

# NATURAL GAS GROUP



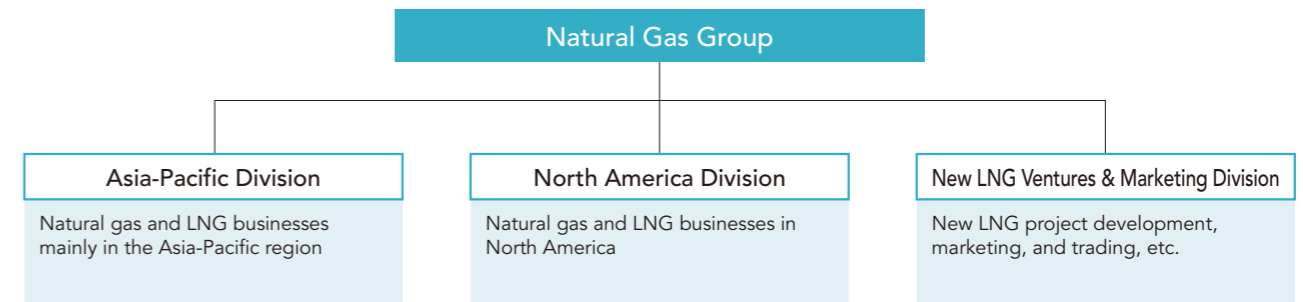
## Our Vision



**Jun Nishizawa**  
Executive Vice President  
Group CEO,  
Natural Gas Group

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In the transition to a carbon neutral society, natural gas and LNG play an important role as a complement to renewable energy intermittency and as an energy source for sectors that are difficult to electrify. Our Group will contribute to the realization of a carbon neutral society and sustainable economic development through the decarbonization of the LNG supply chain and providing a stable supply of LNG.



## Materiality (Material Issues)

### Related Material Issues



Contributing to Decarbonized Societies



Promoting Stable, Sustainable Societies and Lifestyles



Addressing Regional Issues and Growing Together with Local Communities

### Relevance of Material Issues to the Business

Global energy demand is expected to increase due to population growth, economic development, and other factors. While the switch to renewable energy is expected to progress in the power sector in the future, dramatic technological innovation is essential to supplement all power with renewable energy sources in terms of intermittency, location and other factors. In addition, although it is expected that a certain degree of electrification will progress in the future, it is not expected that electricity will be able to replace all of the heat sources in factories and fuels for modes of transportation that currently use fossil fuels directly. Therefore, to meet the world's growing energy demand and at the same time realize a carbon-neutral society, it is essential to decarbonize fossil fuels.

The Group is committed to, fulfill its responsibility to provide a stable supply of natural gas and LNG, which have relatively low environmental impact among fossil fuels, and to reduce GHG emissions throughout the value chain via improvements in operational efficiency, CCUS and other methods.

In addition, there are regions of the world that depend on firewood, charcoal, coal, cattle manure, etc. for their energy sources, resulting in millions of deaths annually due to indoor air pollution. Through gas sales to emerging countries, we will also work to address such societal challenges.

\*CCUS: Carbon Capture, Utilization and Storage

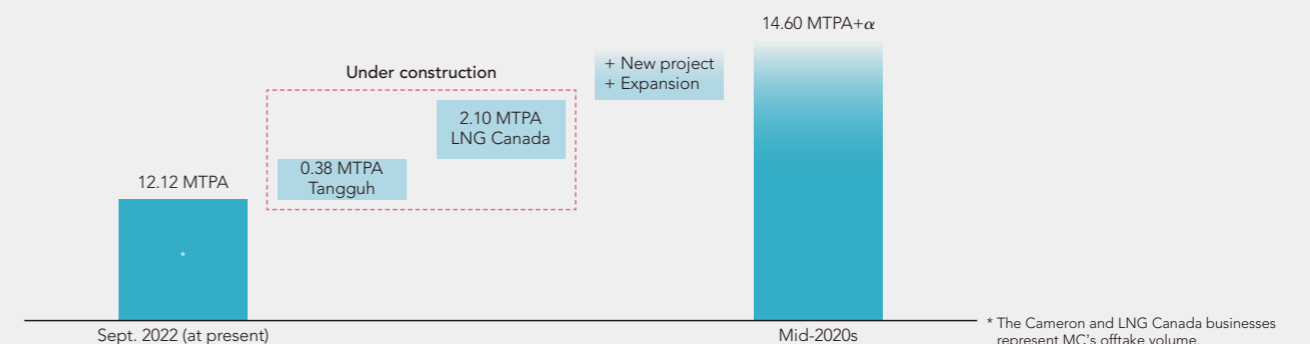
## Group Strengths and Strategy

Group Strengths	<ul style="list-style-type: none"> <li>Market presence as the largest LNG player in Japan (based on production share)</li> <li>Supply capacity from our LNG facilities around the world, and marketing capabilities primarily through our subsidiary in Singapore</li> <li>Initiatives for low-carbon LNG value chain, next-generation energy derived from natural gas and LNG, CCUS, etc. for the transition to a carbon neutral society</li> </ul>
Summary of Midterm Corporate Strategy 2021	In existing businesses, we continued to strengthen our earnings base through constant cost reductions and other measures. As for projects under construction, Cameron LNG started production, and construction of the Tangguh LNG (Expansion) and LNG Canada progressed toward the start of production. In parallel, we launched initiatives for next-generation energy, CCUS, and carbon credits for the transition to a carbon neutral society.
Strategies Under Midterm Corporate Strategy 2024	In addition to further strengthening the foundation of existing businesses and progressing construction for the successful start-up of the Tangguh LNG (Expansion) and LNG Canada, we will strengthen our LNG supply portfolio through participation in competitive new projects and enhance our LNG marketing capabilities through LNG cargo optimization functions and will strengthen our LNG business. We will also promote initiatives to reduce GHG emissions in existing projects, CCUS, carbon credit projects, etc., to realize a carbon neutral society.
Forecast for Future Growth	Demand for natural gas and LNG, which have comparatively lower environmental impact, is growing against a backdrop of increasing energy demand due to population and economic growth. Our Group aims to maintain and expand LNG production capacity share by building a competitive LNG supply portfolio, including expansion of existing assets, and strengthening LNG marketing capabilities. In addition, by promoting the decarbonization of the LNG supply chain, we will contribute to both a stable supply and sustainable economic development.

## Major Growth Drivers

We have been involved in the LNG business since the 1960s and have increased our equity participation in LNG projects. Currently, we have equity interests in 12 projects in 8 countries around the world, with a total LNG production capacity share of 12.12 MTPA. The Tangguh LNG (Expansion) and LNG Canada projects under construction are expected to start production in 2023 and the mid-2020s, respectively, and it is expected that our total LNG capacity share will reach 14.60 MTPA by the mid-2020s. We will continue to expand our LNG production capacity share through participation in competitive new projects in the future.

### Production Capacity Share and Projected Growth



## Business Examples

### Indonesia, Tangguh LNG (Expansion) project, CCUS business

In the Tangguh LNG project in which we participate with BP as the operator, we are undertaking a Carbon Capture Utilization and Storage (CCUS) project together with the other participating companies. This project will apply CCUS to gas fields under production to recover a cumulative total of approximately 25 million tons of CO<sub>2</sub> emitted from the project and approximately halve project emissions by injecting and storing it in existing gas fields, while at the same time improving production efficiency and increasing natural gas production. The development plan was approved by SKK Migas (Special Task Force for Upstream Oil and Gas Business Activities Republic of Indonesia) in 2021, and the natural gas production and CCUS operations are scheduled to commence in 2026, subject to the Front-End Engineering and Design (FEED) and a final investment decision to be made after mid-2022.



Map of the project



Liquefaction plant existing second system and expanded system under construction, LNG tanks, jetty, etc.