# Machinery & Infrastructure Segment

Infrastructure Projects Business Unit

Integrated Transportation Systems Business Unit





Managing Officer, Chief Operating Officer of Infrastructure Projects Business Unit



Managing Officer,
Chief Operating Officer of Integrated
Transportation Systems Business Unit
Hiromichi Yaqi

## Yoshio Kometani

### **Business Portfolio**

## ► Creating infrastructure that contributes to the future of society and nation-building

#### **ELECTRIC POWER**

• Independent power producer (IPP) business with thermal power, hydropower and renewable energy

### MARINE ENERGY / BASIC INDUSTRY

- Marine energy business including FPSO (floating production, storage and offloading system for offshore oil and gas) facilities
- Core infrastructure business including LNG facilities for offloading/unloading, pipeline and local gas distribution business

### WATER TREATMENT AND SUPPLY / LOGISTICS

- Development and operation of water supply and sewage, desalination, and wastewater treatment facilities in Mexico, China, Europe and Middle East
- Development and operation of logistics and social infrastructure projects mainly involving seaport and airport business

# Supporting social and economic activity with a wide range of land, sea, and air transportation systems

#### SEA

- Sales of newbuilding ships, provision of ship management services, brokerage for chartering vessels and for sales and purchases of second-hand ships for ship owners and shipping companies in Japan and overseas, and sales of ship machinery to shipbuilders
- Ownership and operation of commercial ships and LNG ships

#### LAND

- Export, manufacturing and sales of Japanese automobiles and parts
- Import wholesaling, dealing and manufacturing of Japanese vehicles, logistics for vehicle parts, retail operations and retail finance worldwide
- Sales and ancillary services involving dump trucks for mining operations, hydraulic excavators, etc.
- Arrangement for rolling stock and locomotive operating and finance leasing in North America, Brazil, Europe and Russia, as well as provision of relevant operating, maintenance and management services
- General freight transport and passenger transport business in Brazil
- Truck leasing and truck rental business in North America

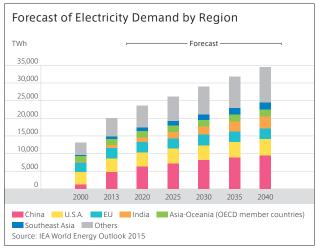
#### AIR

 Sales, provision and arrangement of operating leases and finance leases for passenger aircraft, as well as aircraft engines to airlines in Japan and overseas

## **Risks and Opportunities**

## Rising demand for infrastructure investment

In emerging countries, where economies and populations continue growing markedly, demand is rising for the development of basic infrastructure, including electrical, water-related, and logistical infrastructure. As for industrialized countries, aging infrastructure is leading to increased demand for repairs, while efforts to create a low-carbon society are boosting demand for related infrastructure investment. Moreover, as facilities and equipment for energy resource development become more advanced, larger, and more complex, development demand is rising overall. In the United States, the progress of shale oil and gas development is heightening demand, not only for infrastructure development but also for pipeline transportation, downstream chemical manufacturing, gas-fired power generation and LNG shipping facilities.



# ► Solid increase in demand for transportation machinery in line with economic growth

Growth in emerging economies is sluggish, and resources and energy prices have declined from the second half of 2014. The lower demand for mining machinery has had a temporary influence on results. However, emerging economies are expected to continue to grow, and resource and energy prices are expected to increase over the medium to long term. Accordingly, demand for mining machinery should recover, and market conditions are expected to pick up due to an increase in land- and sea-based logistics.

In the United States, the manufacturing industry is undergoing a revival, and the underlying trend of improvement in U.S. business conditions is having a favorable effect on the Company's automobile, truck, machine tool, and construction machinery businesses. Economic expansion in emerging economies has fostered growing concern about associated environmental problems. In addition, there is a modal shift toward public means of transportation that alleviate traffic congestion. As a result, demand for passenger railway facilities is expected to increase. Due to ongoing global economic growth, the number of airline passengers is expected to increase over the medium to long term, and consequently, demand for airframes and engines is also expected to rise.



# Strengths

- Project development; regional development; business model (project) structuring; business management
- Global marketing expertise cultivated over many years; global trading network
- Infrastructure development and operations knowledge and know-how
- · Fund-raising; financing
- Relationships of trust with excellent domestic and international partners, including the Toyota Group; the Penske Group of the United States; and shipowners and shipping companies in Japan and overseas

# Updates of Current Medium-term Management Plan

### Promotion of IPP business

Mitsui has established a superior IPP business portfolio diverse in such elements as geographical location and fuel-mix. Factoring in the power plants that are currently under construction, Mitsui possess a net generation capacity of 11.1GW on a global scale (as of March 2016). By gradually completing construction on projects in development and new projects, we are significantly enhancing our earning potential. At the same time, we are carrying out strategic asset recycling to further improve the quality of our portfolio.

- As of March 2016, 42 turbines have commenced commercial operations at the Jirau Hydroelectric Power Plant (total capacity of 3.75GW) on the Madeira River in northern Brazil, in which Mitsui made a 20% investment in January 2014. All 50 turbines are slated to be completed during 2016, making the Jirau Hydroelectric Power Plant the fourth-largest power plant in Brazil
- In January 2016, Mitsui began participation in two natural gasfired combined cycle power plants (total capacity of 3.2GW) in the Ibri Industrial Area and Sohar Industrial Area, both located in northern Oman. Mitsui is the leading investor in these plants, with a 50.1% shareholding. Through the commencement of commercial operations in 2019, these plants are expected to



lirau Hydroelectric Power Plant

- provide approximately 30% of electricity consumed in the northern region of the country, which includes the capital city of Muscat.
- Mitsui has been investing in an ultra-supercritical coal-fired power plant in Malaysia (total capacity of 2.0GW; commercial production slated to commence in 2019) with major electric utility company Tenaga Nasional Berhad. In its efforts to engage in strategic asset recycling, Mitsui sold 15% of its 30% share in the plant to The Chugoku Electric Power Co., Inc. in March 2016, after completion of debt financing through the world's largest issuance of Islamic bonds (as of 2015) in December 2015.

## ▶ Promotion of gas distribution business in Brazil

Through participation in the gas distribution business in Brazil, Mitsui is engaging in efforts to establish a gas distribution infrastructure in Brazil and ensure a stable supply of gas. In 2015, we acquired additional shares in the business. The gas distribution business in Brazil consists of regional monopolies based on concessions granted by state governments. The expansion of the gas distribution business lineup, which steadily generates cash revenues, is significantly contributing to our earnings.

In 2006, we acquired Mitsui Gás e Energia do Brasil Ltda (Mitsui Gás), which at the time had equity interests in gas distribution companies in seven states in Brazil. In addition to acquiring a portion of shares in Companhia de Gás do Ceará S.A. in 2014, we acquired a portion of shares in Petrobras Gás S.A., which owns local gas distribution companies, from the semipublic Brazilian multinational corporation Petróleo Brasileiro S.A. - Petrobras in December 2015. Through these acquisitions, the number of states served by gas companies in which Mitsui Gás has an equity interest increased to 19, with the amount of gas supplied by these companies rising to 30 million m<sup>3</sup> per day.



Gas distribution business in Brazil

# ► Collaborative expansion through equity participation in North American truck leasing and rental business as well as logistics business based on solid relationship with the Penske Group

In 2001, Mitsui made its first investment in the Penske Automotive Group (PAG), the second-largest automotive retailer in the United States. In March 2004, Mitsui increased its investment in PAG to approximately 15% and made it an associated company. Since then, we have been involved in PAG's management in cooperation with Penske Corporation, PAG's largest shareholder. The solid relationship cultivated with the Penske Group over the years has developed into a strategic partnership. Accordingly, in March 2015 we acquired a 20% limited partner interest in Penske Truck Leasing Co., L.P. (PTL) for approximately US\$750 million (¥91.0 billion). In doing so, we have newly invested in truck leasing, truck rental, and logistics businesses in North America. By leveraging the know-how accumulated through our truck manufacturing, assembly, distribution, and truck retail businesses in countries around the world, not only will we use trucks to provide road transport services, we will also create optimal logistics solutions by reducing transportation costs and making logistics infrastructure more efficient. In addition, we are making efforts to create synergistic effects with other business segments. Through PTL's businesses, we will play an important role in transportation infrastructure while aiming for further global expansion.



A PTL truck

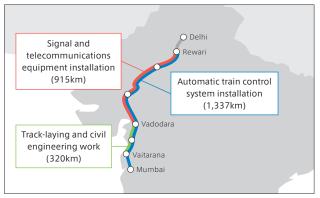
# ► Railway construction for the Western Dedicated Freight Corridor Project in India

In the Western Dedicated Freight Corridor (DFC) Project in India, Mitsui has won contracts through syndicates of local construction contractors and Japanese manufacturers to perform track-laying and civil engineering work totaling 320 km and to install signal and telecommunications equipment as well as an automatic train control system along a 1,344 km section of the project. Work for the project commenced with the goal of completing construction around 2022.

The governments of Japan and India aim to realize the DFC Project through a strategic global partnership. As the backbone of the Delhi-Mumbai Industrial Corridor, the project plans to create a strong economic foundation through the consolidation of infrastructure such as industrial parks, which will be established near new freight lines, logistics bases, power stations, highways, and harbors.

As part of its national strategy, the Japanese government is pushing strongly for the overseas development of packaged infrastructure projects with a focus on operation, maintenance, and management by private companies. Rail transport, in which Japan possesses a high level of technology and proven record of

safety, has been positioned as a valuable area in this strategy. As the Western DFC project entails the construction of high-quality infrastructure, the Japanese government is providing yen loans under the Special Terms for Economic Partnership (STEP) on the condition that Japanese technology is used. Accordingly, Japanese-made rail and signaling systems are being installed. Taking advantage of these political measures, Mitsui is focusing its efforts on the development and implementation of projects to establish rail infrastructure overseas.



Section covered by contract

## Portfolio of IPP (Independent Power Producer) Business

28%

As of March 31, 2016 Net Generation Capacity (Mitsui's Share): 11.1GW - Indian Queens (Oil) 140MW [U.K.] (Gross Capacity: 41GW) - Saltend (Gas) 1,200MW [U.K.] - Saltillo (Gas) 248MW [Mexico] Rio Bravo II (Gas) 495MW [Mexico] Rugeley (Coal) 1,050MW [U.K.] Rio Bravo III (Gas) 495MW [Mexico] Deeside (Gas) 500MW [U.K.] Rio Bravo IV (Gas) 500MW [Mexico] Hamamatsu (Solar) 43MW [Japan] - First Hydro (Pumped Storage) 2,088MW [U.K.] Hamada (Wind) 48MW [Japan] - Altamira II (Gas) 495MW [Mexico] Derwent (Gas) 214MW [U.K.] aneda (Solar) 2MW [Japan] - Hibikinada (Wind) 15MW [Japan] adian RE Portfolio 680MV - Ichihara (Biomass) 50MW [Japan] (Wind 10 assets, Solar 2 assets) Yonago (Solar) 43MW [Japan] ntario (Gas) 1,005MW [Canada] - Izumiotsu (Solar) 20MW [Japan] Tomatoh Abira (Solar) 111MW [Japan] Laffan (Gas) 2.730MW [Oatar] Arao/Miike (Solar) 42MW [Japan] Astoria I (Gas) 575MW [U.S.A.] — Tahara (Solar/Wind) 56MW [Japan] razos (Wind) 160MW [U.S.A.] [Mvanmar] Hezhou (Coal) 2,090MW [China] Salalah-2 (Gas) 718MW [Oman] CK Power (Hydro/Gas/Solar) 2,160MW [Thailand] Ibri (Gas) 1,509MW [Oman] - 12SPP (Gas) 1.470MW [Thailand] Eco Electrica (Gas) 524MW Sohar-3 (Gas) 1,710MW [Oman] Gulf Electric (Gas/Biomass) 1,897MW [Thailand] [Puerto Rico] Juneda Solar (Solar) 1MW [Spain] Paiton 1 (Coal) 1,230MW [Indonesia] Jirau (Hvdro) 3,750MW [Brazil] Spanish Hydro (Hydro) 84MW [Spain] Paiton 3 (Coal) 815MW [Indonesia] n (Solar) 50MW [Spain] Track 3B (Coal) 2,000MW [Malaysia] Safi (Coal) 1,386MW - Kwinana (Gas) 118MW [Australia] Loy Yang B (Coal) 1,026MW [Australia] - Avon (Diesel) 670MW [South Africa] - Valladolid (Gas) 525MW [Mexico] Hazelwood (Coal) 1,675MW [Australia] Dedisa (Diesel) 335MW [South Africa] Bii Stinu (Wind) 164MW [Mexico] Synergen (Gas/Oil) 396MW [Australia] Santo Domingo (Wind) 160MW [Mexico] Pelican Point (Gas) 487MW [Australia] Canunda (Wind) 46MW [Australia] ▲ IPM (U.K.) Power's portfolio ■ IPM Eagle's portfolio Bald Hills (Wind) 107MW [Australia] MT Falcon's portfolio O IPAH's portfolio Others Merchant RE 7% Africa 6% Hydro 12% ▼ Under construction Middle East by Merchant/ Energy Region Contracted Source Australia

> 10% Europe

22%

Contracted