

Local Government SDGs Model Projects

(1) Overview of issues, target setting and actions

Name of Local Government SDGs Model Project:

Next-Generation Regional Energy Model Project

(Overview of activities)

The goals of the SDGs, which also include integrating the environment, economy and society, can be achieved in this project by taking action related to resources and energy in the region from the following three perspectives.

To this end, strategies (master plan(s)) will be formulated and implemented to comprehensively, effectively and efficiently promote the following actions.

1. "Create"

- ① Create energy (electric power, etc.) → Wind power, biomass power, etc.
- ② Create related technologies and industries → Components related to wind power, advanced recycling technologies, attracting data centers using low-carbon and stable energy, establishment of power charging services, etc.
- ③ Create human resources and networks → Training for researchers and developers, development of human resources for maintenance related to renewable energy, creation of biomass deforestation network
- ④ Repeatedly recycle and create products → Expand the variety of recycled products, commercialize advanced recycling activities
- ⑤ Create a disaster-resilient city → Strengthen resilience through the local production and consumption of energy, protect and revitalize *satochi* and *satoyama* (also referred to as Socio-Ecological Production Landscapes and Seascapes (SEPLS))

2. "Use"

- ① Smart and skillful use of energy itself → Improve demand response (use of AI, etc.), optimize the amount of power generated by predicting power demand
- ② Use surplus resources and by-product resources → Use by-product hydrogen, effectively use forest resources (regeneration cutting, periodic thinning), secure sources of rare metals by recycling small household appliances (urban mines), establish PV reuse and recycling
- ③ Use human resources and networks → Promote "town and city-wide recycling", promote the participation of the elderly and people of all abilities in recycling (create employment opportunities)

3. "Connect"

- ① Strengthen connections in the community (connect people) → Develop human resources, coordinate and use public awareness bases, rebuild communities through local activities, such as the collection of used paper, etc.
- ② Connect visitors and users in remote locations by making energy visible → Rebranding the energy industry for tourism, monitoring from remote areas using information on actual energy usage
- ③ Connect with the world through the transfer of technology → Development of a city brand by publicizing this model project overseas, connections to technology transfer business, training business, and environmental protection on a global scale (circulation of resources, prevention of global warming, etc.)

(2) Actions under the three dimensions

① Actions: Economic dimension

Goals and Target Numbers	KPI	
 7.2	Indicator ①-1: Amount of renewable energy etc. introduced into the city area	
	Current (July 2018) 288,000kW	FY 2020: 360,000kW
 8.2	Indicator ①-2: Number of projects subsidized to support the introduction of industrial robots	
	Current (FY 2017) 3 cases	FY 2020: Total 9 cases (Support provided for 3 cases each year until 2020)
 9.4	Indicator : ①-3: Investment in Eco-Town project (total)	
	Current (FY 2016) JPY 77 billion	FY 2020 JPY 79.8 billion

①-1 Promotion of the formation of a local energy hub

<Overview>

Kitakyushu has plans to create a low-carbon society by providing support to low-carbon energy industries, such as offshore wind power. Spanning approximately 20,000 parts and components, the range of industries connected to wind power is extensive. Kitakyushu aims to invite these industries to locate to the city (in the Hibikinada district) to revitalize the economy, create employment and add to the social dynamics of the city's population.

<Key activities>

- Development of next-generation resources and energy systems

(Project cost)

Total cost over three years (2018-2020): JPY 30 million

(Overview of activities)

- Promote a regional energy strategy as a driving force for Japan to put advanced initiatives into practice with the “creation and smart use of a stable and low-carbon supply of energy”, “creation of disaster-resilient cities”, and “development of the energy industry” in order to help reduce CO₂ emissions and contribute to regional economic growth
- Focus on promoting the introduction of renewable energy, such as wind power and biomass, and supporting new energy-savings projects, such as energy management and bamboo biomass, to form a local energy hub

①-2 Increased production using robots and AI

<Overview>

In areas where the working age population is shrinking, productivity can be improved by using robots and AI to ensure that various urban activities remain sustainable.

For example, AI can be used to implement highly-efficient energy management through elevated demand response actions to form a comfortable and eco-friendly society. Kitakyushu also aims to create environmentally- and people-friendly workplaces by encouraging the development and introduction of energy-saving industrial robots that are easy for people of all abilities to operate.

<Key activities>

- Improve manufacturing capabilities using robot technologies

(Project cost)

Total cost over three years (2018-2020): JPY 81.3 million

(Overview of activities)

- Improve productivity and enhance competitiveness in local manufacturing industries by promoting the introduction of robots at production sites of small and medium-sized manufacturing enterprises (SMEs)
- More precisely, manage support centers that will offer consultations on the introduction of industrial robots, technologies, and human resource development and will also subsidize costs related to the introduction of and updates to industrial robots in local SMEs

①-3 Stimulating primary industries (forestry, etc.) and environment-related industries

<Overview>

By stimulating eco-industries, Kitakyushu is planning to promote recycling and low-carbon development to create new industries that can promote green growth, such as those that recycle wood chips and PET bottles. With the development of these new industries, Kitakyushu aims to create places of employment for the elderly and people of all abilities.

<Key activities>

- Kitakyushu Eco-Town Project

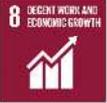
(Project cost)

Total cost over three years (2018-2020): JPY 39.069 million

(Overview of activities)

- Further develop bases for clusters of environmental industries and the development of environmental and energy technologies in order to create a material-cycle society concentrated around Japan's first and largest Eco-Town
- Specifically, engage in new recycling activities in response to social issues, such as recovery of rare metals (urban mining) and PV panels

② Actions: Social dimension

Goals and Target Numbers	KPI	
 8.5	Indicator: ②-1 Employment rates for women (ages 25-44)	
	Current (2015): 70.0%	2020: 70.0%
 11.b	Indicator: ②-2 Number of school districts for a project to support the operation of the Local Bousai (Disaster Prevention) Meeting (Creation of region-wide disaster prevention network)	
	Current (FY 2014-2017): 14 school districts	FY 2020: About 10 school districts/year
 4.7	Indicator: ②-3 Number of users of ESD activity bases and participants in ESD awareness-raising events (total)	
	Current (FY 2016): 18,520 people	FY 2020: 24,000 people

②-1 Creation of an environment where women, the elderly and people of all abilities can play an active role

< Overview >

Kitakyushu aims to promote multi-generational participation in society to eliminate labor shortages due to both falling and super-aging populations that will only escalate in the future by creating an environment where women, the elderly and people of all abilities can play an active role.

< Key activities >

- Management of Women Work Café Kitakyushu

(Project cost)

Total cost over three years (2018-2020): JPY 91.8 million

(Overview of activities)

- Manage Women Work Café Kitakyushu, which acts as a one-stop service to support women's employment, career advancement and business startups, in cooperation with the national government and Fukuoka Prefecture
- Specifically, organize various seminars that introduce working styles and are helpful in finding employment, advancing careers, and starting up businesses that can be balanced with child-rearing with the Café playing a key role.

②-2 Safe and disaster-resilient urban development

<Overview>

Kitakyushu is engaged in the development of a disaster-resilient city that minimizes impacts from disasters by creating local communities where residents are key players. Kitakyushu plans to stabilize its industrial base and improve productivity by strengthening resilience.

<Key activities>

- Promotion of Minna de Bousai city development (Disaster prevention by all)

(Project cost)

Total cost over three years (2018-2020): JPY 46.125 million

(Overview of activities)

Kitakyushu is implementing the “Minna de Bousai city development project” with an aim to improve local disaster prevention capabilities by encouraging residents to develop an awareness of the concept of “self-help” to protect their own lives and “mutual assistance” to help other members of the community, in order to protect people’s lives in a disaster. Community disaster-prevention plans will be drawn up in all school districts in the city (132 districts) and a region-wide disaster-prevention network will be established.

②-3 Creation of an environment for civic activities (ESD, other)

<Overview>

Kitakyushu is promoting activities to create an environment that makes it easy for large numbers of residents to take part in civic activities, such as environmental learning with a focus on ESD, town beautification activities and recycling and collection, as well as activities at the civic level to counter global warming.

Kitakyushu is also engaged in creating a society that places priority on lifelong activities by encouraging all residents to take action as key players in civic activities.

<Key activities>

- Support for ESD activities

(Project cost)

Total cost over three years (2018-2020): JPY 61.583 million

(Overview of activities)

- Develop and manage the “ESD promotional base (Kitakyushu Manabito ESD Station)” in the heart of the city, which gathers together and connects people from all different generations and fields in order to further strengthen the spread of ESD, stimulate civic activities and create a busy, bustling city
- Actively publicize and disseminate the SDGs at ESD promotional bases



③ Actions: Environmental dimension

Goals and Target Numbers	KPI	
 7.a	Indicator: ③-1 Number of commercialized research and development projects under a subsidy program for technology development under Kitakyushu's Future City plan	
	Current (FY 2016): 34 cases	FY 2020: 38 cases
 17.7	Indicator: ③-2 Number of strategic international environmental cooperation projects (total)	
	Current (FY 2016): 6 projects	FY 2020: 7 projects
 12.5	Indicator: ③-3 Application of unused local materials as biomass fuel	
	Current (FY 2016): 0 ton/year	FY 2020: 500 tons/year

③-1 Regional circulation of energy and resources

<Overview>

Kitakyushu will promote the concentration of energy and recycling industries and the development of technology to stimulate the city's economy by aiming at the regional circulation of energy and resources. Kitakyushu will also take action to develop responses to climate change and improve resource efficiency through the development of a low-carbon society.

<Key activities>

- Subsidy program for technology development under Kitakyushu's FutureCity plan

(Project cost)

Total cost over three years (2018-2020): JPY 143.604 million

(Overview of activities)

Local companies, such as SMEs, will have opportunities to develop technologies by availing themselves of partial subsidies provided by Kitakyushu for research and development costs for environmental and energy-related technologies that demonstrate a superior level of novelty and originality. Kitakyushu will also promote concentrations of technologies in the fields of the environment and energy in the city.



③-2 International environmental cooperation and international environmental business

<Overview>

Kitakyushu aims to expand business opportunities for local companies and revitalize the economy by engaging in international environmental cooperation and international environmental business through its global networks. Kitakyushu also aims to reduce CO₂ emissions in response to climate change at the global level and improve the living environment by contributing to green growth in cities overseas.

<Key activities>

- Disseminating the SDGs using global networks

(Project cost)

Total cost over three years (2018-2020): JPY 3 million

(Overview of activities)

- Develop international cooperation projects using the city's diverse international environmental networks to improve the environment in cities around Asia
- Strongly support the business development of local companies by disseminating the "Kitakyushu Model" to the world, a package of the city's environmental technologies and social systems, with the "Kitakyushu Asian Center for Low Carbon Society" functioning as the base of activities



③-3 Protection of the natural environment in *satoyama*, other

<Overview>

Kitakyushu aims to create communities that co-exist with nature and properly conserve forests as measures to counter global warming by engaging in the conservation of the natural environments of *satoyama* (human-influenced rural area between mountains and flatlands).

<Key activities>

- Use of forest resources

(Project cost)

JPY 0 (No municipal expenses are used since the implementing body is a private company.)

(Overview of activities)

- Circulate unused materials within the region through the promotion of deforestation of artificial forests, removing thinned trees and branches and utilizing forest resources to protect the natural environment of *satoyama*

(3) Comprehensive overview of actions connected with the three dimensions

Project name of integrated actions: Next-Generation Local Energy Model Project
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(Project cost)

Total cost over three years (2018-2020): JPY 52 million

(Overview of activities)

Under the “Next-Generation Local Energy Model Project”, Kitakyushu aims to achieve the SDGs from the three dimensions of the economy, society and environment through the following actions. Kitakyushu will leverage its strengths (civic power, technological capabilities, international networks, etc.) to achieve this from the three perspectives of “creating energy (through low carbon)”, “(smart) use of energy”, and connecting energy (connections)”.

- (1) Develop strategies to achieve the SDGs in the region with energy at the core
- (2) Develop human resources to support energy-related SDGs activities
- (3) Visualize SDGs activities, including energy, and form a local base to take action on the SDGs
- (4) Create an international platform and network to “create city-level indicators” and disseminate this information to expand activities both in Japan and overseas and identify international needs and seeds

* Items (2), (3) and (4) will be essential content for (1).

(1)-① Formulation of regional energy and SDGs strategy

Kitakyushu will formulate strategies to achieve the SDGs through initiatives on the use of renewable energy, energy savings (energy management) and hydrogen in local areas formed around the energy sector, one of the city’s strengths.

Specifically, if Kitakyushu can decide how to proceed with various energy policies and measures that make use of the potential of the region, the city can clarify whether solutions can be identified for all three dimensions: the “economic dimension” in terms of stimulating industries, the “social dimension” in terms of measures for the aging population and job satisfaction, and the “environmental dimension” in terms of reducing CO₂ emissions.

Subsequently, Kitakyushu will formulate and implement energy-oriented strategies for the SDGs in a series, including future images, specific measures and roadmaps to achieve the SDGs from the perspective of energy, based on a risk and cost analysis.

(1)-(2) Formulation of master plan on the utilization of forests in Kitakyushu

Under the energy sector, Kitakyushu is formulating a master plan that stipulates zoning areas for the city's forests and future plans for their utilization and indicates zoning plans, such as places where circulatory forestry management and civic action are possible.

In addition to promoting the concentration of forest management areas and the development of revenue accounting systems that have impeded operations in the past, Kitakyushu aims to deploy the city's activities throughout Japan by developing forestry management models in urban areas.

(2) Development of human resources for the SDGs

In order to develop human resources that will act as key players in actually promoting the SDGs, awareness-raising activities for the younger generations, who will be our future leaders, will be implemented using manga. Out of the diverse set of stakeholders, training for companies, which have a critical role in the integrated improvement of the three dimensions of the environment, economy and society, will be carried out using infrastructure for ESD (Education for Sustainable Development) that Kitakyushu has been promoting over the past years.

In addition to the creation of the "Kitakyushu World Capital of Sustainable Development SDGs Award (ESD Award)", Kitakyushu will encourage the development of human resources for the SDGs within the various circles of local stakeholders and will promote public awareness through civic centers, which form the base of community activities.

(3) Formation of a base and visualization of the SDGs

Kitakyushu aims to showcase and help residents, companies or visitors from around Japan and overseas visualize the SDGs by redesigning local environmental bases (such as Japan's only Eco-Town Center and Environmental Museum, etc.) that have served as the foundations to disseminate environmental actions to other parts of Japan and overseas that the city has engaged in over the years by also including a perspective on the SDGs.

Specifically, Kitakyushu will set up exhibits on the SDGs and develop systems (such as fuel cells and super water-saving toilets, etc.) in cooperation with private companies in the city where visitors can experience and enrich their understanding of the SDGs.

Through this project, Kitakyushu will encourage specific actions by providing a space where residents, companies, trainees, visitors and tourists from both inside and outside of Japan can experience and come into contact with the SDGs.

(4) Development of "city-level indicators" and creation of a platform and network for the SDGs in collaboration with OECD and other organizations

Since fiscal 2018, Kitakyushu has examined city-level actions and data, shared best practices and built networks with model cities as part of its selection as one of 10 cities worldwide by OECD as a "model city of the world for the promotion of the SDGs" (Kitakyushu was the only city selected from Japan.)

In collaboration with this initiative, Kitakyushu compiles the analyses and assessments of the status of activities on the SDGs by various stakeholders (companies, residents, NPOs) and releases this information in Japanese and English online as the city's platform for the SDGs.

Kitakyushu also utilizes its networks of about 10,000 overseas trainees that have trained in Kitakyushu over the past years to disseminate the results of the above studies and is drawing up business needs and seeds related to the SDGs in each city to connect them with business opportunities.

Under the platform for the SDGs that has been developed, Kitakyushu will accelerate actions on the SDGs by compiling information on various activities in the city and actively accepting data provided by local companies and other organizations.

② Synergistic effects as a result of integrated efforts to connect the three dimensions (creation of new values)

■ Economy ↔ Environment

【Economy → Environment】

KPI	
Indicator: CO ₂ emission reduction effects with the introduction of renewable energy	
Current (as of February 2018): 0 tonnes	FY 2020: 150,000 tonnes
Indicator: Amount of information disseminated using international networks that form the base for the creation of synergistic effects for this model project	
Current (as of February 2018): 0 people	FY 2020: 3,000 people

(Overview)

- Promote economic growth and development of renewable energy and energy-saving industries to accelerate CO₂ emission reductions
- Promote CO₂ emission reductions and resource recycling in and outside the city by offering environmentally-friendly products and making the introduction of services more visible for dissemination to locations both inside and outside of Japan through residents, tourists and visitors
- Continue to develop environmental businesses by identifying needs using international networks to help identify solutions to global environmental problems

【Environment → Economy】

KPI	
Indicator: Number of energy-related projects created as a result of synergistic effects from this model project	
Current (as of February 2018): 0 cases	FY 2020: 10 cases
Indicator: Number of visitors to environmental and SDGs bases (Indicator related to the ripple effect of information on SDG-related measures, products and services)	
Current (FY 2016): 220,000 people/year	FY 2020: 240,000 people/year

(Overview)

- Progressive actions by the energy industry and related industries aiming to reduce CO₂ emissions to promote the concentration of new energy and resource industries and promote the development of technologies
- Increase the number of human resources in companies that have an interest in the SDGs through the development of human resources to improve the attractiveness of the workplace and raise corporate value, such as sustainable economic growth
- Exhibit environmentally-friendly products and increase the visibility of eco-services when they are introduced to help promote Kitakyushu's goods and services in other areas of Japan and around the world to lead to an increase in tourists and visitors to the city
- Disseminate and deploy Kitakyushu's activities overseas and identify needs overseas using international networks to simultaneously help promote environmental improvement in cities overseas and expand global business opportunities for local companies

■ Economy ↔ Society

【Economy → Society】

KPI	
Indicator: Number of new services that will help resolve local issues created from the synergistic effects of this model project	
Current (as of February 2018): 0 cases	FY 2020: 2 cases

(Overview)

- Increase employment for young people and other demographics with advancements in the development of new industries as workplaces become more attractive
- Promote a combination of self-reliant, disaster-resilient and stable energy supply with monitoring services for energy management for the development of a safe and stable city
- Promote collaboration with NPO and community activities by encouraging the creation of employment for human resources that can contribute to the development of new fields required by companies, including the energy sector, which will enhance the vitality of individuals and communities
- Promote regional economic development in cooperation with SDGs bases and local shopping districts
- Improve economic growth and quality of life (QOL) in cities overseas by disseminating and deploying information and identifying needs overseas making full use of international networks

【Society → Economy】

KPI	
Indicator: Number jobs created through synergistic effects from this model project	
Current (as of February 2018): 0 people	FY 2020: 50 people

- Promote new services, such as monitoring and welfare services, using energy management and creation of new services
- Create synergistic effects, such as securing employment for a diverse number of human resources by promoting the active participation of women and the elderly through the development of SDGs human resources
- Take advantage of new business opportunities overseas where populations are aging in similar fashion to Japan and connect this to the development of international business by disseminating and deploying activities overseas and identifying needs making full use of international networks

■ **Society ↔ Environment**

【Society → Environment】

KPI	
Indicator: Number of activities in communities, such as environmental conservation, created through synergistic effects from this model project (activities based in civic centers)	
Current (as of February 2018): 0 cases	FY 2020: 30 cases

- Promote a reduction in environmental impacts in the environment dimension by encouraging renewable energy and energy-saving actions integrated with the community
- Encourage the community to take action and promote lifelong active lifestyles in the social dimension and amplify activities in the environment dimension through the development of SDGs human resources and collaboration with residents and communities in SDGs bases.

【Environment → Society】

KPI	
Indicator: Number of SDGs human resources developed based on synergistic effects from this model project	
Current (as of February 2018): 210 people	FY 2020: 260 people

- Accelerate improvements in disaster prevention functions and quality of life (QOL) in the city by promoting independent and decentralized energy sources in the region and low-carbon actions, such as the use of renewable energy and energy savings
- Stimulate activities under the SDGs and promote the identification of solutions to issues faced by the region through actions by all residents and entire communities
- Find solutions to issues faced by regions overseas, as well as environmental actions by disseminating and deploying activities overseas and identifying needs using international networks

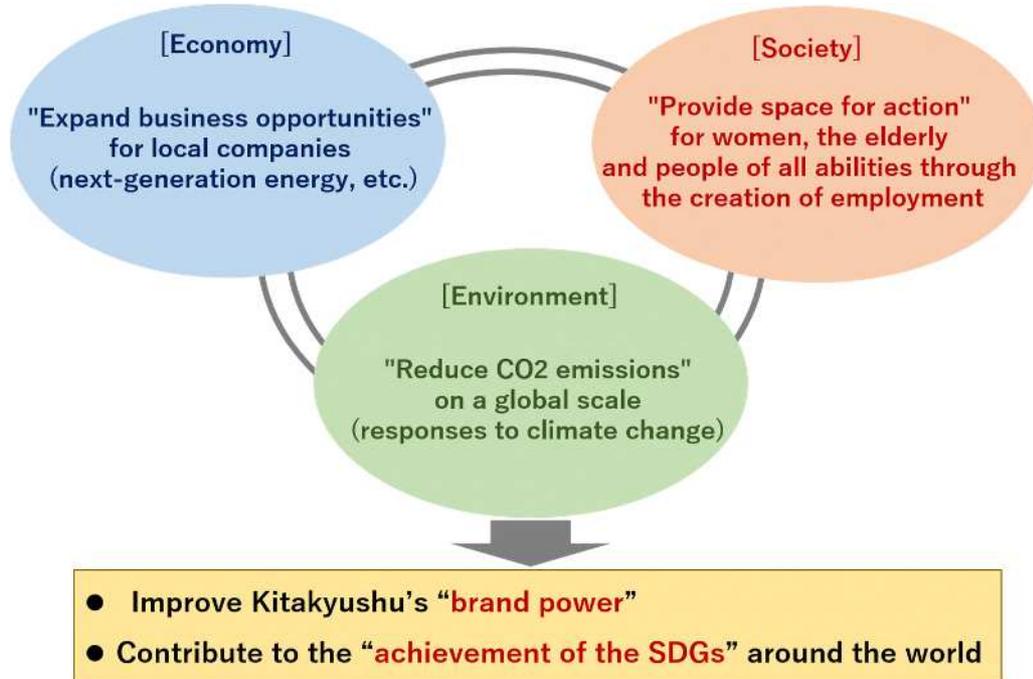
(4) Linkages with stakeholders

Names of Organizations and Groups	Positioning and Role in Model Project
Kitakyushu Power Co., Ltd.	Implement projects from the perspective of the private sector
Sompo Japan Nipponkoa Insurance Inc.	Disseminate and implement awareness-raising activities in projects from the perspective of the private sector
Kitakyushu City ESD Council	Disseminate and implement awareness-raising activities in projects as a networking organization through residents, educational institutes and businesses, other
Local universities (The University of Kitakyushu, other)	Promote projects
OECD	Promote projects
IGES	Promote projects
JICA	Promote projects
JETRO	Promote projects
Environmental sister cities overseas, other (Surabaya, Hai Phong, Phnom Penh, Davao, other)	Implement technical cooperation and exchange human resources as cities engaged in international cooperation
Kitakyushu Overseas Water Business Association (industry, government)	Promote overseas water business
Kitakyushu City SDGs Future City promotion headquarters	Promote actions within city hall
Kitakyushu Local Team (collaboration with OECD)	Promote collaboration with OECD
Kitakyushu Eco-Town Liaison Committee (industry, government, academia)	Promote actions at Eco-Town
Kitakyushu SDGs Council (tentative name)	Reviews policies for SDGs activities and promote them together with residents
Kitakyushu City Promotion Council for the Town, People & Work Revitalization Strategy	Promote linkages from the perspective of regional creation
Kitakyushu SDGs Club	Creation of a system in which residents, companies, and NPOs can participate and organize events and exchange meetings to disseminate and raise awareness on the SDGs

(5) Self-sustaining positive cycles

(Project scheme)

The following self-sustaining positive cycle can be created by leveraging “international partnerships” (with green sister cities, etc.), one of Kitakyushu’s strong points, to deploy this model around the world.



(Initiatives aiming at autonomous actions in the future)

By promoting these proposed projects and deploying them around the world as a model project making full use of international partnerships, one of Kitakyushu’s strong points, the city believes that it can create a self-sustaining positive cycle to reduce CO₂ emissions on a global scale (response to climate change). This will improve Kitakyushu’s brand power and simultaneously contribute to the achievement of the SDGs, in addition to identifying comprehensive solutions to issues in the three dimensions of “promoting sustainable industries (economy)”, “developing measures to counter declining and super-aging populations (society)” and “creating responses to climate change (environment)”. This will be accomplished by:

- ① Expanding business opportunities for local companies
- ② Creating an environment for women, the elderly and persons of all abilities to take action through the creation of jobs resulting from increased business
- ③ Reducing CO₂ emissions on a global scale through the deployment of this model to other areas around the world (responses to climate change)

(6) Dissemination and deployment measures

Kitakyushu proposed the development of a Next-Generation Local Energy Model Project, which was selected by the national government as a “Local Government SDGs Model Project”.

Energy is an essential element not only for quality of life (QOL) for residents but also for industries and social activities. At the same time, it is a universally required element throughout the world, which is the reason Kitakyushu believes the need for this project is high (project is welcome).

First, Kitakyushu aims to raise recognition of this project by using city facilities, such as civic centers and local events to increase the integrity of the project in cooperation with stakeholders and businesses and increase the understanding of residents through ESD activities and the Kitakyushu SDGs Club (tentative name), including environmental learning, to promote the introduction of the project to residents and local businesses.

Subsequently, Kitakyushu aims to disseminate and spread the effects of this project throughout Japan with the organization of tours of Eco-Town and the Environmental Museum, as well as national level events and symposiums.

Kitakyushu also aims to spread the results of these activities overseas through its international environmental activities, environmental business ventures and green sister city partnerships.