained the highest level of consumer-centered management practice.

Building consumer centered corporate culture

In 2006, we introduced CCM(Consumer Centered Management) in our business practice to build consumer-oriented corporate culture and became the first refinery to receive CCM Certification in July 2010. CCM is operated by the Korea Consumer Agency and certified by the Fair Trade Commission. The system ensures that our business practice is in line with consumers' needs, and evaluations are carried out to identify the areas of improvement. In pursuing our vision to become a 'Value No.1 Energy & Chemical Partner', our efforts for delivering reliable products and services have been recognized. We are the first company to receive CCM re-certifications for 4 consecutive years(2010, 2012, 2014, and 2016) in the industry.

At **GS Caltex**, we conduct annual CCM training for all our employees to build consumer trust through the prevention of complaints and prompt follow-up activities while delivering high-quality products and services. Our customer hotline, CSC, offers one-stop consultation service (Customer Service Center, phone 1544-5151 or kixx.co.kr) as an integrated communication channel. The CSC fosters professional service representatives and has a call service infrastructure and system. Customer complaints received through the CSC are shared with the CCM Office and relevant departments on a monthly basis. Details about improvement measures are then distributed throughout the organization to prevent recurrence.

Customer Value Creation Process



Customer-friendly marketing website & mobile app service

At **GS Caltex**, we share information about our gas/filling stations and promotional offers through the KIXX website (www.kixx.co.kr), **GS Group GS&POINT** Membership website (http://www.gsnpoint.com), and **GS&POINT** app.

Improvement of customer satisfaction and unified service activities

GS Caltex has a service quality control process consisting of strategic planning, field training, evaluation and reward, and field practice. As a result of our outstanding service efforts in our gas stations, we were ranked first for the 2015 NCSI(National Customer Satisfaction Index) rating by the Korea Productivity Center for 9 consecutive years. In 2016, we created customer response manuals and distributed them to all our gas and filling stations to enhance overall service satisfaction. In made improvements in the areas of friendliness and cleanliness while promoting '4-Step Gas Service', focusing on unified and fundamental processes as part of our field training.

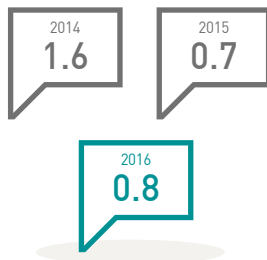
CORE ISSUES

NCSI
(National Customer Satisfaction Index)

Ranked 1st for 8 consecutive years in gas station service category (2009 - 2016)



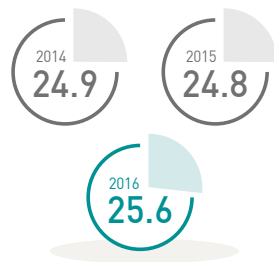
Average time it takes to handle customer complaints (days)



Membership subscribers (10,000 persons)



Domestic market share (%)



Customer service evaluation and partner care

GS Caltex's service evaluation is conducted through online and mobile devices in real time for a certain period of time. The result is used to reward business sites and improve service. Since 1993, we have organized the 'Star Festival' where we select gas stations with excellent service quality as part of our consumer-centered management practice. Through this campaign, we give awards to 'Star Partners' and share their know-how with other business sites.

Special experience with 'I am your Event'

GS Caltex offers a variety of online programs. As the largest film event in Korea, our 'I am your Cinema' is designed to meet the varying expectations of our customers and create a unique brand image with great benefits. To further develop our brand reputation, it was reorganized with 5 different concepts, 'Original/Ticket/Boutique/Camping/Drive' in May 2016.

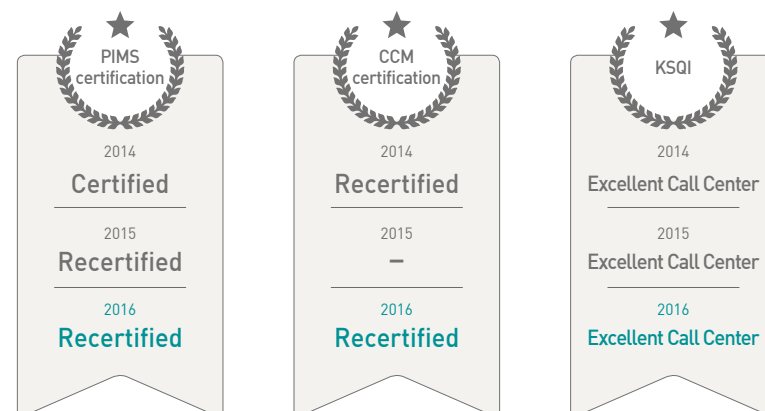
GS&POINT membership and promotional offers

GS & POINT, the membership program of GS Group, provides membership benefits like travel, sports, and cultural experiences for a 'Happy Family Life'. In 2016, we further enhanced our communication channels through promotional events such as 'Giving Away 100 Million in Prizes!', 'GS & Camping', and 'Decorating My House' and provided various benefits for more than 100,000 customers. Through GS & Camping, which has been held for 4 years since 2013, we invited more than 120 family members in six occasions in 2016 and received a great response from customers through DIY carpentry programs at famous travel destinations nationwide. In addition, GS Caltex is continuously developing customer satisfaction programs such as soccer and baseball training, Escort Kids, and a sports program known as 'GS & SPORTS' where parents and children can play sports together.

Improving service quality through the 'Star Service Team'

At GS Caltex, we organize our Star Service Team with service training experts to improve customer experience and standardize our service process. The team visits more than 1,000 stations nationwide each year and ensures that the staff complies with the service manual, receives feedback from customers, and encourages them to improve their service quality. We expanded our service consulting(SC), which was piloted in the metropolitan area in 2015, nationwide. Through the Star Service Team and its dialogue and demonstration consulting, we make sure that our customer satisfaction level stays high. We also introduced the 'Green Star Training Course' to boost staff morale, improve the satisfaction level of our gas station partners, and help foster field staff that can provide excellent service.

Customer Satisfaction Performance



Number of security violations on customers' personal information (2014 - 2016)

0 Cases



Number of data leakage, theft and loss (2014 - 2016)

0 Cases



Information protection activities

Organization and management of information security

As our top decision-making organization when it comes to information security, our 'Information Security Committee' is composed of the executive officers of each division with CISO(Chief Information Security Officer) as the chairman for discussing investment, activities and current issues regarding personal information protection, prevention of cyber-crime, and raising awareness of our employees. To respond to various security threats, protect our assets, and ensure reliable business practice and safety, we have implemented consistent information security policies while operating our information security system in accordance with the laws and standards.

Internal information security measures

At GS Caltex, we are examining our security issues identified in Korea as well as other countries through our security organization composed of top experts in the industry. To prevent security breaches, we conduct various employee training and programs including scenario-based simulations(malicious e-mail training, etc.), security seminars, and campaigns. The IT system vulnerability assessment and cyber-attack simulation are carried out on an annual basis while monitoring and analyzing logs on network anomalies, such as unauthorized access, through various security solutions. To enhance physical security, business infiltration tests and unannounced security checks are also carried out.

Privacy

GS Caltex acquired the government-designated Personal Information Management System(PIMS) certification in 2013 for the first time in the industry. Our company undergoes stringent examination to maintain the PIMS certification status. To protect our customers' personal information, important data is encrypted when it is stored and transmitted. Access to customer data is only allowed in a security room where fingerprint scanners and CCTV are installed. In addition, we implemented a personal information access control system to manage access to personal information and to monitor any unauthorized access. Any teams and third parties with access to personal information are subject to security audit every year. We are making every effort to prevent any violation of laws and misuse. In 2012, we destroyed the resident registration numbers of all our customers and no longer collect or use that information. We also announce the status of processing personal information to our customers at least once a year to make sure their rights are protected while making various efforts to improve our security.




Access monitoring system

GS Caltex's main business sites are designated as restricted and controlled areas and a special access control and monitoring system is implemented. Any unauthorized access is strictly denied and outsiders require authorization through our access system and process to enter our business premises.

Protection of national infrastructure

We are designated as 'Critical National Facilities' and 'National Security Target Facilities', so we meet the security requirements under the laws (e.g. United Defense Act, Security Policies) while implementing the national infrastructure protection plan in response to emergency situations. In the event of disaster or emergency situation, we ensure that our petroleum production and storage are maintained and controlled in an effective manner while preventing interruption of supply and operation.

Production and management competitive products

Complex	Terminal	Gas Station/Customers
 More stringent quality control than legal requirements Quality inspection before shipment	 Quality inspection before receipt Quality inspection for products in long-term storage	 Operation of Kixx quality service vehicles

Strict product quality control

GS Caltex carries out rigorous quality control in the entire business process from production to sales in accordance with the ISO International Quality Certification System. Our products are subject to quality standards that are stricter than the legal requirements, and quality inspection is carried out on incoming and long-term storage products in addition to those being shipped out. We also maintain quality assurance in our production process and terminal in addition to the distribution process. Quality issues in gas stations can result in sales suspension or loss to consumers as the return process is not properly carried out. Since 2007, we have been operating 'Kixx Quality Service Vehicle', which is the first in the industry to carry out the quality test of gas stations nationwide. We also ensure prompt response to complaints and emergency situations. In addition, 'LPG Quality Service Vehicles' have been under operation since 2013 while maintaining the highest quality standards to ensure full compliance with the legal requirements and prevent any violations at filling stations. As a result of these efforts, we were recognized by the Korea Petroleum Quality & Distribution Authority(K-Petro) as the refinery with the lowest number of abnormal products.

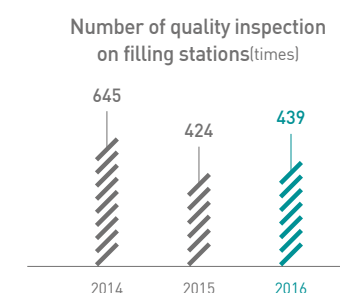
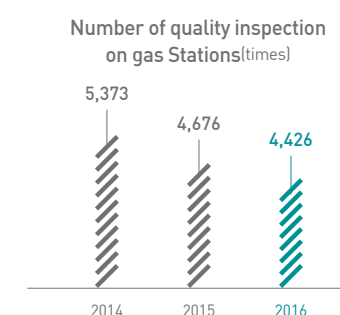
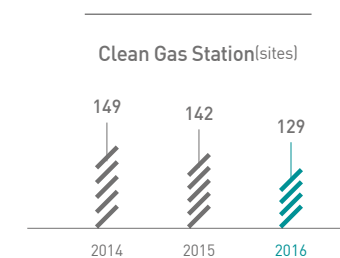
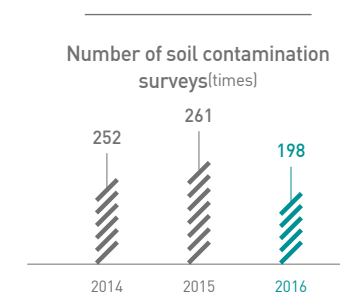
Overview of Kixx Quality Service Vehicles

Purpose	Equipment	Operation Process
Equipped with the systems that can detect quality defects and illegal petroleum products, the vehicles perform onsite sampling and quality inspection at GS Caltex stations.	Gasoline analysis: FT-NIR (Fourier Transform-Near Infrared Spectrometer) Detection of kerosene in diesel: Colorimeter, UV Spectrometer Detection of water content and sediment: moisture detection reagent, centrifugal separator	Selection of stations or emergency report ↓ Onsite quality analysis ↓ Output process and guidance ↓ Follow-up (send the samples to the lab if required)

Prevention of soil contamination

At GS Caltex, we analyze the contamination of soil and carry out remediation process if contamination is detected, based on the voluntary agreement entered with the Ministry of Environment. When opening a new gas station or replacing the tanks at our directly operated stations, we make sure they are Clean Gas Stations and raise our sales staff's awareness of soil contamination on a continuous basis.

※ Clean Gas Station: gas station with dual-wall tanks, dual-protected pipes and overflow prevention facilities that ensure timely detection of leakage and that no contaminants are leaked



Development of eco-friendly products

At GS Caltex, we support low-carbon energy policies by developing energy efficient eco-friendly products. Our gasoline, diesel, and kerosene products boast superior quality thanks to our cutting-edge refining process. We are also working on the development of next-generation eco-friendly technologies such as biobutanol.

GS Caltex Kixx high-quality gasoline contains a high-purity functional additive that protects the key parts of the engine and significantly reduces the emission of hazardous substances in full compliance with environmental standards. It also maximizes the engine performance of vehicles for better fuel efficiency and driving comfort.

Our diesel products feature excellent ignitability and power, containing a high-performance flow improver for better ignition at low temperature. Produced at our advanced desulfurization facilities, they were recognized as the eco-friendly product with the highest quality in the world and graded with five stars, which is the highest level in the Environmental Quality Rating System.

Our kerosene is highly purified and eco-friendly with less emission of harmful gas as it is produced through our advanced refinery process. It produces less petroleum odor and helps promote comfortable environments. It was certified by the Ministry of Environment for eco-friendly attributes as the sulfur content is less than 30ppm, which is 30% of the legal limit.

We also lead the development of eco-friendly biofuel. Through our in-house R&D project that began in 2007, we have secured the technology that integrates the pretreatment saccharification, fermentation, and separation and purification processes needed for mass production of biobutanol from non-edible wood waste, and succeeded in developing high-performance strains. Our biobutanol production technology is eco-friendly as it can reduce GHG (greenhouse gas) emission and was certified for NET by the Ministry of Trade, Industry, and Energy in September 2012 and for Green Technology by the Ministry of Environment in June 2016. The pilot plant for the production of biobutanol is currently under construction in Yeosu, Jeonam, and it is expected to be completed in the second half of 2017.

Response to the EU REACH (Registration, Evaluation, Authorisation, and restriction of Chemicals)

At GS Caltex, we are implementing our response to the EU REACH under a proactive and systematic plan to protect the environment and people's health by identifying the hazards and risks of chemicals. Since the preregistration in 2008, we have registered our products exporting more than 1,000 tons(2010) and 100 tons(2013) to Europe. By 2018 all chemical exports exceeding 1 ton will be registered. Our customers in Europe and those who export our products to Europe ensure their confidence. In addition to the EU REACH, we fully comply with the laws regarding the registration and evaluation of our chemical substances.

Our Commitment

At GS Caltex, we will continue to provide the best quality products and services through:

- ◆ Mobile-based marketing activities for creating a customer-oriented environment and service
 - Communicate with our customers on our product quality
 - Improve convenience for consumers with additional features on the GS&POINT mobile app
 - Offer extra benefits based on the needs of our customers
- ◆ Preemptive information security activities
- ◆ Delivery of high quality products through enhanced quality inspection at gas stations
- ◆ Development of eco-friendly products and technologies

Core Issue 2. ESG Data

Category	ESG Indicators	Data Summary	Report Page	Global ESG Standards
Governance	• Security violations on customers' personal information	0 cases (2014 - 2016)	27	• GRI 418-1 • ISO26000 6.7.1~2
	• Data leakage, theft, and loss	0 cases (2014 - 2016)	27	• GRI 418-1 • ISO26000 6.7.7
	• Consumer service support and activities to resolve complaints and disputes	• Consumer Centered Management (CCM) is adopted • Customer Service Center(CSC) is operated	25	• ISO26000 6.7.6
	• Potential business impact reported publicly • Publicly reported risk mitigation measures • Descriptions of product, health, safety and environmental management systems • Describe how to monitor, track, evaluate, and manage product-related accidents	• Quality control is performed on the entire process from production to sale under ISO Quality Management System • EU REACH compliance is in progress	24 28-29	• DJSI 1.2.4 • ISO26000 6.5.3-5/6.7.1~2/ 6.7.4-5/6.8.8
	• Violations of the laws governing marketing communication e.g. advertisement, promotion, and sponsorship	0 cases (2014 - 2016)	-	• GRI 417-3 • ISO26000 6.7.3
	• Violations of the laws governing product and service information and labeling • If no violations haven committed, simply state the fact.	0 cases (2014 - 2016)	-	• GRI 417-2 • ISO26000 4.6/6.7.1~2
	• Communication of information about the product, service, and labeling	MSDS and details are disclosed on the website	-	• GRI 417-1 • ISO26000 6.7.1~3/6.7.5
	• Training and activities to raise awareness about products and services	• NCSI(National Customer Satisfaction Index) Ranked 1st in 8 consecutive years in the gas station service category (2009 - 2016) • Service quality control system is operated • Customer service manuals are distributed • Star Service Team is operated • Star Festival is held	25~26	• ISO26000 6.7.9
	• Certification of ISO9001 Quality Management System	ISO9001 is maintained at Yeosu Complex and Lubricant Plant	-	• ISO26000 6.5.3-5/6.7.1~2/ 6.7.4-5/6.8.8 • IPIECA HS4 C2
	• Activities for customers' health and safety	• Strict quality control is conducted • Soil contamination survey is carried out • Eco-friendly products are produced	28~29	
Society	• Human rights of public security companies • Training for private security providers • Reporting human rights issues for private and public security	• UNGC Universal Human Rights Principles are supported • Security companies certified by the government have been hired, human rights are protected, and training for confidentiality and safety is conducted on a regular basis	27	• GRI 410-1 • ISO26000 6.3.5
	• Availability of access monitoring system	System available	27	
Environment	• Response to EU REACH and related activities	EU REACH compliance is in progress		• EU Directive Art.19a(1)(e)

※ DJSI corresponds to Oil&Gas Refining&Marketing sector

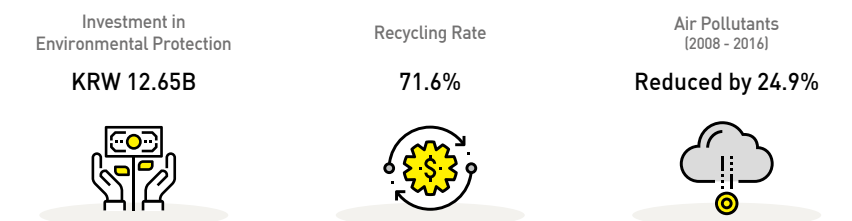


Context & Challenge

The demand for energy and environmental management in business practice is growing. In the 21st UN Climate Conference (COP21) held in Paris in December 2015, the Convention on Climate Change was ratified and became effective in November 2016. As a result, industries around the world are changing their structure to reduce GHG emissions. Due to the nature of its business, the refinery industry requires strict control of its energy and environmental impact throughout the entire process from production and storage to transportation, use, and disposal. Now, environmental management is as crucial to sustainable growth as producing quality products and creating stable profits. Companies must preemptively manage their business beyond the environmental regulations required by the government and the local community to build their reputation, strengthen competitive advantages, and pursue new business opportunities.

Contents of Report	Relevant Issues	Importance	Major Stakeholder	GRI Standards Disclosure Title (Scope of Topic)
<ul style="list-style-type: none"> Reinforcement of environmental management Preemptive GHG control activities Optimization of energy management 	Response to environmental regulations	Key Issues	<ul style="list-style-type: none"> Government Local Communities NGO Employees 	<ul style="list-style-type: none"> GRI 302: Energy(internal) GRI 303: Water(internal) GRI 304: Biodiversity(internal) GRI 305: Emissions(internal) GRI 306: Effluents and Waste(internal) GRI 307: Environmental Compliance (internal)
	Energy conservation and improvement of efficiency	Key Issues		
	Response to climate change	Reporting Issues		
	Emission control	Reporting Issues		
	Recycling and reduction of waste materials	Reporting Issues		
	Water conservation and wastewater control	Reporting Issues		

Highlights



Our Progress

Reinforcement of environmental management

Since we declared our environmental policies in 1996, we have reinforced our environmental management systems in line with environmental factors throughout the entire business process, including development and expansion of facilities, process operation, and transportation.

Prevention of air pollution

In response to increasing social demand for the improvement of air quality, we take initiatives in reducing air pollutant emissions. As part of these initiatives, we introduced cleaner fuel such as LNG while applying Low NOx Burners in existing heating furnaces to reduce nitrogen oxide emissions. We also invested a great deal of effort in building prevention facilities such as NOx reductor to minimize the emission of nitrogen oxide and electrical collector/scrubber/RTO*/VRU** to reduce dust, VOC and SOx. We also installed CleanSYS to automatically measure the emission of dust, SOx, NOx, and CO in real time. The system will be digitized to ensure more consistent and advanced monitoring performance in 2017.

We signed the 2nd Gwangyangman Region Voluntary Environmental Agreement with the Ministry of Environment and Jeollanam-do in 2008 to reduce the air pollutant emissions around the Yeosu National Industrial Complex by 13% until 2016. In 2016, we managed to reduce the total amount of air pollutants by 24.9%[Dust - 48.4%, SOx - 29.6%, NOx - 13.5%], meeting the goal. We will continue to invest in air quality improvement facilities to increase the amount of clean energy and reduce energy consumption.

*RTO: Regenerative Thermal Oxidizer **VRU: Vapor Recovery Unit

Prevention of soil contamination

At GS Caltex, we entered a voluntary agreement with the Ministry of Environment to protect the soil environment (1st Phase: 2002 - 2012, 2nd Phase: 2013 - 2023). As part of this agreement, we installed monitoring devices in all areas of the Yeosu complex to ensure constant monitoring of soil and underground water quality. We also inspect all our directly operated stations for any soil contamination.

Prevention of water contamination

At GS Caltex, we manage wastewater produced during our production process on a daily basis through our monitoring system for wastewater sources. To improve the elimination of pollutants, we reuse wastewater for the dealkalization facilities and installed carbon filters at our water treatment facilities. In 2016, large-scale maintenance and repair work has been carried out on wastewater treatment facilities that discharge treated wastewater to the ocean to maintain their effectiveness. In the future, we are planning to reuse wastewater generated by refining facilities for light / heavy oil to increase the recyclability of wastewater.

Environmental Monitoring System

System	Description
Onsite Assessment	Analysis and assessment is conducted on a regular basis(e.g. air/water quality, waste materials)
Tele-Monitoring System	Air/water pollutants are controlled and measured in real time
LDAR*	VOC and LDAR are monitored
Protection Kit Control System	The inventory of protection kits is managed
Worksite Drainage Control	Oil detectors, pH meters and CCTVs are installed
Typhoon Monitoring System	The time of impact is analyzed, and proactive measures are taken against typhoon at the Yeosu complex
SHE System	General environmental management is conducted

*Leak Detection And Repair

Managing Hazardous Chemicals

At GS Caltex, we monitor the consumption of hazardous chemicals on a daily basis and replace hazardous chemicals with alternative chemicals to reduce their consumption. We have established a system for reviewing chemical substances and requests for investment prior to purchase when we introduce new chemical substances or change the existing ones. By setting our own emission reduction target, we are committed to reducing benzene, toluene, and xylene through the stable operation of marine VRU, installation of aromatic tank VRU, and strengthening of LDAR management.

GS Caltex provides training programs for response to toxic chemical spills and the prevention of damage. In 2013, the Joint Disaster Prevention Agreement was signed with the companies in the Yeosu Industrial Complex to establish emergency response measures and organize joint training for chemical disaster response. As a representative of the 2nd Group of the Yeosu Industrial Complex, we held a seminar for the exchange of information on a quarterly basis and joint training once every six months. In addition, we have reinforced our preparation for hazardous chemical spills by improving our protective gear and emergency chemical substances around each hazardous chemical storage facility. We also conduct inspection on our contractors that handle hazardous chemical substances on a regular basis and offer training programs for their managers as part of our prevention measures.

Management of waste materials

At GS Caltex, we diversify our efforts to reduce the amount of waste we produce and maximize their recyclability. We share the production of waste materials by worksite on a monthly basis and ensure that they are stored separately. We also use a computer system for requesting disposal and an identification system to raise awareness among our companies and partners. To improve the recyclability of waste materials, we are working on the development of technologies and looking for collectors while recycling tank sludge, waste oil, catalyst, synthetic resin, wood, and food for various uses. As a result, we managed to increase the recyclability to 71.6% in 2016. Through continuous training and inspection, we ensure that waste materials are collected and disposed of without leaving a footprint.

Environmental cleaning activities

At GS Caltex, we engage in environmental cleaning activities on a regular basis to promote biodiversity and fulfill our social responsibility. We clean the environment around the Yeosu Industrial Complex on a regular basis to preserve the eco-system in Yeosu where our major business facilities are located as well as the coastal areas around the complex and the islands.

Protected Areas in Yeosu

Classification	Description
Water Source Protected Area	1 Mipyeong Water Source Protected Area is located 8.8km from the worksite in Mipyeong-dong, Yeosu
Wildlife Protected Area	There are 4 wildlife protected areas in Yeosu. The closest one is located in 190-1 (san), Jungheung-dong, about 6.8km from the worksite
Designated Island Area	There are 12 designated island areas in Yeosu. The one closest to the Gadeok Island is located about 15.8km from the worksite
Nature Park	Hallyeohaesang National Park located in Odong Island, eastern part of the Yeosu Peninsula, Dadohaehaesang National Park, all of Dolsaneup, and designated islands, in the southern part of the peninsula, have been designated. Hallyeohaesang National Park and Dadohaehaesang National Park are about 6.5km and 29km away from the worksite, respectively
Air Protected Area	Gwangyang Bay Area has been designated as an Air Protected Area in accordance with the 'Designation of Air Protected Area, Ministry of Environment #1999-191'
Low Sulfur Oil Supply and Use Area	The content of sulfur must be 0.1% or less in diesel and 0.3% or less in fuel oil in accordance with Article 10-2 of the Enforcement Decree of the Clean Air Conservation Act, 'Scope of Low Sulfur Oil Supply and Use Facilities'
Special Controlled Area	Located in the Special Controlled Area in the Gwangyang Bay

Compliance with government policies

Acts	Activities
Chemicals Control Act	1. Performed external impact evaluation/Hazard control plan TF activities 2. Undertook TF activities for improving facilities under the Chemicals Control Act(by 2019) 3. Distributed personal protective gear under new regulations 4. Established the procedure of reporting tools and inspecting facilities 5. Installed facilities for emergency cleaning and the prevention of solid catalyst 6. Replaced harmful chemical substance warning signs 7. Conducted regular inspection on the harmful chemical substance facilities 8. Established training program on the Chemicals Control Act(for all employees)
Act on the Registration and Evaluation, etc. of Chemical Substances	1. Built a chemicals control system(improve the purchase process, etc.) 2. Registered chemical substances
Clean Air Conservation Act	1. The prevention facilities were upgraded to improve their efficiency (e.g. replacement of NOx reducers and catalyst in SOx elimination process) 2. Introduction of clean fuel (LNG)

Status of Voluntary Environmental Management Agreements

Agreements	Terms of Agreement	Description
Voluntary Agreement for Purchase	2005~2016	Promotion of the production, distribution, and purchase of eco-friendly products (Eco-Labeling Certification and GR Mark Certification)
Voluntary Agreement for the National GHG Emission Reduction against BAU by 2020	2014 ~ 2020	Reduction of industrial GHG emission to achieve the national GHG target against BAU by 2020
Agreement on SMART Program for Chemical Emission Reduction	2013 ~ 2017	Reduction of emissions of benzenel(by 60%) and butadienel(by 14%) from 2009 to 2017
Voluntary Environmental Agreement for Reduction of Air Pollutants in Gwangyang Bay Area	2012 ~ 2016	Reduction of air pollutant emissions by 13% from 2008 to 2017
Voluntary Agreement for Soil Preservation	2013~2023	Prevention of soil contamination by oil spills and perform voluntary inspection and recovery
Joint Agreement for Emergency Response to Chemical Disaster	2013~	Establishment of joint emergency response plan for the prevention and recovery of chemical disasters

Investment in Environmental Protection (Unit: KRW 100M)

Classification	2014	2015	2016
Wastewater and Marine Contamination	75.5	22.5	20
Air	7.1	21.6	52.6
Volatile Organic Compounds	46.7	0.4	2.1
Soil Contamination	77.1	73.1	51.8
Misc.	-	-	-
Total	206.4	117.6	126.5

Environmental indicators

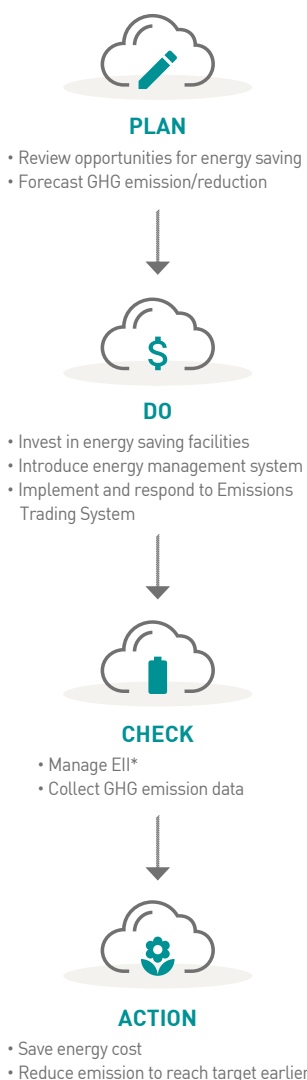
Indicators	2014	2015	2016	
Volume of Air Pollutants (ton)	Dust	189.1	179	165.9
	Nitrogen oxide(NOx)	4,010.9	4,151.5	4,374.1
	Sulfur oxides(SOx)	8,541.3	6,304	7,392.1
	Carbon monoxide(CO)	775.9	757.5	395.4
	Volatile organic compounds(VOC)	133.4	116.5	109.8
	Hazardous air pollutants(HAP)	58.8	80.5	95.6
Concentration Level of Air Pollutants* (ppm. GS/Legal Req.)	Dust***	4.8/30	4.8/30	5.7/30
	Nitrogen oxide(NOx)	64.2/150	88/150	83.3/150
	Sulfur oxides(SOx)	55.5/180	59.2/180	62.1/180
Volume of Water Pollutants (ton)	Biochemical oxygen demand(BOD)	145.5	119.7	172.8
	Chemical oxygen demand(COD)	161.8	132.4	140.2
	Suspended solids(SS)	97.3	85.7	82.3
Concentration Level of Water Pollutants** (ppm. GS/Legal Req.)	Biochemical oxygen demand(BOD)	5.4/30	6.8/30	6.9/30
	Chemical oxygen demand(COD)	9/40	10.1/40	9.2/40
	Suspended solids(SS)	3/30	2.2/30	3.2/30
Volume of Waste Material (ton)	Designated waste	19,796	22,461	21,165
	General waste	18,026	18,481	20,726
	Recyclable	24,525	28,668	30,001
	Composting	308	276	263
	Collected(incl. energy)	12,937	19,544	19,129
	Incinerated	4,229	3,029	2,596
	Buried	8,573	9,163	9,294
	Misc.	11,775	8,929	10,609
Water Consumption(ton/day)	Annual average consumption	53,055	53,930	55,487
Wastewater(ton/day)	Annual average emission	24,775	26,942	28,542
Hazardous Chemical Consumption (ton)	Caustic soda(NaOH)	9,220	25,521	30,398
	Sulfuric acid(H ₂ SO ₄)	602	1,123	770
	Hydrochloric acid (HCl)	1,647	1,666	1,840
	Ammonial(NH ₃)	466	462	579

* Dust/SOx/NOx: Effluent quality standards and average concentration level of standard heaters and boilers
 ** Effluent quality standards and concentration level of ocean effluence *** Dust Unit: mg/m³

※Pollutant Discharge Facilities

- Air Pollutant Discharge Facilities: RFCC CO Boiler, Heater, Package Boiler
- Water Pollutant Discharge Facilities: Petroleum Refinery Manufacturing Facilities, Basic Petrochemical Compound Manufacturing Facilities, Industrial Water Purification Facilities

GHG/Energy Management Plan



* EII: Energy Intensity Index
 Developed by Solomon (US), the Energy Intensity Index is designed to compare the energy efficiency of individual processes from refineries worldwide. The index calculates the level of efficiency based on the unit throughput or the amount of energy required for production unit in accordance with the statistical data from Solomon. The higher the energy efficiency, the lower the EII index as the energy usage is reduced against the unit throughput

Preemptive GHG control activities

The ETS(Emission Trading System) which was implemented in 2015 can present both opportunity and risk to companies. At **GS Caltex**, we analyzed the financial impact of GHG ETS and take a proactive approach in response to this new system. We also implemented a separate process to reach our reduction target while organizing a task force to push for a more proactive response to climate change. By analyzing the internal and external environment of each scenario, we review our strategy in response to climate change and plan our actions. When making new investment, we conduct an economic evaluation to reflect the impact of GHG on the environment and our value chain at a corporate-wide level to plan our strategy to deal with the new climate change system and seek new business opportunities. In addition, our efforts to build a resource recycling structure continues as we optimize our low-carbon energy mix using surplus heat energy in the Yeosu industrial complex and reduce GHG emissions through the production of highly purified hydrogen using byproduct gas. We are also striving to raise the awareness about GHG emission among our employees within our company through online and offline training programs on GHG and climate change.

GHG Emission (Unit: tCO2eq)

Classification	2014	2015	2016
Scope I: Direct Emissions (fixed combustion, mobile combustion and process emission)	6,500,458	6,616,133	6,997,586
Scope II: Indirect Emissions (externally purchased steam and power)	2,024,761	1,818,771	1,438,494

※The above data is before the final approval of the government, so it may change in the future

Optimization of energy management

At **GS Caltex**, we developed a roadmap to strengthen our competitive advantages in the global energy market and undertake consistent energy management activities. Every year, we set a goal for energy-saving in each production process and identify the areas where we can further reduce our energy consumption through in-house TF activities and consulting with external energy experts. Through the 'Energy Portal' system, we monitor the energy consumption at the Yeosu Complex in real time in terms of energy saving performance and management of loss items while ensuring more consistent energy management practice. We also take a proactive approach in the government policies on the GHG and energy and GHG emission trading system in line with the Convention on Climate Change. We keep track of GHG emissions at the Yeosu Complex on a monthly basis and focus our resources on identifying the areas of reduction and developing the expertise of our human resources. As a result of these efforts, we managed to save KRW 30 billion in energy cost in 2016.

Energy Index (Unit: TJ)

Classification	2014	2015	2016
Scope I: Direct Energy Consumption (all sources of energy excluding purchased power and steam)	88,292	87,759	93,003
Scope II: Indirect Energy Consumption (purchased steam and power)	17,270	17,657	16,099
Annual Reduction	2,919	2,705	2,562

※Energy consumption calculation method and unit conversion factor source

- Direct consumption: Check the amount of consumption through the flow meter → calculation of calorific value by product
- Unit conversion source: Unit conversion based on the energy calorific conversion standard of the Energy Act

At GS Caltex, we perform environmental management and respond to climate change by:

- ◆ Reinforcing our environmental management system
- ◆ Complying with the environmental laws and regulations
- ◆ Operating TF in relation with chemical substances
- ◆ Planning the mid and long-term strategy for securing GHG emission right
- ◆ Identifying areas of improvement in energy management
- ◆ Establishing mid and long-term energy saving plans(annual investment plan and applicable item management)
- ◆ Continuing investment for energy saving ◆ Consulting on energy and reviewing global case studies

Core Issue 3. ESG Data

Category	ESG Indicators	Data Summary	Report Page	Global ESG Standards
Governance	• Business sites with significant actual/potential negative impact on local community • Report the characteristics of direct/indirect biological impact	• Refining industry consumes a large amount of energy and may have harmful impact on people and environment • Product MSDS is disclosed	31	• GRI 413-2 • ISO26000 6.3.9/6.5.3/6.8
	• Specific mechanism that takes care of pollutions caused in the operation of process in local community	• Activities for the prevention of air pollution and water/soil contamination are performed • Activities for managing hazardous and waste materials are carried out • Environmental laws and agreements are complied	32-34	-
Environment	• Senior position in charge of climate change	Head of Safety and Environmental Planning Division	-	• DJSI 2.4.2 • UNGC Advanced 9~11
	• Potential opportunities and risk associated with climate change • How to respond to opportunity and risk factors related to climate change	Financial impact of the GHG Emissions Trading System is analyzed in advance, and consistent response strategy is established	31,35	• GRI 201-2 • ISO26000 6.5.5
	• Emissions of nitrogen oxides, sulfur oxides, VOCs, and other air pollutants	Key environmental indicators for 3 years are disclosed through sustainability report	31,36	• GRI 305-7 • ISO26000 6.5.3 • UNGC Advanced 9~11 • DJSI 2.3.7~10
	• Sites owned, rented, or managed, or protected areas with a high level of biodiversity	Status of protected areas in Yeosu is disclosed	33	• GRI 304-1 • ISO26000 6.5.6/6.7.5 • UNGC Advanced 9~11
	• Assessment and consideration of input from local community and stakeholders	• Environmental cleaning activities are carried out on a regular basis • Environmental management agreements are signed and executed with the central and local governments	33~34	• UNGC Advanced 9~11 • IPIECA E5 S3
	• Systematic management of industrial water consumption within plants • Total wastewater discharge	Water consumption and wastewater discharge are disclosed	35	• GRI 303-1 • UNGC Advanced 9~11
	• Consideration of water stress level when undertaking a project • Intent to take part in global water-related initiatives	Water stress level is considered when undertaking a project, and we plan to take part in initiatives such as CDP Water	-	• DJSI 2.5.1-2
	• Initiatives for the improvement of energy efficiency and saving and their procedure • Activities for energy saving and GHG emission reduction • Energy used directly for electricity, heat, and vapor • Energy consumption/saving/sales to outside	• Energy saving goals are set • Consultation of internal TF and energy experts are in progress • Energy portal system is operated • Activities in response to GHG Emissions Trading System are carried out • Direct/indirect energy consumption and reduction are reported • No energy is sold outside	36	• GRI 302-1~2,4 • ISO26000 6.5.4 • DJSI 2.3.4
	• GHG emissions • Environmental audit from a third-party organization	Direct/indirect GHG emission data is disclosed, and third-party assurance is in progress	36	• GRI 306-3~4
	• Hazardous waste materials under control/emissions/disposal process • Emission of normal waste materials • Activities for transporting hazardous materials • Amount and cases of critical oil spill	• Waste material emission and hazardous chemical material control process are disclosed through sustainability report • No critical oil spills in 2015-2016 ※The Wu Yi San collision and oil spill in 2014 were reported in 2015 Sustainability Report	33	• GRI 306-2~3 • ISO26000 6.3.3/6.5.4/6.5.6 • UNGC Advanced 9~11
	• Scope of sharing effective measures as part of environmental activities • Disclosure and content of environmental policies	Disclosed through the website, sustainability report, and environmental disclosure system	-	-
	• Availability of formal documents for analyzing the environment risk in new process and process changes • Operation of official system for implementing, applying and reporting environmental impact assessment	• Environmental impact analysis is conducted in all business sites - Third product wharf construction: environmental impact analysis - New project site construction: post environmental impact analysis - Oil tank construction project in Sapo: post environmental impact analysis - Oil and naphtha tank site construction: post environmental impact analysis	-	• UNGC Advanced 9~11 • EU Directive Art. 19a(1)(e) • DJSI 2.2.1-2
	• Percentage of projects with the ISO 14001 certification • Scope of application of environmental management system (EMS: ISO14001) (e.g., percentage of business sites, sales ratio)	• The Yeosu Complex which is significant in terms of size and sales is maintaining its certification • The Yeosu Complex is subject to third-party assurance, and other business sites are operated based on an equivalent internal system	-	-

※DJSI corresponds to Oil&Gas Refining&Marketing sector

Our Commitment

CORE ISSUES

4



Reinforcement and Dissemination of Safety System

Context & Challenge

In response to increasing concern for safety issues due to recent industrial disaster and accidents, safety is essential for maintaining sustainable growth. As a corporate citizen, companies are taking a proactive approach in creating safer workplaces and working toward sustainable growth while strengthening their safety and healthcare policies and regulations. In this context, GS Caltex sets SHEQ(Safety, Health and Environmental Quality) as the highest priority and carries out corporate-wide SHEQ activities.

Contents of Report	Relevant Issues	Importance	Major Stakeholder	GRI Standards Disclosure Title (Scope of Topic)
<ul style="list-style-type: none"> SHEQ(Safety, Health and Environmental Quality) management system Enhancement of workplace safety Emergency Response Health Management in the Workplace 	<ul style="list-style-type: none"> Prevention of accident and safety awareness Employee health 	<ul style="list-style-type: none"> Key Issues Reporting Issues 	<ul style="list-style-type: none"> Government Local Communities NGO Employees Partners 	<ul style="list-style-type: none"> GRI 403: Occupational Health and Safety(internal/external)

Highlights

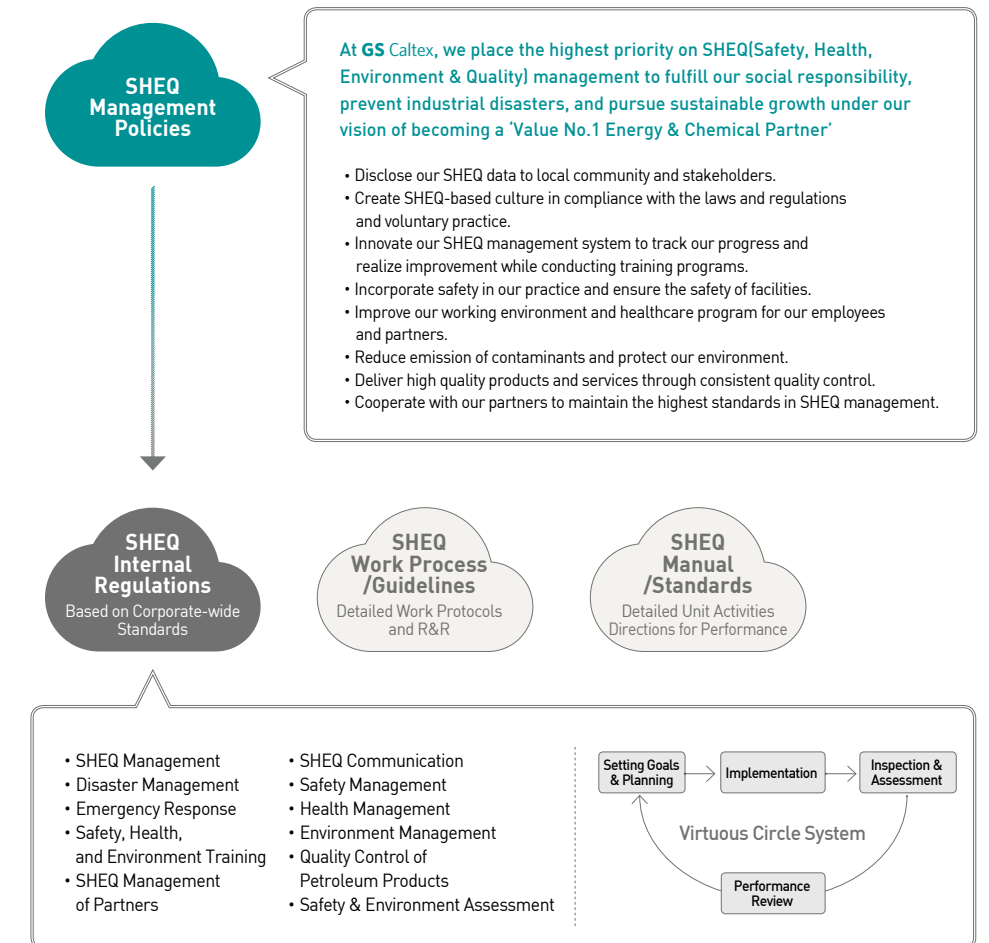
Corporate-wide		Workplace*	
Drills	Frequency(times)	Drills	Frequency(times)
Unannounced emergency training at a corporate-wide level	1 time/quarter	Firefighting Drills	3 times/year(by shift)
		On & Offshore Oil Spill Response Drills	3 times/year(by shift)
		Process Dry Training Drills**	1 time/month(by shift)
		Early Response Drills	1 time/month(by shift)

*The drills at the workplace are based on the Yeosu complex, and internal drills are conducted under individual guidelines
 **One type of training according to the emergency response scenario

Our Progress

SHEQ(Safety, Health, Environment & Quality) management system

Recognizing the importance of SHEQ management in our business practice, we have established the SHEQ management system to fulfill our social responsibility and the legal requirements. At GS Caltex, we make sure our business practice reflects our 8 Corporate SHEQ Policies. Our system undergoes the process of setting goals, planning, implementation, inspection, and improvement.

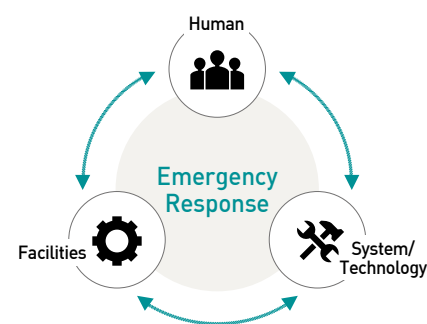


Enhancement of workplace safety

GS Caltex recognizes that safety is essential for sustainable growth and creates a workplace culture with a strong commitment to safety. We understand that it is important to promote active communication among employees and raise safety awareness and safe practices. We must also create a consistent system and safe facilities while enhancing our response to emergency situations.

At GS Caltex, we continue to enhance the level of our response and operation in accordance with PSM (Process Safety Management). We make sure that all our employees understand the 12 items of PSM and internalize each area of emergency response, including Human(Education and Training/Accident Investigation/ Partner Management/Internal Audit), Facilities(Facilities Maintenance/Pre-Safety Checkup), and System/ Technology(Process Safety Data/Safety Operation Instruction Procedures/Safety Work Permit Procedures/ Process Risk Assessment/Change Management) for voluntary compliance.

Internalization of Process Safety Management System



Human

At GS Caltex, we are creating a self-reliant safety culture by raising awareness and improving safety practices for voluntary compliance. We are working with DuPont, a company with the highest standards in safety, to establish the 'Safety Culture Transformation Program' and encourage our leaders to set an example for their coworkers and take the initiative in promoting active communication for safety matters. We also provide a variety of programs for our partners to raise awareness and help them stay motivated. While supporting the establishment of the Safety and Health Management System(KOSHA 18001) to foster expertise in risk assessment, we offer programs to promote mutual growth through the Work Certification System and the Safety and Environment Contest to help our partners improve their safety performance.

Facilities

Our process facilities are designed, built, and operated at the highest level of safety in the world. For the last 50 years, we have checked and maintained the safety of our facilities using our state-of-the-art inspection and diagnostic system and replace any outdated facilities. From 2014 to 2016, we conducted a safety assessment on vulnerable parts of our facilities and established our mid to long-term Reliability Master Plan to be realized by 2020 in order to make continuous improvement. All facilities are operated in strict compliance within the safety range. If they go outside the range, the alarm system is activated and the process operation system stops automatically. Based on our 50 years of operation know-how, we continue to develop the expertise of our operators to maintain the highest level of safety and emergency response at all times.

System/Technology

At GS Caltex, we assess our risks using advanced, practical techniques for more consistent analysis of risks in petrochemical process. Our existing risk assessment system was revamped based on more qualitative and quantitative HAZOP-LOPA-SIL-QRA* while the entire process was improved through risk assessment to minimize risks in our processes.

*HAZOP: Hazard and Operability Study, LOPA: Layer of Protection Analysis, SIL: Safety Integrity Level
QRA: Quantitative Risk Assessment

To maintain a high level of safety in our operation, we ensure that safety requirements are met prior to undertaking the work through advanced, practical risk assessment, and all our activities comply with our safety plan. While work is in progress, safety supervisors are allocated to ensure voluntary safety compliance. When changes are needed, the risk assessment is resumed and the safety work plan is revised. If any part of the work is found to be unsafe during the operation, it is stopped until safety issues are rectified.

To make sure our SHEQ management system is operated effectively, we carry out objective safety environment diagnosis with some of the best experts in Korea. The Safety Environment Diagnosis is conducted on a regular team-by-team basis through a quantified checklist. We use advanced techniques so the areas of Human, Facilities, System / technology, and Emergency Response can be identified in a comprehensive and consistent manner. In addition, we conduct an API* safety environment diagnosis every three years at our workplace while conducting an assessment of safety culture every two years to identify the areas of improvements and continue to raise the level of safety.

*API: American Petroleum Institute

Emergency Response

At GS Caltex, we established an Emergency Response Team in 2014 to expedite our emergency response process in case of industrial disasters, safety and environmental accidents, and natural disasters such as earthquakes and typhoons 24 hours a day. Based on the 'GS Caltex Emergency Response Manual', we clarify the responsibilities of our employees in emergency situations while simplifying our reporting system so that we can promptly respond when an accident occurs. At each workplace, an emergency response scenario is prepared. Training is conducted on a monthly basis while unannounced emergency response training is conducted at our headquarters. The Yeosu Complex has a system of dispatching 200 emergency personnel as the first line of response, and 100 personnel as the second line of response. In addition, we are making largest scale efforts in Korea to minimize death and environmental and property damage through fire drills.

Health Management in the Workplace

At GS Caltex, we provide various healthcare programs and facilities to help our employees maintain their health and deal with musculoskeletal disease, smoking, and metabolic syndrome. At the Yeosu Complex, we are operating a clinic with specialized medical staff including doctors, nurses, clinical pathologists, and emergency rescue personnel and the latest medical equipment. The clinic can provide basic medical service such as first aid treatment, blood tests, hearing tests, and X-ray examinations as well as follow-up inspection if necessary. We also provide various healthcare supports including MSDS* management, protective gear, and work environment analysis for our employees.

*MSDS(Material Safety Data Sheet)

Industrial Safety & Health Indicators

Classification		Unit	2014	2015	2016
Employees/Partners TRIR*		-	0.12/0.07	0.03/0.07	0.03/0.10
Employees/Partners DAFWR**		-	0.09/0.07	0.00/0.07	0.03/0.03
Work-related Death of Employees	Male	No. of People	0	0	0
	Female	No. of People	0	0	0
Work-related Death of Partners' Employees	Male	No. of People	0	0	1
	Female	No. of People	0	0	0

*TRIR(Total Recordable Incident Rate): Number of incidents (any injuries, illnesses, and fatalities excluding those equivalent to or less serious than incidents requiring first aid) that occur every 200,000 working hours

**DAFWR(Days Away From Work Rate): Number of incidents that cause a loss of one or more days' work every 200,000 working hours

Our Commitment

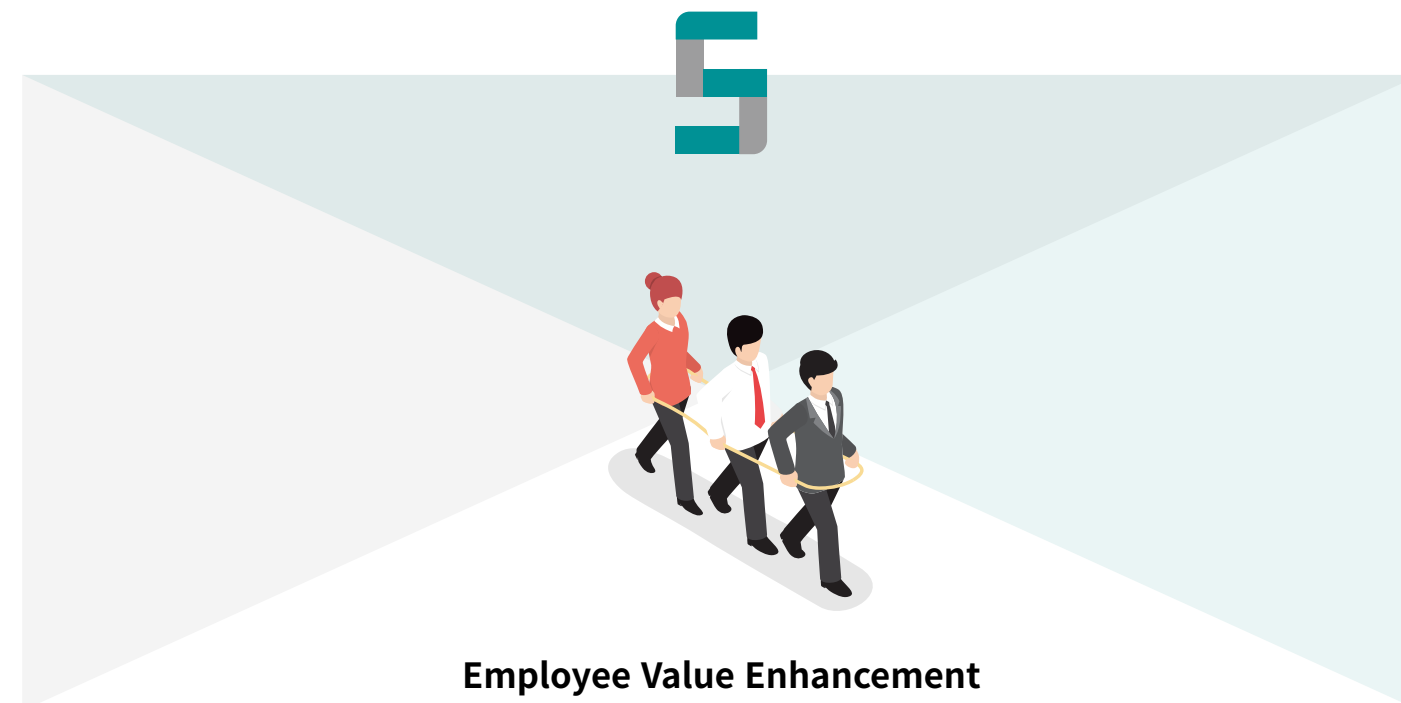
At GS Caltex, we will improve and expand our safety system by:

- ◆ Incorporating the SHEQ Management System in our safety practice
- ◆ Implementing Safety Culture Transformation Program
- ◆ Undertaking safety inspection and management activities with focus on leak prevention, vulnerable facilities, safety analysis, and reliability of facilities with A+ rating
- ◆ Internalizing PSM activities
- ◆ Analyzing the safety environment in all workplaces
- ◆ Conducting unannounced emergency response training in response to earthquake

Core Issue 4. ESG Data

Category	ESG Indicators	Data Summary	Report Page	Global ESG Standards
Governance	<ul style="list-style-type: none"> Integrated management system for safety culture and crisis response throughout the supply chain and research/production cycle 	PSM(Process Safety Management) is operated systematically	39	<ul style="list-style-type: none"> SASB NR0101-19
Society	<ul style="list-style-type: none"> A description of the processes and programs that recognize the local and global issues of employees' health and produce outcomes and plans Explanation of current healthcare systems and recent improvements 	<ul style="list-style-type: none"> Healthcare programs are provided(e.g. musculoskeletal disease prevention program, smoking cessation program, metabolic syndrome management) Affiliated clinics with medical staffs(e.g. doctors, nurses, clinical pathologists, paramedics) are operated MSDS management, protective gear, and work environment analysis are supported 	41	
	<ul style="list-style-type: none"> Applicability of safety and health policies to partners 	<ul style="list-style-type: none"> The development of expertise and a Safety and Health Management System (KOSHA18001) is supported Safety Environment Contest and Work Certification System are implemented 	40	<ul style="list-style-type: none"> ISO26000 6.4.4 IPIECA HS2 C1, S1
	<ul style="list-style-type: none"> Availability of formal documents and process for employees' health and safety when introducing/ changing processes 	Processes are implemented or changed in accordance with Chapter 4-1-1 'Facility Change Management Procedures' of the Common Business Procedures. Through this process, the risk of introducing/changing processes is analyzed in detail for the consideration of employees' safety and health	-	
	<ul style="list-style-type: none"> Percentage of business sites certified by OHSAS 18001 	20%(3 out of 15 sites, Busan/Incheon Terminal, Incheon Lubricant Plant) ※For business sites that are not certified, the Safety and Health Management System is established for self-analysis at the level of a certified one	-	
	<ul style="list-style-type: none"> Safety and health issues subject to formal agreement with labor union 	Subject to formal agreement		
	<ul style="list-style-type: none"> Percentage of Industrial Safety and Health Committee representing employees working under the organization's exclusivity 	100%	-	<ul style="list-style-type: none"> GRI 403-1,4 ISO26000 6.4.4/6.4.6 UNGC Advanced 6-8
	<ul style="list-style-type: none"> Level of operation in Industrial Safety and Health Committee 	Composed of 7 members, held once every quarter		
Society	<ul style="list-style-type: none"> TRIR(Total Recordable Incident Rate) and DAFWR (Days Away From Work Rate) No. of death of employees/partners' employees 	The data for 3 years are disclosed through the sustainability report	41	<ul style="list-style-type: none"> GRI 403-2-3 ISO26000 6.4.6/6.8.8 UNGC Advanced 6-8 EU Directive Art.19a(1)(d) DJSI 3.6.2-6 SASB NR0101-17 IPIECA HS2 C1, S1
	<ul style="list-style-type: none"> Membership status of industrial or other associations 	<ul style="list-style-type: none"> Korea Institute of Hazardous Materials PSA Maekyung Safety and Environment Research Institute National Industrial Health Committee Korea Institute of Safety Korea Industrial Hygiene Association Korea Occupational Nursing Association 	41	<ul style="list-style-type: none"> GRI 102-13
Environment	<ul style="list-style-type: none"> Availability of BCP(Business Continuity Plan) 	<ul style="list-style-type: none"> Emergency Response Team was established in 2014 Emergency response manual is available for prompt response from employees Internal emergency training is carried out in each business site on a monthly basis Emergency response training is conducted by the headquarters The Yeosu Complex has a system of dispatching 200 emergency personnel as the first line of response and 100 personnel as the second line of response 	41	-

※DJSI corresponds to Oil&Gas Refining&Marketing sector



Employee Value Enhancement

Context & Challenge

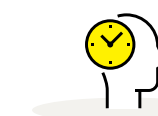
Human resources are an essential part of maintaining a company's competitive advantages in the refining industry where industrial growth and technology are at a mature level. Securing superior human resources and fostering competency are the first priority for companies because their reputation and value depend on them. Due to increasing uncertainty in the business environment, it is necessary to strengthen internal competency and train humans to achieve sustainable growth. From the social perspective, there are many issues related to Labor-Management relations and work-life balance, and as a result, hiring and retaining employees is more important than ever.

Contents of Report	Relevant Issues	Importance	Major Stakeholder	GRI Standards Disclosure Title (Scope of Topic)
<ul style="list-style-type: none"> Employment and retention of talented individuals Systematic human resource development Welfare system for work-life balance Activities for effective internal communication 	Employment and retention of human resources	Key Issues	<ul style="list-style-type: none"> Employees 	<ul style="list-style-type: none"> GRI 202: Market Presence(internal) GRI 401: Employment(internal) GRI 402: Labor/Management Relations(internal) GRI 404: Training and Education(internal) GRI 405: Diversity and Equal Opportunity (internal) GRI 406: Non-discrimination(internal) GRI 407: Freedom of Association and Collective Bargaining(internal) GRI 408: Child Labor(internal) GRI 409: Forced or Compulsory Labor(internal)
	Discrimination and diversity issues	Reporting Issues		
	Labor-Management relations	Reporting Issues		
	Performance training programs	Reporting Issues		
	Work-life balance	Reporting Issues		
Internal communication	Reporting Issues			

Highlights

Average Years of Employment

15.3 Years



Labor Disputes

0 Cases



Our Progress

Employment and retention of talented individuals

Fair and Objective Recruiting Procedure At GS Caltex, we recognize the importance of human resources for sustainable growth and value diversity. We also focus on the actual qualifications of our employees rather than their academic background. To do this, we simplified our application process and removed the foreign language test score from the qualifications while focusing on job competency. We provide equality opportunities in job application using an online system. The applicants are tested for their personal values and competency for the job as well as knowledge in our nation's history. Also, our interviewers are not allowed to view their academic records: applicants are thus judged based on their level of competency. We also diversified our hiring process and introduced an academy-industry internship program, chemical engineering leadership, and mentoring program to recruit talented, qualified individuals. Our internship program allows us to hire talented individuals while providing an opportunity for applicants to prove their qualifications and experience what it is like to work for our company. The chemical engineering leadership is a course that is co-established by the company and the university and allows the executive officers of our company to share their know-how and knowledge in practice with students. Meanwhile, the mentoring program helps students to gain working knowledge and an understanding of business practices from our employees. Based on these systems, we recruit individuals who are fully qualified for each job while providing more information about our company and jobs for our applicants.

Fair Performance Evaluation and Compensation At GS Caltex, any discrimination in wage, evaluation, and promotion based on gender is strictly prohibited. Our performance evaluation and compensation system is designed to increase job satisfaction and motivate our employees by keeping the system fair and effective. The compensation system is based on the evaluation. When it comes to our evaluation system, we categorize based on their jobs and positions and ensure that their performance is evaluated based on their roles and responsibilities in a fair and objective manner. When setting business goals and during the mid and end-year review, we closely align employees' goals with our business objectives to drive success and conduct an interview to review on their progress and seek ways to improve their performance. At the end of the year, we evaluate performance using a descriptive form to consider both quantitative and qualitative aspects and apply them for their development and compensation. To improve the level of fairness and acceptability of performance evaluation, evaluators are required to record their observation at all times. The follow-up interview, feedback system, and objection system regarding the results of evaluation have also been implemented. Our compensation system is managed in line with performance evaluation to ensure that our employees stay fulfilled and motivated. The level of compensation for our employees is determined based on their individual performance, level of contribution, and importance of their jobs. High performers are rewarded with additional incentives to motivate them. In 2016, the highest earner received 9.45 times of the average base salary of employees. At GS Caltex, we will continue to improve our compensation system to make sure that our employees' performance is fully recognized and rewarded in a fair, objective manner.

Employment and Evaluation Indicators

Classification	Unit	2016
Newly Employed		108
By Age	Less than 30	97
	30-50	11
	More than 50	0
By Gender	Male	93
	Female	15
By Location	Headquarters/Province	38
	Yeosu Complex	70
New Employee Wage	Production & Engineering	3,425
	Office Staff	4,250
Percentage of Wage Against Minimum Wage in 2016	Production & Engineering	226
	Office Staff	281
Percentage of Employees Subject to Performance & Career Review*		88
Percentage of Employees Subject to Performance Evaluation by Senior Manager*		88
Percentage of Employees Subject to Multi-aspect Evaluation**		94
Percentage of Employees Subject to Relative Evaluation***		90
Status of Female Employees	Executive Officers	0
	Head of Department or Higher Position	13
	Manager or Higher Position	95

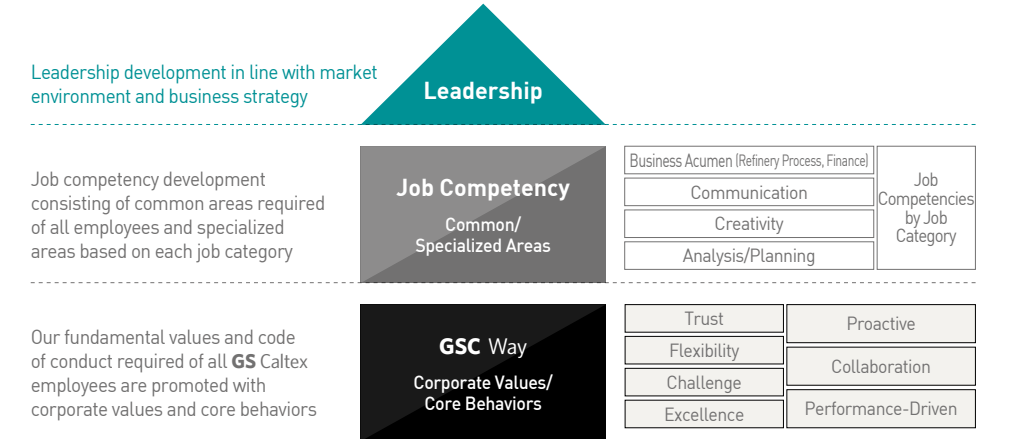
*Percentage of employees subject to setting goal/mid-term review/year-end evaluation
 Percentage of employees subject to self-evaluation and evaluation by senior manager *Exclusive of absolute evaluation group

Labor-Management Indicators

Classification	Unit	2014	2015	2016
Union Members	Members/Eligible Employees	1,298/1,769	1,294/1,804	1,289/1,796
Full-time Union Members	No. of People	3	3	3
Associated Groups	-	-	-	-
No. of Labor Dispute Cases	Cases	-	-	-

Labor Practice for Shared Growth At GS Caltex, we uphold the freedom of association and the right to collective bargaining. We also prohibit any kind of forced labor and child labor in all our workplace. On December 9, 2005, we established the 'Declaration and Charter for Harmonious Labor-Management Relations' to realize our vision of 'Shared Growth based on Productive Labor-Management Relations'. Based on this declaration, we have implemented various Labor-Management programs to build Labor-Management relations for shared growth and development. Through the collective agreement, we maintain ongoing communication channels with its full-time union officials. As a Labor-Management consultative body, we have the Labor-Management Council (7 members from each side for discussing working conditions and work-related matters) and the Industrial Safety and Health Committee (7 members from each side for discussing industrial safety and health issues). We are also engaged in the bargaining process to determine wages for employees every year and negotiate for the renewal of collective agreement to discuss labor union activities and working conditions every two years.

Systematic human resource development



At GS Caltex, we have established our competency model based on the 'GSC Way', 'Job Competency', and 'Leadership' for our talent development program. The 'GSC Way' refers to our organizational values and essential conduct, and 'Job Competency' consists of several areas of expertise that are required to perform the job. 'Leadership' includes the qualities that leaders must have in order to achieve our company's vision. Our training programs are oriented towards practice and are designed with special leadership training, job training, coaching / mentoring, various experience courses, and external degree programs. It has both short and long-term courses. All employees can develop their own training plan based on the results of the competency analysis and choose training course accordingly.

Leadership Development Program At GS Caltex, we provide training programs for all our employees on a regular basis to help them improve their job competency and skills at each stage of growth. We select and foster candidates for team leaders through the LDC (Leadership Development Center), our internal leadership program. We also evaluate the leadership of our executives and team leaders from multiple perspectives and provide them with feedback on a yearly basis.

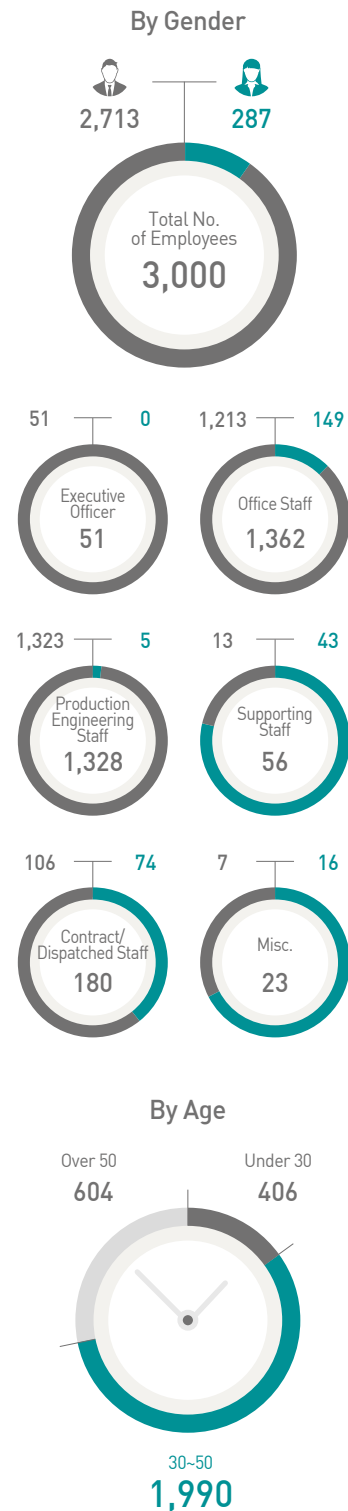
Coaching/Mentoring Program We have organized a coaching program for our executives and team leaders to help them improve the leadership skills required to perform their duties. Our internal coaching program helps employees to adapt to organizational environment and bring out their full potential. Our mentoring program in which team leaders or seniors play the role of mentors is also available to new employees during their first and second years of employment.

Talent Development Indicators

Classification	Unit	2016
Training Cost (internal/external) exclusive of indirect cost	KRW 100M	39

CORE ISSUES

Employee Status by Gender/Age
(As of 2016, Unit: People)



Job Competency Development Program Our job competency model consists of common areas required of all employees and specialized areas based on each job category. To develop job competency in the common areas, we provide business courses dealing with the refining process and corporate finance as well as courses for improving individual communication skills, creativity, and planning and analysis skills. The specialized areas are developed based on an analysis of all the jobs and tasks in our organization and built into the training programs.

Individual Talent Development Program We provide selected individuals with the opportunity to earn various academic degrees including MBAs in eminent domestic or global colleges and training programs at global companies such as Chevron to help them reach their full potential. We also provide opportunities for our employees to take various courses and external education programs in their areas of expertise when needed.

Welfare system for work-life balance

Healthcare Support We provide medical expenses for our employees and their family members as part of our employee health care program. For our employees and their spouses, we cover full medical expenses in excess of KRW 50,000 and up to KRW 3 million for their children not older than 24 years of age. For prosthodontics expenses, we cover 50% of the expenses up to KRW 3 million for 3 years after deducting KRW 50,000 from their wages.

Group Insurance Support We provide our employees with optional group insurance which covers injuries, death, disability, and hospitalization up to KRW 100 million(maximum KRW 200 million) in case of death caused by industrial disaster.

Parental Leave Employees are allowed to take parental leave up to 1 year for children up to 8 years old or in second grade of elementary school. The parental leave can be split 1 time.

EAP(Employee Assistance Program) Support We offer professional counseling program for our employees and their family members regarding their professional and personal lives, as well as legal and financial matters.

Educational Support As part of our employee educational support program, we provide 50% of the tuition if an employee receives a higher level of education while covering 100% for their children if they go to regular schools and colleges authorized by the Minister of Education. We also allow our employees to receive full performance-based scholarships to promote their academic performance.

Livelihood Support As part of our employee welfare program, we provide them with a loan at an annual interest rate of 1% up to KRW 50 million when they purchase or lease a house (up to 85m² in area for exclusive use). We also give our employees a loan at an annual interest rate of 1% up to KRW 10 million when they get married.

Selective Welfare System To meet our employees' varying needs, we have implemented a selective employee welfare system. We give our executive officers and staff 350,000 points and 2 million points (1 point = KRW 1) which they can spend for cultural activities and sports facilities. The amount they spent is settled by our company system.

Maternity Support We established a nursing room and relaxation room in our headquarters to help our female employees during or after their pregnancy.

Other Forms of Support We provide resort facilities and a condominium for our employees and support their social club activities to help build teamwork while distributing tickets for sporting events for boosting morale. We also have a daycare center for our employee's children at the headquarters and production facilities.

Activities for effective internal communication

Open Communication Space 'Jieum'

At GS Caltex, we set up a place for open communication on the 27th floor(760m²) of our GS Tower to promote communication and collaboration among our employees in 2015. The word 'Jieum' means creating new ideas and connecting with people through communication. The place was designed to promote collaboration among employees and teams, foster new ideas, and engage in organizational cultural activities. Jieum Academy, Jieum Talk, and Jieum TIME are held on a regular basis. The Jieum Academy is designed to give lecture on business trends that can be applied in daily practice and in 2016, we gave 10 lectures attended by 600 employees. The Jieum Talk is for learning and sharing ideas about a specific topic, and 150 employees joined in 2016. The Jieum TIME is for exchanging knowledge, experience, and topics of interest providing opportunities for communication. In 2017, we are going to implement the Jieum Academy and Talk in other regions. Furthermore, various exhibitions (corporate history, vacation photo gallery) and campaigns including 'Good Manners' where we display posters about business manners are also organized at the Jieum.

Internal Communication Channel

We established an online internal communication channel called 'Nanumteo' to encourage our employees to share their ideas, improve work processes, and discuss new business ideas and specific topics. In 2016, more than 100 ideas were presented and applied in practice after reviewed by the relevant teams. In 2017, we are going to take this online communication platform to the next level by creating a discussing forum and collecting ideas from employees to promote communication and collaboration.

HR-related Indicators (3 Years)

Classification	Unit	2014	2015	2016
Total No. of Employees		3,059	3,079	3,000
By Employment Type	Executive Officer	55	52	51
	Office Staff	1,450	1,447	1,362
	Production Engineering Staff	1,313	1,351	1,328
	Supporting Staff	51	55	56
	Contract/Dispatched Staff	152	144	180
	Misc.	38	30	23
By Location	Seoul, etc.	1,406	1,373	1,326
	Yeosu	1,653	1,706	1,674
Employees Subject to Pension System		2,809	2,738	2,771
No. of Retirees		322	257	170
Retirement Rate		10.5	8.3	5.7
Percentage of Female Employees	%	10.4	9.1	9.6
Percentage of Employees with Disabilities		1.71	1.61	1.5
Average Years of Employment	Years	15.1	15.3	15.3
Newly Employed	No. of People	50	90	108

Our Commitment

At GS Caltex, we promise to enhance our employee value by:

- ◆ Recruiting and fostering talent
- ◆ Building Labor-Management relationship for shared growth
- ◆ Implementing fair and objective performance evaluation and compensation systems
- ◆ Helping our employees maintain a healthy work-life balance
- ◆ Building a corporate culture based on communication

Core Issue 5. ESG Data

Category	ESG Indicators	Data Summary	Report Page	Global ESG Standards
Governance	<ul style="list-style-type: none"> • Compensation determination process • Brief description of the employee incentive system • Collecting feedback on compensation from stakeholders 	<ul style="list-style-type: none"> • An objective performance evaluation system is available • Performance-based compensation system has been implemented 	44	<ul style="list-style-type: none"> • GRI 102-36-37 • ISO26000 6.2 • UNGC Advanced 1,20 • DJSI 3.4.2
	<ul style="list-style-type: none"> • Reporting the right to join labor unions and group association. 	The right to associate is protected	45	<ul style="list-style-type: none"> • GRI 407-1 • ISO26000 6.3.10 • UNGC
	<ul style="list-style-type: none"> • Percentage of union employee 	71.8%(1,289 employees/1,796 employees)	45	<ul style="list-style-type: none"> • GRI 102-41 • ISO26000 5.3 • UNGC Advanced 3-5 • DJSI 3.2.3
	<ul style="list-style-type: none"> • Number of negotiations/agreements made with the union regarding changes in business management 	0(no significant changes in business management)	-	<ul style="list-style-type: none"> • UNGC Advanced 3-8 • DJSI 3.2.1
	<ul style="list-style-type: none"> • Percentage of female managers [executive officer/head of department/team manager] 	0/13/95(No. of People)	44	<ul style="list-style-type: none"> • UNGC Advanced 3-8 • DJSI 3.2.1
	<ul style="list-style-type: none"> • Ratio of new employee's wage against minimum wage by gender 	Production Engineering 226%, Office Staff 281% (There is no discrimination)	44	<ul style="list-style-type: none"> • GRI 202-1~2 • ISO26000 6.8.1~2
	<ul style="list-style-type: none"> • Percentage of local senior executives 	100%	-	
	<ul style="list-style-type: none"> • Lack and variability of minimum wage(gender) 	Not applicable	-	
	<ul style="list-style-type: none"> • Employee composition (gender/age/location/employment type) • Wage of female employees against male employees • Percentage of employees with disabilities • New employees (gender/age/location/employment type) • Percentage of employees subject to regular performance and career development review • Retirement rate • Number of discrimination cases and measures taken 	<ul style="list-style-type: none"> • Any discrimination in wage, evaluation, and promotion against gender is strictly prohibited • The detailed indicators on employee composition are disclosed through the sustainability report 	45~47	<ul style="list-style-type: none"> • GRI 102-8/401-1/404-3/405-1~2/406-1 • ISO26000 6.2.3/6.3.7/6.3.10/6.4.3/6.4.7/6.8.5 • UNGC Advanced 3-8 • EU Directive (7)[18]/Art.19a[1][a]/[b][7] • DJSI 3.2.1~2/3.4.1
	<ul style="list-style-type: none"> • Compensation system for regular employees is not available for non-regular or part-time employees. • Number of employees who have taken parental leave 	<ul style="list-style-type: none"> • Welfare and benefits for maintaining work-life balance e.g. medical expense, group insurance, and parental leave • Number of employees who have taken parental leave: 19 • Number of employees who have returned from parental leave: 8 	46	<ul style="list-style-type: none"> • GRI 401-2~3 • ISO26000 6.4.6/6.4.4 • UNGC Advanced 6-8 • EU Directive (7)
	<ul style="list-style-type: none"> • Number of employees who are on pension system 	2,771 employees	46	<ul style="list-style-type: none"> • GRI 201-3 • ISO26000 6.8.7
<ul style="list-style-type: none"> • Actions taken to abolish child and forced labor • Reporting on business sites with a risk of child labor • Actions taken to prevent child and forced labor • Employee training on human rights policies and processes • Corporate policies on human rights 	<ul style="list-style-type: none"> • International Labor Organization Standards and UNGC Principles are complied • Forced or child labor is strictly prohibited • Voluntary compliance programs for the prevention of sexual harassment and human rights have been implemented 	10, 61	<ul style="list-style-type: none"> • GRI 408-1/409-1/412-2 • ISO26000 4.8/6.3.1-2/6.3.5/6.4.1-2 • UNGC Advanced 3-5 • EU Directive Art.19a[1][e] 	
<ul style="list-style-type: none"> • Corporate policies and approach on non-retaliation and grievance handling system • Quantitative data on non-retaliation and grievance handling system • Reporting on the efforts for social communication with employees 	<ul style="list-style-type: none"> • Ideas for improvement and new business, and issues are discussed and shared through the Nanumteo Program (100 ideas are registered in 2016) • There are the communication Space(Jieum), newsletters and SNS activities 	47	<ul style="list-style-type: none"> • ISO26000 6.3.6/6.4.5 • UNGC Advanced 3-5 • EU Directive Art.19a[1][e] 	
<ul style="list-style-type: none"> • Approach/frequency/scope of application for employee engagement • Reporting on how to handle grievance and issues of employees 	<ul style="list-style-type: none"> • Work process and performance are discussed through annual goal setting/mid-term review/year-end assessment • EAP (Employee Assistance Program) is available for supporting employees on their psychological, financial, and legal matters 	46	<ul style="list-style-type: none"> • IPIECA SE16 C1 	
<ul style="list-style-type: none"> • Cases, performance and participation of development programs • Investment in training and development for regular employees • Support for job performance improvement 	<ul style="list-style-type: none"> • Leadership development, coaching/mentoring and job performance development programs are available • KRW 3.9 billion was invested for training in 2016 	45	<ul style="list-style-type: none"> • GRI 404-2 • ISO26000 6.3.5/6.4.7/6.8.5 • UNGC Advanced 6-8 • EU Directive (7) • DJSI 3.3.3 • IPIECA SE17 C2 	
<ul style="list-style-type: none"> • Minimum notification period for changes in business management that have significant impact on employees • Availability of notification period and negotiation terms on collective agreement 	<ul style="list-style-type: none"> • Employees are notified 30 days prior to termination of employment with justified cause, and 50 days for termination due to a business reason under Article 24 of the Labor Standards Act • A written notification for renewing collective agreement must be given at least 2 months before its expiration. Both parties must respond to collective bargaining at least 30 days before the expiration date. However, if there is no request for renewal, it is renewed automatically 	-	<ul style="list-style-type: none"> • GRI 402-1 • ISO26000 6.4.3/6.4.5 • UNGC Advanced 15-18 • EU Directive Art.19a[1][b] 	

※ DJSI corresponds to Oil&Gas Refining&Marketing sector



Context & Challenge

The society's needs for CSR activities continue to grow. As a part of their local communities, it is important for companies to make donations and volunteer to help their neighbors on a regular basis. Lately, more companies are taking the initiatives and leading CSR activities to solve mid and long-term social issues to meet the needs of local communities rather than focusing on giving donations. This means we need to become more involved in our role in creating social value while expanding contacts with many of our stakeholders, including the local community.

Contents of Report	Relevant Issues	Importance	Major Stakeholder	GRI Standards Disclosure Title (Scope of Topic)
<ul style="list-style-type: none"> • Creating social value through CSR activities • Performing CSR activities for local communities • Investing in local communities through foundation activities 	<ul style="list-style-type: none"> Investment in local communities Expansion of CSR activities Protection of the rights of local communities 	<ul style="list-style-type: none"> Key Issues Reporting Issues Reporting Issues 	<ul style="list-style-type: none"> Local Communities NGO Employees 	<ul style="list-style-type: none"> • GRI 203: Indirect Economic Impacts(internal/external) • GRI 413: Local Communities (internal/external)

Highlights

Number of Children Helped by Mom Talk Talk (2013 - 2016)

9,747 Children



Number of volunteers per year

2,132 Persons



Number of Yeulmaru Visitors

106,688 Persons



CORE ISSUES

Our Progress



Creating social value through CSR activities

Mom Talk Talk is one of our key CSR activities where we help children and youth deal with the psychological and emotional issues in their life. Pursuing the belief that healthy relationships with their peers is important for our children to grow and become valuable members of our society, we have helped 9,747 children from 2013 to 2016 through this program.

The key to the art therapy program is helping children interact with each other to develop their social skills and build self-confidence through art activities such as painting, play, dance, and music. To provide support for children in psychologically and emotionally critical situations, we have been working with some of the best experts in Korea and are improving the effectiveness of art therapy through 208 hours of therapy sessions for 4 years and continuous supervision.

Introduced in 2013, the Mom Talk Talk Project has helped children from low income families, together with Good Neighbors. We formed partnership with the Ministry of Education[Art Therapy for Students Dealing with School Life] to collaborate on the Wee Project, which the ministry is undertaking to help students deal with school life.

The psychological/emotional support program of the Mom Talk Talk Project is divided into three areas. 'Mom Talk Talk Therapy' is designed to help children who are having a difficult time adjusting to school deal with depression, anxiety, and low self-esteem. 'Mom Talk Talk Healing Class' is for helping middle school students improve their relationships with classmates. 'Mom Talk Talk Healing Camp' gives students opportunities to experience positive relationships with their peers by camping for 3 days in a new environment and helping them deal with psychological and emotional problems. In 2016, we organized special art therapy programs for teenagers on probation in the eastern part of Jeonnam and children from North Korean defectors. Our stakeholders have responded to our efforts in these areas with great enthusiasm and support.

The Mom Talk Talk Project collaborates with the Ministry of Education, Good Neighbors, Korea Hana Foundation, Korea Educational Corps, Ministry of Justice Love Committee, Jeonnam East Area Association, Community Chest of Korea, and the Music Therapy Department of Ewha Womans University. Our partnership with Community Chest of Korea makes the project more transparent and stable. In addition, some of the resources for the project are donated by our employees with matching grants from the company.

Mom Talk Talk Program Summary

Classification		2013	2014	2015	2016	Total
Mom Talk Talk Therapy	No. of Organizations	13	16	32	35	96
	No. of Children	1,410	1,278	1,453	1,529	5,670
Mom Talk Talk Healing Class	No. of Schools		3	24	5	22
	No. of Children		560	1,484	730	2,774
Mom Talk Talk Healing Camp	No. of Camps	6	2	4	1	13
	No. of Children	738	292	208	65	1,303
Total(No. of Children)		2,148	2,130	3,145	2,324	9,747

Number of Volunteers for GS Caltex Share the Love (2008 - 2016)

35,000 Volunteers



GS Caltex Scholarship Granted (1996 - 2016)

KRW 5.7 billion



Performing CSR activities for local communities

CSR Activities for Improving Quality of Life in Local Communities Since May 2008, we provide free meals for more than 350 senior citizens a day for 5 days a week as part of our 'GS Caltex Share the Love' program. As of December 2016, more than 690,000 meals have been provided. The GS Caltex Employees Volunteer Club and Wives Club, and the GS Caltex Retired Employees Club participate in this project and 29 local volunteer service groups with 18 volunteers participating each day. So far, more than 35,000 volunteers were recorded to have participated in this program, setting a great example for the community. As a result, the GS Caltex Share the Love Volunteer Group received won the Presidential Prize for the 2016 Korea Sharing Award. In April 2016, GS Caltex signed the 'Mom Talk Talk Art Therapy Support Agreement' with the Suncheon Office of the Gwangju District Public Prosecutors' Office and Jeonnam East Area Association (Justice Department Beosarang Committee). Through this agreement, GS Caltex will help 119 teenagers in probation to lead healthy lives and reach their full potential by providing music therapy(playing instruments, music composition lessons). We will continue to help troubled youth through this program. Since 2010, we have organized the 'Heemang Energy Class for Local Children's Centers' where children get to experience jobs, pursue their dreams, and learn about the environment at local children's centers in Yeosu. So far, more than 2,100 volunteers participated in this cause, and programs vary each year. In 2016, with the theme of 'Catch Your Job', more than 500 children experienced and learned about different jobs through various programs from May to November. 800 copies of the Case Study Book, which describes and reviews the experience and various volunteer activities, were distributed to Yeosu City, Yeosu Education Support Agency, Yeosu Regional Children's Center, Yeosu Youth Center, and Yeosu YWCA. We also have provided 'English Lessons with Native Speakers in Remote Areas' for students from 5 schools with inadequate educational resources since March 2007. Various programs for creating emotional connections were provided as native English teachers lived on the islands, and these lessons were met with great enthusiasm from the residents. In addition, we provided KRW 5.7 billion in scholarships to more than 7,900 middle school, high school, and college students in Yeosu from 1996 to 2016 as part of our 'GS Caltex Scholarship Program'. Since 2006, the Labor-Management parties have provided financial support of KRW 720 million for the last 11 years to provide school uniforms for underprivileged students, after school YMCA academy program, and night classes for middle

'Environmental Education for Children' for a Sustainable Future Since 2012, we have organized the Green Energy School Program in a joint effort with the Green Fund to raise awareness in climate change and energy conservation for elemental school students. Through this program, we developed an environmental education kit called 'Aseul Aseul Earth' with which instructors visit schools and educate children on the importance of environment. We also organize environmental cleaning activities around the Yeosu Complex and local terminals.

'GS Caltex Volunteer Groups' Sharing Love As part of our local community, our employees organized 'GS Caltex Volunteer Groups' in Yeosu where our major workplaces are located in order to help our neighbors in need through various volunteer programs. There are 32 individual volunteer groups in our company, and they engage in more than 20 volunteer programs each month, including the one-on-one mentoring program for teenagers, providing electrical and boiler repair service, and taking pictures for funerals. They also volunteer to serve free meals for senior citizens and support the disability experience program. In 2015, a new volunteer group was formed by employees' children, and they volunteered to make furniture, fix houses, and deliver charcoal briquettes for underprivileged families with the Hatbit Volunteer Group from Seoul National University. In addition to individual volunteer groups, we continue to engage in volunteer programs at a corporate-wide level. Since 2005, we have engaged in various volunteer programs every May as part of the celebration for our corporate anniversary and have donated rice and household goods worth KRW 100 million as part of the 'Hangawi Charity Event' during the Chuseok holidays. We also donate Kimchi, heating fuel, and charcoal briquettes for those in need at the end of each year. In the second half of 2015, we organized the 'I am your GS Caltex' program where we invite middle school students to our company, provide counseling services, and help plan their future careers as part of the FKI Career Planning Network program. The 'I am your GS Caltex' program was commended by the Minister of Education in January 2017 for its contribution to the school's free-term system.

Investing in Local Communities through Foundation Activities

GS Caltex is committed to fulfilling our social responsibility for the development of our local communities and improving people's quality of life by building infrastructure for art and culture at a level suitable for the city that hosted the Yeosu Expo 2012.

Opened in May 10, 2012, the Yeosu Culture & Arts Park - GS Caltex Yeulmaru is a landmark on the south coast of the Korean Peninsular in which GS Caltex has invested more than KRW 110 billion since 2007. The name 'Yeulmaru' carries the meaning of 'a space full of the rolling waves of culture and art and where people can relax as if they were lying on the floor of a traditional house'. It represents a great example of collaboration among a corporation, local government, and communities for building infrastructure for culture and art. It is fully equipped with state-of-the-art audio and lighting facilities. The Grand Theater can accommodate 1,021 seats, and the Small Theater can accommodate 302 seats. The park also features multi-purpose exhibition halls taking the culture and art experience in Yeosu to the next level and meets the local communities' need for cultural spaces. Yeulmaru features a wide variety of genres including classical, opera, musical, concert, ballet, and plays to extend the opportunities for people to enjoy quality cultural and art content.

CSR Activities Indicators

Classification	Unit	2014	2015	2016
Amount of Social Contribution*	KRW 100M	114	139	356
Number of volunteers per year	No. of People	1,967	1,460	2,132
Annual Number of Visitors to Yeulmaru	No. of People	106,602	106,739	106,688
Annual Number of Concerts & Exhibitions	Frequency	352	328	331

*This is for the purpose of making social contribution, and this figure is different from the donation amount specified in the business report

Our Commitment

At GS Caltex, we will carry out the following CSR activities:

- ◆ Increasing the social value of 'Mom Talk Talk'
- ◆ Encouraging the participation of our employees in volunteer programs
- ◆ Continuing CSR programs for our local communities
- ◆ Launching Jangdo Project(2nd Part of Yeulmaru) and completion of Yeulmaru

Core Issue 6. ESG Data

Category	ESG Indicators	Data Summary	Report Page	Global ESG Standards
Society	<ul style="list-style-type: none"> Statement on CSR policies, programs and procedures Social development programs based on the needs of local communities Percentage of business sites that engage in local communities and perform impact assessment and development programs 	<ul style="list-style-type: none"> All business sites engage in local community activities CSR products/local community contribution activities and art culture promotion programs are undertaken 	49-52	<ul style="list-style-type: none"> GRI 203-1/413-1 ISO26000 6.3.9-10/6.8.1-6.8.2/6.8.7/6.8.9 EU Directive Art. 19a(1)(a)/(b)(7) DJSI 3.5.1-2
	<ul style="list-style-type: none"> CSR performance(donation/number of participants) 	KRW 35.6B/2,132 participants	52	
	<ul style="list-style-type: none"> Disclosure of social value creation programs Assessment of social and environmental impact 	<ul style="list-style-type: none"> Disclosed through the sustainability report The benefits of CSR projects are analyzed 	49-52	<ul style="list-style-type: none"> DJSI 1.7.3/1.7.5
	<ul style="list-style-type: none"> Availability of process for handling complaints from local communities 	<ul style="list-style-type: none"> Anonymous ethical management reporting hotline is operated Customer service center and website are available 	11, 25	<ul style="list-style-type: none"> GRI 413-1 ISO26000 6.3.8/6.3.9/6.5.1-3/6.8/6.8.1-6.8.2 EU Directive Art.19a(1)(a)/(b)(7)
	<ul style="list-style-type: none"> Number of violation of natives' rights reported during the reporting period Reporting of status and measures taken 	Not applicable ※The Wu Yi San collision and oil spill in 2014 was reported in the 2015 Sustainability Report	11, 25	<ul style="list-style-type: none"> GRI 411-1 ISO26000 6.3.4/6.3.6-7 EU Directive Art.19.a(1)(d) IPIECA SE2 S1

※DJSI corresponds to Oil&Gas Refining&Marketing sector

APPENDIX

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GS Caltex Code of Ethics	60
UN Global Compact	61
Third Party Assurance Statement	62

Category	ESG Indicators	Data Summary	Report Page	Global ESG Standards
	• Creation and distribution of economic value	Detailed information about sales/employee salary and benefits/ investment in local community/purchase from partners/tax is disclosed	6-7, 17,23, 43-48, 52,55	• GRI 102-7/201-1 • ISO26000 6.8.1-6.8.3/6.8.7 • UNGC Advanced 1 • DJSI 1.6.2
	• Corporate profile	Detailed information about an organization's name/major brands, products and services/location of headquarters/ number of countries with business operation, major business sites/ownership structure and characteristics, and legal form/geographical location where products and services are provided/areas of business is disclosed	6-7, 17	• GRI 102-1-6 • ISO26000 6.3.10 • UNGC Advanced 1 • EU Directive Art.19a(a)
	• Changes in location and operation(e.g. opening/closing, shutdown, and expansion of facilities) • Formation, maintenance, and change in equity structure	There were no significant changes	-	• GRI 102-10
	• Risk monitoring/reporting of sustainability management • Adoption of principles and approach for prevention • A statement of alignment between corporate strategy and sustainability that high-level decision makers have identified • Measures taken to address the performance of the top decision-making body on how economic, environmental, and social topics are managed • Committees / executive officers and departments that manage sustainability • Role of the top decision-making body in identifying economic, social, and environmental topics and their impacts, risks, and opportunities	• Sustainability management system was built step-by-step • CSR Committee and related committee meetings are held on a regular basis • CEO Message is included in the sustainability report	5,12-13	• GRI 102-11/14/ 20-21/26-34 • ISO26000 5.2/6.2/6.3.5/ 6.7/7.4.2-3/7.8 • UNGC Advanced 1/19-20 • EU Directive Art.19a(a) • DJSI 1.1.5/1.2.1
	• Availability of staff in charge of environmental/ human rights/ labor issues • Appointment of executive officers who are responsible for economy, environment, and society • Right to report to the top decision-making body	• Environment: Head of Safety and Environmental Planning Division • Human Rights/Labor: Head of HR Office • Reported to the CSR Committee/committee in charge of sustainability	-	
Governance	• International standards/declaration/principles supported publicly	UNGC	61	• GRI 102-12
	• Corporate values, principles, standards, and code of conduct	Vision and code of conduct are specified	8	• GRI 102-16 • ISO26000 4.4 • DJSI 1.3.1
	• Policies/activities/system/training on fair business practice and anti-bribery and anti-corruption • Internal/external guidance/grievance handling programs for ethical and legal compliance • Percentage of employees taking ethics training • Scope of application for basic human rights activities/policies	• Systematic compliance is ensured • Corporate compliance management extended to partners and subsidiaries • Ethics education for all employees • Universal human rights policies for partners and customers (UNGC 10 Principles)	10-11, 61	• GRI 102-17/205-2 • ISO26000 4.4/ 6.6.1-6.6.3/6.6.5-6 • UNGC Advanced 12-14 • EU Directive Art.19a(1) [a][b]/Art.19a(1)(d)[7] • DJSI 1.3.1-2/1.3.4
	• Legal dispute in relation to ethical management within 5 years • Number of ongoing and past violations against fair competition and monopoly laws • Reporting of completed legal measures (incl. decision and judgement) • Major fines and non-financial restrictions caused by violations of regulatory requirements	• There is a Supreme Court ruling on general collusion and LPG collusion in 2015, but this was a decision for cases in 2007 and 2010. There were no new legal disputes between 2012 and 2016 • In March 2016, we were fined(KRW 14M) for the violation of the obligation to disclose the status of the corporate group in 2012 - 2015(4 years). The fine was paid in 2016, and risk management is underway to prevent recurrence by improving the internal disclosure process	-	• GRI 206-1/419-1 • ISO26000 4.6/6.6.1-6.6.2/ 6.6.5/6.6.7 • UNGC Advanced 9-11 • EU Directive Art.19a(1)[e]
	• List of stakeholders in relation to the organization • Participation of stakeholders during the reporting process • Corporate-wide activities for the engagement of stakeholder	A survey is conducted on stakeholders, and the results are shared with all employees on the intranet while being reflected for the selection of key issues	14-16	• GRI 102-42-44 • ISO26000 5.3 • UNGC Advanced 21 • DJSI 3.7.1-3
	• Compensation for CEO/Directors and Senior Executives • Composition of the Board of Directors • Committees under the Board of Directors • Corporate Governance including the Board of Directors • Information on Board Operations including Independence of Directors	Information on Corporate governance and the Board of Directors is provided through the sustainability report and business report	9	• GRI 102- 18,23-25,35,38/405-1 • ISO26000 5.2/6.2/6.2.3/ 6.3.7/6.3.10/7.8 • UNGC Advanced 1/3-8/ 19-20 • EU Directive (7)[18] • DJSI 1.1.1/1.1.3-8/ 1.1.10

※DJSI corresponds to Oil&Gas Refining&Marketing sector

Financial Data

Consolidated Statements of Financial Position

Unit: KRW 1M

Category	2016	2015
Assets		
Current assets		
Cash and cash equivalents	1,491,635	1,476,265
Accounts and notes receivable	2,921,621	2,563,708
Short-term financial assets	1,067,023	1,269,194
Inventories	3,321,618	2,797,562
Prepaid income taxes	268	1,316
Other current assets	113,905	99,319
Total current assets	8,916,070	8,207,364
Non-current assets		
Long-term financial assets	339,005	388,055
Investments in associates	288,254	275,251
Property, plant, and equipment	9,567,579	9,931,766
Investment property	58,638	41,049
Intangible assets	79,842	71,708
Deferred income tax assets	510	490
Other non-current assets	33,967	33,844
Total non-current assets	10,367,795	10,742,163
Total assets	19,283,865	18,949,527
Liabilities		
Current liabilities		
Accounts payable-trade	1,850,332	1,734,197
Short-term financial liabilities	3,353,708	3,301,649
Income taxes payable	345,302	145,002
Other current liabilities	87,280	63,920
Total non-current liabilities	5,636,622	5,244,768
Non-current liabilities		
Long-term financial liabilities	3,581,995	4,392,841
Employees benefits	35,677	88,385
Deferred income tax liabilities	137,210	189,776
Other non-current liabilities	51,032	61,243
Total non-current liabilities	3,805,914	4,732,245
Total liabilities	9,442,536	9,977,013
Equity		
Common stock	260,000	260,000
Capital surplus	68,330	68,330
Capital adjustments	-61,189	-61,189
Accumulated other comprehensive income	6,295	13,155
Retained earnings	9,567,893	8,692,218
Equity attributable to owners of the Parent Company	9,841,329	8,972,514
Non-controlling interests		
Total equity	9,841,329	8,972,514
Total liabilities and equity	19,283,865	18,949,527

Consolidated Statements of Income (Loss)

Unit: KRW 1M

Category	2016	2015
Sales	25,770,243	28,339,224
Cost of sales	-22,772,526	-26,206,935
Selling, general and administrative expenses	-857,317	-826,757
Operating profit	2,140,400	1,305,532
Share of profit (loss) of equity method accounted investees	11,874	1,894
Financial income	2,185,215	1,904,672
Finance costs	-2,433,336	-2,259,553
Other income	543,024	868,001
Other expenses	-621,763	-543,888
Profit (loss) before income taxes	1,825,414	1,276,658
Income tax expense	-408,413	-304,836
Profit (loss) for the year	1,417,001	971,822
Profit (loss) attributable to:		
Owners of the Parent Company	1,417,001	971,822
Non-controlling interests		

Consolidated Statements of Comprehensive Income (Loss)

Unit: KRW 1M

Category	2016	2015
Profit (loss) for the year	1,417,001	971,822
Other comprehensive income (loss), net of tax:		
Items that will not be reclassified to profit or loss		
Remeasurements of defined benefit liability	-2,502	-5,775
Changes in equity method accounted investee's capital	176	-782
Total	-2,326	-6,557
Items that will be reclassified subsequently to profit or loss		
Net change in unrealized fair value of available-for sale financial assets	82	1,846
Changes in equity method accounted investee's capital	-371	102
Effective portion of changes in unrealized fair value of cash flow hedges	-6,298	31
Foreign currency translation differences	-273	12,516
Total	-6,860	14,495
Total comprehensive income (loss) for the year	1,407,815	979,760
Total comprehensive income (loss) attributable to:		
Owners of the Parent Company	1,407,815	979,760
Non-controlling interests		

General Standards Disclosures

● Full ○ Partial ○ None **N/A** Not Applicable

GRI Standards	Disclosure Number	Description	Page	Status of disclosure	External assurance
Organizational profile					
GRI 102	102-1	Name of the organization	6	●	●
GRI 102	102-2	Activities, brands, products, and services	7	●	●
GRI 102	102-3	Location of headquarters	6	●	●
GRI 102	102-4	Location of operations	6	●	●
GRI 102	102-5	Ownership and legal form	9	●	●
GRI 102	102-6	Markets served	6	●	●
GRI 102	102-7	Scale of the organization	6	●	●
GRI 102	102-8	Information on employees and other workers	43-48	●	●
GRI 102	102-9	Supply chain	17, 22-23	●	●
GRI 102	102-10	Significant changes to the organization and its supply chain	54	●	●
GRI 102	102-11	Precautionary Principle or approach	12-13	●	●
GRI 102	102-12	External initiatives	61	●	●
GRI 102	102-13	Membership of associations	42, 61	●	●
Strategy					
GRI 102	102-14	Statement from senior decision-maker	5	●	●
GRI 102	102-15	Key impacts, risks, and opportunities	14-16, 18, 24, 31, 38, 43, 49	●	●
Ethics and integrity					
GRI 102	102-16	Values, principles, standards, and norms of behavior	8	●	●
GRI 102	102-17	Mechanisms for advice and concerns about ethics	10	●	●
Governance					
GRI 102	102-18	Governance structure	9	●	●
GRI 102	102-19	Delegating authority	9	●	●
GRI 102	102-20	Executive-level responsibility for economic, environmental, and social topics	12	●	●
GRI 102	102-21	Consulting stakeholders on economic, environmental, and social topics	14-16	●	●
GRI 102	102-22	Composition of the highest governance body and its committees	9	●	●
GRI 102	102-23	Chair of the highest governance body	9	●	●
GRI 102	102-24	Nominating and selecting the highest governance body	9	●	●
GRI 102	102-25	Conflicts of interest	9	●	●
GRI 102	102-26	Role of highest governance body in setting purpose, values, and strategy	9	●	●
GRI 102	102-27	Collective knowledge of highest governance body	12	●	●
GRI 102	102-28	Evaluating the highest governance body's performance	9	●	●
GRI 102	102-29	Identifying and managing economic, environmental, and social impacts	12-13	●	●
GRI 102	102-30	Effectiveness of risk management processes	12-13	●	●
GRI 102	102-31	Review of economic, environmental, and social topics	12-13	●	●
GRI 102	102-32	Highest governance body's role in sustainability reporting	12-13	●	●
GRI 102	102-33	Communicating critical concerns	12-16	●	●
GRI 102	102-34	Nature and total number of critical concerns	9, 12	●	●
GRI 102	102-35	Remuneration policies	9	●	●
GRI 102	102-36	Process for determining remuneration	54	○	●
GRI 102	102-37	Stakeholders' involvement in remuneration	54	○	●
GRI 102	102-38	Annual total compensation ratio	44, 54	○	●
GRI 102	102-39	Percentage increase in annual total compensation ratio	54	○	●

GRI Standards Index

General Standards Disclosures

● Full ○ Partial ○ None **N/A** Not Applicable

GRI Standards	Disclosure Number	Description	Page	Status of disclosure	External assurance
Stakeholder engagement					
GRI 102	102-40	List of stakeholder groups	14	●	●
GRI 102	102-41	Collective bargaining agreements	45	●	●
GRI 102	102-42	Identifying and selecting stakeholders	14	●	●
GRI 102	102-43	Approach to stakeholder engagement	14	●	●
GRI 102	102-44	Key topics and concerns raised	14-16	●	●
Reporting practice					
GRI 102	102-46	Defining report content and topic Boundaries	18, 24, 31, 38, 43, 49	●	●
GRI 102	102-47	List of material topics	18, 24, 31, 38, 43, 49	●	●
GRI 102	102-48	Restatements of information	52	●	●
GRI 102	102-50	Reporting period	2	●	●
GRI 102	102-51	Date of most recent report	2	●	●
GRI 102	102-52	Reporting cycle	2	●	●
GRI 102	102-53	Contact point for questions regarding the report	2	●	●
GRI 102	102-54	Claims of reporting in accordance with the GRI Standards	2	●	●
GRI 102	102-55	GRI content index	3	●	●
GRI 102	102-56	External assurance	62-63	●	●

Topic-Specific Standards Disclosures

● Full ○ Partial ○ None **N/A** Not Applicable

GRI Standards	Disclosure Number	Description	Page	Status of disclosure	External assurance
Energy					
Management Approach			31-37	●	●
GRI 302	302-1	Energy consumption within the organization	36	●	●
GRI 302	302-4	Reduction of energy consumption	36	●	●
Emissions					
Management Approach			31-37	●	●
GRI 305	305-1	Direct (Scope 1) GHG emissions	36	●	●
GRI 305	305-2	Energy indirect (Scope 2) GHG emissions	36	●	●
GRI 305	305-7	Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	35	●	●
Environmental Compliance					
Management Approach			31-37	●	●
GRI 307	307-1	Non-compliance with environmental laws and regulations	37	●	●
Employment					
Management Approach			43-48	●	●
GRI 401	401-1	New employee hires and employee turnover	44	●	●
GRI 401	401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	46	●	●
GRI 401	401-3	Parental leave	48	●	●

Topic-Specific Standards Disclosures

● Full ○ Partial ○ None **N/A** Not Applicable

GRI Standards	Disclosure Number	Description	Page	Status of disclosure	External assurance
Occupational Health and Safety					
Management Approach			38-42	●	●
GRI 403	403-1	Workers representation in formal joint management-worker health and safety committees	42	●	●
GRI 403	403-2	Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities	41	●	●
GRI 403	403-4	Health and safety topics covered in formal agreements with trade unions	42	●	●
Local Communities					
DMA			49-52	●	●
GRI 413	413-1	Operations with local community engagement, impact assessments, and development programs	52	●	●
GRI 413	413-2	Operations with significant actual and potential negative impacts on local communities	31	●	●
Marketing and Labeling					
Management Approach			24-30	●	●
GRI 417	417-1	Requirements for product and service information and labeling	30	●	●
GRI 417	417-2	Incidents of non-compliance concerning product and service information and labeling	30	●	●
GRI 417	417-3	Incidents of non-compliance concerning marketing communications	30	●	●

Other Standards Disclosures

● Full ○ Partial ○ None **N/A** Not Applicable

GRI Standards	Disclosure Number	Description	Page	Status of disclosure	External assurance
Economic Performance					
GRI 201	201-1	Direct economic value generated and distributed	17	●	●
GRI 201	201-2	Financial implications and other risks and opportunities due to climate change	31, 36	●	●
GRI 201	201-3	Defined benefit plan obligations and other retirement plans	47	●	●
Market Presence					
GRI 202	202-1	Ratios of standard entry level wage by gender compared to local minimum wage	44	●	●
GRI 202	202-2	Proportion of senior management hired from the local community	48	●	●
Indirect Economic Impacts					
GRI 203	203-1	Infrastructure investments and services supported	49-52	●	●
Procurement Practices					
GRI 204	204-1	Proportion of spending on local suppliers	23	●	●
Anti-corruption					
GRI 205	205-2	Communication and training about anti-corruption policies and procedures	10-11	●	●
GRI 205	205-3	Confirmed incidents of corruption and actions taken	10-11	●	●
Anti-competitive Behavior					
GRI 206	206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	10-11, 54	●	●
Water					
GRI 303	303-1	Water withdrawal by source	33	●	●

GRI Standards Index

Other Standards Disclosures

● Full ○ Partial ○ None **N/A** Not Applicable

GRI Standards	Disclosure Number	Description	Page	Status of disclosure	External assurance
Biodiversity					
GRI 304	304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	33	●	●
Effluents and Waste					
GRI 306	306-2	Waste by type and disposal method	35	●	●
GRI 306	306-3	Significant spills	37	●	●
Supplier Environmental Assessment					
GRI 308	308-1	New suppliers that were screened using environmental criteria	22	●	●
GRI 308	308-2	Negative environmental impacts in the supply chain and actions taken	23	●	●
Labor/Management Relations					
GRI 402	402-1	Minimum notice periods regarding operational changes	48	●	●
Training and Education					
GRI 404	404-2	Programs for upgrading employee skills and transition assistance programs	45	●	●
GRI 404	404-3	Percentage of employees receiving regular performance and career development reviews	44	●	●
Diversity and Equal Opportunity					
GRI 405	405-1	Diversity of governance bodies and employees	46	●	●
GRI 405	405-2	Ratio of basic salary and remuneration of women to men	48	●	●
Non-discrimination					
GRI 406	406-1	Incidents of discrimination and corrective actions taken	48	●	●
Freedom of Association and Collective Bargaining					
GRI 407	407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	45	●	●
Child Labor					
GRI 408	408-1	Operations and suppliers at significant risk for incidents of child labor	48	●	●
Forced or Compulsory Labor					
GRI 409	409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	48	●	●
Security Practices					
GRI 410	410-1	Security personnel trained in human rights policies or procedures	27	●	●
Rights of Indigenous Peoples					
GRI 411	411-1	Incidents of violations involving rights of indigenous peoples	52	●	●
Human Rights Assessment					
GRI 412	412-2	Employee training on human rights policies or procedures	10, 61	●	●
Supplier Social Assessment					
GRI 414	414-2	Negative social impacts in the supply chain and actions taken	23	●	●
Customer Health and Safety					
GRI 416	416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	30	●	●
Customer Privacy					
GRI 418	418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	27	●	●
Socioeconomic Compliance					
GRI 419	419-1	Non-compliance with laws and regulations in the social and economic area	54	●	●

Purpose

GS Caltex is striving to build an optimal business portfolio and maximize synergies with the goal of growing into the leader in total energy service. The Company's objectives are to provide customer satisfaction by offering top quality products and services, pursue mutual prosperity with suppliers and business partners, help employees grow by providing fair opportunity and support, maximize shareholder value through outstanding performance, and promote sustainable growth of the Company and society by building a safe workplace, protecting the environment and contributing to local communities. With that in mind, GS Caltex prepared the Code of Ethics which sets forth the standards for decision-making and conduct for all employees of GS Caltex.

Customer Satisfaction

We recognize that customers form the basis of our growth and profits and will satisfy customers by providing them with genuine value.

1. We shall respect and give priority to customers' opinions in conducting our business.
2. We shall provide top quality products and services that meet customers' demands and expectations.
3. We shall protect customer Information and interests and keep our promises to customers.

Co-prosperity with Business Partners

We shall build mutual trust and cooperation with business partners through fair and transparent transactions for mutual development.

1. We shall build partnerships by providing equal opportunity to business partners and Guaranteeing reasonable transaction terms.
2. We shall conduct transactions as equal partners and shall refrain from abusing our position to engage in unfair conduct in any form.

Respect for Employees and Basic Ethics

We and our employees will faithfully fulfill their duties to spur mutual growth and development based on mutual trust and respect.

1. We shall respect each employee and treat each Individual fairly based on his/her ability and performance so that all employees may realize their full potential.
2. Our employees will treat each other with mutual respect, and clearly distinguish between work and personal affairs and carry out their work in a transparent manner to fulfill their respective responsibilities.

Protecting Shareholder Interests

We shall protect shareholder interests through efficient and transparent management worthy of shareholders' trust and investment.

1. We shall realize sound profits through efficient management to protect shareholders' return on investment.
2. We shall respect shareholders' right to know relevant information and provide necessary information in a timely and transparent manner.

Responsibility to Society

We shall comply with national laws and regulations and fulfill our social responsibility as a corporate citizen.

1. We shall contribute to national development through job creation and faithful payment of taxes.
2. We shall work with local communities for sustained development and play a leading role in creating a happy future for all people.
3. We shall prohibit engaging in improper solicitation, bribery, and actions that may disrupt the market. We comply with laws and treaties that regulate international commercial trade, and anti-corruption, and we take care to exercise good commercial practices and culture.
4. We shall respect human dignity and rights and support freedom, equality, and the value of coexistence.

Safety, Health and Environment, Management

We shall do our best to protect the environment and create an accident-free workplace.

1. We shall make efforts to prevent pollution and fulfill our environmental responsibility.
2. We shall place priority on the health and safety of employees and business partners and create a safe and pleasant workplace free of accidents.

UN Global Compact

Since we joined the UN Global Compact, we have been fully committed to its ten principles covering human rights, labor, the environment, and anti-corruption. We have reported our progress to the COP (Communication on Progress) each year.

At GS Caltex, we will continue to improve our compliance with the UN Global Compact and its principles.

Sector	Principles	Related activities	Results(pages)
Human rights	<ol style="list-style-type: none"> 1. Businesses should support and respect the protection of internationally proclaimed human rights. 2. Businesses should make sure they are not complicit in human rights abuses. 	<ul style="list-style-type: none"> • Providing education on in-house sexual harassment prevention and human rights protection for all employees • Running welfare system for employees' work and life balance 	10, 46
Labor	<ol style="list-style-type: none"> 3. Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining. 4. Businesses should uphold the elimination of all forms of forced and compulsory labor. 5. Businesses should uphold the effective abolition of child labor. 6. Businesses should uphold the elimination of discrimination in respect of employment and occupation. 	<ul style="list-style-type: none"> • Operating a labor union and guaranteeing freedom of engaging in the union • Maintaining a communication channel through the point of contact in the union • Abiding with the regulations of the International Labor Organization and the UNGC principles ※ Any kinds of forced labor and child labor are strictly prohibited at GS Caltex. • Prohibiting discrimination by gender regarding wages, • Evaluation and promotion • Offering equal opportunity of employment online 	43-48
Environment	<ol style="list-style-type: none"> 7. Businesses should support a precautionary approach to environmental challenges. 8. Businesses should undertake initiatives to promote greater environmental responsibility. 9. Businesses should encourage the development and diffusion of environmentally friendly technologies. 	<ul style="list-style-type: none"> • Establishing and practicing SHEQ management policies • Obtaining Certificate of the Energy Management System • Adopting the GHG Emission Trading System [ETS] • Building environmental monitoring system • Making improvement in compliance with new environmental laws • Signing and performing voluntary environmental management agreement • Developing more efficient and eco-friendly products • Continuing R&D efforts in biochemical 	21, 31-42
Anti-corruption	<ol style="list-style-type: none"> 10. Businesses should work against corruption in all its forms, including extortion and bribery. 	<ul style="list-style-type: none"> • Submission of the employee pledge for voluntary compliance • Expanding Voluntary Compliance System and Strengthening the role of Compliance Officer • Organizing training programs for ethical practice 	10

Third Party Assurance Statement

To the Stakeholders of GS Caltex

The Korea Productivity Center (hereinafter the 'Assurer') was appointed by GS Caltex to provide third party assurance of its 'GS Caltex 2016 Sustainability Report' (hereinafter the 'Report').

Responsibility and Independence

The responsibility for the information and statements included in the Report lies solely with GS Caltex. The KPC is responsible for the assurance findings generated in the Report. As an independent assurance provider, the KPC was not engaged in the preparation of the Report in any other way and does not have any interest in GS Caltex in a way that may hamper its independence as an assurance provider.

Assurance Standard & Scope

This assurance was conducted in accordance with the AA1000AS(2008) Assurance Standards providing Type 2 moderate level of assurance. It was achieved through the evaluation of the organization's adherence to the AA1000APS (2008) of Inclusivity, Materiality and Responsiveness and the Global Reporting Initiative (GRI) Standards in its preparation and presentation of the Report. The scope and boundaries of this assurance are based on the reporting boundaries defined in terms of its time, region and value chain. As a result, the scope of assurance fully satisfies the standards of the company and does not include its subsidiaries and suppliers unless specified otherwise.

Limitations

The Assurer verified the organization's business performance in 2016 based on the aforementioned assurance standards and scope. The reliability of financial data in the Report was verified by crosschecking financial statements and disclosure information which was audited by an auditor while its greenhouse gas emission data was based on existing assurance results. The on-site verification was carried out in a limited scope at the headquarters in Seoul and the result of this assurance is subject to change if any additional verification is conducted in the future.

Assurance Methods

This assurance was conducted using the following methods:

1. Verified if the requirements for core options of GRI Standards were fulfilled.
2. Verified the compliance with the principles of the Report contents and quality based on GRI Standards.
3. Verified the suitability of the contents and any errors in expression through comparison analysis with other sources.
4. Verified the appropriateness of material issues and contents of the Report through media research and benchmarking analysis.
5. Verified the basis of core data and information and the internal process and system through on-site inspection at the headquarters in Seoul.

Findings and Conclusion

It is the Assurer's opinion that the Report represents the sustainability efforts and performance results of GS Caltex in a fair and accurate manner. The Assurer also verified that the requirements for core options of GRI Standards were fulfilled.

General Standards were prepared in full compliance with the requirements under the Core Option while Topic-specific Standards were reviewed based on the indicators and issues of material issues identified through the materiality assessment process.

Material Issues	Issues	Indicators
Investment in local communities	Local communities	413-1, 413-2
Prevention of incidents and raising safety	Occupational health and safety	403-1, 403-2, 403-4
Product and service pricing	Marketing and labeling	417-1, 417-2, 417-3
Energy conservation and improvement of efficiency	Energy, Emissions	302-1, 302-4, 305-1, 305-2, 305-7
Employment and retention of human resource	Employment	401-1, 401-2, 401-3
Response to environmental regulations	Environmental compliance	307-1

※ The indicators have been reviewed in terms of the Non-Material Standards from the Topic-specific Standards and the details are specified on the GRI Contents Index

Inclusivity: Shareholder engagement

In compliance with the Principles of Inclusivity, GS Caltex categorizes its stakeholders into nine groups: the government, labor unions, NGOs, subsidiary companies, partner companies, regional communities, customers, stockholders and investors, and employees. The KPC verified that GS Caltex clearly defined the communication channels and expectations of each group and garnered the opinions of its stakeholders through active interaction and dialogue.

Materiality: Selection and Reporting of Key issues

GS Caltex has selected a comprehensive report topic through issues of companies within the same industry analyses, media analyses, and international standards in sustainable. The KPC has also verified that issues that are important to GS Caltex have been selected through surveys of internal and external stakeholders.

Responsiveness: organizational Response to issues

The KPC verified that the Report properly demonstrates GS Caltex's awareness of the key issues that would impact stakeholder judgment of its performance and that it undertook measures to resolve such issues. Through the Report, GS Caltex is faithfully disclosing the actions and performance of their responses to key issues in sustainable management. With regards to the 11 key issues derived from the materiality evaluation, a report scope regarding the stakeholders has been proposed and it has been verified that GS Caltex's current status of responses has been disclosed in each page of the report in a balanced manner.

Recommendations

KPC rates highly the range of endeavors and achievements made by GS Caltex to advance its sustainability and presents the following recommendations to enhance GS Caltex's future reports and its level of sustainability management.

- It is necessary to focus more resources on gathering feedback directly from stakeholders and to confirm their expectations. To this end, we suggest that you develop periodical stakeholder engagement programs and processes.
- In order to maintain a high level of sustainability in business management, it is important to identify and manage the mid- and long-term strategic tasks and KPI (key performance indicators) while communicating with your stakeholders on strategic implementation.



2017 June
Korea Productivity Center
Soon-jick Hong, CEO

Soon-jick Hong



Dong-soo Kim, Director

Beom-taek Oh, Team Manager

D.S. Kim

Beom-taek Oh

The Sustainability Management Center of the Korea Productivity Center is a fully qualified independent assurance agency. It is officially certified by AccountAbility that established AA1000, the international standard for stakeholder engagement and assurance. It has the Assurance Committee with experienced experts who are qualified for the consultation and assurance of sustainability practice.