#### **Business Strategies**

### **Business Segments**

## **Comprehensive Energy Business**

Koji Inada Director

2028 (FY)

Overview

We seek to establish a solid position as a leading company in the energy sector in Japan by expanding our reach from existing electricity and gas businesses to encompass new energy businesses with utilizing the technological expertise and other assets we have cultivated, and by accelerating efforts toward overall optimization as a comprehensive energy business.

#### Electricity supply

As we work to lower the carbon intensity of the electric power supply with nuclear power and renewable energy sources as our two wheels, we aim to create a power structure with a good S+3E\* balance. Moreover, we will provide customers with a wide range of "safe, comfortable and convenient" as well as economical energy services.

\* Safety + Energy security, Economy and Environmental conservation

#### Gas supply

In addition to industrial and commercial facility customers, we have been selling city gas to households, retail stores and other customers since April 2017. As we provide such services as these that meet the needs of our customers, we are securely implementing gas safety maintenance services as well.



Representative Executive Officer, Vice Presi

2019-2021 \* Comprehensive energy business, engineering solution business and overseas power business

2016-2018

#### **Business environment**

• The supply-demand structure is changing, triggered by advanced energy saving and the massive introduction of renewable energy power sources, while competition among businesses intensifies due to market liberalization.

• The social momentum toward decarbonization and the emergence of new markets may create new values in electricity.

• Advanced technologies (digitalization, etc.) and diversifying social needs may lead to new services.

Medium-term Management Plan Strategies	What we aim to become in the future We will accelerate our efforts toward the optimization of our comprehensive energy business as a whole and seek to establish our solid position as a Japan's leading company in the energy sector.
Efforts (3-year Medium- term Management Plan)	<ul> <li>Promote cost restructuring that utilizes digital technologies to the maximum extent</li> <li>Strive to reduce carbon in power supplies (nuclear power and renewable energy sources)</li> <li>Strengthen sales strategies that contribute to increasing profits in consideration of factors including the competitive environment</li> <li>Create new services using digital technology and improve usability for customers</li> </ul>



#### Performance for fiscal year 2019

#### Diversified power sources to ensure stable supply

#### Energy risks faced by Japan

Japan's energy self-sufficiency rate is around 12%, including nuclear power generation, which is a very low value compared to major countries in the world. For most of its fossil fuel needs, Japan must rely on imports. Since energy resources on the earth are not inexhaustible, stably securing energy resources is a top-priority issue for Japan. For continued stable supply of energy in the future, it is vital to combine various power generation methods in a well-balanced manner, while not relying on only a single power generation method.

#### Energy self-sufficiency rates of major countries (for 2017, except FY 2018 for Japan)



#### Facility configuration based on S+3E



#### Energy mix

In July 2015, the government established a long-term energy supply and demand outlook (energy mix) that expresses how energy supply and demand should be in Japan for fiscal 2030. Furthermore, the 5th Strategic Energy Plan formulated in July 2018 unveiled the government's intention to further step up efforts to ensure the realization of this energy mix. As for the power supply composition, nuclear power is specified to have a fixed ratio of 20–22%, and 22–24% is indicated for renewable energy.

#### Fiscal 2030 energy mix

Renewable energy 16%	- Nuclear power 3%	Renewable energy About 22–24%	
lng <b>40</b> %		Nuclear power About 22–20%	
		LNG About 27%	
Coal 33%		Coal	
		About 26%	
Oil 9%			— Oil About 3%
FY 2017 (Power composition		FY 2030 ideal power composition	
tollowing the dreat			

East Japan Earthquake)

Source: "Energy of Japan 2019", Agency for Natural Resources and Energy, the Ministry of Economy, Trade and Industry

company, we will accelerate our efforts focused on both nuclear power and renewable energy.





#### Approach for stable fuel procurement

We place a premium on safe, cost-effective and flexible procurement of thermal power generation fuel while diversifying procurement sources, offering flexible pricing options and seeking alliance opportunities with other companies.

As part of these efforts, we aim to expand our business operations, focusing on upstream (stake acquisition) and middle-steam (transportation) operations in the LNG value chain. Fossil fuel faces a variety of problems, such as concentration in certain regions and political instability in the producing countries.

In order to procure fossil fuels stably, economically and flexibly, our

Company is involved in every stage from fuel production to receiving. We also work to diversify procurement sources and pricing formula.



\* The total may not add up to 100% due to rounding.

## Enhanced spot trading for agile LNG procurement and sales

In an effort to deal with demand fluctuations, KE Fuel Trading Singapore Pte. Ltd., which was established in April 2017 to secure the procurement of LNG and expand our sales network, plays a pivotal role in extending our information gathering network based in Singapore, which is the LNG trading hub in the Pacific region.

The role of KE Fuel Trading Singapore includes timely gathering of information such as spot LNG trading and establishment of flexible LNG procurement/sales systems.



### Developing a full-scale nuclear fuel cycle

#### Nuclear fuel cycle

Uranium, a fuel for nuclear power generation, is produced in politically stable nations, which enables a stable supply. It can also be a "semi-domestic energy resource" mainly because a small amount of uranium is required for long-term power generation and spent fuel can be reprocessed and used again as fuel. Promotion of the "nuclear fuel cycle," a cycle of re-using uranium and plutonium out of fuels used at nuclear power plants, is a practical way to effectively use energy resources and secure stable energy for Japan, a resource-poor country.



Source: "Nuclear Power and Energy Drawings", Japan Atomic Energy Relations Organization

#### Recyclable fuel storage center

Spent fuels are stored in a spent fuel pool inside power stations for a certain period of time and then transported to a reprocessing plant. In case the pool is filled to capacity, the power station cannot be operated. For this reason, spent fuels have to be taken out in a planned manner. Installation of a recyclable fuel storage center (interim storage facility), in which spent fuels are temporarily stored, enables the stable operation of power plants into the future. Our Company prepared a "Plan to promote measures for spent fuel" in 2015, and we are working as a unified company on efforts toward obtaining sites and promoting understanding about the necessity and safety of it widely among the public in power consuming areas.

#### Initiatives prioritizing safety at nuclear power plants

#### To prevent the lessons of the Mihama Nuclear Power Station Unit 3 accident from fading away

On August 9, 2004, an accident involving the rupture of secondary system piping occurred at Mihama Nuclear Power Station Unit 3. Based on the President's Declaration "Ensuring safety is my mission, and the mission of the Company," we have strictly implemented recurrence-prevention measures, with a firm determination that we shall never cause such accidents. The Nuclear Power Division has established Five Basic Principles as preventive measures that form part of our quality policy concerning the operation of nuclear power businesses with safety as the top priority. These measures are revised as necessary for safety improvement purposes. Making every August 9th our "Safety Vow Day," every employee observes a moment of silence. We are working to cultivate a safety culture in order to implement business management with safety as the top priority and prevent the lessons of the Mihama Nuclear Power Station Unit 3 accident from fading.



#### Commitment to enhancing nuclear safety

In response to the accident at the Tokyo Electric Power Fukushima Daiichi Nuclear Power Station, we established our Commitment to Enhancing Nuclear Safety, which clearly states our idea about nuclear power safety, as a company proclamation that is one of our most important company rules. The company proclamation underlines our determination to constantly improve safety in nuclear power generation, whereby all executives and employees fully understand the characteristics and risks of nuclear power generation and always remind themselves of the potential magnitude of an accident, with the President playing a leading role in making company-wide efforts to protect local communities, society and environment.

Preface	Every one of us shall remember the lessons learned from the Fukushima-Daiichi nuclear accident and ceaselessly strive to enhance nuclear safety to protect the people not only in the plant-hosting communities but also the whole country, and to preserve the environment.
Characteristics nuclear power generation and risk awareness	Nuclear power generation has superior characteristics in terms of energy security, prevention of global warming and economic efficiency, and is an essential power source for the future. On the other hand, nuclear power generation has risks of radiation exposure and environmental contamination. Every one of us shall always bear in mind that once a severe accident happens due to lack of proper management, it could cause enormous damage to the people and the environment.
Continuous removal/ reduction of ris	To enhance nuclear safety, we shall fully understand the characteristics and risks of nuclear power generation and continually remove or reduce such risks while identifying and evaluating them, never believing at any moment that we have reached the goal of ensuring safety. These efforts shall be conducted at each level of the Defense-in-Depth.
Development o safety culture	<ul> <li>Safety culture is the basis for continuously removing or reducing risks.</li> <li>Since the accident of Mihama Unit No. 3, we have been reviewing and improving our safety culture, and we shall develop such safety culture.</li> <li>To this end, we shall always be ready to question anything, learn from others and listen to the voices of society and discuss issues uninhibitedly while respecting diverse opinions with further efforts.</li> </ul>
Commitment to enhancing nuclear safety	Enhancing nuclear safety is the overriding priority in the company. It is also important to promote two-way communications with the people in the plant-hosting communities and the whole country, and to share common perceptions on nuclear safety. Under the President's leadership, every one of us shall work together to tirelessly enhance nuclear safety.

#### Safe and stable operation of power plants

We will continue to safely and carefully operate and maintain our nuclear power plants, thereby ensuring the safe and stable operation of Units 3 and 4 of the Takahama Nuclear Power Station and the Ohi Nuclear Power Station, each of which has resumed operations.

#### Preparing for operation beyond 40 years

Nuclear power – a well-balanced energy source contributing to 3E (Energy security, Economy and Energy conservation) – is essential in resource-poor Japan. As a result, nuclear power generation should be maintained at a certain level to ensure energy security and develop technical/human resources, whereby accident-proof nuclear power plants can be operated for over 40 year-spans. Therefore, we will be making the most of our nuclear power plants, placing a premium on their safe operation

We are undertaking face-to-face communication, including power plant tours by the Nuclear Power Division and explanations in various locations to deepen public understanding about the operation of our plants beyond 40 years. We will continue to promote active communication with people in the communities including those who live near our facilities.



Takahama Nuclear Power Station Units 1 and 2 containment vessel upper shield installation work

#### Reliable decommissioning processes

Decommissioning status of Mihama Nuclear Power Station Units 1 and 2 and Ohi Nuclear Power Station Units 1 and 2 Decommissioning is conducted in four stages, which all

together takes a total of about 30 years. While Stage 1 (dismantling) is underway, proper measures are in place for safe decommissioning.

Radioactivity investigations and the dismantling of equipment in turbine buildings are underway at Mihama Nuclear Power Station Units 1 and 2, along with system decontamination and the dismantling of equipment in turbine buildings at Ohi Nuclear Power Station Units 1 and 2.

#### Voluntary efforts to enhance nuclear safety

Learning lessons from the accident at Mihama Nuclear Power Station Unit 3, we place a premium on nuclear safety. Specifically, the accident at Tokyo Electric Power's Fukushima Daiichi Nuclear Power Station made us aware that our understanding and preparedness for risks unique to nuclear

power generation were not necessarily sufficient. We, therefore, established a roadmap to "step-up voluntary/ continuous efforts to improve nuclear safety," based on which various measures are being implemented.

#### Safety improvement activities Promoting safety improvement measures

Large-scale renovation work is underway at Mihama Nuclear Power Station Unit 3 and Takahama Nuclear Power Station Units 1 and 2 to deliver over 40 years of safe operation. Examples of construction work to improve safety:

- Large equipment, pumps and piping are being replaced while central control panels are being upgraded to their digital counterparts to enable timely and accurate monitoring and operation.
- Earthquake-proof steel-framed concrete gantries\* were set up at Mihama Nuclear Power Station Unit 3, preparing for a possible collapse of the hill nearby, which could damage the reactor building, access routes, etc.
- \* Access platforms for reactor containment vessels, etc.

#### Boosting the accident response capacity

Comprehensive disaster drills are conducted at all nuclear power plants as a precaution in the event of a nuclear disaster, with efforts underway to strengthen our capacity to respond to accidents. Specific improvements are being made – based on lessons learned from previous drills – to prevent, in a timely and accurate manner, the spread and expansion of damage caused by accidents.

There are also programs to develop leadership capacity in preparation for an emergency. One such example is the TAIKAN training program\*1 conducted at the Takahama Nuclear Power Station and the Ohi Nuclear Power Station. The program is designed to develop communication skills and decision-making capacity under stressful conditions so that plant task force leaders can control and guide subordinates in an appropriate manner in the event of a serious incident.

Efforts to improve our capacity to deal with nuclear disasters also include cooperating with and participating in disaster drills jointly conducted by the five power companies\*<sup>2</sup> in West Japan.

Examples of drills:

- The five companies jointly conducted a logistic support drill at the Chugoku Electric Power's Shimane Nuclear Power Station
- Support staff were dispatched to cooperate with municipalities and conduct review inspections at the time of evacuation.
- Training programs and disaster drills including one organized by the national government with Tottori and Shimane Prefectures, along with drills organized at the prefectural government level by Ehime, Ishikawa and Kagoshima, with Saga, Fukuoka and Nagasaki Prefectures holding a joint drill.
- \*1 Developed by the Institute of Nuclear Safety System, Incorporated (INSS). \*2 Hokuriku Electric Power Company, our Company, the Chugoku Electric Power Co., Inc., Shikoku Electric Power Co., Inc., and Kyushu Electric Power Co., Inc.





### Providing services as a consolidated group

### Aiming to be "the best partner in daily life and in business"

Our Group has been meeting the various demands of our customers and society by offering total solutions that combine our services, including comprehensive energy supply which is mainly offering electricity, as well as telecommunications, daily life and businesses.

Along with the global trend of electrification, the demands of our customers and society are becoming increasingly diverse. In order for the services offered by the Group to continue to be selected by customers, we will continue expanding the scope of our services in addition to our existing push toward "total electric conversion" and our provision of electricity and gas as a combination. From the standpoint of our customers, we will offer a wide variety of "safe, comfortable and convenient" as well as economical energy services. The Group has cultivated engineering as our core strength, and by leveraging this core strength we have committed to providing

#### Business areas for strong growth

Providing solutions that solve our customers' problems in all aspects of lifestyle and business



solutions that solve our customers' problems in all aspects of lifestyle and business. By providing these solutions we will play a role that exceeds our customers' expectations.

#### Services for residential customers

In addition to "total electric conversion" that realizes a comfortable and convenient lifestyle, since February 2018 we have offered a new plan that combines our electricity and gas services.

We also offer services that are helpful for our customers' daily lives, including a service to dispatch support personnel to customers experiencing problems, such as a sudden power outage, as well as a points program through which points are earned according to the amount of energy usage.

As a comprehensive energy company, we will promote initiatives that satisfy our customers.

#### Services for corporate customers

Our Group promotes a variety of services, providing optimal energy systems and management methods designed to meet individual customer needs and help reduce energy consumption, costs, and CO<sub>2</sub> emissions.



### **Business Segments**

## Transmission and Distribution Business Yoshihiro Doi

President and Director Kansai Transmission and Distribution, Inc.



#### Overview

With the Electricity Business Act revised in April 2020 to further ensure the neutrality of the transmission and distribution business, the general power transmission and distribution operations of the Kansai Electric Power Company were spun off and integrated into the newly established Kansai Transmission and Distribution, Inc.

At Kansai Transmission and Distribution, Inc., we manage power grids while planning and constructing transmission, transformation and distribution facilities to deliver electricity to customers. Specifically, committed to being neutral and fair, we are delivering safe, stable and low-cost electricity to all customers and providing reliable and secure power grid services, which contributes to the development of local communities.



#### **Business environment**

• Efforts should be stepped up to promote the mitigation of and resilience to disasters in order to maintain a safe and stable electricity supply, with typhoons and earthquakes occurring frequently and in light of the Nankai megathrust earthquake, which is expected to strike Japan.

• As social challenges emerge, such as an aging society (with a declining population due to falling birthrates) and aging infrastructure, massive amounts of renewable energy should be introduced while keeping up with changes in the business environment (e.g., progress in digital and storage battery technologies).

Medium-term Management Ian Strategies	What we aim to become in the future In addition to continuing to guarantee neutral and fair transmission and distribution b customers with safe and stable power at low cost, we will create new services and adv communities.	usinesses and provide vance together with local
Efforts 3-year Medium- rm Management Plan)	<ul> <li>To make efforts to "strengthen management foundations" in order to continuously provide "safe", "stable" and "affordable" electricity</li> <li>Build resilience through discussions with the Typhoon No. 21 Response Verification Committee, the Organization for Cross-regional Coordination of Transmission Operators, etc.</li> <li>Respond properly to aging facilities</li> <li>Accelerate cost restructuring by utilizing digital technology</li> <li>Develop structures and mechanisms looking ahead to spin-offs and the realization of our Medium-term Management Plan</li> </ul>	
	<ul> <li>To make efforts to "increase business opportunities" looking ahead at medium and long-term environmental changes and growth opportunities</li> <li>Develop facilities ahead of next-generation transmission &amp; distribution (Maximum utilization of existing facilities and decentralization efforts, etc.)</li> <li>Accelerate efforts to create new business utilizing technology and know-how</li> <li>Carry out overseas consulting business continuously, and facilitate human resource development and mechanisms for promoting overseas business</li> </ul>	A drone taking off with a cord

#### Performance for fiscal year 2019

#### To provide high-quality electric power

We at Kansai Transmission and Distribution, Inc. work to operate power systems that provide a reliable link between power plants and consumers and optimize the configuration of facilities. We are also making thorough efforts to prevent failure recurrence. As a result of our efforts, with the exception of major natural disasters, we are maintaining one of the world's highest power quality levels in the transmission and distribution business.

#### Annual duration of power outage per household



#### Achieving electricity resilience

On September 4, 2018, the powerful Typhoon No. 21 ripped through the Kansai area, causing breakages totaling more than 1,300 utility poles and a power outage affecting roughly 2.2 million households in total. We apologize to our customers for the inconvenience and trouble caused by the extensive and long-term power outage.

Following the damage caused by Typhoon No.15 and Typhoon No.19 during the 2019 season, the Electricity Resilience Working Group\* compiled verification results in January 2020 regarding our response to these emergencies. Based on these results, we have created a cooperation plan to be used in an emergency with the aim of fulfilling our power supply obligations through successful restoration of the power supply. This plan specifies cooperation with general power transmission and distribution business operators and related organizations (local governments, Self-Defense Forces, etc.) in the case where significant damage has been caused, or may be caused, to power transmission and distribution equipment in an emergency. We will continue to step up our efforts for quick recovery in the event of an emergency.

By addressing issues presented by the Electricity Resilience Working Group, which have been discussed nationwide, and sharing the lessons learned from Typhoon No. 21, we are



determined to fulfill our mission of supplying safe and stable electricity and supporting society. To that end, we will develop and introduce new technologies and new construction methods, as well as systematically maintaining or replacing aging equipment, aiming for prevention of accidents and prompt restoration of the power supply.

\* Joint working group set up under the Basic Policy Subcommittee on Electricity and Gas of the Advisory Committee for Natural Resources and Energy, and the Electric Power Safety Subcommittee of the Industrial Structure Council.

#### Examples of measures taken following Typhoon No. 21

- Quick information gathering using smartphones
- Understanding the scope of damage using drones; using this information for restoration work
- Trial operations of power outage information collection utilizing smart meter data
- Bolstering a broad support system inside and outside the company
- Timely provision of information to the customer on power
- outages and restoration work

# Understanding the scope of damage using drones; using this information for restoration work

In places that are difficult to access, such as a site following a landslide, we use drones to check the status of equipment so we can quickly grasp the whole picture.

Drones are also expected to be used in restoration work, for example, using a drone for overhead wiring of a cord to replace power lines.



Damage investigation by aerial drone video



Using a drone for overhead wiring of a cord to replace power lines

Value (



Foundation to Support Value Creatic

Financial and Corporate Information

# Introduction of a new system for renovation work for aging facilities

<Adoption of new method (attachment-type moving device) to remove 500-kV No. 4 transformers at the Shigi Substation> When replacing large equipment, such as transformers, on substation premises, the roller towing method is generally adopted for the transportation. Recently, we have adopted a new method which uses an attachment-type moving device. Compared to the roller towing method, it enables shorter working hours and reduces the risk of accident (injury from falling heavy objects, physical injuries when inserting rollers, etc.), and this new approach is expected to be adopted as an option for transporting large equipment. We will continue to adopt new technologies and methods to ensure safe operations.



#### Our efforts toward disaster mitigation

#### Preparing for a major disaster

To ensure the safety of our employees and their families and to fulfill our responsibilities of providing a stable supply of electricity and gas, we promote disaster mitigation initiatives that will strengthen facilities to withstand various natural disasters. We have also put in place a disaster control system to enable rapid recovery. Particularly, in the event of the Nankai Trough Earthquake, a megathrust earthquake which is feared to hit in the future, we will follow the basic plan for mitigating disaster announced by the Japanese government and take carefully planned disaster response and recovery measures in place.

Considering the damage caused by typhoons that occurred more frequently in recent years, including Typhoon No. 21 in 2018, we also implement various disaster mitigation measures, utilizing the lessons learned from past disasters. In addition, through disaster mitigation events and lectures, we provide information on disasters and how we can be prepared, as well as carrying out activities to raise awareness on disaster mitigation in local communities.

#### Strengthening our disaster response system

We are enhancing our response systems to prepare for rapid initial response upon the occurrence of disasters. This includes the designation of individuals who arrive at the workplace early and night watches by initial response supervisors, along with the implementation of special training for individuals and supervisors in charge of initial response several times a year.

Moreover, with the President of the Kansai Electric Power Co., Inc. serving as Chief of the Emergency Headquarters, group-wide comprehensive disaster drills are conducted every year and these drills see full collaboration between the Kansai Electric Power and Kansai Transmission and Distribution, Inc. We are committed to improving our disaster response skills and raising disaster awareness, not only to prepare for the occurrence of the Nankai Trough Earthquake but also with consideration for severe incidents such as the simultaneous occurrence of a nuclear power disaster or during occasions when the balance of power supply and demand is tight.

In the event of a major disaster, employees will be notified of any information pertaining to the disaster at the same time. Furthermore, we have established action standards so that we can build a response system promptly after a disaster occurs, even on holidays or during the night.



#### Response to extremely severe natural disasters

In recent years, natural disasters have become increasingly severe. Based on what we learned from Typhoon No. 21 that hit in 2018, we established the Typhoon No. 21 Response Verification Committee to ensure an even more appropriate and robust response. From the perspective of rapid restoration of power supply following power outages, customer service and cooperation with local governments, we have implemented measures to cope with large-scale disasters.

Looking specifically at rapid restoration of power supply following power outages, we utilized drones and other new technologies to gain a timely and efficient grasp of the extent of damage to equipment. We also sought support and cooperation from not just internal sources but also from our subcontractors and other general power transmission and distribution utilities, in order to strengthen the restoration work system.

Regarding customer service, we have newly introduced a Power Outage Information App, an Al-driven automated power outage information response service, and an automated information portal that utilizes a scenario-based chatbot, with the aim of disseminating power outage information and diversifying information channels. Our support system in the event of a massive blackout has also been strengthened. As part of such efforts, in collaboration with other general power transmission and distribution utilities, we have established new Transmission and Distribution Contact Centers in Aomori City and Sapporo City to answer inquiries regarding power outages and power transmission and distribution equipment.

In cooperation with local governments, we have reinforced our cooperation through prior discussions and concluding agreements on the removal of fallen trees and other obstacles, as well as mutual confirmation of which facilities are to be restored as a priority.

Additionally, based on the lessons learned from past natural disasters, we developed an emergency collaboration plan designed for mutual support and cooperation in an emergency situation. Working together, 10 general power transmission and distribution utilities jointly submitted this plan to the Ministry of Economy, Trade and Industry.

Going forward, we will continue to share lessons learned for the future as well as steadily implementing these efforts to build a more robust business foundation to ensure safe and stable electricity and gas supply.

# Strengthening collaborative ties with concerned external organizations

Even in times without disasters, we are working to build relationships with governments, police and fire departments and other concerned external organizations as well as other electric power companies in order to enable smooth mutual cooperation during times of emergency and restore electric and gas service as quickly as possible. Specifically, we proactively participate in disaster response training sessions and programs held by local governments, designated public corporations and the like. In collaboration with the Japan Ground Self-Defense Force and Japan Maritime Self-Defense Force, we periodically carry out joint drills based on standing agreements for mutual cooperation in disaster preparedness and prevention.



Joint disaster drill with Japan Maritime Self-Defense Force Maizuru Regional Headquarters in March 2020

# Contribution to raising awareness of disaster mitigation in local communities

We run booths at disaster drills and events held by local governments, and carry out activities to raise awareness of disaster mitigation using our Disaster Preparedness Handbook as well as through experience of operating seismic breakers.

Moreover, for a wide range of generations, from students to neighborhood associations, we create opportunities to explain what damage and disruption could be expected following a Nankai Trough Earthquake, as well as the damage caused by disasters in recent years, and our routine preparations. Through these efforts, we contribute to promoting understanding of the importance of disaster response and preparedness.

### Disaster response after company spin-off

Even after the unbundling of the transmission and distribution sector required by law that was implemented in April 2020, in the event of a large-scale disaster such as the Nankai Trough Earthquake, the Company and Kansai Transmission and Distribution, Inc. will be united to respond to the disaster and continue to fulfill our responsibility of providing a stable electricity and gas supply.

- Disaster Preparedness Handbook
- Disaster Preparedness Handbook is disclosed
- on the websites of the Kansai Electric Power
- Co., Inc. and Kansai Transmission and
- Distribution, Inc. It will help with disaster mitigation efforts in the home.



Emergency system for communicating with relevant authorities



#### Dispatching a restoration support team to other electric companies

In September 2019, after the damage caused by Typhoon No. 15, the Group dispatched a support team to restore electricity upon the request of TEPCO Power Grid. Specifically, we sent equipment such as high- and low-voltage generators, as well as personnel for recovery and logistics work in the afflicted area, Shirako in Chiba Prefecture. For 17 days, we offered our full cooperation to the restoration work of the TEPCO Power Grid. We will continuously and proactively cooperate in responding to natural disasters that occur in other areas to fulfill our responsibility of providing a stable electricity supply.



Emergency power transmission with high voltage power generators (Image is for illustrative purposes.) (April 2016)

**Business Segments** 

## **Overseas Power Business**



Mikio Matsumura **Executive Vice President** 

### Overview

We have participated in a total of 20 projects in the domains of power generation, transmission and distribution across 12 countries. Our first international project was in 1998 when we took part in the San Roque Hydropower Project located in the Philippines. This made us the first Japanese utility to enter into the international (IPP) business arena.

Utilizing our five overseas bases including Bangkok, New York and Amsterdam, we aim to expand our global power business so it can continue to grow into a key cornerstone of the Group's overall earnings.





#### **Business environment**

• While competition in overseas electric power market is accelerating, there is also a growing awareness toward ESG-focused business as well as the setting and attainment of SDGs. This growing trend is expected to stimulate growth in low-carbon power sources, providing opportunity for us to utilize our technical expertise and experience, including in the realm of digital technologies and deregulated business. • Additionally, we intend to focus on development of human resources through On the Job Training in foreign countries as well as the formation of positive alliances with other companies in which each party is able to exercise their respective competitive advantages. This is seen as key in order to expand and diversify our international business portfolio.



#### What we aim to become in the future

Our goal is to continue expanding our portfolio globally, building strong connections and relationships in the various countries where our projects are located. In this way, we aim to continue creating high added-value in our global development and operational portfolio with swift and accurate response to trends in the world-wide energy market.



Rajamandala Hydropower Project in Indonesia

participating in projects from the initial development stage. construction. (3-year Medium term Managem

megatrend of SDGs, ESG-focused business and decarbonization. • Fostering of extensive human resource training from a global development perspective, encouragement of diversity, as well as strengthening of organizational structures and operational practices in our overseas projects. • Increasing the added value of our projects and creation of new business opportunities by promoting group-wide cooperation and alliances with third party corporations outside Kansai Electric Power Group.

#### Performance for fiscal year 2019

Efforts

Plan)

#### Expansion of our overseas power business

In the fiscal year of 2019, both the Rajamandala Hydropower Plant (Rajamandala) in Indonesia and the Nam Ngiep 1 Hydropower Plant (Nam Ngiep 1) in Laos were completed and commenced commercial operation. Rajamandala marks a first in that it is the only international project where the entire development process was undertaken exclusively by a Japanese electric utility. We independently executed all aspects including prior investigation, business evaluation and financing. Nam Ngiep 1 has also been led by Kansai Electric Power Company and is known as the second "Kuroyon" due to the fact that the main power station is equivalent to the Kurobegawa No.4 Hydropower Station in terms of power capacity and its large-scale dam size. For the construction stage, we obtained agreements for civil engineering, electrical and metal works with major Japanese companies to ensure quality control and schedule management.

In addition, our overseas business has also expanded to distribution and retail services. In the Philippines, we have been engaged in the power distribution and retail services for New Clark City (NCC) including design, construction, operation and maintenance of power systems. This has been carried out utilizing smart grid technologies in line with the development of the NCC smart city. In the UK, we have been involved in the electricity distribution network operations of Electricity North West Limited (ENW). This is the first case in which a Japanese power utility company has invested in a large-scale electricity distribution network operator overseas.

In 2020, the Hickory Run Thermal Power Plant (Hickory Run) started commercial operation in the U.S. Hickory Run is our first green-field project in North America. As for renewable power generation, we have also taken part in the Piiparinmäki Onshore Wind Farm Project (Piiparinmäki) in Finland and the Aviator Onshore Wind Farm Project (Aviator) in the U.S. Piiparinmäki and Aviator are the first renewable projects we have undertaken in their respective countries. By adding these two wind farms to our assets, our overseas renewable energy capacity has grown to incorporate approximately one-third of total capacity held in our international business portfolio.

Nam Ngiep 1 Hydropower Project in Laos

• Acceleration of efforts to increase profitability by building stable revenue sources such as projects with long-term PPAs and

• Generation of large profits during and beyond the current three fiscal years through concentrated execution of projects under

• Increasing the value of our domestic and foreign assets through acquisition and utilization of new technologies, including the digital. • Formulation of and participation in renewable energy projects, including hydro and wind power, with aspirations to lead the global

> Power generation capacity by investment ratio (as of the end of August 2020)

Overseas power projects (as of the end of August 2020) **20** projects in **12** countries

2.816 GW



NW engineers

Aviator Onshore Wind Earm Project

#### Achieving the targets set in our Medium-term Management Plan

We are concentrating our efforts toward achieving the profit targets set in the Medium-term Management Plan via participation in regulated business and projects from the initial development stages. Large profits can be generated and maximized by steadily advancing projects under construction as well as continually optimizing businesses in which we have a pre-existing stake.

#### **Business Strategies**

### **Business Segments**

## Information and **Telecommunications Business**



### Overview

Arranging an extensive menu of options properly that respond to customer needs, we are providing comprehensive IT services for households and business firms utilizing AI, IoT and other digital technologies. Moreover, through actively incorporating new information and telecommunication technologies such as 5G, we are committed to building on our contribution to our customers by developing new businesses and services, capitalizing on our Group's strength.





#### Business environment

- Decrease in the number of FTTH service subscribers due to the maturity of the fixed broadband market.
- Increasingly competitive mobile market associated with the emergence of 5G services.

• Growing cyber security risks.

- Growing needs for business efficiency and automation, with the shrinking workforce and advances in digital technologies.
- Growing demand for telework in the wake of the COVID-19 pandemic.
- Business expansion potential created by 5G, which provides high-speed, large-capacity services.

Medium-term	What we aim to become in the future
Management	By strengthening our customer base and creating added-value services, we will seek to be an IT business that is
Plan Strategies	chosen by customers throughout the country.
Efforts (3-year Medium- term Management Plan)	<ul> <li>Create new solutions that address digitalization needs.</li> <li>Expand the infrastructure business dealing with the 5Gs</li> <li>Maintain and expand customer base for "eo Optical Fiber" and "mineo" services.</li> <li>Expand business fields using alliances, etc. and create new business.</li> </ul>





#### **Business Strategies**

**Business Segments** 

## Life / Business Solution Business



Representative Executive Officer, Vice Presider



In addition to comprehensive real estate services (leasing, condominium sales, property management, leisure, etc.) we provide specific services for both individuals (home security, healthcare, etc.) and businesses (call-center and staffing services, etc.) to provide support for their everyday needs.





Business environmen

• Growing expectations for healthcare services that contribute to solving problems associated with an aging society (increasing healthy life expectancy, etc.)

• Growing outsourcing needs due to short staffing, progress in working practice reforms, etc.

• Robust demand for office space, leasing and condominiums.

· Decreasing yields on newly acquired real estate due to intensifying competition in real estate acquisition

Medium-term Management Plan Strategies	What we aim to become in the future We provide services that satisfy individual and business customers in their everyday needs, which in turn improves the Group's credibility and expands its revenues. At the same time, our aim is to transform ourselves into a general real estate business group to meet all real estate needs, capitalizing on a well-balanced mix of leasing, condominium and fee businesses.
Efforts (3-year Medium- term Management Plan)	<ul> <li>Enhance our brand power to expand operations in the Tokyo metropolitan area from our base in the Kansai urban area, while also branching out abroad.</li> <li>In the rental property field, expand and strengthen the asset management business for institutional investors.</li> <li>Expand and strengthen healthcare services by developing advanced services utilizing digital technology.</li> <li>Streamline operations and reduce labor by introducing RPA, etc.</li> </ul>



#### Performance for fiscal year 2019

• We have made active efforts to increase sales of "Cielia" condominiums in the Kansai and capital regions, and have provided 2,434 residences with this brand as of the end of March 2020.



Cielia Senri Chuo Tower (completed in February 2019)

#### Number of "Cielia" brand residences supplied

Total of condominium units and detached houses with residential land development completed since starting to supply Cielia brand residences (fiscal 2016) until fiscal 2019

2,434 units CIELIA



• Our real estate business in the emerging economies, especially those in Southeast Asia, deals primarily with condominiums, while the focus is on office leasing in Europe, the U.S., Australia and in other developed countries. As of the end of March 2020, we have participated in three condominium development projects in Vietnam, Indonesia and Thailand, and eight office leasing projects in the U.S., Singapore and Australia.

Number of projects invested in since the first overseas real estate business 11 projects (fiscal 2017) until fiscal 2019



New York

Svdnev



Bangkok

• About 54,000 contracts have been signed for our home security services as of the end of March 2020, a significant achievement in our efforts to reach out to customers and win their confidence.



Customer satisfaction rate: 98% We help customers live a more secure and comfortable life.

In addition to providing real estate services, we monitor social trends in four business categories: life support (home security, housekeeping services, etc.), healthcare (health management support, caretaking services, etc.), financial services (collection agency services, financing, leasing, etc.) and business solutions (staffing services, call-center services and management, etc.). Moreover, by leveraging the Group's seed projects and those of others, we will continue to develop new service models that meet the needs of customers while providing high valueadded services.

