

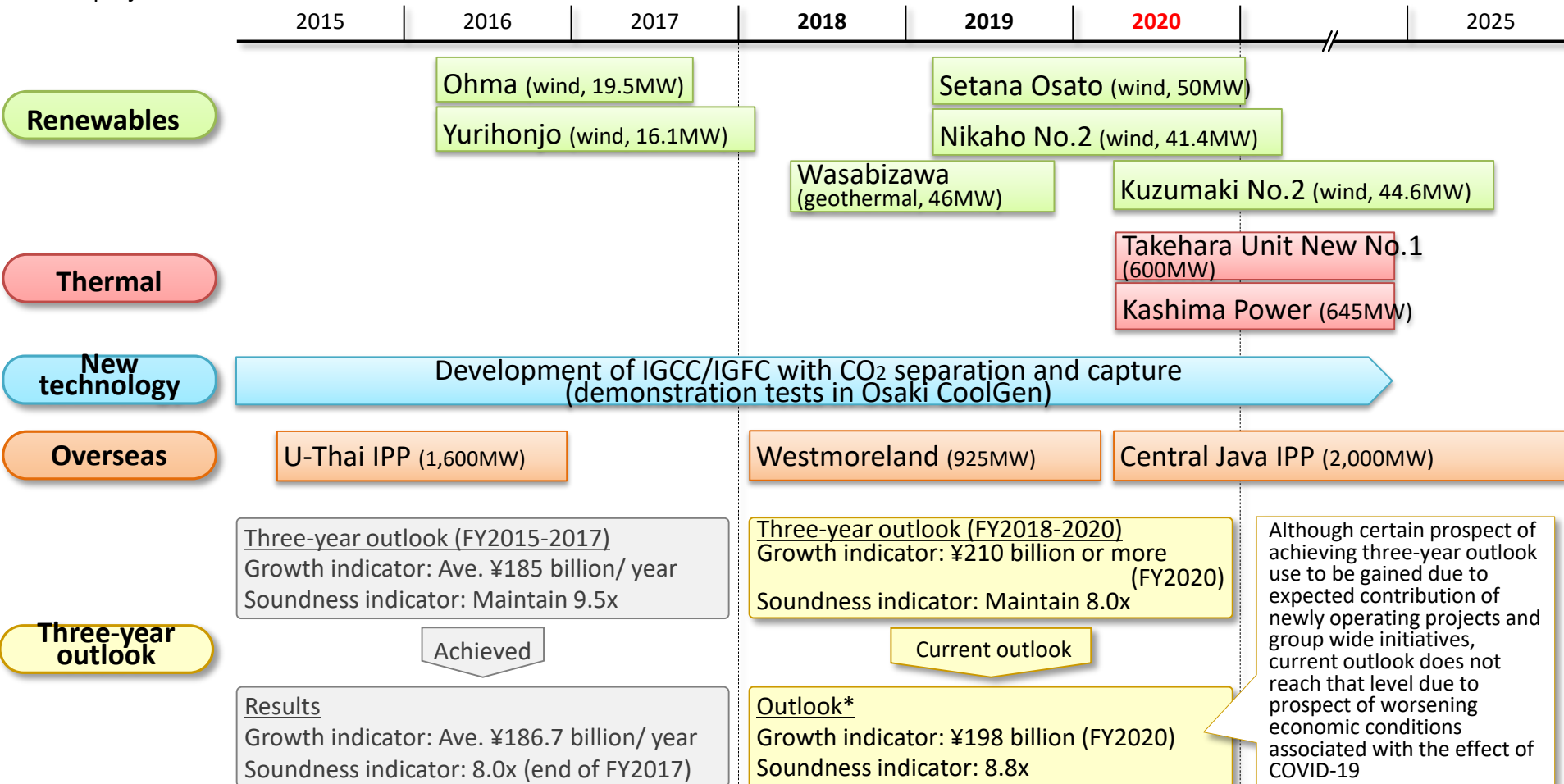
# Progress of Medium-term Management Plan and Future Initiatives

# 1. Progress So Far

# Progress So Far

- The outlook for global economy is extremely unclear due to COVID-19
- Secure the safety and security of our stakeholders and promote Medium-term Management Plan, giving top priority to the stable power supply

【Main projects】



Note) The amount of growth indicator shows J-POWER EBITDA (operating income + depreciation and amortization + share of profit of entities accounted for using equity method, hereinafter "JP EBITDA"), the amount of soundness indicator shows the ratio of interest-bearing debt to JP EBITDA

\* Outlook based on the consolidated earnings forecasts for the year ending March 31, 2021 disclosed in the Financial Results for the Year Ended March 31, 2020 on April 30, 2020

## 2. Future Initiatives

# Where J-POWER Goes in the Long Run

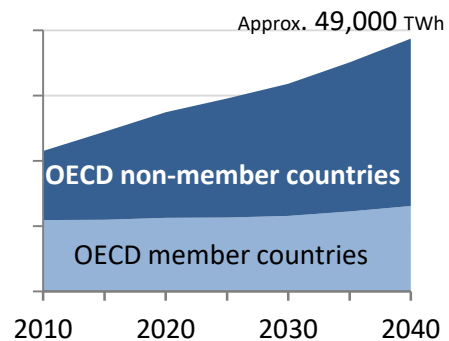
➤ Energy industry around the world is standing at a major turning point toward 2050

## Climate change challenges

(Paris Agreement)

- ✓ Keep a global temperature rise well below 2 °C and pursue efforts to limit even further to 1.5 °C
- ✓ Balance GHG emissions and absorption in the latter half of this century

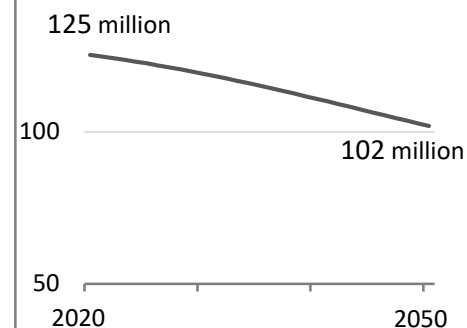
## Electricity demand increase



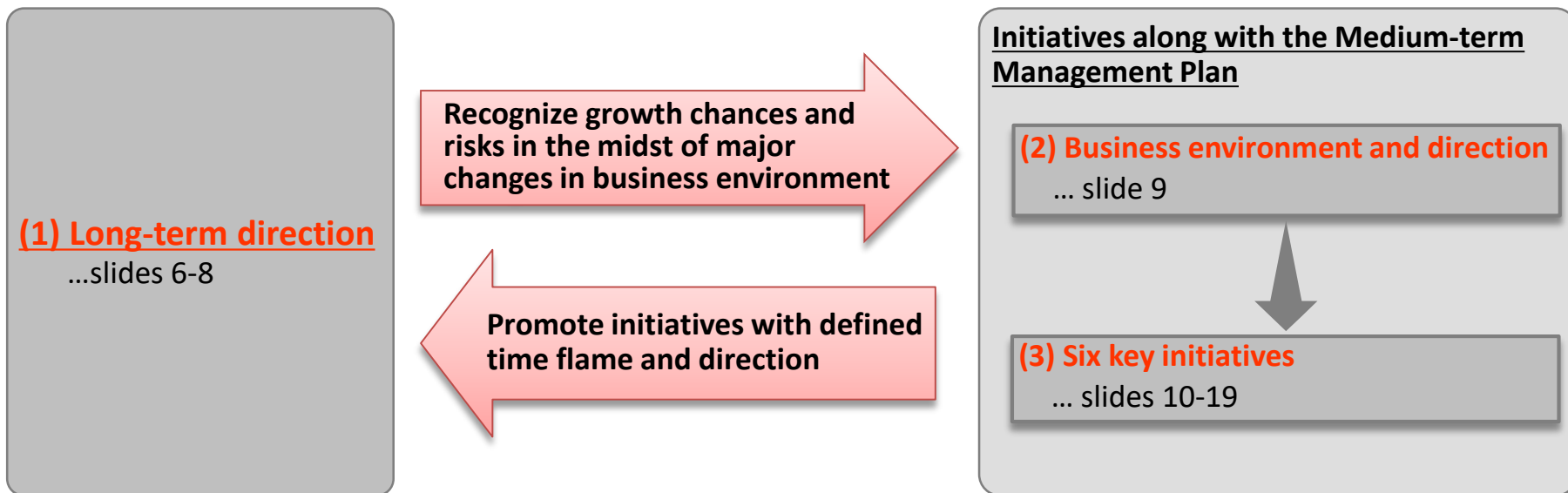
## Innovations

- ✓ Progress of digital transformation
- ✓ Development of zero emission technologies
- ✓ Price drop of renewables and batteries

## Population decline in Japan



➤ Setting a long-term direction toward 2050, expand business activities globally



# (1) Long-term Direction - Japan [1/2]

➤ **Contribute to lower carbon emissions through realizing supply of zero emission electricity**

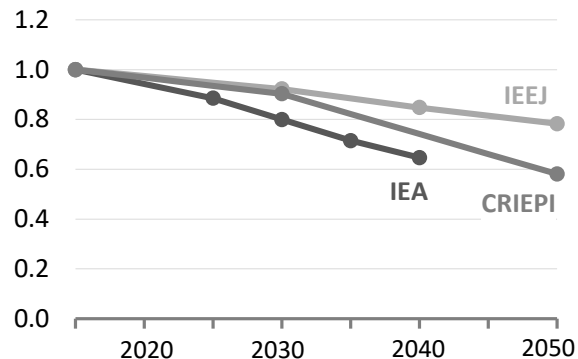
➤ **Continue to play an important role in Japanese power supply**

- ◆ Immutable request for lower carbon emissions
- ◆ Final energy consumption ↓
- ◆ Electrification ↑
- ◆ Electricity demand stays flat

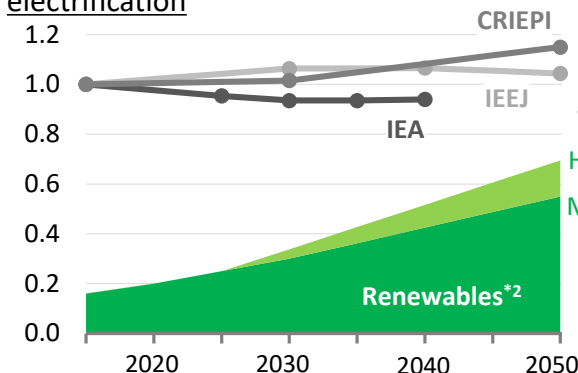
People request “CO<sub>2</sub>-free electricity”

⇒ **Realize supply of zero emission electricity** to respond to the request

✓ Final energy consumption declines



✓ Electricity demand stays flat due to electrification



**【Toward zero emission power generation】**

**Development of renewables**

**Making fossil fuel generation zero emission**  
(IGCC & CCUS\*1)

**Steady progress toward nuclear power generation**

**Pursue possibility for new technology**  
(Hydrogen generation and others)

Supply of CO<sub>2</sub>-free electricity



Household



Transportation



Service



Industry

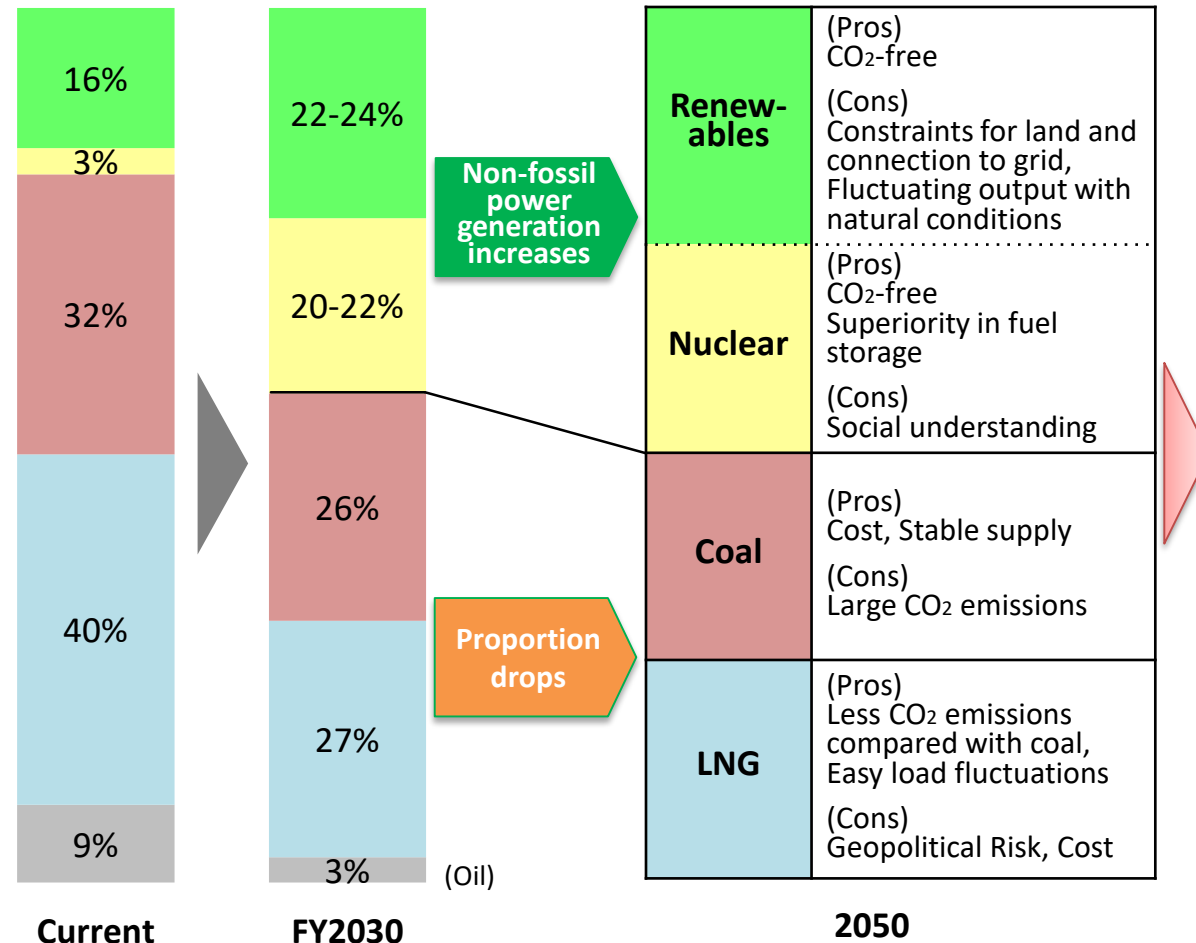
CO<sub>2</sub> emissions in power generation sector are assumed to be significantly reduced by replacement of fossil fuel use with lower carbon electricity

\*1 Technology for CO<sub>2</sub> emitted from fossil fuel power generation and other sources to be captured and utilized or stored underground

\*2 Referred to Ministry of Environment and Mitsubishi Research Institute “FY2014 Research Report on Feasibility Study on Dissemination of Distributed Energy Including Renewables”

# (1) Long-term Direction - Japan [2/2]

- ▶ Japan needs a well balanced power generation portfolio from the perspective of "3E+S"\*
- ▶ J-POWER is developing zero emission technology for fossil fuel power generation toward 2050 aiming to form a CO<sub>2</sub>-free portfolio with renewables and nuclear



**Significance of coal-fired thermal power in 2050**

- ✓ As of 2050, non fossil fuel power generation alone will not be enough to cover electricity demand  
⇒ **Some fossil fuel power generation will be required**
- ✓ Japan depends resources on import from overseas, so has to refrain from rely on a specific fossil fuel in the view of Energy security and Economic efficiency  
⇒ **There will remain some needs for coal-fired thermal power**
- ✓ Coal use faces CO<sub>2</sub> challenges  
⇒ **Solve CO<sub>2</sub> issues which hamper coal use** by utilizing IGCC + CCUS technologies in order to respond to social demand for realizing 3E+S  
⇒ **Consider global expansion**

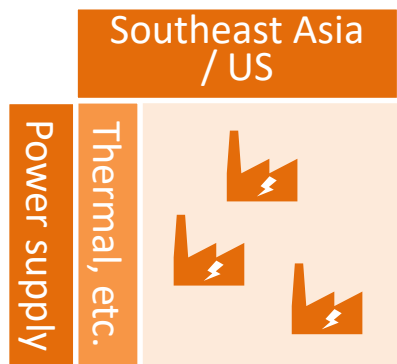
**"CO<sub>2</sub>-free power generation portfolio in FY2050"**  
⇒ In addition to renewables and nuclear with stable output,  
• Variable renewables & batteries  
• Fossil fuel generation & CCUS are essential

Note The table above does not present estimated power generation proportion

\* Basic idea of energy policy which aims at realizing stable energy supply (Energy security), Economic efficiency and Environmental compatibility (Environment) with Safety as the major prerequisite

# (1) Long-term Direction - Overseas

- Contribute to both global economic growth and climate change mitigation through power supply
- Pursue possibilities of various types of power supply in economically developing countries and regions



**Expand areas**

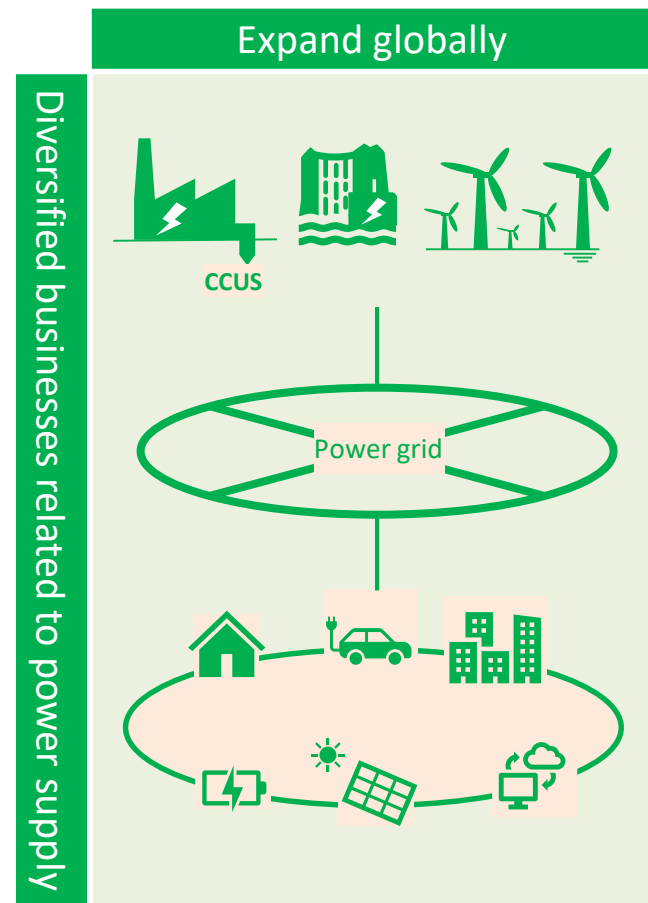
Expand to countries and regions where population increase and economic growth are expected in addition to Southeast Asia and US where we are currently active

**Initiatives for zero emission power generation**

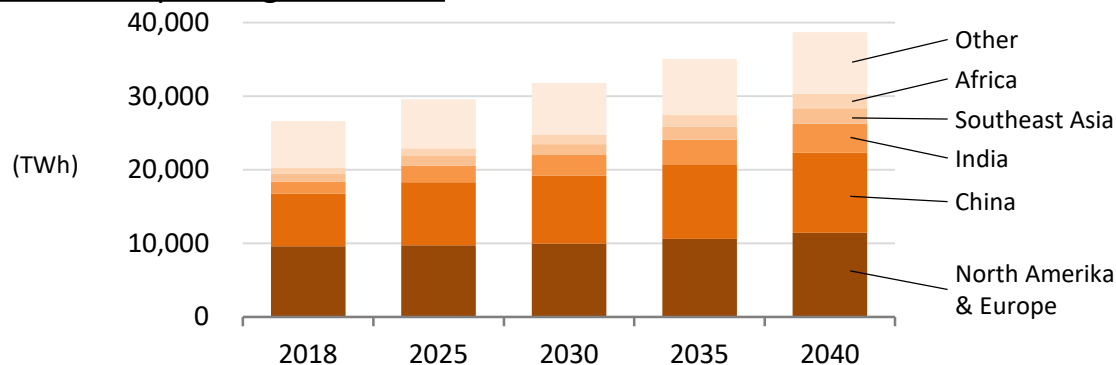
Expand IGCC and CCUS globally in addition to renewables and batteries

**Diversify businesses other than power generation**

Pursue business opportunities caused by structural change of power supply including decentralization



✓ Estimated power generation\*



\* Sustainable Development Scenario in IEA "World Energy Outlook 2019"



## (2) Business Environment and Direction

### Current business environment

- ✓ Needs to address climate change challenges
- ✓ Japan: Deregulation of power market and intensifying competition, request for stable power supply and resilience
- ✓ Overseas: Needs to simultaneously address both increasing energy demand and climate change
- ✓ Developing business environment for distributed power systems dissemination

### Direction of initiatives

- Realizing zero emission in power supply
- Further expand globally
- Expand new businesses taking advantage of business environment changes
- Strengthen business foundation to support above initiatives

### Key initiatives

	Slide
① Further expansion of renewable energy	... 10-11
② Zero emission from fossil fuel power generation	... 12-13
③ Promotion of the Ohma Nuclear Power Plant Project, with safety as the major prerequisite	... 14
④ Exploring new fields in overseas business	... 15
⑤ Initiatives for distributed energy service	... 16
⑥ Strengthening profit base, financial discipline and human resource strategy	... 17-19

### (3) Six Key Initiatives

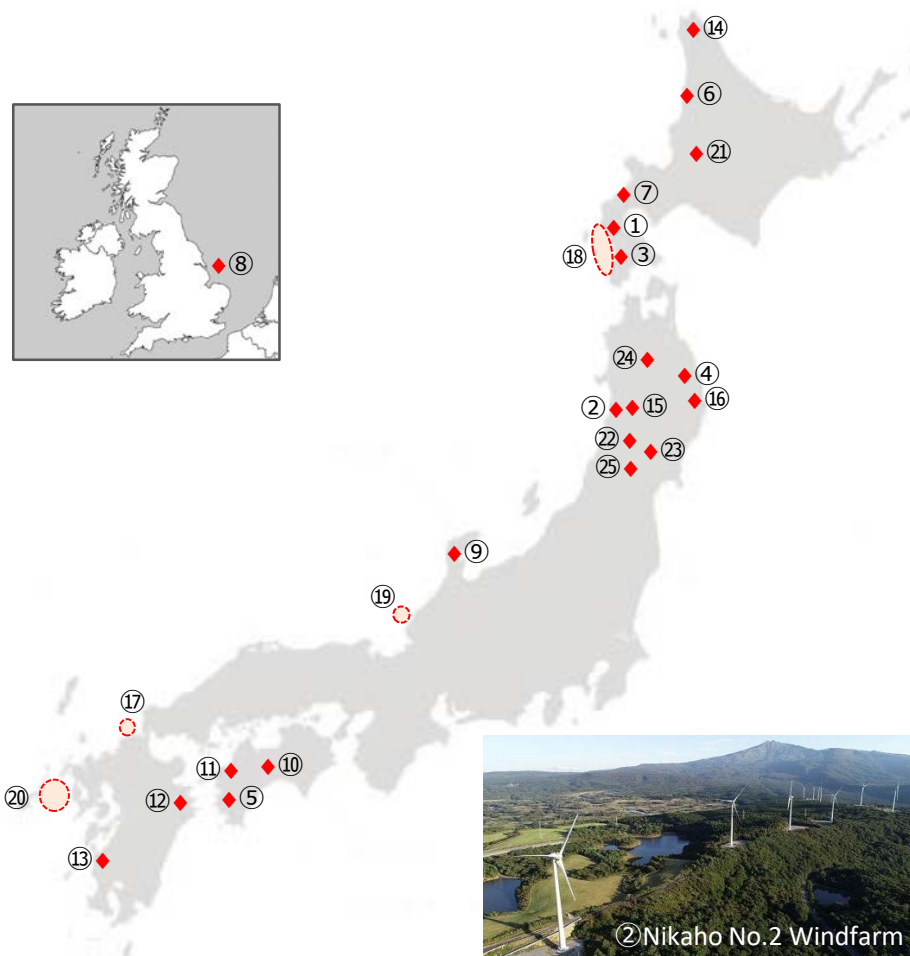
## ① Further Expansion of Renewable Energy [1/2]

### ▶ As a leader in renewables, newly develop 1GW (2025 target) to achieve 10GW scale, and further aim for growth

Offshore	<ul style="list-style-type: none"> <li>✓ Expand business know-how by participating in a development project in Europe, an advanced region, in addition to accumulating track records in Japan</li> <li>✓ Aim for <b>acquiring large-scale projects outside port areas in Japan</b> utilizing obtained know-how</li> </ul>
	<p>2009-2019 A demonstration project (2MW)</p> <p>2017- A development project in a port area [220MW (owned capacity 88MW), Start of operation is scheduled in FY2025]</p> <p>2018- Participation in a development project in UK [857MW (owned capacity 214MW), Start of operation in scheduled in 2021]</p> <p>2019- Research for development outside port areas ~ aiming for commercialization</p>
Wind	<ul style="list-style-type: none"> <li>✓ <b>Track record of development and maintenance over 20 years</b> from the start of operation of Tomamae project in 2000</li> <li>✓ Efficiently expand, maintain and operate by developing new projects nearby existing sites</li> <li>✓ <b>Expand capacity by developing new projects and replace existing wind turbines with large-scale ones</b></li> </ul>
Onshore	<p>Development and O&amp;M over 20 years 22 sites / total 439MW A maintenance subsidiary specialized in windfarm</p> <p>Expanding capacity nearby existing sites Started operation in 2 projects totaling 91MW 3 new projects totaling up to 127MW are under/ preparing for construction</p> <p>Prepare for development at new sites and replace existing facilities</p> <p>Look for new sites for further expansion</p>
Geo-thermal	<ul style="list-style-type: none"> <li>✓ Wasabizawa (46MW) started operation in 2019, which is the first large-scale geothermal power in these 23 year in Japan</li> <li>✓ Develop projects following Onikobe (ended operation in 2017) Replacement and Appi</li> </ul>
Hydro	<ul style="list-style-type: none"> <li>✓ Contribute to stable power supply utilizing operation experience over 60 years (60 sites/ total 8,560MW)</li> <li>✓ Enhancing power generation volume by repowering and improvement of intakes, and maintaining reservoirs by removing sediment</li> <li>✓ Promote large-scale revitalization plans and taking measures against natural disaster risks aiming at long-term stable power source</li> </ul>

### (3) Six Key Initiatives

## ① Further Expansion of Renewable Energy [1/2]



#### In operation/ Started operation

Wind	Onshore	In operation	- 22 existing sites	439.2MW
		Started operation in FY2019	① Setana Osato	50.0MW
			② Nikaho No.2	41.4MW
	- Total 24 sites	Total 530.6MW		

#### Under construction/ Preparing for construction (③④⑤⑥⑦: replacing existing windfarms)

Wind	Onshore	Under construction	③ Kaminokuni No.2	141.5MW
			④ Kuzumaki No.2	44.6MW
		Preparing for construction	⑤ Minamiehime No.2	Max. 40.8MW
			⑥ Tomamae	30.6MW
			⑦ Shimamaki	4.3MW
	Offshore	Under construction	⑧ Triton Knoll Offshore <sup>2</sup>	214MW

#### Preparing for development (⑨⑩⑪⑫⑬⑭⑮⑯: replacing existing windfarms)

Wind	Onshore	Preparing for development	⑨ Wajima	Max. 90.3MW	
			⑩ Reihoku Kunimiyama	Max. 50.6MW	
			⑪ Seiyō Yusuhara	Max. 163.4MW	
			⑫ Youra	Max. 64.5MW	
			⑬ Kita-Kagoshima	Max. 215MW	
			⑭ Sarakitomanai	14.9MW	
			⑮ Nikaho	24.8MW	
			⑯ Kuzumaki	21MW	
	Offshore		Preparing for development	⑰ Hibikinada Offshore <sup>3</sup>	Max. 88MW

#### Researching for development (Capacity figures are current estimation)

Wind	Offshore	Researching for development	⑱ Hiyama-area Offshore	Max. 722MW
			⑲ Awarake Offshore	Max. 350MW
			⑳ Saikai Offshore	Max. 513MW

\*Operator is determined by bid after each sea area is designated as a promotion area

1 Presents only phase 1 construction. Total plan amounts up to 120.4MW

2 J-POWER's owned capacity; 25% Joint project with innogy SE and Kansai Electric Power

3 J-POWER's owned capacity; 40% Joint project with KyudenMirai Energy Company, Hokutaku, Saibu Gas, and Kyudenko Corporation

4 J-POWER's owned capacity; 50% Joint project with Mitsubishi Materials Corporation and Mitsubishi Gas Chemical Company

5 J-POWER's owned capacity; 15% Joint project with Mitsubishi Materials Corporation and Mitsubishi Gas Chemical Company

Note; Projects with "max." notation is under scrutinization of capacity

Hydro	In operation	- 60 existing sites	8,560MW
	Under construction	⑳ Shinkatsurazawa/Kumaoui	*+17MW
Geothermal	In operation	㉒ Wasabizawa <sup>4</sup>	46MW
	Under construction	㉓ Onikobe	14.9MW
		㉔ Appi <sup>5</sup>	14.9MW
	Researching for development	㉕ Takahinatayama	-

\* "+" shows the change of capacity by the project

# ② Zero Emission from Fossil Fuel Power Generation [1/2]

## ➤ Commercialization of IGCC toward realizing zero emission

### Demonstration tests



### Advantage of IGCC\*

- Able to contribute to zero emission**
- ① **Generation technology toward zero emission**  
- High affinity with CCUS
  - ② **Quick load change ability**  
- Able to absorb output fluctuations of renewables
  - ③ **High thermal efficiency**  
- Able to reduce fuel consumption

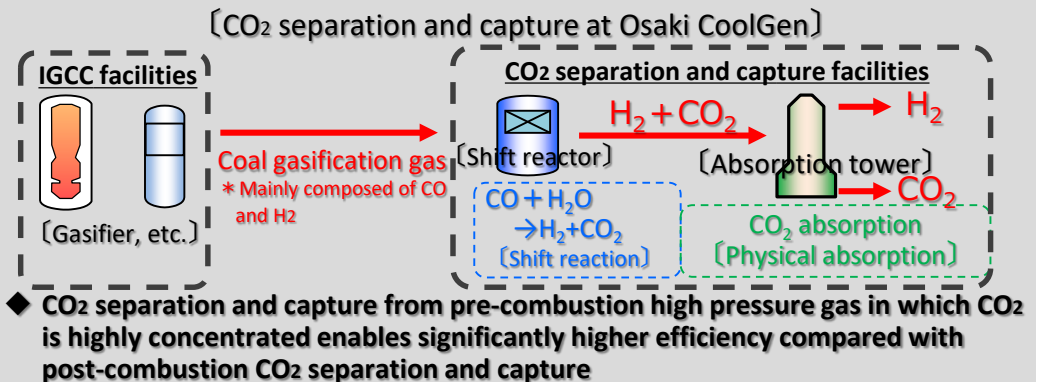


### Target

Commercialize in the latter half of 2020s

## ➤ Establish CO2 separation and capture technology essential for zero mission

### Efforts undergoing (2019-)



### Target

Establish technology in FY2020

Osaki CoolGen demonstration project (Phase 2; 2019-2020)

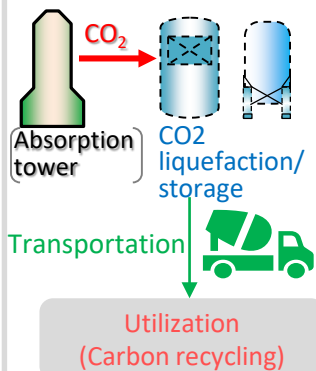
\* Oxygen-blown IGCC (integrated coal gasification combined cycle) demonstration tests at Osaki CoolGen (partially sponsored by NEDO) have proved not only world highest level of thermal efficiency (gaining perspective for approx. 53% of gross efficiency at a commercial plant with 1500°C-class gas turbine) and quick load change abilities (up to 16% per minute) but also facility reliability being able to withstand commercialization and expected economy which achieves the same level as current coal-fired thermal power plants when commercialized

### (3) Six Key Initiatives

## ② Zero Emission from Fossil Fuel Power Generation [2/2]

### ➤ Promote initiatives for CO<sub>2</sub> utilization and storage toward zero emission from fossil fuel generation and also promote diverse initiatives including hydrogen use utilizing gasification technology

#### CO<sub>2</sub> liquefaction - Demonstration of total utilization flow



- ◆ Demonstrate total utilization flow in which CO<sub>2</sub> is liquefied, stored, transported and utilized, at Osakikamijima, a research center for carbon recycling

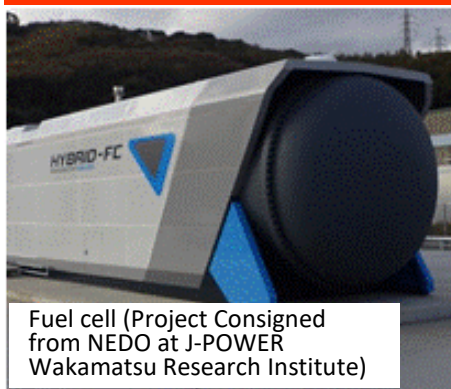
◆ Period : FY2022

#### Participation in Australian Brown Coal Hydrogen Pilot Test Project



- ◆ Participating in Japan-Australia joint demonstration test of “constructing supply chain for CO<sub>2</sub>-free hydrogen” utilizing unused brown coal
- ◆ Participating mainly in gasification of brown coal and manufacturing hydrogen
- ◆ CO<sub>2</sub> generated with gasification is planned to be stored (CCS) when commercialized

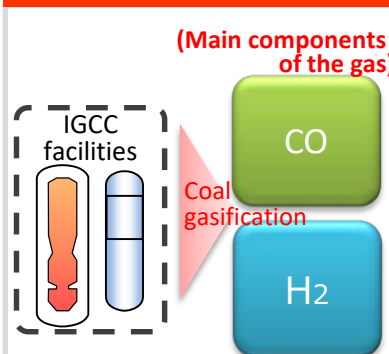
#### IGFC\* demonstration (Osaki CoolGen phase 3)



- ◆ Demonstrate IGFC aiming for achieving higher efficiency, in which hydrogen generated when CO<sub>2</sub> is separated and captured is used in fuel cells

◆ Period : FY2021-22

#### Taking advantage of oxygen-blown gasification technology



- ◆ Coal gasification gas from oxygen-blown IGCC technology mainly consists of raw material components (CO<sub>2</sub> and H<sub>2</sub> account for approx. 80%) and is available for various use
- ◆ Aiming at expanding business regardless of power generation business

\*Abbreviation of “integrated coal gasification fuel cell combined cycle” which add fuel cell to IGCC (integrated coal gasification combined cycle)

(3) Six Key Initiatives

③ Promotion of the Ohma Nuclear Power Plant Project, with Safety as the Major Prerequisite

- **Contribute to energy security in Japan by using full-MOX fuel that leads to supporting nuclear fuel cycle, while supporting industries in Japan as semi-domestically produced energy**
- **Contribute to address climate change challenges as large-scale CO<sub>2</sub>-free power generation**

(Specific activities)

- ✓ Pursue further improvements in safety continuously
- ✓ Sincerely and appropriately respond to compliance reviews and aim to restart full scale construction work quickly
- ✓ Strive for more polite information communication and mutual communication so that we can gain the understanding and trust of the community

**Overview of the Ohma Nuclear Power Project**

Location	Ohma-machi, Shimokita-gun, Aomori Prefecture
Capacity	1,383MW
Type of nuclear reactor	Advanced Boiling Water Reactor (ABWR)
Fuel	Enriched uranium and uranium-plutonium mixed oxide (MOX)
Start of construction	May, 2008
Start of operation	To be determined
Status	After submitting to NRA an application for permission for alteration of reactor installment license and an application for construction plan approval in December 2014, J-POWER has been undertaking review of compliance with the new safety standards

### (3) Six Key Initiatives

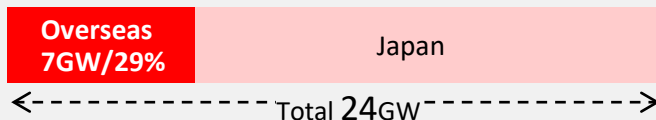
## ④ Exploring New Fields in Overseas Business

- Developing new businesses including renewable energy projects
- Entering new areas other than power generation business

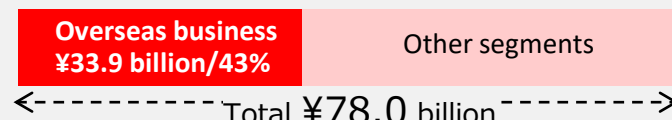
### Current business

- ✓ **Fully entered into overseas power generation business in 2000**  
(Started from acquiring projects with long-term PPAs\*)
- ✓ Expanded business scale and revenue after 2010 by developing green field thermal power projects with long-term PPAs
- ✓ Currently also developing a gas-fired thermal power without PPA in US

#### Generating capacity in operation



#### Segment income



➔ 3 projects are under construction totaling 4.1GW (2.1GW in owned capacity basis)

Gas-fired thermal power under development in US<sup>1</sup>

### Changes in business environment

- ✓ Thermal power development projects with long-term PPAs are decreasing
- ✓ Needs for development are diversifying by countries and regions
- ✓ Power business structures are changing in countries where deregulation and introduction of renewables are expanding

### Future business

- ✓ To be engaged in **new development of renewables** including wind and solar in addition to thermal power
  - ⇒ Expand chances for acquiring projects and secure profitability commensurate with risks
    - Take risks in joining projects from early stages of development  
(expand development chances, secure return as a developer)
- ✓ Explore new fields in areas where power business structure changes are advancing

Offshore wind farm under development in UK<sup>2</sup>

<sup>1</sup> Jackson Gas-fired Thermal Power Plant (Illinois, US, J-POWER has 100% of stake, output; 1,200MW, start of operation is scheduled in 2022)

<sup>2</sup> Triton Knoll Offshore Wind Project (UK, J-POWER has 25% of stake, output; 857MW (214MW is owned), start of operation is schedule in 2021)

The picture shows a wind turbine to be adopted (Photo provided by MHI Vestas Offshore Wind A/S)

\* Power Purchase Agreement in which conditions of power supply including price and period are stipulated

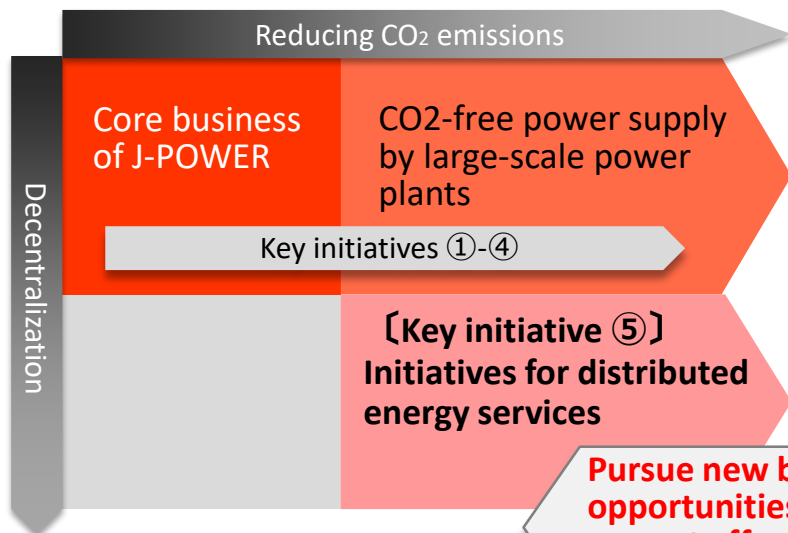
### (3) Six Key Initiatives

## ⑤ Initiatives for Distributed Energy Services

- Decentralization driven primarily by renewables such as solar is expected to progress
- Position distributed energy services as new business areas which is expected to spread and expand

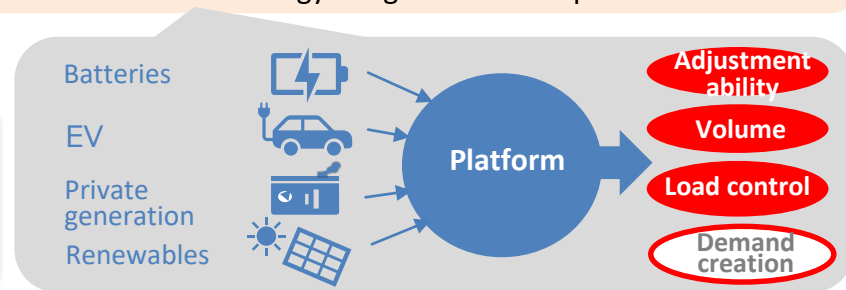
#### 【Long-term direction】

#### 【Current efforts】



- ✓ Entering power retailing business in cooperation with partners (slide 19)
- ✓ Create new value (in cooperation with partners)
  - Supply green power that meets RE100 Project\*
  - Virtual power plant (VPP) business
  - Utilize adjustment ability of customer's resources (batteries and pumps, etc.)
  - Construction of distributed energy integrated control platform

**Pursue new business opportunities by developing current efforts and collaborating with partners**



#### 【Collaboration with start-ups】

- ✓ Combine various start-ups' technologies centered on off-grid type connected living environment
- ✓ Approach distributed services from fields other than energy service



\*An environmental initiative targeting to cover 100% energy necessary for business operations by renewable energy



### Strengthening profit base

- Steadily progress the projects under construction\*1
  - ✓ Japan : Takehara Thermal Power Plant New Unit No.1 (FY2020), Kashima Power (FY2020)
  - ✓ Overseas\*2 : Central Java IPP (Indonesia, FY2020), Jackson Gas-fired Thermal Power (US, FY2022)
- Improve maintenance of power generation facilities
  - ✓ Summarize the maintenance and operation of thermal power plants into a thermal maintenance subsidiary (completed by one company) [refer to slide 19]
  - ✓ Transfer the maintenance and operation of windfarms to a hydro, transmission and transformation maintenance subsidiary in FY2020 (enhanced system responding to expansion)
- Diversify electricity sales
  - ✓ Aim for maximization and stabilization of revenue by diverse ways of sales combining sales based on long-term PPAs with short-term PPAs and retail business [refer to slide 19]
- Enhance reliability of transmission and transformation facilities, improve wide area network [refer to slide 18]
  - ✓ Secure stable revenue by enhancing resilience, managing aging facilities and new installation of New Sakuma Frequency Converter Station
- Strengthen profit base of hydro
  - ✓ Improve reliability by taking measures against facilities' aging and promote initiatives to enhance competitiveness

### Financial discipline

- Financial soundness
  - ✓ Utilize interest-bearing debt within the range where the cash flow (JP EBITDA) ratio improves from the level at the end of FY2014 (9.5x)
- Investment projects
  - ✓ Conduct review including screening by hurdle rate when making investment decisions, regularly monitor projects

### Utilization of human resources

- Bring diverse human resources to play an active role (diverse personalities, generations and values, etc.)
  - ✓ Acquire and cultivate human resources with the ability and individuality contributing to support business expansion in Japan and overseas, and put them into growing fields
  - ✓ Open call to support voluntary learning (work experience at startups, internal internship)
  - ✓ Realize diverse work styles (flexible working hours, promote childcare / nursing care leave and work at home)
  - ✓ Develop a safe work environment (Utilizing IT tools, advanced risk assessment)
  - ✓ Promote health of human resources (collaborate with the health insurance association, awarded a Health & Productivity Management Outstanding Organization prize)

\*1 Refer to slide 11 for renewable projects under development

\*2 The impacts of COVID-19 are under examination

(3) Six Key Initiatives  
 ⑥ Strengthening Profit Base, Financial Discipline and human resource strategy [2/3]

- Contribute to wide-area network development for large-scale introduction of renewables
- Take measures for resilience and against aging of facilities while achieving cost efficiency

**J-POWER 送变电**

J-POWER Transmission Network has been established in April 2020

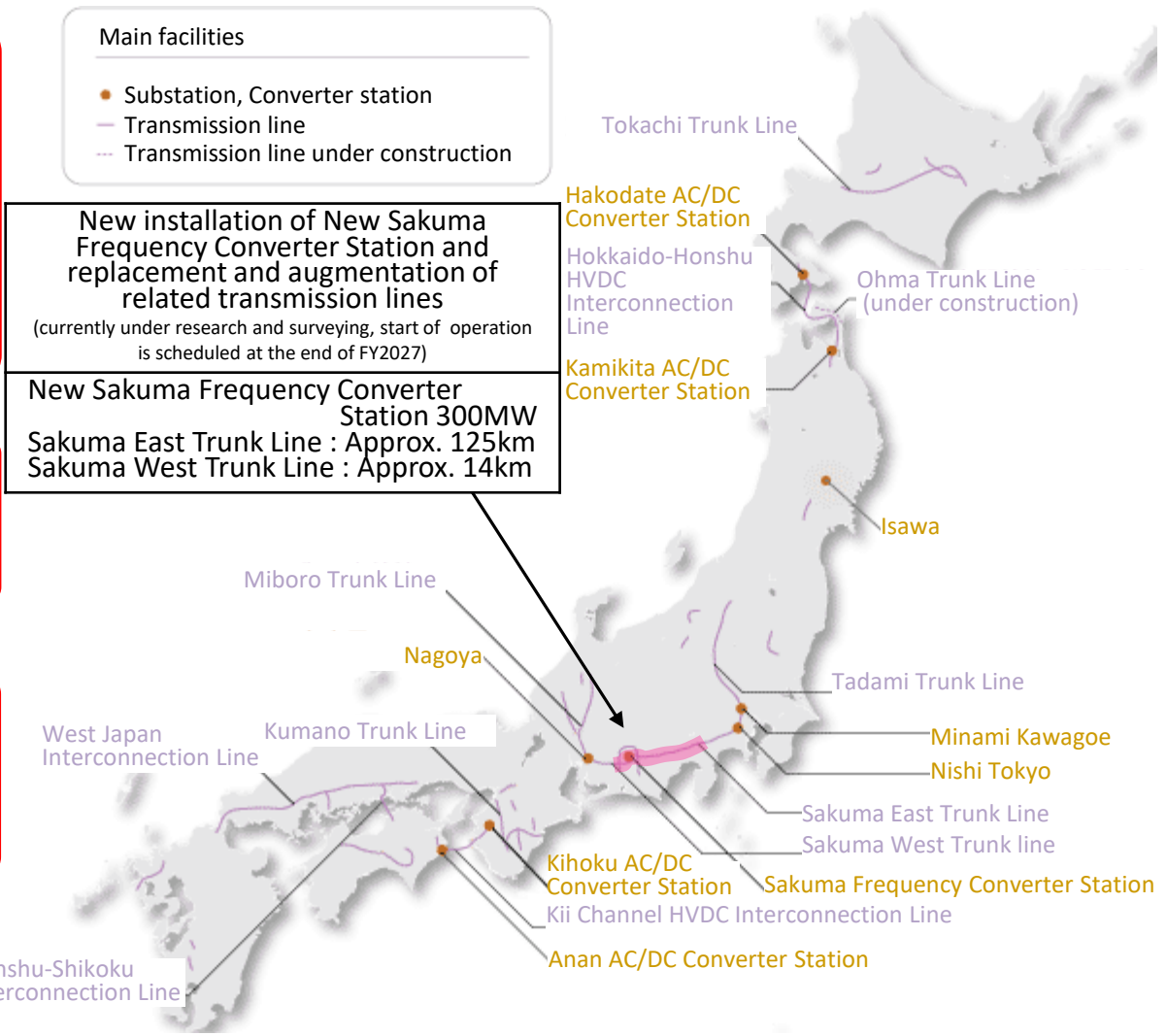
**Challenges**

- ✓ Expansion of renewables
- ✓ Intensification of natural disasters
- ✓ Aging of facilities

**Key initiatives**

- Steadily progress frequency converter station enhancement projects, etc.
- Enhance resilience
- Pursue efficient maintenance and R&D

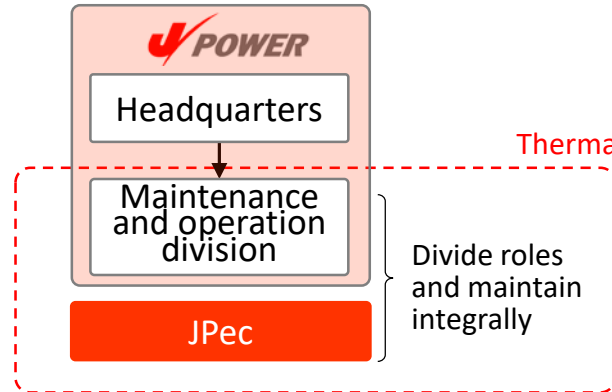
**Stable power supply**  
(Strengthening profit base)



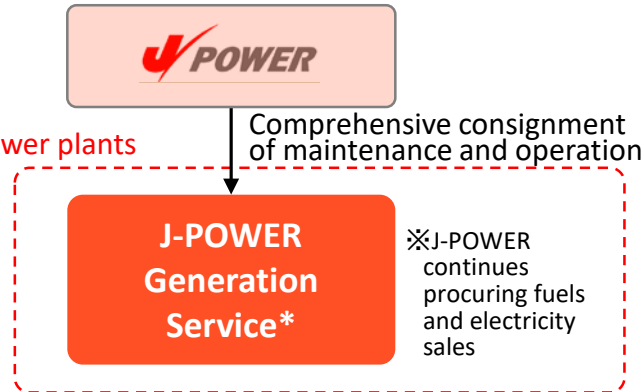
(3) Six Key Initiatives  
 ⑥ Strengthening Profit Base, Financial Discipline and human resource strategy [3/3]

➤ New system to maintain and operate thermal power plants

【Cooperation of two companies】



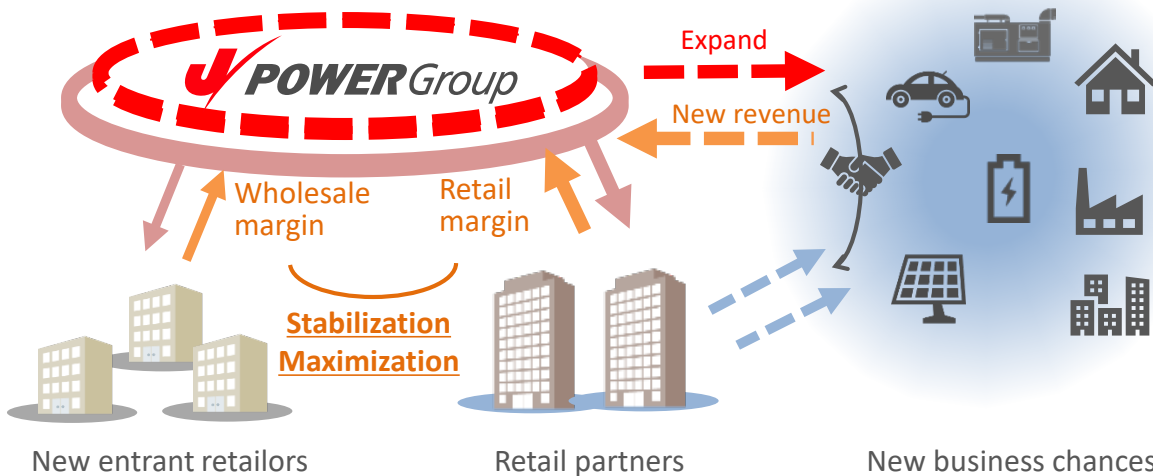
【Completed by one company】



\*Planned to change the company name from JPec

- ✓ Start building a new system from FY2020
- ✓ Achieve cost reduction and more efficient staffing through elimination of redundant management structure and utilizing digital technologies (reduce about 30% of O&M personnel by FY2024)
- ➔ Enhance cost competitiveness while increasing personnel in renewable and overseas businesses

➤ Diversify electricity sales



- ✓ While most of electricity sales are based on long-term PPAs which derive stable revenue, market sales ratio is increasing
- ✓ Aims for mitigating impacts of price fluctuations at power exchange due to changes in natural resource prices and supply-demand balance through combining short-term PPAs, retail business and other initiatives
- ➔ Aims for maximizing and stabilizing revenue by diversifying ways of sales

(Reference)

## ➤ **Contribute to mitigate impacts on people's life and economy through stable power supply**

- ✓ Established COVID-19 Response Headquarters headed by the president in February
- ✓ Take all group-wide measures to continue business focusing on following measures

### **Infection prevention**

- Work at home (excluding important work at the office related to business continuation)
- Management of important work areas at power plants and other facilities (access restrictions, separation of flow lines)

### **Securing personnel**

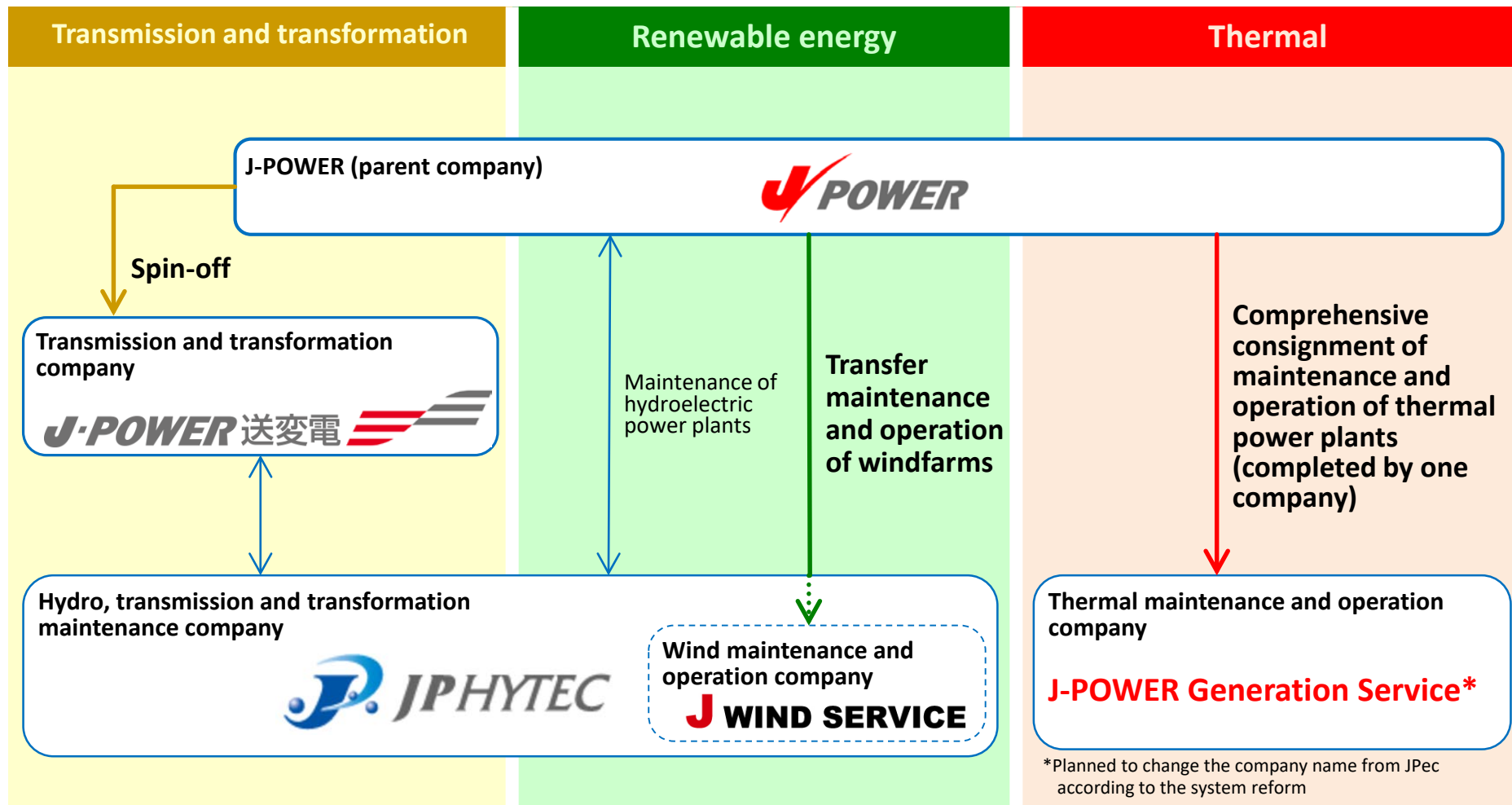
- Shift work by dividing personnel engaged in important work into two groups
- Securing backup personnel in preparation for infection

### **Fuel procurement**

- Utilizing diverse coal procurement sources, stable procurement by ingenuity of distribution of carrier vessels
- Securing required amount through adequate operation of coal yards and coal centers

# Reform of J-POWER Group Management System

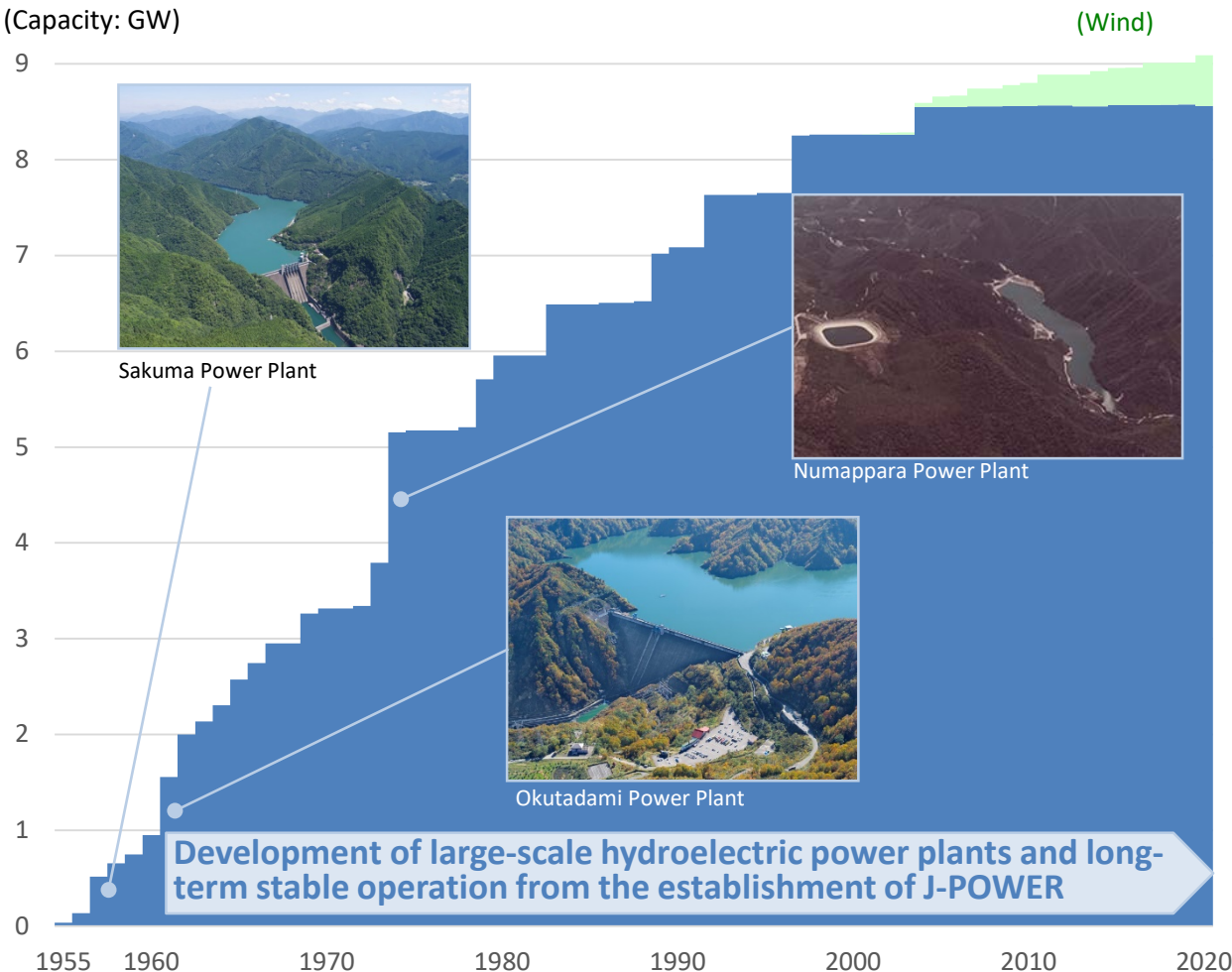
- In FY2020, implement reform of group management system in transmission and transformation business, renewable energy business and thermal business
- Continue to anticipate changes in the business environment as a united group through continuous reform



\*Planned to change the company name from JPec according to the system reform

# J-POWER's Renewable Energy (Hydro)

- Large-scale CO<sub>2</sub>-free domestic energy which has constantly contributed to stable power supply from the establishment of J-POWER
- Realize permanent and stable operation of this valuable power source and improve power generation volume



Maintain and expand long-term stable power source for the next 100 years

Repowering (comprehensive replacement of main equipment)

Revitalization plan (considering large-scale replacement of facilities)

Efficiency improvement (improvement of intakes, etc.)

Maintenance and management of reservoirs (measures against sediment)

Measures against natural disaster risks

Maintain function permanently and improve power generation volume

In operation	60 sites	8,560MW
Under construction	Shinkatsurazawa /Kumaoi	+17MW
Under repowering	Ashoro	-
Preparing for repowering	Nagayama	+2.5MW
	Ogamigo	+1.3MW

Note: "+" shows the change of capacity by the project

## Efficiency improvement by replacing existing facilities



- ◆ Contribute to carbon reduction through improving generating efficiency by replacing facilities at thermal power plants
- ◆ Takehara Thermal Power Plant Unit New No.1 which starts operation in FY2020 will achieve world highest-level generating efficiency and greatly contribute to carbon reduction

## Toward CO<sub>2</sub> separation, capture and utilization



- The target of the technology to access is as follows

	CO <sub>2</sub> capture	CO <sub>2</sub> utilization
Existing thermal	✓	
IGCC	Demonstrating	✓

- ◆ Access to global CCUS technologies through Chrysalix\*, a venture capital
- ◆ Considering efficient CO<sub>2</sub> separation and capture at existing power plants
- ◆ Considering new utilizing ways in addition to existing ways (photosynthesis promotion in agriculture, jet fuel production using microalgae, etc.)

## Biomass fuel mixed combustion over many years

### Biomass fuel



Wood-base chips



Wood-base pellets

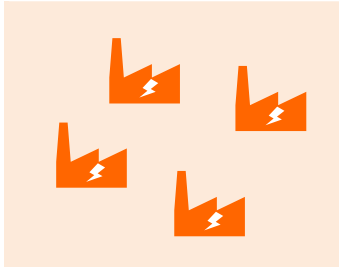


Sewage sludge oil-desiccated fuel



Sewage sludge carbonized fuel

### Coal-fired thermal power plants



- ◆ Started biomass mixed combustion at coal-fired thermal power plants in 2003 (sewage sludge oil-desiccated fuel mixed combustion at Matsuura Thermal Power Plant)
- ◆ Proactively involving in wood-base biomass fuel manufacturing in order also to utilize unused forest offcuts
- ◆ Combusting 20-30 thousand tons per year in recent years
- ◆ Strengthen efforts after FY2020 onward (aiming at 10% mixed combustion at Takehara Thermal Power Plant Unit New No.1)



J-POWER Group's mission

## Stable power supply

Value sharing with stakeholders

End consumer

Business partners

Shareholders/  
investors

Local community

Employees

Nature/  
environment

Contribution to SDGs

1 NO POVERTY



7 AFFORDABLE AND CLEAN ENERGY



8 DECENT WORK AND ECONOMIC GROWTH



9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



12 RESPONSIBLE CONSUMPTION AND PRODUCTION



13 CLIMATE ACTION



The following contains statements that constitute forward-looking statements, plans for the future, management targets, etc. relating to the Company and/or the J-POWER group.

These are based on current assumptions of future events, and there exist possibilities that such assumptions are objectively incorrect and actual results may differ from those in the statements as a result of various factors.

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