

The background of the cover is a photograph of a small green seedling with two leaves growing out of a piece of weathered, light-colored wood. The scene is set against a blurred background of green foliage and sunlight filtering through the trees. A large, thick circular graphic is overlaid on the image, with a red top arc, a blue bottom arc, and a purple bottom arc.

Environmental Report

ORIX Group

A Message from CEO

The ORIX Group is focusing its combined strength to resolve environmental and energy issues through its business operations.



Makoto Inoue

**Director
Representative Executive Officer
President and Chief Executive Officer**

The Paris Agreement came into effect in November 2016, making it obligatory to report to the United Nations on the status of greenhouse gas emission reduction targets and progress. Migration from a carbon society will continue to accelerate in countries around the world, and Japan is required to fulfill no less responsibility than other major countries in adopting initiatives.

The Japanese government is already leading the way with such initiatives as formulating strategies to lead the world in environmental technologies and reforming laws with the objective of strengthening energy conservation regarding businesses and households that have increasing energy consumption.

ORIX first entered the environment and energy business in 1995 when it engaged in capital participation in a wind power generation project. Currently, we are engaged in businesses in a wide variety of domains including renewable energy, electric power supply, energy conservation services, waste processing and metal resources. We are also moving forward with expanding our environment and energy business overseas, utilizing the expertise we cultivated in Japan. The environment and energy business is an area directly connected with social issues in a global perspective. The ORIX Group will resolve these issues with proposals from an original point of view, leveraging the sophisticated expertise we possess in a wide array of businesses. To express to the international community our ideas of steadily putting this thinking into practice, the Group joined the United Nations Global Compact in July 2014.

In Japan, the introduction of renewable energy is being promoted as a countermeasure against global warming. While doing so, from the viewpoint of the stable supply of electricity, Japan is moving ahead with energy policies that give a certain weight to thermal power generation.

Currently, with these developments as a backdrop, we have positioned the environment and energy business as one of our key areas. At the end of March 2016, we secured a project of about 900 MW in the solar power generation business, which is one of the largest in Japan. In addition, we are developing the business of supplying electricity to corporate clients amid the ongoing liberalization of the Japanese electricity market. We are also moving forward with the development of and investment in environmentally friendly base load power sources. Moreover, we are also investing overseas where we are participating in a 1,004 MW large-scale wind power generation business in India and have decided to participate in a hydroelectric power business in Vietnam.

Based on our belief that we contribute to society through our business activities, ORIX is always seeking to create new value to provide to society, and aims to continue to be a corporate presence that society finds necessary. I believe by actively engaging in business and investment activities to respond to key global environmental and energy issues, we can provide a distinctive ORIX value to society. Looking ahead, we will endeavor to leverage the collective capabilities of the ORIX Group to resolve problems through our business activities, thereby contributing to society.

November 2016



Sarabetsu Tokachi Speedway Mega-Solar Power Plant

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Approach to the Environment and Safety

Environmental Policy and Activity Targets

Environmental Policy

The ORIX Group will contribute to resolving environmental and energy issues through business operations that meet the needs of customers and society. This commitment will direct our efforts as we continue to expand the range of our business and growth.

Activity Targets

1. Provide new Eco Services that contribute to the resolution of the environmental and energy issues faced by customers and society.
2. Maintain an understanding of the environmental impact of our business and work to reduce this impact while complying with environmental regulations.
3. Improve employee awareness and knowledge to ensure environmental initiatives that match the characteristics of each business are implemented.
4. Provide appropriate information regarding legally mandated disclosure and environmental initiatives.

Revised September 25, 2012

Environmental Activity Framework

The ORIX Group has established the following framework to promote environmental activities that are more closely linked to the Group’s business activities.

- The representative responsible for environmental activities is the ORIX Group’s Chief Financial Officer (CFO), and the managing division is the Corporate Planning Department, which will formulate policies and plans.
- Divisions that will play principal roles are the ORIX Legal & External Relations Department, Corporate Communications Department and Energy and Eco Services Business Headquarters.
- The scope of activities will include all domestic Group companies. Coordination will be conducted with these Group companies, particularly those developing business that can significantly impact the environment, to monitor environmental data and legal compliance. Response measures will be implemented as necessary.



For further details about the ORIX Group’s environmental and social contribution activities, please visit our website. <http://www.orix.co.jp/grp/en/sustainability>

Safety & Environmental Quality Policy

The ORIX Group is expanding its business domains in response to the diversifying needs of customers and the changing economic environment while operating its businesses on a long-term basis by utilizing assets managed under facility management operations and environmental energy-related operations. In constructing and operating the facilities needed in such businesses, countermeasures related to safety, health and the environment together with the improvement of service quality are especially important, and all of these are also needed by society.

The ORIX Group, through the stable delivery of high-quality services to its customers, aims to contribute broadly to society through the operation of its businesses. In order to achieve this aim, the ORIX Group formulated its Safety & Environmental Quality Policy on the basis of EC21 developed by ORIX and its environmental policies.

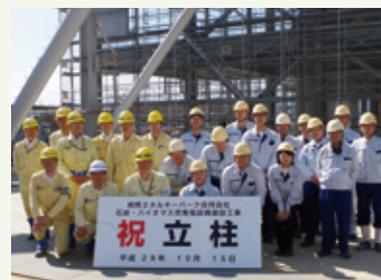
1. The ORIX Group shall comply with all laws, regulations and agreements related to safety, health, environmental conservation, and quality.
2. All officers and employees of the ORIX Group and its supply chain shall place top priority on ensuring security and aim to achieve "zero disasters."
3. The ORIX Group shall implement measures that mitigate environmental burdens while giving due consideration to the surrounding environment.
4. The ORIX Group shall respond to customers' needs involving environment-related products, technologies and energy, and provide the relevant reliable solutions.
5. The ORIX Group shall make all officers and employees of the ORIX Group and its supply chain well aware of this Safety & Environmental Quality Policy. The ORIX Group shall also make an announcement to the public about this Safety & Environmental Quality Policy.

Formulated October 2014

Safety Education and Training

The ORIX Group is strengthening its safety management framework in line with the Safety & Environment Quality Policy formulated in October 2014. In the Energy and Eco Services Business Headquarters in particular, requests were made to a third-party safety consultant organization to survey the safety management status, assess the current situation and identify issues at the already operating biomass power plant, a wood chip-fired thermal power plant, and waste processing facilities. This led to a review of the safety management framework. Construction is also moving ahead on two coal-fired- and biomass power plants scheduled to start operating in fiscal 2018, and ORIX is striving to strengthen the safety management framework for its construction and operation.

As one aspect of these operations, in October 2015, workshop-style basic safety training was conducted to foster and enhance safety awareness among sales, administrative and facility operation officers. Participants offered opinions on the training, including one person who said, "it enabled me to reaffirm the necessity of safety training and I learned about how to approach risk assessment." During the current fiscal year the scope of those eligible to attend the training will be broadened, and practical training will be used to entrench safety awareness among those in charge of factory operations, thereby becoming the foundation stone to build the company's safety management framework further.



A ceremony to mark the start of construction of the boiler at Soma Energy Park

Highlights of Environmental Activities

Investment in UET, a U.S.-Based Energy Storage Company

In December 2015, ORIX acquired a stake in the U.S.-based startup UniEnergy Technologies, LLC (UET), which develops and manufactures advanced large-scale energy storage systems. UET is a startup founded in 2012 by two researchers who developed a new type of electrolyte while working at the U.S. Department of Energy's Pacific Northwest National Laboratory (PNNL). The next-generation vanadium redox flow battery (VRB) commercialized into a utility-class system by UET can be left charged for long periods of time, easily accommodates large capacities, and is long-lasting compared to existing energy storage technologies. By significantly increasing the energy density of the electrolyte, UET has also succeeded in reducing the VRB's installation space, a drawback from the previous VRB technologies. In the U.S., with the increased cost of continuing to maintain power transmission across an expansive territory, renewable power generation has been growing due to public investment and regulatory policy. As a result, large-scale energy storage systems are increasingly being installed to stabilize and improve the resilience of power supplies which can be affected by factors such as weather disruptions, and other electric grid events. There is also an intensifying drive among large energy consumers like commercial buildings to lower their electricity bills by using large-scale energy storage systems to reduce demand charges*¹ billed based on peak energy usage. Against this backdrop, the

U.S. market for large-scale energy storage systems is projected to expand about ninefold from 2015 to 2021*². In addition to domestic projects like renewable power generation and electricity retailing, ORIX is also working to expand its energy business in the U.S. market, with efforts including investment in energy-related businesses. ORIX will continue to pursue investment in the promising energy markets both in Asia and Europe.

*1 In many electricity service areas in the U.S., a charge corresponding to a customer's peak demand for the period is added to their electricity bill. Since demand charges can account for 30-70% of electricity costs, means of reducing them are highly-sought.

*2 Source: GTM Research, U.S. Energy Storage Monitor/June 2016



A large-scale energy storage system and local employees

Taking Part in the Japan Climate Leaders' Partnership Activities

ORIX has been a member company of the Japan Climate Leaders' Partnership (J-CLP) since 2014. Member companies are of the understanding that climate change "represents a significant risk to the stability of society and business," aim to realize sustainability and decarbonization, and are required to take the initiative in implementing these ideas. Activities in 2015 centered on COP21 held in December and included joining other member companies to submit requests to the Minister for the Environment, conducting dialogue with experts and organizations and holding study groups on matters such as carbon pricing. We believe that information obtained through these activities will be used to connect to creating business opportunities for ORIX.



With J-CLP members submitting requirements for COP21 to the then-Environment Minister Tamayo Marukawa

Sales of Japan's Largest Case of Carport-Type Solar Power Generation Systems

ORIX installed a carport-type solar power generation system with a maximum output of 1MW in March 2016 in part of the parking lot at the Ami Premium Outlets operated by Mitsubishi Estate-Simon Co., Ltd (located in Chiyoda-ku, Tokyo).

Mitsubishi Estate-Simon consumes all electricity generated through solar power generation systems, which has enabled a reduction of about 580 tons* of CO₂ year on year.

* Based on 2015 Japan Photovoltaic Energy Association guidelines
Based on calculations that generating 1kWh of electricity emits 505.5 grams of CO₂.



Carport-type solar power generation systems

Signatories to the Principles for Financial Action for the 21st Century

ORIX, ORIX Bank and ORIX Life Insurance support and are signatories to the Principles for Financial Action towards a Sustainable Society (Principles for Financial Action for the 21st Century).



Carbon Offset (Ise-Shima Summit)

ORIX cooperated by providing 50t-CO₂ in carbon offsets for energy consumed in transporting and housing participants in the G7 Ise-Shima Summit in May 2016.



ORIX Miyauchi Foundation Initiatives

The ORIX Group contributes through the ORIX Miyauchi Foundation to back various areas such as social welfare, support for children and youth who represent our future, and music and the arts, which cannot be reached by our business activities alone.



Hands-on tree-planting experience at Domin no Mori in Hokkaido

Between October 2015 and March 2016, environmental preservation activities to which local children were invited at five locations across Japan, experiencing tree-planting and hands-on nature education were conducted. ORIX Group executives and their family members took part as volunteers and participants joined as one to contribute to the local community.

Environmental Preservation Activities

Okinawa Coral Reef Restoration Project

In partnership with Sea Seed LLC and Okiden Kaihatsu Company, Inc., ORIX Real Estate has been engaged in "SANGO ORIX," a project to restore Okinawa's coral reefs with the aim of protecting their abundant capacity to sustain biodiversity and pass pristine oceans on to future generations, since 2008. At present, the project is planting coral off the shores of Okinawa and continues preservation and renewal activities such as surveys to confirm the growth status of coral. ORIX has successfully transplanted 9,600 coral seedlings of the total 10,000 scheduled.



Enosui eco

The Enoshima Aquarium, located in Fujisawa City, Kanagawa Prefecture, is pursuing its own form of environment activities called "Enosui eco." Enosui eco is comprised of both Ecology and Eco-Action.

The aquarium provides a place to learn about animal habitats in a fun way and includes exhibits explaining the biodiversity and ecosystems of the Sagami Bay and hands-on events observing and investigating tide pool organisms and jellyfish. Furthermore, an Enosui eco Day is held on the third Sunday of every month. On this day, the aquarium conducts activities including beach cleaning and collection of bottle caps for the "Ecocap" Movement.



Mangrove Planting Project

Since 2012, after experiencing the damage caused by a typhoon, ORIX METRO Leasing and Finance Corporation has been planting mangrove trees in the Cagsao district along the Bay of San Miguel in the Philippines. In the planting of 100,000 seedlings conducted at least twice yearly, employees are joined by government officials and students. Planting mangroves not only protects local residents from high waves and damage from erosion, but also helps to nurture rich marine life.



History and Development of Environment and Energy Businesses

From Leasing to Neighboring Business Fields and Beyond



Energy field

Derived from leasing and consulting functions

ESCO

- 1995 Invested in a wind power company
- 2000 Launched ESCO services
- 2002 Established Energy and Eco Services Department at ORIX Corporation

Entry into electric power business

- 2007 Launched electricity wholesale business
- 2008 Acquired Agatsuma Electric Power Co., Ltd. (Now Agatsuma Bio Power Co., Ltd.)
- 2009 Launched electricity retailing business

Leasing

- 1995 Electric Utility Industry Reform (Liberalization of electric power wholesale in Japan)

- 2002 Passing of Renewable Portfolio Standards Law
- 2005 Power trading began on Japan Electric Power Exchange (JEPX)

Developments in Japan and Overseas

- 1997 Adoption of the Kyoto Protocol Strengthening of regulations through revision of Waste Disposal Laws
- 1998 Passing of Law Concerning the Promotion of Measures to Cope with Global Warming

- 2000 Passing of the Basic Law for Establishing the Recycling-based Society
- 2002 Passing of the Automobile Recycling Law
- 2005 The Kyoto Protocol enters into force Creation of Japan's Voluntary Emissions Trading Scheme (JVETS)

Environmental field

Derived from proper processing of end-of-lease assets

Waste Processing Intermediary

- 1998 Established ORIX Eco Services Corporation

Network-building

- 2002 Established ORIX Environmental Resources Management Corporation
- 2003 Launched Nationwide Recycling System business



Since its foundation in 1964, starting from the leasing business, ORIX has evolved its business by continuously expanding into neighboring fields and acquiring a wide range of expertise. In the field of environment and energy, from its first investment in a wind power generation business in 1995, ORIX has expanded its environment and energy-related businesses across a wide area including waste processing, energy conservation services, electric power supply, renewable energy, and metal resources.



Expansion of energy-saving services

- 2010 Launched sale of solar power generation systems
- 2010 Established ORIX Electric Power Corporation and launched bulk electric power purchasing service
- 2010 Invested in Ubiteq, INC.

Launched power generation business

- 2011 Launched operation of Agatsuma Biomass Power Plant

Expansion of renewable energy business

- 2012 Launched solar power generation operations
- 2012 Launched "Hatto Watto" demand response service
- 2013 Established ONE Energy Corporation and launched storage battery system rental service
- 2014 Established an environmental and energy investment fund together with the Asian Development Bank and Robeco Groep N.V.
- 2015 Invested in UET, U.S.-based next-generation large-scale energy storage startup
- 2016 Participated in a 1,004 MW, large-scale wind power generation business in India
- 2016 Invested in Bitexco Power Corporation, Vietnam's largest private hydropower company

<ul style="list-style-type: none"> 2009 Start of system for purchasing surplus solar power 	<ul style="list-style-type: none"> 2010 The Act Concerning the Rational Use of Energy enters into force 2011 Passing of Act on Special Measures Concerning Procurement of Renewable Electric Energy by Operators of Electric Utilities 	<ul style="list-style-type: none"> 2012 Introduction of feed-in tariff system for renewable energy 	<ul style="list-style-type: none"> 2016 Liberalization of the electricity retail industry throughout Japan Partial enactment of the Act for the Improvement of the Energy Saving Performance of Buildings
<ul style="list-style-type: none"> 2008 Start of the First Commitment Period of the Kyoto Protocol 	<ul style="list-style-type: none"> 2010 Partial Amendment to the Law Concerning the Promotion of Measures to Cope with Global Warming enters into force The Revised Tokyo Metropolitan Environmental Security Ordinance enters into force Convention on Biological Diversity Conference (COP10) 	<ul style="list-style-type: none"> 2012 Rio+20 UN Conference on Sustainable Development, Rio de Janeiro, Brazil End of the First Commitment Period of the Kyoto Protocol Introduction of Carbon Dioxide Tax of Global Warming Countermeasure 2013 Small Electric Household Appliance Recycling Law enters into force 	<ul style="list-style-type: none"> 2015 Global Warming Prevention Headquarters decides the Intended Nationally Determined Contribution Started the Joint Crediting Mechanism (JCM) Held the United Nations Framework Convention on Climate Change (COP21) 2016 Paris Agreement came into effect

Operation of waste processing facilities

- 2006 Launched operations at ORIX Environmental Resources Management Corporation's Yorii Plant
Started disposal of industrial waste materials, special industrial waste materials and general waste materials
- 2008 Acquired Kanematsu Kankyo Co., Ltd., renamed Funabashi Eco Services Corporation (Now ORIX Eco Services Corporation)
- 2008 Launched Carbon Offset service

Launched metal resources business

- 2010 Established strategic alliance with the Chinese Academy of Sciences
- 2011 Invested in Chinese water utility operator, China Water Affairs
- 2011 Won contract to participate in the cooperative preparatory study for a JICA PPP infrastructure project relating to sewage systems in Indonesia and Vietnam
- 2011 Launched metal resources business at ORIX Eco Services Corporation
- 2013 Merger of ORIX Eco Services Corporation and Funabashi Eco Services Corporation
- 2015 Started operation of Tachikawa City's business-related general waste reshipment facility through ORIX Environmental Resources Management Corporation
- 2016 Opened and started operations at ORIX Eco Services Corporation's Kasukabe Plant
- 2016 Built a general waste disposal wide area network in collaboration with business operators at ORIX Environmental Resources Management Corporation
- 2016 Acquired authorization under the Act on Promotion of Recycling of Small Waste Electrical and Electronic Equipment at ORIX Eco Services Corporation



ORIX Group Eco Services and Environmental Activities



Energy Business

▶ P.11



Power Generation (Renewable Energy) P.13

- Mega-solar Power Generation
- Sales of Solar Power Systems
- Rooftop Solar Power Generation
- Biomass Power Generation
- Geothermal Power Generation
- Wind Power Generation

Electric Power Supply P.17

- Electric Power Retailing
- Bulk Electric Power Purchasing Service

Energy Conservation P.19

- ESCO Services
- “Hatto Watto” Demand Response Service
- Electricity Visualization and Automated Control Services
- ESCO Fund

Storage Batteries P.20

- Storage Battery System Rental Service

Case Study P.21

- Japan’s First Storage Battery System Rental Service for Ordinary Households
- Repurposing Japan’s First Regional Commuter Airport as a Mega-Solar Power Plant

Overseas P.23

- Operation of an Environmental and Energy Investment Fund in Asia
- RobecoSAM—A global leader in SRI assessment and rating
- Wind Power Generation Business in India
- Hydropower Generation Business in Vietnam
- Distributed Solar Power Generation Business in Asia



Resources and Waste Business

▶ P.25



- Nationwide Recycling System
- Metal Recycling
- Advanced Waste Processing



One-stop Eco-friendly Services for Automobiles

▶ P.26



- Introduction of EV and HV
- Maintenance Services
- Telematics Service "e-Telematics"
"e-Telematics PRO"
- Leasing and Sales of Used Automobiles



Eco-friendly Real Estate Business

▶ P.27



- Logistics Facilities
- Artificial Light Plant Factory
- Kyocera Dome Osaka
- Office Buildings
- Aquariums
- ORIX Theater
- Golf Courses



Other Eco Services

▶ P.28



- Environment-related Equipment Rental
- Sale of Rental Equipment and Purchase of Used Equipment
- Contract Testing Services for Environment-related Equipment
- Environmental-friendly Loan Guarantees
- Sale of Tradable Green Power Certificates
- Carbon Offset Service / Sale of Carbon Credits
- Support for the Introduction of Low-carbon Equipment (Eco-lease)

Energy Business

The ORIX Group is responding to the energy needs of customers in a variety of fields, extending from upstream to downstream areas of the energy business. Specific fields include the small- and large-scale generation of energy from renewable sources, supply of lower-priced electricity, and provision of energy-saving services.



Power Generation (Renewable Energy)



Mega-Solar Power Generation



Biomass Power Generation



Geothermal Power Generation



Wind Power Generation

Solar power generation (maximum output capacity)

887,000 kW
(887 MW)

Mega-solar	Rooftop Solar Power Generation
across Japan	across Japan
110 sites	350 locations
Combined maximum output 780,000 kW (780 MW)	Combined maximum output 107,000 kW (107 MW)

Projected annual power generation of 889 million kWh
Equivalent to the annual power consumption of approximately **247,000 ordinary households**

* Calculation based on consumption of 3,600 kWh a year per household. Source: Electricity Statistics Information, The Federation of Electric Power Companies of Japan

Total projects planned, under construction, or in operation as of March 31, 2016

Electric Power Supply



Electric Power Retailing (PPS)

Electric power retailing (total amount of power sold)

1,756



Energy Conservation / Storage Batteries



Bulk Electric Power Purchasing Service



ESCO Services



Demand Response Service



Storage Battery System Rental Services

ESCO services (CO₂ reduction)

2 million kWh

52,500 t-CO₂

The total amount of extra-high and high-voltage power sold for the fiscal year ended March 31, 2016

The estimated yearly CO₂ reduction volume is calculated in a trial calculation at the start of the project under the ESCO agreement. The contribution to reducing CO₂ is assumed to be over 5 years.

Power Generation (Renewable Energy)

The ORIX Group is contributing to the prevalence of renewable energy including solar power, biomass, geothermal, wind, and other renewable energy sources.

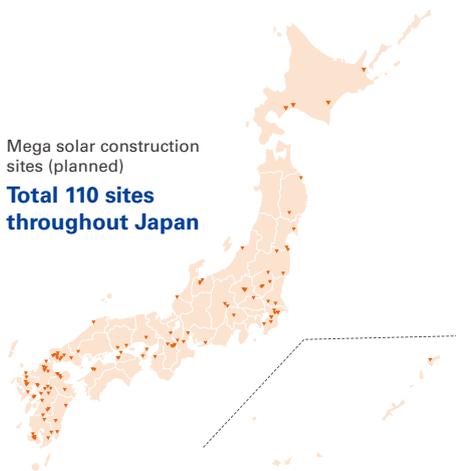
■ Mega-solar Power Generation

ORIX Corporation NS Lease Co., Ltd. Kyuko-Lease Inc.



Large-scale solar power plants on disused land

ORIX is renting disused land owned by local government, companies, and other landowners across Japan to build large-scale mega-solar power generation facilities (mega-solar) that will have maximum output capacities of more than 1,000 kW (1MW).



ORIX Awaji Mega-Solar Power Plant (Awaji, Hyogo Prefecture)

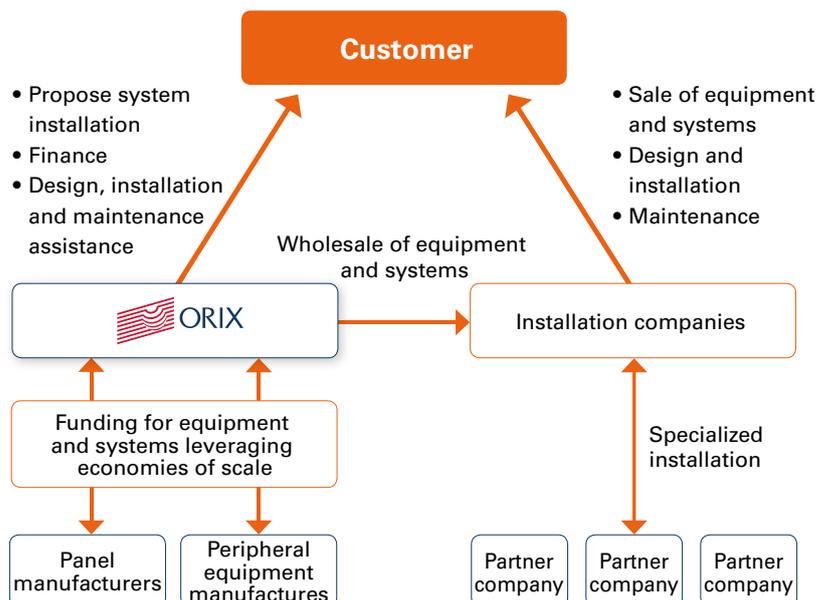
■ Sales of Solar Power Systems

ORIX Corporation



ORIX provides total support for customer's power generation

ORIX supports its customers investing in solar power systems by providing products at low cost through leveraging economies of scale using the network of installation companies nationwide and procuring equipment directly from manufacturers. ORIX assists customers with the smooth introduction of systems by providing everything from project design to post installation maintenance on a one-stop basis. This includes selecting appropriate equipment from multiple manufacturers, funding solutions appropriate to the customer including leasing, installment loans, financing and rental, as well as other services such as advising on obtaining facility certification for the feed-in-tariff system.



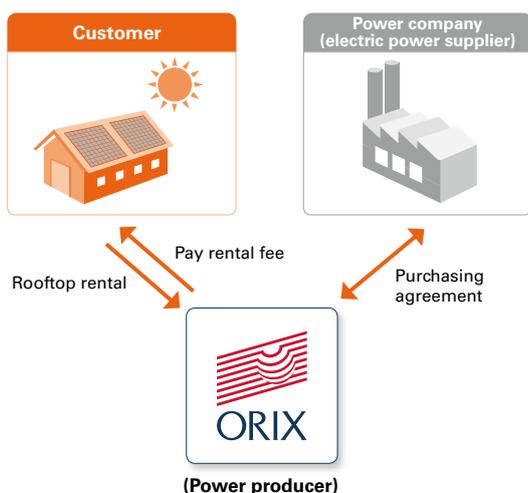
■ Rooftop Solar Power Generation

ORIX Corporation Kyuko-Lease Inc.



Solar power generation using the rooftops of facilities

ORIX is engaged in solar power generation business by renting the roofs of factories, warehouses, and other largescale facilities owned by customers and installing solar power systems on them to generate electricity. ORIX will achieve efficient power generation by not just conducting large-scale solar power generation on disused land but by also taking full advantage of customer-owned facilities. For the customers' part, in addition to being able to use their assets effectively, customers will benefit from reduced air conditioning needs at their facilities due to the heat-shielding effect of the solar panels, and also improved roof lifespan. ORIX is also developing solar power generation businesses using the rooftops of commercial facilities and other properties owned by the ORIX Group.



Kyushu Plant, ARIAKE JAPAN Co., Ltd. (Kitamatsuura, Nagasaki Prefecture)

Topics

Case Studies Meeting Various Needs

ORIX Corporation

One of Japan's Largest Rooftop Mega-Solar Businesses

ORIX rents rooftop space at I MISSIONS PARK SAKAI which was jointly developed by Itochu Corporation and Mapletree Investments Pte Ltd. and launched a rooftop mega-solar project with a capacity of 2.75 MW that makes it one of the largest rooftop mega-solar power generation projects installed at an individual logistics facility in Japan.

By proposing rooftop solar power generation business for I MISSIONS PARK SAKAI from the design stage, it has been possible to start generating power from the time construction on the facility ended. I MISSIONS PARK SAKAI of which ORIX rents rooftop for solar power generation is the second logistics facility jointly developed by Itochu and Mapletree, followed by I MISSIONS PARK NODA. Together, these facilities have the capacity for maximum output of 4,307 kW (4.31 MW)* of solar power. * As of June 30, 2016



Rooftop solar power generation at I MISSIONS PARK SAKAI

Leasing Rooftops on 12 JA Saga Facilities

Saga Prefectural Japan Agricultural Cooperatives (JA Saga), located in Saga, Saga Prefecture, has leased rooftops at 12 facilities including fruit and vegetable sorting areas, farming warehouses and affiliated companies to develop a solar power generation business to generate total maximum output of 4,273 kW (4.2MW).* The estimated annual power generated is about 4.3 million kWh. Among the rooftops being used by JA Saga are some that are structurally incapable of bearing heavy panels, and for these lightweight panels of 10 kg/m² or less are used, enabling participation in this business. * As of June 30, 2016



JA Saga Shiroishi District Onion Center in the Kishima District of Saga Prefecture

Energy Business

■ Biomass Power Generation

Agatsuma Bio Power Co., Ltd.



Biomass power generation utilizing wood chips

Agatsuma Bio Power Co., Ltd. operates the Agatsuma Biomass Power Plant, a wood chip-fired thermal power station located in Gunma Prefecture. Wood chip-fired power generation works by using wood chips as fuel to heat a boiler and then using the steam from the boiler to power a turbine to generate electricity. The use of biomass as an alternative to fossil fuels not only helps to reduce CO₂ emissions but also enables environmental-friendly power generation through the use of thermal recycling*¹ technology. The Agatsuma Biomass Power Plant has a maximum output of 13,600 kW (13.6 MW), with annual power transmission of 85 million kWh*². Converted to ordinary household electricity use, this equates to the annual power consumption of approximately 23,600 households*³.



Agatsuma Biomass Power Plant

*1. Thermal recycling refers to the process of collecting and utilizing heat energy generated from combustion, rather than merely incinerating waste materials.

*2. Fiscal Year 2015 Track Record

*3. Calculation based on consumption of 3,600 kWh a year per household
Source: Electricity Statistics Information, The Federation of Electric Power Companies of Japan

Topics

Construction of a Coal and Biomass Power Plant

ORIX Corporation

Coal-biomass co-combustion power plants are being constructed in Soma City, Fukushima Prefecture, and Kitakyushu City in Fukuoka Prefecture, ahead of completion in 2018. Each power plant will have a maximum power output of 112,000 kW (112 MW), estimated annual transmission capacity of approximately 800 million kWh, which is the equivalent annual electricity consumption of about 220,000 ordinary households. Utilizing the world's highest-standard equipment and mixing up to about 30% of biomass fuel enables targeting an annual reduction of about 240,000 tons of CO₂ emissions compared to similar coal-fired thermal power plants. ORIX is conducting an advanced initiative with consideration for the environment and future generations.

■ Geothermal Power Generation

Power generation using geothermal energy

Beppu Suginoi Hotel (Beppu, Oita Prefecture) operated by the ORIX Group owns and operates one of the largest private geothermal power generation facilities in Japan. The Suginoi geothermal power generation facility uses geothermal heat and has a maximum output of 1,900 kW (1.9 MW). The electricity generated by the plant is used to power all of the hotel's electrical installations, and is able to supply about 50% of the power used during peak hours. Capitalizing on the geothermal power generation know-how obtained at the Beppu Suginoi Hotel and its experience operating hot springs hotels, ORIX is implementing surveys and geothermal drilling to industrialize geothermal power generation business and construct geothermal power generation facilities with maximum outputs of around 2,000 kW (2 MW) to commercialize geothermal power generation.



Suginoi geothermal power generation facility

■ Wind Power Generation

ORIX Corporation



ORIX has invested in 3 wind power generation projects with a total of 19 wind turbine units. The combined maximum output of these units is 12,790 kW (12.7 MW).

Akita Araya Wind Farm (Akita, Akita Prefecture)	8,790 kW (8.7 MW)
Tachikawa Wind Farm (Shonai, Higashitagawa District, Yamagata Prefecture)	3,200 kW (3.2 MW)
Goto-Kishiku Wind Power Plant (Goto, Nagasaki Prefecture)	800 kW (0.8 MW)



Akita Araya Wind Farm

ORIX Corporation



Topics

Surveying Ahead of Constructing New Geothermal Power Generation Facilities

ORIX Corporation

Construction on a geothermal power generating facility with maximum output of about 5,000 kW (5 MW) is progressing smoothly in the Minamikayabe Region, Hakodate, Hokkaido Prefecture. The exploration well drilled in 2015 confirmed stratum to be appropriate for geothermal power generation. ORIX will advance the planning and construction of a geothermal power generating facility, based on upcoming fumarole testing results.

Additionally, physical explorations of similar geothermal power generation facilities have finished in Aomori City, Aomori Prefecture, Kazamaura Village, Shimokita District, Aomori Prefecture and Hachimantai City, Iwate Prefecture. Next, preparations will be made for drilling surveys.



Drilling site in Minamikayabe, Hakodate

Electric Power Supply

ORIX helps to reduce customer power costs through a low-cost power supply service.

■ Electric Power Retailing

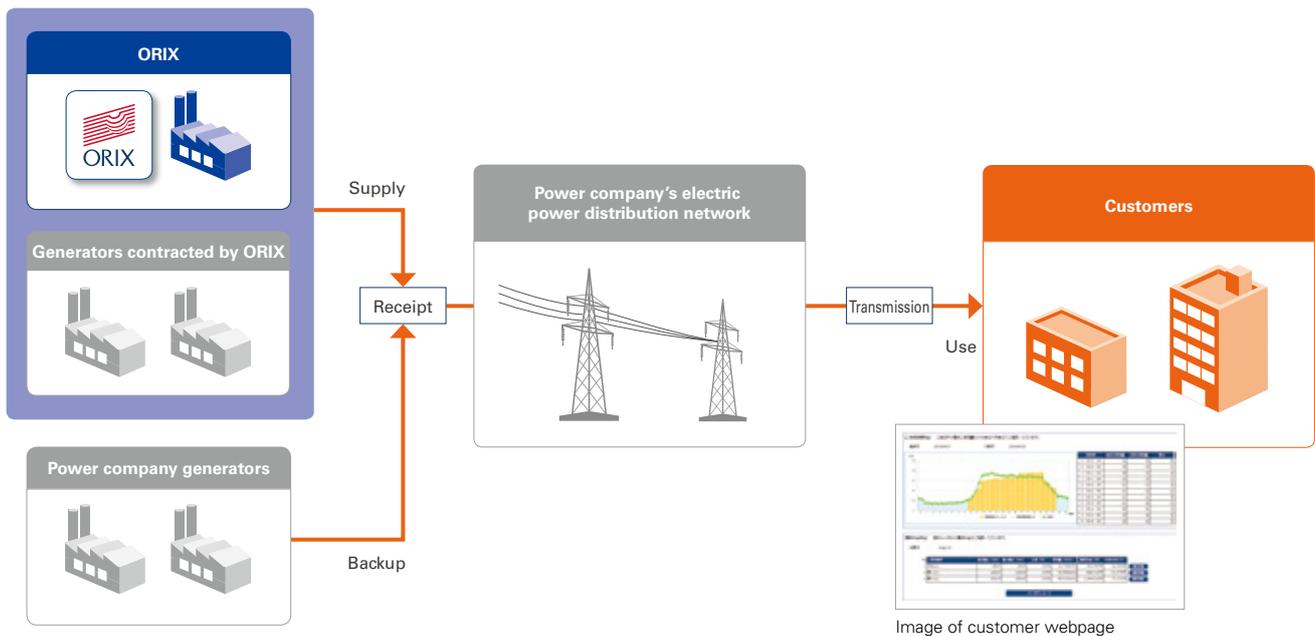
ORIX Corporation



Supplying low-cost electric power to businesses as a PPS

As a Power Producer and Supplier (PPS) power, generated power is sold primarily to privately owned building and facilities requiring high-voltage power at reasonable prices within the areas of Tokyo Electric Power Company, Kansai Electric Power Company, Chubu Electric Power Company, Tohoku Electric Power Company and Chugoku Electric Power Company. Moreover, ORIX provides website that offers customers access free of charge to information on their monthly electricity usage and charges, as well as a visible log of the electricity they are using in 30-minute intervals. Such data is available to the customer for both viewing and downloading. Customers with multiple contracts also have access to the electricity usage data in a table format that is easy for comparison among the facilities.

ORIX is planning construction of a coal and biomass power plant to secure a power source for the stable supply of electricity. (Please refer to Topics on p.15 for details)



Topics

Expansion of Electric Power Retailing

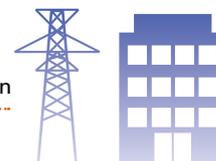
ORIX Corporation

Electric power retailing used to be monopolized by regional electric power companies due to the Electricity Business Act's entry regulations. However, since the deregulation of the electric power industry came into effect in 1995, the industry has been liberalized step-by-step. Today, consumers are able to choose an electric power provider in light of economic efficiency and service quality. Now, the "low-voltage" (less than 50 kWh) consumer category in which households, small factories and shops are included, has also been liberalized, allowing electric power retailers to enter into this category, depending on the economical nature of demand or services provided. ORIX started its electric power wholesaling and electric power retailing in 2007 and 2009 respectively. Today, ORIX sells 1,756,200,000 kWh* (1 billion 756.20 million). The power supply business will continue to evolve going forward.

* Fiscal year ended March 31, 2016

■ Bulk Electric Power Purchasing Service

ORIX Electric Power Corporation



Creating "intelligent condominiums" through the Bulk Electric Power Purchasing Service

Low-cost, high-voltage bulk electric power is purchased from power companies and redistributed as low-voltage power to condominiums, allowing customers to benefit from reduced electricity charges. In addition, from September 2013, ORIX Electric Power has been providing the "EneVista" service that uses a smart meter installed to enable customers to check their electricity use or weather information via a website.

The EneVista service provides a website where customers can keep track of weather information and power usage updated every 30 minutes. The service also enables users to figure out the optimal service charge scheme based on their past usage history, and assigns "power conservation points" to people who help to conserve power during times when supply is short due to strong demand.

In April 2014, ORIX added a new function that enables electricity usage and charges to be viewed on an intercom system fitted with an Internet browser function.

By installing a smart meter, condominium management associations can promote the installation of smart condominiums.

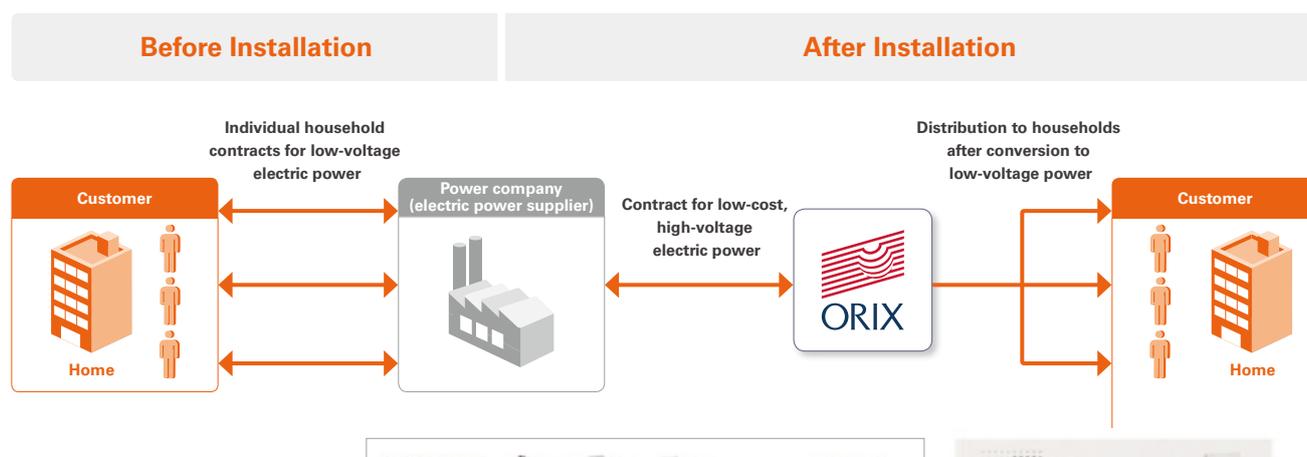


Image of EneVista customer webpage



Visualization of electricity usage using intercom screen

Energy Conservation

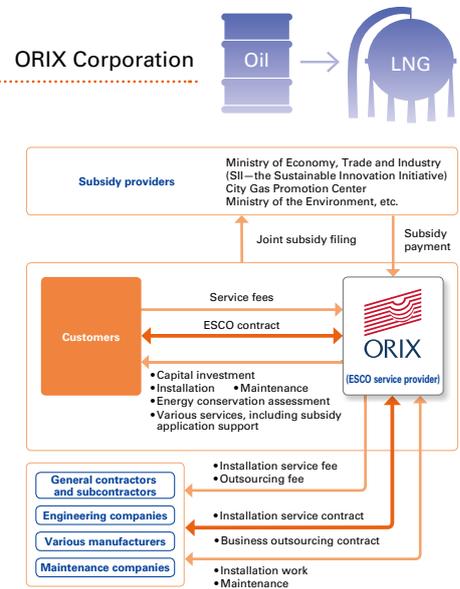
The ORIX Group is helping customers to conserve power, increase asset value, and cut costs through services such as ESCO and the visualization of electricity consumption.

■ ESCO Services

Proposing ESCO services customized to the needs of various facilities, including factories, warehouses, commercial facilities, and hotels

ESCO* are comprehensive services pertaining to energy efficiency in buildings, which achieve energy cost reduction without compromising the existing use of the building. Energy cost reductions include the installation costs, maintenance costs, and the cost of assessing the energy conservation benefits. Consequently, many private-sector companies and local governments are demanding ESCO services as a means of simultaneously conserving energy and reducing running costs with no up-front costs. ORIX ascertains customers' energy use through energy diagnostics and offers one-stop services ranging from the proposal to implementation of energy conservation solutions. ORIX also provides ESCO services customized to the needs of various facilities including factories, warehouses, commercial facilities, and hotels. ORIX selects the best equipment and items depending on their intended use and without being limited to a particular manufacturer. After installation, ORIX provides continuous support including operation and maintenance of equipment, energy conservation monitoring and verification, and operations consulting.

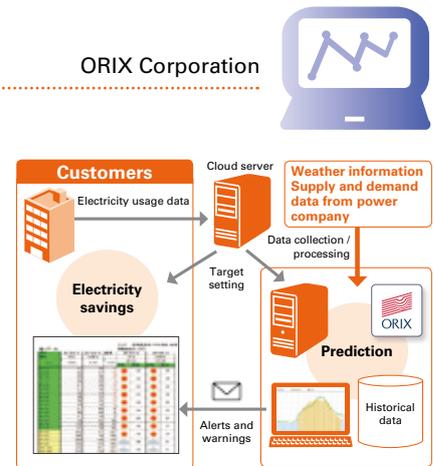
* Energy Service Company



■ “Hatto Watto” Demand Response Service

Supporting the reduction of peak electricity demand and electricity use

ORIX supports the reduction of customers' peak electricity demand and electricity consumption. Through this service, ORIX provides customers with an optimal power conservation plan. In addition to providing electricity consumption and weather information over the Internet, the service will also predict electricity consumption for the following day based on previous consumption patterns and the weather forecast and alerts customers when they are close to exceeding planned consumption amounts by sending an email warning before the planned amount has been exceeded. ORIX covers the cost of data transmission and other charges needed for this service, and will share the cost savings derived from conserving power with customers. Customers can use this service without an initial investment.



■ Electricity Visualization and Automated Control Services

Ubiteq, INC.

Energy conservation solutions that enable various tools from visualization of the amount of electricity in use to automated control

BE GREEN Next (previously UGS) is an energy conservation service that makes the visualization of the amount of electricity in use and its automated control possible. This service links an office's lighting, air-conditioning, and security equipment to its IT systems. This service not only allows the visualization of the amount of electricity in use but also provides automatic control functions including automatic shutdown of lighting and air-conditioning in the event that electricity use exceeds the upper limit pre-specified by the customer.

■ ESCO Fund

ORIX Corporation

Proposing investment schemes limited to eco-friendly capital expenditure in partnership with regional financial institutions

ESCO Funds are investment schemes limited to eco-friendly capital expenditure. ORIX is able to meet the financing needs of customers by combining its ESCO services know-how with the locally based information networks of regional financial institutions such as The Shiga Bank, Ltd., The Kiyo Bank, Ltd., The Bank of Fukuoka, and other regional financial institutions.

Storage Batteries

The ORIX Group is contributing to the creation of a new lifestyle where electricity is stored efficiently and used wisely.

Storage Battery System Rental Service

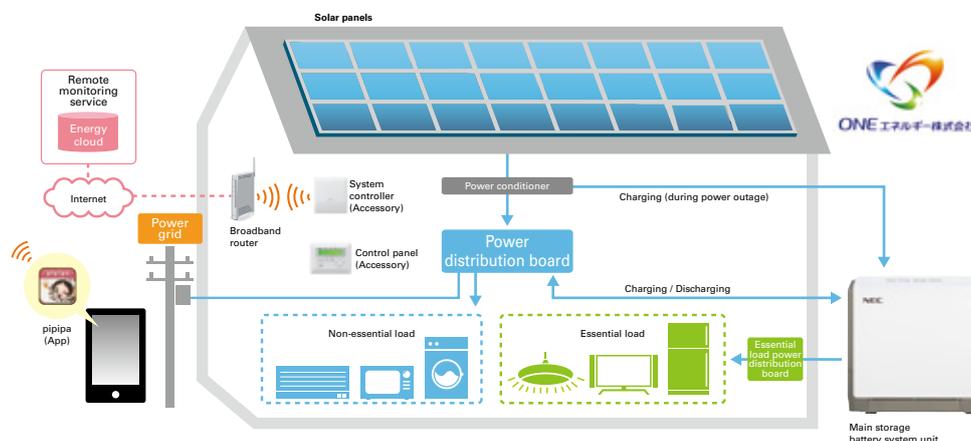
ONE Energy Corporation



An energy service based on rental of compact storage battery systems for home use

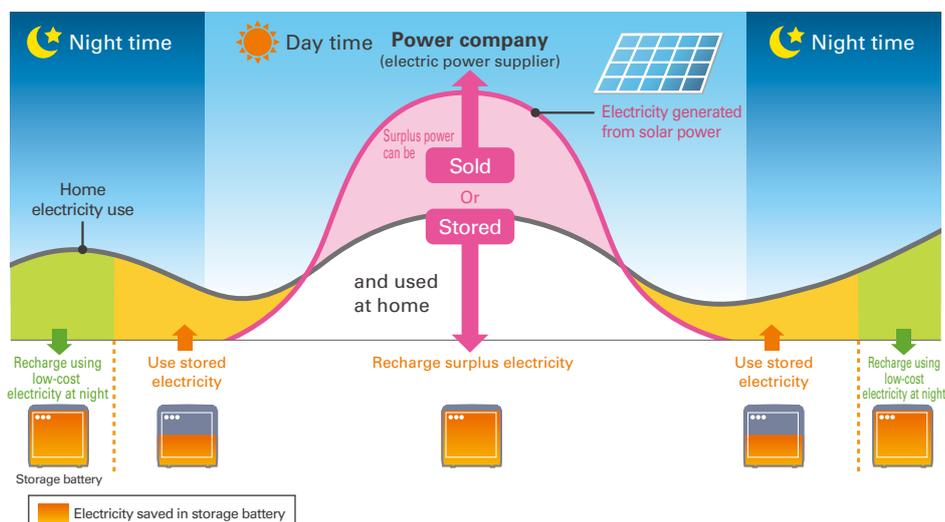
ONE Energy is a joint venture established by ORIX, NEC Corporation, and EPCO Incorporated to provide Japan's first* home-use compact storage battery rental service. In collaboration with house-makers, the service targets detached homes, and provides rental of an entire system including NEC-manufactured fixed-storage batteries paired with an application called "pipipa" which, through a cloud data link, helps users to save electricity by visualization. The storage battery system enables customers to reduce their electricity bills by storing low-cost electricity during the night and releases it later for use during the day. This system helps to reduce peak day time electricity demand, and also provides emergency power source during power cuts.

* Survey conducted by Rakuten Research, a survey contractor (as of February 2015)



Furthermore, ONE Energy provides a service in which the use of storage batteries and a solar power system are combined. This service allows customers to store or sell any surplus electricity generated through the combined use of storage batteries and a solar power system. When surplus electricity is stored, the household will aim for energy self-sufficiency by reducing the amount of power purchased from the electric power company. Even when surplus electricity is sold instead of stored, since there is no double power generation* households can sell power without reducing the purchase price. Going forward, ONE Energy aims to expand its scope of service provision to not only homes but small retailers and restaurants.

* Double power generation allows households to sell a greater amount of power by combining solar power systems with fuel cells or storage batteries for household use. A lower feed-in tariff rate has been set for double power generation, compared with power generated only by solar power systems.



Case Study

This section presents actual case studies of the ORIX Group's eco services.

Japan's First Storage Battery System Rental Service for Ordinary Households

Voice of the Customer

This system is appealing because it provides not only electricity cost savings, but also peace of mind in the event of a natural disaster.

Adding Peace of Mind to an All-Electric Home

In the course of building our new home, we wanted to install solar power generation facilities and create an all-electric home. This is because we knew an all-electric home would hold down our utility costs and that induction cooking systems are efficient. However, our biggest concern with relying solely on electricity for all our energy needs was the possibility of a power outage during a natural disaster. To alleviate this concern, we believed that a storage battery system that could store electricity and make it available for use when needed would give us peace of mind even if there was a power outage. Therefore, we decided to build an all-electric home with both a storage battery system and solar power generation facilities. It is very reassuring to know that even in a power outage, our refrigerator will continue operating as usual, keeping food and other groceries fresh for our growing children.

Storing Inexpensive Nighttime Electricity for Use during the Day

The storage battery system enables us to store inexpensive nighttime electricity in the storage battery for use during the day, when electricity fees are high, in conjunction with solar power generation. We are a double-income family. By the evening hours, when my wife returns home from work, we are able to meet all our electricity needs with solar power and electricity stored in the storage battery system. Therefore, we buy hardly any expensive electricity during the daytime hours.



Installed storage battery



Rooftop solar panels



Mr. and Mrs. Ue in Kanagawa Prefecture

Checking Electricity Usage on a Tablet

Being able to check the status of our electricity usage on a tablet has made us more conscious of our electricity usage. For example, our tablet can tell us that 0.4 kW of electricity is now being used by our refrigerator, lights, PC and other appliances and devices, and all of this electricity is being supplied by the storage battery system. Realizing that we are using inexpensive electricity stored during the night, we can casually use the dishwasher and other appliances during the daytime hours and this is a big plus. The children are also very pleased because they can turn on the air conditioner during the day without hesitation.



Mr. Ue uses his tablet to check the status of electricity usage

Repurposing Japan's First Regional Commuter Airport as a Mega-Solar Power Plant

Makurazaki Former Airport Site No.1 and No.2 Power Plants in Kagoshima Prefecture

Makurazaki Airport in Makurazaki, Kagoshima Prefecture opened as Japan's first regional commuter airport in 1991. However, the airport subsequently fell into disuse, with not one single aircraft landing or taking off since 2004. Makurazaki City was facing cumulative losses of nearly ¥1.0 billion from the airport. In response, with the start of the feed-in tariff (FIT) system in 2012, ORIX proposed that Makurazaki City convert the airport into a mega-solar power plant. Thereafter, the airport was reborn as a mega-solar power plant with a maximum output of 8,218 kW (8.2 MW), and part of the airport terminal building was remodeled for the installation of a seminar space that includes exhibits on how solar power plants work and environmental education facilities. In addition, an astronomical observatory was also built on the former airport grounds, offering a place for local residents to congregate and thereby helping to contribute to the community. In the course of advancing the project, ORIX faced the problem of being unable to send electricity from the mega-solar power plant to the local substation in the Makurazaki area as planned due to limitations on the substation's capacity to accept electricity. The problem was solved by dividing the power plant into two separate plants, and having each plant transmit electricity independently.



Repurposing Makurazaki Airport as a mega-solar power plant and astronomical observatory



Voice of the Customer

The Determining Factor: a Highly Feasible Proposal

We conducted a competitive tender in the course of converting Makurazaki Airport into a mega-solar power plant. One of the main factors behind the selection of contractors was power generation capacity. Having gained the cooperation of a university in advance, Makurazaki City had roughly estimated the amount of output that could be expected from the site. The estimates presented in ORIX's proposal were only several tenths of a percentage point different from the city's estimates. Additionally, when considering an alternative plan for transmission pathways, ORIX actually surveyed the entire candidate site on foot and arrived at mostly the same conclusions as the city. Based on this, we were convinced that ORIX had presented a highly feasible proposal based on solid evidence and reasoning. We also sought proposals on contributing to the community. The astronomical observatory, which can be used to observe solar flares, and the educational facility for learning about solar power generation have proven highly useful to environmental education by offering venues for social studies field trips by elementary school students. We continued to entrust property management for the power plant site to Nansatsu Airport Co., Ltd., a third-sector company that had formerly managed the airport, allowing us to preserve employment following the airport's closure.



Shinji Kamisono
Makurazaki City Office

Overseas

Starting with its entry into Hong Kong in 1971, the ORIX Group has gone on to establish bases in 36 countries and regions around the world, and is now conducting global operations. Capitalizing on know-how cultivated in the environment and energy-related business in Japan, ORIX is aggressively engaging in this business in emerging markets particularly in Asia, where strong demand is anticipated.

The ORIX Group's Global Network



Main Initiatives Overseas

■ Operation of an Environmental and Energy Investment Fund in Asia

Joint operation with Robeco Groep N.V. and the ADB

ORIX participates in operating the Asia Climate Partners (ACP) with Robeco Groep N.V., and the Asian Development Bank (ADB). ACP is Asia's largest private equity fund dedicated to companies working in the environmental improvement and low-carbon sectors in Asia. Many government organizations, banks, insurance companies and investors other than ORIX and the ADB have invested in ACP. Based in Hong Kong, ACP's specialist team is dedicated to examining investment opportunities in renewable energy, clean technology, natural resource efficiency, water, agriculture, forestry and other climate-friendly transactions.

In 2016, ACP became a major shareholder in ColdEx Logistics Pvt. Ltd., India's second-largest refrigeration logistics company, and is now supporting enhanced infrastructure to reduce food loss in India.

■ RobecoSAM—A global leader in SRI assessment and rating

Highly evaluated by a ranking business specializing in sustainability

In July 2013, the ORIX Group welcomed a new member, RobecoSAM, a specialist in socially responsible investment (SRI)^{*1} whose operations include asset management and company research and rating services. RobecoSAM assesses about 3,400 leading global companies, focusing on their sustainability from an ESG^{*2} perspective. It announces the best-performing companies each year. Moreover, RobecoSAM and the U.S. company S&P Dow Jones Indices LLC jointly operate the leading global SRI share price index, the "Dow Jones Sustainability Index." Since its establishment as a specialist in sustainability investments in 1995, RobecoSAM has garnered worldwide recognition for these operations, and has established a strong position in this field.

*1. Investment in companies that contribute to sustainable development of society based on the idea that such companies will be valued in the market and will increase their performance.

*2. Environment, Society, and Governance. There is a focus on whether or not management gives consideration to these, as they are issues that involve the sustainability of companies in order to maintain and realize a sustainable society.

■ Wind Power Generation Business in India

ORIX enters the wind power generation business in India with a total of 1,004 MW of power

In collaboration with India's infrastructure development and investment company, INFRASTRUCTURE LEASING & FINANCIAL SERVICES LIMITED (IL & FS), ORIX is working on the development and operation of a 1,000 MW scale wind power generation project in India. This project entails the development of a total of 26 wind farms in 7 states in the southwest of India, where there are good wind conditions for India, and the electricity generated will be sold mainly under the feed-in tariff system to state power companies. In addition, some of the electricity will be sold to large-scale electricity users.

At the 21st Conference of Parties (COP21), India pledged to increase its percentage of renewable energy to 40% of all energy produced by the year 2030. To do this, India set the goals of achieving a total output of 100,000 MW by solar power generation and a total output of 60,000 MW by wind power generation by 2020.

In addition to developing a large number of solar power generation projects in Japan, ORIX is actively engaged in renewable energy businesses such as biomass, geothermal, and wind power. Drawing on this experience, in India ORIX will also promote developing its solar power generation and other businesses, as well as its wind power generation business.



Karnataka state



Madhya Pradesh state

■ Hydropower Generation Business in Vietnam

Responding to the continued growing demand for electricity in Vietnam

ORIX has undertaken capital participation in Vietnam's hydropower company, Bitexco Power Corporation (BPC). BPC operates and is engaged in the construction of 18 hydropower projects throughout Vietnam. With a total power generation capacity of 1,000 MW, this means that BPC is the largest private-sector company in the hydropower business in Vietnam.

Demand for electricity in Vietnam is growing by an average of 10-12% per year, and by 2030 it is expected to be more than triple that of 2015. Against this backdrop, the Vietnamese government has adopted a policy of gradually liberalizing the electric utility market to respond to the strong demand for electricity. ORIX will press ahead with a broad range of businesses in Vietnam by leveraging its expertise in such areas as the power generation business using renewable energy, and the electric power trading business, both of which were developed in Japan.



The DakMi 4 power station which is owned and operated by Bitexco Power Corporation

■ Distributed Solar Power Generation Business in Asia

Business development utilizing the ORIX Group's local network

ORIX promotes renewable energy generation business operations in Asia where strong demand for electricity is expected, and utilizes its local network of overseas subsidiaries to promote its small-scale distributed solar power generation business using the rooftops of its factories and commercial facilities. As a result of the increasing availability of lower-priced solar panels, ORIX is focusing its efforts on these growth fields that can help to reduce electricity bills, and aims to expand the businesses in many Asian countries.



Harrison Car Maintenance Center (Philippines / Manila)

Resources and Waste Business

ORIX offers customers a one-stop service for all their 3R* and waste processing needs by meeting diversifying customer needs with logistics and proper processing function due to the facilities under its management and nationwide network business

* The "3Rs" stand for Reduce, Recycle, and Reuse.

Nationwide Recycling System

ORIX Eco Services Corporation

Building a network supporting the processing of waste items

ORIX Eco Services (OES) is building a nationwide network that allows it to offer integrated support for recovering waste items and prepare them for reuse, recycling, or proper disposal. OES supports the disposal of waste items from customers with offices throughout Japan and strives to prevent the incorrect disposal of waste by providing the same quality of collection and recycling across Japan and by selecting processing companies, arranging transportation, conducting price appraisal for waste items to be sold, proposing cost reduction measures, and centrally managing all the administrative paperwork associated with proper waste disposal.

Process of Collecting, Reusing, Recycling, and Properly Disposing of Waste Items



Metal Recycling

ORIX Eco Services Corporation

OES is operating a metal recycle business recovering useful metallic resources.

OES operates intermediate metal waste processing facilities in Funabashi, Chiba Prefecture and Kasukabe, Saitama Prefecture, centering on disposal of metals such as office equipment and machinery. The facilities conduct integrated operations ranging from collection, storage, primary processing and recycling (either as products or materials). OES aims to advance the recycling facilities through selection of high quality materials and the like by manual dismantling or plant processing sorting functions.

Advanced Waste Processing

ORIX Environmental Resources Management Corporation

Realized complete recycling at the zero-emission plant

As a private finance initiative (PFI) with Saitama Prefecture, ORIX Environmental Resources Management (OERM) operates a zero-emission*1 plant that utilizes the latest thermal decomposition and gasification methods in the town of Yorii, Saitama Prefecture. Its defining feature is that it melts waste at roughly 2,000°C, which enables all of the waste to be recycled. Recycled materials include slag and metals, which are recovered, and refined syngas, which is used as fuel for highly efficient power generation at an onsite generator. The plant not only handles industrial waste, but is also used to process general waste such as household trash in volumes that have exceeded the treatment capabilities of processing facilities run by municipalities and the like. When entrusted with this kind of processing, we cooperate with major private sector treatment plant operators*2 to build a backup system. This enables us to offer stable processing for a wide area through private contractors because there are many occasions where large quantities need to be processed in a short timeframe.

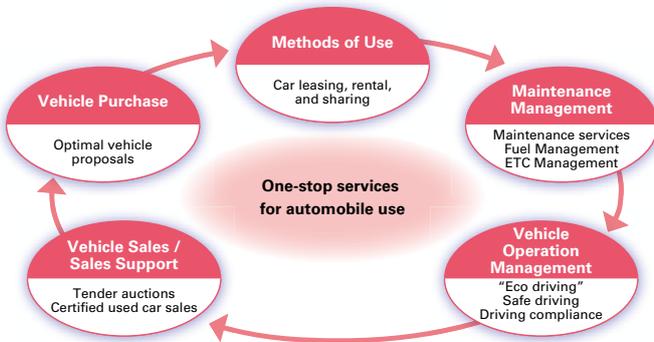


High-temperature reactor that melts waste

*1. Zero-emission refers to recycling resources by making effective use of all waste as raw material without emitting any unusable waste.
 *2. Prior consultation with local and regional authorities is required.

One-stop Eco-friendly Services for Automobiles

ORIX Auto provides comprehensive car-related services, ranging from leasing, rental, and car-sharing services to used car sales and high value-added vehicle management services. Through these services, ORIX Auto aims to foster environmental awareness and reduce the environmental burden and CO₂ emissions at each stage of a car's life cycle.



Car Sharing

■ Introduction of EV and HV

ORIX Auto has introduced total of about 5,000* vehicles comprised of electric vehicles (EV) and hybrid vehicles (HV) for car rental and car sharing across Japan.

* As of March 31, 2016



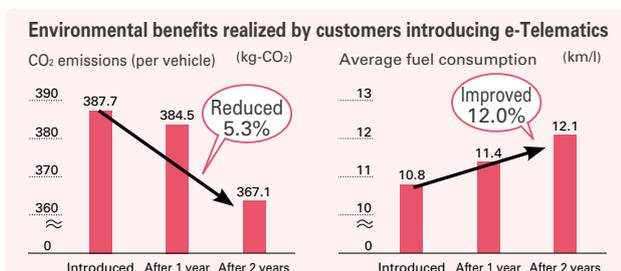
■ Maintenance Services

ORIX Auto contributes to higher fuel efficiency and lower CO₂ emissions by performing oil change and refill as required and also checking tire air pressure as part of regular vehicle maintenance inspections. In addition, ORIX Auto also works to limit resource consumption by using recycled parts when replacing parts on damaged vehicles.

■ Telematics Service "e-Telematics" "e-Telematics PRO"

ORIX Auto's telematics service "e-Telematics" is a consulting service that is comprised of compliance, environmental, and safety aspects. This service enables customers to visualize their vehicle's operational status by installing specialized equipment on board. By providing a consulting service encompassing operational methods to verify efficiency, ORIX Auto offers one-stop support for optimal use of vehicles, proper work management, traffic accident prevention, and CO₂ emission reduction. Telematics service, installed in about 130,000 vehicles*, has now contributed to reducing impact on the environment and won the grand prize at the Green Purchasing Network's 17th Green Purchasing Awards.

* As of March 31, 2016



Visualization of vehicle's operation status



■ Leasing and Sales of Used Automobiles

From among cars that have been returned upon leasing contract expiration or that have completed their useful lives in rental operations, only those vehicles that satisfy our own stringent standards are sold as "ORIX Certified Used Cars." ORIX Auto supplies reliable used cars at reasonable prices via 10 ORIX U-car stores nationwide and over the Internet. Furthermore, to enable customers to make use of used cars more readily, ORIX Auto also offers a "One Price Used Car Lease," that provides customers with a choice of different monthly payments and types of vehicle.



Eco-friendly Real Estate Business

The ORIX Group develops excellent environmental performance in real estate development and reducing environmental impact in facility operations.

Logistics Facilities

With many companies facing the task of reducing their environmental impact, there is growing demand from companies moving into our logistics facilities as tenants for energy conservation measures. ORIX's initiatives include the introduction of solar power systems and placing greenery along outer walls. The logistics centers, Hirakata Logistics Center (2015), Moriya Logistics Center (2016) and Ichikawa-Shiohama Logistics Center (2016) were all awarded CASBEE* Class A Ratings.



Moriya Logistics Center

* CASBEE is an acronym for Comprehensive Assessment System for Built Environment Efficiency. CASBEE is a system for objectively ranking the environmental performance of a building. Figures inside parentheses denote the year of completion.

Artificial Light Plant Factory

ORIX leased an abandoned elementary school in Yabu City, Hyogo Prefecture, and has built and operates a complete artificial light plant factory* inside the gymnasium, where it cultivates and sells three types of vegetables including loose-leaf lettuce. Growing vegetables in artificial light plant factories reduces risk of contamination by foreign substances and crops are less affected by seasons, weather, and other factors because they can be shielded from external threats and be cultivated without agricultural chemicals. Because there is no concern about soil depletion from continuous cultivation, lettuces can be grown stably with high efficiency in growing racks up to eight racks high. ORIX aims to grow approximately 3,000 plants a day and approximately 1 million plants (80 tons) a year.



Yabu lettuce factory

* A factory that uses artificial light to cultivate plants under almost bacteria-free conditions. As cultivation is largely unaffected by seasons, weather, or other factors, vegetables can be grown stably without using agricultural chemicals. Broadly speaking, there are two types of plant factory: factories that use only artificial light and factories that use natural sunlight.

Kyocera Dome Osaka

This arena uses rain water for toilets and to water plants. The arena utilizes natural ventilation methods with sea breezes to ventilate the arena.



Golf Courses

Aiming for golf course operations with a low environmental impact, ORIX is working to reduce CO₂ emissions at Group golf courses by upgrading air-conditioning, water-heating equipment, and night-playing golf facilities, as well as switching to LED lighting. In addition, golf course grass trimmings are converted into fertilizer for use in plants on the courses. A mega-solar power plant was built on unused land at the Deer Lake Country Club (Kanuma, Tochigi Prefecture) and solar panels were installed on the roof-top of the club house and at parking lots at the Hira Golf Club (Otsu, Shiga Prefecture).



Deer Lake Country Club

Office Buildings

The ORIX Group's Osaka Head Office (ORIX Honmachi Building) was built with concern for the environment in mind, employing technologies from the construction stage to reduce environmental load by contributing to energy saving and reduction of CO₂. To start with, the old buildings framework was reused. Further, tall trees and other greenery were placed within the building's grounds and on its roof. In addition, a solar power system, a high-efficiency low-maintenance multi-air-conditioning system utilizing heat pumps, and LED lighting were also installed, enabling the building to acquire CASBEE Osaka Class S Rating, which is the highest rating available. Some of the technology used in the ORIX Honmachi Building has been recognized by the Ministry of the Environment in its "Cool City Center Pilot Project."



ORIX Honmachi Building

Aquariums (Enoshima Aquarium, Kyoto Aquarium, and Sumida Aquarium)

ORIX Real Estate has been involved in the operation of the Enoshima Aquarium* as a private finance initiative (PFI) with Kanagawa Prefecture since 2004. In 2012, it opened Kyoto Aquarium and the Sumida Aquarium, which it operates directly. While conducting environmental friendly facility and project management, these facilities not only contribute to the development of the surrounding area as leisure spots but also provide customers with a place to study the environment. By combining entertainment and education, ORIX Real Estate has created "Edu-tainment" Aquariums.



Large-scale tank in the Kyoto Aquarium using artificial seawater

* Enoshima Aquarium is a joint project between the ORIX Group and Enoshima Marine Corporation.

ORIX Theater

ORIX renovated and operates the former Osaka Welfare Pension Great Hall into a multi-purpose facility while preserving the traditional facade. It has also set up a solar power system.



Other Eco Services

The ORIX Group is working to meet customer needs by offering a variety of eco services that leverage its specialized expertise.

Environment-related Equipment Rental

ORIX Rentec Corporation

For corporate customers and local governments, ORIX Rentec rents out measuring instruments that can measure PM2.5 atmospheric fine particulate matter and radiation measuring instruments with rental periods starting from one day. ORIX Rentec supports customers' environmental impact measurement through its rental services by providing measuring instruments used for measuring CO₂ and nitrogen monoxide for the study of greenhouse gas reduction.



Measurement equipment (PM2.5) Nitrous oxide (N₂O) meter

Sale of Rental Equipment and Purchase of Used Equipment

ORIX Rentec Corporation

ORIX Rentec sells high-quality used rental equipment that has undergone maintenance directly to customers through its expansive network, which includes regular auctions targeting used equipment dealers, its own branches, and the Internet. It also provides a purchasing service that inspects and buys equipment customers no longer need.

Contract Testing Services for Environment-related Equipment

ORIX Rentec Corporation

At the Kobe Testing Center, ORIX Rentec provides contract-based performance evaluations for lithium-ion batteries that are becoming commercially viable for automobile driving energy or a stable power source of natural energy using battery charge/discharge testing equipment required for developing or evaluating storage batteries. Moreover, by renting testing laboratories and equipment to customers for a fixed period of time, customers can perform their own tests and inspections freely.



Charging and discharging testing equipment Environment testing equipment

Support for the Introduction of Low-carbon Equipment (Eco-lease)

ORIX Corporation

The Ministry of the Environment is promoting the "FY 2015 Eco-Lease Promotion Project," which subsidizes 3% to 5% of the overall lease fee for small and medium-sized businesses (and others) who wish to install low-carbon equipment using leasing. (In Iwate, Miyagi, and Fukushima prefectures subsidies may cover up to 10%.) As a designated provider of these leases, ORIX assists customers with the installation of low-carbon equipment.

Environmental-friendly Loan Guarantees

ORIX Corporation

ORIX provides environmental-friendly loan guarantees in partnership with regional financial institutions. Under this system, companies applying for such loans and guarantees can receive preferential loan terms in aspects such as guarantee fees or credit lines, based on environmental criteria such as whether they have an environmental management structure in place, such as ISO 14001, or the amounts of energy used and waste disposed. Through this system and together with regional financial institutions, ORIX endeavors to raise environmental awareness among companies and support for their environmental initiatives.

Sale of Tradable Green Power Certificates

ORIX Corporation

ORIX sells tradable green power certificates that represent certified electric power generated using wood chips as biomass fuel at the Agatsuma Biomass Power Plant (see page 15).



Carbon Offset Service / Sale of Carbon Credits

ORIX Corporation

As a carbon offset provider, ORIX offers a range of support services. These include everything from consultation services (and subsequent proposals) when customers develop carbon offset products to calculating CO₂ emissions, procuring, and managing credits (emissions rights). ORIX also issues carbon offset certificates and sells emissions rights in the form of carbon credits.



Environmental Performance

The ORIX Group contributed to a reduction of 847,700 t-CO₂ in CO₂ emissions through its Eco Services

The ORIX Group's Eco Services business contributed to reducing CO₂ emissions equivalent to 847,700 t-CO₂ among customers and society as a whole during FY2016. Calculation methods were as follows:

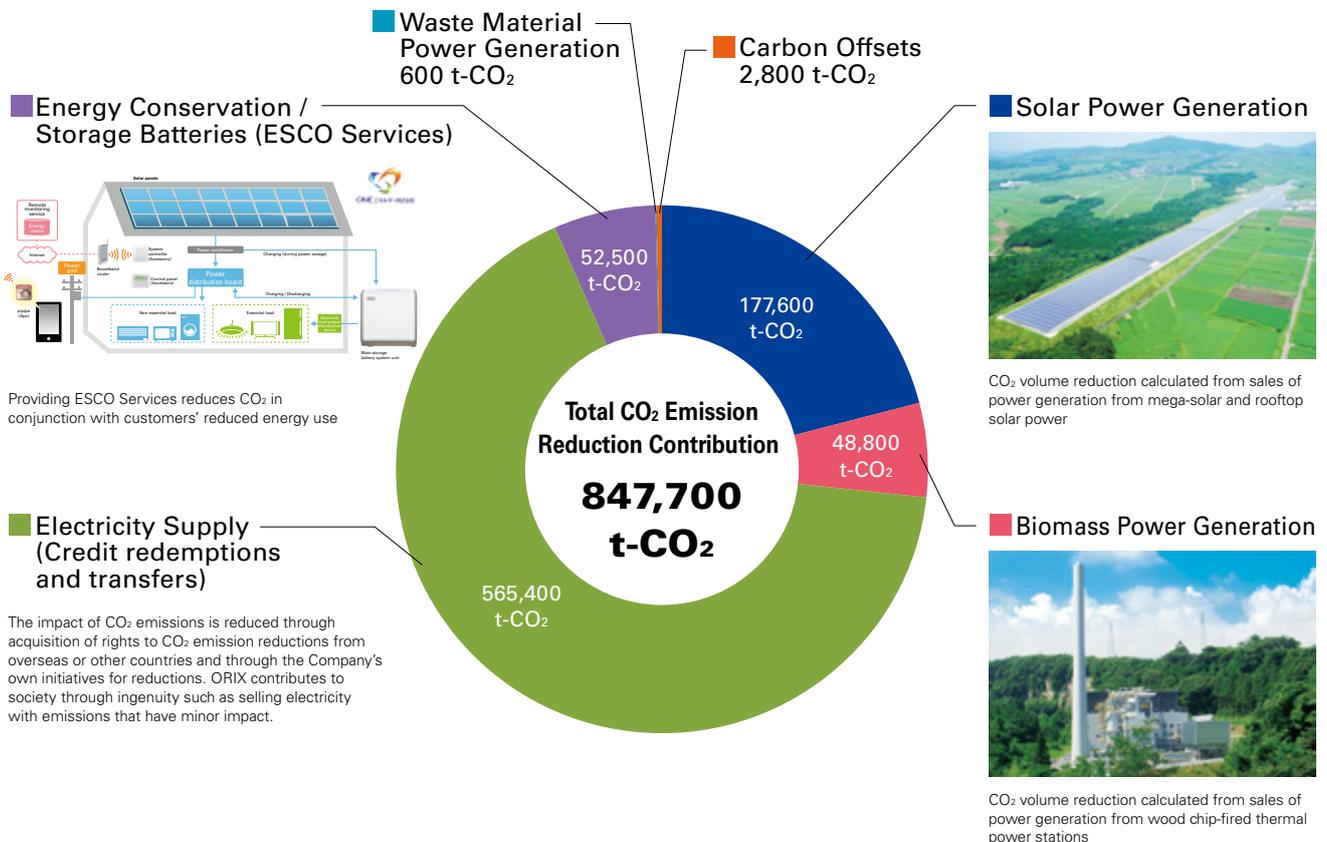
Calculation period: FY2016.3 (April 1, 2015 to March 31, 2016)

Calculation scope: ORIX Group Eco Services engaged in the environment and energy-related business in Japan

Basic concept: Calculations are performed by multiplying the decreased amount of activity by customers or society as a whole due to the ORIX Group's Eco Services by a CO₂ emission coefficient. The emission coefficient used is basically the nationwide version listed as an "alternate value" under the Greenhouse Gas (GHG) Emissions Accounting, Reporting, and Disclosure System (Act on Promotion of Global Warming Countermeasures) (0.000579 t-CO₂/kWh).

Calculations also add the CO₂ reduction credits redeemed during the calculation period after being acquired by the ORIX Group.

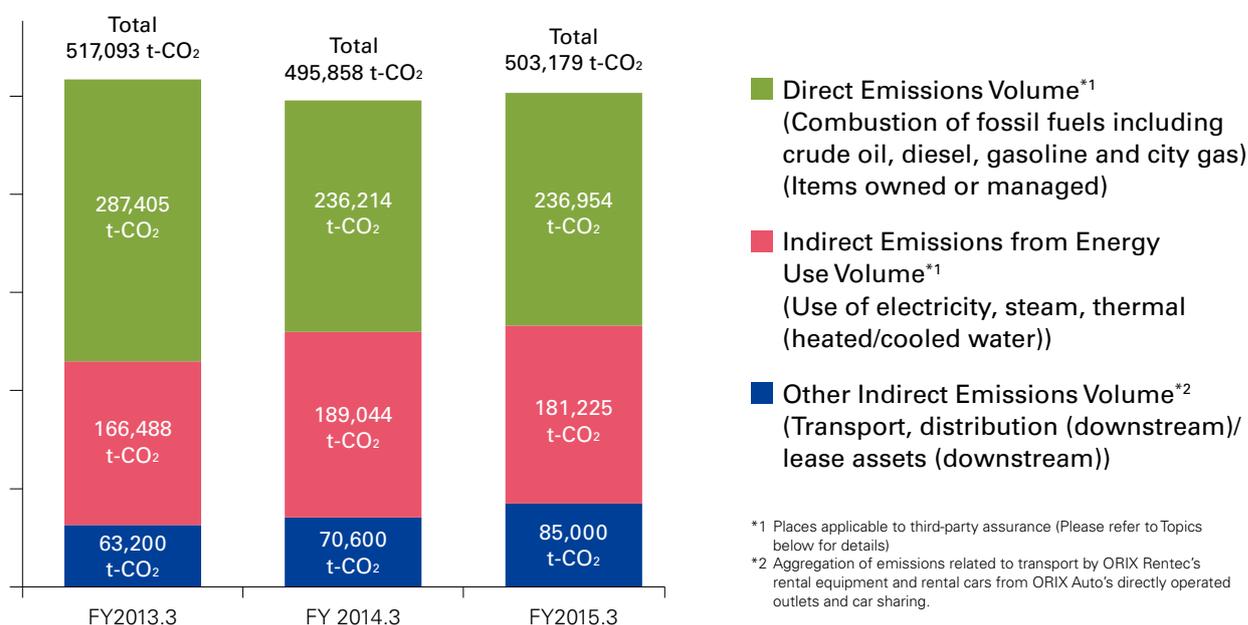
ORIX's Environment and Energy-Related Business FY2016.3 (April 1, 2015 to March 31, 2016) CO₂ Emission Reduction Contribution



Calculation Methods

- Solar Power Generation (mega-solar and rooftop solar power generation): Calculated by multiplying the emissions coefficient by the amount of the power generated through solar power generation that is sold as a substitute for power supplied by power companies.
- Biomass Power Generation: Calculated by multiplying the emissions coefficient by the power generated. Emissions from combustion improvers are deducted.
- Electricity Supply: Transferred credit amount before redemption to calculate the post-adjustment coefficient by operator under the Greenhouse Gas (GHG) Emissions Accounting, Reporting, and Disclosure System.
- Energy Conservation / Storage Batteries (ESCO Services): Calculated for a planned annual CO₂ reduction based on an estimate at the start of a project for ESCO signatories. Assumed CO₂ reduction period is five years.
- Waste Disposal Power Generation: Calculated by multiplying the abovementioned coefficient by the amount of power sold after being generated through waste disposal power generation.
- Carbon Offsets: Credit amount offset during the period.

ORIX Group CO₂ Emissions



Calculation details are as follows.

Aggregation period: Each fiscal year from April 1 to March 31 of the following year

Calculation scope: ORIX Group consolidated companies in Japan (except for companies receiving investments in the principal investment business)

Calculation Method

- CO₂ emissions are calculated based on the "Ministerial Ordinance Concerning Calculation of Greenhouse Gas Emissions Associated with Business Activities of Specified Emitters."
- Calculated based on internal regulations related to management of environmental information

- CO₂ emissions include CO₂ from non-energy use, methane (CH₄) and dinitrogen oxide (N₂O).
- Emissions coefficients for electricity use actual emissions coefficients by power company under the Greenhouse Gas (GHG) Emissions Accounting, Reporting, and Disclosure System.

Topics

ORIX receives third-party assurance reports on CO₂ emissions

Figures for direct emissions and indirect emissions from energy use have received third-party assurance from PricewaterhouseCoopers Sustainability LLC.
Please refer to this link for details.

<https://www.orix.co.jp/grp/en/sustainability/environment/disclosures.html>

It All Started with Financing

Stories behind ORIX's unique challenges and services are introduced in our website.

Visit our site <http://www.orix.co.jp/grp/en/story/> (directly or via QR code) to know what makes us "ORIX!"

Type in "ORIX Story" in the search engine or scan a QR code on the right.



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