

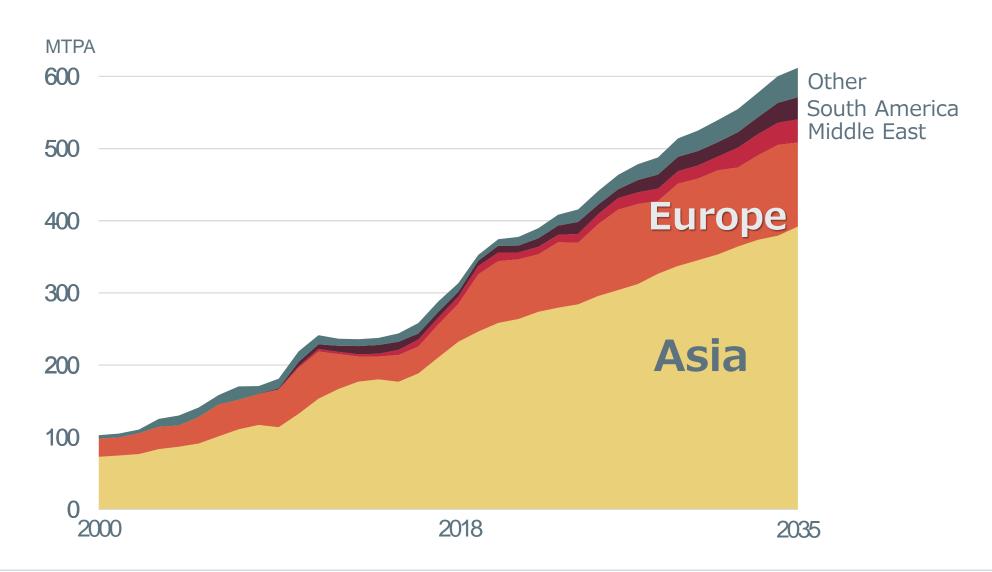
# Transforming Energy: Invest, Innovate, Integrate Session 2 "Innovate"

October 30, 2018

Yuji Kakimi

President, JERA Co., Inc.

#### **LNG Demand Outlook**



#### Infrastructure



Sodegaura Thermal Power Plant & LNG Terminal



Kawagoe Thermal Power Plant & LNG Terminal



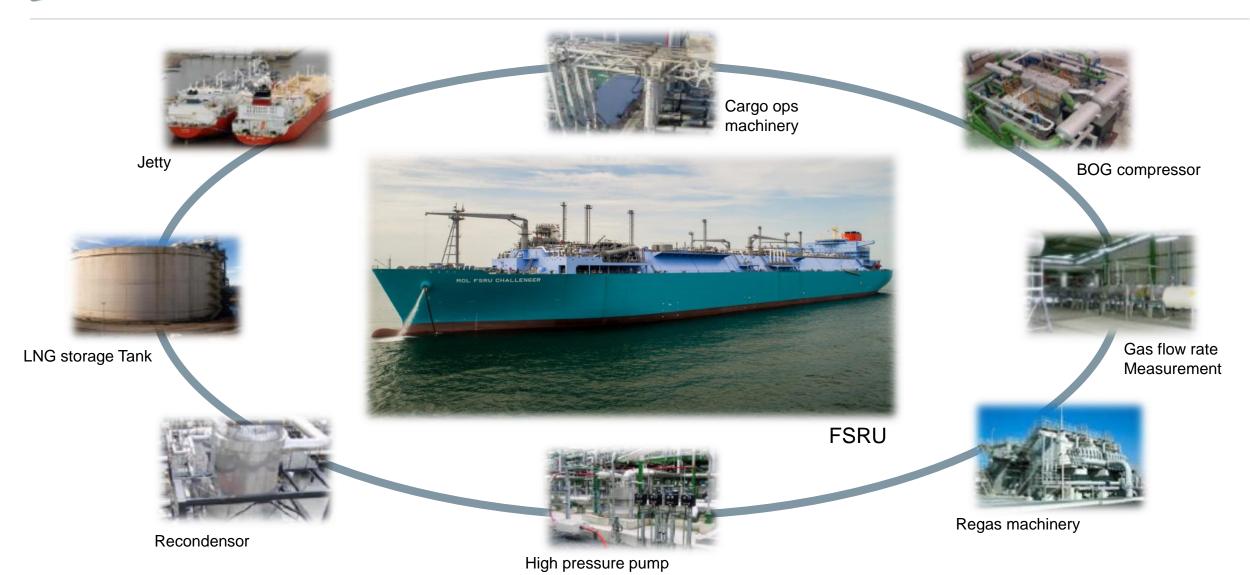
LNG Tank



LNG Vaporizer

Source: Tokyo Electric Power Co., Inc (TEPCO) & Chubu Electric Power Co., Inc. (CEPCO)

## Floating Storage & Regasification Unit (FSRU)



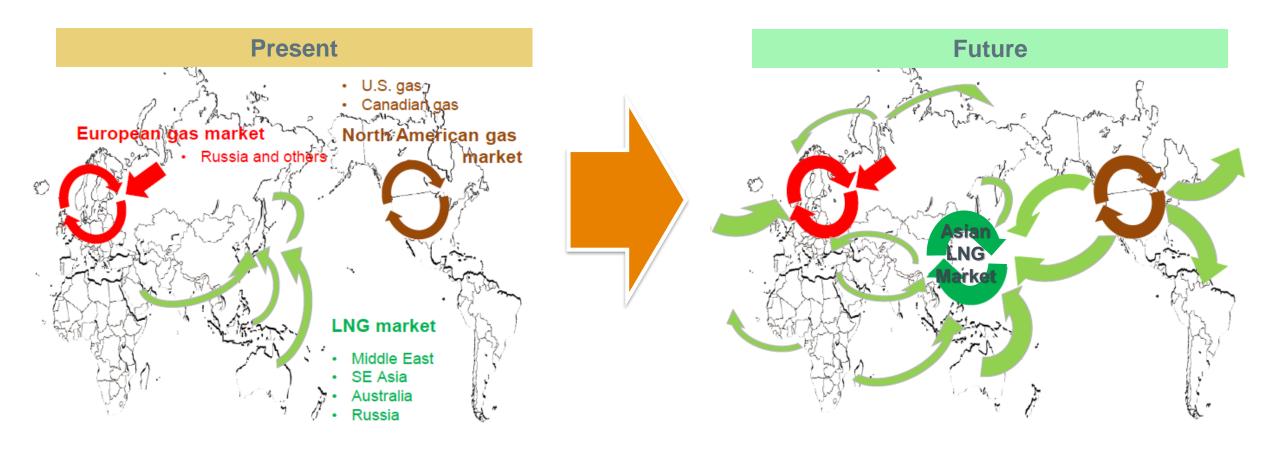
Source: Mitsui O.S.K. Lines, Ltd.

#### Improvement of Efficiency, IT, and AI

70% Power generation efficiency (LHV) 70% 1800°C class GTCC LNG-fired thermal Gas Turbine Fuel Cells Combined Cycle (GTFC) 20% CO2 reduction 1700°C class GTCC 65% 63.8% 10% CO2 reduction **Gas Turbines** Combined Cycle (GTCC) 60% 40% **Advanced Humid** Air Gas (AHAT) Half a century ago 1970 2020 Present 2030

Source: METI documents etc.

#### **Integration of Gas Market**



Source: METI Strategy for LNG Market Development

"Segmentation to Integration"

### **Future View of Asian LNG Market**

	Present	Future
Liquidity	Limited	Liquid, Active
Price Index	Oil-Price Link	Asian LNG Market Price
Contract Period	Mainly Long-term	Diversity (Long, Short & Spot)
Destination Clause	Mainly Restricted	No Restriction
Link to Other Gas Markets	No Link	Link to Gas Markets of Europe/US

## **Outline of JERA**

#### **JERA's Integrated Global Chain as of April 2019**

Upstream Fuel Investment

5 Projects Fuel Procurement LNG

40

MTPA

Coal 60

**Transportation** 

**LNG Fleet** 

16
Vessels

**Trading** 

JERA
Trading's
LNG/Coal and
Freight
Businesses

LNG Terminals

In Japan

8
Terminals

Power Generation

Domestic Capacity

70

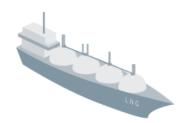
Overseas Capacity (Equity Ownership)

8

GW





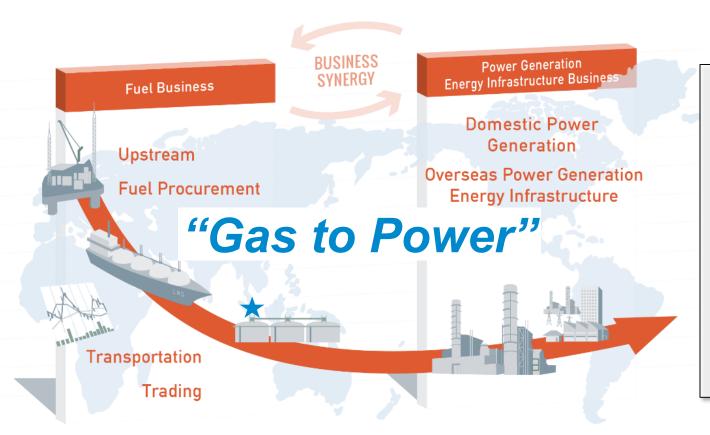








# "JERA will open a new ERA of LNG."



#### Contacts In Singapore

For Development of Gas to Power, etc.,

**→** JERA Energy Development Asia

For LNG Trading and Optimization,

→ JERA Global Markets <a href="http://jeratrading.com/">http://jeratrading.com/</a>

#### Thank you very much for your attention.

