

**Financial Results for Fiscal 2021**

# **Business Overview**

A stylized globe graphic composed of a grid of small dots, with the continents of North and South America visible. It is positioned on the right side of the slide, partially behind the title and the tagline.

Enhancing planetary health

May 12, 2022

**Tadashi Ishizuka**

**Representative Director, President and COO**

**JGC Holdings Corporation**

# CONTENTS

- Total Engineering Orders for FY2021
- Total Engineering Orders Target for FY2022
- Domestic and Overseas Market Environment
- Progress in Major Projects
- Functional Materials Manufacturing Results for FY2021 and Target for FY2022
- Status of Key Strategies in the medium-term business plan (Summary)

## (APPENDIX)

Status of Key Strategies in the medium-term business plan

- Key Strategy 1: Transformation of EPC Operations
- Key Strategy 2: Expansion of Manufacturing Business for High-Performance Functional Materials
- Key Strategy 3: Establishment of Future Engines of Growth

# Total Engineering Orders for FY2021

Approx. **316** Billion Yen (Target: 500 Billion yen)

Although targets were missed due to the timing of some expected projects, the overall market environment is recovering

	Overseas	Domestic	
Results for fiscal 2021	Approx. <b>146</b> Billion Yen	Approx. <b>170</b> Billion Yen	
Orders target for fiscal 2021	<b>340</b> Billion Yen	<b>160</b> Billion Yen	
Main orders received	<div><div>Energy Solutions</div><div><ul style="list-style-type: none"><li>• Saudi Arabia      Dew point control unit</li><li>• Malaysia      FLNG (FEED)</li><li>• Nigeria      FLNG (FEED)</li><li>• Canada      LNG (change order), etc.</li></ul></div></div>	<div><div>Facility Infrastructure Solutions</div><div><ul style="list-style-type: none"><li>• Taiwan      LNG Terminal</li><li>• Philippines      Mega solar</li><li>• Malaysia      Medical products mfg. plant</li><li>• Bangladesh      Infrastructure construction in special economic zone ,etc.</li></ul></div></div>	<div><ul style="list-style-type: none"><li>• Pharmaceutical mfg. plants</li><li>• Chemical plants</li><li>• Hospitals</li><li>• Nuclear related</li><li>• Maintenance services , etc.</li></ul></div>

# Total Engineering Orders Target for FY2022

Value of FY2022 Consolidated Orders Target :

**840** Billion Yen

## Overseas

**670** Billion Yen

## Domestic

**170** Billion Yen

Orders target  
for fiscal 2022

Expected Projects

### Energy Solutions

- Middle East GOSP
- North America Gas chemicals
- Middle East Gas chemicals
- North America LNG
- Southeast Asia LNG
- Southeast Asia Chemicals, etc.

### Facility Infrastructure Solutions

- Asia Solar power and power storage system
- Europe Battery parts mfg. plant
- Asia Industrial park tenant factories
- Asia Biodegradable plastics production demonstration, etc.

- Pharmaceutical mfg. plants
- Hospitals
- Blue hydrogen production demonstration
- SAF production demonstration
- Nuclear related
- Maintenance services , etc.

# Domestic and Overseas Market Environment

## Overseas

- Resumption of development investment, anticipating post-pandemic recovery in energy demand and energy security policy
- More inquiries/orders from international oil companies and others for feasibility studies and front-end engineering and design for LNG projects. EPC orders for large LNG projects may resume after the latter half of fiscal 2022
- Steady progress in Middle East/North America petrochemical projects
- In infrastructure, ongoing investments such as renewable energy projects in Asia

## Domestic

- Investment remains brisk in life sciences, healthcare, and maintenance
- Progress in large-scale investment for life science applications such as biopharmaceuticals and vaccine production
- In decarbonization, SAF and blue hydrogen production will be demonstrated, among other expected progress

We will continue to closely monitor the impact of the rising prices of materials and equipment and transportation costs against the backdrop of the situation in Ukraine and other factors.

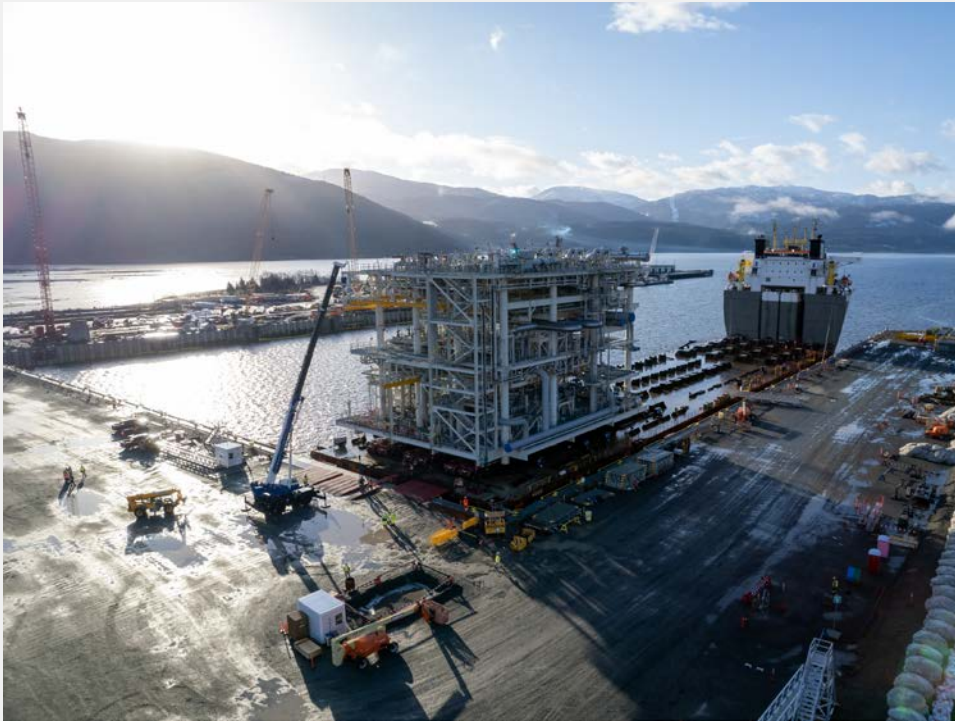
# Progress in Major Projects: LNG Canada

Large modules being completed one after another



# Progress in Major Projects: LNG Canada

**Modules shipped in succession are arriving in Canada**



# Progress in Major Projects: LNG Canada

**Progress is also being made in installing modules and equipment on-site**



# Progress in Major Projects: Basra Refinery Upgrading

Temporary and permanent facilities construction now underway



# Functional Materials Manufacturing Results for FY2021 and Target for FY2022

Results for  
FY2021/  
Target for FY2022

**Net sales**

**Fiscal 2021 Results**

**Approx.**

**44.2** Billion Yen

**Fiscal 2022 Target**

**Approx.**

**45** Billion Yen

Policy for  
FY2022

## Catalysts / Fine Chemicals

Demand for petroleum refining catalysts and fine chemical products is returning, lifted by global economic recovery.

In catalysts, we are entering new fields, and in fine chemicals, we remain committed to developing multiple applications.

## Fine Ceramics

With chips still in short supply, growth in our core business for production equipment is also expected this fiscal year. Higher sales will be sought through improved quality, increased hiring, and capital investment.

# Status of Key Strategies in the medium-term business plan (Summary)

## Steady progress in implementing the three key strategies

### Transformation of EPC Operations

- Appointment of a non-Japanese president at the overseas EPC operating company (JGC Corp.)
- **Stronger framework for regional management: JGC Asia Pacific**
- Formulation of a medium-term IT strategy, with April 2023 as the start of accelerated digitalization of EPC
- Reinforcement of life science business: IHI Plant Services' pharmaceutical plant EPC business acquired

### Expansion of Manufacturing Business for High-Performance Functional Materials

- **Expansion of silica sol production/sales for hard disk polishing, in the wake of higher chip demand**
- Expansion of catalyst sales overseas, development of catalysts supporting decarbonization
- Start of full-scale production of high thermal conductivity silicon nitride substrates

### Establishment of Future Engines of Growth

- **Joint demonstration of a SAF production supply chain model, mainly sourced from used cooking oil**
- Joint Green Innovation Fund project underway with Asahi Kasei to demonstrate green chemical production using hydrogen from renewable energy sources
- Invests in U.S. Company NuScale Power which is ready for commercialization

### Implementing strategic investment

- **Value of FY2021: Approx. 16 Billion Yen**  
(Main investment)
- Digital transformation of EPC
- Acquisition of IHI Plant Services' pharmaceutical plant EPC business
- Development of new product technologies in functional materials manufacturing
- Facilities related to high thermal conductivity silicon nitride substrates , etc.
- Invests in U.S. Company NuScale Power

# Status of Key Strategies in the medium-term business plan (Summary)

## Sign Alliance Agreement on EPC Projects for Fuel Ammonia Plants with TOYO

### Subject

- Fuel-ammonia manufacturing plants and ammonia receiving terminals
- Receipt of orders and execution of EPC projects, starting from feasibility studies (FS) and front-end engineering design (FEED) for above

### Significance

- This field is being promoted under the leadership of Japanese companies with the backing of the Japanese government. To contribute to the development of this field, we have established a leading position in related EPC by working with partners who can utilize and complement each other's strengths.



## License Agreement Signed with KBR for Ammonia Manufacturing Process

- The company's process has a proven track record in the world (approximately 50% share of the global production volume) and is a process technology that can be easily adapted to larger scale production.
- Together with the alliances mentioned above, we will demonstrate our competitiveness in the field of fuel ammonia and lead the industry.

**(APPENDIX)**

# **Status of Key Strategies in the medium-term business plan**

A stylized globe made of dots, showing the continents of North and South America, serves as a background for the right side of the slide.

Enhancing planetary health

---

# Key Strategy 1: Transformation of EPC Operations

## Accelerate transformation of overseas EPC operations

- Appointment of Mr. Farhan Mujib as president of JGC Corp. (effective Jan. 1, 2022)
- Draws on insight from his previous executive positions at U.S.-based KBR, extensive experience and knowledge of EPC projects, and a wide professional network of clients and contractors to accelerate transformation of our main business of overseas EPC operations



### Large Projects

## Accelerate digital transformation of EPC

- Formulation of a medium-term IT strategy; from 2023, seeking integrated digital execution of EPC services for overseas projects
- Introducing advanced work packaging (AWP) for the Basra project in Iraq

### Growth Markets and Segments

## Strengthen framework for domestic pharmaceutical business

- Acquisition of IHI Plant Services' pharmaceutical plant EPC business  
Pursuit of further business expansion in this segment
- Receipt of orders for large pharmaceutical projects (making fiscal 2021 the best year on record in this segment)

### Growth Markets and Segments

## Start preparations to establish regional headquarters for the Asian market

- Establishment of JGC Asia Pacific : Stronger framework for regional management in the fast-growing Asian region; building a framework for sales and project execution that emphasizes local production for local consumption and works closely with regional clients
- Receipt of orders for a mega solar plant in the Philippines and an LNG receiving terminal in Taiwan

# Key Strategy 2: Expansion of Manufacturing Business for High-Performance Functional Materials

Expanding revenue from existing business

## Respond to higher semiconductor demand

- Expansion of silica sol sales, on growing demand for hard disk polishing materials amid higher semiconductor demand (Fine Chemicals)
- Record orders and sales of structural ceramics for applications related to semiconductor production equipment; steady growth also projected in fiscal 2022 (Fine Ceramics)

Expanding revenue from existing business

## Expand product sales overseas Develop and sell catalysts supporting decarbonization

- Increased revenue from more overseas orders of FCC catalysts (Catalysts)
- Development of new amorphous silica-alumina material; focus on expanding sales from fiscal 2022 (Catalysts)
- Development of low-temperature denitration catalysts; market expansion for denitration in waste incinerators and biomass power generation (Catalysts)

Promoting sales of strategic products

## Expand production facilities for silicon nitride substrates

- Start of full-scale production of high thermal conductivity silicon nitride substrates in fiscal 2021; continued production line investment and R&D focused on higher performance, to meet greater demand (Fine Ceramics)

Exploring and developing next-gen business

## Expand applications to life science materials

- Start market exploration and R&D to expand applications to life science materials, including antibacterial and dental materials expected to show stable demand
- Life Science Group established at the R&D Center (Fine Chemicals)

# Key Strategy 3: Establishment of Future Engines of Growth

Clean Energy

## Sustainable aviation fuel (SAF)

- Current project: Joint demonstration of a supply chain model for SAF production from used cooking oil with Revo International and Cosmo Oil
- Establishment of "ACT FOR SKY" a voluntary organization working for the Commercialization, Promotion and Expansion of Domestically Produced

Clean Energy

## Green chemical production

- Joint project with Asahi Kasei demonstrating production of green chemicals using hydrogen derived from renewable energy sources; a NEDO Green Innovation Fund project
- Targeting Japan's first demonstration of green ammonia production on a semi-commercial scale in 2024

Clean Energy

## SMRs – small modular reactors

- Investment in U.S.-based NuScale Power, the company closest to commercialization
- Joining North America's first SMR construction project  
Potential for EPC business in the Middle East, Southeast Asia, and elsewhere from the 2030s

Clean Energy

## Carbon management

- Conducted a commissioned survey to help establish global MRV/CI methodologies for GHG emission associated with LNG, hydrogen, and ammonia operations

Circular Economy

## Chemical recycling of plastic and fiber waste

- Start of development for licensing a plastic waste recycling technology using an oilification process
- Start of a joint working group with Teijin, the University of Tokyo, and others to submit proposals on legislation promoting textile recycling

Other

## Water treatment / Smart factory

- In water infrastructure field, start of collaboration with Nihon Suido Consultants
- Receipt of FEED order for smart factory

# Note on Future Outlook

This presentation may contain forward-looking statements about JGC Holdings Corporation. You can identify these statements by the fact that they do not relate strictly to historic or current facts. These statements discuss future expectations, identify strategies, contain projections of results of operations or financial conditions, or state other "forward-looking" information.

These statements are based on currently available information and represent the beliefs of the management of JGC Holdings Corporation. These statements are subject to numerous risks and uncertainties that could cause JGC Holdings' actual results, performance, achievements, or financial condition to differ materially from those described or implied in the forward-looking statements.

JGC Holdings Corporation assumes no obligation to publicly update any forward-looking statements after the date of this presentation. These potential risks and uncertainties include, but are not limited to: competition within the financial services industries in Japan and overseas, our ability to adjust our business focus and to maintain profitable strategic alliances, volatile and sudden movements in the international securities markets, and foreign exchange and global economic situations affecting JGC Holdings Corporation.

For questions concerning this material, please contact:

Group Strategic Planning &  
Management Development Department  
Corporate Communication Group  
JGC Holdings Corporation

Tel: 81-45-682-8026 Fax: 81-45-682-1112

Email: [ir@jgc.com](mailto:ir@jgc.com)