



Environmental Policy

Environmental Policy

MIRARTH HOLDINGS Group environmental policy

MIRARTH HOLDINGS Group was holds as its purpose: "To design sustainable environments for a happier future for both people and our planet." The Group think more positively about the future happiness of people and the earth than anyone else, and propose the creation of a sustainable environment that is friendly to the earth.

1. **Providing environmentally friendly buildings and spaces**

We will strive to improve environmental performance, reduce environmental impact, and actively incorporate environmentally friendly technologies and ideas into our products and services to help address global warming and create a recycling-oriented city.

2. **Addressing climate change**

We will contribute to reducing greenhouse gas emissions and mitigating climate change issues through the efficient use of energy, the development and operation of renewable energy generation facilities, and the utilization of renewable energy.

3. **Maintenance and conservation of biodiversity**

In all of our business activities, we will strive to reduce the impact on, and conserve, biodiversity by taking into consideration the risks that may affect the surrounding ecosystems and biodiversity, conducting appropriate risk management, and giving due consideration to environmental conservation in accordance with the natural and social conditions of the region.

4. **Promotion of resource recycling**

We will work to conserve the water environment and reduce waste, and, through the promotion of the 3Rs (reduce, reuse, recycle), we will strive to reduce our environmental impact and contribute to the formation of a recycling-oriented society.

5. **Compliance with environmental laws and regulations and environmental education**

We will comply with environmental laws, regulations, and other relevant laws and regulations, and we will raise the environmental awareness of our employees through education and awareness activities on the environment.

6. **Establishment of environmental management**

We will promote appropriate environmental management by setting and periodically reviewing environmental targets.

Global Warming

Climate Change Initiatives

Endorsement of TCFD Recommendations

Group companies Takara Leben, Takara Asset Management, and Takara PAG Real Estate Advisory have expressed their endorsement of the TCFD (Task Force on Climate-related Financial Disclosure) *1 recommendations and joined the TCFD Consortium*2.

MIRARTH HOLDINGS has positioned "proactive response to ESG" as one of the pillars of its medium-term management plan announced in May 2021, and has set KPIs for each of the key issues identified and is promoting group-wide initiatives to resolve these issues. In particular, climate change is a systemic risk in finance, and many stakeholders, including investors, are demanding disclosure of information on climate-related risks and opportunities. Identifying, assessing, and managing the risks and opportunities posed by climate change and enhancing the resilience of our business is essential to ensure our sustainable and stable earnings over the long term.

Going forward, we will strive to foster a relationship of trust with our stakeholders, enhance our corporate value, and contribute to the realization of a sustainable society by expanding our disclosure of information on climate change in line with the TCFD recommendations.



*1 TCFD (Task Force on Climate-related Financial Disclosures): An international initiative established by the Financial Stability Board (FSB) at the request of the G20 to examine how climate-related disclosures and financial institutions should be addressed, recommendations for companies and others to disclose their "governance," "strategy," "risk management," and "indicators and targets" related to climate change-related risks and opportunities.

[TCFD Website](#)

*2 TCFD Consortium: A private-sector initiative established in 2019 to discuss effective disclosure of corporate information and efforts to link disclosed information to appropriate investment decisions by financial institutions and others.

[TCFD Consortium Website](#)

Governance

The following governance structure has been established to address climate-related risks and opportunities.

The Chief Executive Officer for climate-related issues is the Representative Director, and the Executive Officer is the Director in charge of sustainability.

The Chief Operating Officer reports regularly to the Chief Executive Officer on matters related to climate change response, including identification and assessment of climate change impacts, management of risks and opportunities, progress of adaptation and mitigation efforts, and establishment of indicators and targets, at the Sustainability Committee meetings. After deliberation and consideration of each agenda item by the attendees of the Sustainability Committee, decisions are made by the Chief Executive Officer.

Strategies

MIRARTH HOLDINGS establishes a process for identifying, evaluating, and managing the impact of climate-related risks and opportunities on its business activities, strategies, and financial plans and operates it appropriately.

In identifying and assessing climate-related risks and opportunities, we aim to do so systematically and objectively, utilizing scientific and academic knowledge.

As part of our efforts to reduce CO₂ emissions, we entered the energy business in 2013 and have developed a number of mega solar power plants across Japan, promoting solar power generation and other renewable energy projects.

Through the development and operation of solar power generation facilities, we will continue to contribute to regional revitalization, including environmental improvement, energy self-sufficiency, and utilization of idle land, as well as further renewable energy supply to achieve carbon neutrality through initiatives such as wind power and biomass power generation projects.

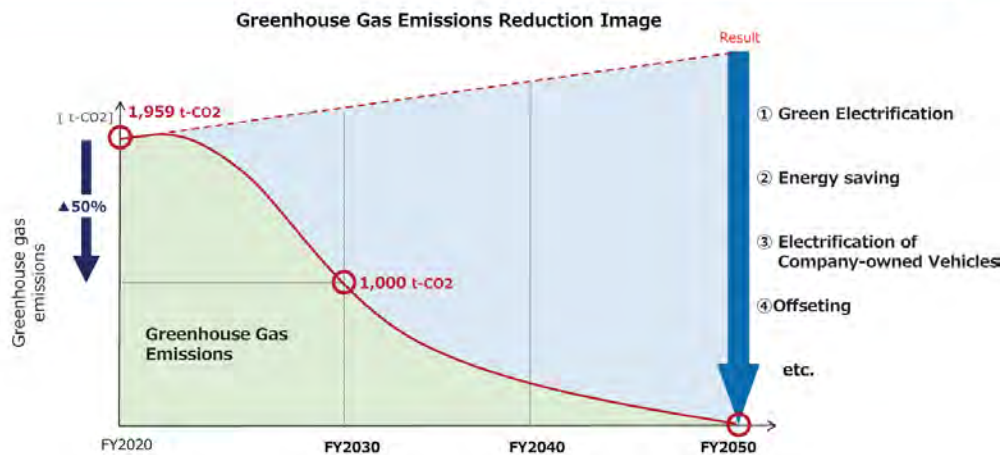
Managing Risks and Opportunities


By managing identified climate-related risks/opportunities and promoting resilience initiatives, MIRARTH HOLDINGS aims to reduce business risks and realize value creation opportunities to ensure sustainable and stable earnings over the long term.

Indicators and Targets

In order to achieve carbon neutrality by 2050, we have set a target to reduce greenhouse gas emissions (Scope-1 and 2) from business activities of MIRARTH HOLDINGS Group by 50% (compared to FY2020) by FY2030 and to net zero by FY2050.

For Scope3, we are currently compiling energy data and plan to release our greenhouse gas emissions of this category in FY2023.



• [Click here to read the full text](#)  553KB

Repeal and Revision

The Sustainability Committee approves this policy and any amendments or revisions to its content.

At least once a year, the Sustainability Committee reviews the content of this policy to ensure that it is appropriate for our approach to climate-related issues.

Energy & Resources

Energy Business

Renewable Energy Initiatives

MIRARTH HOLDINGS Group promotes energy projects that utilize renewable energy sources that contribute to the reduction of CO₂ emissions. Since 2013, when we entered the energy business, we have been developing mega solar power plants and small- and medium-scale solar power plants on idle land and other sites across Japan, with a total generation capacity of approximately 360 MW as of March 31, 2023.

In addition, we are also involved in other renewable energy projects other than solar power generation, such as wind power and biomass.

Tohoku

Aomori Prefecture

- LS Aomori Hiranai Power Generation Facility

Miyagi Prefecture

- LS Miyagi Osato Power Generation Facility
- LS Miyagi Sendai A & B Power Generation Facility
- LS Miyagi Osato 2 Power Generation Facility
- LS Miyagi Ohira Power Generation Facility
- LS Miyagi Matsushima Power Generation Facility

Fukushima Prefecture

- LS Fukushima Yamatsur Power Generation Facility
- LS Fukushima Kagamiishi 1 and 2 Power Generation Facility
- LS Fukushima Tamura Power Generation Facility

Iwate Prefecture

- LS Iwate Hirono Power Generation Facility
- LS Iwate Hachimantai Power Generation Facility

Kanto-Koshinetsu

Ibaraki Prefecture

- LS Koga Onanuma Power Generation Facility
- LS Tone A, B, and C Power Generation Facility
- LS Chikusei Power Generation Facility
- LS Tsukuba Bouchi Power Generation Facility
- LS Miho Power Generation Facility
- LS Mito Takada Power Generation Facility
- LS Tone Fukawa Power Generation Facility
- LS Sakuragawa 3 Power Generation Facility
- LS Kamisu Hasaki Power Generation Facility
- LS Hokota Power Generation Facility
- LS Sakuragawa 2 Power Generation Facility
- LS Inashiki Aranuma 1 Power Generation Facility
- LS Sakuragawa Nakaizumi Power Generation Facility
- LS Sakuragawa 4 Power Generation Facility
- LS Sakuragawa Shimoizumi Power Generation Facility

- LS Sakuragawa 1 Power Generation Facility
- LS Inashiki Aranuma 2 Power Generation Facility
- LS Takahagi Power Generation Facility
- LS Ibaraki Kasumigaura Power Generation Facility
- LS Sakuragawa Makabe Power Generation Facility

Tochigi Prefecture

- LS Shioya Power Generation Facility
- LS Nasu Nakagawa Power Generation Facility
- LS Fujioka A Power Generation Facility
- LS Fujioka B Power Generation Facility
- LS Shioya 2 Power Generation Facility

Nagano Prefecture

- LS Nagano Shiojiri Power Generation Facility

Tokyo Metropolitan Area

Saitama Prefecture

- LS Hanno Misugidai Power Generation Facility

Chiba Prefecture

- LS Chiba Wakaba-ku Power Generation Facility
- LS Sosa Power Generation Facility
- LS Chiba Sammu East and West Power Generation Facility
- LS Chiba Narita Power Generation Facility
- LS Chiba Katsuura Power Generation Facility

Chubu

Shizuoka Prefecture

- LS Shizuoka Omaezaki Power Generation Facility

Aichi Prefecture

- LS Aichi Toyohashi Power Generation Facility

Mie Prefecture

- LS Mie Yokkaichi Power Generation Facility

Kinki

Wakayama Prefecture

- LS Shirahama Power Generation Facility

Chugoku

Hiroshima Prefecture

- LS Hiroshima Mihara Power Generation Facility

Tottori Prefecture

- LS Tottori Daisen Power Generation Facility

Okayama Prefecture

- LS Okayama Tsuyama Power Generation Facility

Kyushu and Okinawa

Nagasaki Prefecture

- LS Nagasaki Isahaya Power Generation Facility
- LS Nagasaki Sasebo Power Generation Facility
- LWP LWP Nagasaki Tsushima Power Generation Facility

Kagoshima Prefecture

- LS Kirishima Kokubu Power Generation Facility
- LS Kagoshima Kanoya Power Generation Facility
- LS Kirishima Kokubu 2 Power Generation Facility
- LS Kagoshima Tanegashima Power Generation Facility

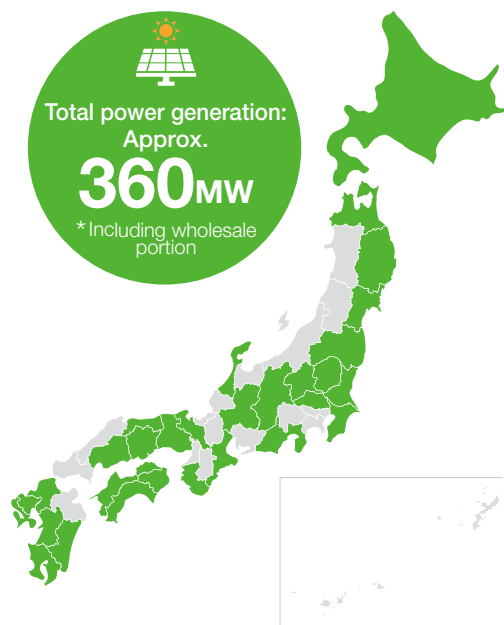
Miyazaki Prefecture

- LS Miyazaki Miyakonojo Power Generation Facility

Okinawa Prefecture

- LS Miyakojima Gusukube Power Generation Facility

etc.



- Other Group Achievements [↗](#)

Leben Solar Tottori Daisen Power Plant

In August 2022, Takara Leben, which has been developing mega solar power plants by installing solar panels on sites unsuitable for building construction or idle land, held a completion ceremony for the Leben Solar Tottori Daisen Power Plant, which utilizes a former golf course site in Saihaku-gun, Tottori Prefecture.

The plant is the largest power plant developed by the our group in the Chugoku region, generating approximately 16.5 million kWh of electricity per year, which is equivalent to the electricity supply for approximately 4,800 households. In addition to the longer mounting piles to prevent snow damage, double-sided power generation modules are used to convert reflected light from the ground surface onto the back of the panels as well as the front of the panels, resulting in greater power generation even in a limited space.

Property Name	LS (Leben Solar) Tottori Daisen Power Plant
Location	339-2, Fukukane, Hoki-cho, Saihaku-gun, Tottori, etc.
Area	Approx. 254,645 m ²
Generating capacity	Approx. 14MW
Estimated annual power generation	Approx. 16.5 million kWh
Unit price of electricity sold	24 yen/kWh

Efforts to promote PPA

MIRARTH HOLDINGS and Leben Clean Energy have signed a memorandum of understanding (MOU) on solar power generation business with Mitsui & Co. Plant Systems to jointly develop Offsite Corporate PPA* to realize a decarbonized society.

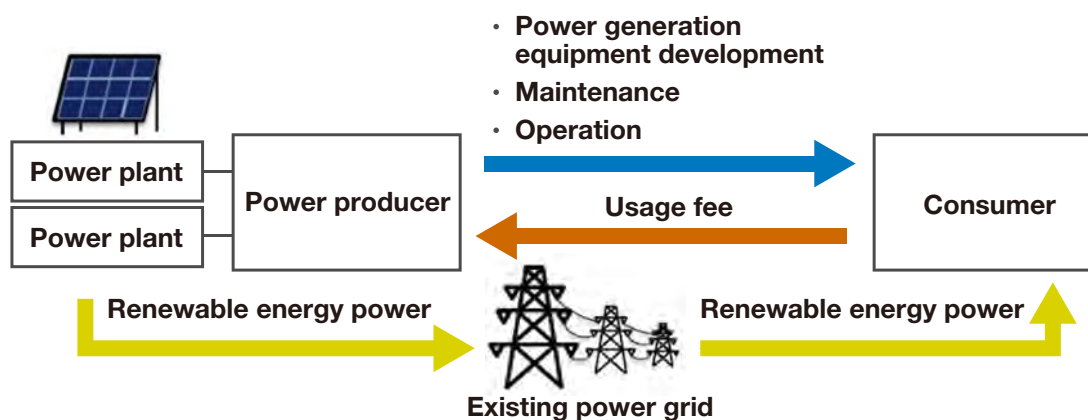
With a track record of developing more than 200 high-voltage solar power plants nationwide, Leben Clean Energy is the core company in the renewable energy business of MIRARTH HOLDINGS Group. We are developing renewable energy, particularly solar power, to meet the growing decarbonization needs of our customers while building a business model that does not depend on feed-in tariffs (FITs). In recent years, the number of large-scale solar power generation sites has been on the decline, and we have been speeding up the development of medium- and small-scale solar power plants across Japan. This collaboration with Mitsui & Co. Plant Systems is part of our efforts to quickly build a development system and commercialization of such plants.

In addition, MIRARTH HOLDINGS is also promoting activities with a view to supplying post-FIT renewable energy by conducting a tender offer for units of Takara Leben Infrastructure Fund through a limited liability company it has established. By actively and continuously developing projects through Leben Clean Energy, we will work to develop more non-FIT solar power plants, etc.

Going forward, the company plans to continue to provide solutions to a large number of customers through the project development capabilities of Leben Clean Energy, the project management capabilities of Mitsui & Co. Plant Systems, and the extensive network of the Mitsui & Co. group.

*Offsite Corporate PPA: A system in which solar power plants are installed on idle land, etc., in remote areas throughout Japan, outside customer demand areas, and electricity or environmental value is supplied using the existing power grid owned by a general transmission and distribution utility.

PPA Scheme Image



Biomass Power Generation

In 2021, MIRARTH HOLDINGS entered the biomass power generation business for the first time in the company's history. The Fuji Asagiri Biomass Power Plant (Fujinomiya City, Shizuoka Prefecture), which is currently in trial operation to start selling electricity in FY2022, generates biomass power using cattle manure collected from members of the Fuji Kaitaku Agricultural Cooperative Association. The power plant generates electricity by burning biogas generated from the fermentation process of cattle manure, which emits less CO₂ than the direct combustion of wood waste and combustible waste. The liquid fertilizer produced with the biogas will be marketed as Fuji Asagiri Biomass Liquid Fertilizer.

This project follows our solar power initiative as the second renewable energy venture. It aims to create a regional, recycling-oriented symbiotic zone, supplying clean energy through effective waste material utilization and addressing the issue of cattle manure disposal.



LS Chiba Sammu East & West Power Plants Sign Specified Wholesale Supply Agreement with Minna Denryoku Co.

Green Energy, a limited liability company whose asset management is entrusted to Takara Asset Management, has concluded a specified wholesale supply contract with Minna Denryoku (currently UPDATER Inc.) for the LS Chiba Sammu East and West Power Plants. Minna Denryoku is developing a service that connects electricity producers and users with renewable energy. Through Minna Denryoku, we aim to promote a decarbonized society and the spread of renewable energy by supplying energy to households that choose energy with low environmental impact and to companies that practice environmentally friendly management.



Measures to Reduce CO₂ Emissions

Takara Leben Infrastructure Fund and Green Energy, a limited liability company, aim to create a sustainable, earth-friendly environment through investment in renewable energy generation facilities and other assets, contributing to the reduction of CO₂ emissions by approximately 76,302 tons per year*.

* Annual amount of reduction of CO₂ emissions compared to fossil fuel-fired thermal power plants based on the output of power generation facility panels.



Takara Leben Sustainability Fund

Takara Leben has begun operation of new means of financing with the aim of encouraging measures that contribute to the global environment. Leben Funding LLC. was established in January 2021, and in collaboration with Funds, Inc., it launched the Takara Leben Sustainability Fund #1~3 and conducted crowdfunding to solicit loan investments from a wide range of investors. The collected funds will be used as working capital for renewable energy projects and Sustainability (CSR) measures.





Ecology & Culture

ZEH Condominium

Takara Leben is committed to supplying environmentally friendly ZEH condominiums.

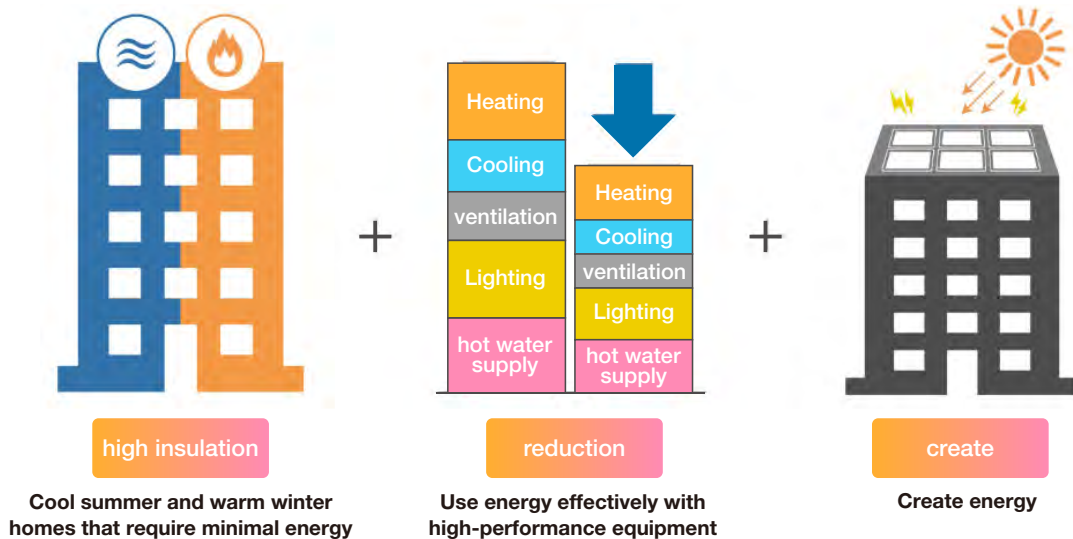
*1 ZEH (Net Zero Energy House): A house that simultaneously achieves a "comfortable indoor environment" and a "net annual residential energy consumption of approximately zero or less."

ZEH Condominium "LEBEN TOYAMA JINZUHONMACHI ONE TOWER"

LEBEN TOYAMA JINZUHONMACHI ONE TOWER (Toyama City, Toyama Prefecture) by Takara Leben is insulated not only on the exterior walls and folded parts but also on the ceiling surface to ensure the high insulation performance required for a ZEH*1 condominium, and metal sashes and double-layer double glazing Low-E glass are used for openings.

The condominium has obtained Grade 4 in the "heat insulation performance grade" of energy conservation measures*2 (whereas ordinary condominiums are rated Grade 3), and Grade 5 in the "primary energy consumption grade."

In addition, the building has received the highest rating of 5 stars (out of 5 scale) under the BELS, an energy efficiency rating system that calculates the primary energy consumption of a house.



*2 Energy measure grade: Established by the Ministry of Land, Infrastructure, Transport and Tourism as a grade that expresses energy-saving performance.



快適で
健康にやさしい



省エネで
家計にやさしい



地球の
未来にやさしい



ZEH Condominium "LEBEN TOYAMA NISHICHO RESONACIA"

LEBEN TOYAMA NISHICHO RESONACIA is the first ZEH (Net Zero Energy House) condominium in Toyama Prefecture. It has obtained the highest rating of 5 stars under the BELS, Energy Saving Performance Indication System, which calculates the primary energy consumption of a house and assigns a 5-star rating.



"L.Biz NIHOMBASHI" Acquired CASBEE Certification "A rank"

At L.Biz NIHOMBASHI (Chuo-ku, Tokyo), an office building developed by MIRARTH HOLDINGS and its Group company, Takara Leben, we are working on heat load control of the building envelope to achieve environmental performance for the realization of a decarbonized society, in line with the Group policy of "providing environmentally conscious buildings and spaces" and working to improve the indoor environment by controlling room temperature and lighting. In addition, to encourage the use of natural energy such as sunlight, the building has a high floor height and curtain walls*1. Also, to conserve water resources, which are non-renewable resources, we are working to reduce water consumption through water-saving devices.

These environmental performances were highly evaluated, and the property was the first in our series of office buildings to receive the "A" rank in CASBEE*2 - Building (New Construction), a comprehensive assessment system for building environmental performance.

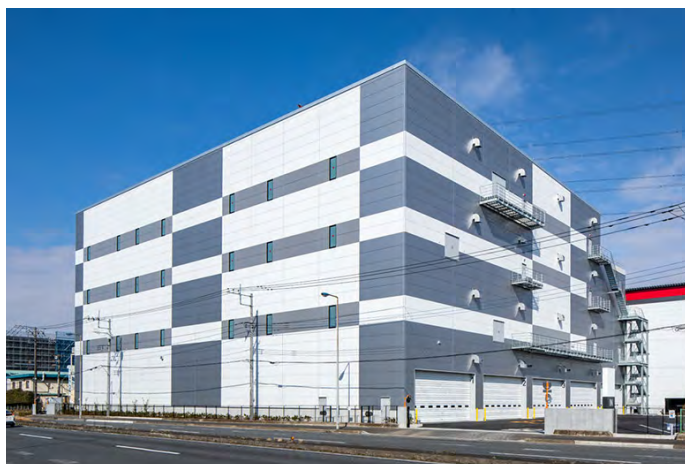
*1 Curtain wall: A lightweight exterior wall that is installed to reduce the load on the building's structure by ensuring wind pressure from the outside and watertightness.

*2 CASBEE: A system for evaluating and rating the environmental performance of buildings. It comprehensively evaluates the quality of buildings, including environmental considerations such as energy conservation and the use of materials and equipment with low environmental impact, as well as indoor comfort and consideration for the landscape.



Noda City Nakasato Logistics Facility Receives 5-Star BELS Certification

Noda City Nakasato Logistics Facility (Noda City, Chiba Prefecture), the first logistics facility built by Takara Leben in March 2022, has a policy of "developing environmentally friendly properties" and has a solar power generation system on the roof. The energy generated is used for a portion of the facility's electricity consumption. In recognition of these environmentally friendly efforts, the facility has received the highest rating of 5 stars under the BELS (Building Energy Efficiency and Low Energy Performance Labeling System).



Environmental Initiatives through ISO 14001 Certification

Recognizing the need to promote environmental friendliness in the general construction industry, Leben Home Build acquired ISO 14001 certification, the international standard for environmental management systems, in 2008. We continue to operate our environmental management system by setting and regularly evaluating targets for reducing industrial waste resulting from our production activities at work sites.

- Separate trash at construction sites and promote recycling
- Separate and reduce waste at each business site.
- Regular cleaning outside the company by employees
- Propose plans and designs for energy conservation



Promotion of LEDs

For the purpose of effective use of resources and reduction of running costs, we are promoting the replacement of lighting installed in managed properties with LED lighting, which has a longer life and consumes less power.

Initiatives of Leben Trust

Leben Trust, a real estate leasing and management company, actively proposes environmentally friendly capital investments to owners, such as the use of LED lighting in common areas of managed properties, to promote energy conservation in buildings.

Takara PAG Real Estate Advisory Initiatives

Takara PAG Real Estate Advisory, which is entrusted with asset management of Takara Leben Real Estate Investment Corporation, has implemented LED lighting in 41 of the properties it owns.

	Number of properties (including some partially implemented)	Percentage of LEDs in portfolio	
LED conversion	41 properties	Total 73.1%	Common areas: 91.1%
			Exclusive areas: 62.1%

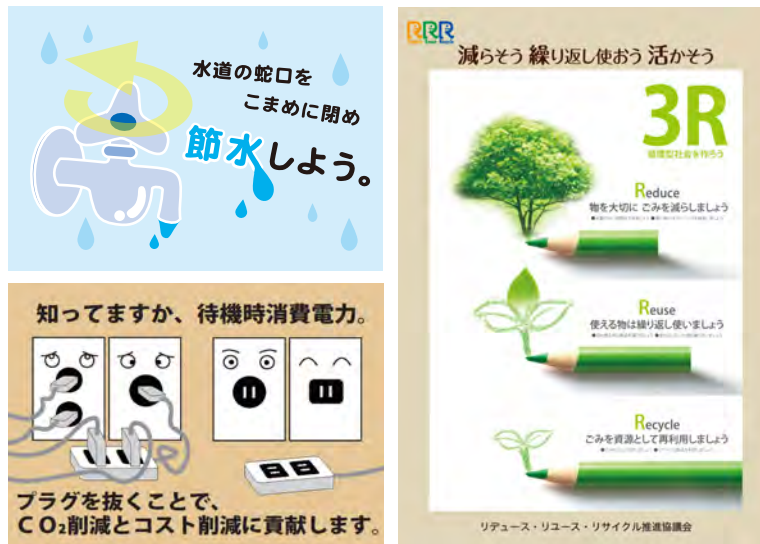
(Based on floor space, as of the end of February 2023)

Environmental Initiatives in Office Buildings

Takara PAG Real Estate Advisory, which is entrusted with asset management of Takara Leben Real Estate Investment Corporation, is promoting environmentally friendly initiatives to reduce environmental impact and improve the indoor environment.

To reduce water consumption in office buildings, we use rainwater for toilet flushing water, conduct awareness raising activities for tenants, and install "water-saving panels" to reduce the amount of water used in the water supply.

In addition, by displaying educational posters in common areas and tenants' private areas, we are promoting the reduction of greenhouse gas emissions and waste by fostering awareness of electricity conservation and the 3Rs.

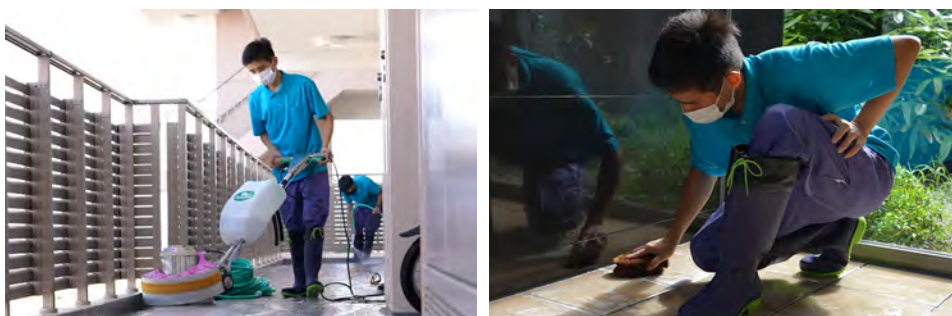


Regular Cleaning Using Environmentally Friendly Detergents

As part of its commitment to environmental friendliness in condominium management services, Leben Community has officially introduced biodegradable plant-derived surfactants since fiscal year 2022.

Although vegetable-based detergents had been introduced on a trial basis at some properties since FY21, the vegetable-based detergents at that time had less cleaning power than conventional detergents and did not meet the quality required for the services. After a number of trials and errors, we have officially introduced a detergent that does not fall under the PRTR system* and that takes environmental recycling into consideration. Currently, the detergent is used at sites where cleaning and janitorial staff belonging to Leben Community work.

*PRTR system: A system under which business operators are required to monitor and report to the government the amount of chemical substances released into the environment (air, water, and soil) from their business sites and the amount transferred out of their business sites in waste materials, which may be harmful to human health or the ecosystem.





Environmental Data

Environmental Data

The Group's Scope 1 and Scope 2 greenhouse gas (CO₂) emissions and energy consumption are shown below:

Greenhouse gas (CO₂) emissions

Unit: t-CO₂

Category	FY2020	FY2021	FY2022	Remarks
Scope1	374	380	610	Combustion of city gas, LP gas, kerosene, gasoline
Scope2	1,585	1,696	3,171	Use of electricity and cold water
Total	1,959	2,076	3,781	

* The scope of environmental data calculation covers MIRARTH HOLDINGS Group (9 consolidated companies).

* The period covered is FY2020 and FY2022 (April 1, 2020 to March 31, 2023).

* The figures for FY2022 are provisional and subject to change.

In addition, from FY2022, with the expansion of the boundary of electricity use, etc., the scope of aggregation of business activities is additionally aggregated.

* The Group excludes greenhouse gases other than CO₂ (chlorofluorocarbons, etc.) because of their extremely small amounts, and it only calculates and reports CO₂ emissions.

Energy consumption

Unit: kL of crude oil equivalent

Energy Type	FY2020	FY2021	FY2022
Electricity	915.2	1,020.8	1,782.5
City gas	3.2	0.5	61.8
LP gas	0.0	0.4	56.1
Gasoline	140.8	145.2	136.7
Kerosene	0.7	0.3	0.1
Light oil	0.0	0.0	3.0
Cold water	1.2	0.4	0.5
Total	1,061.1	1,167.6	2,040.5

* The scope and period covered by the energy data are the same as for CO₂.

* The values for FY2022 are provisional and subject to change.

* Crude oil conversion is a measure to compare the size of different energy sources, such as electricity and gas.