# Conducting all business activities based on our CSR Action Principles

## **CSR Action Principles**

## ⇒P41 Safe and Stable Delivery of Products and Services As Chosen by Customers The Kansai Electric Power Group will endeavor to develop and improve the products and services as chosen by customers and as a business operator responsible for lifelines that are indispensable to society. We will take every conceivable measure, day by day, to deliver our product and services safely and stably ⇒P52 Proactive Approach with a View to Creating **Ever Better Environment** As a provider of energy services that are closely connected with the environment, the Kansai Electric Power Group fully recognizes the scale of impact its business activities have on the global environment and therefore will strive to alleviate the environmental burden and environmental risks accompanying our business activities. Furthermore, we will aspire for creating ever better environment and contribute proactively to the development of a sustainable society through provision of products and services having lesser environmental impact. Proactive Contributions to Development of ➡P64 Local Communities As a business operator closely linked with its local communities and lives of their inhabitants, the Kansai Electric Power Group fully recognizes that its own development is not conceivable without the development of the local communities associated with its business activities and therefore we will proactively contribute to the development of our local communities through initiatives to revitalize these communities and the local economy. Also with regard to our overseas business activities, we will strive to contribute to the development of the respective local communities with due consideration to local culture and practices. Respect for Human Rights and Development of Favorable ⇒P67 Work Environment by Taking Advantage of Diversity The Kansai Electric Power Group recognizes the "human rights" as a common and universal value of the global society, supports the international standards relating to the human rights and respects the human rights in all of its business activities. Accordingly, we will strive to secure safe and comfortable work environment for all the people associated with our business activities and take advantage of diversity (each individual's diversity) to the maximum extent. **Highly Transparent and Open Business** ⇒P72 Activities In order to properly reflect social opinions in its business activities, to ensure fairness in the management of its business operations and to faithfully carry out its accountability to society through timely transmission and disclosure of information, the Kansai Electric Power Group will promote increased communication with all members of society and conduct business activities that are transparent and open. ⇒P74 6 Strict Enforcement of Compliance In all aspects of its business activities, the Kansai Electric Power Group will comply with all laws and regulations, internal rules and business ethics and will ensure strict enforcement of compliance as the basis of our management. The Group as a whole will build the structure that should ensure these actual practices and will strive to maintain and improve its structure.

### **CSR** Action Principles

## **Safe and Stable Delivery** of Products and Services As Chosen by Customers

The Kansai Electric Power Group will endeavor to develop and improve the products and services as chosen by customers and as a business operator responsible for lifelines that are indispensable to society. We will take every conceivable measure, day by day, to deliver our product and services safely and stably



## Ensuring diverse power sources for stable supply

## **Energy risks faced by Japan**

Japan's energy self-sufficiency rate is around 9%, 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 sources on the earth are not inexhaustible, stably securing energy sources 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 2016, except FY 2017 for Japan)



Source: Federation of Electric Power Companies of Japan, "Consensus document on nuclear power"

## **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.

### FY 2030 energy mix



Reference: The Agency for Natural Resources and Energy, the Ministry of Economy, Trade and Industry "Energy of Japan 2018"

## Facilities configuration based on S+3E



## Flexible and stable fuel procurement

## Approach for stable fuel procurement

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.



### Enhanced spot trading for agile LNG procurement and sales

In April 2017, we established KE Fuel Trading Singapore Pte. Ltd. as a new company with the purpose of strengthening LNG procurement and sales in Singapore. To reinforce the structure capable of flexibly reacting to fluctuation of demand and other factors, we have expanded our information gathering network in Singapore, which is an LNG trading hub in the Pacific region. We acquire spot and other LNG trading-related information with a high level of freshness and accuracy to realize agile LNG procurement and sales. We have been steadily accumulating achievements.

## Securing stable energy through the 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 sources and secure stable energy for Japan, a resource-poor country.



## **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

## Enhancing nuclear power safety and reliability

Kansai Electric Power is carrying out a variety of measures to minimize risk and ensure sufficient safety at its nuclear power plants.

### Ensuring nuclear power plant safety

Nuclear power plants are designed to include multiple safety systems to prevent a malfunction or human error from resulting in an accident, premised on the fact that machines break down and human beings make mistakes. In the unlikely event of a malfunction occurring, multiple safety functions come into action: detection of abnormalities at an early stage; automatic shutdown of the nuclear reactor; cooling of the fuel with cooling water; and containment of radioactive materials. In addition, based on a defense-in-depth policy, and naturally in compliance with the new regulatory requirements issued by the Japanese government in the wake of the accident at TEPCO's Fukushima Daiichi Nuclear Power Station in March 2011, Kansai Electric Power is taking safety measures to cope with a "severe accident" and other measures that go beyond the existing regulatory framework. We conduct inspections of and carefully monitor all facilities, carry out training as before, and run regular drills to practice responding to severe accidents. In these ways we strive to further enhance the safety and reliability of nuclear power generation.

## **Strict radiation control**

To monitor the effects of radioactive substances on the surrounding environment, multiple monitoring stations and monitoring posts are located around each plant. Atmospheric radiation levels are monitored around the clock, and the data can be accessed on our website and elsewhere. In addition, Kansai Electric Power regularly samples soil, river water, seawater, agricultural products, and marine products in the vicinity of its nuclear power plants, and tests the levels of radioactive substances contained to monitor impact on the environment.

## Striving for business operations that further prioritize safety

## 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. Moreover, making every August 9th our "Safety Vow Day," every employee observes a moment of silence and reviews their CSR Conduct Cards on which they have written their own safe conduct oaths. Through these and other efforts, 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.

## Fostering an unshakable group-wide safety culture

Based on the lessons from the Mihama Nuclear Power Station Unit 3 accident, we are continuing safety efforts that put preserving the safety of every person involved in the business activities of our company first. We share a strong belief that "we will not allow misfortune to occur to the colleagues who work with us or their families." This includes our partners and the staff of subcontractors. We are striving to cultivate a culture that prioritizes the assurance of safety and to practice safe conduct.

Safety first is set as a management criterion in our Management Philosophy. In addition, we aim to make "our beliefs about safety" and our Safe Action Declaration in the Kansai Electric Power Group Safe Action Charter\* further

## Promoting efforts to further increase 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 ideals about nuclear power safety, as a company proclamation that is one of our most important company rules.

Based on this philosophy, we are working to further enhance voluntary sustained efforts to increase the safety of nuclear power generation.



The president and others renew vows of safety and observe a moment of silence before a stone memorial



Safety Vow Memorial made of stone erected on-site at the Mihama Nuclear Power Station

permeate the Group. We also convey the details of these principles to our subcontractors and deepen information sharing and communication. By doing these and other things, we are working to cultivate a group-wide safety culture that never wavers.

\* For details, refer to page 82.



Undertaking a safety activity in unity with a subcontractor

### Commitment to Enhancing Nuclear Safety

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

## Safe and stable operation of power plants

## Takahama Nuclear Power Station Units 3 and 4 and Ohi Nuclear Power Station Units 3 and 4 continue safe and stable operation

We resumed operation at Ohi Nuclear Power Station Unit 3 in March 2018 and Unit 4 in May of the same year. To continue with safe and stable operation into the future, we will keep expending all possible means to operate and maintain these units, together with Takahama Nuclear Power Station Units 3 and 4, which resumed operation in 2017, with a sense of pressure and top priority given to safety.

## Preparing for operation beyond 40 years

Promoting safety improvement measures toward the restarting of operations at Takahama Nuclear Power Station Units 1 and 2 and Mihama Nuclear Power Station Units 3, as well as activities to gain understanding of operations beyond 40 years

Our company has always maintained the durability of our nuclear power plant facilities by continuously implementing maintenance and management, including regular inspections and planned equipment replacements. At the time of our application for an operation period extension for 40 years from the starting month of operation, in accordance with the law, for Takahama Power Station Units 1 and 2 and Mihama Power Station Unit 3, special inspections were carried out for reactor vessels and other equipment. In addition, technical evaluations of degradation from age were carried out, confirming that the durability of important facilities for safety could be assured even for an operation period of 60 years. After these examinations, we received operation period extension approvals from the Nuclear Regulation Authority for both power stations. As we now prepare for operations beyond 40 years, we are steadily advancing large-scale safety measure construction projects.

We are undertaking face-to-face communication, including power plants tours 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 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

We are advancing the decommissioning plans for Mihama Nuclear Power Station Units 1 and 2, which will cover about 30 years in total. Specifically, the plans will be moved forward in four main stages: preparation work for dismantling, disassembly of the reactor's auxiliary buildings, dismantling of the reactor vessel and other equipment and the lastly, disassembly of the structures. Currently we are advancing the process of the first stage. For Ohi Nuclear Power Station Units 1 and 2, we applied for decommissioning in November 2018 and received the Nuclear Regulation Authority's examinations. Going forward, we will move ahead with the decommissioning of these units along with Mihama Nuclear Power Station Units 1 and 2, for which we have already received approval for decommissioning, with top priority given to safety.

## Voluntary efforts to enhance nuclear safety

## Further strengthening of ongoing voluntary efforts to enhance nuclear safety

Apart from regulatory frameworks, we are advancing our voluntary and sustained efforts for improving the safety of nuclear power generation as a unified company. Our efforts are organized as a road map and are publicly reported semiannually. Safety enhancement is also promoted as necessary through cooperation with organizations, such as the Japan Nuclear Safety Institute (JANSI), which provides support through evaluation of safety enhancement efforts and suggestions, the Nuclear Risk Research Center (NRRC), which supports safety enhancement efforts from the perspective of probabilistic risk assessment, and the Atomic Energy Association (ATENA), which identifies issues that the entire nuclear power industry should address. With overseas electric companies, we exchange information at top management meetings and at the working level. Furthermore, we proactively incorporate overseas case examples and knowledge through the World Association of Nuclear Operators (WANO) and other organizations.

### Safety enhancement efforts in cooperation with Japanese and overseas organizations



Status of nuclear power plants and new regulatory requirements throughout Japan (as of May 24, 2019)



### Key

### Plant status

Operational: 
PWR (pressurized water reactor)
BWR (boiling water reactor)
Decommissioned: (Determined/Under review)

New regulatory requirement compliance status Nuclear reactor installation and upgrading permit received:

Application for permission to install and upgrade nuclear reactor facilities completed: Service life extension (beyond 40 years)

| Operating  |                   |                   |                            |  |  |  |
|--|-------------------|-------------------|----------------------------|--|--|--|
| New regulatory<br>requirement<br>compliance status               | PWR<br>(reactors) | BWR<br>(reactors) | <b>Total</b><br>(reactors) |  |  |  |
| Nuclear reactor installation<br>and upgrading permit<br>received | 12                | 3                 | 15                         |  |  |  |
| Application submitted  | 4                 | 6*                | 10                         |  |  |  |
| Application not submitted  | 0                 | 8                 | 8                          |  |  |  |
| Total  | 16                | 17                | 33                         |  |  |  |

### Decommissioned

| 5   I. | 22 |
|--------|----|
| 0 10   |    |

 Excluding Ohma and Shimane Unit 3 that are under construction

\*\* On June 14, 2018, Tokyo Electric Power Company Holdings, Inc. announced that it is considering decommissioning the Fukushima Daini Nuclear Power Station.

# Maintaining power supplies with the invariable safety and stability after the full liberalization of the retail electricity sales

## Maintaining electric power quality by adjusting supply and demand balances

We are working for the stable supply of power by adjusting the amount of power generated in response to fluctuations in the amount of power used in the Kansai area.

In recent years, the incorporation of power generation from renewable energy sources has been progressing in Japan. The amounts generated from solar and wind power vary greatly due to weather changes. For this reason, we are working to maintain the balance of power supply and demand as well as voltages and frequencies by precisely adjusting the amounts of power generated by thermal power and pumped-storage hydropower plants by using technology that forecasts solar power output. In addition to that, we are actively contributing to the incorporation of power generation from renewable energy sources.

### During clear weather



Solar power generation Adjustable power sources (thermal and pumped-storage hydropower

## Training the personnel who support safe and stable supply functions

Systematic drills are carried out on a continuous basis to train individuals and provide necessary specialized skills. Additionally, to properly preserve and pass on these techniques and technical skills throughout the Group we have a system in place that certifies as specialist technicians those individuals who have advanced technical capabilities and who demonstrate leadership. We have also introduced a system for ascertaining the technical capabilities of individuals, along with various other measures.

## To provide high-quality electric power

Kansai Electric Power works 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, we are maintaining one of the world's highest power quality levels in the transmission and distribution business.

Nevertheless, on September 4, 2018, the powerful Typhoon No. 21 ripped through the area in which we operate, 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.

Reflecting on this situation, we will step up our efforts to develop and introduce new technologies and new construction methods for the purpose of preventing failures and for swift recovery in the event that an accident does occur. Along with that, systematic renovation is in progress for aging facilities.

### Annual duration of power outage per household





## **Preventing electrical accidents**

If something approaches, touches or damages one of our electrical facilities, including transmission and distribution equipment, injury due to electric shock, wide-area power outages and other serious impacts on society could occur.

In order to prevent such electrical accidents, we provide information about things that construction companies should be aware of during construction and that customers should keep in mind during daily life, for example, on our website and through various public relations activities.

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

Upon renewal of aging facilities that were constructed during the period of rapid economic growth, we have proactively introduced a new system to build facilities that enable us to

respond more swiftly than ever in case a defect occurs within the facilities by remote checking or other means. In February 2019, Gakken Kizu Power Station was established by incorporating

all these new systems. We will



continue proactively introducing these new technologies and take all possible measures to ensure the safe and stable supply of power.

## Well prepared for G20 Osaka Summit

The G20 Summit was held in Osaka on June 28 and 29, 2019 for the first time in Japan.

Toward the success of the summit, as a member of the Kansai economic circles and as an energy company, we made all-out group efforts to build and implement a system for ensuring the security of facilities so nothing could happen to the stable supply of electricity.

More specifically, we cooperated with the summit by ensuring a stable supply of electricity to the conference sites and important facilities through patrol focused on power supply facilities, monitoring of electrical systems and operation systems, reinforced security and so on under a cooperative headquarters system headed by our president.

## Preparing for a natural disaster

## Preparing for a major disaster

Based on our mission of providing stable electric power, Kansai Electric Power promotes disaster mitigation initiatives that will strengthen facilities to withstand disaster. We have also put in place a disaster control system to enable rapid recovery from various kinds of natural disasters. Particularly, in the event of the Nankai Trough Earthquake, a megathrugst 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.

### Strengthening the disaster response system

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

We are also seeking to improve employee skills in responding to disasters and increasing their awareness about disaster preparation. We implement annual company-wide comprehensive disaster response training under the leadership of our president as the chief of the Emergency Headquarters. We do these things not only to prepare for the occurrence of



Number of participants in corporatewide comprehensive emergency response drills 9007

Corporatewide comprehensive emergency response drills (fiscal 2018) the Nankai Trough Earthquake but also through considering cases with various severe conditions such as the occurrence of a nuclear power disaster at the same time or occasions when the balance of power supply and demand is tight.

## Implementation of the Typhoon No. 21 Response Verification Committeye

Reflecting on the extensive and long-term power outage caused by Typhoon No. 21 that hit in September 2018, we established the Typhoon No. 21 Response Verification Committee headed by our president to ensure an even more solid response to future large-scale disasters. Under this structure and from the viewpoints of early restoration from power outages, customer service and cooperation with local governments, we verified our responses in general, extracted challenges and then considered measures in a broad range and summarized the results in a report.

Our key measures include utilization of drones for efficient understanding of equipment damage, enhancement of information distribution by developing a power outage information application and strengthening of the reception function of call centers. We will also enhance our information and contact system with local governments for improved cooperation in case of emergency.

Using a combination of such measures, we will fulfill our important mission of supporting the life of citizens through early restoration from power outages, delivery of fine-tuned, timely information about the power outages and the restoration outlook.

We will continue making strenuous efforts in building a truly robust business foundation that enables the safe and stable supply of electricity amid unexpected disasters.

## 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 power as quickly as possible.

Specifically, we proactively participate in disaster response training held by local governments, designated public corporations and the like. With Japan Ground Self-Defense Force and Japan Maritime Self-Defense Force, we have signed agreements for mutual cooperation in disaster preparedness and prevention.



Signed agreements on mutual cooperation with Japan Maritime Self-Defense Force Maizuru Regional Headquarters in August 2018

## Disaster response after company spin-off

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



Electric Power to our full extent.

supply.

Kansai Electric Power Disaster Preparation Measures (center) Kansai Electric Power Disaster Preparation Measures video (right)

aster Preparedness Handbook



Emergency system for communicating with relevant authorities

METI

Japan Self-Defense Force

Relevant

authorities

Organization for Cross-regional

Disaster manager

Other Power Supplier

Tokyo Branch

Restoration work for distribution cables

## Providing services as a consolidated group

Dispatching a restoration support team to other electric companies

support team to restore electricity amid the disastrous heavy rain in western Japan.

In July 2018, upon the request of the Chugoku Electric Power Co., Inc., we dispatched a

More specifically, we sent equipment such as high voltage power generators and

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

aerial work platforms as well as personnel for restoration work and logistics to the city of Mihara, Hiroshima. Over seven days, we cooperated in restoration work for the Chugoku

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

Our corporate 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.

For our Group to continuously be selected by customers, we will continue expanding various services in addition to our existing "total electric conversion" and provision of electricity and gas as a combination. From the standpoint of our customers, we will offer a wide variety of "safe, comfortable, convenient" as well as economical energy services. With our engineering strength that the Group has so far cultivated as our core, we are committed to provide solutions that solve our customers' problems in all aspects of lifestyle and business, through which we will play a role that exceeds our customers' expectations.

### Business areas for strong growth



### Services for residential customers

In addition to "total electric conversion" that realizes a comfortable and convenient lifestyle, since February 2018, we have started to offer "Nattoku Packs" that combine our electric and gas services to encourage more and more customers to choose our energies. We are also offering a variety of services that support daily life, including our "Kaketsuke Electricity Service," which dispatches support personnel to customers having trouble with electricity, and "Hapi e-Kurashi Support," a set of daily life troubleshooting and preferential services, and "Hapi e-Point," which can be collected by using our electricity and gas. As a comprehensive energy company, we will keep making efforts to lead customers to choose our Group for both our prices and services.



## Service improvement and service creation to reflect the opinions of customers

We work to create and improve services in response to requests received from customers through our call centers, website, etc. so we can meet our customers' needs.



### **Customer satisfaction survey**

We conduct "Customer Satisfaction Surveys" asking our customers to assess how understandable our telephone operators' explanations regarding inquiries such as "The lights in the house went out suddenly." We receive high evaluations from a lot of customers.

We will keep working to make our customers more satisfied by utilizing the evaluation results for improvements in services and businesses.



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## Create new services and value that meet customer needs

K-Opticom Corporation has consolidated the information system development function owned by Kanden System Solutions Co., Inc., and changed its corporate name to OPTAGE Inc.

This business integration enables the provision of enhanced one-stop solutions combining information and communication. We will continue meeting the needs of our customers by providing new services and value, including digitalization and IoT, as well as existing services, such as FTTH services—"eo Optical Fiber Internet," "eo Optical Fiber Telephone" and "eo Optical Fiber Television" —which utilize our own optical fiber network that has high speed and reliability, and "mineo" cell phone services.



OPTAGE Inc. service brands

## Lifestyle services with the confidence of our customers as the foundation

With quality is our top priority, we deliver lifestyle-related services to residential customers. These services provide peace of mind, comfort and convenience and are deeply connected to their lives. In this way, our individual companies seek to make our corporate group the one that our customers trust and choose as the "best partner for their lifestyles." As for caregiving services, in particular, considering the arrival of a society in which the average age is extremely high, in July 2018 we started demonstration experiments of IoT technology-based lifestyle support services for the elderly at home. Specifically, we have been carrying out necessary studies to create an application that enables the provision of even higher quality care and more accurate and more detailed safety confirmations by reading data to grasp the details of changes in life rhythm, vital signs, sleep states, etc. of the elderly at home.

We will keep offering high quality services in real estate, nursing care, home security, health management support and other businesses that our Group operates. At the same time,



employing the comprehensive abilities of our Group, we will combine the above businesses to satisfy our customers' diversified needs, thereby supporting the realization of peace of mind, comfort and convenience in customer lifestyles even more than before.

## Services for corporate customers

Kansai Electric Power 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.

### **Examples of adopting utility services**

Kintetsu Real Estate Co., Ltd. adopted the utility services of Kanden Energy Solution Co., Inc. (Kenes) for the Abeno Harukas super-high rise multifunction building, which stands 300 m above ground and had its grand opening in March 2014.

Expert energy technicians from Kenes are stationed at the building around-the-clock, managing facilities with different energy quality demands, including a department store, offices, a hotel and a museum. Moreover, we are continuously realizing energy, cost and CO<sub>2</sub> reductions by monitoring energy use conditions in real time and utilizing the collected data in operation and maintenance. In this way, we have been told that customers are able to focus their business resources, including essential personnel, on their primary businesses by entrusting work related to energy management to Kenes.

### Examples of services for corporate customers

| Examples of services for corporate customers                                    |   |  |  |
|---|---|--|--|
| Electricity Usage<br>Notification Service<br>(Kansai Electric Power<br>Company) | In addition to making it possible to see electricity use<br>conditions on a website, we also distribute<br>information and email newsletters that help customers<br>solve problems.   |  |  |
| <b>Utility Service</b><br>(Kanden Energy<br>Solution Co., Inc.)                 | This service enables customers to outsource facility<br>management and even makes initial financing<br>unnecessary for them by providing comprehensive<br>services from fund-raising and design to installation<br>and maintenance administration for utility facilities<br>related to energy, including power receiving<br>equipment, air-conditioning and heating equipment<br>and boilers. |  |  |
| Assistive vehicle<br>leasing service<br>(The Kanden L & A Co., Ltd.)            | We provide total support for assistive vehicles, including leasing, sales, repair and upgrading.  |  |  |
| Business place security<br>(KANDEN Security of<br>Society, Inc.)                | This service preserves customer safety 24 hours a day 365 days a year by rapidly detecting abnormalities, including intruders and fires, and rushing staff to the site.   |  |  |
| Comprehensive<br>building management<br>(Kanden Facilities Co.,<br>Ltd.)        | These services provide facility environments that are<br>safe and secure and contribute to increasing property<br>values through, for example, the daily maintenance<br>management and cleaning of buildings and facilities,<br>security, environmental hygiene and energy<br>management.   |  |  |

The group companies that provide the services are indicated inside parentheses.



Inspecting the utility facilities of the Abeno Harukas building

### Future plans

Recently sentiment has been rising to strongly expect enterprises to make contributions toward the realization of a sustainable society.

Even under a severely competitive environment after the full liberalization of retail electricity and gas sales, our Group will keep challenging to meet such expectations and earn the trust of customers and communities.

Especially about safe and stable electricity supply, which forms the backbone of the Group' business, we will proceed with steps for the continuation of safe and stable operations and resumption of subsequent plants. In addition, after the spin-off of our transmission/distribution company, we will steadily work to ensure stable supply from a neutral and equitable standpoint, prepare for large-scale disasters in cooperation with organizations concerned and foster a safety culture in our Group-wide efforts.

As provided in the Medium-term Management Plan (2019-2021), we will deliver a broad range of "safe, comfortable, convenient" and economical energy services. Along with that, employing the comprehensive strengths of our Group, we will create new businesses and services. As a leading company in the Japanese energy sector and also a major player of "a shared infrastructure supporting the realization of a sustainable society in the future," we will continue to be at the service of our customers and communities.



Toru Tanaka General Manager of Office of Corporate Planning The Kansai Electric Power Company