

Sustainability Initiatives: Exercising Strengths in “Connections”

Efforts to Address Climate Change

In July, 2020, the Gunma Bank announced its support for the TCFD Recommendations as a means to preserve and create the global environment, a priority issue in the Gunma Bank Group SDGs Declaration. The Gunma Bank analyzes the impact of climate change on its business and reduces our greenhouse gas emissions, and supports its customers in their efforts to go carbon-free.

As for the automotive sector, a key industry in the region, the environment surrounding it has changed significantly due to the rapid growth in electrification, etc. Consequently, as a sector open to transition risk, we are performing a scenario analysis on the industry. Moreover, by engaging with local automotive suppliers on an individual basis, we are working to provide medium- to long-term accompanying support for each supplier.

By strengthening our efforts to tackle climate change, we hope to create and piece together a future for the region.

Supporting the TCFD Recommendations

Disclosures related to governance, strategy, risk management, and indicators and targets based on the TCFD* Recommendations are as follows.



* Task Force on Climate-related Financial Disclosures

Governance

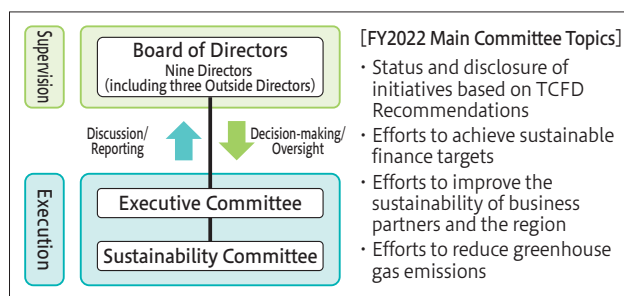
Governance structure

The Bank considers addressing climate change, the SDGs, ESG, and other sustainability-related initiatives as important management issues. We are developing a governance structure to provide oversight of these issues.

We established the Sustainability Committee chaired by the President. Its goal is to reinforce the Bank’s sustainability initiatives, develop management strategies from a mid- to long-term perspective, and enhance the effectiveness of measures.

The Sustainability Committee will hold four meetings per year, in principle. The main matters it will discuss and consider include the formulation of policies related to sustainability initiatives and reports on the progress of the plan.

The matters discussed and considered by the Sustainability Committee are submitted and reported to the Executive Committee, an advisory body to the president, which discusses important business matters each time the committee is convened. The committee will make four reports to the Board of Directors per year, in principle, allowing the Board of Directors to provide oversight. The committee submits important sustainability-related matters for discussion by the Board of Directors, which in turn makes decisions on these matters.



Performance-linked share remuneration

A performance-linked share remuneration system for inside directors was introduced in June 2019. In addition to financial evaluation indicators, the Bank has adopted non-financial indicators for this system that measure contributions towards the achievement of the SDGs, including addressing climate change. These indicators include the Bank’s greenhouse gas emissions reduction rates and the amount of loans to renewable energy projects executed.

* See P55 for more on the performance-linked share remuneration system.

Strategy

Identifying climate change-related risks and opportunities

We conduct qualitative analyses of the risks (physical risks and transition risks) and opportunities of climate change on short- (three-year), mid- (10-year), and long-term (30-year) time scales.

Type	Overview (Time Scale)
Physical risk	• Damage to real estate collateral (buildings) due to flooding, etc. (short-to-long term)
	• Increased credit risk due to business stagnation caused by damage to customers’ business facilities (short-to-long term)
	• Increased operating costs due to damage to the Bank’s business facilities (short-to-long term)
Transition risk	• Increased credit risk due to the negative impact of tighter climate change-related regulations, taxation, etc. on customers’ business performance (mid-to-long term)
	• Increased credit risk due to negative impacts on customer performance, e.g. increased transition costs of transitions to low-carbon and decarbonized products, delayed responses to changes in consumer product preferences, etc. (short-to-long term)
	• Damage to the Bank’s reputation in the event it is determined we have not provided adequate disclosure (short-to-long term)
Opportunity	• Provision of new financial products and services to support the transition to a decarbonized society (short-to-long term)
	• Reduction of operating costs through resource and energy conservation at the Bank’s business locations (short-to-long term)
	• Increased demand for public works projects, corporate capital investment, etc. as a countermeasure for climate change-related disasters (short-to-long term)

Sustainability initiatives

Scenario Analysis

We estimated the increase in the Bank's credit costs due to physical and transition risks in multiple temperature range scenarios. As shown below, the results of all analyses indicate that the impact on the Bank's finances is limited.

Physical risk

The majority of physical risk was due to natural disasters caused by climate change. As floods have a high probability of occurring in Japan, we analyzed the impact of flood damage. The analysis was based on the Intergovernmental Panel on Climate Change (IPCC) 8.5 scenario (4°C scenario). We calculated the increase in the Bank's credit costs through 2050 based on two factors estimated using hazard maps; the amount of damage to the value of real estate collateral held by the Bank, and the number of days of business stagnation for customers due to flooding.

The result of the analysis was a maximum increase in credit costs of 5.3 billion yen through 2050.

Scenario	IPCC/RCP8.5 (4°C Scenario) Scenario Expectations Slow adoption of regulations will lead to further global warming.
Subjects of analysis	Financed small and medium companies with head offices in Japan
Content of analysis	Damage to the value of real estate (buildings and condominiums) collateral held by the Bank estimated using hazard maps/Estimated impact on credit costs of decreased customer revenue due to business stagnation
Results of analysis	Maximum increase in credit costs through 2050: 5.3 billion yen

Transition risk

Among the sectors identified as vulnerable to climate-related financial impacts in the TCFD recommendations, the automotive and energy (electric power, oil and gas) sectors were selected for analysis in terms of the impact on climate change and the Bank's exposure. Based on the 2°C or less scenario, publicly disclosed information of model companies set for each sector and scenario forecast data was used to estimate the increase in credit costs due to customers' worsening financial situation associated with the transition to a carbon-free world.

The result of the analysis was a cumulative increase in credit costs of 7.1 billion yen through 2050.

Scenario	IEA/NZE2050 (1.5°C scenario), IPCC/RCP2.6 (2°C scenario) Scenario Expectations The regulations and technological innovations necessary to control temperature increases are adopted.
Subjects of analysis	Automotive and Energy (electric power, oil and gas) sectors
Content of analysis	<ul style="list-style-type: none"> Qualitative evaluation of the expected business impact on the sector Based on qualitative analysis, model companies are selected for each sector with future performance changes predicted from scenario forecast data, public information, etc. Above analysis results rolled out for entire sector while considering the business and products handled, etc. to estimate increase in credit costs
Results of analysis	Cumulative increase in credit costs through 2050: 7.1 billion yen

State of Carbon-Related Assets

Carbon-related assets accounted for approximately 23.8% of the Bank's total credit balance.

(Exposure to the energy, transportation, materials and buildings, and agriculture, food and forestry products sectors. Total of loans, acceptances, foreign exchange, private placement bonds, etc. at the end of March 2023. Excludes waterworks and renewable energy business.)

Risk Management

The Bank recognizes that the physical and transition risks arising from climate change are significant risks that could significantly impact the Bank's business operations and strategic and financial plans. The impact of the various risks identified through scenario analysis, etc. will be assessed for different categories, such as "credit risks" and "operational risks." The Bank will adopt a posture that allows it to manage such risks within the existing framework.

Based on the results of scenario analysis and other factors, we will strengthen our dialogue (engagement) with customers with the aim of addressing climate change and transitioning to a decarbonized society. Deeply understanding the challenges and needs of each of our customers and providing them with solutions will lead to the creation and better management of business opportunities.

The Bank also established its Environmentally and Socially Conscious Investment and Loan Policy in June 2021. The policy clearly states the Bank's stance on providing credit to sectors that have a significant impact on climate change risk, including a principle of not providing investments and loans for the construction of new coal-fired power plants.

Indicators and Targets

Sustainable Finance

The Group has also set mid- to long-term finance targets for the period from FY2022 through to FY2030 in order to further initiatives aimed at achieving sustainability in the region by solving environmental, social, and other issues. By proactively engaging in sustainable finance, we will uncover and resolve local ESG issues.

Target cumulative amount of sustainable financing*	
FY2030	FY2024
1.5 trillion yen (including 1 trillion yen in the environmental field)	500 billion yen (including 300 billion yen in the environmental field)

* Accumulated amount executed since FY2022. Sustainable finance refers to finance activities that contribute to solving environmental issues (renewable energy, energy-saving equipment, etc.) and social issues (business start-ups and succession-related issues, medical care, etc.).

Sustainable finance results
FY2022
266.2 billion yen (including 116.0 billion yen in the environmental field)

As part of our efforts to decarbonize the region, in October 2021 we established the GB Green Fund, an investment and loan fund totaling 50 billion yen to support the development of renewable energy. Through the fund, we will support the development of renewable energy and contribute to the reduction of greenhouse gas emissions. We will also promote the local production for local consumption of energy and regional revitalization through the spread of distributed power sources and other means.

GB Green Fund
Cumulative financing amount FY2021*-FY2022
46.1 billion yen

* October 2021–March 2022

Greenhouse Gas Emission

To help create a carbon-free world and contribute to the sustainable development of society, the Bank has set targets for reducing greenhouse gas emissions. Greenhouse gas emissions in FY2022 were 8,272 tons of CO₂, a reduction of 26.2% from FY2013. All electricity at the Bank's head office building and at its computer center has been switched to electricity derived from renewable energy. These buildings now have virtually zero greenhouse gas emissions associated with the electricity used there.

Going forward, we will continue to work on local renewable energy production for local consumption through the Gungin Oze Katashina Power Plant, for which we have acquired the naming rights, and by installing solar panels at our banks with power purchase agreements (PPA) in place. We will also further strengthen our efforts toward decarbonization through the use of electric vehicles.

Target FY2024: 50% reduction compared to FY2013
Net Zero by 2030

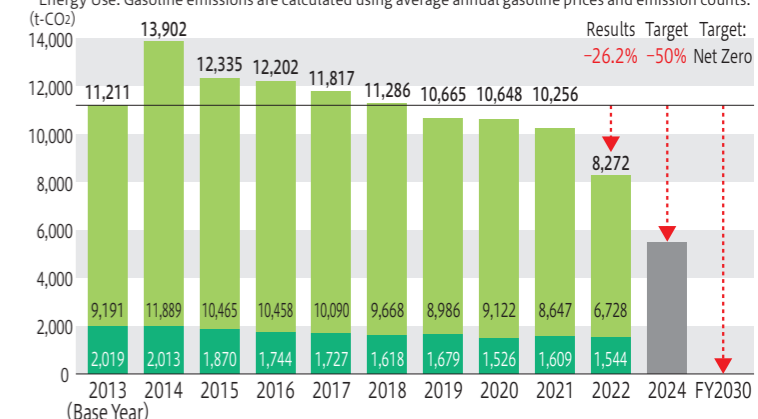
Main Initiatives

April 2022	All electricity for head office building was switched to electricity derived from renewable energy
November 2022	Decided to use electric vehicles for all banks (excluding those where vehicles are not used). Initiative still ongoing.
April 2023	All electricity for computer center was switched to electricity derived from renewable energy
October 2023	Scheduled start of Takasaki-Tamachi Branch PPA power supply
January 2024	Planned switch to renewable energy derived from the Gungin Oze Katashina Power Plant for all electricity used at the nine branches in the Hokumou area and a portion for the electricity used at the computer center

[Greenhouse gas emission]

■ Scope 1: Direct emissions by the Bank itself (heavy oil, utility gas, gasoline, etc.)
■ Scope 2: Indirect emissions from the use of energy supplied by other companies (electricity, cold water, steam, etc.)

* Calculated in accordance with criteria from the periodic reports mandated by the Act on Rationalizing Energy Use. Gasoline emissions are calculated using average annual gasoline prices and emission counts.



*The scope of the greenhouse gas emissions calculation is part of scope 1 and scope 2 for the Bank's domestic offices.

Efforts to Reduce Greenhouse Gas Emissions through Financing

The Gunma Bank issued green bonds in November 2019, and then in October 2021 issued sustainability bonds. These were the first issuances of both types of bonds by a regional bank. Of the 30 billion yen raised through the issuance of green bonds and sustainability bonds, 20 billion yen has been allocated to green projects. This will result in a greenhouse gas reduction of 60,537t-CO₂/year, equivalent to the annual greenhouse gas emissions (electricity) of approximately 33,000 households. This reduction

also greatly exceeds the Bank's FY2022 greenhouse gas emissions of 8,272t-CO₂.

Greenhouse gas emissions reductions from green projects (t-CO₂/year)

Renewable energy			Energy efficiency	Clean transportation	Total
Solar power	Hydroelectric power	Biomass power generation			
6,197	21,922	32,193	157	65	60,537

(Calculated based on MOE "Summary of FY2021 Statistical Survey on CO₂ Emissions from the Household Sector (Confirmed Figures)")

Sustainability initiatives

The Gunma Bank is working to expand the scope of how it measures greenhouse gas emissions, and this fiscal year we started to calculate the emissions associated with employee business trips and commuting. Going forward, we will continue to look at how we measure the Bank's emissions.

(Units: Tons of CO₂)

Measurement item		FY2021	FY2022
Scope 3	Some of Category 1 (purchase of copy paper)	263	249
	Category 6 (business travel)	43	58
	Category 7 (commuting)	1,069	1,013

[Measurement methods]

Category 1: Emissions =

Value of purchased products x Emissions intensity

Category 6, 7: Emissions =

Total amount of transportation expenses paid for each mode of transport x Emissions intensity

Measurements were made using the Japanese Ministry of the Environment and the Ministry of Economy, Trade and Industry's Basic Guidelines on Accounting for Greenhouse Gas Emissions Throughout the Supply Chain (ver.2.5) and the Ministry of the Environment's Emissions Intensity Database for Calculating an Organization's Greenhouse Gas Emissions Throughout the Supply Chain (ver.3.3).

Scope 3 Category 15

Since Scope 3 Category 15 (financed emissions) is considered to be important for financial institutions in understanding the risks and opportunities in climate change, calculations were made, based on the PCAF* standard measurement method, for investments and loans to domestic business loan recipient corporations as of the end of March 2023.

In the future, we will continue to look at how to improve measurements.

* Partnership for Carbon Accounting Financials. An international initiative to develop standards for standardizing the measurement and disclosure of financed emissions.

[Calculation formula for emissions]

Financed emissions are calculated by multiplying the ratio of the Bank's investments and loans to the total amount of funds raised by the investment and loan recipient (attribution factor) by the greenhouse gas emissions* of the investment and loan recipient.

* Disclosed information is used for companies listed on the TSE Prime Market that disclose emissions on their own websites, etc., and estimated values are used for other companies.

$$\text{Financed Emissions} = \sum_i \text{Attribution Factor}_i \times \text{Emissions}_i$$

$$\text{Attribution Factor}_i = \frac{\text{Investment amount}_i}{\text{Funding total amount}}$$

(i is each investment and loan recipient)

[Emissions by industry

(carbon-related sectors based on TCFD recommendations)]

Industry	Carbon intensity (t-CO ₂ /million yen)	Emissions (t-CO ₂)
Agriculture	5.37	36,269
Paper/Forestry	3.52	139,840
Food/Beverage	3.64	586,674
Metals/Mining	4.52	695,871
Chemical product	4.75	231,483
Oil/Gas	3.21	323,833
Building materials/Capital goods	4.85	1,560,283
Automotive	3.09	420,622
Electric energy	24.51	461,867
Real estate management and development	0.87	155,956
Land transportation	2.90	484,818
Sea transportation	9.39	24,583
Air transportation	12.38	480
Other	1.64	3,674,053
Total		8,796,632

[Calculation formula for carbon intensity by industry]

Carbon intensity by industry is derived by the following formula for each industry.

Σ (Carbon intensity of individual company × Investment and loan amount of individual company) / Total investment and loan amount of individual company

SDGs Initiative Support Service

Since September 2022, we have been providing the SDGs Initiative Support Service which evaluates the status of our customers' initiatives toward the SDGs. We objectively assess the status of our customers' SDGs initiatives through a prescribed interview sheet, and clarify the strengths and weaknesses of our customers through a feedback sheet. The service has been used by 181 companies so far. (As of March 31, 2023)

Raising Understanding of the SDGs and Their Necessity

Deciding on priority issues

Proposing Solutions that "Connect" to Solving Issues

Financing, Subsidies, Etc. Based on Proposed Solution

SDGs Initiative Support Service

- Confirm current state of initiatives based on interview sheets
- Ascertain issues, etc. through dialog with business partners using feedback sheets
- Support formulation of SDGs declarations tailored to business partners' businesses
- Contributing to social trust and the improvement of employee satisfaction by declaring commitment to initiatives

Environment	Human Rights/Labor	Fair Business Practices Organizational Structure	Products Service	Social Contribution Regional Contribution
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Parameter	Main Services, Etc.	Group Companies
SDGs-Related Consulting	SDGs-Related KPI Setting, Training, Etc.	Gungin Consulting Co., Ltd.
Carbon-Related		
Measuring and Visualizing Greenhouse Gas Emissions	Greenhouse Gas Emission Visualization Cloud Service	
Carbon Offsets	Purchase of J-Credits	
Introduction of Renewable Energy Facilities	Support of Installation of Solar Equipment, Etc.	
Support for Solving Other Social Issues		
Business Succession	Support of Business Succession Plan Formulation Provision of Capital Funds, Hands-on Support	Gungin Consulting Co., Ltd. Gunma Regional Advanced Solution Partners Co., Ltd.
Hiring of High-level Human Resources	Staffing Service	Gungin Consulting Co., Ltd.
BCP Consulting	Support with BCP Formulation and BCP Training	
Human and Labor Affairs/ Training and Development	Formulation of Personnel and Labor Regulations, Training and Development	Gungin Consulting Co., Ltd.
Demand Forecasting Service	Demand Forecasting Using Weather and Sales Data, Etc.	


Sustainable Finance	Sustainability-Linked Loans, Gungin SLLs Structured covenant loans for business successions, SDGs private placement bonds Loans for renewable energy projects Financing with Special Clause for Waiver in the event of Torrential Rain/ Earthquake, etc.
Subsidy Support	Project to promote leading decarbonization initiatives in construction and business sites Subsidies for energy efficiency investment promotion and support projects Projects to reduce the prices of solar power generation equipment, etc.
Interest Subsidy	Subsidy for Energy Efficiency Investments

TOPIC Use of Renewable Energy Derived from the Gungin Oze Katashina Power Plant

Local renewable energy production for local consumption using environmental value

As an initiative for decarbonization in the region, we procure carbon-free renewable energy generated at the Oze Katashina Power Plant (operated by The Tokyo Electric Generation Co., Ltd.) through TEPCO Energy Partner, Inc.

We have also acquired the naming rights for the power plant, naming it the Gungin Oze Katashina Power Plant. The procured electricity will be used by the Bank's nine branches in the Hokumou area and the computer center.

Logo:  **ぐんぎん尾瀬片品発電所**
群馬銀行

Location: Tsuchiide, Katashina-mura, Tone-gun, Gunma Prefecture
Start of power supply: January 2024 (scheduled)
Annual power generation: Approx. 3,700 MWh (about 20% of the Bank's annual power consumption)



Image of completed power plant (provided by The Tokyo Electric Generation)

TOPIC Automotive Sector Initiatives

Rapid changes in the environment around the automotive industry

The environment surrounding the automotive industry is undergoing significant changes, including rapid progress in the electrification of cars. Suppliers in the region, too, are being forced to respond to these changes in a variety of ways. This includes offering products compatible with electric vehicles and reducing greenhouse gas emissions in their manufacturing processes. Due to the reduction in the number of parts it takes to build cars, this also includes entering new fields or changing business models.

Expanding the support system for business partners and providing mid- to long-term accompanying support

In order to improve the sustainability of the automobile-related industry, Gunma Bank has expanded its support system by inviting former employees of automakers, building a database of suppliers in the prefecture, and conducting individual company-specific interviews with SUBARU-affiliated suppliers, focusing on the technologies, equipment, and characteristics of each company.

In FY2022, we were selected as a financial institution supported by the Ministry of the Environment's FY2022 ESG Regional Finance Promotion Project, and received support for sharing issues with customers based on the results of interviews.

Going forward, we will continue to work closely with external organizations to provide medium- to long-term support for each supplier, such as support for electrification and productivity improvement.

Sustainability Initiatives ▶ See page 29 for target cumulative amount of sustainable financing

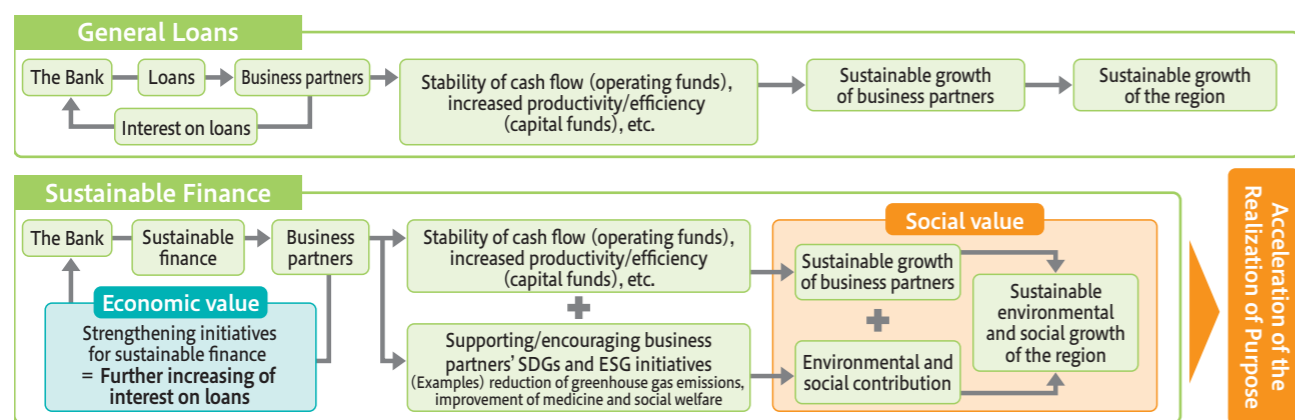
With the urgent need to address social issues such as climate change and population decline, sustainable finance, finance that provides funds and advice to help solve social problems, is becoming increasingly important.

The Gunma Bank has set medium- to long-term sustainable finance cumulative disbursement targets as KPIs for FY2030, and will take appropriate actions according to each customer's phase. This has led to various business matches and sustainable finance services which includes Sustainability-Linked Loans, Gungin SLLs, structured covenant loans for business successions, SDGs Private Placement Bonds, loans for renewable energy

projects, and Financing with Special Clause for Waiver in the event of Torrential Rain and Earthquake.

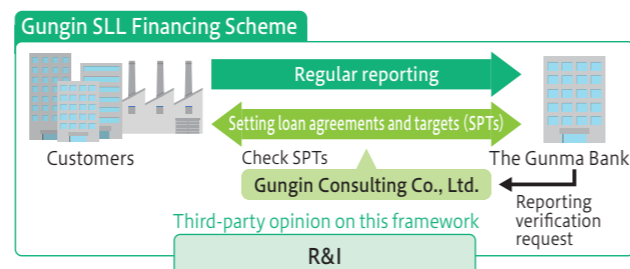
The significance of sustainable finance initiatives

Sustainable finance can make a significant environmental and social contribution and lead to the sustainable growth in the region (increase of social value). By strengthening these sustainable finance initiatives, the Bank will be able to increase interest on loans (increase in economic value). We aim to realize our Purpose by improving social and economic value.



Gungin SLL

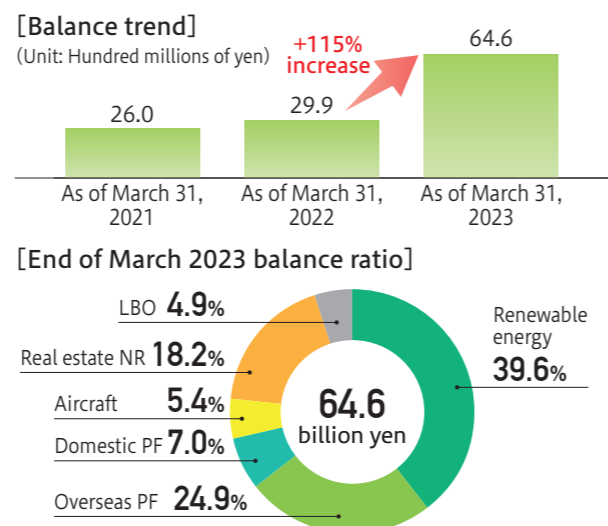
In June 2022, we established the Sustainability Performance Target (SPTs), which is an initiative target consistent with our customers' SDGs and ESG strategies, and began offering the Gungin SLL, a self-rated sustainability-linked loan. This loan is a lending product with a mechanism that fluctuates interest rates according to how well targets are being met.



TOPIC Initiatives in Structured Finance

The Bank is actively engaged in structured finance utilizing sophisticated financial technology. We are mainly working on projects related to renewable energy that contribute to the SDGs with about 40% of the loan balance of 64.6 billion yen (up 115% year-on-year) as of the end of March 2023 related to renewable energy.

In terms of structure, in April 2022, we established the Specialized Finance & International Department based on the existing International Department, increasing the number of personnel involved in structured finance operations. Furthermore, through the organizational reform in April 2023, we are working to build a promotion system that focuses on human resource development and accumulation of know-how that can respond to advanced finance, for example, by making this a specialist department for structured finance.



Regional Sustainability Initiatives

Comprehensive Collaborative Agreement for Community Revitalization

Collaboration with local governments in Gunma Prefecture aimed at regional revitalization

Gunma Bank has concluded comprehensive partnership agreements with 13 local governments in Gunma Prefecture and other prefectures, and works to improve the appeal of the region by collaborating with related departments, mainly with the Regional Revitalization Office in the Corporate Consulting Department, as well as with sales branches and Group companies. Specifically, the Group is engaged in activities such as the revitalization of Minakami Onsen with Minakami Town among four types of organizations (industry, academia, government and financial institutions) as well as revitalization support through the corporate version of the hometown tax, encouraging companies to relocate to the region, promote immigration and permanent residence.

We will continue to address the challenges facing the region and work with the community to continue our efforts toward regional revitalization.

Striving to realize the Purpose through regional revitalization

Through dialogue with local governments and local residents, the Bank supports the creation of a sustainable society for the kind of future local communities are aiming for.

Using the industry-academia-government-financed efforts in Minakami Town as a model case, we aim to revitalize the region by expanding the efforts outward to other regions in the prefecture.



Signing of the Comprehensive Collaborative Agreement on Regional Revitalization in Minakami Town (September 2021)

Collaboration Agreement on Gunma Next-Generation Industry Creation and Cultivation

Creating and fostering industries that will build a future for Gunma Prefecture

Through the Collaboration Agreement on Gunma Next-Generation Industry Creation and Cultivation concluded in March 2021, the Bank will work to create and foster new industries and revitalize the region through organic collaboration between industrial, government, academic, and financial institutions while leveraging the strengths of each.

The agreement aims to create and cultivate new next-generation industries based on the technological seeds possessed by universities, companies, and other entities in Gunma Prefecture and the R&D capabilities of local companies.

technical colleges, and companies, and to promote their social implementation has been held twice in FY2021 and FY2022. We support the social implementation of these technological seeds by providing accommodating support to the teams that enter the event.

Through the continuous implementation of such efforts, we aim to create the seedbed for new industries to emerge and make the region a place where business continue to be created.



The 2nd Gunma Tech Plan Grand Prix (July 2022)

Implementation of the Gunma Tech Planter which promotes the discovery and social implementation of science and technology

The Gunma Tech Planter, a support program to discover science and technology generated by universities,

Kanto Yawaragi Energy Co., Ltd.

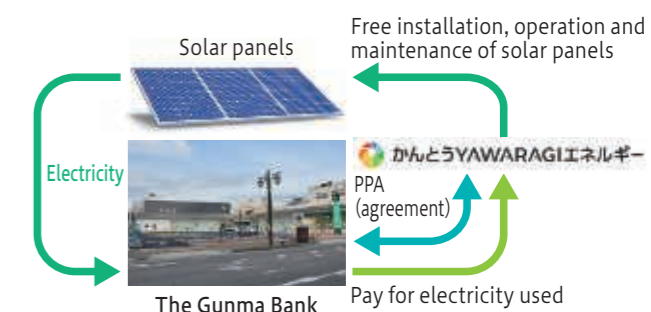
Making the region carbon-free through renewable energy

In July 2022, through a fund operated by Gunma Regional Advanced Solution Partners Co., Ltd., a wholly owned subsidiary, we jointly established with local business operators a regional power generation company, Kanto Yawaragi Energy Co., Ltd.

The reason why this company was created is to contribute to the decarbonization of the region through the development of renewable energy power sources.

The Bank has concluded a PPA* with the company and is proceeding with the installation of solar panels on the roof of a building shared between Gunma Bank's Takasaki-Tamachi Branch and the Daishi Hokuetsu Bank's Takasaki Branch.

[The on-site PPA scheme]



* Power Purchase Agreement. Energy companies install solar panels on the roofs of companies (energy users) or on idle land free of charge. Companies can then benefit from the generated electricity, enabling the use of renewable energy without having to own the power generation facilities. On-site PPA is a scheme in which the power generation facility is located on the energy user's premises.