

# Engineering the Future

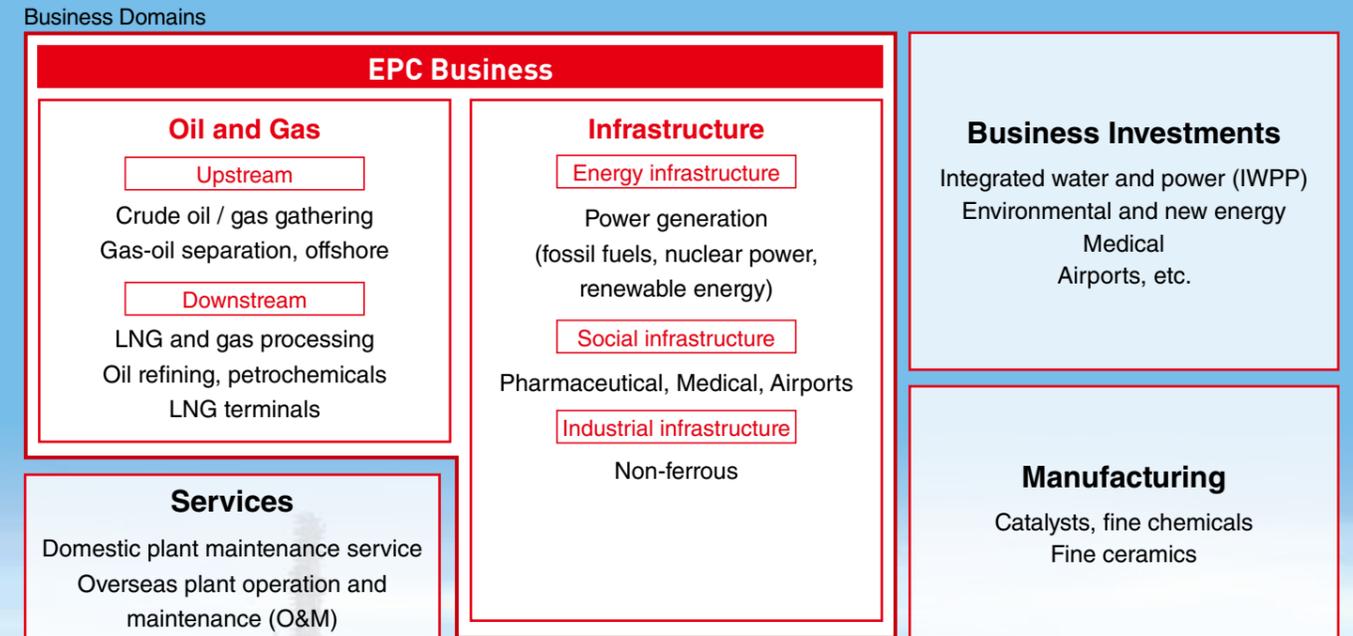
JGC Report 2017

April 1, 2016 – March 31, 2017



Since its founding in 1928, JGC has built plants and facilities worldwide serving a wide range of purposes, mainly in the oil and gas industries, such as oil, natural gas and petrochemical plants, but also power plants, non-ferrous metal plants, and other energy and industrial infrastructure as well as pharmaceutical plants, hospitals, environmental facilities, and other social infrastructure. JGC's proven capabilities in all these areas have established its reputation as a leading engineering contractor worldwide.

JGC views its corporate group mission as one which is committed to creating a more prosperous future for its clients, for people and for society through integrating its core capabilities and technical expertise to generate innovative solutions. We intend to further promote the expansion of our business fields and contribute to industrial advancement, economic progress, and sustainable growth, not only in Japan but throughout the world.



**Purpose of This Report**

The purpose of the JGC Report, which was first published in 2015, is to explain to stakeholders how the JGC Group endeavors to generate sustainable growth and increase corporate value over the medium to long term. JGC uses this report as a tool to communicate with stakeholders as part of its efforts to achieve sustainable growth through continuous, constructive dialogue.





**Masayuki Sato**

Representative Director, Chairman and  
Chief Executive Officer (CEO)

**Tadashi Ishizuka**

Representative Director, President and  
Chief Operating Officer (COO)

## To Our Stakeholders

On the occasion of the publication of our 2017 JGC Report, we would like to convey our heartfelt appreciation for the deep understanding of our business activities and the steadfast support shown by all our stakeholders.

Fiscal 2016 is likely to be seen as an historical turning point as a result of a series of major political events worldwide, including the UK's decision to leave the EU and the new administration in the US. Meanwhile, crude oil prices, which are closely linked to our core engineering business, eventually steadied at around \$50/bbl after a period of weakness from autumn 2014, partly helped by an OPEC agreement in November 2016 to cut production. In oil-producing countries, companies that had reined in capital investment started investing again, and conditions in the plant market gradually began to recover. Against this backdrop, the JGC Group secured orders worth more than ¥500 billion in fiscal 2016, up from ¥320 billion in fiscal 2015.

However, we are disappointed to report that the Company recorded a net loss for the first time in 19 years, reflecting significant losses related to the implementation of a petrochemical project in the US, an oil refinery project in the Middle East and several other projects. We would like to take this opportunity to offer our most sincere apologies to our stakeholders.

Under our leadership, the aim of the new senior management team is to deliver solid results by building an operating structure that generates steady profits from our core EPC business and by making bold moves into the infrastructure and offshore engineering fields.

To give stakeholders a better understanding of the diverse value that the JGC Group provides, we have added more content to this 2017 edition of the JGC Report, which covers our business activities, future management strategies and specific business initiatives, as well as a broad range of information about our activities in the environment, social and governance (ESG) spheres. In doing so, we hope to give stakeholders an insight into the JGC Group's powerful ability to create and provide value, in both an economic and social context.

We look forward to your continued support as we strive to meet the expectations of shareholders, clients, business partners, local communities and all our other stakeholders.

Representative Director, Chairman and Chief Executive Officer (CEO)  
Masayuki Sato

Representative Director, President and Chief Operating Officer (COO)  
Tadashi Ishizuka

## Corporate Philosophy

# JGC Way

The corporate philosophy of the JGC Group, "The JGC Way", is the fundamental platform pursuant to which the business activities of the group are promoted and furthermore is followed by each and every JGC Group employee and executive in their activities.

### Mission

We are committed to creating a more prosperous future for our clients, for people and for society through integrating our core capabilities and technical expertise to generate innovative solutions.

### Values

We are driven by our shared values and commitments. These elements express our strengths and represent the basis for how we work and deliver solutions to our clients and stakeholders:

#### Shared Values

**Challenge** We venture into new business fields, overcome technical hurdles and establish innovative methodologies.

**Create** We remain dedicated to developing results-focused, thoughtful solutions that fully meet the needs of our clients and benefit society as a whole.

**Integrate** We bring together a wide range of technologies, innovative tools and a diverse team dedicated to increasing value to all stakeholders.

**Deliver** We commit to overcoming obstacles through diligence and our "never-give-up" philosophy, and to delivering quality products and services to our clients and society.

#### Professional Commitments

**Respect** We undertake to foster mutual respect and support among all those involved in our activities and to emphasize the importance of safety for all.

**Integrity** We pledge to maintain the highest ethical standards in everything we do.

### Vision

We bring a new generation of innovative solutions to the energy and infrastructure industries by utilizing our core competencies in engineering and project management.

JGC Group Corporate Slogan

# Engineering the Future

## CONTENTS



- P01 Business Domains | Purpose of This Report
- P03 To Our Stakeholders
- P05 Corporate Philosophy | JGC Group Corporate Slogan

### Chapter 1: Targeting Sustainable Growth

- P07 Message from the Chairman
- P09 Message from the President
- P11 JGC Story
- P11 Part 1: The Source of JGC's Strengths
- P13 Part 2: The JGC Group's Value Creation
- P15 Part 3: Social Value Provided by the JGC Group
- P17 Part 4: Changes in the Operating Environment and the JGC Group's Vision
- P19 Message from the Head of Finance
- P21 Financial and Non-financial Highlights



### Chapter 2: Value Creation

- P24 Total Engineering Business
- P29 Catalysts and Fine Chemicals Business
- P30 Investment and Service Business



### Chapter 3: Initiatives to Reinforce the Management Base

- P33 Strengthening Human Resources
- P35 Partnerships with Suppliers
- P36 Partnerships with Clients
- P37 Enhancing Technical Capabilities



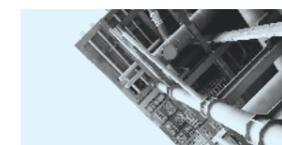
### Chapter 4: Environment and Society

- P39 Basic Stance on ESG
- P41 Environmental Initiatives
- P45 Working with Local Communities
- P47 Human Rights and Diversity



### Chapter 5: Management Structure

- P49 Conversation between Outside Directors
- P53 Corporate Governance Structure
- P55 Compliance
- P58 Security Risk Management
- P59 Occupational Health and Safety
- P61 Quality Management System
- P62 Directors, Auditors and Executives
- P63 IR Activities
- P64 ESG Data Highlights



### Chapter 6: Data Section



## ◆ Message from the Chairman Transforming JGC into a Company That Can Grow in Any Operating Environment

Masayuki Sato  
Representative Director, Chairman and CEO

Since joining JGC in 1979, has worked throughout the Company in finance and accounting. Has been in charge of finance for projects in the Middle East, North Africa, Southeast Asia and CIS countries. Appointed Director in June 2010. Served as Managing Director, Senior General Manager of the Corporate Administrative & Financial Affairs Division, and Chief Financial Officer from July 2011, and was appointed Executive Vice President and Director in June 2012. Since June 2014, has held the positions of Representative Director, Chairman and CEO.

### Orders worth ¥500 billion secured in non-LNG business fields, but losses in the US and Middle East

After several lean years in the plant market, triggered by the drop in the crude oil price from autumn 2014, we saw signs of improvement in fiscal 2016, with oil-producing countries steadily restarting capital investment programs as the oil price stabilized. Orders received exceeded the level in fiscal 2015. Excluding large-scale LNG projects, we secured orders worth more than ¥500 billion, which will drive the Group's future growth.

However, we are disappointed to report that the Company reported its first net loss in 19 years, reflecting the booking

of significant losses related to a petrochemical project in the US and an oil refinery project in the Middle East, partly due to factors outside our control in local markets.

In the US, unpredictable weather led to a drop in productivity in construction work, while in the Middle East, we faced long visa processing times for construction workers. We have tightened risk control in construction work at the US project and we have strengthened project management at our large joint-venture project. We will use this experience in other projects that are currently under way and ensure that lessons are learnt for future projects.

### Reinforcing our core EPC business

The net loss in fiscal 2016 has reaffirmed our commitment to implementing the basic policies in our current medium-term business plan, which is designed to ensure the JGC Group's sustained growth. Under the plan, we are strengthening our presence in the oil & gas field and stepping up efforts to move into offshore and infrastructure fields in our core EPC business. To drive the implementation of these policies, we promoted Tadashi Ishizuka from Senior Executive Vice President to President and Chief Operating Officer (COO) in July 2017, as part of a complete revamp of the senior management team.

Our new President is a professional with extensive experience in the oil & gas field in the EPC business and strong connections to clients in Japan and overseas. We believe that makes him the best person to strengthen and grow the EPC business in the oil & gas field, where the Group currently faces challenges, and to extend the reach of the EPC business into new fields. In that sense, fiscal 2016 marked an important first step on the path to delivering sustained growth and further increasing corporate value. I will work closely with Tadashi Ishizuka to take the JGC Group forward.

### Fulfilling our social responsibility, generating sustained growth

The JGC Group's EPC business has a deep connection with energy, the environment and society. The business plays a direct role in creating value for the public, giving it a very important social purpose.

To continue growing and increasing corporate value, we need to provide social value to a broad range of stakeholders by actively implementing initiatives in the environmental, social and corporate governance (ESG) spheres. This is our duty as a company, and it will support our efforts to increase economic value for shareholders by helping the JGC Group reliably generate profits under any conditions.

As part of those efforts, I believe we have to actively disclose information about the kind of value the JGC Group provides.

In fiscal 2016, we formulated a new corporate philosophy for the Group called the JGC Way, which incorporates our mission of creating a more prosperous future for our clients, for people and for society. Anchored by the JGC Way, we will strive to meet the expectations of all our stakeholders and deliver sustained growth as a corporate group that provides a broad range of value to society. I hope we can count on your continued support in the months and years ahead as we implement these new approaches.



◆ Message from the President

# Building an Operating Structure to Generate Stable Profits from the EPC Business

Tadashi Ishizuka  
Representative Director, President and Chief Operating Officer (COO)

After joining JGC in 1972, was assigned to the Domestic Project Construction Division before being transferred to a role in overseas project management. Was Managing Director and Senior General Manager of the Project Operation Services Division from June 2008. Appointed Senior Managing Director in 2010 before being promoted to the role of Executive Vice President and Director in June 2011. Became Senior Executive Vice President in February 2017 and was appointed President and COO in June 2017.

## Proud to be appointed President of JGC

Firstly, I would like to thank all stakeholders for their continued support of the JGC Group.

I was appointed Representative Director, President and COO of JGC in June 2017. After joining JGC in 1972, I was involved in the implementation of overseas projects, mainly construction work. After being appointed Director, I was given overall responsibility for the EPC business, which is focused on overseas projects. I have been closely involved in a large number of projects during my career, which I have devoted to risk management. That experience has given me some of the best insights of anybody in our Company into the unforgiving conditions of the EPC business and the JGC Group's strengths and dynamism.

## Reinforcing risk management to generate steady profits

In fiscal 2016, JGC reported a net loss due to significant losses in the Group's core EPC business. My mission as the new President and COO is to use my experience to tackle the urgent task of rebuilding the EPC business with the aim of creating an operating structure that generates steady profits. Also, as outlined in our medium-term business plan, we will expand the EPC business and train personnel to support those EPC operations in the future.

Our project management capabilities have been highly praised by oil majors, state-run oil companies and other clients. Those capabilities are supported by teams of highly skilled personnel and a corporate culture – formed over many years – that always sees projects through to completion. These are core competencies that we should be proud of. The question of how best to manage risk sits at the heart of the project implementation process. To ensure our core EPC business generates profits, we need to tighten up EPC project implementation by identifying and addressing various risks in the implementation process more rapidly than ever before.

## Actively moving into the offshore and infrastructure fields

Under our medium-term business plan, which was launched in fiscal 2016, we positioned EPC as our core business and set out a basic strategy of reinforcing our presence in the oil & gas field and actively moving into the offshore and infrastructure EPC fields. In fiscal 2016, the plan's first year, we got off to a good start, with the Group securing several orders for power generation plants in the infrastructure field in Japan and overseas, worth a total of more than ¥100 billion. In fiscal 2017, we plan to leverage our track record as the leading contractor for floating LNG plants in the oil & gas field to win more business in the offshore EPC field. We will also step up efforts to expand our presence in the infrastructure field, targeting industrial infrastructure orders for oil- and gas-fired power plants and solar and biomass power plants, as well as orders from the nonferrous metals sector. In the social infrastructure field, we aim to secure business from clients in the life science sector. In terms of business investment, we intend to take a cautious

approach based on investment in key strategic areas, as we are currently focused on reinforcing and expanding our EPC business.

## Focusing on long-term performance rather than short-term gains

The plant market in the oil & gas sector has been stagnant in recent years as clients have curbed capital investment plans, but with the crude oil price stabilizing at a low level, we started to see signs of an upturn from 2016.

Nevertheless, we think it will take a few more years for large-scale LNG projects in North America to eventuate. In fiscal 2017, we are therefore focusing on non-LNG areas such as oil, gas and infrastructure EPC projects, aiming to secure orders worth ¥750 billion. We also plan to achieve our fiscal 2017 earnings forecasts by building an operating structure that can generate steady profits, starting with existing projects currently under way. The JGC Group will work one step at a time towards the final-year targets of the current medium-term business plan, which ends in fiscal 2020.

We want our shareholders, investors and other stakeholders to continue supporting JGC based on the Group's medium- and long-term performance, rather than short-term gains. I hope we can count on your continued support as we work toward our fiscal 2020 goals.

# JGC STORY

The Source of JGC's Strengths

The JGC Group's Value Creation

Social Value Provided by the JGC Group

Changes in the Operating Environment and the JGC Group's Vision

1

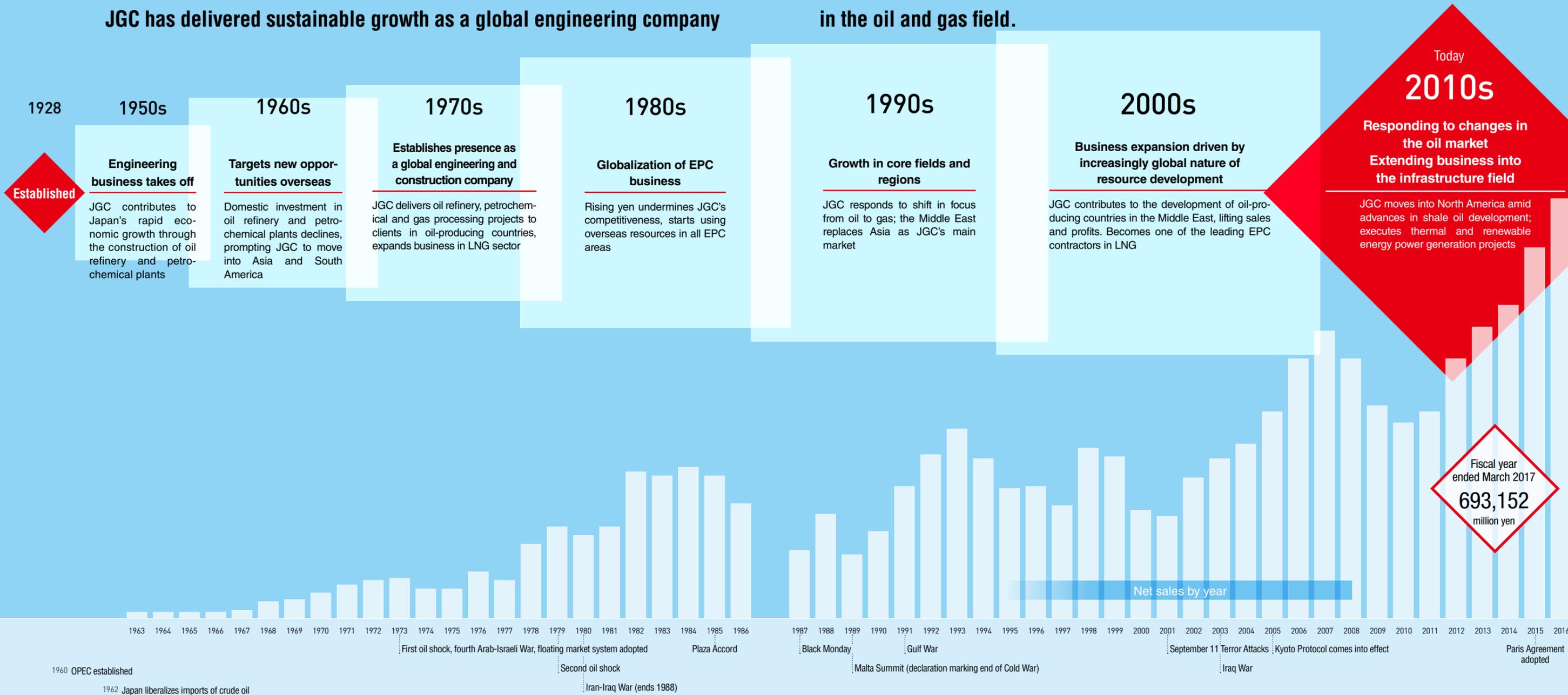
## The Source of JGC's Strengths

JGC has constantly transformed its business to rapidly respond to changing times. Tireless efforts to control market risk have underpinned growth in the JGC Group's economic value.

Amid a decline in investment by the oil and petrochemical industries in Japan in the 1960s, JGC boldly moved into overseas markets, successfully building trust in oil-producing countries while facing a broad range of business risks. When the yen appreciated sharply in the 1980s, JGC improved its ability to compete for orders by rapidly switching the focus of its engineering, procurement and construction resources from Japan to overseas markets, resulting in a more globalized approach to project implementation. In the 1990s, the Asian financial crisis led to a contraction in the Southeast Asian plant market. Aiming to expand its presence in the Middle East and at the same time address rising demand for natural gas, JGC secured and implemented many gas processing, LNG and other natural gas-related projects. By subsequently moving into the power plant sector and other infrastructure fields to complement its main oil and gas business field, JGC has achieved sustainable growth as an engineering company. Today, JGC continues to focus on creating even greater economic value for all its stakeholders.

## JGC has delivered sustainable growth as a global engineering company

## in the oil and gas field.



# JGC STORY

# 2

## The JGC Group's Value Creation

JGC's ability to execute projects that maximize profits while minimizing risk has won the confidence of clients worldwide.

The Source of JGC's Strengths

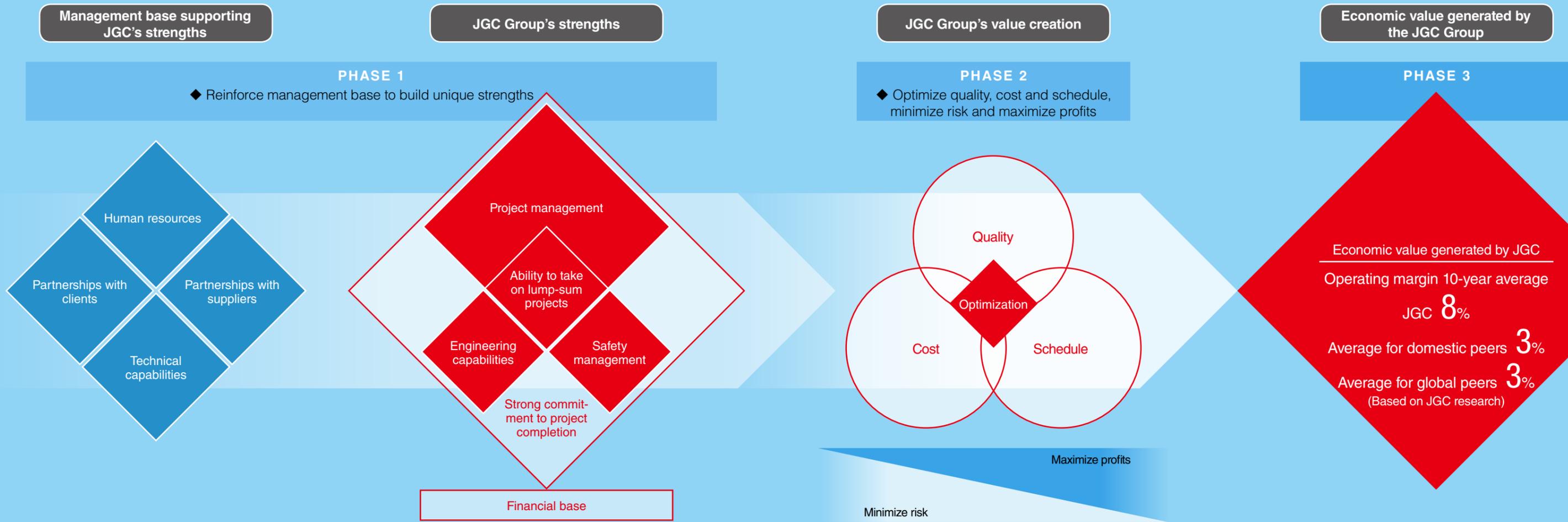
The JGC Group's Value Creation

Social Value Provided by the JGC Group

Changes in the Operating Environment and the JGC Group's Vision

The most important role of the EPC business is to generate a high level of profits for clients and the JGC Group by completing projects on time while ensuring optimal quality and cost in line with client requirements. That is reflected in the JGC Group's operating margin, which is higher than at domestic and overseas peers.

To ensure projects are executed as planned, the JGC Group draws on its strong engineering and safety management capabilities and its workforce of highly skilled and knowledgeable specialists, who manage entire projects while working closely with business partners worldwide. JGC also makes full use of its long experience in managing risk, accumulated since the first days of the company, to ensure every plant and facility project reaches completion, no matter how challenging the conditions or how complex the design. This approach has won the confidence and trust of clients, helping us to continue securing orders.



# JGC STORY

# 3

## Social Value Provided by the JGC Group

We are working to create a more prosperous future for our clients, for people and for society through our engineering business.

The Source of JGC's Strengths

The JGC Group's Value Creation

Social Value Provided by the JGC Group

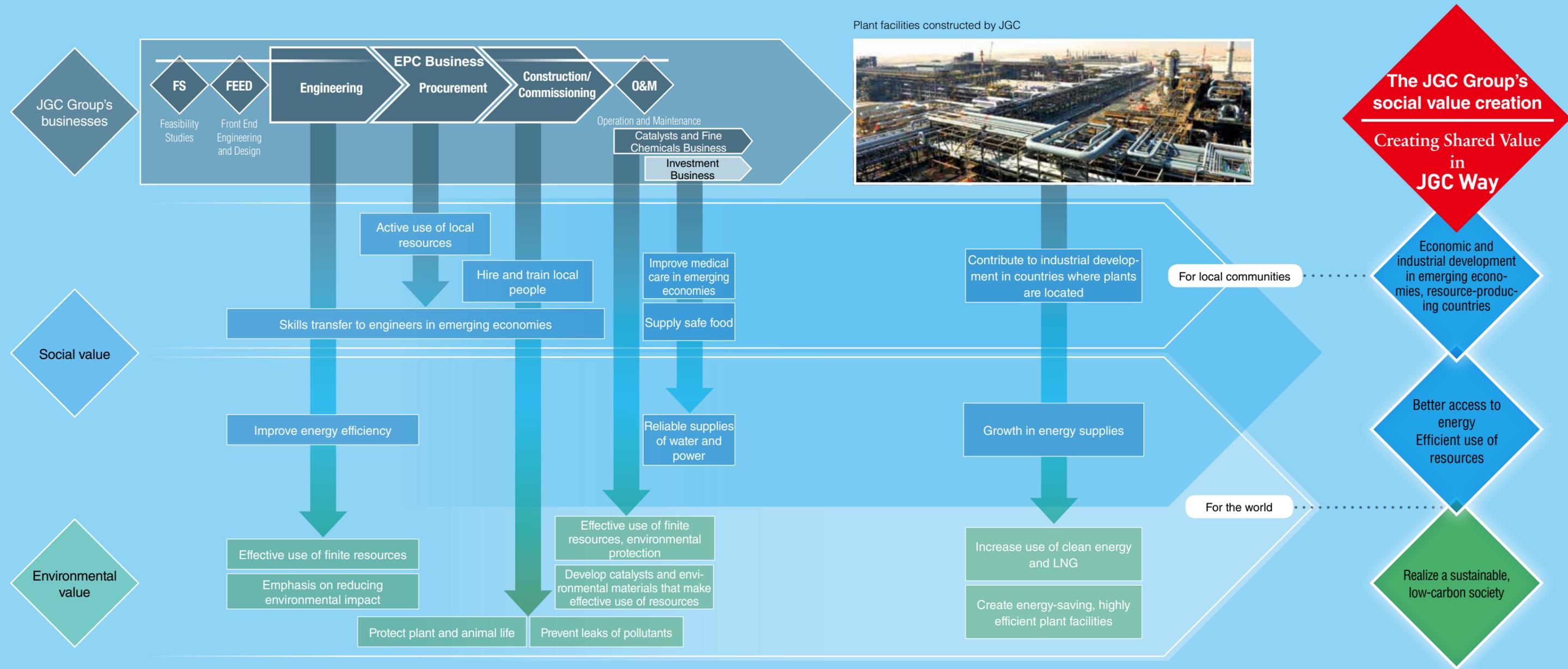
Changes in the Operating Environment and the JGC Group's Vision

Our corporate slogan, "Engineering the Future," expresses our strong commitment to building a better future for society and the planet through our EPC business.

In each EPC phase of our business, we take various steps to create social and environment value. Plant facilities built by JGC are also designed to put maximum emphasis on energy efficiency and environmental performance. Through their operation, the facilities make significant contributions to society by improving access to energy worldwide, creating sustainable societies and supporting the economic development of countries in which they are located.

Going forward, we will continue to use our EPC business to help regions worldwide develop and overcome challenges, aiming to provide environmental and social value as well as economic value.

Plant facilities constructed by JGC



# JGC STORY

## 4

### Changes in the Operating Environment and the JGC Group's Vision

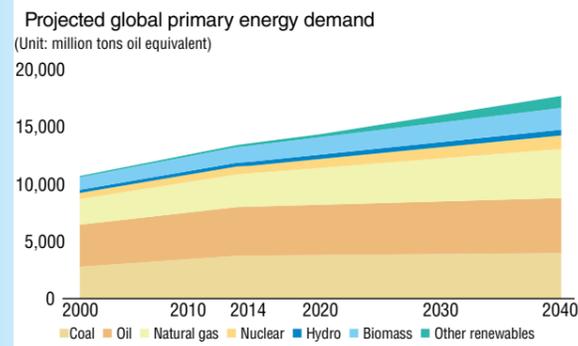
Targeting sustained growth in corporate value as an engineering contractor

#### Changes in the Operating Environment

#### Impact on JGC

##### Rising demand for energy worldwide

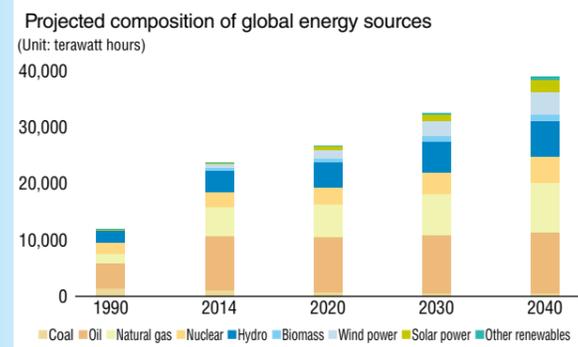
**JGC's response** Accurately respond to changes in the energy mix



Global demand for energy is projected to continue expanding on the back of population growth and rising living standards in emerging economies. Forecasts point to rising demand for natural gas, which generates less CO<sub>2</sub> per unit of heat than other fossil fuels during combustion, and increased demand for renewables, particularly wind, solar and biomass power. JGC constantly monitors any signs of change in energy markets. We will boldly establish new businesses by rapidly responding to changes in our operating environment.

##### Rising electricity demand and changes in composition of energy sources

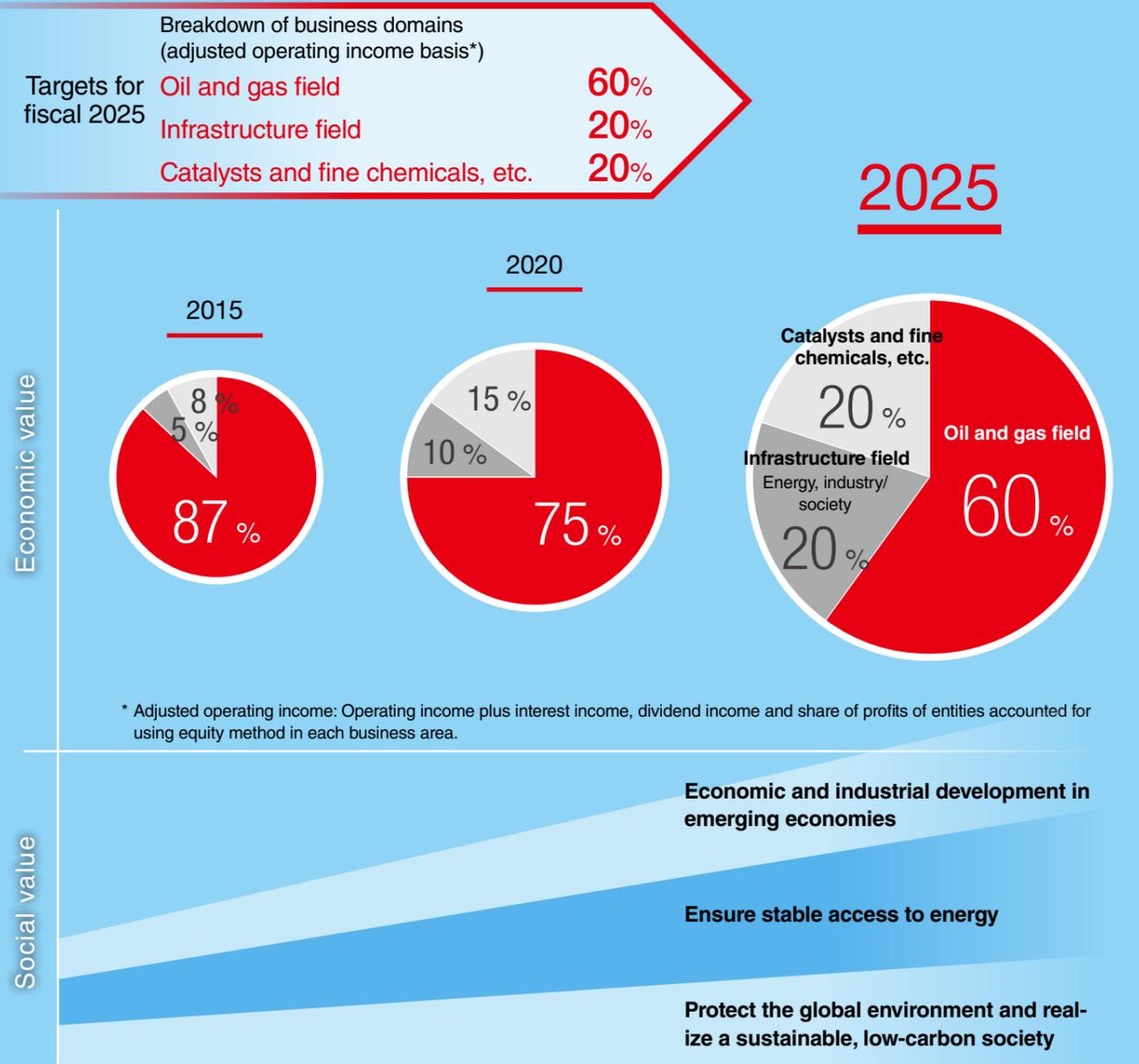
**JGC's response** Focus on infrastructure fields with prospects for market growth



In 2014, global electricity demand was roughly 100% higher than the level in 1990 and about 50% higher than in 2000. In the period through to 2040, global demand for electricity is projected to rise by approximately 65%, mainly driven by emerging economies. Forecasts for changes in the composition of energy sources indicate growth in the use of natural gas in the fossil fuels category and increased use of renewable energy, which is projected to account for roughly 35% of all energy generation by 2040. JGC will carefully monitor continued growth in demand for electricity and changes in the composition of energy sources, while actively building up its track record in the construction of gas processing plants, LNG plants, LNG receiving facilities, and thermal power plants – which make up the gas supply chain – and renewable energy power plants.

Amid rising demand for energy worldwide, oil, natural gas and other fossil fuels are likely to remain a key source of energy for some time. However, renewable energy such as solar, wind and biomass power are gaining ground, leading to a gradual change in the global energy mix.

To accurately respond to these changes in the operating environment, we aim to maintain our position as a leading contractor in the oil and gas field while harnessing our accumulated project management skills to expand the JGC Group's operations in the infrastructure field, creating a more balanced business portfolio.





## ◆ Message from the Head of Finance

### Restoring the JGC Group's Sound Financial Base

Takehiko Hirose  
Associate Executive Officer, General Manager, Corporate Administrative & Financial Affairs Division; General Manager, Finance & Accounting Department

After joining JGC in 1983, worked in manpower management and overseas project cost control before moving to the Finance & Subsidiary Accounting Department in 1991. Has experience as financial controller for overseas projects and head of finance at an overseas subsidiary. Appointed to current post of Associate Executive Officer and General Manager, Finance Department in 2014, and General Manager, Corporate Administrative & Financial Affairs Division in 2016.

### Basic aim of financial strategy

The basic aim of our financial strategy is to appropriately allocate the Group's financial resources generated by the core EPC business to support sustained profit growth. Profits generated by that business are then used to fund further business expansion.

For clients that place orders for large capital-intensive projects, the financial position of EPC contractors that implement EPC projects is a key factor in contractor selection. That means we have to ensure the Group has a sound financial position as part of our strategy to win orders.

The shareholders' equity ratio, an indicator of financial strength, was 59.1% in fiscal 2016, exceeding the 50% target in the medium-term business plan and underscoring the Group's sound financial position.

However, we reported a net loss attributable to owners of parent of ¥22.0 billion, mainly due to the booking of significant losses on several projects currently under way, including a petrochemical project in the US and an oil refinery project in the Middle East. Cash reserves have fallen from a recent peak of ¥385.2 billion in fiscal 2013 to ¥185.6 billion in fiscal 2016. Depending on order trends, we expect financial resources to remain on a downward trend in fiscal 2017, as we plan to use funds to invest in delivering sustainable growth.

To improve the Group's financial situation, we have to consistently generate profits from our core EPC business and increase cash reserves. Allocating those cash reserves appropriately and effectively will also be an important part of our financial strategy.

Under our medium-term business plan, we intend to allocate cash reserves as follows.

- Working capital for EPC business: 30%
- Growth strategy investments: 30%
- Shareholder returns: 20%
- Business investments: 10%
- Capital investments (Maintain Company buildings, Group companies): 10%

As explained above, the Group's cash reserves are on a downward trend at the moment, so although we plan to maintain the above allocation ratios in principle, we will put priority on

allocating working capital for the EPC business and on investment to help the EPC business move into new fields.

We will also need to take a cautious approach to business investment, channeling resources into a selected fields. The 20% allocation for shareholder returns will be maintained.

In addition to generating sustained profits in the EPC business, we plan to boost cash reserves by using diverse fund procurement methods.

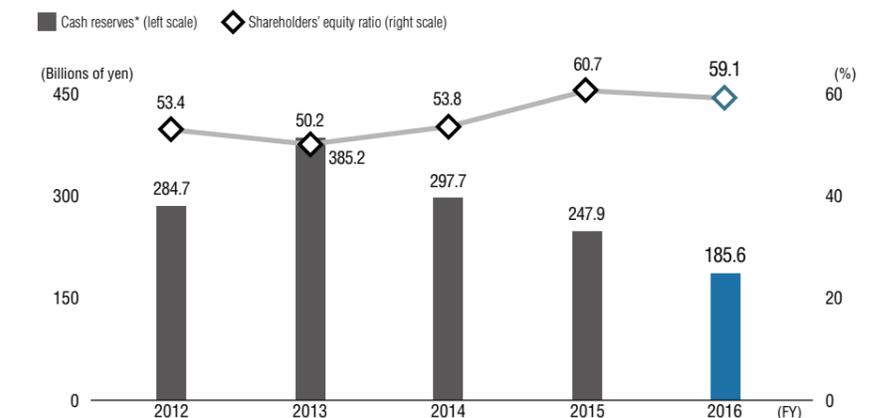
### Shareholder return

Our target for the dividend payout ratio is 30% of net income attributable to owners of parent. In fiscal 2016, we reported a net loss attributable to owners of parent of ¥22.0 billion. However, given the importance we attach to shareholder returns, and after considering the Company's financial position, including the earnings outlook, we decided to pay an annual dividend of ¥30.00 per share, the same amount as our forecast announced in May 2016.

For fiscal 2017, we forecast consolidated net sales of ¥680 billion, operating income of ¥26 billion, ordinary income of ¥30 billion and net income attributable to owners of parent of ¥21 billion. Based on the above dividend payout ratio target, we plan to pay an annual dividend of ¥25.00 per share.

We look forward to your continued support of the JGC Group.

Cash reserves and shareholders' equity ratio (last five years)



\* Cash and cash equivalents at fiscal year-end

## Financial and Non-financial Highlights

(Millions of yen)

	March 31, 2008	March 31, 2009	March 31, 2010	March 31, 2011	March 31, 2012	March 31, 2013	March 31, 2014	March 31, 2015	March 31, 2016	March 31, 2017
<b>Performance Highlights</b>										
Net Sales	¥551,062	¥450,911	¥414,257	¥447,222	¥556,966	¥624,637	¥675,821	¥799,076	¥879,954	¥693,152
Operating Income or Operating Loss (-)	44,896	52,003	41,919	63,559	67,053	64,123	68,253	29,740	49,661	-21,496
Net Income Attributable to Owners of Parent or Loss Attributable to Owners of Parent (-)*1	30,019	31,543	27,112	25,477	39,111	46,179	47,178	20,628	42,793	-22,057
New Contracts	402,352	506,135	733,549	618,203	793,278	594,091	818,161	769,680	320,626	506,293
Outstanding Contracts	632,827	671,341	982,594	1,163,256	1,506,146	1,549,813	1,767,814	1,772,036	1,192,625	1,045,684
<b>Financial Position at Year-End</b>										
Total Current Assets	324,616	335,220	283,538	319,464	376,172	460,231	575,886	533,538	522,747	480,865
Total Current Liabilities	217,339	208,023	137,728	174,293	205,771	262,439	333,353	286,533	225,203	226,457
Total Assets	466,772	480,279	430,176	468,502	526,169	628,757	746,102	719,754	689,782	646,291
Total Net Assets	207,536	224,488	246,140	264,483	291,042	336,083	379,882	388,496	419,673	383,260
Shareholders' Equity	207,254	223,887	245,819	263,983	290,415	335,534	374,654	387,480	418,695	382,215
<b>Cash Flow</b>										
Net Operating Cash Flow	28,864	36,595	-25,179	48,214	97,847	85,010	120,576	-71,416	-49,764	-28,884
Investment Cash Flow	-15,032	-26,457	-19,823	116	-18,746	-28,370	-18,728	-23,411	8,696	-12,979
Financing Cash Flow	-7,317	472	-8,893	-7,317	-20,536	-3,695	-10,687	3,836	-4,374	-19,674
Cash and Cash Equivalents at End of Year	164,617	174,281	123,808	161,894	222,556	284,777	385,252	297,707	247,947	185,603
<b>Financial Highlights</b>										
ROA (Return On Assets) (%)	10.0	10.4	9.0	14.1	14.6	12.6	12.2	6.1	7.4	-2.3
ROE (Return On Equity) (%)	15.2	14.6	11.5	10.0	14.1	14.8	13.3	5.4	10.6	-5.5
Net Income per Share or Net Loss per Share (-)(in yen)	118.33	124.76	107.25	100.83	154.90	182.91	186.90	81.73	169.60	-87.42
Cash Dividends per Share (in yen)	21.0	30.0	21.0	30.0	38.5	45.5	46.5	21.0	42.5	30.0
Gross Margin Ratio (%)	11.6	16.0	14.6	18.2	15.6	13.5	13.1	6.6	8.3	0.2
Operating Income Ratio or Operating Loss Ratio (%)	8.1	11.5	10.1	14.2	12.0	10.3	10.1	3.7	5.6	-3.1
Shareholders' Equity Ratio (%)	44.4	46.6	57.1	56.3	55.2	53.4	50.2	53.8	60.7	59.1
Current Ratio (%)	149.4	161.1	205.9	183.3	182.8	175.4	172.8	186.2	232.1	212.3
Payout Ratio (%)	17.7	24.0	19.6	29.8	24.9	24.9	24.9	25.7	25.1	-
<b>ESG Indicators</b>										
Number of incidents of leaks of hazardous substances, etc. (Domestic and overseas construction sites)	-	0	2	1	0	0	0	0	0	0
Number of women in management positions	-	-	-	-	3	5	10	11	15	17
Rate of frequency of accidents accompanied by lost work time (%)*2	-	-	-	-	0.014	0.010	0.004	0.012	0.015	0.012

\*1: As a consequence of applying "Accounting Standard for Business Combinations" (ASBJ Statement No. 21, September 13, 2013), "Net income" is referred to as "Net income attributable to owners of parent" from the fiscal year ended March 2016 onward

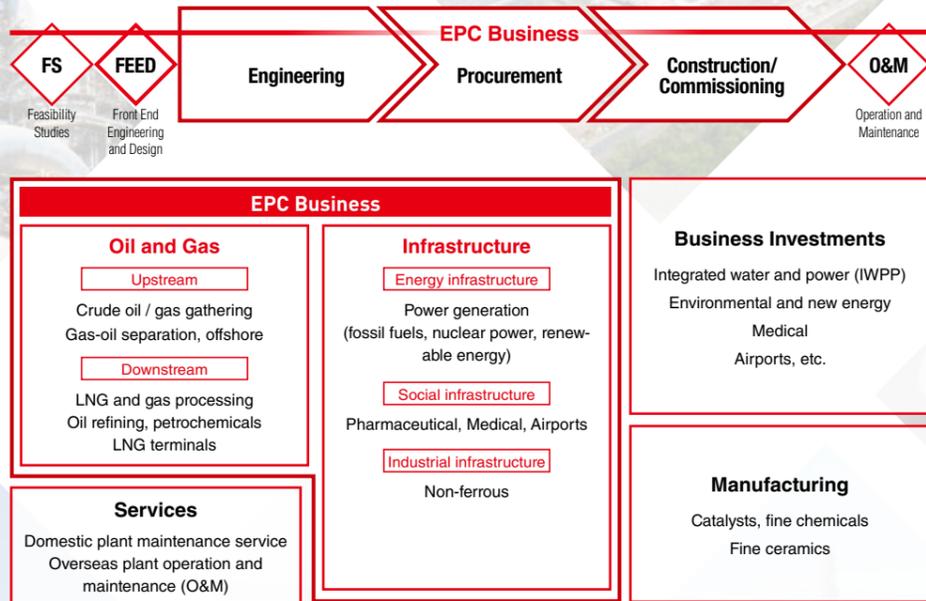
\*2: Rate of frequency of accidents accompanied by lost work time = Number of accidents accompanied by lost work time × 200,000 ÷ Total project working hours

## Chapter 2: Value Creation

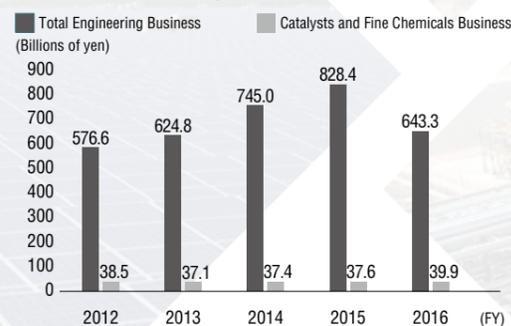
In this section, we look in more detail at the JGC Group's value creation by introducing some of the initiatives and projects in the total engineering business, catalysts and fine products business and investment and operation business.

### CONTENTS

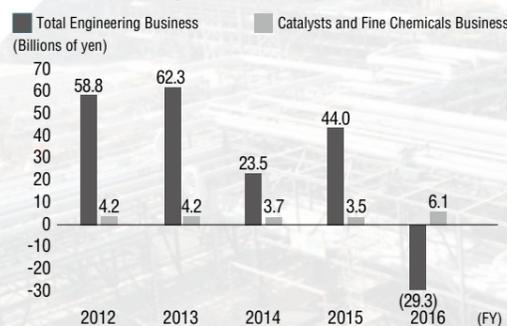
- P24 Total Engineering Business
- P29 Catalysts and Fine Products Business
- P30 Investment and Service Business



Segment Sales



Segment Profit (Loss)



## Total Engineering Business

### Business Environment

Oil- and gas-producing countries are resuming capital investment programs after a modest recovery and subsequent stabilization in the crude oil price. JGC expects those countries to push ahead with capital investment in large-scale oil and gas projects, power plants and other infrastructure projects to address growing demand for energy in their home markets, which is being driven by population growth and economic development. Oil- and gas-producing countries are also aiming to increase energy exports as a source of foreign currency.

### Results of Operations

The total engineering business focused on steadily executing large-scale projects, particularly in the LNG field. However, there were substantial increases in construction costs for several projects currently underway, including a petrochemical plant project in the US, an oil refinery project in the Middle East and projects in new business fields in Japan. Going forward, the business will continue to work on delivering projects in the order book.

### Fiscal 2016-17: Orders Received and Projects Underway



Projects Underway		
1	Bahrain National Gas Expansion Company	Gas processing plant, Awali, Bahrain
2	Nghi Son Refinery Petrochemical LLC	Oil refinery and petrochemical complex, Nghi Son, Vietnam
3	Saudi Aramco	Oil refinery, Jazan, Saudi Arabia
4	Kuwait National Petroleum Company	Oil refinery, Ahmadi, Kuwait
5	Gorgon Joint Venture	LNG plant, Barrow Island, Australia
6	Ichthys LNG	LNG plant, Darwin, Australia
7	Petronas	Floating LNG plant, Sabah, Malaysia
8	JSC Yamal LNG	LNG plant, Sabetta, Russia
9	JAPEX	LNG receiving terminal, Fukushima, Japan
10	Chevron Phillips Chemical	Ethylene plant, Baytown, US
Orders Received in Fiscal 2016		
11	Sonatrach	Gas boosting separation and compression facilities, Hassi R' Mel, Algeria
12	Sarangani Energy Corporation	Thermal power plant, Sarangani, Philippines
13	Pacifico Energy	Solar power plant, Okayama, Japan
Orders Received in Fiscal 2017		
14	Sonatrach	Crude oil gathering and processing facilities, Hassi Messaoud, Algeria
15	Coral FLNG	Floating LNG plant, Coral, Mozambique

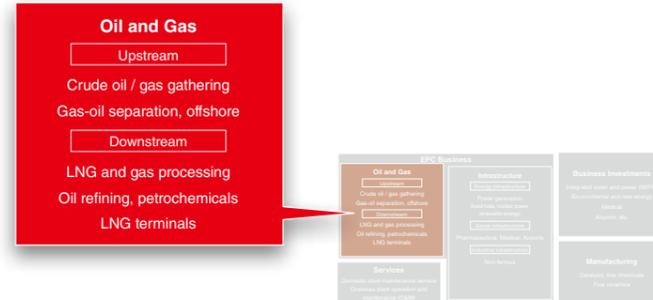
## Total Engineering Business

### Oil & Gas Field

#### Business Overview and Growth Strategy

JGC operates a wide range of businesses in the oil and gas field, such as plant and facility EPC, operation and maintenance (O&M) services, and business investment. Through these businesses, JGC helps clients achieve their capital investment goals, ultimately contributing to the economic growth and industrial development of resource-producing countries.

In the oil and gas field, the EPC business is reinforcing its presence in the offshore area.



#### Orders Received in Fiscal 2016

In fiscal 2016, JGC and wholly owned local subsidiary JGC Algeria, S.p.A. secured a major order from Sonatrach, Algeria's state-owned oil and gas company, to expand gas boosting separation and compression facilities feeding the gas processing plant located in the Hassi R' Mel gas field, Algeria.

The JGC Group's success in winning the order reflected its excellent cost competitiveness, as well as its strong relationship of trust with Sonatrach, built up over many years. JGC and subsidiary JGC Gulf International also won an order to build a gas pipeline and gas storage tanks in Bahrain.

#### Projects Underway in Fiscal 2016



◆ **Ichthys LNG Project** Australia Scheduled to start production in fiscal 2017

### First major LNG project to be led by a Japanese company

As the operator of Ichthys LNG, the first large-scale LNG project to be planned and developed by a Japanese company, INPEX Corporation commissioned a joint-venture group headed by JGC to carry out the EPC work for the project.

A full module construction method was adopted for Ichthys, with modules built at fabrication yards and transported onsite. Project execution therefore required a high level of expertise to manage construction at module fabrication yards, logistics, and assembly at the site. As one of the world's leading LNG contractors, JGC is leveraging the full extent of its capabilities and leadership to ensure the success of the project.

Construction of the modules, which was carried out simultaneously at four different fabrication yards worldwide, is almost completed. The modules are being progressively assembled and tested onsite after delivery by large transportation vessels. JGC is working to start production of LNG before the end of fiscal 2017 while ensuring rigorous onsite safety management.



#### Project Overview

- ◆ Client: Ichthys LNG
- ◆ Location: Darwin, Northern Territories, Australia
- ◆ Capacity: Onshore LNG plant: 8.9 million tons / year (LPG: 1.6 million tons / year, condensate: 100,000 barrels / day (peak output))
- ◆ Contract type: Hybrid lump-sum and cost-reimbursement contract
- ◆ Project implementation structure: Joint-venture group (JKC JV) headed by JGC, with KBR of the US and Chiyoda Corporation of Japan



◆ **Yamal LNG Project** Russia Scheduled to start production in fiscal 2017

### One of Russia's largest LNG projects, set to start production soon

The Yamal LNG Project is currently under development on the Yamal Peninsula – estimated to contain more than 20% of the world's remaining natural gas reserves – in the Yamalo-Nenets Autonomous District above the Arctic Circle in the Russian Federation. In the local language, "Yamal" means "end of the land." Yamal is the second LNG project in the country and one of the largest planned.

With winter temperatures falling as low as minus 50°C, a full module construction method was chosen to reduce onsite construction time.

Plant facilities designed to operate in the extremely cold environment, management of fabrication yards used to build modules weighing a total of 560,000 tons, transportation via the Arctic sea route using icebreakers (some modules have already been delivered by this route during the summer months), and construction work at Sabetta in this "end of the land," all combine to make Yamal LNG one of JGC's toughest projects to date. Despite these challenges, we continue to work hard toward its successful conclusion by marshaling our accumulated capabilities and commitment to project completion. Module construction work in several Asian countries is nearing completion and many modules have already been delivered to Yamal. Onsite assembly work is now approaching the peak phase. We aim to start LNG production before the end of fiscal 2017.



#### Project Overview

- ◆ Client: JSC Yamal LNG
- ◆ Location: Sabetta, Yamalo-Nenets Autonomous District, Russia
- ◆ Capacity: Onshore LNG plant: 16.5 million tons / year (5.5 million tons x 3 trains)
- ◆ Contract type: Hybrid lump-sum and cost-reimbursement contract
- ◆ Project implementation structure: Joint-venture group headed by France's Technip FMC, with JGC and Chiyoda Corporation of Japan

#### TOPIC

### Gaining Momentum in the Offshore Field

Leveraging experience from the completion of two LPG floating production storage and offloading (FPSO\*1) units in the 2000s, and our long track record in onshore LNG plant construction, we secured an order in 2014 to build a floating LNG plant off the Malaysian coast, the first such project to be awarded to a Japanese company. That was followed in June 2017 by our second order for a floating LNG plant, which will be located off the coast of the Republic of Mozambique.

The construction of floating LNG plants presents numerous technological challenges. Currently, only JGC and one other contractor worldwide has experience in EPC delivery for floating LNG topside work. JGC is involved in three of the four floating LNG projects underway at the moment, including the provision of construction management and completion support services for a floating LNG plant based offshore Australia.

Going forward, we aim to leverage our extensive experience and technical capabilities as a leading contractor in onshore LNG plants in order to strengthen and expand our business in the offshore field by reentering all FPSO areas in our EPC business.

\*1: Floating vessels used to produce LPG at sea

#### Track Record in the Offshore Field

Country	Project Type	Year Completed
Indonesia	Floating LPG plant (FPSO) construction project	2004
Angola	Floating LPG plant (FPSO) construction project	2004
Malaysia	Floating LNG plant construction project	Under construction
Australia	Construction management and completion support for floating LNG plant	2017
Mozambique	Floating LNG plant construction project	Under construction



Floating LNG plant for Malaysia currently under construction (rendering of completed vessel)

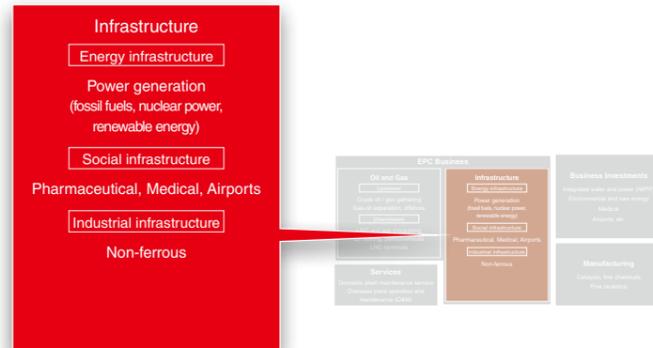
## Total Engineering Business

### Infrastructure Field

#### Business Overview and Growth Strategy

In the energy infrastructure, industrial infrastructure and social infrastructure fields, which support industry and lifestyles worldwide, JGC is tapping into a broad and diverse range of demand in countries and regions around the world through its EPC business.

We are targeting growth in the power generation field by leveraging our experience in the oil and gas sector. Also, we are working with overseas Group companies to target high-value added areas in the infrastructure field, focusing on markets in Southeast Asia such as the Philippines, Vietnam, Indonesia and Singapore.



#### JGC Group's Growth Strategy in the Infrastructure Field

**Energy infrastructure**  
Strengthen presence in power generation field (fossil fuels, nuclear power, renewable energy)

**Industrial infrastructure**  
Reinforce business in non-ferrous

**Social infrastructure**  
Move into overseas markets in the pharmaceutical and medical (health-care) fields



Track Record in Major Renewable Energy Projects

Project Type	Location	Capacity	Year Completed
Solar power plant	Chiba Prefecture	40.4 MWdc	2014
Solar power plant	Chiba Prefecture	31.2 MWdc	2015
Biomass power plant	Hokkaido	74.9 MWdc	Under construction
Solar power plant	Oita Prefecture	25.4 MWdc	2015
Solar power plant	Iwate Prefecture	48.0 MWdc	Under construction
Solar power plant	Iwate Prefecture	80.8 MWdc	Under construction
Solar power plant	Okayama Prefecture	257.7 MWdc	Under construction

#### Orders Received in Fiscal 2016

One of the goals of the current medium-term business plan, Beyond the Horizon, is to grow our business in the infrastructure field. Those efforts paid off in fiscal 2016, with a number of major orders received for power plants.

In the thermal power plant field, JGC won an order from Sarangani Energy Corporation for phase II construction work for a thermal power plant (output 105 MW) in Sarangani Province, Mindanao in the Philippines.

In renewable energy development, JGC invested in a new biomass power plant (output 74.9 MW) with JXTG Nippon Oil & Energy Corporation (formerly TonenGeneral Sekiyu K.K.) and also secured the order to build the plant. Also, in the solar power field, JGC received an order from Karumai Higashi Solar, LLC. to build a solar power plant (output roughly 80.8 MW) and an order from Pacific Energy K.K. for the construction of what will become one of Japan's largest solar power plants (output 257.7 MW).

#### Strengthening and Expanding JGC's Presence in the Infrastructure Field Overseas

◆ Sarangani Thermal Power Plant Project **Philippines** Scheduled to start operation in fiscal 2019

#### Actively Moving into the Energy Infrastructure Field

JGC was awarded a contract for phase II construction work (output 105 MW) for a thermal power plant currently being built by Sarangani Energy Corporation in Sarangani Province, Mindanao in the Philippines.

Demand for electricity continues to increase each year in the Philippines due to the country's rising population and stable economic growth. However, energy supply situation is particularly acute on the island of Mindanao, which urgently needs to build new power plants due to a tight electricity market. The contract is for phase II construction work for a thermal power plant, which will have a combined output of 210 MW (105 MW x two units). Electricity generated by the plant will be supplied to the province of Sarangani on Mindanao island and the island's major city of General Santos, thereby increasing the potential for industrial growth in the province and contributing to an improved standard of living for the residents.

Using this latest order as a foothold, JGC will accelerate its moves into the power plant construction market – part of the energy infrastructure field – aiming to contribute to the development of the ASEAN region and its projected economic growth and expansion.



#### Project Overview

- ◆ Client: Sarangani Energy Corporation (Investors: Alsons Consolidated Resources, Inc. 75%, Toyota Tsusho Corporation 25%)
- ◆ Location: Sarangani Province, Mindanao, Philippines
- ◆ Contract: Engineering, procurement, construction and commissioning services for phase II construction work (105 MW x 1 unit) for a thermal power plant with a capacity of 210 MW (105 MW x 2 units).
- ◆ Contract type: Lump-sum contract
- ◆ Order value: Not disclosed
- ◆ Delivery: Scheduled for April 30, 2019



**Projects Underway in Fiscal 2016**

◆ **Muroran Biomass Power Plant** Japan Scheduled to start operation in fiscal 2019

**Joint Investment in One of Japan's Largest Wood-based Biomass Power Plants**

JGC has invested in a new biomass power plant (output 74.9 MW) planned by JXTG Nippon Oil & Energy Corporation. JGC also received the order to build the plant, which will be located in Muroran, Hokkaido. The plant will be one of the largest wood-based biomass power plants in Japan. JGC was selected as both a business partner for the project and the contractor responsible for engineering, procurement and construction (EPC) based on its relationship of trust with the client, which has been built up over many years of working together on refineries and related facilities in the EPC business.



**Project Overview**

- ◆ **Client:** Muroran Biomass Power Generation GK (investors: JXTG Nippon Oil & Energy Corporation 90%, JGC 10%)
- ◆ **Location:** Kohoku-cho, Muroran, Hokkaido
- ◆ **Power output:** 74.9 MW
- ◆ **Contract:** Engineering, procurement and construction of biomass power generation facilities, commissioning of utility facilities and commissioning assistance for the power generation unit
- ◆ **Contract type:** Lump-sum contract
- ◆ **Order value:** Not disclosed
- ◆ **Delivery:** Scheduled for autumn 2019

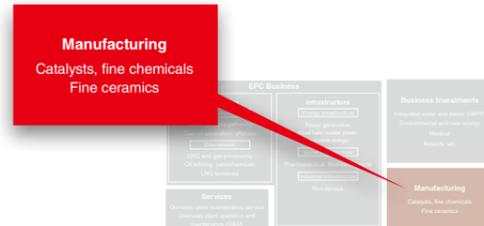
**Catalysts and Fine Chemicals Business**

**Initiatives in Fiscal 2016**

In the catalysts field, JGC implemented initiatives focused on winning back market share in Japan, increasing sales in export projects and securing more business from existing clients. As a result, the business won new orders for FCC catalysts and a contract to supply a major client in Indonesia. Exports of raw materials for NOx removal catalysts were also strong to clients in the US and Europe.

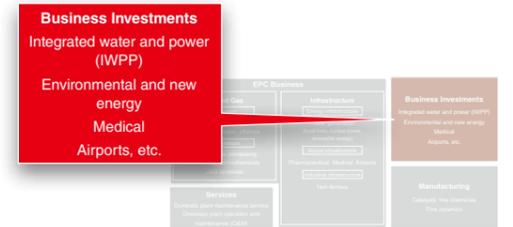
In the fine chemicals field, there was a decline exports to China of optical materials used to make lenses for eyewear, but shipments of functional coating materials (antireflective materials) for 4K TVs increased. Components (ceramic-metal hybrid materials) for photolithography equipment used to make OLEDs, and optical communication components (ceramic materials) also registered solid sales.

As a result, sales and profits in the catalysts and fine chemicals business increased from the previous fiscal year.



**Investment and Service Business**

As part of Beyond the Horizon medium-term business plan, operations in the investment and service business have been classified into one of three categories: expansion areas, status quo areas and future areas. Leveraging experience and lessons learned from issues in the past, JGC's basic policy will be to narrow its focus to strategic investment projects while pursuing synergies with the JGC Group's core EPC business.



◆ **Expansion areas:** Continue proactive initiatives

- ◆ Integrated water and power (IWPP) business
- ◆ Environmental and new energy business
- ◆ Medical business

◆ **Status quo areas:** Maintain for time being and assess future potential based on market conditions

- ◆ Resources development business
- ◆ Water / sewage business
- ◆ Urban development business

◆ **Future areas:** New areas to challenge based on future potential

- ◆ Airport operation business
- ◆ Agricultural business
- ◆ Big data solutions business

**Initiatives in Fiscal 2016**

Since fiscal 2005, JGC has aimed to expand the investment and service business to offset fluctuations in profits in the EPC business. Until recently, we have invested in a relatively wide range of areas, achieving a certain level of success in areas such as power generation and renewable energy. However, investment returns in resources development and other businesses have not met initial expectations.



## Chapter 3: Initiatives to Reinforce the Management Base

In the roughly 90 years since it was established, JGC has continued to develop and grow, focusing on the EPC business. In that time, we have seen changes in the economic and political situation worldwide, market conditions and client intentions, but the source of our competitiveness has always been the same: a management base supported by human resources, partnerships with clients, partnerships with suppliers and our technical capabilities.

In this section, we look at how those four elements of our management base have made JGC competitive and supported the Group's sustained growth.

### Initiatives to Reinforce the Four Elements of our Management Base – the Source of JGC's Strength



#### CONTENTS

- P33 Strengthening Human Resources
- P35 Partnerships with Suppliers
- P36 Partnerships with Clients
- P37 Enhancing Technical Capabilities



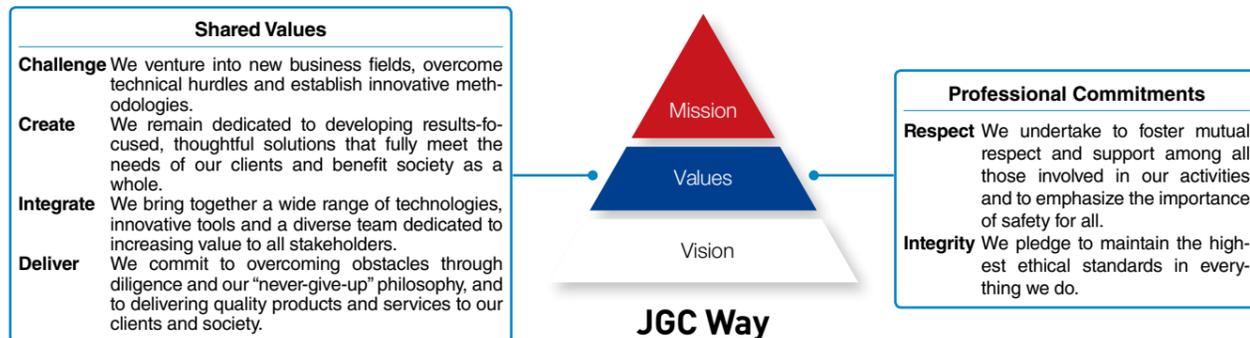
# Strengthening Human Resources

## Basic Stance

Our competitiveness as a company is supported by people who pass on experience and skills acquired from implementing a wide range of projects and who are also motivated to acquire new expertise and techniques. Another key factor in our competitiveness is our culture of seeing through projects to completion. This is underpinned by a firm commitment to ensuring the success of every project we are involved in, whatever the challenges we face. As an engineering company with no assets such as production facilities, people are our most important business asset. We are working to reinforce human resources so that every one of our employees can maximize their performance.

## Personnel Systems, Employee Training

Using OJT, OFFJT and self development to cultivate self-sufficient employees



The basic aim of our personnel systems is to increase the number of self-sufficient employees – people who can independently understand the goals they have to achieve and tackle the necessary work and challenges themselves. We also want to create an environment that supports the sustained development of personnel. People who embody the values of the JGC Way are the type of human resources we aim to cultivate throughout the JGC Group. We have also defined the type of expertise and skills required for each job category and set out training paths to develop self-sufficient employees.

To create that type of workforce, we have developed an integrated training system based on three approaches: on-the-job (OJT) training, off-the-job (OFFJT) training and self development. We offer various OJT and OFFJT programs and job rotations. We have also established systems to support self-development, aiming to help our employees acquire the skills and experience to tackle challenges they will face in their everyday jobs and build a workforce of "T-shaped professionals" or "π-shaped professional" who can combine their skills with expertise in other areas.

## Project Management Development Department Established

Cultivating the next generation of project leaders

As part of a reorganization we underwent on July 1, 2017, we established a new Project Management Development Department, which is tasked with rapidly training project management personnel who have a wide range of skills and experience in projects and construction. Personnel trained by the department will become JGC's next generation of project leaders. They will be earmarked to fill future project manager roles and other positions, helping to pass on and enhance our project management capabilities – the source of JGC's competitiveness.



## Onsite Training System

Preparing our employees for leadership with six-month onsite deployments

All new employees hired in the main career track are sent to construction sites in Japan and overseas for six months of onsite training. By actually seeing and experiencing the plants that represent JGC's final products and by being involved in the construction phase at an early stage in their careers, our employees gain an understanding of how the engineering documents they will help create at our Head Office are used in the plant construction process. They also experience the weight of responsibility related to ensuring quality and delivering plants to clients on schedule.

At overseas construction sites, people from many different countries often work together at a given time. Clients, vendors of materials and equipment, and subcontractors involved in plant construction each have their own approaches and value systems. Even though our new employees are just starting

their JGC careers, they need to display the necessary leadership and teamwork skills to ensure onsite staff work together as a team towards the goal of completing the plant. Experience gained from the onsite training system is invaluable in their future roles around the world.



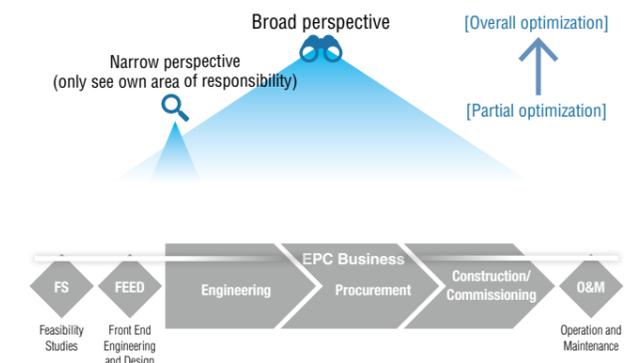
Fiscal 2016 deployments under the onsite training system (60 employees)



## Role Play-based Training

Learning early on how to optimize entire projects

In 2007, we launched a role play-based training course for employees who have been with JGC for four to nine years to give them experience in preparing project estimates and negotiating with clients. During the course, which is mainly a residential program and lasts for four and a half days, small teams are given the task of preparing a project quote and proposal documents to win a hypothetical order within a set timeframe. The hypothetical projects used in the training are created based on experience from many past estimates and projects implemented by JGC, giving our employees a real feel for actual estimate preparation processes, despite the OFFJT environment. Every member of a JGC project team is required to understand how to optimize entire projects, rather than simply focus on their specific areas. This training is aimed at ensuring employees in the early stages of their JGC careers see the importance of taking a broad perspective, giving them the tools and skills to understand and optimize the bigger picture.



## Partnerships with Suppliers

### Basic Stance

JGC has created a global supply chain for plant construction thanks to more than half a century of implementing numerous projects overseas. JGC sees suppliers as partners in value creation, working with them to ensure mutual competitiveness and success through optimum quality, cost and delivery. We select suppliers based on a fair and comprehensive assessment of factors such as quality, price, delivery and technical capabilities, while also fully taking into account environmental considerations, human rights, health and safety, and information security in our procurement activities.

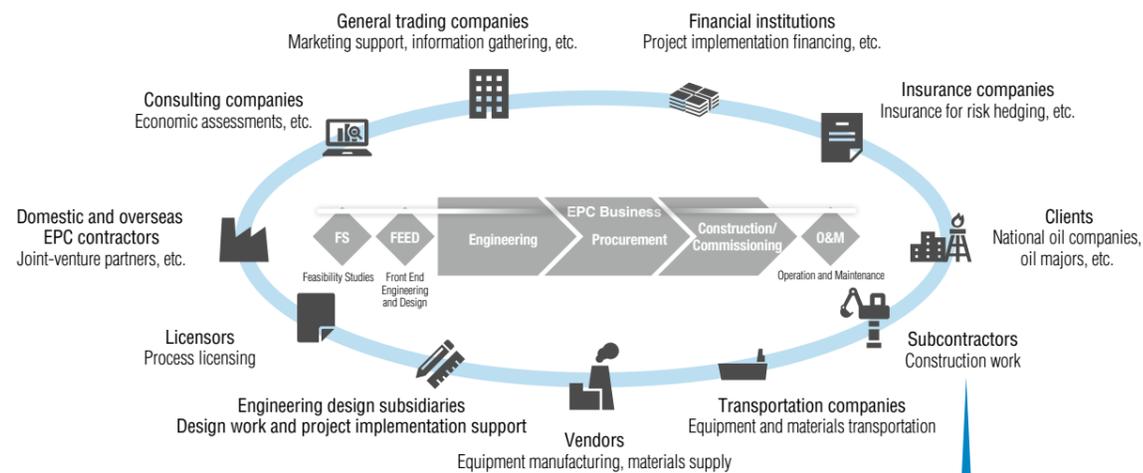
## Partnerships with Clients

### Basic Stance

For roughly 90 years, JGC has been constructing and maintaining plants and other facilities for national oil companies in oil- and gas-producing countries, oil majors and a wide range of other clients in the energy infrastructure, industrial infrastructure and social infrastructure fields in Japan and overseas. When our clients decide to invest in new facilities, we put forward proposals that help them increase the value of their businesses and work to deliver the best-quality plants and facilities to cost and delivery. Our long track record of success has helped us win their confidence, resulting in a strong client base.

## The JGC Group's Supply Chain

### Emphasizing the importance of suppliers as partners in value creation



### Focus | A culture of Cooperation with Subcontractors

Unforeseen risks can materialize during the construction phase. In those situations, JGC's approach is to work closely with subcontractors in project implementation and construction management to ensure smooth progress based on shared interests, rather than using contractual obligations to pressurize subcontractors into shouldering all the responsibility.

## TOPIC

### JGC Quality Forum

To ensure the quality of plant facilities – JGC's final products – we have to drive improvements in quality at suppliers in Japan and overseas, which make up our supply chain. To achieve that goal, it is important for our suppliers to take steps based on their own initiative. At JGC, there is no trade-off between quality and factors such as delivery and profit margins. We aim to improve quality while delivering projects on time and maintaining margins. These approaches and initiatives support what we call a culture of quality, and we work hard on an ongoing basis to ensure that culture permeates throughout our supply chain.

On January 20, 2017, we held the 2nd JGC Quality Forum, which gives participating suppliers an opportunity to share the details and outcomes of initiatives aimed at promoting a culture of quality and to learn about new quality enhancement activities. The forum, which was held at our Yokohama Head Office, featured a lively exchange of opinions between representatives of five client companies and 33 vendors in Japan and overseas.



Quality Forum held on January 20, 2017

## Delivering JGC Quality Worldwide

### Building long-term relationships with clients based on trust

Most plant construction projects around the world are expected to support the industrial and economic development of the countries where they are located. That means JGC needs to use local plant equipment and materials, construction employees and other resources wherever possible. JGC ensures it meets clients requirements for local content, while also establishing local EPC companies in each region to support the development of the local engineering sector. This approach has been warmly welcomed by oil-producing countries, which increasingly need to diversify away from resources exports and develop other sectors, helping us to further strengthen our customer base.



◆ Main Group Companies in Japan ◆ Main International Group Companies

## TOPIC

### Supporting the development of Algeria's energy sector for more than 40 years

JGC's association with Algeria began in the 1960s, when we carried out a well-received technical and economic study for a petrochemical plant and related fertilizer manufacturing facilities. In 1969, JGC was awarded the contract for the Arzew oil refinery, our first plant construction project in Algeria. We faced some major challenges in the construction process, but our project management approach and the hardworking nature and sincere attitude of the Japanese employees involved in the project won over local people, who place high value on loyalty.

That project opened the way to many more successful project completions in Algeria, helping JGC win the support and confidence of Sonatrach, Algeria's state-owned oil and gas company. To date, we have completed roughly 50 projects in Algeria, primarily in the oil and gas field. Through the success of those projects, we have played a major role in the development of Algeria's energy sector.

In November 2008, we established JGC Algeria S.p.A., which works to train and recruit local engineers. Going forward, we plan to contribute to the further development of Algeria's energy sector and economy through our continued close business relationship with Algeria.



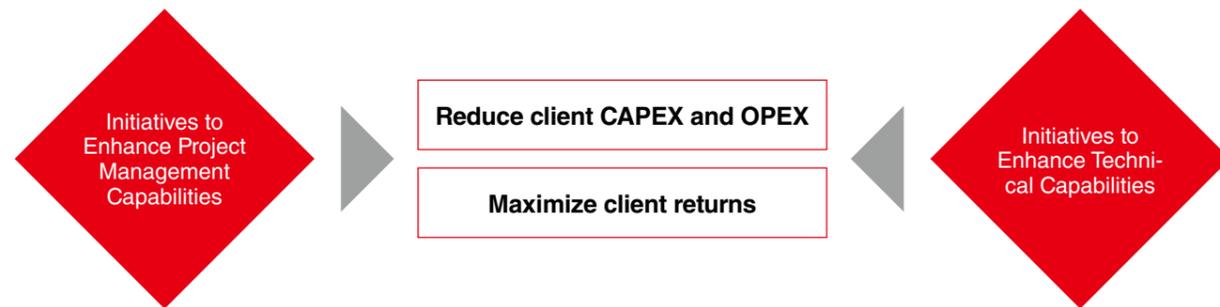
In Salah gas processing plant (2000s)

## Enhancing Technical Capabilities

### Basic Stance

JGC leverages its advanced expertise in design technologies such as process technology and unit operation technology to create plants and facilities that reduce both plant construction costs (capex) and plant operating costs (opex) in line with client needs. JGC also utilizes its project execution technologies, built up over many years, to create designs that maximize returns for clients who make the investments. JGC will continue to optimize existing engineering technology by refining, integrating and combining various technologies, while also actively using IoT and other advanced technologies, and improving its technical capabilities to reduce the environmental impact of fossil fuel energy and use renewable energy widely.

### Initiatives to Enhance Technical Capabilities



### Creating Social and Economic Value by Improving Technology

As an engineering company, JGC aims to increase business efficiency by enhancing the effectiveness of its engineering technology and project management capabilities and by relentlessly improving its skills and abilities. To address clients' project requirements, which have become increasingly advanced in recent years, we need to develop environmental technology and other new technologies that help us execute highly challenging projects.

We plan to refine, integrate and combine various existing engineering technologies and develop new construction methods to improve our ability to deliver difficult projects.

We will also make use of IoT and other emerging technologies, work to reduce the environmental impact of fossil fuel use, and enhance our technical capabilities to support wider use of renewable energy.

### Concrete Initiatives

#### Unit Operation Technology

JGC has developed proprietary process technology and unit operation technology, using it widely in plants and facilities. JGC now needs to conduct its business in ways that protect the global environment and have a more meaningful role in society. To achieve that, we will leverage our existing expertise while also developing more advanced, cutting-edge technologies to make a broader contribution to society. Specifically,

we will focus on areas such as environmental protection, particularly the management of CO<sub>2</sub> emissions, untapped resources, nuclear power, life sciences, non-ferrous metal refining resources and urban infrastructure.

We will also work with external partners to complement our own efforts to develop new technologies.

### Project Implementation Technologies

#### Modular construction method

JGC has typically used the stick-built construction method, where most work is completed onsite, but many projects are now subject to a range of restrictions and conditions that make it hard to apply that approach, such as challenging natural environments and strict environmental regulations, difficulties securing necessary personnel (prohibitively high labor costs), or limited space for plant facility construction, preventing the use of existing methods.

To ensure projects can be completed under those conditions, we have improved our project implementation technologies by adopting the modular construction method.

With the modular method, the design and construction phases are more complex. In addition to conventional design work, the design phase needs to take into account stresses on modules during transportation (movement during sea and land transport) and the routes the modules will take to reach the site. The implementation phase is also challenging because it has a similar level of complexity to implementing multiple projects in several regions around the world at the same time.

Starting with the Gorgon LNG project in Australia in 2009, we have adopted the modular construction method for a number of projects, including Ichthys LNG in Australia, Yamal LNG in



Modules being transported by ship

Russia, and a floating LNG project offshore Malaysia, giving JGC unrivaled experience and expertise in modular construction compared with peers in the global engineering contractor sector.

Opportunities to build plants in locations subject to various regulations and restrictions are likely to increase, leading to demand from clients for contractors with a strong track record in project implementation using the modular construction method. We plan to reinforce our position as one of the pioneers in modular construction and continue improving our technical capabilities.

### TOPIC

## Aiming to Create a Hydrogen-based Society

### Current Issues

The world needs to diversify its energy sources to ensure stable supplies and significantly reduce CO<sub>2</sub> emissions. Against that backdrop, hydrogen is increasingly seen as a promising source of energy. However, hydrogen's low boiling point and energy density makes it difficult to handle, raising significant issues, especially with respect to transport and storage. Despite those hurdles, hydrogen fuel cell vehicles are already on the market and hydrogen is seen as a promising fuel for power generation, spurring demand for hydrogen technology that can be used to generate power.

### Our Initiatives

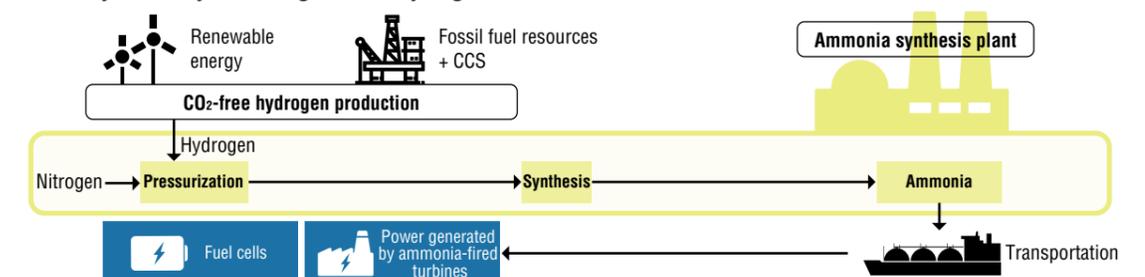
JGC is focusing on ammonia as an energy carrier for hydrogen at point of use. Ammonia is a compound of hydrogen and nitrogen and does not emit CO<sub>2</sub> during combustion. Ammonia also has commercial transportation and storage infrastructure already in place. Work is currently underway to develop highly efficient, low-cost methods of ammonia synthesis, which has typically been produced from natural gas. Possible alternatives include using CO<sub>2</sub>-free hydrogen created using renewable energy or fossil fuels as a precursor for ammonia synthesis.

### Future Initiatives

JGC is currently building a demonstration ammonia synthesis plant and plans to start commissioning during fiscal 2017. The plant is scheduled to move into the demonstration phase in fiscal 2018. To establish hydrogen-based power generation technology using ammonia as the energy carrier, we plan to create a large-scale demonstration plant and develop commercial plant technologies.

Our goal is help create a clean energy future by developing a highly efficient, low-cost ammonia synthesis process that uses CO<sub>2</sub>-free hydrogen as the precursor.

### Ammonia synthesis system using CO<sub>2</sub>-free hydrogen



# Chapter 4: Environment and Society

## CONTENTS

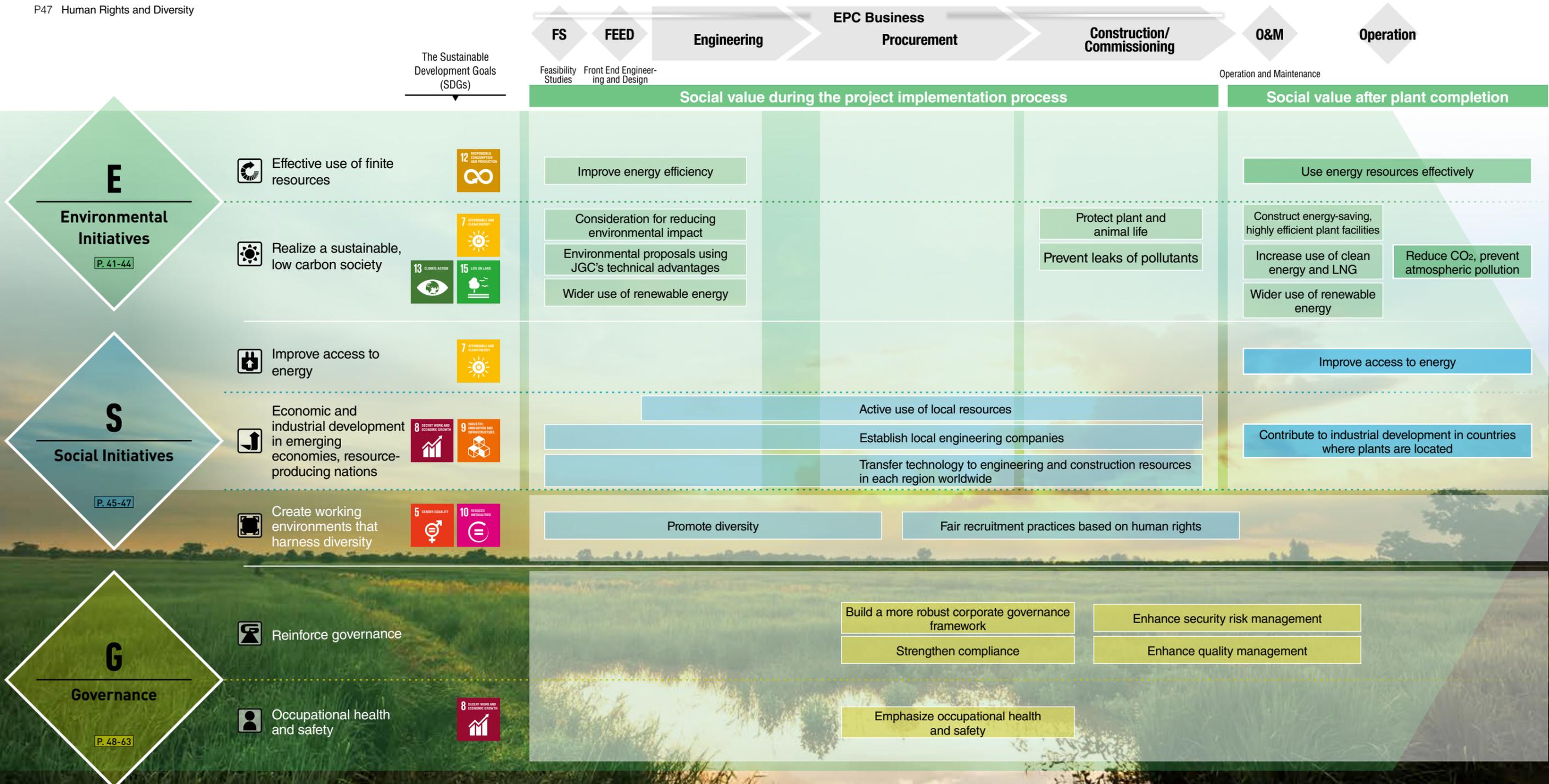
- P39 Basic Stance on ESG
- P41 Environmental Initiatives
- P45 Working with Local Communities
- P47 Human Rights and Diversity

## Basic Stance on ESG

Guided by the JGC Group's corporate philosophy, the JGC Way (see page 5 for more details), which sets out the fundamental direction and basis for our business activities, our goal is to ensure high ethical principles, respond to the needs of society and our clients, respect diverse human resources and utilize a wide range of technologies, while continuously increasing corporate value and growing environmental and social value. We recognize that ESG initiatives must be an integral part of our business activities in order to realize the ideals of the JGC Way. We will continue to conduct our business in a way that achieves sustained growth in corporate value. ESG disclosures in this report reference the Global Reporting Initiative (GRI), fourth generation (G4) Sustainability Reporting Guidelines and the Sustainable Development Goals (SDGs), in line with the core subjects of ISO 26000.



"Sustainable Development Goals" agreed upon by world leaders towards 2030



# Environmental Initiatives



### Basic Stance

Economic development and population growth in emerging countries is spurring increased interest in environmental conservation, protecting biodiversity and other efforts to realize sustainable societies. Based on our belief that engineering has an inherent role to play in conserving the environment, we understand that protecting nature and ensuring co-existence with the environment are key issues in our business activities. With that in mind, we implement a range of initiatives to protect the global environment, in line with the principles of our Environmental Policy.



Realize a sustainable, low-carbon society



### Environmental Policy

As a global engineering company creating a more prosperous future for people and the earth, JGC Corporation establishes the following environmental policies to contribute to the protection of the earth's environment.

- To establish, maintain and work through regular review for the continuous improvement of an Environmental Management System that clearly states and provides for the implementation of environmental targets for office operations and project execution which contribute to the prevention of environmental pollution.
- To use our technical expertise to provide our clients with access to services that contribute to the protection of the earth's environment.
- To fully conform with environmental laws and regulations established for the protection of the environment and with related agreements reached with clients and stakeholders.
- To minimize the burden on the environment from office operations by reducing waste, promoting reuse and recycling, and limiting energy consumption.
- To strictly observe the following principles in carrying out

the engineering, procurement and construction work for our projects.

- In our design work for projects we shall strive to minimize adverse impacts on the environment through measures that include limiting the consumption of resources and energy, and working to prevent pollution of the air, water and soil.
- In procurement, we shall encourage vendors that show a positive attitude toward the use of environmentally friendly manufacturing practices.
- In construction, we shall minimize the use of resources and the production of waste, promote recycling, and strive to protect the environment through preventing the pollution of the air, water and soil.

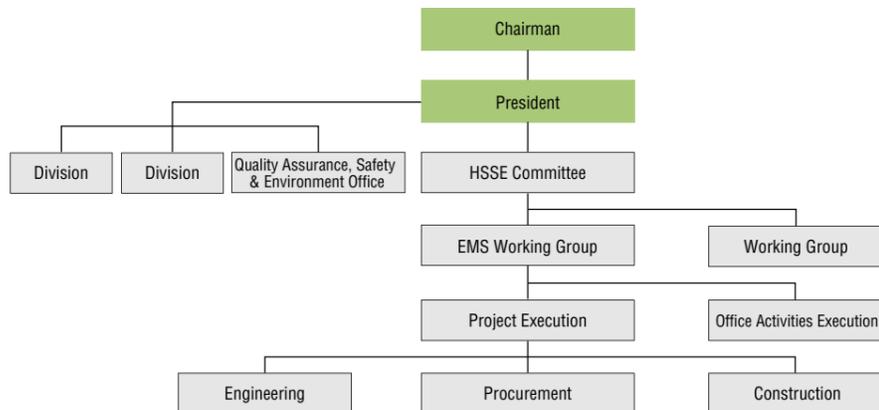
Tadashi Ishizuka  
Representative Director, President  
and Chief Operating Officer (COO)  
JGC Corporation  
July 1, 2017

### Continuous Improvements to the Environmental Management System

JGC obtained ISO 14001 certification from Lloyds Register Quality Assurance (LRQA) in December 2003. ISO 14001 is the international standard for environmental management systems and certification was renewed for a fourth time in October 2015.

To realize the principles in our Environmental Policy, we make continuous improvements to our environmental management system by setting annual activity targets and measuring and evaluating our performance against those targets.

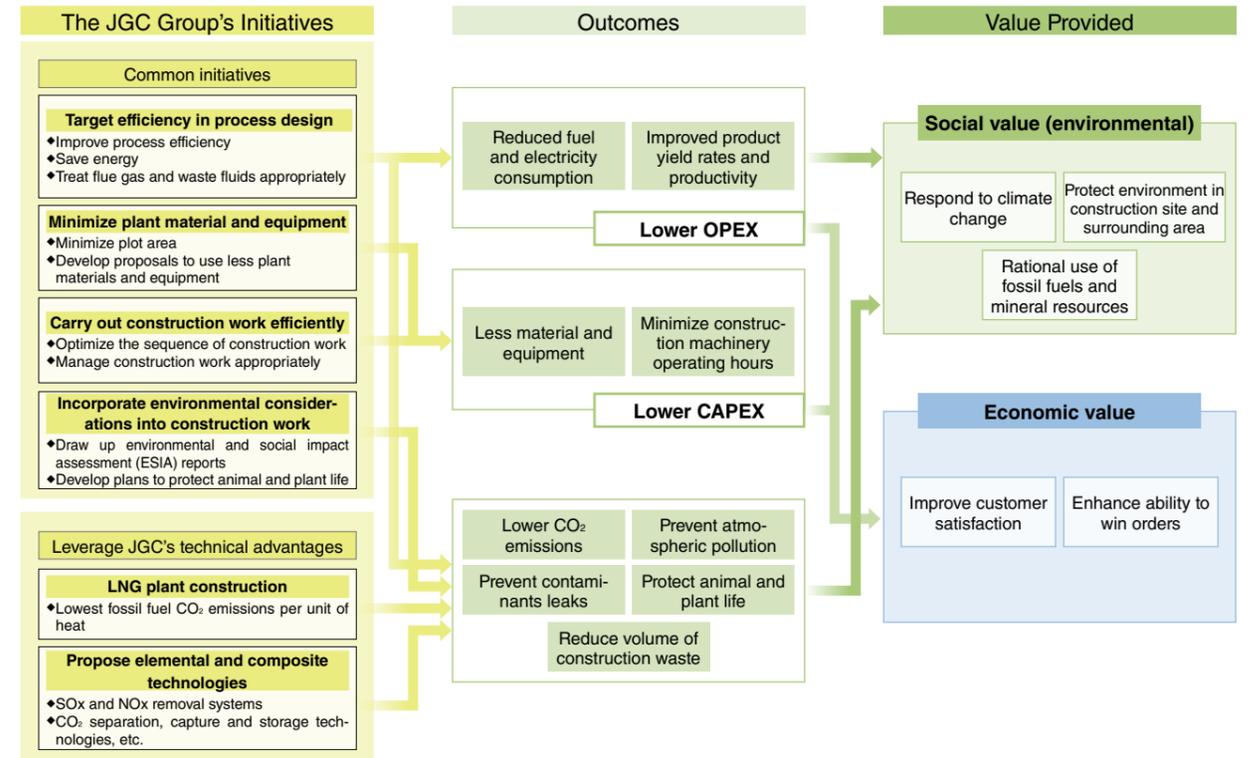
### Environmental Management Systems



### Environmental Improvement Activities in Our Core Business

JGC believes it is important to solve environmental issues and support the sustainable development of society through its business activities, which also helps create corporate value and improve the Group's competitiveness. Based on this thinking, the JGC Group tackles environmental issues directly and indirectly through its business activities.

#### Social value created through our business activities (environmental)



### TOPIC

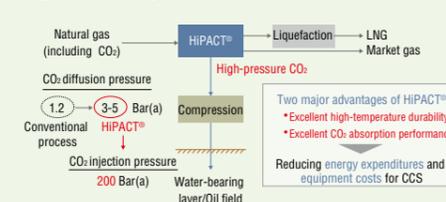
### High-pressure Regenerative CO2 Capture (HiPACT®) Process



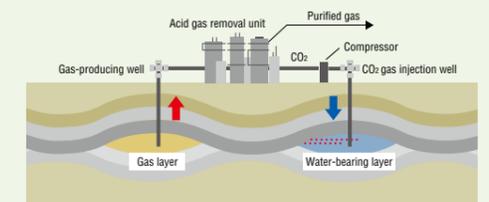
Gas processing and CCS facility (operated by Naftna Industrija Srbije (NIS), Serbia)

HiPACT® is a technology for absorbing and separating CO<sub>2</sub> from natural and synthetic gases and capturing it at high pressure. With this technology, CO<sub>2</sub> can be stored underground (CCS: Carbon dioxide Capture and Storage) at low cost, while dramatically reducing additional energy required for CCS, helping to prevent global warming. The process, which was developed jointly by JGC and BASF, was introduced at a natural gas plant owned by Inpex Corporation in 2010 to demonstrate its viability. Since January 2015, a Serbian oil company has operated a commercial gas processing and CCS facility with a CO<sub>2</sub> recovery unit using the HiPACT® process.

#### HiPACT® process flow (example)



#### CCS schematic



**Construction and Operation of Solar Power Plants**

The JGC Group has been involved in the construction of 17 solar power plants, including projects still underway. The combined output of the plants is nearly 700 MW, or enough to power roughly 220,000 households for one year. JGC is one of the most experienced contractors in Japan's solar power plant construction market. In addition to construction work, the JGC Group provides plant operation and maintenance services and is involved in solar power plant operation helping to spur wider uptake of solar power in Japan through its involvement in various phases of solar power businesses. Leveraging our wealth of experience in solar power plant construction and operation in Japan, we are also working with JGC subsidiaries around the world to actively target solar power plant construction projects overseas.

Through these initiatives, the JGC Group will drive wider use of renewable energy in Japan and overseas and help create a recycling-oriented society that addresses issues related to climate change.



**TOPIC**

**Development of Dry-type SOx and NOx Removal System for Mid- and Low-temperature Flue Gases**

JGC has combined the dry denitration catalyst developed by Group company JGC Catalysts and Chemicals Ltd. (JGC C&C) with the dry desulfurization technologies of a partner company in Japan to create the world's first dry-type SOx and NOx removal system for mid- and low-temperature flue gases. JGC and local partners are providing and installing this system in China, where the government is tightening emission regulations to address the growing problem of atmospheric pollution caused by gas emissions. With atmospheric pollution from gas emissions now an increasingly serious issue in other countries across Asia, JGC plans to roll out the system in India and other markets in the region.



Dry-type SOx and NOx removal system for mid- and low-temperature flue gases installed at coke manufacturing plant (Inner Mongolia Autonomous Region, China)

**Implementing Our Zero Emissions Initiative**

Since 2008, we have implemented measures to eliminate by-products from our business activities as part of efforts to fulfill our corporate social responsibility. These efforts have evolved into our Zero Emissions Initiative, which has led to improvements in the JGC Group's environmental performance.

**Environmental Assessments of Domestic Construction Sites**

JGC conducts an annual evaluation of environmental performance at its construction sites in Japan based on three criteria: industrial waste recycling rate, number of contaminant leaks and CO<sub>2</sub> emissions per unit of energy. In fiscal 2016, JGC made good progress, achieving its internal environmental targets through concerted efforts across its project sites to improve the recycling ratio and reduce the number of leaks. However, CO<sub>2</sub> emissions per unit of energy increased quite substantially compared with the previous fiscal year, reflecting some orders and special projects with conditions that were not anticipated when the targets were set, such as the continuous use of large construction machinery and equipment that

The Zero Emissions Initiative covers all project sites in Japan and overseas, the Head Office, the Research and Development Center, JGC Group companies in Japan and overseas, and domestic and international sales offices.

require large amounts of energy and fuel. From fiscal 2017, we plan to set and manage targets that take into account ongoing conditions in those projects.

**Environmental Performance Indicators for Domestic Construction Sites**

Environment indicators	Units	Fiscal 2012	Fiscal 2013	Fiscal 2014	Fiscal 2015	Fiscal 2016
Industrial waste recycling rate	Result (Target) %	95.8 (97.0)	94.2 (97.0)	94.1 (97.0)	96.3 (98.0)	98.1 (97.0)
Number of leaks of hazardous substances, etc.	Result (Target) Leaks	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
CO <sub>2</sub> emissions per unit of energy	Result (Target) kg-CO <sub>2</sub> /hour	0.36 (1)	0.58 (0.9)	0.63 (0.9)	0.64 (0.9)	1.43 (0.8)

**TOPIC**



Training to increase awareness for prevention of oil spills

**Targeting Zero Leaks**

JGC takes into account environmental considerations in every phase of plant and facility construction projects implemented by the Group in different fields around the world. At overseas construction sites, which are more difficult to manage than sites in Japan, all employees share and implement a rigorous approach to site management to prevent any leaks of contaminants. Our employees, as well as people working for construction subcontractors, undergo training to encourage a deeper understanding of this management approach. On some projects, several thousand onsite personnel participate in the training program.

S  
Social Initiatives

## Working with Local Communities

### Basic Stance

As our management philosophy states – we are committed to creating a more prosperous future for our clients, for people and for society by integrating our core capabilities and technical expertise to generate innovative solutions. In line with this philosophy, we recognize that we have a responsibility to contribute to the development of society through our business, in addition to increasing economic value. We are working to fulfill our corporate social responsibility while always seeking to coexist with society. Through our projects, we will contribute to the sustainable development of society, including regional communities, by creating employment opportunities and implementing various activities such as education, training and guidance programs for local workers.



Economic and industrial development in emerging economies, resource-producing nations



### Contributing to Energy Supplies

#### More than 30 Years of Support for Petronas in LNG Development

The Bintulu LNG Complex, which is owned by Malaysia's state-owned oil company Petronas, is one of the largest LNG production centers in Asia. The facility currently has nine trains with a combined annual LNG production capacity of roughly 26 million tons.

For more than 30 years, starting in the 1980s, JGC has carried out engineering, procurement, construction and commissioning (EPC) work for all the plant's nine trains, as well as ongoing work to increase capacity and upgrade facilities after completion. This long-term support for Malaysia and Petronas,

as well as our detailed knowledge of the Bintulu LNG Complex and advanced technical capabilities in the LNG field, is highly valued in Malaysia.

The construction of the complex has also contributed to the local economy by supporting the development of local equipment manufacturers, primarily in Malaysia, and by creating many job opportunities.



Bintulu LNG Complex, Malaysia (train 9)

### Industrial Development in Emerging Countries

#### Targeting Sustained Growth with Suppliers

When vendors in emerging countries want to take on the challenge of producing equipment that is more complex than anything they have previously tackled, engineers from JGC's Vendor Technical Support Group offer appropriate guidance and help them gain experience by assessing their manufacturing facilities and the capabilities of their designers. If quality issues occur at vendors, JGC works with them to identify the

cause and provides support to improve quality, rather than terminating the business relationship. In our business with suppliers, there is no trade-off between quality and profits, and we work with them to build relationships based on mutual respect and prosperity, leading to sustained growth for both parties.

JGC will continue to demonstrate strong leadership, aiming to establish and foster a culture of safety and quality at suppliers.

TOPIC

## Training Engineers at JGC Philippines



Technical training at JGC Philippines



Training at a construction site

### ◆ JGC Philippines Established

JGC Philippines, Inc. was established in September 1989 as the Group's first overseas global engineering center. Prior to that, most engineering work was conducted by JGC in Japan using Japanese staff. The steep rise in the value of the yen following the Plaza Accord forced JGC to take steps to improve its competitiveness in overseas orders. One of those steps was the establishment of JGC Philippines as an engineering center to conduct the Group's project feasibility studies, front end engineering and design (FEED) and other design work. The subsidiary was also tasked with developing the local plant facility market.

### ◆ Developing JGC Philippines' Capabilities Training Local Engineers

As part of efforts to increase corporate value, JGC Philippines has implemented initiatives on an ongoing basis to enhance the capabilities of its engineers. The company has trained engineers in the latest design technologies through courses at its own offices and JGC's Yokohama Head Office and given them opportunities to gain project experience and skills through deployments to some of JGC's projects worldwide. Outstanding engineers are actively promoted to division manager positions, as well as senior manager roles, helping to increase motivation and loyalty. This ongoing program has enhanced the engineering skills of JGC Philippines as an engineering center. The company is now also capable of implementing EPC projects after securing a construction license in the Philippines in 2016 (AAAA category).

### ◆ Contributing to Local Communities Cultivating the next generation of human resources with partners in academia

JGC Philippines offers internships as part of efforts to fulfill its social responsibility. After undergoing training in office and general skills, interns are given practical experience by participating in actual projects while rotating between various departments. The internship program has led to various links with local universities and colleges, giving JGC Philippines the opportunity to contribute to local communities and the development of human resources in the Philippines.

### ◆ Future Plans

We aim to step up the training of human resources to enhance the company's capabilities as a global engineering center. JGC Philippines will implement EPC projects in the Philippines, as well as move into other markets in Southeast Asia and expand its capabilities in order to contribute to the development of the region.

## Human Rights and Diversity

### Basic Stance

Fair personnel management that emphasizes human rights is fundamental to the JGC Group. We are working to enhance the diversity of our workforce through equitable recruitment practices and personnel systems that give a greater role to non-Japanese personnel, seniors, people with disabilities and female employees. JGC is also implementing various measures to respect different lifestyles, increase the motivation of every employee and create working environments that enable all personnel to maximize their skills and potential, which will be vital to create different types of value and drive sustained growth.

 Create working environments that harness diversity



S

Social Initiatives

## Chapter 5: Management Structure

In this section, we look at JGC's management structure, which supports the JGC's efforts to create value. The section includes an Interview with Outside Directors, information about compliance measures and the steps we are taking to improve occupational health and safety.

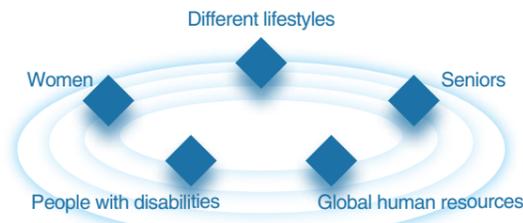
G

Governance

### Personnel Diversity

JGC's large overseas projects rely on teamwork between many different specialists and human resources with diverse cultural backgrounds and values – teams that genuinely embody diversity. JGC believes diversity is a crucial ingredient

in creating social and economic value and is actively implementing various measures to promote even greater diversity in the workforce.



Systems and measures to create a healthy work-life balance that respects different lifestyles

#### ◆ Promoting Global Recruitment

JGC is hiring more people from different countries to work at its head office in order to strengthen its ability to implement multinational projects. We run recruitment campaigns at universities overseas and actively hire exchange students in Japan. Around 100 foreign employees from over 20 different countries currently work at the head office, accounting for more than 4% of head office staff. As our workforce has become more international, we have taken steps to respect different cultures and make the working environment welcoming for everyone, such as providing a prayer room for Muslim employees.

#### ◆ Supporting Active Careers for Seniors

JGC has raised the mandatory retirement age to 65 to create workplaces where motivated older employees can continue to work with peace of mind, giving them the opportunity to utilize their extensive experience and specialist knowledge and play an active role for as long as possible. In addition to continuing their main duties, senior staff pass on their skills, provide advice and make a major contribution to the training of young engineers.

#### ◆ Recruiting People with Disabilities

Under a law designed to promote the employment of people with disabilities, JGC is actively working to achieve legally stipulated employment ratios for disabled employees. Efforts are also being made to upgrade and improve workplace environments to cater for different types and levels of disability. JGC is creating employment opportunities for people with disabilities and is also planning to introduce a health keeper system (in-house therapeutic nurses) to help manage the health of employees.

#### ◆ Empowering Women

JGC has introduced a family care system and taken other steps to improve working conditions for women. By working with the Kanagawa Women's Career Support Group and talking to our female employees, we aim to encourage wider use of the family care system, as well as boost career awareness among female employees, provide more opportunities for them to fulfill their potential and promote them to leadership positions. We are also working to raise awareness of our industry as a sector where women have job opportunities, for example by holding company briefing sessions for new graduates aimed specifically at female students.

### CONTENTS

P49	Conversation between Outside Directors
P53	Corporate Governance Structure
P55	Compliance
P58	Security Risk Management
P59	Occupational Health and Safety
P61	Quality Management System
P62	Directors, Auditors and Executives
P63	IR Activities
P64	ESG Data Highlights



## Conversation between Outside Directors

### Achieving Sustained Growth as a Global Company

JGC has increased the number of outside directors, implemented measures to improve the effectiveness of the Board of Directors and taken other steps to enhance corporate governance aimed at increasing corporate value over the medium to long term. In this section, outside directors Shigeru Endo and Masayuki Matsushima had a conversation about JGC's corporate governance initiatives and the business challenges facing JGC Group over the longer term.



Outside Director **Shigeru Endo**

**Profile: Shigeru Endo**

Apr. 1974	Joined the Ministry of Foreign Affairs
Apr. 2001	Director-General, Middle Eastern and African Affairs Bureau
Feb. 2002	Director-General, Consular and Migration Affairs Department
Aug. 2003	Ambassador to The Permanent Mission of Japan to the United Nations and Other International Organizations in Geneva and Consul General, Consulate General of Japan in Geneva
Mar. 2007	Ambassador extraordinary and plenipotentiary to the Republic of Tunisia
Jul. 2009	Ambassador extraordinary and plenipotentiary to Saudi Arabia
Oct. 2012	Retired from the Ministry of Foreign Affairs
Jun. 2013	Outside Director, JGC CORPORATION (current post)
Jun. 2013	Outside Director, IINO KAIUN KAISHA, LTD. (current post)
Apr. 2014	Special Assistant to the Minister for Foreign Affairs (current post)

- < Significant Positions Concurrently Held >
- Outside Director, IINO KAIUN KAISHA, LTD.
  - Special Assistant to the Minister for Foreign Affairs

Outside Director **Masayuki Matsushima**

**Profile: Masayuki Matsushima**

Apr. 1968	Joined Bank of Japan
Jun. 1998	Executive Director, in charge of the Bank's International Affairs
Jun. 2002	Senior Advisor, the Boston Consulting Group
Feb. 2005	Senior Executive Advisor, Credit Suisse Securities (Japan) Limited
Jun. 2008	Chairman, Credit Suisse Securities (Japan) Limited
May. 2011	Senior Advisor, the Boston Consulting Group
Jun. 2011	Outside Director, Mitsui O.S.K. Lines, Ltd. (current post)
Jun. 2011	Outside Director, Mitsui Fudosan Co., Ltd. (current post)
Sep. 2014	Senior Advisor, Integral Corporation (current post)
Jun. 2016	Outside Director, JGC CORPORATION (current post)

- < Significant Positions Concurrently Held >
- Outside Director, Mitsui O.S.K. Lines, Ltd.
  - Senior Advisor, Integral Corporation

◆ Taking a proactive stance on governance

**Endo:** Before meetings of the Board of Directors, JGC briefs outside directors and provides relevant materials about resolutions, allowing us to participate in discussions. In 2016, JGC appointed a second outside director, Masayuki Matsushima. Mr. Matsushima provides a new perspective, mainly from a financial and management standpoint, helping to broaden discussions by the Board of Directors.

**Matsushima:** A key aspect of the role of outside directors is to put forward different views based on knowledge and experience acquired outside the company. It's important for us to prevent discussions from becoming too one-sided. That's why, to ensure a meaningful role in meetings, we need to understand how and why agenda points have been raised, constantly ask ourselves whether the right decisions are being made by considering every angle, and always try to provide objective opinions.

**Endo:** I was appointed outside director in 2013. Since then, JGC's stance on corporate governance has changed. As I mentioned earlier, JGC has appointed two outside directors to strengthen oversight of the board. Along with various other measures, that has led to a steady improvement in corporate governance at JGC. JGC has also made welcome changes to improve efficiency, such as narrowing down the number of agenda points discussed by the board to key topics. Going forward, the key question will be how well this new approach becomes established within JGC. The fundamental objective of governance is to support sustained growth and increase corporate value over the medium to long term. I try to always keep that in mind when contributing to discussions during board meetings. At the same time, I make a point of ensuring I am accountable to the interests of external stakeholders, such as shareholders and investors.

**Matsushima:** I agree. Corporate governance at JGC is fast-improving and heading in the right direction. When Japanese companies talk about strengthening gover-

nance, they tend to focus on defensive governance. But we should also look at corporate governance from a proactive perspective. We need to consider a good balance between defensive and proactive governance. Japan's Corporate Governance Code states that risk-taking is the responsibility of the Board of Directors. Companies have to take risks to increase profits, but without proactive governance, they are unlikely to achieve sustainable growth and increase corporate value.

◆ Comprehensively managing risk to increase corporate value

**Matsushima:** I've been told that managing risk sits at the heart of JGC's core EPC business. I often raise points about risk during board meetings, but that does not mean I advise the board to avoid taking on risk. The meaning of the word "risk" in English refers to predicting an outcome based on a certain level of probability. The key role of governance is to enable companies to take risks while ensuring those risks are carefully mitigated.

**Endo:** We're currently seeing a dramatic qualitative and quantitative change in geopolitical risk. More specifically, country risk is emerging in various ways beyond anything we've previously assumed. The more JGC expands its operations, the greater the risks it faces. To address that trend, the Board of Directors and other bodies in JGC should perhaps think about discussing risk more thoroughly.

**Matsushima:** I agree completely. The Board of Directors could establish a mechanism to quantify and rationally assess risk to support their discussions. That will not be easy, but I think JGC needs to develop a system that allows the Board of Directors to balance risks and returns for each project and evaluate JGC's entire risk portfolio and risk threshold in numerical terms, not just on an individual project level. The idea is not to stop JGC from taking risks altogether, but to help it make decisions about risk for specific projects that do not lead to serious issues for JGC as a whole, even in a worst-case scenario. Improving

the accuracy of risk measurement gives the management team more confidence, making it easier to take other risks.

**Endo:** And we have to be able to deal with risk when it materializes. More than ever, we need a strong presence on the ground to gather information and create networks.



JGC Group has faced and overcome a wide range of risks in the past, but we need to continue improving our capabilities in this area.

◆ Rebuilding the EPC business amid a changing environment  
Training highly skilled personnel

**Endo:** Under the leadership of President Tadashi Ishizuka, JGC is channeling business resources into the core EPC business and implementing a raft of initiatives to turn round the business. The most important thing for JGC right now

is for the whole of the JGC Group to support the new President and the Company's leadership to ensure this approach delivers results. Investment over the last decade or so has yielded some results, but we need to reflect about the Company's recent losses. However, rather than nipping businesses in the bud, we should look at their prospects from a longer term perspective and leave them to grow and develop if there are "green shoots."

**Matsushima:** I think we should turn round the EPC business in phases. The first step is to carefully learn from past mistakes. That means we have to identify and take shared ownership of any issues so that everybody is on the same page, then tackle the issues and deliver results as quickly as possible. The next step is to rebuild the EPC business. Our operating environment is changing due to a number of emerging trends: the energy revolution, driven by shale oil & gas and other developments, new competitors from China, South Korea and other countries, and the digital revolution, characterized by technologies such as artificial intelligence (AI). To remain competitive in this environment, we have to think carefully about how to rebuild the EPC business by focusing on JGC's competitive advantages. JGC has already started developing new business areas such as the infrastructure and offshore fields, but we need to adopt a more ambitious attitude and create a framework to help us reach even greater heights.

**Endo:** President Ishizuka has highlighted the importance of identifying and training JGC's future leaders. We've also created a Project Management Development Department to integrate the Project Department and the Construction Department, and we will train mid-career employees and new hires to give them a better understanding of overall management processes in small and mid-size projects. I have plenty of opportunities to interact with JGC employees, and my overriding impression is that they are decent people. Many are highly skilled with a strong sense of public duty. The fact there are so many JGC employees with those qualities is proof that our personnel training is

working. As an engineering business with no production facilities, human resources are the lifeblood of JGC. That's why we need to remain focused on personnel training as a constant challenge for JGC. I'm confident that JGC has the ability to become one of Japan's leading companies in human resources development.

**Matsushima:** I don't think there is any real secret to cultivating personnel. On the job training (OJT) should form the core of any program, because people grow and develop when they are given responsibilities. To make that happen, managers need to trust their staff and give them duties with more responsibility. The recent initiative to train mid-career and new employees as candidates for future project manager roles by giving them experience in small and midsize projects shows that JGC knows it has to overcome some of the issues that occur in large enterprises.

◆ Steps to achieving sustainable growth

**Endo:** JGC is an unusual company in that it has focused on one business field – EPC – during the nearly 90 years since it was established. But looking ahead, the pace of change in JGC's operating environment is likely to be even faster than anything experienced before. I hope to have many opportunities to discuss some of the issues JGC faces, such as how to develop JGC's earnings capabilities, and what strategic direction JGC should take over the medium to long term.

**Matsushima:** Regarding JGC's medium- to long-term perspective, in the short term we must take a look at how to balance JGC's pursuit of immediate profits with medium- to long-term issues. In my experience, it is difficult to attend to long-term management issues when concentrating on immediate management issues. Furthermore, experiencing success can get in the way of the next course of action to grow the company, in other words it can experience the problem of innovators dilemma. Even when the whole corporate group focuses on short-term issues, it is import-

ant that some departments in the company always have a long-term vision and perspective to prepare for strategic changes in direction.

**Endo:** If JGC is serious about becoming a truly global company over the medium and long term, it also needs to think about tackling environmental and social issues on a global scale, such as those laid out in the United Nations Global Compact and the sustainable development goals (SDGs). We also have to nurture the idea that we and our customers can balance business activities with the cost of supporting



environmental and social initiatives. Taking a broader view of the kind of company we want JGC to be holds the key to JGC Group's sustainable, global growth.



## Corporate Governance Structure

### Basic Stance

JGC's priority management goal is to achieve sustained improvement in corporate value. To realize that goal, we need a corporate governance system that ensures fair, transparent and efficient management in order to win and retain public trust. JGC is also working to strengthen compliance in accordance with the values of the JGC Group, which stress upholding high ethical principles and acting with honesty. Going forward, we will continue to engage with shareholders and investors while also monitoring the effectiveness of the Board of Directors, designing appropriate executive remuneration systems and improving compliance as part of concerted efforts to reinforce corporate governance to support sustained growth in corporate value.



### Corporate Governance Framework

JGC is a company with a Board of Directors and an Audit & Supervisory Board. We have also introduced an executive officer system to clarify responsibility and authority in business execution and to improve the speed and efficiency of decision-making and business execution. To reinforce management oversight and enhance transparency, we have appointed outside directors and outside audit & supervisory board members who satisfy the criteria for independent officers. The main elements of JGC's corporate governance system are described below.

#### Board of Directors

The Board of Directors has 11 directors, including two outside directors. The Company's five audit & supervisory board members, including three outside members, also attend meetings, which are held once a month in principle.

#### Audit & Supervisory Board

The Audit & Supervisory Board has five members, including three outside audit & supervisory board members. In principle, meetings are held once a month.

#### Nominating Committee and Assessment Committee

Outside directors sit on the Nominating Committee and the Assessment Committee to enhance fairness and transparency

in decisions related to executive appointments and compensation. In principle, the committees meet once a year.

#### Operations Steering Committee

In principle, the Operations Steering Committee meets twice a month to discuss items related to business execution by JGC and the JGC Group. The committee is made up of members appointed by the president. Audit & supervisory board members also attend meetings.

#### Strategy Committee for EPC/Business Investment Projects

In principle, the council meets once a month to discuss tender strategies related to JGC's and the JGC Group's EPC project and business investment. The council mainly comprises directors and executive officers.

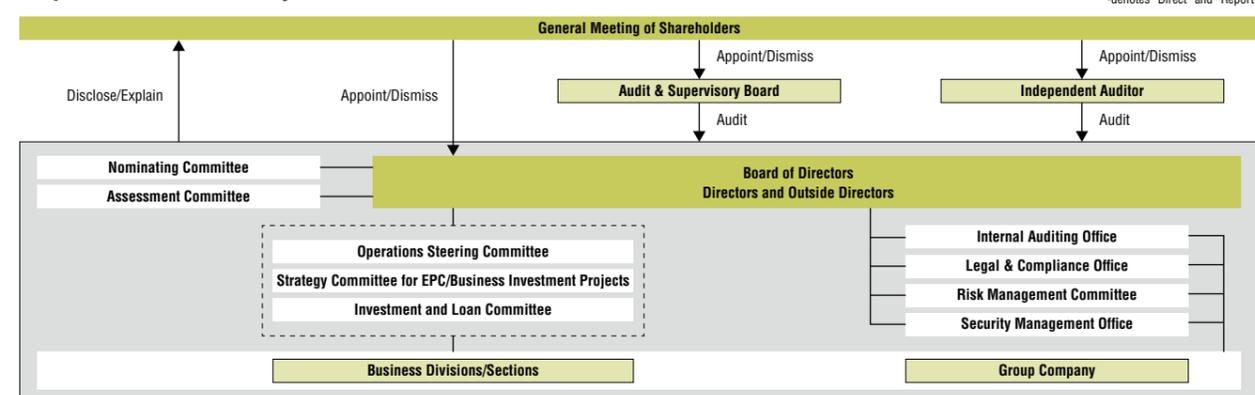
#### Investment and Loan Committee

In principle, the committee meets once a month to discuss JGC's and the JGC Group's investments and loans. The committee mainly comprises directors and executive officers.

#### Independent Auditor

The certified public accountants (CPA) who audit JGC's accounts are Michitaka Shishido and Yoshinori Saito of KPMG AZSA LLC. Four other CPAs and eight other individuals assist in carrying out these audits.

### Corporate Governance System



### Status of Internal Control System

JGC's Board of Directors determines the basic principles of the internal control system and revises them as necessary. The Internal Auditing Office monitors, evaluates and improves the effectiveness of the internal control systems of JGC and the JGC Group and conducts separate audits as necessary. We have also formulated rules assigning management author-

ity, which regulate the duties and authority of executives and employees, resulting in clear lines of responsibility in corporate management and business execution. We have also formulated and implemented management rules for Group companies to ensure efficient and appropriate operations across the Group.

### Executive Remuneration

The basic principle of executive remuneration at JGC is to attract the necessary management personnel to increase JGC's global competitiveness as an engineering company and to deliver sustained growth in corporate value. In line with that principle, remuneration received by executives is decided within the limits approved at the 113th Ordinary General Meeting of Shareholders held on June 26, 2009. Currently, the combined upper limits are ¥690 million for directors and ¥88 million for audit & supervisory board members.

Remuneration for directors comprises fixed remuneration and performance-based remuneration. The fixed portion is determined by the position and duties of the director. The performance-based portion is paid from a total pool of up to 1% of net income for each fiscal year and is designed to incentivize directors to improve the Company's earnings. In the mainstay EPC business, it typically takes several years for projects to

be delivered from the time orders are received. Given the nature of the EPC business, we take into account medium- to long-term improvements in corporate value when evaluating operations supervised by each director and their contribution to earnings in each fiscal year. To ensure objectivity in performance evaluations, the contribution to earnings is discussed and decided by the Assessment Committee, which includes outside directors. Outside directors receive only fixed remuneration to ensure they appropriately oversee management from a standpoint that is independent of business execution.

Audit & supervisory board members also receive only fixed remuneration due to the Audit & Supervisory Board's position as an independent body overseeing the executive actions of directors to ensure the appropriate operation of the corporate governance system.

### Breakdown of Executive Remuneration

Category	Total value of remuneration, etc.	Breakdown of remuneration, etc.			
		Fixed remuneration		Performance-based remuneration	
		Number of eligible executives	Total amount provided	Number of eligible executives	Total amount provided
Nine directors (Outside directors not eligible)	279.00 million yen	Nine	279.00 million yen	-	-
Three audit & supervisory board members (Outside audit & supervisory board members not eligible)	33.60 million yen	Three	33.60 million yen	-	-
Six outside executives (Two outside directors and four outside audit & supervisory board members)	39.36 million yen	Six	39.36 million yen	-	-

(Note 1) The figure for fixed remuneration above includes remuneration for one director and remuneration for two audit & supervisory board members who stepped down at the conclusion of the 120th Ordinary General Meeting of Shareholders held on June 29, 2016.

(Note 2) As of the end of fiscal 2016, the Board of Directors comprised 10 directors (including two outside directors) and the Audit & Supervisory Board comprised five audit & supervisory board members (including three outside audit & supervisory board members).

### Corporate Governance Code Initiatives

Japan's Corporate Governance Code is designed to encourage proactive corporate governance based on accountability to stakeholders, fair and transparent decision-making and expeditious and firm management decisions. JGC agrees with the intent of the code and is implementing its principles. In line

with the aims of the code, JGC will continue to engage with stakeholders, disclose accurate information in a timely manner and improve the effectiveness of the Board of Directors to realize sustainable growth and increase corporate value over the medium to long term.



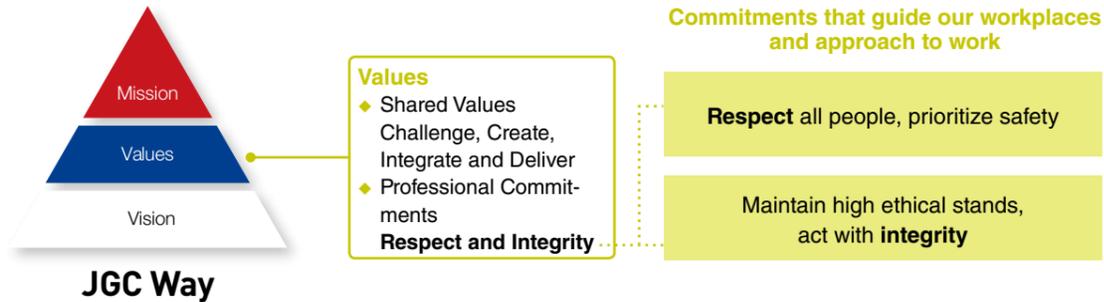
## Compliance

### Basic Stance

The JGC Group's corporate philosophy states, "We are committed to creating a more prosperous future for our clients, for people, and for society through integrating our core capabilities and technical expertise to generate innovative solutions." JGC has also positioned compliance as the cornerstone of management, based on two keywords in its list of shared values – Respect and Integrity. As a member of the international community, the JGC Group believes that compliance with the laws of Japan and of all countries where the Group operates, as well as fair and equitable business practices in accordance with corporate ethics, are essential to the pursuit of sustainable business development. Based on this thinking, the Group has developed the Code of Business Conduct. The code, which must be followed by all employees, contains key points to ensure the JGC Group's corporate philosophy – the JGC Way – is implemented in practice.



### The Role of Compliance in the JGC Way – the JGC Group's Corporate Philosophy



### Group Compliance System



The JGC Group has established a Group compliance system that ensures business activities conform to the highest ethical principles at all Group companies. Each Group company has appointed compliance officers, creating a single contact point for compliance issues in order to improve the effectiveness of compliance activities. The compliance officers are responsible for evaluating compliance risks specific to their companies and develop and implement compliance measures tailored to those risks. Compliance officers from across the Group regularly meet to share information and promote closer cooper-

ation, while also working to develop systems and implement measures that raise awareness about compliance issues. In fiscal 2016, compliance officers from domestic and overseas Group companies gathered at our Yokohama Head Office and in Hanoi, Vietnam (JGC Vietnam Co., Ltd.) to attend Group Compliance Conferences. The conferences featured lively discussions about the issues and risks faced by each company, as well as ideas about effective measures to resolve and mitigate risks and issues.

### Key Compliance Personnel

JGC has implemented a range of measures through its management structure to reinforce compliance, led by the JGC Compliance Office. However, relying on this top-down, one-way approach makes it difficult to identify potential issues in each department, ensure feedback is communicated to the JGC Compliance Office and assess the effectiveness of compliance activities. These factors have limited the impact of our compliance activities.

To address these issues, we have started deploying key compliance personnel to each department on a trial basis to improve communication with the JGC Compliance Office. Key

compliance personnel are responsible for leading compliance activities in each department.



Key compliance staff in each department

### Measures to Prevent Bribery

JGC works to ensure fair business practices, in line with its basic policy of complying with all anti-bribery rules and regulations, such as provisions in Japan's Unfair Competition Prevention Law prohibiting the bribing of foreign public officials, the US Foreign Corrupt Practices Act (FCPA) and the UK Bribery

Act 2010. The table below shows the JGC Group's regulations and programs related to preventing bribery, based on provisions in the JGC Group's corporate philosophy and code of business conduct.

The JGC Group's corporate philosophy		
Code of Business Conduct		
Bribery Prevention Regulations		
<b>Regulations to prevent bribery by employees</b> Gifts, entertainment and travel policy Policy on charitable donations Policy on political contributions	<b>Regulations to prevent bribery by business partners</b> Anti-corruption policy for international commercial representative Anti-corruption policy for joint ventures Anti-corruption policy for vendor and subcontractor	<b>Regulations to ensure effective operation of bribery prevention programs</b> Rules related to the JGC Group Compliance Hotline Bribery risk management guidelines Bribery prevention training guidelines Compliance monitoring guidelines

### Preventing Bribery by Subcontractors

JGC requires all subcontractors to comply with rules and regulations prohibiting bribery. Before starting a business relationship with a company, JGC assesses the company's links with public officials and evaluates its governance and compliance systems. Business partners are also required to sign declarations or business contracts agreeing to JGC's anti-bribery

policy and stating a commitment that they will not engage in bribery. In cases where the risk of bribery is deemed to be high, JGC conducts a further round of rigorous due diligence and only decides to begin a business relationship if all concerns have been completely eliminated.

### Initiatives in Regions with a High Risk of Bribery

JGC addresses risks specific to each project, conducting assessments at the bidding stage to identify the risk of bribery in the order and implementation phases of each project.

For projects in regions with a high risk of bribery, the JGC Compliance Office takes a rigorous approach, visiting work sites midway through project implementation to conduct intensive monitoring, evaluate efforts to prevent bribery and recommend any necessary improvements.

### Number of EPC projects underway, order backlog in countries ranked in bottom 20 in Corruption Perceptions Index

	Fiscal 2012	Fiscal 2013	Fiscal 2014	Fiscal 2015	Fiscal 2016
Number of EPC projects underway	2	2	2	2	1
Outstanding contracts (100 millions of yen)	375	313	277	241	234



## Security Risk Management

### Basic Stance

JGC works on a daily basis to mitigate and prevent risk. When JGC is faced with serious security risks, our security risk management team prioritizes the safety of employees and addresses the situation carefully, appropriately and rapidly, aiming to minimize any negative impact while ensuring business continuity.



## Compliance Training

JGC conducts compliance training programs tailored to different employee grades and topics in order to raise compliance awareness.

### Compliance Training Programs

#### ◆ Objectives and number of participants (course completion rate) for employee grades-based training

	Objective	Fiscal 2012	Fiscal 2013	Fiscal 2014	Fiscal 2015	Fiscal 2016
New employees (April and October)	Acquire essential knowledge about compliance as a member of society and learn about JGC's compliance systems	75 (100%)	86 (100%)	95 (100%)	105 (100%)	67 (100%)
Basic compliance training	Acquire fundamental understanding of compliance, learn about global trends and understand issues related to compliance during project implementation	-	-	-	48 (8%)	117 (27%)
Intermediate compliance training	Acquire compliance knowledge needed for managerial positions and consider corporate ethics issues	51 (48%)	44 (51%)	84 (53%)	46 (54%)	67 (62%)
High-level compliance training	Understand the role senior managers need to play to foster ethical corporate behavior and rigorous compliance	29 (69%)	21 (74%)	78 (73%)	19 (80%)	13 (84%)

\* The low course completion rate for basic compliance training is mainly due to the relatively recent start of the course (fiscal 2015). JGC aims to improve the completion rate by continuing to implement the course.

#### ◆ Topic-based training

In addition to grade-based training, JGC runs topic-based training targeting specific areas of compliance, such as bribery, anti-social forces, anti-monopoly law and business ethics for engineers. These courses are designed for specific employee groups and are run intensively at certain times to achieve the greatest impact. They typically pinpoint key topics, such as risk areas identified in internal compliance awareness surveys or risk assessments, or issues raised by corporate scandals in the news. Courses are led by employees with in-depth experience in each field or by external experts. The hybrid programs of lectures, workshops and case study methods ensure thorough learning and long-term awareness of each topic. For example, in fiscal 2016, Yasuko Okada, Representative Director of Cuore C3 Co., Ltd. and an expert on tackling harassment, was invited to run a workshop on changing awareness about harassment in the workplace. Senior managers from project departments also attended the workshop.

#### ◆ Number of topic-based training courses and participants

	Fiscal 2012	Fiscal 2013	Fiscal 2014	Fiscal 2015	Fiscal 2016
Number of courses	27	8	8	19	14
Participants	996	220	312	600	434

## JGC Group Compliance Hotline

We have established the JGC Group Compliance Hotline to help rapidly identify, mitigate and prevent compliance risks. The hotline allows employees to seek advice or report any concerns related to compliance violations or activities that may constitute a violation of compliance rules.

Any reports or requests for advice about violations are investigated thoroughly and appropriate responses or feedback are implemented and provided on a timely basis.

Extreme care is taken to ensure whistleblowers do not suffer detrimental treatment.

The JGC Group Compliance Hotline has two contact points – one internal (English language) and one external (Japanese language).

The former is run by the Compliance Department and the latter by a third-party organization that specializes in whistleblower reporting. Employees can report concerns anonymously by phone or email.

#### Number of Reports Received by Hotlines

Fiscal 2012	Fiscal 2013	Fiscal 2014	Fiscal 2015	Fiscal 2016
4	2	3	5	12

Internal Whistleblowing System Publicity poster

## Security Management Office

JGC executives and employees make more than 5,000 overseas trips each year and around 500 JGC personnel are stationed overseas in 30 countries. JGC has established the Security Management Office to provide rapid 24-7 support to overseas employees in the event of natural disasters, acts of

terrorism, conflict, pandemics, crime, public unrest, traffic accidents, illness and other incidents. The office has two operating postures:

### Crisis Management Operations

The Security Management Office leads the implementation of crisis management measures based on the risk level in a given area, in line with the Basic Rules for Risk Management.

\* Examples: Restrictions on overseas business trips, preparation and implementation of temporary employee evacuations, etc.

### Preventive Operations

1. Collect, analyze and communicate risk information
2. Update standard documentation such as crisis response

policies, manuals and safety standards

3. Assess levels of public safety, analyze potential threats and evaluate risk related to specific projects, develop and implement security measures
4. Monitor activities related to items 1-3 and provide guidance to ensure improvement
5. Provide education and training for crisis management
6. Coordinate and liaise with related organizations (government agencies, external consultants, etc.)

## Information Security Management

Handling large volumes of information (specification documents, design plans, reports, etc.) is part and parcel of project execution. Much of this information is confidential data received from clients and business partners, as well as JGC's proprietary know-how. Protecting these information assets is one of the expected responsibilities of an engineering contractor.

However, JGC also has to ensure its employees, clients and business partners can safely access the information they need to support the smooth delivery of projects worldwide. To this end, we actively invest in information systems, including security measures. These investments support continuous improvements in information security, ensuring security levels satisfy the needs of our clients and business partners.

### Groupwide System to Promote Information Security

We have developed information security regulations and operating frameworks based on the ISO/IEC 27001 international standard for information security management systems and JGC's track record in projects, which can vary significantly in terms of client specifications and operating conditions. We also work to improve information security from both a technological and human perspective.

### Certification for Information System Platforms

The Corporate Administrative & Financial Affairs Division, the Corporate IT Office and the relevant department in Fujitsu Engineering Technologies Ltd., which are collectively responsible for planning, building, operating and managing JGC's IT infrastructure, acquired ISO/IEC 27001 certification in 2006 as part of efforts to ensure the stable operation of the Group's information system platforms. Certification entails continuous screening on an annual basis and a review process every three years to renew certification. JGC underwent evaluation in July 2016 for certification renewal and passed the continuous screening process in July 2017.

# G Governance

## Occupational Health and Safety

### Basic Stance

Safety is one of the highest priorities for an engineering contractor. In accordance with JGC's Health and Safety Policy, and under the leadership of senior management, JGC works to prevent worksite accidents and traffic accidents involving its own employees and those of partner companies. In the last few years, our Incident- and Injury-Free (IIF) activities, which are implemented at all worksites, have achieved a dramatic improvement in awareness about occupational health and safety and traffic safety at construction projects in Japan and overseas. Going forward, we will continue to rigorously enforce worksite and traffic safety measures across the JGC Group.



### Safety and Health Policy

JGC Corporation places the highest priority on maintaining the safety and good health of all the personnel participating in or affected by JGC's operations and preventing property losses as JGC serves its clients, industry and the world community.

In the fulfillment of the above-stated policy, JGC hereby declares:

**First** JGC's management, employees and project employees are committed to continuing efforts for zero accidents, injuries and property losses.

**Second** JGC's management encourages safety and health awareness among its employees on an ongoing basis.

**Third** Regardless of the location, nature and type as well as size of projects, all applicable safety and health rules shall be strictly applied on all of JGC's projects.

JGC Corporation ensures that this policy, related directives and procedures are thoroughly communicated and implemented throughout the corporation and subcontractors engaged in JGC's projects.

### Basic HSSE Guidelines

In 2015, we developed the JGC Group Basic HSSE\* Guidelines and distributed them to employees across JGC Group in August 2015. The new guidelines replaced HSSE Vision 2015, which set out our previous policy on HSSE. With the new guidelines, we are aiming to raise the level of HSSE across the whole JGC Group by establishing universal HSSE guidelines, rather than setting HSSE goals based on fixed timeframes of several years under our previous vision.

Our Basic HSSE Guidelines comprise an HSSE slogan and an HSSE Code of Conduct, which were announced by the president at the HSSE Conference he hosted on July 28, 2015.

#### Basic HSSE Guidelines

Ensure everyone works safely and in good health and returns home to their families without incident

#### HSSE Slogan

Respect & Care

#### HSSE Code of Conduct

- Take the initiative in complying with rules
- Be aware of each other, look out for each other, appreciate each other
- Show individual leadership

\* HSSE stands for Health, Safety, Security and the Environment.

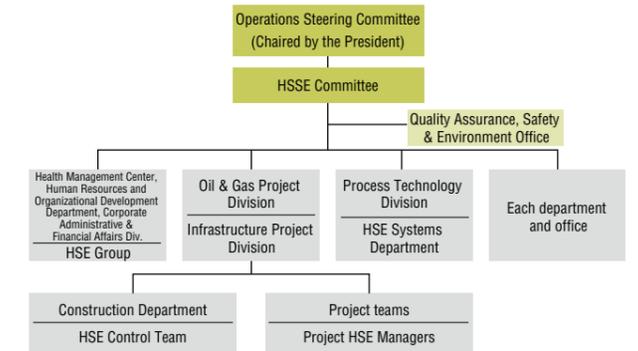


### HSSE Organization

The HSSE Committee discusses and deliberates on important safety matters for the whole JGC. It also reports to the Operations Steering Committee chaired by the president. Matters decided by the HSSE Committee are promptly implemented by the Company's divisions.

An audit group appointed by the chairman of the HSSE Committee is tasked with conducting health and safety audits at principal construction sites in Japan and overseas and submits audit reports to the Operations Steering Committee.

### HSSE Organization



### Fiscal 2016 Overview

In fiscal 2016, the Group continued to implement measures to prevent worksite accidents and traffic accidents at construction sites in Japan and overseas. We also implemented activities to change attitudes on HSSE throughout the Group, in line with the JGC Group Basic HSSE Guidelines, which were formulated in 2015.

Over the last few years, we have implemented our IIF Program, in an effort to change perceptions about HSSE, leading to greater awareness about safety at projects in Japan and overseas. However, due to a fatality at an overseas project, we failed to achieve our priority target of zero fatal accidents

in 2016, bringing the Group's run of five straight years without a fatal accident to an end. To prevent any reoccurrence, the Chairperson of the HSSE Committee issued instructions to all related personnel reminding them to take all necessary care. As a part of our road safety program, we ran a Groupwide campaign aimed at preventing traffic accidents, resulting in no major traffic accidents occurred during fiscal 2016. We also enforced and monitored our Seven Golden Rules for accident prevention, a list of key rules created to ensure road safety at subcontractors.

### Fiscal 2017 Policy

Building on progress in fiscal 2016, we plan to further increase awareness of HSSE among JGC Group employees, raise health and safety standards to an even higher level at construction sites and step up activities to eliminate traffic accidents, in line with the JGC Group Basic HSSE Guidelines, which were formulated in 2015, and led by senior management.

In particular, we will focus on enforcing basic rules related

to priority areas of concern that were raised after the fatal accident in 2016. We will also put renewed emphasis on rigorously enforcing safety measures for worksite areas that are not usually monitored by ordinary personnel. Also, we will look into establishing our IIF Program more widely by developing activities tailored to the scale and setup of each project.

### TOPIC

## JGC Safety Day



HSSE Conference held on July 25, 2017

### JGC Safety Day Campaign

From June to July every year, JGC conducts a Groupwide campaign that focuses on traffic and construction site safety. In addition to the Yokohama Head Office, this campaign covers all of the Group's construction sites, offices and affiliates in Japan and overseas. In fiscal 2016, Safety Day was divided into two parts – an HSSE Forum and an HSSE Conference. The Safety Day campaign at overseas worksites and bases was held in early June, before the start of Ramadan, and on 1 July in Japan, and featured parallel worksite and traffic safety campaigns. During the campaign period, JGC management personnel worked to raise HSSE awareness across the whole Group by visiting three work sites in Japan and seven worksites and bases overseas.



## Quality Management System

### Basic Stance

In our business, quality assurance is an essential part of achieving safe plant operation and stable production. Led by the Quality Assurance Committee, JGC's quality management system is designed to achieve continuous improvements in quality. Each department and section sets its own quality targets and works to address quality issues, aiming to nip any issues in the bud and identify underlying causes as part of a proactive stance on resolving quality issues.



### Using QMS to Improve Quality Performance

JGC obtained ISO 9001 certification for its quality management system (QMS) in 1993. At the time, QMS certification was essential, especially for overseas projects, and we worked to acquire and retain QMS certification from a third-party certifying body.

Since 2009, we have implemented fundamental QMS reforms and actively improved our organization on a continuous basis, led by the Quality Assurance Committee, with the aim of improving organizational performance as appropriate to the type of work performed.

Every year, JGC's president releases an operating policy. This policy is treated as a quality policy by each department and

section, which set quality targets in line with the policy. Each fiscal year, they identify any organizational issues and formulate operating policies and action plans ("Plan"), implement them ("Do"), evaluate them ("Check") and improve them on the basis of the evaluation process ("Act"). This PDCA cycle is designed to drive continuous improvement in organizational performance.

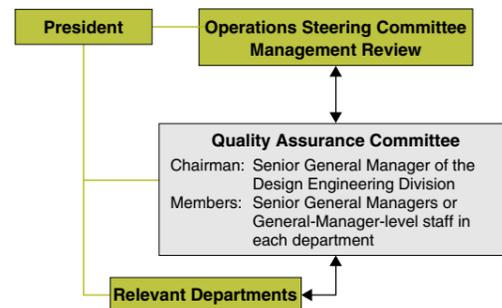
ISO 9001 was significantly revised in 2015. Using that as an opportunity to further improve JGC's organizational performance, we revised our QMS in line with the updated 2015 version of ISO 9001 and started operation of the new QMS in February 2017.

### Quality Assurance Committee

The Quality Assurance Committee meets monthly and reports directly to the president. The committee is chaired by the senior general manager of the Design Engineering Division and comprises executive-level general managers. The Quality Assurance Committee implements a range of remedial measures to ensure the quality of products and services provided to clients consistently meets their specifications. It also evaluates the impact of those measures to drive ongoing improvements.

Once a year, the Operations Steering Committee is convened by the president to conduct a management review of the Quality Assurance Committee's activities, with the president leading efforts to continuously improve the quality assurance organization.

#### Role of Quality Assurance Committee



## Directors, Auditors and Executives

(As of July 1, 2017)

### Management Structure

<b>Representative Directors</b>	Chairman and Chief Executive Officer (CEO)	Masayuki Sato	<b>Executive Officers</b>	Senior Executive Vice Presidents	Yutaka Yamazaki*
					Tsutomu Akabane*
	President and Chief Operating Officer (COO)	Tadashi Ishizuka		Senior Managing Executive Officers	Satoshi Sato*
				Eiki Furuta*	
	Vice President and Chief Project Officer (CPO)	Yutaka Yamazaki		Hitoshi Kitagawa	
<b>Directors</b>	Vice Chairman	Koichi Kawana	Senior Executive Officers	Hiroyasu Fukuyama	
				Takehito Hidaka	
		Tsutomu Akabane		Hiroyuki Miyoshi	
		Satoshi Sato		Takashi Yasuda	
		Eiki Furuta		Tadao Takahashi	
		Masanori Suzuki		Kenichi Yamazaki	
		Kiyotaka Terajima		Masanori Suzuki*	
		Shigeru Endo (Outside director)		Shigeru Abe	
		Masayuki Matsushima (Outside director)		Terumitsu Hayashi	
				Kiyotaka Terajima*	
<b>Audit &amp; Supervisory Board Members</b>	Audit & Supervisory Board Members	Toyohiko Shimada	Executive Officers	Hisakazu Nishiguchi	
		Yukihiko Makino		Yasutoshi Okazaki	
				Nobuhiro Kobayashi	
				Yasuhiro Okuda	
				Akio Yoshida	
				Toru Amemiya	
				Masayasu Endo	
				Yuji Tanaka	
				Takaya Matsuoka	
				Masurao Fujii	
	Audit & Supervisory Board Members (Outside Auditor)	Masao Mori		Masahiro Aika	
		Koichi Ohno		Aya Yamazaki	
		Norio Takamatsu		Yasuharu Yamaguchi	
				Takuya Hanada	
				Takeshi Kawasaki	
				Tetsuya Muramoto	
				Tadashi Yamagishi	
				Hiroyuki Ishizaki	
				Mutsuto Tone	

\*Also a director

## IR Activities

### Basic Stance

The JGC Group recognizes that dialogue (engagement) with shareholders and investors is vital to increasing corporate value. Based on that thinking, we provide detailed information to stakeholders through timely disclosure of information, business briefings by senior management and other means. We also listen carefully to the opinions of shareholders and investors about our business and reflect that feedback in management in order to increase corporate value and create the right conditions for holding shares in JGC over the long term.

### IR Initiatives in Fiscal 2016

#### Institutional Investors and Analysts

To address the needs of all our shareholders and investors, we disclose a range of financial data showing the Group's financial position and operating performance, as well as information about risk, governance and other nonfinancial indicators. Through this disclosure of information, we engage with shareholders and investors to increase corporate value over the medium to long term, using their feedback at the management level. Information from investors and shareholders is shared with the Board of Directors, Management Meeting and other internal bodies in order to support the Group's continued growth and to increase corporate value.

	IR activity	No. of cases	No. of companies
1	Response to request for information, phone calls from institutional investors in Japan / overseas	212	241
2	Results briefing conference call	2	95
3	Results briefing by senior management	2	114
4	ESG-related meetings	4	2
5	Overseas IR road shows by senior management	2	13



Fiscal 2016 results briefing

#### Annual IR Activity Schedule



## ESG Data Highlights

This table introduces our initiatives related to the environment, society, and governance (ESG) and our key performance indicators (KPI).

	JGC's main KPI	Units	Fiscal 2012	Fiscal 2013	Fiscal 2014	Fiscal 2015	Fiscal 2016
<b>Report on Environmental Initiatives (E)</b>							
	Industrial waste recycling rate (Domestic construction sites)	%	95.8	94.2	94.1	96.3	98.1
	Number of incidents of leaks of hazardous substances, etc. (Domestic and overseas construction sites)	Incidents	0	0	0	0	0
	Energy-related CO <sub>2</sub> emissions (Domestic construction sites)	kgCO <sub>2</sub> /hr	0.36	0.58	0.63	0.64	1.43
	Rate of diffusion of electronic manifests	%	—	—	—	79.4	96.0
Environment-related Initiatives	Energy consumption (Yokohama Head Office) <sup>(1)</sup>	Crude oil equivalent (kl)	3,069	2,908	2,770	2,579	2,405
• Contribution to environmental protection	Ratio of copy paper compliant with Act on Promoting Green Purchasing (Yokohama Head Office)	%	100	100	100	100	100
• Environmental Improvement Activities in Line with Our Business	Yokohama Head Office power consumption	1,000 kWh	7,934	7,530	7,308	6,720	5,974
• Promotion of the Zero Emissions Initiative	Consumption of chilled water by Yokohama Head Office	1,000 MJ	19,403	19,058	17,112	16,195	15,857
	Consumption of steam by Yokohama Head Office	1,000 MJ	9,911	8,617	8,252	8,021	8,886
	Volume of waste disposal by Yokohama Head Office	1,000 kg	309	309	258	224	209
	Rate of recycling of waste by Yokohama Head Office	%	65.3	65.4	63.2	66.6	64.9
<b>Report on Social Initiatives (S)</b>							
	Number of women in management positions	Persons	5	10	11	15	17
	Rate of employment of people with disabilities	%	1.75	1.70	1.91	1.75	1.81
	Number of re-employed employees <sup>(2)</sup>	Persons	184	191	209	208	189
	Number of non-Japanese employees <sup>(2)</sup>	Persons	56	71	85	97	94
	Number of employees taking childcare leave (Male)	Persons	1	0	2	1	2
	Number of female employees taking childcare leave (Rate of reinstatement of female employees taking childcare leave)	Persons (%)	14 (100)	12 (94.7)	20 (100)	29 (100)	27 (96)
	Number of employees taking spousal childbirth leave	Persons	77	75	76	72	81
Initiatives related to human rights and labor practices	Number of employees taking sick or injured childcare leave	Persons	124	119	113	125	115
• Promotion of diversity	Number of employees taking nursing care leave	Persons	2	3	2	4	8
• Support for realization of work-life balance	Number of employees taking temporary retirement for nursing care	Persons	0	1	1	2	2
• Support for employee career formation	Number of employees working reduced hours for childcare	Persons	29	37	33	37	44
	Number of employees working reduced hours for nursing care	Persons	1	0	0	1	1
	Rate of utilization of annual leave	%	49	48	50	53	53
	Number of employees dispatched for onsite training/ onsite instruction	Persons	88	112	125	98	62
	Number of employees dispatched to overseas companies, etc.	Persons	5	3	3	2	5
Initiatives related to health and safety	Total project working hours	1,000 hrs.	104,893	140,309	206,831	185,433	128,036
• Fostering of culture of health and safety	Number of fatal accidents	Accidents	0	0	0	0	3
• HSSE leadership by top management	Number of accidents accompanied by lost work time	Accidents	5	3	12	14	8
• Enhancement of HSSE management system for investment projects	Number of restrictions on work	Restrictions	20	48	60	37	25
• Ongoing implementation of traffic safety measures	Number of conditions requiring specialized treatment	Conditions	53	77	124	99	65
• Further development of in-house health and safety education	Rate of frequency of accidents accompanied by lost work time <sup>(3)</sup>		0.010	0.004	0.012	0.015	0.012
• Enhancement of Head Office construction HSSE functions	Rate of frequency of recordable accidents <sup>(4)</sup>		0.15	0.18	0.19	0.16	0.16
<b>Report on Governance (G)</b>							
Initiatives related to fair business practices	Number of times compliance training implemented/ number of employees receiving compliance training	Times (People)	27 (996)	8 (220)	8 (312)	19 (600)	14 (434)
• Realization of increased compliance awareness							
Initiatives related to the promotion of information security	Number of serious information security-related incidents	Incidents	0	0	0	0	0
• Information management awareness verification surveys and voluntary inspections							
• Drills against targeted threats							
Reinforcement of governance system	Number of outside directors	Persons	1	1	1	1	2

(1) Energy consumption (Yokohama Head Office): Targets for fiscal 2015 and fiscal 2016 have been set as an average annual reduction of 1%, with 2013 as the base year.

(2) Number of re-employed employees and number of non-Japanese employees = (Number of employees in April + Number of employees in March) ÷ 2

(3) Rate of frequency of accidents accompanied by lost work time = Number of accidents accompanied by lost work time × 200,000 ÷ Total project working hours

(4) Rate of frequency of recordable accidents = (Number of fatal accidents + Number of accidents accompanied by lost work time + Number of restrictions on work + Number of conditions requiring specialized treatment) × 200,000 ÷ Total project working hours

## Data Section

### CONTENTS

P67	Six-Year Summary
P68	Analysis of Performance and Financial Position
P72	Business Risks
P73	Consolidated Balance Sheets
P75	Consolidated Statements of Operations
P76	Consolidated Statements of Comprehensive Income
P77	Consolidated Statements of Changes in Net Assets
P78	Consolidated Statements of Cash Flows
P79	Notes to Consolidated Financial Statements
P97	Independent Auditor's Report
P98	Supplemental Explanation
P99	Internal Control Report (Translation)
P100	Independent Auditor's Report (Translation)
P102	JGC Group
P103	Outline of JGC

## Six-Year Summary (As of March 31 of each year)

### Consolidated

	(Millions of yen)					
	2012	2013	2014	2015	2016	2017
Net Sales	¥ 556,966	¥ 624,637	¥ 675,821	¥ 799,076	¥ 879,954	¥ 693,152
Operating Income (Loss)	67,053	64,123	68,253	29,740	49,661	(21,496)
Net Income (Loss) Attributable to Owners of Parent	39,111	46,179	47,178	20,628	42,793	(22,057)
Total Current Assets	376,172	460,231	575,886	533,538	522,747	480,865
Total Current Liabilities	205,771	262,439	333,353	286,533	225,203	226,457
Working Capital	170,401	197,792	242,533	247,005	297,544	254,408
Current Ratio	182.8	175.4	172.8	186.2	232.1	212.3
Net Property and Equipment	64,887	71,708	70,290	78,560	76,255	69,877
Total Assets	526,169	628,757	746,102	719,754	689,782	646,291
Long-Term Debt, Less Current Maturities	7,591	9,363	13,001	22,715	20,991	12,631
Total Net Assets	291,042	336,083	379,882	388,496	419,673	383,260
New Contracts	793,278	594,091	818,161	769,680	320,626	506,293
Outstanding Contracts	1,506,146	1,549,813	1,767,814	1,772,036	1,192,625	1,045,684
Net Income (Loss) per Share (in yen)	154.90	182.91	186.90	81.73	169.60	(87.42)
Cash Dividends per Share (in yen)	38.5	45.5	46.5	21.0	42.5	30.0
Number of Employees	6,524	6,721	7,005	7,332	7,489	7,554

## Analysis of Performance and Financial Position

### Our View of the Operating Environment

During the consolidated fiscal year under review, the JGC Group's operating environment improved, with oil- and gas-producing countries restarting capital investment amid a moderate upturn and stabilization in crude oil prices. JGC expects oil- and gas-producing countries to push ahead with investment in major oil and gas projects to address growing demand for energy and electricity amid population growth and economic expansion in their own countries, and to increase energy exports as a source of foreign currency.

### Results of Operations

In the consolidated fiscal year under review, the JGC Group reported net sales of ¥693,152 million (down 21.2% year on year), an operating loss of ¥21,496 million (compared with operating income of ¥49,661 million in the previous fiscal year), an ordinary loss of ¥15,215 million (compared with ordinary income of ¥52,047 million in the previous fiscal year), and a net loss attributable to owners of parent of ¥22,057 million (compared with net income of ¥42,793 million in the previous fiscal year).

#### ● Net Sales

Net sales declined ¥186,802 million year on year to ¥693,152 million, mainly reflecting deteriorating profitability for some projects in progress.

#### ● Cost of Sales and Selling, General and Administrative Expenses

Cost of sales declined ¥115,295 million year on year to ¥691,700 million in line with the decrease in net sales. Selling, general and administrative expenses also fell, dropping ¥348 million year on year to ¥22,948 million.

#### ● Operating Loss

JGC reported an operating loss of ¥21,496 million, a deterioration of ¥71,157 million from operating income of ¥49,661 million in the previous fiscal year, which mainly reflected a decline in total income from completed projects.

#### ● Other Income (Expenses)

Other income increased ¥3,894 million year on year, from other income (net) of ¥2,386 million in the previous fiscal year to other income (net) of ¥6,280 million in the year under review, primarily due to an increase in dividends received.

#### ● Income (Loss) before Income Taxes

JGC booked extraordinary losses (net) of ¥4,133 million, with loss on impairment of fixed assets and other extraordinary losses outweighing extraordinary income such as reversal of allowance for investment loss. As a result, the Company reported a loss before income taxes of ¥19,349 million for the consolidated fiscal year under review, a deterioration of ¥79,006 million compared with the previous fiscal year.

#### ● Taxes on Income

Income taxes and other taxes increased ¥895 million year on year to ¥9,974 million. Deferred taxes on income was negative ¥7,480 million, resulting in income taxes (net) of ¥2,493 million.

#### ● Net Income Attributable to Non-controlling Interests

Net income attributable to non-controlling interests increased ¥39 million year on year to ¥214 million.

#### ● Net Loss Attributable to Owners of Parent

As a result of the above, net loss attributable to owners of parent totaled ¥22,057 million, a decline of ¥64,851 million from the previous consolidated fiscal year.

### Segment Information

#### ● Total Engineering Business

In the engineering, procurement and construction (EPC) business, the Company worked to win orders in Japan, the Middle East, Africa, Southeast Asia, the North America region, Russia/CIS and other markets. In the oil & gas field, Group company JGC Gulf International Co., Ltd. secured an order in October 2016 for a gas pipeline and gas storage tank construction project in Bahrain. In the same month, JGC and Group company JGC America, Inc. were awarded a contract to provide front end engineering and design (FEED) services for an LNG plant project in Canada, and in December 2016, JGC and Group company Algeria S.p.A. won an order to increase the capacity of boosting and compression facilities at a gas processing plant in Algeria. In Japan, JGC was awarded a contract in November to construct a methionine production facility in Ehime Prefecture.

In the infrastructure field, JGC and Group company JGC Philippines, Inc. won a contract in July 2016 for the construction of a thermal power plant in the Philippines. In Japan, JGC secured several infrastructure orders in the year under review, including a contract in September 2016 to build a biomass power generation plant in Muroran, Hokkaido, an order in November for the construction of a photovoltaic power plant in Iwate Prefecture, and an order in March 2017 for another photovoltaic power plant, in Okayama Prefecture. The Company also focused on the steady implementation of existing large-scale projects, particularly in the LNG field. However, there were substantial increases in construction costs for several projects, including a petrochemical plant project in the US, an oil refinery project in the Middle East and projects in new business fields in Japan.

In the investment business, JGC made the decision in September 2016 to invest in a new biomass power generation plant in Muroran, Hokkaido with partner TonenGeneral Sekiyu K.K. (now JXTG Nippon Oil & Energy Corporation.)

#### ● Catalysts and Fine Chemicals Business

In the catalysts business, Group Companies focused on winning back market share, increasing sales in export projects and securing more business from existing customers. As a result, the business won new orders for FCC catalysts and a contract to supply a major customer in Indonesia. Exports of

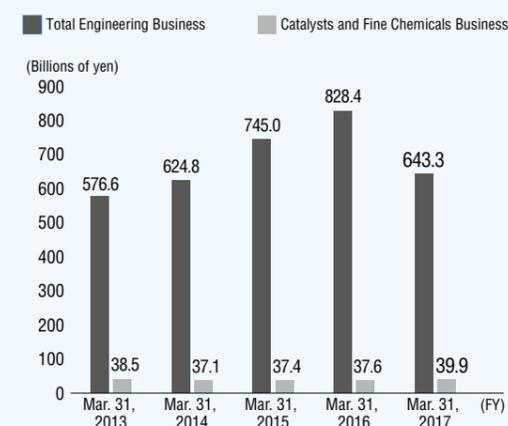
raw materials for NOx removal catalysts were also strong to customers in the US and Europe.

In the fine chemicals business, there was a slowdown in exports of optical materials to China, but shipments of functional coating materials increased and orders were strong for OLED exposure equipment components and optical communication components.

#### ● Other Business

In the other business, the Company continued to push ahead with its large-scale solar power generation (mega-solar) operations in Japan.

Net Sales by Reporting Segment



### Financial Position

For the consolidated fiscal year under review, total assets stood at ¥646,291 million as of March 31, 2017, down ¥43,490 million from the end of the previous fiscal year. Net assets totaled ¥383,260 million, a decrease of ¥36,413 million.

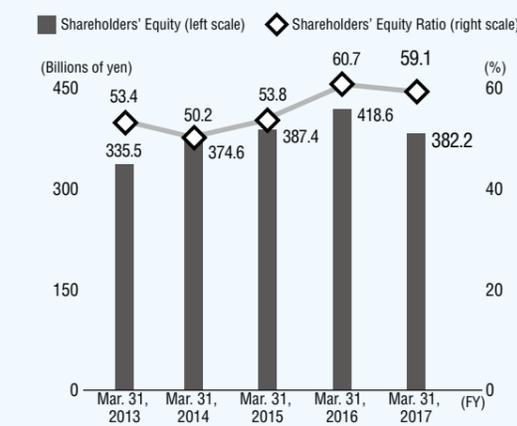
	March 31, 2015	March 31, 2016	March 31, 2017
Current ratio	186%	232%	212%
Fixed asset ratio	48%	40%	43%

Notes: Current ratio: Current assets / Current liabilities  
 Fixed asset ratio: Net property and equipment + Total other assets / Total net assets  
 Both indicators are calculated using consolidated financial figures.

### Cash Flow

On a consolidated basis, cash and cash equivalents for the consolidated fiscal year under review (“net cash”), excluding the increase in net cash from newly consolidated entities, declined ¥62,346 million from the end of the previous fiscal year to ¥185,603 million. Net cash used in operating activities was ¥28,884 million, compared with net cash used in operating activities of ¥49,764 million in the previous fiscal year. The main uses of cash were loss before income taxes of ¥19,349 million and increase in notes and accounts receivable. Net cash used in investing activities was ¥12,979 million, compared with net cash provided of ¥8,696 million in the previous fiscal year. The main uses of cash were payments for purchase of property and equipment

Shareholders' Equity and Shareholders' Equity Ratio

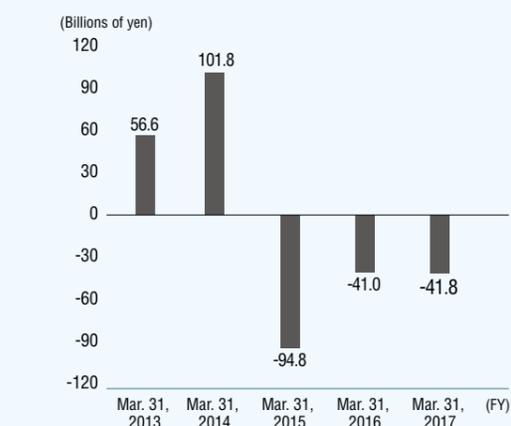


and increase in short-term loans receivable. Net cash used in financing activities was ¥19,674 million, mainly reflecting repayments of long-term loans and cash dividends paid.

	March 31, 2015	March 31, 2016	March 31, 2017
Shareholders' equity ratio	53.8	60.7	59.1
Shareholders' equity ratio (market basis)	83.7	61.6	75.5
Interest-bearing liabilities to cash flow ratio	-	-	-
Interest coverage ratio	-	-	-

Notes: Shareholders' equity ratio:  
 (Total net assets – Minority interests) / Total assets  
 Shareholders' equity ratio (market basis):  
 Total market capitalization / Total assets  
 Interest-bearing liabilities to cash flow ratio:  
 Interest-bearing liabilities / Cash flow  
 Interest coverage ratio: Cash flow / Interest expense  
 \*All indicators are calculated using consolidated financial figures.  
 \*Interest-bearing liabilities" includes all liabilities on the consolidated balance sheet on which interest is paid. "Cash flow" is cash flow from operating activities shown in the consolidated statements of cash flow. "Interest expense" is the amount of interest paid shown in the consolidated statements of cash flows.  
 \*In fiscal years where cash flow is negative, the interest-bearing liabilities to cash flow ratio and the interest coverage ratio are denoted by a dash.

Free Cash Flows



### Analysis of New Contracts

In the fiscal year under review, orders received totaled ¥506,293 million.

The tables below provide a breakdown of new contracts in the total engineering business by sector and region.

New Contracts by Business Sector			(Billions of yen)
	March 31, 2016	March 31, 2017	March 31, 2017 (Percentage of new contracts)
Oil and gas development projects	131.1	159.5	31.5%
Petroleum refining projects	33.9	25.4	5.0%
LNG projects	41.5	102.6	20.3%
Chemical projects	55.0	50.4	10.0%
Other projects	58.8	168.1	33.2%

New Contracts by Region			(Billions of yen)
	March 31, 2016	March 31, 2017	March 31, 2017 (Percentage of new contracts)
Japan	86.0	194.6	38.5%
Asia	63.6	45.8	9.0%
Africa	40.9	128.0	25.3%
Middle East	73.4	32.7	6.5%
Oceania and Other	56.8	104.8	20.7%

### Business Outlook

#### ● Total Engineering Business

In the plant market, the implementation of capital investment projects is gradually gaining momentum amid a projected increase in demand for energy due to population growth in emerging economies. JGC will focus on securing projects with adequate margins by increasing added value and improving competitiveness. In line with the medium-term business plan, "Beyond the Horizon," JGC will also expand the Group's operations further by growing the EPC business in the infrastructure field and by generating stable profits from non-EPC business fields, such as the investment business, while also continuing to develop the EPC business in the core oil & gas field.

#### ● Catalysts and Fine Chemicals Business

The catalysts business faces a challenging operating environment due to weak demand caused by downsizing and restructuring in the domestic refinery sector and moves by petrochemical companies to integrate their refining and petrochemicals operations. In response, the business will work to increase its share of the domestic FCC catalyst market and expand sales of FCC catalysts overseas, win new orders and expand sales of chemical catalysts, and use marketing activities to increase sales of NOx removal catalysts, mainly in East Asia.

The fine chemicals business will actively respond to rising demand for optical communication components, work to win orders for energy-related substrates and abrasives, grow sales of functional coating materials, and promote optical materials for a wider range of applications.

## Business Risks

The following describes business and other risks faced by the JGC Group that may have a material impact on investment decisions.

Forward-looking statements in this section are based on information available as of March 31, 2017 and take into account the whole JGC Group.

#### ① Overseas Risk

Overseas businesses generate more than 80% of the JGC Group's total net sales. Such businesses are subject to country risks including economic risks and socio-political risks. Specific risks include political instability, war, revolution, civil unrest, terrorism, changes in economic policy or conditions, default on foreign debt and changes to exchange and taxation systems. To minimize the impact of those risks on its businesses, the JGC Group continuously reviews and reinforces its risk management system, uses trade insurance, recovers project receivables as early as possible, forms joint ventures and takes various other steps. However, the JGC Group's performance may be affected if changes in the business environment are more extreme than anticipated and projects are canceled, suspended or delayed.

#### ② Project Execution Risk

Most contracts for projects in which the JGC Group participates are lump-sum, full-turnkey contracts. However, to hedge some of the risks in these contracts, the Group uses cost-plus-fee contracts and contracts based on the cost disclosure estimate method, depending on the project. The JGC Group draws fully on its past experience to anticipate and incorporate into each contract provisions for dealing with risks that could materialize during project execution. However, the profitability of projects may be adversely affected due to unforeseen impediments to project execution, including sudden steep rises in the costs of materials, equipment, machinery and labor, natural disasters and outbreaks of disease, or if the JGC Group's actions or a problem during project execution should cause a major accident, which may affect the JGC Group's performance.

#### ③ Investment Risk

The JGC Group conducts investments in such areas as the oil and gas development business, the power generation and desalination business, and the agriculture, urban development and infrastructure maintenance business. The JGC Group conducts appropriate risk management by carrying out risk assessments when making new investments and reinvestments and by performing timely monitoring of existing businesses. However, the JGC Group's performance may be affected by unanticipated events such as dramatic changes in the investment environment exemplified by sudden price changes for oil, gas and other energy resources, as well as changes in estimated reserves.

#### ④ Foreign Exchange Risk

Almost all the JGC Group's overseas sales are paid under agreements denominated in foreign currencies. The JGC Group uses a number of approaches to hedge associated exchange rate risks, such as executing project contracts denominated in multiple currencies, conducting overseas procurement, securing orders in overseas currencies and entering into forward foreign exchange agreements. However, sudden exchange rate fluctuations may affect the JGC Group's performance.

# Consolidated Balance Sheets

(March 31, 2017 and 2016)

ASSETS	(Millions of yen)		(Thousands of U.S. dollars)
	March 31, 2017	March 31, 2016	March 31, 2017 (Note 1)
<b>CURRENT ASSETS:</b>			
Cash and deposits (Notes 3, 12 & 16)	¥ 185,603	¥ 239,948	\$ 1,654,363
Marketable securities (Notes 8, 12 & 16)	–	8,000	–
Notes and accounts receivable (Notes 2 & 16)	196,200	175,876	1,748,819
Inventories (Note 4)	43,970	50,553	391,924
Deferred tax assets (Note 11)	12,412	11,980	110,634
Other current assets (Notes 2, 9 & 16)	44,193	36,789	393,912
Allowance for doubtful accounts	(1,512)	(398)	(13,477)
<b>TOTAL CURRENT ASSETS</b>	<b>480,866</b>	<b>522,748</b>	<b>4,286,175</b>
<b>PROPERTY AND EQUIPMENT (Note 3):</b>			
Land (Notes 13 & 15)	25,046	25,380	223,246
Buildings and structures (Note 15)	62,369	65,520	555,923
Machinery and equipment	71,217	71,751	634,789
Construction in progress	284	217	2,532
Other	4,436	5,357	39,540
	163,352	168,225	1,456,030
Less accumulated depreciation	(93,474)	(91,970)	(833,176)
<b>NET PROPERTY AND EQUIPMENT</b>	<b>69,878</b>	<b>76,255</b>	<b>622,854</b>
<b>INVESTMENTS AND OTHER ASSETS:</b>			
Investments in unconsolidated subsidiaries and affiliates (Notes 8 & 16)	21,450	17,807	191,194
Investment securities (Notes 3, 8 & 16)	38,380	41,516	342,098
Long-term loans receivable (Notes 2 & 16)	5,731	4,846	51,083
Deferred tax assets (Note 11)	12,447	5,998	110,946
Net defined benefit asset (Note 5)	190	194	1,694
Other	17,350	20,418	154,648
<b>TOTAL INVESTMENTS AND OTHER ASSETS</b>	<b>95,548</b>	<b>90,779</b>	<b>851,663</b>
<b>TOTAL ASSETS</b>	<b>¥ 646,292</b>	<b>¥ 689,782</b>	<b>\$ 5,760,692</b>

The accompanying notes are an integral part of these statements.

LIABILITIES AND NET ASSETS	(Millions of yen)		(Thousands of U.S. dollars)
	March 31, 2017	March 31, 2016	March 31, 2017 (Note 1)
<b>CURRENT LIABILITIES:</b>			
Short-term loans and current maturities of long-term debt (Notes 2 & 3)	¥ 14,052	¥ 15,338	\$ 125,252
Notes and accounts payable (Notes 2 & 16)	97,613	108,390	870,069
Advances received on uncompleted contracts (Note 2)	45,041	37,961	401,471
Reserve for job warranty costs	2,850	2,884	25,403
Reserve for losses on contracts	31,262	20,680	278,652
Income taxes payable	3,523	3,742	31,402
Provision for loss on guarantees	2,815	1,301	25,091
Other current liabilities (Notes 2, 3, 9 & 16)	29,302	34,907	261,182
<b>TOTAL CURRENT LIABILITIES</b>	<b>226,458</b>	<b>225,203</b>	<b>2,018,522</b>
<b>LONG-TERM LIABILITIES:</b>			
Long-term debt, less current maturities (Notes 3 & 16)	12,631	20,991	112,586
Net defined benefit liability (Note 5)	16,210	15,612	144,487
Deferred tax liabilities for land revaluation (Notes 11 & 13)	3,126	3,133	27,864
Other non-current liabilities (Notes 2, 3 & 11)	4,607	5,169	41,064
<b>TOTAL LONG-TERM LIABILITIES</b>	<b>36,574</b>	<b>44,905</b>	<b>326,001</b>
<b>TOTAL LIABILITIES</b>	<b>263,032</b>	<b>270,108</b>	<b>2,344,523</b>
<b>CONTINGENCIES (Notes 6 &amp; 14)</b>			
<b>NET ASSETS (Note 7):</b>			
<b>SHAREHOLDERS' EQUITY</b>			
Common stock			
Authorized — 600,000,000 shares,			
Issued — 259,052,929 shares in 2017 and 2016	23,511	23,511	209,564
Capital surplus	25,609	25,609	228,265
Retained earnings	341,764	374,625	3,046,297
Treasury stock, at cost			
6,744,000 shares in 2016 and 6,744,700 shares in 2017	(6,736)	(6,736)	(60,041)
<b>TOTAL SHAREHOLDERS' EQUITY</b>	<b>384,148</b>	<b>417,009</b>	<b>3,424,085</b>
<b>ACCUMULATED OTHER COMPREHENSIVE INCOME:</b>			
Net unrealized holding gains on securities (Notes 8 & 16)	7,955	7,065	70,906
Deferred losses on hedges (Note 9)	(432)	(503)	(3,851)
Revaluation reserve for land (Note 13)	(6,131)	(6,115)	(54,648)
Foreign currency translation adjustments	(756)	4,072	(6,739)
Remeasurements of defined benefit plans (Note 5)	(2,569)	(2,832)	(22,899)
<b>TOTAL ACCUMULATED OTHER COMPREHENSIVE INCOME</b>	<b>(1,933)</b>	<b>1,687</b>	<b>(17,231)</b>
<b>NON-CONTROLLING INTERESTS</b>	<b>1,045</b>	<b>978</b>	<b>9,315</b>
<b>TOTAL NET ASSETS</b>	<b>383,260</b>	<b>419,674</b>	<b>3,416,169</b>
<b>TOTAL LIABILITIES AND NET ASSETS</b>	<b>¥ 646,292</b>	<b>¥ 689,782</b>	<b>\$ 5,760,692</b>

## Consolidated Statements of Operations

March 31, 2017 and 2016

	(Millions of yen)		(Thousands of U.S. dollars) (Note 1)
	Year ended March 31, 2017	Year ended March 31, 2016	Year ended March 31, 2017
<b>NET SALES (Note 10)</b>	<b>¥ 693,152</b>	<b>¥ 879,955</b>	<b>\$ 6,178,376</b>
<b>COST OF SALES</b>	<b>691,700</b>	<b>806,996</b>	<b>6,165,434</b>
Gross profit	1,452	72,959	12,942
<b>SELLING, GENERAL AND ADMINISTRATIVE EXPENSES</b>	<b>22,949</b>	<b>23,298</b>	<b>204,554</b>
Operating income (loss)	(21,497)	49,661	(191,612)
<b>OTHER INCOME (EXPENSES):</b>			
Interest and dividend income	6,504	4,636	57,973
Interest expense	(662)	(719)	(5,901)
Gain on sales of investment securities	1,648	1,085	14,690
Loss on impairment of fixed assets (Notes 10 & 17)	(5,928)	(1,661)	(52,839)
Exchange loss, net	(1,534)	(2,938)	(13,673)
Equity in earnings of affiliates	632	716	5,633
Reversal of allowance for investment loss	3,399	–	30,297
Gain on liquidation of subsidiary	1,867	–	16,641
Reversal of provision for guarantees	–	5,294	–
Loss on provision for guarantees	(1,514)	(1,235)	(13,495)
Loss on valuation of investment securities (Notes 8 & 11)	(2,926)	(10,371)	(26,081)
Reversal of allowance for doubtful accounts	–	10,231	–
Other, net (Note 15)	661	4,958	5,892
	<b>2,147</b>	<b>9,996</b>	<b>19,137</b>
Income (loss) before taxes on income	(19,350)	59,657	(172,475)
<b>TAXES ON INCOME (Note 11):</b>			
Current	9,974	9,079	88,903
Deferred	(7,481)	7,610	(66,682)
<b>NET INCOME (LOSS)</b>	<b>(21,843)</b>	<b>42,968</b>	<b>(194,696)</b>
<b>NET INCOME ATTRIBUTABLE TO NON-CONTROLLING INTERESTS</b>	<b>215</b>	<b>175</b>	<b>1,917</b>
<b>NET INCOME (LOSS) ATTRIBUTABLE TO OWNERS OF JGC CORPORATION</b>	<b>¥ (22,058)</b>	<b>¥ 42,793</b>	<b>\$ (196,613)</b>
		Yen	U.S. dollars
<b>AMOUNTS PER SHARE OF COMMON STOCK:</b>			(Note 1)
Net income (loss)	¥ (87.42)	¥ 169.60	\$ (0.78)
Cash dividends applicable to the year	¥ 30.00	¥ 42.50	\$ 0.27

The accompanying notes are an integral part of these statements.

## Consolidated Statements of Comprehensive Income

March 31, 2017 and 2016

	(Millions of yen)		(Thousands of U.S. dollars) (Note 1)
	Year ended March 31, 2017	Year ended March 31, 2016	Year ended March 31, 2017
<b>NET INCOME (LOSS)</b>	<b>¥ (21,843)</b>	<b>¥ 42,968</b>	<b>\$ (194,696)</b>
<b>OTHER COMPREHENSIVE INCOME (Note 18):</b>			
Net unrealized holding gains (losses) on securities (Notes 8 & 16)	890	(3,208)	7,933
Deferred gains (losses) on hedges (Note 9)	87	(46)	775
Land revaluation (Note 13)	–	174	–
Translation adjustments	(4,828)	(2,612)	(43,034)
Remeasurements of defined benefit plans (Note 5)	265	(1,340)	2,362
Share of other comprehensive income (loss) of affiliates accounted for using equity method	(2)	3	(18)
<b>TOTAL OTHER COMPREHENSIVE INCOME</b>	<b>¥ (3,588)</b>	<b>¥ (7,029)</b>	<b>\$ (31,982)</b>
<b>TOTAL COMPREHENSIVE INCOME</b>	<b>¥ (25,431)</b>	<b>¥ 35,939</b>	<b>\$ (226,678)</b>
Comprehensive income attributable to owners of JGC Corporation	¥ (25,661)	¥ 35,795	\$ (228,728)
Comprehensive income attributable to non-controlling interests	¥ 230	¥ 144	\$ 2,050

The accompanying notes are an integral part of these statements.

## Consolidated Statements of Changes in Net Assets

March 31, 2017 and 2016

	Common stock		Capital surplus	Retained earnings	Treasury stock, at cost	Net unrealized holding gains on securities (Notes 8 & 16)	Deferred losses on hedges (Note 9)	Revaluation reserve for land (Note 13)	Foreign currency translation adjustments	Remeasurements of defined benefit plans	Non-Controlling Interests	(Millions of yen)
	Shares	Amount										
<b>Balance at April 1, 2015</b>	259,053	¥ 23,511	¥ 25,608	¥ 336,324	¥ (6,659)	¥ 10,273	¥ (488)	¥ (6,289)	¥ 6,594	¥ (1,393)	¥ 1,016	
Net income attributable to owners of JGC Corporation				42,793								
Effect of change in scope of consolidation				807								
Cash dividends				(5,299)								
Gain on disposal of treasury stock			1		0							
Net unrealized holding gains on securities						(3,208)						
Net deferred losses on hedges							(15)					
Foreign currency translation adjustments									(2,522)			
Increase of treasury stock					(77)							
Remeasurements of defined benefit plans										(1,439)		
Net changes during the year								174				(38)
<b>Balance at March 31 and April 1, 2016</b>	259,053	¥ 23,511	¥ 25,609	¥ 374,625	¥ (6,736)	¥ 7,065	¥ (503)	¥ (6,115)	¥ 4,072	¥ (2,832)	¥ 978	
Net loss attributable to owners of JGC Corporation				(22,058)								
Effect of change in scope of consolidation				(96)								
Cash dividends				(10,723)								
Decrease of land revaluation				16								
Gain on disposal of treasury stock			0		1							
Net unrealized holding gains on securities						890						
Net deferred losses on hedges							71					
Foreign currency translation adjustments									(4,828)			
Increase of treasury stock					(1)							
Remeasurements of defined benefit plans										263		
Net changes during the year								(16)				67
<b>Balance at March 31, 2017</b>	259,053	¥ 23,511	¥ 25,609	¥ 341,764	¥ (6,736)	¥ 7,955	¥ (432)	¥ (6,131)	¥ (756)	¥ (2,569)	¥ 1,045	

	Common stock	Capital surplus	Retained earnings	Treasury stock, at cost	Net unrealized holding gains on securities (Notes 8 & 16)	Deferred losses on hedges (Note 9)	Revaluation reserve for land (Note 13)	Foreign currency translation adjustments	Remeasurements of defined benefit plans	Non-Controlling Interests	(Thousands of U.S. dollars)(Note 1)
	<b>Balance at April 1, 2016</b>	\$ 209,564	\$ 228,265	\$ 3,339,202	\$ (60,041)	\$ 62,973	\$ (4,484)	\$ (54,506)	\$ 36,295	\$ (25,243)	\$ 8,718
Net loss attributable to owners of JGC Corporation			(196,613)								
Effect of change in scope of consolidation			(856)								
Cash dividends			(95,579)								
Decrease of land revaluation			143								
Gain on disposal of treasury stock		0		9							
Net unrealized holding gains on securities					7,933						
Net deferred losses on hedges						633					
Foreign currency translation adjustments								(43,034)			
Increase of treasury stock				(9)							
Remeasurements of defined benefit plans									2,344		
Net changes during the year							(142)				597
<b>Balance at March 31, 2017</b>	\$ 209,564	\$ 228,265	\$ 3,046,297	\$ (60,041)	\$ 70,906	\$ (3,851)	\$ (54,648)	\$ (6,739)	\$ (22,899)	\$ 9,315	

The accompanying notes are an integral part of these statements.

## Consolidated Statements of Cash Flows

March 31, 2017 and 2016

	(Millions of yen)		(Thousands of U.S. dollars)
	Year ended March 31, 2017	Year ended March 31, 2016	Year ended March 31, 2017
<b>CASH FLOWS FROM OPERATING ACTIVITIES:</b>			
Income (loss) before taxes on income and non-controlling interests in earnings of consolidated subsidiaries	¥ (19,350)	¥ 59,657	\$ (172,475)
Adjustments to reconcile income before taxes on income and non-controlling interests in earnings of consolidated subsidiaries to net cash used in operating activities:			
Depreciation and amortization	8,013	9,424	71,423
Increase (Decrease) in allowance for doubtful accounts	785	(10,209)	6,997
Increase (Decrease) in reserve for losses on contracts	10,157	(14,944)	90,534
Increase in net defined benefit plans	614	2,379	5,473
Interest and dividend income	(6,504)	(4,636)	(57,973)
Interest expense	662	719	5,901
Exchange loss	546	4,270	4,867
Equity in earnings of affiliates	(632)	(716)	(5,633)
Gain on sales of investment securities	(1,648)	(5,312)	(14,690)
Gain on sales of property and equipment	(45)	(201)	(401)
Loss on sales and disposal of property and equipment	188	89	1,676
Loss on impairment of fixed assets	5,928	1,661	52,839
Gain on liquidation of subsidiary	(1,867)	-	(16,641)
Increase in notes and accounts receivable	(21,439)	(42,315)	(191,095)
Decrease (Increase) in inventories	6,386	(9,456)	56,921
Decrease in other assets	1,497	4,067	13,343
(Decrease) Increase in notes and accounts payable	(11,239)	3,355	(100,178)
Increase (Decrease) in advances received on uncompleted contracts	7,035	(47,461)	62,706
Other	(3,739)	4,264	(33,328)
Subtotal	(24,652)	(45,365)	(219,734)
Interest and dividends received	6,707	5,110	59,782
Interest paid	(630)	(746)	(5,615)
Income taxes paid	(10,309)	(8,764)	(91,889)
<b>NET CASH USED IN OPERATING ACTIVITIES</b>	<b>(28,884)</b>	<b>(49,765)</b>	<b>(257,456)</b>
<b>CASH FLOWS FROM INVESTING ACTIVITIES:</b>			
Payments for purchases of property and equipment	(6,175)	(3,538)	(55,041)
Proceeds from sales of property and equipment	1,107	1,424	9,867
Payments for purchase of investment securities	(635)	(6,397)	(5,660)
Proceeds from sales of investment securities	3,324	17,901	29,628
Proceeds from sales of shares of subsidiaries resulting in change in scope of consolidation	-	1,872	-
(Increase) Decrease in short-term loans receivable	(6,016)	156	(53,623)
Other	(4,584)	(921)	(40,859)
<b>NET CASH PROVIDED BY (USED IN) INVESTING ACTIVITIES</b>	<b>(12,979)</b>	<b>8,696</b>	<b>(115,688)</b>
<b>CASH FLOWS FROM FINANCING ACTIVITIES:</b>			
(Decrease) Increase in short-term loans	(406)	3,077	(3,619)
Proceeds from long-term loans	3	4	27
Repayments of long-term loans	(8,060)	(1,731)	(71,842)
Payments for purchase of treasury stock	(0)	(76)	(0)
Cash dividends paid	(10,724)	(5,302)	(95,588)
Cash dividends paid to non-controlling interests	(164)	(188)	(1,462)
Other	(323)	(159)	(2,879)
<b>NET CASH USED IN FINANCING ACTIVITIES</b>	<b>(19,674)</b>	<b>(4,375)</b>	<b>(175,363)</b>
<b>EFFECT OF EXCHANGE RATE CHANGES ON CASH AND CASH EQUIVALENTS</b>	<b>(809)</b>	<b>(5,732)</b>	<b>(7,211)</b>
<b>NET DECREASE IN CASH AND CASH EQUIVALENTS</b>	<b>(62,347)</b>	<b>(51,176)</b>	<b>(555,727)</b>
<b>CASH AND CASH EQUIVALENTS AT BEGINNING OF YEAR</b>	<b>247,948</b>	<b>297,708</b>	<b>2,210,072</b>
<b>INCREASE IN CASH AND CASH EQUIVALENTS FROM NEWLY CONSOLIDATED SUBSIDIARIES</b>	<b>2</b>	<b>1,416</b>	<b>18</b>
<b>CASH AND CASH EQUIVALENTS AT END OF YEAR (Note 12)</b>	<b>¥ 185,603</b>	<b>¥ 247,948</b>	<b>\$ 1,654,363</b>

The accompanying notes are an integral part of these statements.

## Notes to Consolidated Financial Statements

### Note 1 : SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

#### (a) BASIS OF PRESENTING CONSOLIDATED FINANCIAL STATEMENTS

The accompanying consolidated financial statements of JGC Corporation (Nikki Kabushiki Kaisha, the "Company") and its consolidated subsidiaries have been prepared in accordance with the provisions set forth in the Japanese Financial Instruments and Exchange Act and its related accounting regulations, and in conformity with accounting principles generally accepted in Japan ("Japanese GAAP"), which are different in certain respects as to application and disclosure requirements from International Financial Reporting Standards.

The accounts of consolidated overseas subsidiaries are prepared in accordance with either International Financial Reporting Standards or U.S. generally accepted accounting principles, with adjustments for the specified four items as applicable. The accompanying consolidated financial statements have been translated into English (with some expanded descriptions) from the consolidated financial statements of the Company prepared in accordance with Japanese GAAP and filed with the appropriate Local Finance Bureau of the Ministry of Finance as required by the Japanese Financial Instruments and Exchange Act. Certain supplementary information included in the statutory Japanese language consolidated financial statements, but not required for fair presentation, is not presented in the accompanying consolidated financial statements.

In addition, certain reclassifications have been made to present the accompanying consolidated financial statements in a format which is more familiar to readers outside Japan. Furthermore, certain reclassifications of previously reported amounts have been made to reconcile the consolidated financial statements for the year ended March 31, 2016 to the 2017 presentation.

The translation of the Japanese yen amounts into U.S. dollars is included solely for the convenience of readers outside Japan, using the prevailing exchange rate at March 31, 2017, which was ¥112.19 to U.S. \$1. The convenience translations should not be construed as representations that the Japanese yen amounts could be converted into U.S. dollars at this or any other rate of exchange.

#### (b) PRINCIPLE OF CONSOLIDATION

The consolidated financial statements include the accounts of the Company and its significant subsidiaries that include less than 50% owned affiliates controlled through substantial ownership of majority voting rights or existence of substantial control. All significant inter-company transactions and account balances are eliminated in consolidation.

Investments in non-consolidated subsidiaries and affiliates over which the Company has the ability to exercise significant influence over operating and financial policies of the investees are accounted for by the equity method.

The number of consolidated subsidiaries and affiliates accounted for using the equity method at March 31, 2017 and 2016, was as

follows:

	2017	2016
Consolidated subsidiaries	19	19
Affiliates under the equity method	1	2

Consolidated subsidiaries and affiliates accounted for using the equity method at March 31, 2017 and 2016, was as follows:

Consolidated subsidiaries	Location	Capital share	
		2017	2016
JGC PLANT INNOVATION CO., LTD.	Japan	100%	100%
JGC PLANTECH AOMORI CO., LTD.	Japan	100%	100%
JGC Catalysts and Chemicals Ltd.	Japan	100%	100%
JAPAN FINE CERAMICS CO., LTD.	Japan	100%	100%
NIKKI BUSINESS SERVICES CO., LTD.	Japan	100%	100%
JAPAN NUS CO., LTD.	Japan	88%	88%
JGC-ITC Rabigh Utility Co., Ltd.	Japan	100%	100%
JGC Mirai Solar Co., Ltd.	Japan	51%	51%
Kamogawa Mirai Solar Co., Ltd.	Japan	100%	100%
JGC SINGAPORE PTE LTD	Singapore	100%	100%
JGC PHILIPPINES, INC.	Philippines	100%	100%
JGC Gulf International Co., Ltd.	Saudi Arabia	100%	100%
JGC Gulf Engineering Co., Ltd.	Saudi Arabia	75%	75%
JGC OCEANIA PTY LTD	Australia	100%	100%
JGC America, Inc.	U.S.A.	100%	100%
JGC (GULF COAST), LLC <sup>*1</sup>	U.S.A.	100%	100%
JGC Exploration Eagle Ford LLC	U.S.A.	100%	100%
JGC Energy Development (USA) Inc. <sup>*2</sup>	U.S.A.	-	100%
JGC EXPLORATION CANADA LTD.	Canada	100%	100%
PT. JGC INDONESIA <sup>*3</sup>	Indonesia	100%	100%

Affiliates under the equity method	Location	Capital share	
		2017	2016
Nikki -Universal Co., Ltd.	Japan	50%	50%
JMD Greenhouse-Gas Reduction Co., Ltd. <sup>*2</sup>	Japan	-	47%

Investments in non-consolidated subsidiaries and affiliates not accounted for by the equity method are carried at cost, adjusted for any substantial and non-recoverable decline in value. The effect on net income and retained earnings from those investments not accounted for under the equity method is immaterial.

<sup>\*1</sup> At the year ended March 31, 2017, JGC (GULF COAST), LLC was included in the scope of consolidation because its effect on the consolidated financial statement became significant.

<sup>\*2</sup> At the year ended March 31, 2017, JGC Energy Development (USA) Inc. and JMD Greenhouse-Gas Reduction Co., Ltd. were excluded from the scope of consolidation and the equity method respectively, because these companies were liquidated during this fiscal year.

<sup>\*3</sup> At the year ended March 31, 2016, PT. JGC INDONESIA was included in the scope of consolidation because its effect on the

consolidated financial statement became significant.

#### (c) CONSOLIDATED STATEMENTS OF CASH FLOWS

In preparing the consolidated statements of cash flows, cash on hand, readily available deposits and short-term highly liquid investments with negligible risk of changes in value, and maturities not exceeding three months at the time of purchase are considered to be cash and cash equivalents.

#### (d) CONVERSION OF FOREIGN CURRENCIES AND TRANSLATION OF STATEMENTS

Receivables and payables denominated in foreign currencies are translated into Japanese yen at the year-end rates.

Balance sheets of consolidated overseas subsidiaries are translated into Japanese yen at the year-end rates except for net assets accounts, which are translated at the historical rates. Income statements of consolidated overseas subsidiaries are translated at average rates except for transactions with the Company, which are translated at the rates used by the Company.

#### (e) UNIFICATION OF ACCOUNTING POLICIES APPLIED TO FOREIGN SUBSIDIARIES FOR CONSOLIDATED FINANCIAL STATEMENTS

The Accounting Standards Board of Japan has issued ASBJ Practical Issues Task Force No.18 "Practical Solution on Unification of Accounting Policies Applied to Foreign Subsidiaries for Consolidated Financial Statements" ("PITF No.18"). PITF No.18 requires that accounting policies and procedures applied by a parent company and its subsidiaries to similar transactions and events under similar circumstances should, in principle, be unified for the preparation of the consolidated financial statements. PITF No.18, however, as a tentative measure, allows a parent company to prepare consolidated financial statements using foreign subsidiaries' financial statements prepared in accordance with either International Financial Reporting Standards or U.S. generally accepted accounting principles. In this case, adjustments for the following four items are required in the consolidation process so that their impacts on net income are accounted for in accordance with Japanese GAAP unless the impact is not material.

- (1) Goodwill not subjected to amortization
- (2) Actuarial gains and losses of defined benefit plans recognized outside profit or loss
- (3) Capitalized expenditures for research and development activities
- (4) Fair value measurement of investment properties, and revaluation of property, plant and equipment, and intangible assets

#### (f) ALLOWANCE FOR DOUBTFUL ACCOUNTS

Notes and accounts receivable, including loans and other receivables, are valued by providing for individually estimated uncollectible amounts plus the amounts for probable losses calculated by applying a percentage based on collection experience to the remaining accounts.

In Investments And Other Assets, the amount of Allowance for doubtful accounts is deducted from long-term loans receivable and other.

#### (g) MARKETABLE SECURITIES, INVESTMENTS IN UNCONSOLIDATED SUBSIDIARIES AND AFFILIATES, AND INVESTMENT SECURITIES

The Company and its consolidated subsidiaries are required to examine the intent of holding each security and classify those securities as (1) securities held for trading purposes, (2) debt securities intended to be held to maturities, (3) equity securities issued by subsidiaries and affiliates, and (4) all other securities that are not classified in any of the above categories (hereafter, "available-for-sale securities"). The Company and its consolidated subsidiaries did not have the securities defined as (1) and (2) above for the years ended March 31, 2017 and 2016.

Available-for-sale securities with available fair market values are stated at fair market value. Unrealized gains and losses on these securities are reported, net of applicable income taxes, as a separate component of net assets. Realized gains and losses on the sale of such securities are computed using the moving-average method. Other securities with no available fair market value are stated at moving-average cost. Equity securities issued by subsidiaries and affiliates, which are not consolidated or accounted for using the equity method, are stated at moving-average cost.

If the market value of available-for-sale securities declines significantly, such securities are restated at fair market value and the difference between fair market value and the carrying amount is recognized as loss in the period of decline (See Note 8). For equity securities with no available fair market value, if the net asset value of the investee declines significantly, such securities are required to be written down to the net asset value with the corresponding losses in the period of decline. In these cases, such fair market value or the net asset value will be the carrying amount of the securities at the beginning of the next year.

#### (h) ALLOWANCE FOR LOSSES ON INVESTMENT

To prepare for estimated losses to be incurred in the future, allowance for losses on investment is stated in amounts considered to be appropriate based on financial condition of investments. In Investments And Other Assets, the amount of Allowance for losses on investment is deducted from Investments in unconsolidated subsidiaries and affiliates and Investment securities.

#### (i) PROVISION FOR LOSSES ON GUARANTEES

To provide for losses on guarantees, the Company makes a provision for potential losses at the end of the fiscal year.

**(j) RECOGNITION OF SALES, CONTRACT WORKS  
IN PROGRESS AND ADVANCES RECEIVED ON  
UNCOMPLETED CONTRACTS**

Sales on contracts for relatively large projects, which require long periods for completion and which generally include engineering, procurement (components, parts, etc.) and construction on a full-turnkey basis, are recognized on the percentage-of-completion method, primarily based on contract costs incurred to date compared with total estimated costs for contract completion.

Contract works in progress are stated at cost determined by a specific identification method and comprised of direct materials, components and parts, direct labor, subcontractors' fees and other items directly attributable to the contract, and job-related overheads. Selling, general and administrative expenses are charged to operations as incurred and are not allocated to contract job work costs.

The Company normally receives payments from customers on a progress basis in accordance with the terms of the respective construction contracts.

**(k) INVENTORIES**

Inventories of the Company and its consolidated subsidiaries are stated at cost determined using the moving-average method (which writes off the book value of inventories based on decreases in profitability) except for contract works in progress as stated in Note 1(j).

**(l) OPERATING CYCLE**

Assets and liabilities related to long-term contract jobs are included in current assets and current liabilities in the accompanying consolidated balance sheets, as they will be liquidated in the normal course of contract completion, although it may require more than one year.

**(m) PROPERTY AND EQUIPMENT, DEPRECIATION AND  
FINANCE LEASES**

Property and equipment are stated at cost, except for certain revalued land as explained in Note 13. Depreciation of property and equipment is calculated primarily using the straight-line method for buildings used for business operation and structures which were acquired since April 1, 2016, and the declining-balance method for other property and equipment over the estimated useful lives of the assets based on the Corporate Tax Code of Japan.

Expenditures for new facilities and those that substantially increase the useful lives of existing property and equipment are capitalized. Maintenance, repair and minor renewals are charged to expenses as incurred.

The cost and accumulated depreciation applicable to assets retired or otherwise disposed of are eliminated from the related accounts and the gain or loss on disposal is credited or charged to income.

**(n) IMPAIRMENT OF FIXED ASSETS**

The Company and its consolidated subsidiaries review their long-lived assets for impairment whenever events or changes in circumstances indicate the carrying amount of an asset or asset group may not be recoverable. An impairment loss would be recognized if the carrying amount of an asset or asset group exceeds the sum of the undiscounted future cash flows expected to result from the continued use and eventual disposition of the asset or asset group. The impairment loss would be measured as the amount by which the carrying amount of the asset exceeds its recoverable amount, which is the higher of the discounted cash flows from the continued use and eventual disposition of the asset or the net selling price at disposition.

**(o) RETIREMENT AND SEVERANCE BENEFITS AND  
PENSION COSTS**

**(1) Employees' severance and retirement benefits**

The Company and its consolidated subsidiaries provide two types of post-employment benefit plans, unfunded lump-sum payment plans and funded non-contributory pension plans, under which all eligible employees are entitled to benefits based on the level of wages and salaries at the time of retirement or termination, length of service and certain other factors.

Certain consolidated subsidiaries also have a defined contribution pension plan, which was transferred from a portion of defined benefit pension plan.

The Company and its consolidated subsidiaries provided allowance for employees' severance and retirement benefits at March 31, 2017 and 2016, based on the estimated amounts of projected benefit obligation, actuarially calculated using certain assumptions and the fair value of the plan assets at that date.

The method of attributing the amount of expected retirement benefit in each period is a benefit formula basis.

The Company and its consolidated subsidiaries recognize past service costs as expenses using the straight-line method over 12 years within the average of the estimated remaining service lives of the employees, and actuarial gains and losses as expenses using the declining-balance method over 12 years within the average of the estimated remaining service lives.

However, certain consolidated subsidiary recognized actuarial differences as expenses in the period incurred.

**(2) Officers' severance and retirement benefits**

Consolidated domestic subsidiaries provide for liabilities in respect of lump-sum severance and retirement benefits to directors and corporate statutory auditors computed on the assumption that all officers retired at a year-end.

**(p) RESEARCH AND DEVELOPMENT COSTS**

Research and development costs for the improvement of existing skills and technologies or the development of new skills and technologies, including basic research and fundamental development costs, are

charged to income in the period incurred. The total amount of research and development expenses, included in Costs of Sales and Selling, General and Administrative expenses, was ¥5,175 million (\$46,127 thousand) and ¥5,483 million, respectively, in 2017 and 2016.

**(q) TAXES ON INCOME**

The Company and its consolidated subsidiaries provide tax effects of temporary differences between the carrying amounts and the tax basis of assets and liabilities. The asset and liability approach is used to recognize deferred tax assets and liabilities for the expected future tax consequences of temporary differences.

**(r) RESERVE FOR JOB WARRANTY COSTS**

A reserve for the estimated cost of warranty obligations is provided for the Company's engineering, procurement and construction work at the time the related sales on contracts are recorded.

**(s) RESERVE FOR LOSSES ON CONTRACTS**

A reserve for losses on contracts is provided for an estimated amount of probable losses to be incurred in future years in respect of construction projects in progress.

**(t) PER SHARE INFORMATION**

Net income (loss) per share is computed by dividing net income available to common shareholders by the weighted-average number of common shares outstanding for the period.

Cash dividends per share have been presented on an accrual basis and include dividends to be approved after the balance sheet date but applicable to the year then ended.

**(u) AMORTIZATION OF GOODWILL**

Goodwill is amortized over five years on a straight-line basis. Negative goodwill is recognized in income statement immediately.

**(v) DERIVATIVE TRANSACTIONS AND HEDGE ACCOUNTING**

The accounting standard for financial instruments requires companies to state derivative financial instruments at fair value and to recognize changes in the fair value as gains or losses unless the derivative financial instruments are used for hedging purposes.

If derivative financial instruments are used as hedges and meet certain hedging criteria, the Company and its consolidated domestic subsidiaries defer recognition of gains or losses resulting from changes in fair value of derivative financial instruments until the related losses or gains on the hedged items are recognized.

However, in cases where foreign exchange forward contracts are used as hedges and meet certain hedging criteria, foreign exchange forward contracts and hedged items are accounted for in the following manner (Allocation Method):

(1) If a foreign exchange forward contract is executed to hedge an existing foreign currency receivable or payable,

- (i) The difference, if any, between the Japanese yen amount of the hedged foreign currency receivable or payable translated using the spot rate at the inception date of the contract and the book value of the receivable or payable is recognized in the statement of income in the period which includes the inception date, and
- (ii) The discount or premium on the contract (that is, the difference between the Japanese yen amount of the contract translated using the contracted forward rate and that translated using the spot rate at the inception date of the contract) is recognized over the term of the contract.

- (2) If a foreign exchange forward contract is executed to hedge a future transaction denominated in a foreign currency, the future transaction will be recorded using the contracted forward rate, and no gains or losses on the foreign exchange forward contract are recognized.

Also, where interest rate swap contracts are used as hedges and meet certain hedging criteria, the net amount to be paid or received under the interest rate swap contract is added to or deducted from the interest on the liabilities for which the swap contract was executed (Special method for interest rate swap).

**(w) ACCRUED BONUSES TO DIRECTORS AND  
CORPORATE AUDITORS**

Accrued bonuses to directors and corporate auditors are provided by the estimated amounts, which are obligated to pay to directors and corporate auditors after the fiscal year-end, based on services provided during the current period.

**(x) ACCRUED BONUSES TO EMPLOYEES**

Accrued bonuses to employees are provided by the estimated amounts, which are obligated to pay to employees after the fiscal year-end, based on services provided during the current period.

**(y) CHANGES IN ACCOUNTING POLICY**

(Changes in Accounting Policies In association with the revision of the Corporation Tax Act)

In response to the revision to the Corporation Tax Act, the Company and its domestic subsidiaries have applied the "Practical Solution on a change in depreciation method due to Tax Reform 2016" (ASBJ Practical Issues Task Force (PITF) No.32 dated June 17, 2016) from the current fiscal year, and changed the depreciation method for facilities attached to buildings and structures that were acquired on or after April 1, 2016 from the declining-balance method to the straight-line method. The impact of this change on the consolidated financial statements for the year ended March 31, 2017 was immaterial.

**(z) CHANGES IN PRESENTATION**

(Consolidated statements of operations)

“Gain on sales of affiliates securities”, which was stated as a separate account item in “Other Income (Expenses)” in the previous fiscal year, is incorporated in “Other, net” for the fiscal year ended March 31, 2017 due to its decreased materiality. As a result, ¥4,227 million presented as “Gain on sales of affiliates securities” under “Other Income (Expenses)” on the consolidated statements of operations for the previous fiscal year has been reclassified as “Other, net.”

(Consolidated statements of cash flows)

“(Increase) decrease short-term loans receivable”, which was included in “Other” under “Cash flows from investing activities” in the previous fiscal year, is presented separately for the fiscal ended March 31, 2017 due to its increased materiality. As a result, ¥156 million included in “Other” under “Cash flows from investing activities” on the consolidated statements of cash flows for the previous fiscal year has been reclassified as “(Increase) decrease short-term loans receivable”.

**(aa) ADDITIONAL INFORMATION**

(Application of implementation guidance on recoverability of deferred tax assets)

The Company and its domestic subsidiaries have applied the “Revised Implementation Guidance on Recoverability of Deferred Tax Assets” (ASBJ Guidance No.26 dated March 28, 2016) from the current fiscal year.

**Note 2 : RECEIVABLES FROM AND PAYABLES TO UNCONSOLIDATED SUBSIDIARIES AND AFFILIATES**

Significant receivables from and payables to unconsolidated subsidiaries and affiliates at March 31, 2017 and 2016, were as follows:

March 31,	(Thousands of U.S. dollars)		
	(Millions of yen)	2016	2017
Notes and accounts receivable	¥ 1,197	¥ 123	\$ 10,669
Other current assets	1,454	793	12,960
Long-term loans receivable	2,477	4,858	22,079
Short-term loans	69	76	615
Notes and accounts payable	933	543	8,316
Advances received on uncompleted contracts	937	–	8,352
Other current liabilities	266	139	2,371
Other non-current liabilities	10	10	89

**Note 3 : BORROWINGS AND ASSETS PLEDGED AS****COLLATERAL**

Short-term loans consisted mainly of unsecured notes and bank overdrafts and bore interest at the annual rates of 1.40% and 1.03% at March 31, 2017 and 2016, respectively. Such loans are generally renewable at maturity.

Long-term debt consisted of the following:

March 31,	(Thousands of U.S. dollars)		
	(Millions of yen)	2016	2017
<b>Secured Loans</b> 0.95% – 1.45% loans from banks due serially through 2033	¥ 11,254	¥ 12,005	\$ 100,312
<b>Unsecured Debt</b> 0.66% – 1.25% loans from banks and insurance companies due serially through 2020 (some debt has no fixed term)	2,183	10,299	19,458
	13,437	22,304	119,770
Less current maturities	(806)	(1,313)	(7,184)
Long-term debt due after one year	¥ 12,631	¥ 20,991	\$ 112,586

Assets pledged as collateral for short-term loans, long-term debt, other current liabilities and other non-current liabilities at March 31, 2017 and 2016, were as follows:

March 31,	(Thousands of U.S. dollars)		
	(Millions of yen)	2016	2017
Land	¥ 4,280	¥ 4,280	\$ 38,150
Buildings and structures, at net book value	2,749	2,904	24,503
Machinery and equipment, at net book value	11,271	11,940	100,463
Cash and deposits	1,850	2,114	16,490
Investments securities	1,638	1,638	14,600
Total	¥ 21,788	¥ 22,876	\$ 194,206

The annual maturities of long-term debt outstanding at March 31, 2017 were as follows:

Amount Year ending March 31,	(Thousands of U.S. dollars)	
	(Millions of yen)	(Note 1)
2018	¥ 2,296	\$ 20,465
2019	814	7,256
2020	748	6,667
2021	759	6,765
2022 and thereafter	8,014	71,433
Total	¥ 12,631	\$ 112,586

**Note 4 : INVENTORIES**

Inventories at March 31, 2017 and 2016 were summarized as follows:

March 31,	(Thousands of U.S. dollars)		
	(Millions of yen)	2016	2017
Inventories:			
Contract works in progress	¥ 35,026	¥ 42,339	\$ 312,202
Finished goods and merchandise	3,765	3,731	33,559
Works in process	2,211	2,089	19,708
Raw materials and others	2,968	2,394	26,455
Total	¥ 43,970	¥ 50,553	\$ 391,924

**Note 5 : RETIREMENT BENEFIT PLAN**

The significant components of the pension plans as of and for the years ended March 31, 2017 and 2016 were summarized as follows:

**(a) DEFINED BENEFIT PLAN****(1) Movement in retirement benefit obligations**

March 31,	(Thousands of U.S. dollars)		
	(Millions of yen)	2016	2017
Balance at beginning of year	¥ 50,642	¥ 48,954	\$ 451,395
Service cost	2,100	2,033	18,718
Interest cost	218	469	1,943
Actuarial loss	376	4,564	3,352
Benefits paid	(2,192)	(2,285)	(19,538)
Past service costs	–	(2,515)	–
Increase in a newly consolidated subsidiary	–	373	–
Decrease in excluding a consolidated subsidiary	–	(883)	–
Other	(119)	(68)	(1,061)
Balance at end of year	¥ 51,025	¥ 50,642	\$ 454,809

**(2) Movement in plan assets**

March 31,	(Thousands of U.S. dollars)		
	(Millions of yen)	2016	2017
Balance at beginning of year	¥ 35,465	¥ 36,092	\$ 316,115
Expected return on plan assets	524	528	4,671
Actuarial gain	33	(396)	294
Contributions paid by the employer	997	1,062	8,887
Benefits paid	(1,648)	(1,758)	(14,689)
Other	(91)	(63)	(811)
Balance at end of year	¥ 35,280	¥ 35,465	\$ 314,467

**(3) Reconciliation from retirement benefit obligations and plan assets to net defined benefit liability and asset**

March 31,	(Thousands of U.S. dollars)		
	(Millions of yen)	2016	2017
Funded retirement benefit obligations	¥ 38,570	¥ 38,590	\$ 343,792
Plan assets	(35,280)	(35,465)	(314,467)
	3,290	3,125	29,325
Unfunded retirement benefit obligations	12,455	12,052	111,017
Allowance for officers' lump-sum severance benefits	275	241	2,451
Total net defined benefit liability	¥ 16,020	¥ 15,418	\$ 142,793
Net defined benefit liability	16,210	15,612	144,487
Net defined benefit asset	(190)	(194)	(1,694)
Total net defined benefit liability	¥ 16,020	¥ 15,418	\$ 142,793

**(4) Retirement benefit expenses**

March 31,	(Thousands of U.S. dollars)		
	(Millions of yen)	2016	2017
Service cost	¥ 2,100	¥ 2,033	\$ 18,718
Interest cost	218	469	1,943
Expected return on plan assets	(524)	(528)	(4,671)
Net actuarial gain and loss amortization	1,039	929	9,261
Past service cost amortization	(330)	(336)	(2,941)
Total retirement benefit expenses	¥ 2,503	¥ 2,567	\$ 22,310

**(5) Remeasurements of defined benefit plans**

March 31,	(Thousands of U.S. dollars)		
	(Millions of yen)	2016	2017
Actuarial losses	¥ 696	¥ (4,031)	\$ 6,204
Past service costs	(330)	2,179	(2,941)
Others	8	(31)	71
Total balance	¥ 374	¥ (1,883)	\$ 3,334

**(6) Cumulative effect of remeasurements of defined benefit plans**

March 31,	(Thousands of U.S. dollars)		
	(Millions of yen)	2016	2017
Actuarial losses that are yet to be recognized	¥ (5,890)	¥ (6,595)	\$ (52,500)
Past service costs that are yet to be recognized	2,195	2,525	19,565
Total balance	¥ (3,695)	¥ (4,070)	\$ (32,935)

## (7) Plan assets

## Components of plan assets

	March 31, 2017	March 31, 2016
Bonds	65%	73%
Equity securities	18	16
Cash and cash equivalents	1	1
Other	16	10
Total	100%	100%

## Long-term expected rate of return

Current and target asset allocations and historical and expected returns on various categories of plan assets have been considered in determining the long-term expected rate of return.

## (8) Actuarial assumptions

The principal actuarial assumptions at March 31, 2017 and 2016 were as follows:

	March 31, 2017	March 31, 2016
Discount rate	Principally 0.25%	Principally 0.25%
Long-term expected rate of return	Principally 1.5%	Principally 1.5%
Expected rate of salary increase	Principally 4.1%	Principally 5.1%

## (b) DEFINED CONTRIBUTION PENSION PLAN

The Company's contributions were ¥263 million (\$2,344 thousand) and ¥228 million for the years ended March 31, 2017 and 2016, respectively.

## Note 6 : CONTINGENCIES

(1) It is a business practice in Japan for a company to guarantee the indebtedness of certain of its trading agents, suppliers, subcontractors and certain subsidiaries and affiliates. The aggregate amount of such guarantees was ¥6,287 million (\$56,039 thousand) and ¥13,854 million at March 31, 2017 and 2016, respectively.

(2) The Company has guaranteed employees' housing loans and others from banks in the amount of ¥7 million (\$62 thousand) and ¥12 million at March 31, 2017 and 2016, respectively.

## Note 7 : NET ASSETS

Under the Japanese Corporation Law ("the Law") and regulations, the entire amount paid for new shares is required to be designated as common stock. However, companies may, by a resolution of the Board of Directors, designate an amount not exceeding one-half of the price of the new shares as additional paid-in capital, which is included in capital surplus.

Under the Law, companies are required to set aside an amount

equal to at least 10% of cash dividends and other cash appropriations in a legal earnings reserve until the total of the legal earnings reserve and additional paid-in capital equals 25% of common stock.

Under the Law, the legal earnings reserve and additional paid-in capital can be used to eliminate or reduce a deficit by a resolution of the shareholders' meeting or can be capitalized by a resolution of the Board of Directors.

Additional paid-in capital and legal earnings reserve may not be distributed as dividends. Under the Law, however, additional paid-in capital and legal earnings reserve may be transferred to retained earnings by a resolution of the shareholders' meeting as long as the total amount of the legal earnings reserve and additional paid-in capital remained equal to or exceeded 25% of common stock.

The maximum amount that the Company can distribute as dividends is calculated based on the non-consolidated financial statements of the Company in accordance with the Law.

At the annual shareholders' meeting of the Company held on June 29, 2017, the shareholders approved cash dividends amounting to ¥7,569 million (\$67,466 thousand). Such appropriations have not been accrued in the consolidated financial statements as of March 31, 2017. Such appropriations are recognized in the period in which they are approved by the shareholders.

## Note 8 : INFORMATION ON SECURITIES

A. The following tables summarize acquisition costs and book values stated at the fair value of securities with available fair values as of March 31, 2017 and 2016.

## AVAILABLE-FOR-SALE SECURITIES WITH AVAILABLE FAIR VALUES:

(1) Securities with book values exceeding acquisition costs:

	(Millions of yen)		
March 31, 2017	Acquisition cost	Book value	Difference
Equity securities	¥ 10,124	¥ 20,670	¥ 10,546

	(Millions of yen)		
March 31, 2016	Acquisition cost	Book value	Difference
Equity securities	¥ 9,151	¥ 18,744	¥ 9,593

	(Thousands of U.S. dollars) (Note 1)		
March 31, 2017	Acquisition cost	Book value	Difference
Equity securities	\$ 90,240	\$ 184,241	\$ 94,001

(2) Securities with book values not exceeding acquisition costs:

	(Millions of yen)		
March 31, 2017	Acquisition cost	Book value	Difference
Equity securities	¥ 961	¥ 756	¥ (205)

	(Millions of yen)		
March 31, 2016	Acquisition cost	Book value	Difference
Equity securities	¥ 3,170	¥ 2,416	¥ (754)

	(Thousands of U.S. dollars) (Note 1)		
March 31, 2017	Acquisition cost	Book value	Difference
Equity securities	\$ 8,566	\$ 6,739	\$ (1,827)

B. The following tables summarize book values of securities with no available fair values or securities not valued by fair market prices as of March 31, 2017 and 2016.

## (a) AVAILABLE-FOR-SALE SECURITIES WITH NO AVAILABLE FAIR VALUES

	(Millions of yen)		(Thousands of U.S. dollars) (Note 1)
March 31,	2017	2016	2017
Non-listed equity securities	¥ 16,916	¥ 20,317	\$ 150,779
Subscription certificate	38	39	339
Total	¥ 16,954	¥ 20,356	\$ 151,118

## (b) UNCONSOLIDATED SUBSIDIARIES AND AFFILIATES:

	(Millions of yen)		(Thousands of U.S. dollars) (Note 1)
March 31,	2017	2016	2017
Securities of unconsolidated subsidiaries	¥ 2,942	¥ 3,013	\$ 26,224
Securities of affiliates	18,508	14,794	164,970
Total	¥ 21,450	¥ 17,807	\$ 191,194

## (c) AVAILABLE-FOR-SALE SECURITIES WITH MATURITIES:

	(Millions of yen)				
	Within one year	Over one year but within five years	Over five years but within ten years	Over ten years	Total
March 31, 2017					
Negotiable certificate of deposit	¥ -	¥ -	¥ -	¥ -	¥ -

	(Millions of yen)				
	Within one year	Over one year but within five years	Over five years but within ten years	Over ten years	Total
March 31, 2016					
Negotiable certificate of deposit	¥ 8,000	¥ -	¥ -	¥ -	¥ 8,000

	(Thousands of U.S. dollars) (Note 1)				
March 31, 2017	Within one year	Over one year but within five years	Over five years but within ten years	Over ten years	Total
Negotiable certificate of deposit	\$ -	\$ -	\$ -	\$ -	\$ -

## (d) LOSS ON VALUATION OF INVESTMENT SECURITIES

The Company recognized loss on valuation for investment securities in the amount of ¥2,926 million (\$26,081 thousand) and ¥10,371 million for the years ended March 31, 2017 and 2016, respectively.

The Company and its consolidated domestic subsidiaries follow a policy of devaluation of available-for-sale securities. The policy of devaluation for the Company and its consolidated domestic subsidiaries is that if the available fair value of the securities declines by 50% or more, compared with acquisition cost, all the corresponding securities are devalued as such decline is considered to be substantial and non-recoverable in value. In addition, in the case whereby the available fair value of the securities declines by more than 30% but by less than 50%, the Company and its consolidated domestic subsidiaries examine the recoverability of the fair value of the securities and devalue if those securities are considered to be unrecoverable.

## (e) SALES OF SECURITIES CLASSIFIED AS OTHER SECURITIES

	(Millions of yen)		(Thousands of U.S. dollars)
March 31,	2017	2016	2017
Equity securities:			
Sales proceeds	¥ 3,048	¥ 1,668	\$ 27,168
Aggregate gain	1,648	1,085	14,690
Aggregate loss	-	-	-
Bond securities:			
Sales proceeds	-	10,196	-
Aggregate gain	-	-	-
Aggregate loss	-	-	-

## Note 9 : DERIVATIVE TRANSACTIONS AND HEDGE ACCOUNTING

As explained in Note 1(v), the accounting standard for financial instruments requires companies to state derivative financial instruments at fair value and to recognize changes in the fair value as gains or losses unless derivative financial instruments are used for hedging purposes.

The Company utilizes foreign currency forward contracts and interest rate swap contracts as derivative financial instruments only for the purpose of mitigating future risks of fluctuation of foreign currency exchange rates with respect to foreign currency receivable and payable and mitigating future risks of interest rate increases and

lowering the financing costs with respect to borrowings.

Foreign currency forward contracts and interest rate swap contracts are subject to risks of foreign exchange rate changes and interest rate changes, respectively.

The derivative transactions are executed and managed in accordance with the established policies and within the specified limit on the amounts of derivative transactions allowed.

The following summarizes hedging derivative financial instruments used by the Company and hedged items:

Hedging instruments:	Hedged items:
Foreign currency forward contracts	Foreign currency trade receivable, payable and future transactions denominated in a foreign currency
Foreign currency deposit	Foreign currency trade receivable, payable and future transactions denominated in a foreign currency
Interest rate swap contracts	Interest on loans payable

The Company evaluates hedge effectiveness semi-annually by comparing the cumulative changes in cash flows from or the changes in fair value of hedged items and the corresponding changes in the hedging derivative instruments. However, where the principal conditions underlying the hedging instruments and the hedged assets or liabilities are similar, the evaluation of hedge effectiveness is not performed.

The Company's financial instrument counter-parties are all prime banks with high ratings, and the Company does not expect non-performance by the counter-parties.

#### (a) FAIR VALUE OF UNDESIGNATED DERIVATIVE FINANCIAL INSTRUMENTS

Fair value of undesignated derivative financial instruments as of March 31, 2017 and 2016, is summarized as follows:

(Millions of yen)					
March 31, 2017	Contract amount			Fair value	Profit or loss evaluation
	Due within one year	Due after one year	Total		
Forward exchange contracts					
Sell U.S. dollars	¥ 1,871	¥ –	¥ 1,871	¥ 109	¥ 109
Buy Euro	2,474	41	2,515	(139)	(139)

(Millions of yen)					
March 31, 2016	Contract amount			Fair value	Profit or loss evaluation
	Due within one year	Due after one year	Total		
Forward exchange contracts					
Sell U.S. dollars	¥ 31,647	¥ –	¥ 31,647	¥ 254	¥ 254
Sell Euro	1,023	–	1,023	(6)	(6)
Sell British pound	1,633	–	1,633	9	9
Buy Yen	224	–	224	(2)	(2)
Buy Euro	1,151	–	1,151	(84)	(84)
Buy Saudi riyal	372	–	372	0	0
Buy Qatar riyal	16	–	16	0	0

(Thousands of U.S. dollars) (Note 1)					
March 31, 2017	Contract amount			Fair value	Profit or loss evaluation
	Due within one year	Due after one year	Total		
Forward exchange contracts					
Sell U.S. dollars	\$ 16,677	\$ –	\$ 16,677	\$ 972	\$ 972
Buy Euro	22,052	365	22,417	(1,239)	(1,239)

Fair value of forward exchange contracts is stated based on the quoted price from banks.

#### (b) FAIR VALUE OF DERIVATIVE FINANCIAL INSTRUMENTS DESIGNATED AS HEDGING INSTRUMENTS

Fair value of derivative financial instruments designated as hedging instruments as of March 31, 2017 and 2016 is summarized as follows:

(Millions of yen)						
March 31, 2017	Accounting method	Hedging instruments	Hedged item	Contract amount		Fair value
				Contract amount	Portion over one year	
Allocation method (Note 1(v))	Forward exchange contracts	Buy Euro	Accounts payable	¥ 955	¥ 535	¥ 0
Principal method (Note 1(v))	Interest rate swap contracts	Receive variable rate and Pay fixed rate swap	Long-term debt	8,948	8,366	(721)

(Millions of yen)						
March 31, 2016	Accounting method	Hedging instruments	Hedged item	Contract amount		Fair value
				Contract amount	Portion over one year	
Allocation method (Note 1(v))	Forward exchange contracts	Buy Euro	Accounts payable	¥ 1,397	¥ –	¥ (4)
Principal method (Note 1(v))	Interest rate swap contracts	Receive variable rate and Pay fixed rate swap	Long-term debt	11,362	9,054	(837)

(Thousands of U.S. dollars) (Note 1)						
March 31, 2017	Accounting method	Hedging instruments	Hedged item	Contract amount		Fair value
				Contract amount	Portion over one year	
Allocation method (Note 1(v))	Forward exchange contracts	Buy Euro	Accounts payable	\$ 8,512	\$ 4,769	\$ 0
Principal method (Note 1(v))	Interest rate swap contracts	Receive floating and Pay fixed swap	Long-term debt	79,758	74,570	(6,427)

Fair value of forward exchange contracts is stated based on the quoted price from banks.

#### Note 10 : SEGMENT INFORMATION

##### (a) OVERVIEW OF REPORTED SEGMENTS

The reported segments of the Company are those units for which separate financial statements can be obtained among the constituent units of the Company and regularly examined by Chief Executive Officer for decisions on the allocation of management resources and for assessing business performance. The operations of the Company and its consolidated subsidiaries are classified into two reportable segments: the total engineering business and the catalysts and fine products business.

Major activities included in the total engineering business are design, procurement, construction and performance test services of machinery and plants for petroleum, petroleum refining, petrochemicals, gas, chemicals, nuclear energy, metal refining, biochemical, food, pharmaceuticals, medical, logistics, information technology, environment conservation and pollution control. Major activities in the catalysts and fine products business include manufacturing and distribution of chemical and catalyst products (FCC catalysts, hydro treating catalysts, deNOx catalysts, petrochemical catalysts, etc.) and new functional material products (colloidal silica, coating materials for surface treatment on cathode ray tubes, material for semiconductors, cathode materials and cosmetic products, etc.).

The accounting policies of the segments are substantially the same as those described in the significant accounting policies in Note 1.

The following is information about sales and profit or loss by reported segments for the years ended March 31, 2017 and 2016:

Year ended March 31, 2017	(Millions of yen)						
	Reported Segment			Other	Total	Adjustment	Consolidated
	Total engineering	Catalysts and fine products	Sub-Total				
Net sales:							
External customers	¥ 643,377	¥ 39,918	¥ 683,295	¥ 9,857	¥ 693,152	¥ –	¥ 693,152
Inter-segment	392	107	499	1,669	2,168	(2,168)	–
Total	¥ 643,769	¥ 40,025	¥ 683,794	¥ 11,526	¥ 695,320	¥ (2,168)	¥ 693,152
Segment profit (loss)	¥ (29,399)	¥ 6,121	¥ (23,278)	¥ 1,607	¥ (21,671)	¥ 174	¥ (21,497)
Segment assets	¥ 563,620	¥ 47,674	¥ 611,294	¥ 55,239	¥ 666,533	¥ (20,241)	¥ 646,292
Impairment	¥ 653	–	¥ 653	¥ 5,275	¥ 5,928	–	¥ 5,928
Depreciation and amortization	¥ 3,466	¥ 2,356	¥ 5,822	¥ 2,247	¥ 8,069	¥ (56)	¥ 8,013
Capital expenditures	¥ 2,565	¥ 2,477	¥ 5,042	¥ 1,118	¥ 6,160	–	¥ 6,160

\*1. The "Other" category includes business activities of information processing, consulting, management of real estate, power and water supply and oil and gas production.

\*2. Adjustments for segment profit (loss), segment assets and other items represent the elimination of intersegment transactions.

\*3. Segment profit (loss) is reconciled to operating loss of consolidated statements of operations.

Year ended March 31, 2016	(Millions of yen)						
	Reported Segment			Other	Total	Adjustment	Consolidated
	Total engineering	Catalysts and fine products	Sub-Total				
Net sales:							
External customers	¥ 828,414	¥ 37,629	¥ 866,043	¥ 13,912	¥ 879,955	¥ –	¥ 879,955
Inter-segment	163	0	163	4,486	4,649	(4,649)	–
Total	¥ 828,577	¥ 37,629	¥ 866,206	¥ 18,398	¥ 884,604	¥ (4,649)	¥ 879,955
Segment profit	¥ 44,064	¥ 3,570	¥ 47,634	¥ 1,731	¥ 49,365	¥ 296	¥ 49,661
Segment assets	¥ 601,945	¥ 43,136	¥ 645,081	¥ 54,034	¥ 699,115	¥ (9,333)	¥ 689,782
Impairment	–	–	–	¥ 1,661	¥ 1,661	–	¥ 1,661
Depreciation and amortization	¥ 4,482	¥ 2,082	¥ 6,564	¥ 3,024	¥ 9,588	¥ (164)	¥ 9,424
Capital expenditures	¥ 2,873	¥ 4,196	¥ 7,069	¥ 2,196	¥ 9,265	¥ 19	¥ 9,284

\*1. The "Other" category includes business activities of information processing, consulting, management of real estate, power and water supply and oil and gas production.

\*2. Adjustments for segment profit, segment assets and other items represent the elimination of intersegment transactions.

\*3. Segment profit is reconciled to operating income of consolidated statements of operations.

Year ended March 31, 2017	(Thousands of U.S. dollars) (Note 1)						
	Reported Segment			Other	Total	Adjustment	Consolidated
	Total engineering	Catalysts and fine products	Sub-Total				
Net sales:							
External customers	\$ 5,734,709	\$ 355,807	\$ 6,090,516	\$ 87,860	\$ 6,178,376	\$ –	\$ 6,178,376
Inter-segment	3,494	954	4,448	14,876	19,324	(19,324)	–
Total	\$ 5,738,203	\$ 356,761	\$ 6,094,964	\$ 102,736	\$ 6,197,700	\$ (19,324)	\$ 6,178,376
Segment profit (loss)	\$ (262,046)	\$ 54,559	\$ (207,487)	\$ 14,324	\$ (193,163)	\$ 1,551	\$ (191,612)
Segment assets	\$ 5,023,799	\$ 424,940	\$ 5,448,739	\$ 492,370	\$ 5,941,109	\$ (180,417)	\$ 5,760,692
Impairment	\$ 5,821	–	\$ 5,821	\$ 47,018	\$ 52,839	–	\$ 52,839
Depreciation and amortization	\$ 30,894	\$ 21,000	\$ 51,894	\$ 20,028	\$ 71,922	\$ (499)	\$ 71,423
Capital expenditures	\$ 22,863	\$ 22,079	\$ 44,942	\$ 9,965	\$ 54,907	–	\$ 54,907

## (b) RELATED INFORMATION

### I. INFORMATION BY GEOGRAPHY

#### (1) Net Sales

Year ended March 31, 2017						
Japan	East and Southeast Asia	Middle East	North America	Oceania	Other	Total
¥ 138,831	¥ 100,047	¥ 127,031	¥ 33,864	¥ 125,336	¥ 168,043	¥ 693,152

\*1. Net sales are classified by the place of customers' address.

\*2. Oceania includes Australia ¥125,336 million (\$1,117,176 thousand).

\*3. Other includes Russia ¥136,666 million (\$1,218,166 thousand).

Year ended March 31, 2016						
Japan	East and Southeast Asia	Middle East	North America	Oceania	Other	Total
¥ 127,672	¥ 209,417	¥ 113,644	¥ 81,247	¥ 202,175	¥ 145,800	¥ 879,955

\*1. Net sales are classified by the place of customers' address.

\*2. East and Southeast Asia includes Malaysia ¥95,165 million.

\*3. Oceania includes Australia ¥202,175 million.

\*4. Other includes Russia ¥121,697 million.

Year ended March 31, 2017						
Japan	East and Southeast Asia	Middle East	North America	Oceania	Other	Total
\$ 1,237,463	\$ 891,764	\$ 1,132,285	\$ 301,845	\$ 1,117,176	\$ 1,497,843	\$ 6,178,376

#### (2) Property and equipment

	(Millions of yen)		(Thousands of U.S. dollars) (Note 1)
	Year ended March 31, 2017	Year ended March 31, 2016	March 31, 2017
Japan	¥ 65,870	¥ 67,297	\$ 587,129
Other	4,008	8,958	35,725
Total	¥ 69,878	¥ 76,255	\$ 622,854

### II. INFORMATION BY MAJOR CUSTOMERS

The following is information on major customers which account for 10% or more of the net sales on the consolidated statements of operations for the years ended March 31, 2017 and 2016:

Year ended March 31, 2017	(Thousands of U.S. dollars) (Note 1)		Related segments
	(Millions of yen)	(Note 1)	
JSC YAMAL LNG	¥ 136,567	\$ 1,217,283	Total engineering
Ichthys LNG Pty Ltd	¥ 116,157	\$ 1,035,360	Total engineering
Year ended March 31, 2016	(Millions of yen)	(Note 1)	Related segments
Ichthys LNG Pty Ltd	¥ 178,667		Total engineering
JSC YAMAL LNG	¥ 121,632		Total engineering

### III. INFORMATION ON IMPAIRMENT LOSS

This information is not disclosed, as this information is disclosed in Note 10 (a) for the years ended March 31, 2017 and 2016.

### IV. INFORMATION ON AMORTIZATION OF GOODWILL AND AMORTIZED BALANCE

This information is not disclosed, as this is immaterial for the years ended March 31, 2017 and 2016.

### V. INFORMATION ON GAIN ON NEGATIVE GOODWILL

This information is not disclosed, as this is immaterial for the years ended March 31, 2017 and 2016.

### Note 11 : TAXES ON INCOME

Income taxes applicable to the Company and its domestic consolidated subsidiaries comprise corporate taxes, inhabitants' taxes and enterprise taxes which, in the aggregate, resulted in statutory tax rates of 30.9% and 33.1% for the years ended March 31, 2017 and 2016, respectively.

(1) The following table summarizes the differences between the statutory tax rate and the Company's and its consolidated subsidiaries' effective tax rate for financial statement purposes for the years ended March 31, 2017 and 2016, were as follows:

	2017	2016
Statutory tax rate	– %	33.1%
Non-deductible expenses	–	0.5
Non-taxable dividend income	–	(0.9)
Tax credit utilized	–	(0.9)
Other	–	(3.9)
Effective tax rate	– %	27.9%

This information is not disclosed, as loss before taxes on income was recorded for the year ended March 31, 2017.

(2) Significant components of the Company's and its consolidated subsidiaries' deferred tax assets and liabilities as of March 31, 2017 and 2016, were as follows:

March 31,	(Thousands of U.S. dollars) (Note 1)		
	(Millions of yen)	(Note 1)	(Note 1)
2017	2016	2017	
Current deferred taxes			
Deferred tax assets:			
Reserve for losses on contracts	¥ 7,579	¥ 6,354	\$ 67,555
Accrued employees' bonuses	1,864	2,182	16,615
Accounts payable	1,586	2,144	14,137
Reserve for job warranty costs	874	767	7,790
Other	623	560	5,553
Total current deferred tax assets	12,526	12,007	111,650
Deferred tax liabilities:			
Foreign currency hedge	(3)	–	(27)
Other	(111)	(27)	(989)
Total current deferred tax liabilities	(114)	(27)	(1,016)
Net current deferred tax assets	¥ 12,412	¥ 11,980	\$ 110,634

March 31,	(Millions of yen)		(Thousands of U.S. dollars) (Note 1)
	2017	2016	2017
Non-current deferred taxes			
Deferred tax assets:			
Net defined benefit liability	¥ 4,752	¥ 4,600	\$ 42,357
The percentage-of-completion method	4,039	–	36,001
Tax loss carry forward	3,669	–	32,703
Loss on valuation of investment securities	1,946	1,776	17,346
Other	1,986	3,077	17,702
Total non-current deferred tax assets	16,392	9,453	146,109
Deferred tax liabilities:			
Net unrealized holding gains on securities	(3,508)	(3,115)	(31,268)
Other	(437)	(340)	(3,895)
Total non-current deferred tax liabilities	(3,945)	(3,455)	(35,163)
Net non-current deferred tax assets	¥ 12,447	¥ 5,998	\$ 110,946
Deferred tax liabilities for land revaluation	¥ 3,126	¥ 3,133	\$ 27,864
Undistributed earnings of foreign consolidated subsidiaries	¥ 236	¥ 202	\$ 2,104
Others	148	227	1,319
Non-current deferred tax liabilities	¥ 384	¥ 429	\$ 3,423

For the years ended March 31, 2017 and 2016, the valuation allowances of ¥20,941 million (\$186,657 thousand) and ¥13,053 million have been deducted from the gross amount of the non-current deferred tax assets, respectively.

#### Note 12 : NOTES TO THE CONSOLIDATED STATEMENTS OF CASH FLOWS

Reconciliation of cash in the consolidated balance sheets and cash and cash equivalents in the consolidated statements of cash flows was as follows:

March 31,	(Millions of yen)		(Thousands of U.S. dollars) (Note 1)
	2017	2016	2017
Cash and deposits	¥ 185,603	¥ 239,948	\$ 1,654,363
Marketable securities	–	8,000	–
Cash and cash equivalents	¥ 185,603	¥ 247,948	\$ 1,654,363

#### Note 13 : LAND REVALUATION

Pursuant to Article 2 of the Enforcement Ordinance for the Law Concerning Land Revaluation effective March 31, 1998, the Company recorded its owned land used for business at the fair value as of March 31, 2002, and the related revaluation difference, net of

income taxes, was debited to Land revaluation, net of deferred tax portion in the Net Assets section. The applicable income tax portion was reported as Deferred Tax Liabilities for Land Revaluation in the consolidated balance sheets at March 31, 2017 and 2016. When such land is sold, land revaluation is reversed and debited to retained earnings.

Fair value of the revalued land as of March 31, 2017 was ¥3,161 million (\$28,175 thousand) less than the book value as of March 31, 2017, which amounts include ¥1,033 million (\$9,208 thousand) relevant to rental property.

#### Note 14 : RELATED PARTY TRANSACTIONS

Significant transactions with related parties for the years ended March 31, 2016 was as follows:

March 31,	(Millions of yen)
2016	
Rabigh Arabian Water and Electricity Company (affiliated company)	
Guarantee obligation	¥ 8,008

The Company does not receive a guarantee charge from Rabigh Arabian Water and Electricity Company.

This information is not disclosed as this is immaterial for the year ended March 31, 2017.

#### Note 15 : RENTAL PROPERTY

The fair value of investment and rental property on the consolidated financial statements at March 31, 2017 and 2016, were as follows:

	Book value (net of depreciation)		Fair value	
	March 31, 2015	Decrease	March 31, 2016	March 31, 2016
Millions of yen	¥ 7,546	¥ (87)	¥ 7,459	¥ 6,410
	March 31, 2016	Decrease	March 31, 2017	March 31, 2017
Millions of yen	¥ 7,459	¥ (75)	¥ 7,384	¥ 6,410
Thousands of U.S. dollars (Note1)	\$ 66,486	\$ (669)	\$ 65,817	\$ 57,135

Rental real estate assets are presented on the consolidated balance sheets net of accumulated depreciation and accumulated impairment loss.

The reason of the decrease was mainly due to the depreciation of the assets. The fair value was determined by the Company based on “the guidance for appraising real estate”.

The Company has rental commercial properties (including land) in Kanagawa Prefecture. The rental incomes in the Other income were ¥443 million (\$3,949 thousand) and ¥438 million for the years ended March 31, 2017 and 2016, respectively.

#### Note 16 : FINANCIAL INSTRUMENTS

##### A. QUALITATIVE INFORMATION ON FINANCIAL INSTRUMENTS

##### (a) POLICIES FOR USING FINANCIAL INSTRUMENTS

The Company manages surplus capital using financial instruments that are short-term and carry low risk. The Company uses derivatives to mitigate the risks that are described below, and does not use derivatives for speculative transactions.

##### (b) FINANCIAL INSTRUMENTS, ASSOCIATED RISKS AND THE RISK MANAGEMENT SYSTEM

Notes and accounts receivable expose the Company to customer credit risk. Marketable securities are mainly negotiable certificate of deposit. Investment securities are mainly related to the business and capital alliance companies and expose the Company to the changes in market prices. Long-term loans receivable are mainly related to subsidiaries and affiliates.

Most notes and accounts payable are due within one year. Some accounts payable associated with purchasing machines and construction contracts are denominated in foreign currencies, which expose the Company to the risks of exchange rate fluctuations. The Company generally procures capital required under its business plan through bank loans. Some bank loans expose the Company to the risks of interest rate fluctuations, which the Company uses interest rate swaps to hedge.

The Company uses derivatives transactions including foreign exchange forward contracts to hedge the risk of exchange rate fluctuations associated with accounts receivable and payable denominated in foreign currencies and interest rate swaps to hedge the risk of interest rate fluctuations associated with loans.

“Derivative Transactions and Hedge Accounting” in Note 1(v) and Note 9 presented earlier explain hedge accounting issues including methods, hedging policies, hedged items and recognition of gain or loss on hedged positions.

##### (c) RISK MANAGEMENT SYSTEM FOR FINANCIAL INSTRUMENTS

##### (1) Credit risk management (counter-party risk)

The Company has established internal procedures for receivables under which the related divisions are primarily responsible for periodically monitoring counter-party status. The department manages amounts and settlement dates by counter-party and works to quickly identify and mitigate payment risk that may result from situations including deterioration of the financial condition of counter-parties. Consolidated subsidiaries are subject to the same risk management rules.

In using derivatives transactions, the Company mitigates counter-party risk by conducting transactions with highly creditworthy financial institutions.

##### (2) Market risk management (risk of exchange rate and interest rate fluctuations)

The Company monitors the balance of the foreign currency receivable and payable by each currency and every month and utilizes foreign currency forward contracts and foreign currency

deposit to hedge the risk of fluctuations. The Company uses interest rate swaps to mitigate the risk of interest rate fluctuations associated with loans.

Regarding marketable securities and investment securities, the Company periodically examines fair value and the financial condition of the issuing entities and revises its portfolio based on its relationships with issuing entities.

The derivative transactions are executed and managed by the Finance & Accounting Department in accordance with the established policies and within the specified limit on the amounts of derivative transactions allowed. The Department periodically provides administrative reports on the results to the financial director and treasurer.

##### (3) Management of liquidity risk associated with capital procurement (payment default risk)

The Company manages liquidity risk by creating and updating a capital deployment plan based on reports from each division.

##### (d) SUPPLEMENTAL INFORMATION ON THE FAIR VALUE OF FINANCIAL INSTRUMENTS

The fair value of financial instruments is based on market prices, or a reasonable estimate of fair value for instruments for which market prices are not available. Estimates of fair value are subject to fluctuation because they employ variable factors and assumptions.

In addition, the contractual amounts of the derivatives transactions discussed in B (a) below are not an indicator of the market risk associated with derivatives transactions.

## B. FAIR VALUES OF FINANCIAL INFORMATION

## (a) FAIR VALUES OF FINANCIAL INSTRUMENTS

Fair values of financial instruments as of March 31, 2017 and 2016, were summarized as follows:

The financial instruments, whose fair values were difficult to measure, were not included in the table below and were summarized in B (b).

	(Millions of yen)			(Millions of yen)		
	March 31, 2017			March 31, 2016		
	Carrying amount	Estimated fair value	Difference	Carrying amount	Estimated fair value	Difference
Cash and deposits	¥ 185,603	¥ 185,603	–	¥ 239,948	¥ 239,948	–
Marketable securities	–	–	–	8,000	8,000	–
Notes and accounts receivable net *1	194,827	194,827	–	175,876	175,876	–
Other receivables *2	23,253	23,253	–	24,950	24,950	–
Investment securities	21,426	21,426	–	21,160	21,160	–
Long-term loans receivable, net *1	5,731	5,731	–	4,846	4,849	¥ 3
<b>Total Assets</b>	<b>¥ 430,840</b>	<b>¥ 430,840</b>	<b>–</b>	<b>¥ 474,780</b>	<b>¥ 474,783</b>	<b>¥ 3</b>
Notes and accounts payable	97,613	97,613	–	¥ 108,390	¥ 108,390	–
Long-term debt	12,631	12,643	¥ 12	20,991	21,025	¥ 34
<b>Total Liabilities</b>	<b>¥ 110,244</b>	<b>¥ 110,256</b>	<b>¥ 12</b>	<b>¥ 129,381</b>	<b>¥ 129,415</b>	<b>¥ 34</b>
Derivative financial instruments, net	¥ (750)	¥ (750)	–	¥ (671)	¥ (671)	–

	(Thousands of U.S. dollars)		
	March 31, 2017		
	Carrying amount	Estimated fair value	Difference
Cash and deposits	\$ 1,654,363	\$ 1,654,363	–
Marketable securities	–	–	–
Notes and accounts receivable, net *1	1,736,581	1,736,581	–
Other receivables*2	207,264	207,264	–
Investment securities	190,980	190,980	–
Long-term loans receivable, net *1	51,083	51,083	–
<b>Total Assets</b>	<b>\$ 3,840,271</b>	<b>\$ 3,840,271</b>	<b>–</b>
Notes and accounts payable	\$ 870,069	\$ 870,069	–
Long-term debt	112,586	112,693	\$ 107
<b>Total Liabilities</b>	<b>\$ 982,655</b>	<b>\$ 982,762</b>	<b>\$ 107</b>
Derivative financial instruments, net	\$ (6,685)	\$ (6,685)	–

\*1 The amount of individual allowance for doubtful accounts is deducted from notes and accounts receivable and long-term loans receivable.

\*2 Other receivables is included in other current assets on the consolidated balance sheets.

The following methods and assumptions were used to estimate the fair value of the financial instruments.

Cash and deposits, and marketable securities

All deposits and negotiable certificates of deposit are short-term. Therefore, the carrying amount is used for the fair value of these items because these amounts are essentially the same.

Notes and accounts receivable

Notes and accounts receivable are short-term. Therefore, the carrying amount is used for the fair value of short-term receivables because these amounts are essentially the same.

Other receivables

Other receivables are short-term. Therefore, the carrying amount is used for the fair value of short-term receivables because these amounts are essentially the same.

Investment securities

Fair value of investment securities is the price listed on securities exchanges for equities. In addition, Note 8 provides information on marketable securities by holding intent.

Long-term loans receivable

Fair value of long-term loans receivable is estimated as discounted present value of total principal and interest using assumed interest rates for equivalent new loans.

Notes and accounts payable

Notes and accounts payable are short-term. Therefore, carrying amount is used for the fair value of short-term payables because these amounts are essentially the same.

Long-term debt

Fair value of long-term debt is estimated as the discounted present value of total principal and interest using assumed interest rates for equivalent new loans. Interest rate swaps subject to special method are used for long-term floating-rate loans. Principal and interest of the loans in which these interest rate swaps are embedded are discounted using a reasonable estimate of the interest rate on the loan at the time of issue.

Derivative financial instruments

Please refer to "DERIVATIVE TRANSACTIONS AND HEDGE ACCOUNTING" in Note 1(v) and Note 9.

## (b) FINANCIAL INSTRUMENTS, WHOSE FAIR VALUES WERE DIFFICULT TO MEASURE

The financial instruments, whose fair values were difficult to measure, as of March 31, 2017 and 2016, were summarized as follows:

March 31,	(Millions of yen)		(Thousands of U.S. dollars)
	2017	2016	2017
Unconsolidated subsidiaries and affiliates	¥ 21,450	¥ 17,807	\$ 191,194
Non-listed equity securities	17,690	20,317	157,679
Subscription certificate	38	39	339

It is difficult to measure the fair value of these financial instruments because there is no market price available and it is not practical to calculate future cash flow. Therefore, these financial instruments were not included in the Investment securities described in B (a).

## (c) MATURITIES OF FINANCIAL INSTRUMENTS

The maturities of the financial instruments at March 31, 2017 were as follows:

Year ending March 31,	(Millions of yen)			
	2018	2019 - 2023	2024 - 2028	2029 and thereafter
Cash and deposits	¥ 185,603	–	–	–
Notes and accounts receivable	194,827	–	–	–
Other receivable	23,253	–	–	–
Long-term loans receivable, net	–	¥ 5,731	–	–
<b>Assets Total</b>	<b>¥ 403,683</b>	<b>¥ 5,731</b>	<b>–</b>	<b>–</b>

Year ending March 31,	(Thousands of U.S. dollars)			
	2018	2019 - 2023	2024 - 2028	2029 and thereafter
Cash and deposits	\$ 1,654,363	–	–	–
Notes and accounts receivable	1,736,581	–	–	–
Other receivable	207,264	–	–	–
Long-term loans receivable, net	–	\$ 51,083	–	–
<b>Assets Total</b>	<b>\$ 3,598,208</b>	<b>\$ 51,083</b>	<b>–</b>	<b>–</b>

Please see Note 3 for the maturities of long term-debt.

**Note 17 : IMPAIRMENT OF FIXED ASSETS**

As discussed in Note 1(n), the Company and its consolidated subsidiaries have applied the accounting standard for impairment of fixed assets.

The Company and its consolidated subsidiaries have grouped their fixed assets principally based on their business segment, while considering mutual supplementation of the cash flows.

The following is information on impairment loss for the year ended March 31, 2017.

Location	Use	Type of assets
U.S.A.	Oil and gas production and sales business	Intangible and other assets

The Company grouped the assets for oil and gas production and sales business based on individual countries. Carrying amount of certain assets was devalued to their recoverable amounts, since oil and gas business environment had significantly adversely changed. As a result, the Company recognized loss on impairment in the amount of ¥5,274 million (\$47,010 thousand). The Company used the value in use which was calculated by discounting future cash flows at the discount rates of 10%.

Impairment losses other than aforementioned are not disclosed since they are immaterial.

The following is information on impairment loss for the year ended March 31, 2016.

Location	Use	Type of assets
U.S.A.	Oil and gas production and sales business	Intangible and other assets

The Company grouped the assets for oil and gas production and sales business based on individual countries. Carrying amount of certain assets was devalued to their recoverable amounts, since oil and gas business environment had significantly adversely changed. As a result, the Company recognized loss on impairment in the amount of ¥1,661 million. The Company used the value in use which was calculated by discounting future cash flows at the discount rates of 10%.

**Note 18 : OTHER COMPREHENSIVE INCOME**

Reclassification adjustments of the Company's and consolidated subsidiaries' other comprehensive income for the years ended March 31, 2017 and 2016, were as follows:

March 31,	(Millions of yen)		(Thousands of U.S. dollars) (Note 1)
	2017	2016	2017
Net unrealized holding gains (losses) on securities			
Unrealized holding gains (losses) arising during the year	¥ 2,933	¥ (3,879)	\$ 26,143
Reclassification adjustment	(1,650)	(1,115)	(14,707)
Sub-total	1,283	(4,994)	11,436
Deferred gains (losses) on hedges			
Deferred losses on hedges arising during the year	(8)	(174)	(72)
Reclassification adjustment	128	37	1,141
Sub-total	120	(137)	1,069
Translation adjustments			
Translation adjustments arising during the year	(2,961)	(2,612)	(26,393)
Reclassification adjustment	(1,867)	-	(16,641)
Sub-total	(4,828)	(2,612)	(43,034)
Remeasurements of defined benefit plans			
Defined benefit plans during the year	(335)	(2,447)	(2,986)
Reclassification adjustment	709	564	6,320
Sub-total	374	(1,883)	3,334
Equity for equity method affiliates			
Share of other comprehensive income of affiliates accounted for using equity method arising during the year	(2)	3	(18)
Sub-total	(2)	3	(18)
Before-tax amount	(3,053)	(9,623)	(27,213)
Income tax effect	(535)	2,594	(4,769)
Total other comprehensive income	¥ (3,588)	¥ (7,029)	\$ (31,982)

Tax effects allocated to each component of other comprehensive income for the years ended March 31, 2017 and 2016, were as follows:

Year ended March 31, 2017	(Millions of yen)		
	Before-tax amount	Income tax effect	Net-of-tax amount
Net unrealized holding gains on securities	¥ 1,283	¥ (393)	¥ 890
Deferred gains on hedges	120	(33)	87
Translation adjustments	(4,828)	-	(4,828)
Remeasurements of defined benefit plans	374	(109)	265
Equity for equity method affiliates	(2)	-	(2)
Other comprehensive income	¥ (3,053)	¥ (535)	¥ (3,588)

Year ended March 31, 2016	(Millions of yen)		
	Before-tax amount	Income tax effect	Net-of-tax amount
Net unrealized holding losses on securities	¥ (4,994)	¥ 1,786	¥ (3,208)
Deferred losses on hedges	(137)	91	(46)
Land revaluation	-	174	174
Translation adjustments	(2,612)	-	(2,612)
Remeasurements of defined benefit plans	(1,883)	543	(1,340)
Equity for equity method affiliates	3	-	3
Other comprehensive income	¥ (9,623)	¥ 2,594	¥ (7,029)

Year ended March 31, 2017	(Thousands of U.S. dollars) (Note 1)		
	Before-tax amount	Income tax effect	Net-of-tax amount
Net unrealized holding gains on securities	\$ 11,436	\$ (3,503)	\$ 7,933
Deferred gains on hedges	1,069	(294)	775
Translation adjustments	(43,034)	-	(43,034)
Remeasurements of defined benefit plans	3,334	(972)	2,362
Equity for equity method affiliates	(18)	-	(18)
Other comprehensive income	\$ (27,213)	\$ (4,769)	\$ (31,982)

## Independent Auditor's Report

To the Board of Directors of JGC Corporation:

We have audited the accompanying consolidated financial statements of JGC Corporation and its consolidated subsidiaries, which comprise the consolidated balance sheets as at March 31, 2017 and 2016, and the consolidated statements of operations, statements of comprehensive income, statements of changes in net assets and statements of cash flows for the years then ended, and a summary of significant accounting policies and other explanatory information.

### Management's Responsibility for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with accounting principles generally accepted in Japan, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatements, whether due to fraud or error.

### Auditor's Responsibility

Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in Japan. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement. An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on our judgement, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, we consider internal control relevant to the entity's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, while the objective of the financial statement audit is not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

### Opinion

In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of JGC Corporation and its consolidated subsidiaries as at March 31, 2017 and 2016, and their financial performance and cash flows for the years then ended in accordance with accounting principles generally accepted in Japan.

### Convenience Translation

The U.S. dollar amounts in the accompanying consolidated financial statements with respect to the year ended March 31, 2017 are presented solely for convenience. Our audit also included the translation of yen amounts into U.S. dollar amounts and, in our opinion, such translation has been made on the basis described in Note 1 to the consolidated financial statements.

*KPMG AZSA LLC*

KPMG AZSA LLC

June 29, 2017

Tokyo, Japan

## Supplemental Explanation

### Internal Control over Financial Reporting in Japan

Under the Financial Instruments and Exchange Act in Japan ("the Act"), which was enacted in June 2006, the management of all listed companies in Japan are required to implement assessments of internal control over financial reporting ("ICOFR") as of the end of the fiscal year and the management assessment shall be audited by independent auditors, effective from the fiscal year beginning on or after April 1, 2008.

We have evaluated our ICOFR as of March 31, 2017, in accordance with "On the Revision of the Standards and Practice Standards for Management Assessment and Audit concerning Internal Control Over Financial Reporting (Council Opinions)" published by the Business Accounting Council on March 30, 2011.

As a result of conducting the evaluation of ICOFR for the year ended March 31, 2017, we concluded that our internal control system over financial reporting as of March 31, 2017 was operating effectively and reported as such in the Internal Control Report.

Independent Auditor, KPMG AZSA LLC, performed an audit of our management assessment on the effectiveness of ICOFR under the Act.

An English translation of the Internal Control Report and the Independent Auditor's Report filed under the Act is provided on the following pages.

JGC Corporation

## Internal Control Report (Translation)

### NOTE

The following is an English translation of the report on internal control over financial reporting filed under the Financial Instruments and Exchange Act in Japan (“ICOFR under the Act”). This report is presented merely as supplemental information.

There are differences between the management assessment of ICOFR under the Act and one conducted under the attestation standards established by the American Institute of Certified Public Accountants (“the AICPA”).

In the management assessment of ICOFR under the Act, there is detailed guidance on the scope of the management assessment of ICOFR, such as quantitative guidance on business location selection and/or account selection. In the management assessment of ICOFR under the attestation standards established by the AICPA, there is no such guidance. Accordingly, based on the quantitative guidance which provides an approximate measure for the scope of assessment of internal control over business processes, we used a measure of approximately two-thirds of total sales and others for the selection of significant locations and business units.

### [TRANSLATION]

#### Internal Control Report

##### 1 Framework of Internal Control Over Financial Reporting

Masayuki Sato, Chairman and Representative Director of JGC Corporation (“the Company”) are responsible for establishing and maintaining adequate internal control over financial reporting as defined in the rule “On the Revision of the Standards and Practice Standards for Management Assessment and Audit concerning Internal Control Over Financial Reporting (Council Opinions)”.

Because of its inherent limitations, internal control over financial reporting (“ICOFR”) may not completely prevent or detect misstatements.

##### 2 Assessment Scope, Timing and Procedures

We have assessed our ICOFR as of March 31, 2017 in accordance with assessment standards for internal control over financial reporting generally accepted in Japan.

We assessed the design and operation of our company-level control and based on this assessment, we analyzed business processes within the scope of the internal control to be assessed, identified a key control that would have a material impact on the reliability of financial reporting and assessed whether the basic components of internal control are operating with regard to the key control.

We assessed the effectiveness of ICOFR of the Company, consolidated subsidiaries and equity-method affiliates to the extent necessary in light of their degree of impact on the reliability of financial reporting.

In assessing the effectiveness of internal control, we decided on reasonable scope of assessment for the significant business processes in light of their degree of quantitative and qualitative impact on financial reporting based on the assessment of the company-level control.

Locations and business units that did not have a material effect on financial reporting were excluded from the scope of assessments.

In assessing the period-end financial reporting process, we decided on reasonable scope of assessment in light of its degree of quantitative and qualitative impact on financial reporting in a similar manner as company-level control.

In assessing the business processes other than described above, based on the assessment of the company-level controls, we assessed the significant business locations based on sales levels until combined sales amounts reach approximately two-thirds on a consolidated basis and the business processes which impact the accounts (sales, accounts receivable and inventory) that were closely associated with the significant business locations’ business objectives.

##### 3 Results of Assessment

As a result of the above assessment, the Company’s management has concluded that, as of March 31, 2017, the Company’s ICOFR was effective.

##### 4 Supplementary Information

Not applicable.

##### 5 Other

Not applicable.

## Independent Auditor’s Report (Translation)

### NOTE

The following is an English translation of the Independent Auditor’s Report filed under the Financial Instruments and Exchange Act in Japan (“the Act”). This report is presented merely as supplemental information.

There are differences between an audit of ICOFR under the Act and one conducted under the attestation standards established by the American Institute of Certified Public Accountants (“the AICPA”).

In an audit of ICOFR under the Act, the auditor expresses an opinion on management’s report on ICOFR and does not express an opinion on the company’s ICOFR directly. In an audit of ICOFR under the attestation standards established by the AICPA, the auditor expresses an opinion on the company’s ICOFR directly.

Also in an audit of ICOFR under the Act, there is detailed guidance on the scope of an audit of ICOFR, such as quantitative guidance on business location selection and/or account selection. In an audit of ICOFR under the attestation standards established by the AICPA, there is no such guidance. Accordingly, based on the quantitative guidance which provides an approximate measure for the scope of assessment of internal control over business processes, we used a measure of approximately two-thirds of total sales and others for the selection of significant locations and business units.

### [TRANSLATION]

#### Independent Auditor’s Report

June 29, 2017

To the Board of Directors of JGC Corporation

KPMG AZSA LLC

Designated Limited Liability Partner,  
Engagement Partner,  
Certified Public Accountant: Michitaka Shishido

Designated Limited Liability Partner,  
Engagement Partner,  
Certified Public Accountant: Yoshinori Saito

#### Audit of Consolidated Financial Statements

Pursuant to the first paragraph of Article 193-2 of the Financial Instruments and Exchange Act in Japan (“the Act”), we have audited the consolidated financial statements of JGC Corporation (the “Company”) and its consolidated subsidiaries included in the Financial Section, namely, the consolidated balance sheet as of March 31, 2017, the consolidated statement of operations, consolidated statement of comprehensive income, consolidated statement of changes in net assets and consolidated statement of cash flows for the fiscal year from April 1, 2016 to March 31, 2017, and a summary of significant accounting policies, other explanatory information and consolidated supplementary schedules.

#### Management’s Responsibility for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with accounting principles generally accepted in Japan, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatements, whether due to fraud or error.

#### Auditor’s Responsibility

Our responsibility is to independently express an opinion on these consolidated financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in Japan. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on our judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, we consider internal control relevant to the entity’s preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, while the objective of the financial statement audit is not for the purpose of expressing an opinion on the effectiveness of the entity’s internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

**Opinion**

In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of JGC Corporation and its consolidated subsidiaries as of March 31, 2017 and their financial performance and cash flows for the year ended March 31, 2017, in accordance with accounting principles generally accepted in Japan.

**Audit of Internal Control**

Pursuant to the second paragraph of Article 193-2 of the Financial Instruments and Exchange Act in Japan, we also have audited the Company's report on internal control over financial reporting of the consolidated financial statements of JGC Corporation as of March 31, 2017 ("Internal Control Report").

**Management's Responsibility for the Internal Control Report**

Management is responsible for the design and operation of internal control over financial reporting and the preparation and fair presentation of the Internal Control Report in conformity with assessment standards for internal control over financial reporting generally accepted in Japan. Internal control over financial reporting may not completely prevent or detect financial statement misstatements.

**Auditor's Responsibility**

Our responsibility is to express an opinion on the Internal Control Report based on our internal control audit. We conducted our internal control audit in accordance with auditing standards for internal control over financial reporting generally accepted in Japan. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the Internal Control Report is free from material misstatement.

An internal control audit involves performing procedures to obtain audit evidence about the assessment of internal control over financial reporting in the Internal Control Report. The procedures selected depend on the auditor's judgment, including significance of effect on the reliability of financial reporting. Also, an internal control audit includes evaluating the appropriateness of the scope, procedures and result of the assessment determined and presented by management as well as evaluating the overall internal control report presentation.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

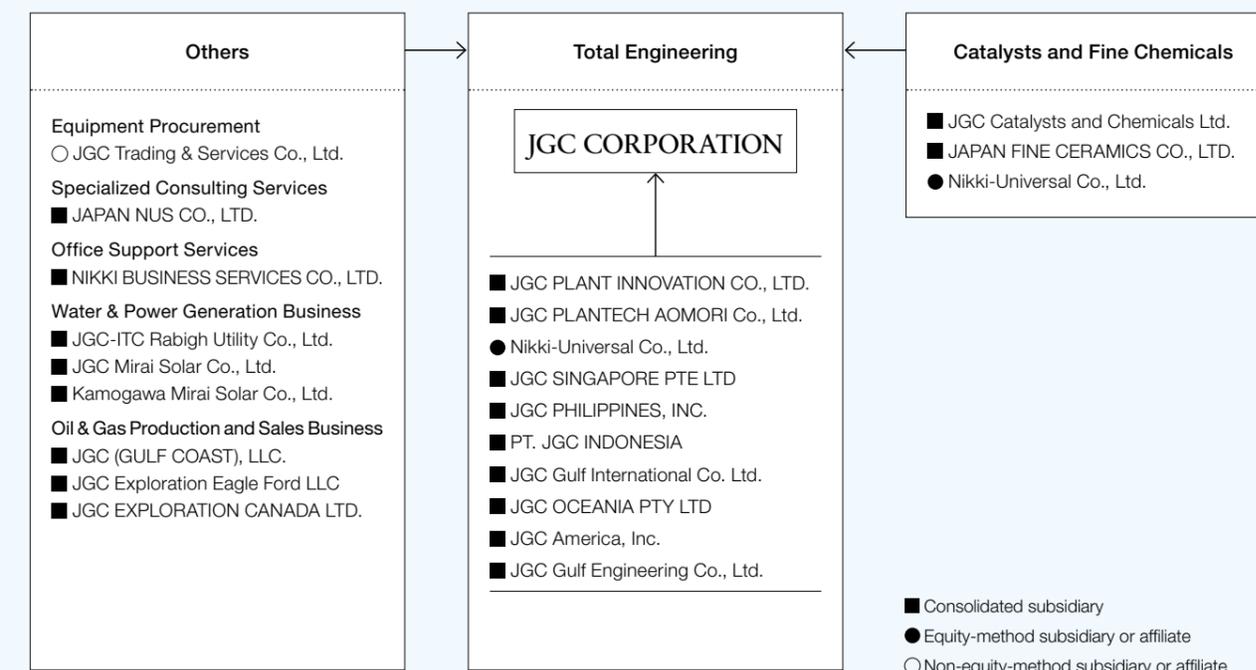
**Opinion**

In our opinion, the Internal Control Report, in which JGC Corporation states that internal control over financial reporting was effective as of March 31, 2017, presents fairly, in all material respects, the assessment of internal control over financial reporting in conformity with assessment standards for internal control over financial reporting generally accepted in Japan.

**Interest**

The firm and the engagement partners do not have any interest in the Company for which disclosure is required under the provisions of the Certified Public Accountants Act of Japan.

**JGC Group** As of March 31, 2017



**Total Engineering**

Business	Company	Country	Capital	Capital Share	Other
Engineering & Construction Services	JGC PLANT INNOVATION CO., LTD.	Japan	¥830,000,000	100%	
	JGC SINGAPORE PTE LTD	Singapore	S\$2,100,000	100%	* JGC 70% * JGC PLANT INNOVATION 30%
	JGC PHILIPPINES, INC.	Philippines	P1,200,000,000	100%	
	PT. JGC INDONESIA	Indonesia	US\$1,600,000	100%	
	JGC Gulf International Co. Ltd.	Saudi Arabia	SAR187,500,000	100%	* JGC 92% * JGC SINGAPORE 8%
	JGC OCEANIA PTY LTD	Australia	A\$1,000,000	100%	
	JGC America, Inc.	U.S.A.	US\$346,200,000	100%	
JGC Gulf Engineering Co., Ltd.	Saudi Arabia	SAR500,000	75%		
Maintenance Services	JGC PLANTECH AOMORI Co., Ltd.	Japan	¥50,000,000	100%	* JGC PLANT INNOVATION 100%
Process Licensing Services	Nikki-Universal Co., Ltd.	Japan	¥1,000,000,000	50%	

**Catalysts and Fine Chemicals**

Company	Country	Capital	Capital Share	Other
JGC Catalysts and Chemicals Ltd.	Japan	¥1,800,000,000	100%	
JAPAN FINE CERAMICS CO., LTD.	Japan	¥300,000,000	100%	
Nikki-Universal Co., Ltd.	Japan	¥1,000,000,000	50%	

**Others**

Business	Company	Country	Capital	Capital Share	Other
Equipment Procurement	JGC Trading and Services Co., Ltd.	Japan	¥40,000,000	24.5%	
Specialized Consulting Services	JAPAN NUS CO., LTD.	Japan	¥50,000,000	88%	
Office Support Services	NIKKI BUSINESS SERVICES CO., LTD.	Japan	¥1,455,000,000	100%	
Water & Power Generation Business	JGC-ITC Rabigh Utility Co., Ltd.	Japan	¥319,000,000	100%	
	JGC Mirai Solar Co., Ltd.	Japan	¥445,000,000	51%	
	Kamogawa Mirai Solar Co., Ltd.	Japan	¥231,000,000	100%	
Oil & Gas Production and Sales Business	JGC (GULF COAST), LLC.	U.S.A.	US\$77,350,000	100%	
	JGC Exploration Eagle Ford LLC	U.S.A.	US\$65,000,000	100%	
	JGC EXPLORATION CANADA LTD.	Canada	C\$105,885,000	100%	

# Outline of JGC

As of March 31, 2017

**Established** October 25, 1928

**Capital** ¥23,511,189,612

**Number of Employees** 2,323 (Consolidated: 7,554)

## Major Shareholders

	Number of shares (Thousands)	Percentage of total (%)
The Master Trust Bank of Japan, Ltd. (Trust Account)	29,205	11.57
Japan Trustee Services Bank, Ltd. (Trust Account)	27,855	11.04
JGC Trading and Services Co., Ltd.	12,112	4.80
Sumitomo Mitsui Banking Corporation	11,000	4.35
JGC-S SCHOLARSHIP FOUNDATION	8,433	3.34
Mizuho Bank, Ltd.	5,700	2.25
NORTHERN TRUST CO. (AVFC) SUB A/C AMERICAN CLIENTS	5,141	2.03
	3,844	1.52
Japan Trustee Services Bank, Ltd. (Trust Account 5)	3,841	1.52
	3,163	1.25

JGC's treasury stock holdings total 6,744 thousand shares, approximately 2.60% of total shares issued.

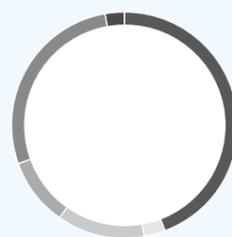
**Authorized Shares** 600,000,000

**Issued and Outstanding Shares** 259,052,929

**Number of Shareholders** 15,877

**Administrator of the Shareholders' Register** Mitsubishi UFJ Trust and Banking Corp.  
1-4-5, Marunouchi, Chiyoda-ku,  
Tokyo 100-8212, Japan

## Distribution of Shareholders (%)

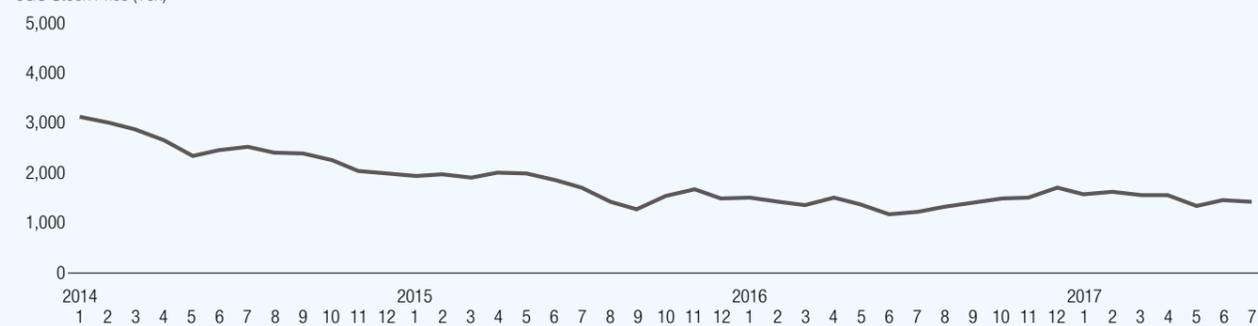


Financial institutions	44.22
Financial instruments firms	3.20
Other domestic corporations	12.39
Individuals and others	9.80
Foreign investors	27.80
Treasury stock	2.60

Figures have been rounded to two decimal places.

## Stock Price

JGC Stock Price (Yen)



Volume (Thousands of shares)

