



Environment

Core Principles of Our Sustainability “Care for the natural environment”

The ORIX Corporate Sustainability Policy states “Care for the natural environment” as one of our core principles that should be implemented in our daily work.

Care for the natural environment:

As detailed in our Environmental Policy, we measure and minimize our environmental impacts and look to provide solutions to society’s environmental issues through our business. ORIX takes a precautionary approach, as set out in the Rio Declaration, to environmental challenges, meaning we act proactively to manage environmental risks and do not use lack of full scientific evidence as a reason to postpone reasonable actions to prevent environmental damage.

Environmental Policy and Goals (Updated September 25, 2012)

Environmental Policy

ORIX Group strives to understand the needs of customers and society, contributing environmental and energy solutions through business. We will continue to adapt to changes brought on by business expansion and growth.

Goals

1. Provide new ecological services that contribute environmental and energy solutions.
2. Understand the impact of business activities on the environment, complying with environmental laws and regulations in order to reduce environmental impact.
3. Raise employee awareness and knowledge in order to respond to environmental issues based on the nature of our business.
4. Provide and disclose information on matters required by environmental laws and regulations.

Responding to Climate Change and Supporting TCFD

Responding to climate change is a key issue that needs to be addressed globally. ORIX recognizes that climate change is an issue that we should tackle and expressed our support for TCFD (Task Force on Climate-related Financial Disclosures) in October 2020.

TCFD has been established by the Financial Stability Board (FSB)* at the request of G20 to examine how climate-related information should be disclosed, and how financial

institutions should respond. TCFD published its final report in June 2017, and recommends companies to disclose items related to climate change-related risks and opportunities.

ORIX believes that responding to TCFD recommendations will contribute to improving our corporate value over the medium to long term, and that working on actions to achieve TCFD recommendations will also be effective in establishing a solid methodology and governance for

promoting our sustainability more generally.

ORIX recognizes climate change as an important risk and at the same time as an opportunity for our global operations. We will work to determine the financial impact of climate change risks and opportunities and enhance our disclosure while also working proactively to respond to climate change issues through our business activities.

* An international body comprised by finance ministries and central banks, which monitors the global financial system.



Environment

Contributing to Society through Our Business Activities

Transition to a Carbon-free Society, Efficient Use and Supply of Energy —Energy Business

ORIX is committed to popularizing renewable energy including solar, biomass, geothermal and wind to support the transition to a carbon-free society now in progress in countries worldwide. For efficient use and supply of energy, ORIX provides a stable supply of electricity including environment friendly electrical power (low emissions factor services) through our power supply service. Our energy management service supports customers to realize energy savings.

<ORIX's Energy Business>

ORIX has built a value chain of generating, delivering, and managing energy, and provides one-stop services tailored to respond to customer needs.



Generate



Renewable Energy Business

ORIX promotes development and operation of power plants that utilize not only solar power but also wind and geothermal power. We contribute to the spread of a well-balanced use of renewable energy.

(All figures are as of March 31, 2020)



Solar power generation business (Japan)

- Mega-solar and roof solar power generation business
ORIX is one of the largest solar power producers in Japan. Our solar power generation business has projects with a capacity of about 1GW of which 910MW of capacity is online.
- Corporate PPA (Power Purchase Agreement)
Through our Corporate PPA service, ORIX installs solar power generation systems and storage battery systems at customer-owned facilities, and supplies the electricity generated through these systems to the customers.



Biomass power generation business (Japan)

- ORIX operates three power plants.
- One power plant is fueled by 100% wood chip biomass and has a total generation capacity of 13.6MW.
- Two power plants are fueled by coal and wood chip biomass and have a total generation capacity of 224MW. These power plants use environment friendly, world-class facilities. Biomass accounts for approximately 30% or more of the total amount of fuel. This results in lower CO₂ emissions compared to coal-fired power plants in the same class.

For detailed information

▶▶▶ [Transition to a Carbon-free Society](#)



Wind power generation business (Japan and overseas)

- In Japan, we are considering the feasibility of offshore wind power generation business.
- In India, we operate a total of 23 wind power plants in southwestern Indian states. The total generating capacity is 873.5MW.



Geothermal power generation business (Japan and overseas)

- In Japan, we plan to commence commercial operations of three geothermal power plants in 2022 or after. Total generation capacity will be 12.9MW. We are also investigating and considering projects in other locations.
- In the United States, we are an investor in Ormat Technologies, Inc. ("Ormat"). Ormat runs a geothermal power generation business with operations in the U.S., Central America and Africa. Ormat has a total generating capacity of 914MW.



Hydropower generation business (Overseas)

- ORIX has a stake in Bitexco Power Corporation ("BPC"), a hydropower generation company in Vietnam. BPC has a total generating capacity of 895MW.



Operation, management, and maintenance of renewable energy power plants (Japan)

- ORIX established a company tasked with the operation, management, and maintenance of power plants that use renewable energy. We operate and manage power plants at 84 sites nationwide, with a combined power generation capacity of approximately 446MW. In addition to carrying out maintenance and checks, ORIX provides immediate recovery support to minimize downtime and power generation losses in the event of malfunctions and maximizes power generation capacity by using remote monitoring and data analysis.



Environment

Contributing to Society through Our Business Activities

(Transition to a Carbon-free Society, Efficient Use and Supply of Energy — Energy Business)

Deliver



Power Supply Service

In addition to our stable power supply service, we provide various power supply menus to support our customers' management of their carbon footprint.



Electric power retailing

- As a power producer and supplier, ORIX supplies generated power primarily to privately owned buildings and facilities requiring high-voltage power.
- Annual electricity sales volume is 1,995,390,000 kWh (FY 2020.3). The number of electric power supply destinations is approximately 10,000 facilities (as of March 31, 2020).
- ORIX operates three power plants (biomass power plants shown in the previous page) for stable power supply.



Environment friendly power supply services

- ORIX provides environment friendly electrical power supply services (low emissions factor services). ORIX supports customers both in achieving RE100 and in reducing their CO₂ emissions by increasing the proportion of electrical power generated from renewable energy and purchasing non-fossil certificates and J-Credits.

Manage



Energy Management Service

We contribute to reduced energy usage by making tailored energy saving proposals according to the energy usage status of our customers.



Energy-saving services

- Energy-saving services are services aimed at helping customers realize energy savings and reductions in CO₂ emissions through increased productivity of factories and production equipment. The services are offered when our customers update or establish new production facilities in factories and buildings.



Sale and lease/rental of solar panels, electricity storage systems

- We conduct wholesaling, leasing, rental and other services for solar panels and electricity storage systems. The combined use of solar panels and electricity storage systems allows customers to save electricity generated by solar power for own use, sale of surplus electricity, and as preparation for power outages.

Other

Joint research into a power tracking system

- ORIX has started joint research into a tracking system that leverages blockchain technology to verify the production site and history of renewable energy-based electric power, from supply to consumption. This research is an effort to solve the problem of certifying the origin of renewable energy.

Participating in a demonstration project to build a virtual power plant (VPP)

- Virtual power plants (VPP) control the charge and discharge of storage batteries installed at the homes of private customers, commercial facilities and factories to make them function like a single power plant. VPPs make efficient use of small distributed energy resources and provide the economic benefit of being cheaper to establish than traditional power plants.

For detailed information

▶▶▶ [Efficient Use and Supply of Energy](#)



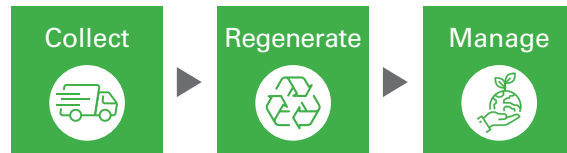
Environment

Creation of a Society That Reuses and Recycles – Environment Business

ORIX conducts business activities such as collecting resources and waste, regenerating resources and waste by reusing and recycling, and managing resources and waste properly. Through these activities, ORIX promotes effective use of resources, control of waste generation, and reduction of environmental impact, and contributes to the creation of a society that reuses and recycles.

<ORIX's Environment Business>

ORIX has built a value chain of collecting, regenerating, and managing resources and waste, and provides one-stop services tailored to respond to customer needs.



Collect



Collecting resources and waste

- ORIX has built a Japan-wide network to support collecting unwanted goods. In addition to collecting waste and unwanted goods, we also respond to diverse customer needs including reuse, recycling, and proper disposal of unwanted goods with a network for proper disposal that includes companies involved in collection and transportation, sale of used products, intermediate disposal and recycling.

Regenerate



Regenerating resources and waste by reusing and recycling

- The collected waste items are sorted and those that can be reused are sold to second-hand sales companies. Items that cannot be reused are disassembled and recycled as materials.
- ORIX operates a zero waste facility*¹ that uses cutting-edge thermal decomposition, gasification and reforming methods. A main feature of the facility is that it achieves a 100% recycling rate by reducing waste to reusable resources through the process of melting or gasifying waste at approximately 2,000°C. It is capable of processing 450 tons of waste per day, making it one of the largest private-sector incineration and melting facilities in Japan.

*¹ A facility that achieves zero waste by breaking down waste into raw materials and effectively using them.

Manage



Managing resources and waste properly

- ORIX is constructing a dry-type biogas power generation facility, the largest in Japan,*² that utilizes municipal waste. The plant is scheduled to be completed and put into operation in the fall of 2021. A dry biogas power generation facility can be used to recycle food without separating food waste and other waste. The operation of this facility will contribute to the improvement of the food recycling rate, which is low due to the difficulty of separating food waste and other non-food wastes.

*² Researched by ORIX.

- ORIX operates one of the largest controlled landfills in Japan. We provide final disposal of non-recyclable items as waste.
- ORIX offers a nationwide disposal service for used solar panels. Currently, shredding and landfill treatment is the mainstream. In the future, we will work to address the recycling of solar panels.
- ORIX provides a service to destroy data on storage equipment. In this service, we have installed a shredding machine in a special vehicle that we have developed and dispatch the vehicle to designated locations to destroy the data on the storage device in the presence of the customer.

For detailed information

▶▶▶ [Creation of a Society That Reuses and Recycles](#)

Creation of a Society That Reuses and Recycles —Auto Business / Real Estate Business

ORIX contributes to the creation of a society that emphasizes the extended use of products and reduces environmental loading. Providing products and services with high environmental performance and promoting a sharing economy in our auto business and real estate business ultimately helps to promote long-term rather than short-term use of assets by society.



Auto Business (All figures are as of March 31, 2020)

• Car rental and car sharing businesses

Our car rental and car sharing businesses offers electric vehicles (EV), hybrid vehicles (HV) and fuel cell vehicles (FCV). We have about 3,000 locations nationwide. Of the approximately 75,000 vehicles under management, approximately 11,000 are EV, HV or FCV.

• Telematics service “e-Telematics”

In ORIX’s e-Telematics service, an onboard device with communication and GPS functions is installed in customer vehicles to visualize their operating status. The service analyzes driving data and notifies a designated recipient

upon the occurrence of erratic or unusual driving behavior. Such notifications lead to safe, environmentally sound driving that reduces fuel costs, improves fuel economy and reduces CO₂ emissions.

Number of vehicles with e-Telematics and e-Telematics PRO: 159,000.

• Car sharing business

ORIX is developing a car sharing business with more than 2,000 car sharing stations centered around urban areas operating more than 3,400 vehicles. We are responding to the call for reducing environmental loading including CO₂ emissions by promoting the combined use of car sharing and public transportation.

Approximately 270,000 member users.



Real Estate Business

• Real estate development with high environmental performance

The buildings and logistics facilities that ORIX has developed have earned high praise for environmental performance and acquired certifications such as LEED*¹ and CASBEE.*²

*1 An environmental performance index developed by the U.S. Green Building Council. It aims to promote the global development of sustainable buildings with excellent energy efficiency.

*2 Comprehensive Assessment System for Built Environment Efficiency: An evaluation system in Japan that evaluates and ranks the environmental performance of buildings.

• Creation of environmentally friendly homes

In its Strategic Energy Plan, the Government of Japan has set a policy goal of achieving ZEH*³ for houses by 2030. Ahead of this plan, we completed Japan’s first “Nearly ZEH-M*⁴” condominium in 2019. We are promoting ZEH-M condominiums as a standard for our future developments.

*3 ZEH is an acronym for a net zero energy house, meaning a house that aims to reduce its balance of annual energy consumption to zero or less by means of energy savings through the introduction of high-performance insulation materials and energy efficient equipment, as well as energy creation from electricity generation using solar power or other methods.

*4 Nearly Zero Energy Mansion. A condominium that complies with Nearly ZEH-M guidelines and achieves a reduction of 75% or more in primary energy consumption through energy savings and energy creation.

• Residential renovation business

ORIX is promoting real estate renovation of both communal and detached housing to lengthen the life span of real estate in Japan. In these businesses, we purchase a second-hand condominium and carry out large-scale repair work not only in the interior of exclusively owned areas but also in common areas such as the entrance and exterior to increase the building’s value. ORIX is actively receiving orders for repair work to protect the value of buildings and allow residents to live long-term in their housing with peace of mind.

For detailed information

▶▶▶ [Creation of a Society That Reuses and Recycles](#)



Initiatives for the Environment Reduction of Environmental Impact in Business Processes

ORIX is working to reduce the environmental impact of its business processes.



Powering recycling plants with 100% renewable energy

- There is growing societal demand for environment friendly initiatives such as reductions in CO₂. As such, ORIX Eco Services (OES) has decided to convert its two recycling plants—Funabashi Plant and Kasukabe Plant—to use electrical power generated from 100% renewable energy (including the use of non-fossil certified renewable energy sources); these plants are therefore now powered by CO₂-free electricity. In the future, OES plans to source the electrical power used by these recycling plants from Agatsuma Biomass Power Plant and other renewable energy power plants owned by ORIX Group.



Reduction of CO₂ emissions in aquariums

- **Artificial seawater**

The Kyoto and Sumida Aquariums have created the first Japanese*¹ artificial seawater production system*² and replaced the water in their aquariums with water from this system. This system solves many problems faced by inland aquariums, such as suppressing the CO₂ generated when transporting sea water in large vehicles. Additionally, the system also maintains a constant water quality throughout the year. Because of this, it is now possible to provide a comfortable environment for organisms in aquariums.

*1 Kyoto Aquarium was the first in Japan, followed by the Sumida Aquarium.

*2 Excludes freshwater.

- **Installation of solar electrical panels**

The Kyoto Aquarium controls CO₂ emissions through the use of solar power generation systems, advanced ventilation systems, and LED lighting.



Utilization of geothermal heat from hot springs at hot spring inns

- Beppu SUGINOI HOTEL operates the Suginoi Geothermal Power Station, which utilizes the largest geothermal resource in Japan for private use. The total generating capacity is 1,900kW (1.9MW), and the generated electricity is used in electric facilities throughout the hotel and covers about 30% of its peak electricity consumption.



Abolition of use of plastic straws and plastic bags

- ORIX Real Estate is actively promoting measures to prevent marine pollution by reducing plastic waste. To this end, ORIX Real Estate has abolished the use of plastic straws at 25 accommodations, aquariums, and restaurants and replaced them with paper straws. ORIX Real Estate also abolished the use of free plastic bags in aquarium gift shops (still offered for a fee) and is shifting to the use of free paper bags.

For detailed information

▶▶▶ [Reduction of Environmental Impact in Business Processes](#)

Sustainable Business Activities

Helping Achieve a Sustainable Society through Our Environment and Energy Business

ORIX launched its environment and energy business in 1995. It has now expanded into a wide range of markets, with energy businesses including renewable energy, electric power retailing and energy-saving services, and environmental businesses including waste recycling and processing. Notably, ORIX is a leader in Japan in solar power, with generation capacity of approximately 1,000MW, including plants in operation and planned for construction, and in geothermal power, with plants planned for construction having a potential generation capacity of 13MW. Outside Japan, ORIX participates in businesses with wind power generation capacity of approximately 870MW, geothermal power generation

capacity of approximately 910MW, and hydroelectric power generation capacity of approximately 900MW.

The trend toward a sustainable society is in full force worldwide. It involves initiatives to use renewable energy and create a society that reuses and recycles, which is giving rise to numerous related technologies and services. We are using the expertise we have cultivated in these businesses to proactively conduct new initiatives that include expanding our renewable energy business in Japan and internationally, providing services that help customers reduce carbon emissions, developing technologies for managing renewable energy supply and demand using IT, and constructing new

municipal waste processing facilities.

We intend to expand our environment and energy business globally, therefore advancing the overall business, and will continue to contribute to ORIX's goal of creating a sustainable society through our business activities.

Hidetake Takahashi

Executive Officer

Head of Energy and Eco Services Business Headquarters

Resolving Social Issues through Diverse Real Estate Businesses

ORIX launched its real estate business in 1986. We now have a comprehensive portfolio of diversified real estate businesses that encompass: i) development and investment in properties such as office buildings, commercial facilities and logistics centers; ii) the operation of facilities including inns, hotels and aquariums; iii) real estate asset management; iv) mixed-use urban development projects; and v) real estate development, distribution, maintenance and management with a focus on condominiums through DAIKYO, which became a wholly owned subsidiary in 2019.

Our real estate businesses are able to contribute to various social issues such as reducing the environmental impact of real estate and regional revitalization. Addressing these issues helps to create new business opportunities and increase the value of our business. By resolving social issues through our business, we aim to create a business portfolio that has both high market value while also helping to realize a sustainable society.

Specific initiatives include developing environmentally friendly real estate, conserving energy at the facilities we operate, and revitalizing regional areas through community

development and local inn management. Another focus is making the customers who use our properties feel safe, secure and comfortable.

Toshinari Fukaya

Group Managing Executive

President, ORIX Real Estate Corporation