「環境未来都市」構想

"FutureCity" Initiative

Urban Development for the Future, Get it Rolling

Regional Wisdom, Power, and Resources will Strengthen Cities

Promotion Council for the "FutureCity" Initiative

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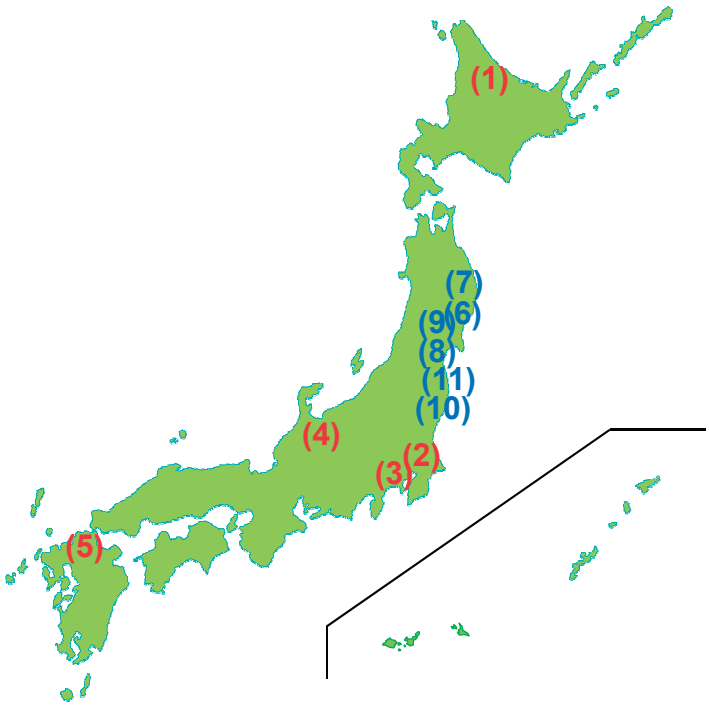

№	Cities/Towns	Project Names
(1)	Shimokawa Town (Hokkaido)	Shimokawa, Forest Future City where people are shining
(2)	Kashiwa City (Chiba Prefecture)	Kashiwanoha Campus City Project “Autonomous urban management with partnership among the public,business sector and academia”
(3)	Yokohama city (Kanagawa Prefecture)	OPEN YOKOHAMA -Creative Port City where People, Things and Event Connect and Develop-
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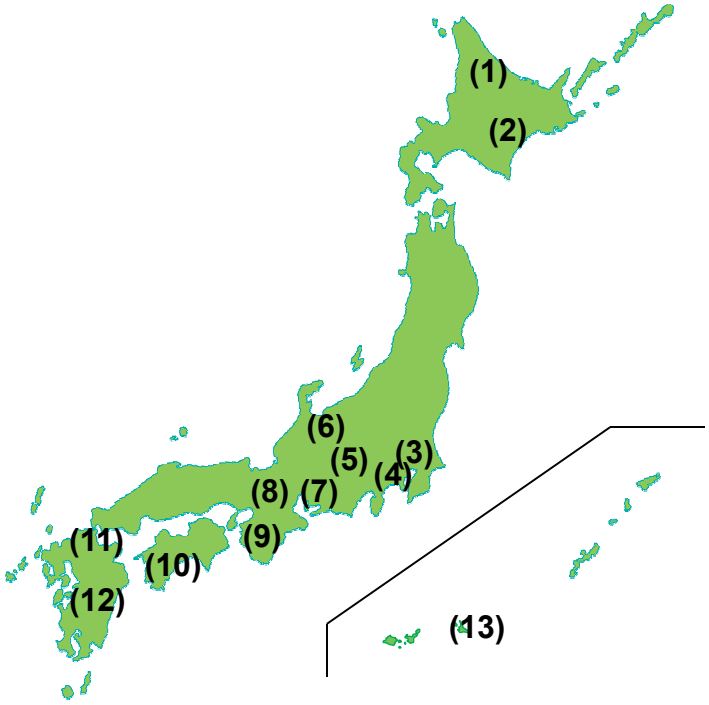
(5)	Kitakyushu City (Fukuoka Prefecture)	Kitakyushu FutureCity
(6)	Ofunato City, Rikuzentakata City, and Sumita Town (Iwate Prefecture)	Kesen Regional FutureCity
(7)	Kamaishi City (Iwate Prefecture)	Kamaishi FutureCity Initiative
(8)	Iwanuma City (Miyagi Prefecture)	Reconstruction with Love and Hope
(9)	Higashimatsushima City (Miyagi Prefecture)	Reconstruction from the Great East Japan Earthquake - Renewal of Higashimatsushima, Towards the future together without forgetting that day -
(10)	Minamisoma City (Fukushima Prefecture)	Recycle City connecting to the next generation, Minamisoma
(11)	Shinchi Town (Fukushima Prefecture)	"Of cource, Shinchi is the best town“ -Town where you can see the future and hope of environment and life-

Location Map of the Eco-Model Cities



№	Cities/Towns	Project Names
(1)	Shimokawa Town (Hokkaido)	Low-carbon Model Society in Symbiosis with the Northern Forest Shimokawa
(2)	Obihiro City (Hokkaido)	Garden eco-model city Obihiro
(3)	Chiyoda Ward (Tokyo)	Energy aware urban development, better energy efficiency
(4)	Yokohama City (Kanagawa Prefecture)	Yokohama Smart City Project rollout
(5)	Iida City (Nagano Prefecture)	Natural energy and low carbon development through citizen participation
(6)	Toyama City (Toyama Prefecture)	Planning to reduce CO2 with Toyama City’s compact city strategy
(7)	Toyota City (Aichi Prefecture)	Low carbon urban development harnessing next generation energy and mobility
(8)	Kyoto City (Kyoto Prefecture)	Developing an attractive city that puts people first, reducing emissions through “community power”
(9)	Sakai City (Osaka Prefecture)	Low carbon city maintaining “comfortable living” and a “thriving town”
(10)	Yusuhara Town (Kochi Prefecture)	Woody biomass community cycle model project
(11)	Kitakyushu City (Fukuoka Prefecture)	Kitakyushu, Carbon Free City in Asia
(12)	Minamata City (Kumamoto Prefecture)	Eco island Miyakojima: island-style low carbon society system
(13)	Miyakojima City (Okinawa Prefecture)	Eco-Island Miyakojima, A Low-Carbon Social System for Small Islands

The “FutureCity” Initiative

1. Purpose

The purpose of the "FutureCity" Initiative is to select a limited number of cities to create world-leading successful cases in terms of expanded demand, job creation, and resolution of international issues. In doing so, the initiative strives to resolve common issues for the 21st century related to the environment and aging, and to disseminate such model solutions both within and outside Japan.

2. Outline

The basic concept of the Initiative is to realize “human-centered cities while creating new values to resolve the challenges of the environment and super aging.” It aims to realize cities where “everybody wants to live” and “everyone has vitality” and where the values of the environment, society and economy are innovatively created.

Selected cities will take action to realize a future vision by addressing the environment and super aging society as fundamental issues, and also by considering other issues unique to the local community.

A platform for international knowledge will be created to promote international coordination to drive the initiative and to create a model for sustainable creation and autonomous development of values.

3. Milestones

February 2011 **Concept study of the “FutureCity” Initiative (Oct 2010 – Feb 2011)**
Expert Study-Group for the “FutureCity” Initiative (Chairman: Shuzo Murakami, President, Building Research Institute)

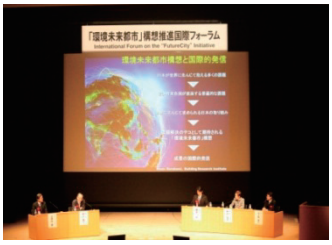
December 2011 **Selection of model cities of the “FutureCity” Initiative (11 cities/towns including 6 from disaster affected areas)**

February 2012 **The 1st International Forum on the “FutureCity” Initiative (in Tokyo)**

May 2012 **FutureCity Plans (5-Year) compiled by each city**

July 2012 **Rio+20 (United Nations Conference on Sustainable Development) (in Brazil)**
Held an official side event on the “FutureCity” Initiative

October 2012 **Information Exchange Meeting of Cities**



▲The 1st International Forum on the “FutureCity” Initiative

▲Information Exchange Meeting of Cities

Concept of “FutureCity” Initiative

1. Background of the Initiative

Urban populations have increased sharply and now comprise half of the world’s population. This is projected to grow to around 6.4 billion — 70 % of the world’s population by 2050. This rapid urbanization is seen prominently in developing regions such as Asia and Africa and has caused various environmental and urban problems. The 21st century is referred to as the age of the city. In this age, the challenge of realizing an affluent life without increasing the burden on the urban environment is a challenge common to all human-beings — a challenge based on an urban perspective.

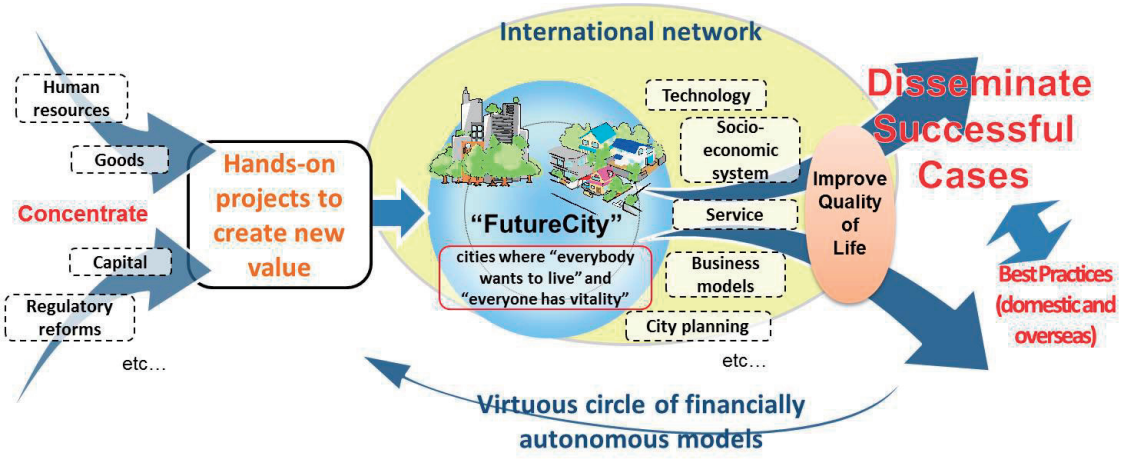
Japan is known as an “advanced country” in terms of challenges of both a rapidly decreasing birthrate and rapid aging. It is projected that in 2050 seniors over age 65 will comprise 40% of the population. Realizing cities and regions where senior citizens can live a fruitful, healthy and secure life in a vital society is an acute challenge. In the near future, many countries, starting in Asia, are expected to experience this challenge. Therefore, Japan is in a position to first tackle this problem and to offer solutions to the common human challenges.

In this context, it is extremely important to mutually recognize the problems, to pose the problems in a general way, and to think about the framework for solutions to such common human challenges as the environment, aging and revitalization of societies and economies.

The Japanese government identified the “FutureCity” Initiative (hereinafter “Initiative”) as one of the National Strategic Projects in its “New Growth Strategy” in June 2010. The objective of this initiative is to challenge common human problems and to try to propose model solutions as a forerunner.

2. Purpose of the Initiative

The purpose of the Initiative is to select a few cities as “future cities,” to realize world-leading successful cases in terms of technology, socioeconomic systems, services, business models and city building in order to resolve common 21st century human issues such as the environment and aging, and to disseminate them not only within Japan but also to the world. The ultimate goal is to achieve a revitalized and



sustainable society with a new socioeconomic system.

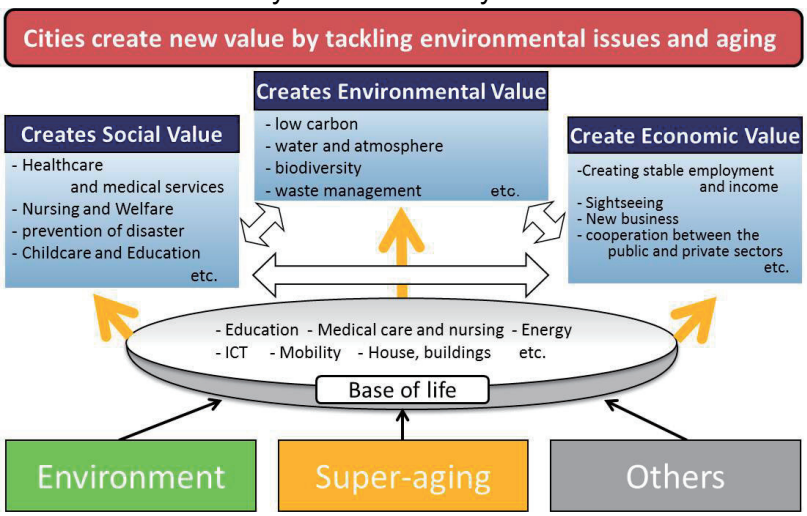
The selected cities are expected to lead to innovations in socioeconomic systems that can create successful cases. The Japanese government will support the selected cities by concentrating related budget appropriations on them, effecting deregulation and reforming the legal and tax systems.

To realize the Initiative, it is important to adopt an open-source innovation strategy which is open both at home and abroad. This strategy is aimed at sharing various experiences, developing intellectual networks, and disseminating the successful cases both inside and outside Japan, at the each development stage in creating concepts, planning and developing technologies and systems and realizing them.

3. Basic concept of the Initiative

The basic concept of the Initiative is to realize “human-centered cities while creating new values to resolve the challenges of the environment and aging.” It is first necessary to solve global challenges such as global warming, resource and energy limits, and super-aging by establishing sustainable socioeconomic systems as well as by recovering social solidarity. Secondly it is necessary to realize cities where “everybody wants to live” and “everyone has vitality” as well as cities that create new values continuously. Thirdly, we must increase the quality of life of the people.

To realize a sustainable society, considering the value of the environment, society and economy is essential. The “FutureCity” where “everyone wants to live” and “everyone has vitality” is defined as a city where the value of the environment, society and economy is innovatively enhanced, based on the premise that a minimum level of value in each of these three areas has been satisfied.



4. Future vision and Efforts of individual cities of the “FutureCity” Initiative

The selected cities are to set the strategic future vision in accordance with the abovementioned basic concept in ways that will maximize the total of environmental, social and economic value. When setting the future vision, it is important to adopt both a “backcasting” approach of looking back from the targeted future ideal and a “forecasting” approach of looking forward from the present situation to enhance feasibility. Moreover, it is important to set the vision in a way to maximize city’s attractions, showing their variety and originality as well as their unique natural and social resources.

The selected cities have to tackle challenges of the environment and aging as a

minimum requirement and then can take on such additional challenges as increasing their originality and comparative advantages. The selected cities are expected to tackle challenges in cooperation with other cities both inside and outside Japan. It is important to gather worldwide wisdom by absorbing other cites' successful cases all over the world, to integrate various efforts in different areas to realize synergistic effect, with the goal of socioeconomic systems where value is created continuously. This process should be more than just a real-world experiment and should lead to real innovations. By creating successful cases continuously and outgrowing subsidy dependence, the cities are expected to acquire a self-financing independence and establish financially autonomous models applicable both inside and outside Japan.

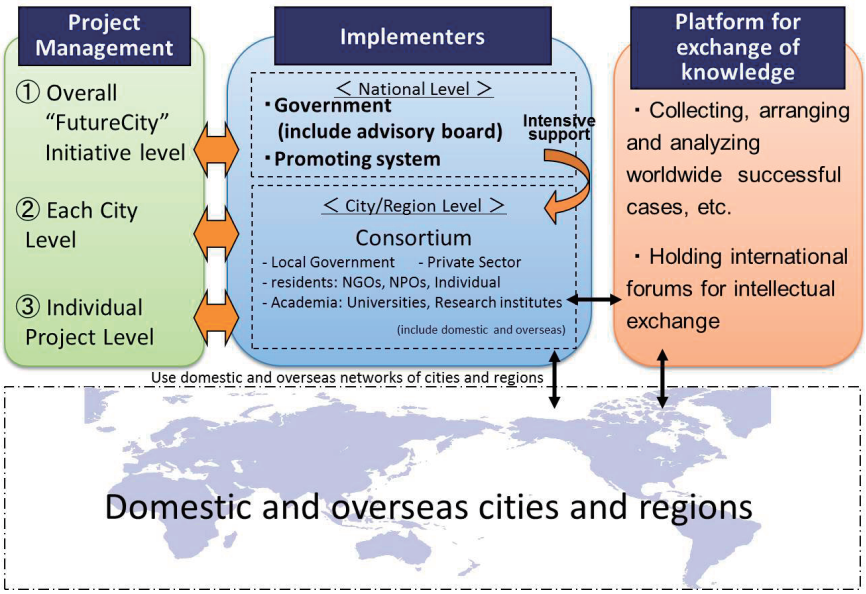
5. A scheme to promote "FutureCity" Initiative

Three important elements are necessary to make the Initiative a success: implementation of steady project management, establishment of a powerful and speedy executive organ, and strengthening cooperation between cities.

In the Initiative, three areas of project management are crucial: how to promote the Initiative effectively, how to manage all projects in individual cities, and how to monitor progress of each project. Steady project management employing the PDCA cycle in each of these areas will increase the possibility of success.

It is essential to have a powerful and speedy executive organ to create successful cases and disseminate them both inside and outside Japan. The national government will not only give advice to the cities but also establish a promoting system to coordinate financing, deregulation and various reforms. The selected cities will form a consortium with corporations, universities and local governments.

Improving successful cases and speeding up dissemination will be realized through strengthening cooperation among cities. The national government will construct an international intellectual platform by collecting, arranging and analyzing worldwide successful cases, disseminating them, and holding international forums for intellectual exchange. The selected cities will exchange successful cases with other cities both inside and outside Japan by utilizing the abovementioned platform as well as deepening cooperation with those cities continuously, including the exchange of citizens.



The Eco-Model City

1. Overview

Eco-Model City is aimed at specifically and comprehensively demonstrating the image of a low-carbon society to which our country aspires to be in the future. In fiscal 2008, 13 cities were selected to take on the challenge of pioneering approaches with high goals towards realizing a low-carbon society.

Each city has created specific Action Plans to achieve the goal and has been moving ahead accordingly while receiving advice from the Eco-Model City Evaluation and Research Review Commission.

The selected model cities have been striving on a daily basis to implement their action plans in a cross-sectional manner and to overcome the barriers of various stakeholders (taking a comprehensive approach), as well as to generate the vitality of cities in a low-carbon society by cooperating with citizens and private organizations, and working to become models of municipalities nationwide.

2. New Movements

Amid growing concern about energy issues due to the Great East Japan Earthquake, the efforts by Eco-Model Cities towards developing low-carbon cities to be further disseminated nationwide has become increasingly essential. This led to a decision to make an additional selection of Eco-Model Cities. We put out a call for proposals in September 2012, and are currently working on the selection process. In the near future, new Eco-Model Cities will join the endeavor to expand such efforts towards realizing a low-carbon society. (As of November 2012)

3. Working Status

A working group, set up by the Promotion Council for the “FutureCity” Initiative to create unified standards for an expedited greenhouse gas emission calculation methodology to realize a low-carbon society, created uniform standards called the “Greenhouse Gas Emissions, Etc., Calculation Method for Eco-Model Cities.”

These standards were introduced as a case study for “Innovations in Multilevel Governance for Energy Efficiency” (2009) reported by the International Energy Agency (IEA).

The report: [http://www.iea.org/publications/freepublications/publication/mlg_final_web.pdf

Cities Selected as Eco-Model Cities

Size	City/Town
Large Cities	Kitakyushu City
	Kyoto City
	Sakai City
	Yokohama City
Regional Central Cities	Iida City
	Obihiro City
	Toyama City
	Toyota City
Small Cities	Shimokawa Town
	Minamata City
	Miyakojima City
	Yusuhara Town
Special Zone	Chiyoda Ward

Concepts of an Eco-Model City

-A compact city (urban development within walking distance)
-Upgrading of traffic systems (public transportation such as LRT and electric vehicles)
-Reform of residence style (Houses that last 200 years, energy-saving houses, fuel cells)
-Dissemination of renewable energy (photovoltaic generation, wind generation, biomass, etc.)
-Conservation and use of forest (carbon offset and local production for local consumption)

To be integrally realized within the city

Create movements toward social reform in the community, such as transformations of lifestyle and business style to generate the region’s vitality

Promotion Council for the “FutureCity” Initiative

1. Purpose

The purpose of the Promotion Council for the “FutureCity” Initiative is to create successful cases that resolve issues related to the environment and a super-aging population, both of which are issues common to humankind in the 21st century. The initiative aims to disseminate such cases nationwide to promote the development of a sustainable economic society, and also to transmit our country’s excellent approaches to the world.

2. Members

Members of the Promotion Council are “FutureCities,” Eco-Model Cities, and other municipalities and private bodies, etc., all of which are motivated to develop cities and regions that respond to environmental and super-aging issues. [Chairperson: Kenji Kitahashi, mayor of Kitakushu City]

-Participating Bodies-
(As of November 14, 2012)

-Municipality:	110
-Others:	118
Total:	228

3. History

December 14, 2008: Foundation

The Promotion Council for Low Carbon Cities was established by motivated municipalities, etc., with the aim of disseminating the approaches taken by the Eco-Model Cities.

May 29, 2012: Reorganization

The Council was expansively reorganized to become the Promotion Council for the “FutureCity” Initiative. In addition to Eco-Model Cities, the Council now promotes the efforts of “FutureCities” as well.

4. Activities

With “FutureCities” and “Eco-Model Cities” in the forefront, member municipalities are learning from one other to broaden their perspectives. Examples of activities are assistance in the development of action plans, commendations for excellent approaches, development and dissemination of “FutureCity” and Eco-Model City, sharing of information regarding leading practices among Future Cities, Eco-Model Cities, and other members, as well as academic research and mutual enlightenment.

Sharing of information on measures and results of their approaches

International conference in fiscal 2011

▼600 people including guests from overseas attended

▼Leading cases at home and abroad were shared

Eco-Products 2011

▼The largest environmental event in the country

▼Publicized the approaches by the members of the Promotion Council for the “FutureCity” Initiative

Sharing of information on measures and results of their approaches

Working-level activities as a working group

Environment and super aging have been covered in addition to low carbon since fiscal 2012

Approaches in fiscal 2011

-Working group to share issues and consider solutions for issues in low-carbon urban development

→ Actions for low-carbon urban development were considered

-Green economy working group

→ Compatibility between global warming mitigation measures and local revitalization was considered

- Working group for the unification of expedited calculating methodology for greenhouse gas emission

→ Greenhouse gas measuring methods were studied

Shimokawa Town, Hokkaido [“FutureCity”/Eco-Model City]

Population: 3,600
Area: 644.2 km²

Shimokawa Town is an inland town located in the northern part of Hokkaido. About 90% of the area is forested, and forestry and agriculture are its key industries.

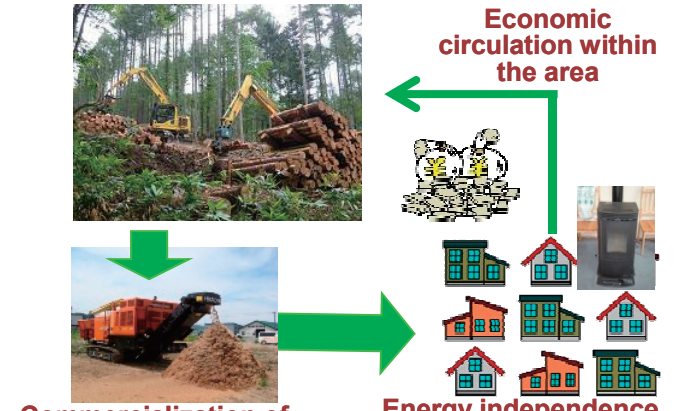
Based on the know-how of the society co-existing with forest that Shimokawa Town has created over the past half century, they will complete a Forest “FutureCity” Model by 2030. And they will export their policies and projects to small municipalities in the Asian countries.

Forest “FutureCity” is a city surrounded by rich forestland where people can gain enough income from forestry, learn and play in the forest, nourish their mental and physical health, and spend a spiritually affluent life surrounded by trees. The modeling of a small municipality with rich forest has started in Shimokawa Town.

Toward the Comprehensive Forestry Business and Being Completely Self-Sufficient in Energy

In order to revitalize the economy through forestry and agriculture based on the rich forest resources, Shimokawa Town has a comparative advantage over the world, and the town will innovate the forestry system and forest product system on the basis of the cyclical type of forest management and zero-emission wood processing system.

Also, the town will upgrade the small-scale distributed renewable energy supply system centering on the use of woody biomass and aim at being completely self-sufficient in energy. The town will build a comprehensive forestry that covers forestry to biomass and create a forest culture with the townspeople.



International Expansion by Cooperating with a University

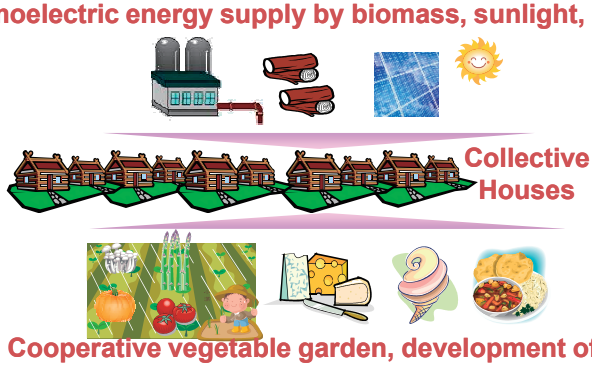
Shimokawa Town has been trying to build a network with municipalities in European countries, build a Forest “FutureCity” model, while referring advanced cases, and aim at exporting to Asian countries.

Shimokawa Town has concluded a collaboration agreement with the Center for Sustainability Science, Hokkaido University, and has been proposing its policies and business models to municipalities in Asia while utilizing the network. Also, they have been widely accepting visitors and trainees at home and abroad and exporting their know-how.

Building of a Self-Sustained Community through Collective Living

The town designated the Ichinohashi area in Shimokawa Town, which has a super-aging issue, as a model area, and will make efforts to reduce the environmental burden, by building Collective Houses in which area characteristics are used, reconstructing the social community, and being self-sufficient in food to create new industry by the senior citizens and youths.

For the collective living by building Collective Houses, a regional thermoelectric energy joint supply system by renewable energy will also be maintained in order for the area to become self-sufficient in energy and to create a model that realizes both self-sufficiency in energy and respond to the super-aging issue.



Obihiro City, Hokkaido [Eco-Model City]

Population: 168,973
Area: 618.94 km²

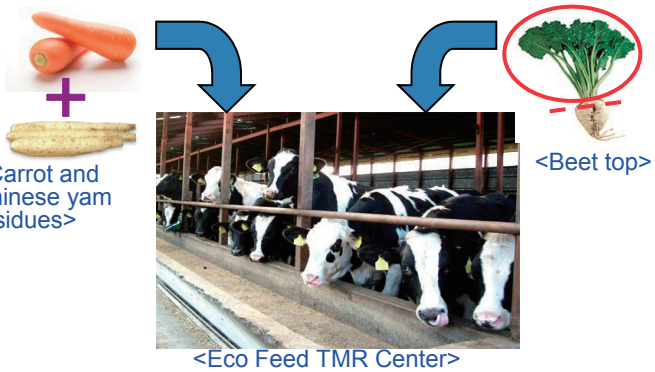
Obihiro City is a major regional city located roughly in the center of the Tokachi Plain in the Doto Region in Hokkaido, and its population is about 170,000.

As a city in which the blessed natural environment and comfortable city functions coexist and people feel both the richness of nature and livability, the city is aiming to realize a vigorous city where everyone can have dreams and hopes under the slogan of *Food Valley Tokachi* while maximizing the local advantages, such as vast land and rich agricultural and livestock products.

The city is actively making efforts for environmental conservation by developing Obihiro No Mori (Obihiro's Forest) and, as a Eco-Model City that makes pioneering efforts to create a low-carbon society, the entire city is working on the prevention of global warming.

Improvement of self-sufficiency in foodstuffs

With regard to the foodstuffs for livestock in which imported compound feeds are also used, unused biomass, such as washing and fruit sorting residues of carrots, Chinese yams, etc., the local farm products, are effectively used and mixed in the pasture to be used at the Eco Feed TMR Center in order to reduce greenhouse gas emissions. The city is also trying to make effective use of beet tops (beet's green stems and top part), which are usually plowed under in the field and is conducting a demonstration experiment, etc., to use beet tops as livestock feed. The amount of Eco Feed used in fiscal 2011 was 3,574 tons, and the reduction effect on CO_2 was 10,882 tons.



<Carrot and Chinese yam residues>

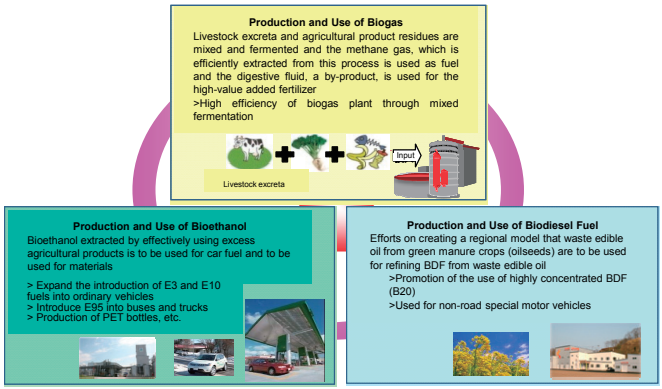
<Beet top>

<Eco Feed TMR Center>

Production and Use of Biomass Fuel

As the city has been designated as the First Authorized Area in the International Strategy Comprehensive Zone along with all municipalities in Sapporo City, Hakodate City, Ebetsu City, and the Tokachi jurisdiction and the Hokkaido Economic Federation, the city intends to intensively use biogas and biomass fuel for the local production of energy for local consumption by utilizing the Comprehensive Zone System, working on the low-carbon agriculture, which is their key industry, and developing cyclical agriculture and forestry that are well balanced with environment.

With an eye toward the realization of its approaches, the city has been officially conducting consultations, etc., with relevant government agencies from the aspects of regulations, the tax system, and financial administration since fiscal 2012.

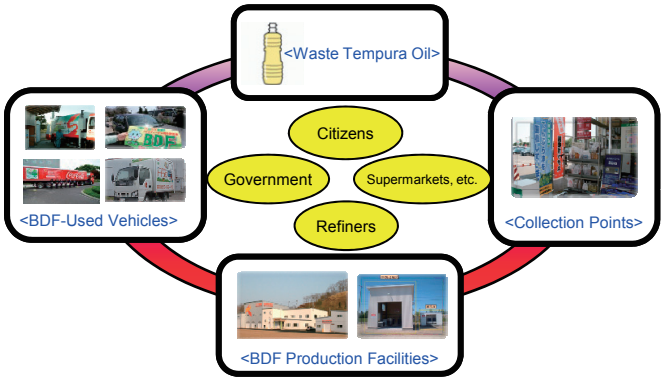


Obihiro BDF Project

With an eye toward waste reduction, effective use of biomass, and heightening the environmental consciousness among citizens, the city has been conducting the Model Project to Reuse Waste Edible Oil from Homes since 2008 in which waste edible oil from general households is collected, refined to BDF, and reused.

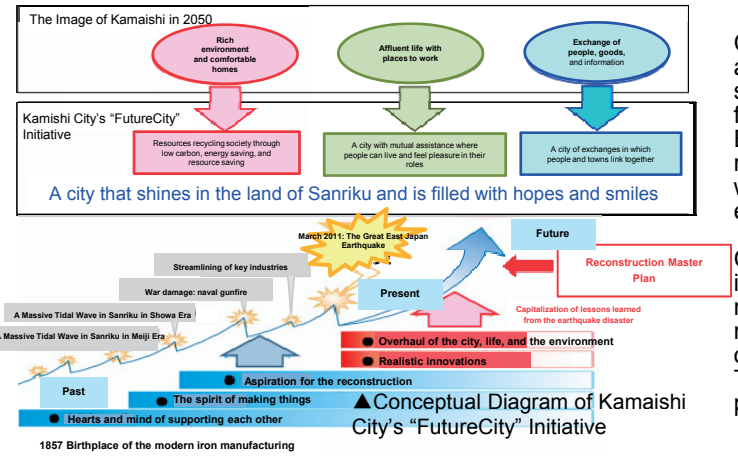
Obihiro City, refiners, and supermarkets, etc., where the oil is collected concluded an agreement, and they are making efforts forir roles while cooperating with each other including citizens.

The collected amount of waste tempura oil in fiscal 2011 was 75,257 L from households and 113,511 L from businesses, and it has been used for public vehicles, such as garbage cars, street/cleaning/patrol cars, private buses, and delivery trucks for supermarkets.



Kamaishi City, Iwate Prefecture [“FutureCity”]

Population: 37,590
Area: 441.43 km²



▲Conceptual Diagram of Kamaishi City’s “FutureCity” Initiative

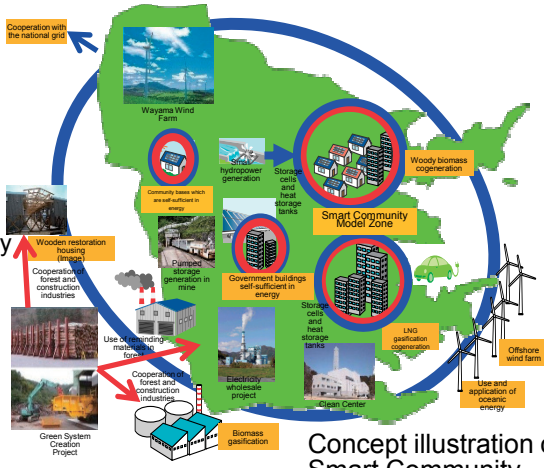
As the birthplace of modern iron manufacturing, Kamaishi City led the nation in accomplishing the industrial revolution and is a front runner in Japan, which has had to face a super-matured society earlier than other cities. The city faced a fateful crisis due to the Great East Japan Earthquake, but by using local resources, its creative ability, rich nature, and various exchanges, the city has been working on developing a new city that goes beyond earthquake disaster reconstruction.

The city sets the (1) Kamaishi version of a Smart Community that improves citizens’ lives and develops industry, (2) that offers one-stop services from healthcare to nursing care through cooperation, and (3) that creates a field museum incorporating rugby, World Heritage, and memories of the earthquake disaster as a core of the “FutureCity” plan. The plan is Kamaishi’s new challenge to try to exert its own presence nationwide.

Development of a Smart Community Master Plan

The city recognized the vulnerability of its energy environment at the time of the disaster in the region through the experience of the Great East Japan Earthquake, so the city clearly stated the Promotion of the Creative Energy Measures in its reconstruction plan and will make efforts on developing the Kamaishi version of the Smart Community in which various energy resources are used.

In fiscal 2012, the city started developing the Kamaishi City Smart Community Master Plan to introduce the Smart Community of the efficient use of renewable energy into the local areas and development of its project schemes.



Concept illustration of Kamaishi City’s Smart Community

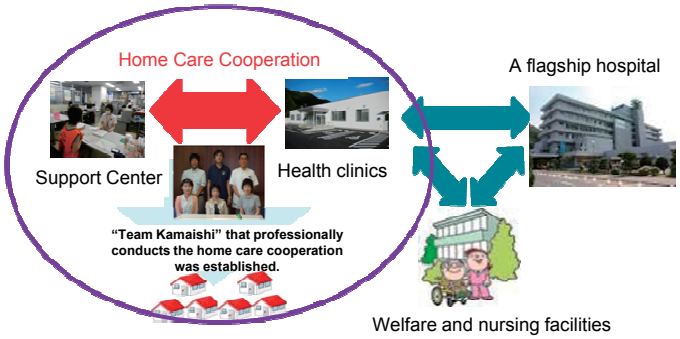
Smart Community Master Plan-Making Committee

Promotion of the cooperation in home care

As a countermeasure for a super-aging population, the city intends to build a framework where people can comprehensively receive services ranging from health to nursing care in the local areas, such as the prevention of adult diseases, which is a further concern due to the life in temporary homes, the cooperation of medical care and nursing care in homes in order to use the medical resources more effectively, etc.

As part of this, the city introduced the State Home Care Cooperation Project this fiscal year and established Team Kamahishi, a point of contact to support patients’ medical treatment with cooperation from the government, doctors, pharmacists, nurses, care managers, and others.

The city will work on developing a city where people can spend life as they wish in a familiar environment.



Concept illustration of the promotion of home care cooperation

Efforts aimed at World Heritage Registration and Attracting the Rugby World Cup in Kamaishi

-Kamaishi, an Iron City: Efforts Aimed at World Heritage Registration-

As a component of the industrial heritage that pioneered Japan’s modernization, the city and relevant municipalities in the Kyushu and Yamaguchi regions have been making efforts aimed at registering the Hashino Iron Mine as a World Heritage site in 2015.

-Kamaishi, a Rugby City: Efforts Aimed at Attracting the Rugby World Cup-

As a symbol of the reconstruction and aiming to hold the Rugby World Cup Japan in Kamaishi in 2019, the city established a National Athletic Meet and Rugby World Cup Promotion Office within the city’s Board of Education in July 2012 and has been making efforts to realize this.

Hashino Iron Mine

Rugby World Cup to be held in Kamaishi

Kesen Regional FutureCity, Iwate Prefecture [“FutureCity”]

Sumita Town, Ofunato City, Rikuzentakata City
Population: 67,000 Area: 890 km^2

Ofunato City
Goishi Seaside

Sumita Town
(Top) Taneyamagahara
(Bottom) Rokando

Rikuzentakata City
A Miracle Lone Pine

Ofunato City, Rikuzentakata City, and Sumita Town are located in the southern maritime area of Iwate Prefecture and have constituted a common cultural and economic zone for a long time. Ofunato City is a port city with Ofunato Port, one of the nation’s major ports. Rikuzentakata City is a scenic seaside city symbolized by the white sand and green pines of Takatamatsubara. Sumita Town has developed as a forestry town that built a cyclical timber supply system from raw wood procurement to wood processing.

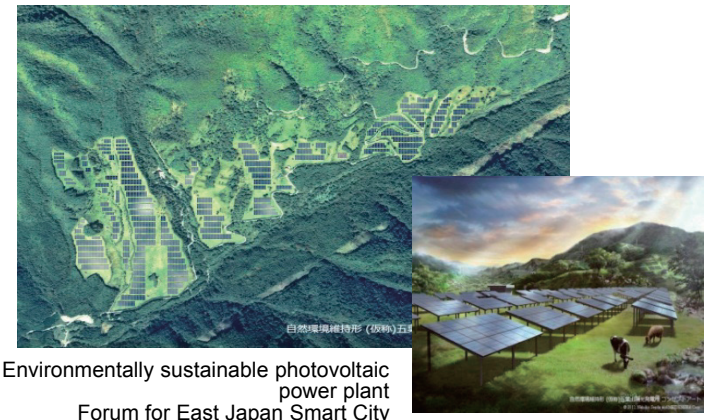
Ofunato City and Rikuzentakata City face the Pacific Ocean and experienced the greatest disaster caused by the Great East Japan Earthquake but these cities intend to develop a “FutureCity” to be proud of as one that plays a leading role in creatively restoring the affected areas while synergistically creating values of the three aspects of environment, society, and economy through numerous project promotions and organic cooperation projects.

Efforts on Environment

Building of the local production for local consumption type of energy-oriented society

With a goal of substituting about 30% of consumed power for the entire Kesen region with renewable energy, the region intends to stably supply power to the region and realize a society where people can securely and safely live by building a mega solar power plant that has territorially distributed storage facilities as well as a decentralized energy system.

Also, through the introduction of the photovoltaic generation, storage facilities, and an energy management system in the public facilities will be used as evacuation centers, and the region promotes the shift to high functionality.



Environmentally sustainable photovoltaic power plant
Forum for East Japan Smart City Project/Meidensha Corporation

Response to Super Aging

Upgrading of a compact city

The urban functions are to be accumulated in the disaster-affected central city area in order to regenerate as a stronghold for the transmission of the charms of the region and interaction, as well as a community stronghold for the intergenerational exchange, to revitalize the cities, and to improve convenience for residents. The area also intends to develop eco-friendly sustainable cities while forming a stronghold for local energy production for local consumption.

Creation of an advanced cooperation model of medical care, nursing care, and welfare

With a council formed by authorities and organizations playing a leading role, the area makes efforts on building a regional medical care system that will become a model in Japan where a regional medical care database is designed, the model is managed, and easing of regulations is used for the upgrading of the generation-circulating hub.

Broad Kesen Area FutureCity’s Medical Care, Nursing Care, Health, and Welfare Cooperation Council

Industrial Promotion

Introduction of advanced technologies to industrial fields

In order to ensure stable and efficient electric energy and enhance local products’ market competitiveness, the area makes efforts to build an advanced plant factory in which renewable energy is used, introducing an electric energy management system that has beneficial energy-saving and power-saving effects to the fishery processing field, make the local products high-value added products, and build a distribution model.

Development of Kesen’s wooden restoration housing estate model that coexists with nature

In anticipation of increased housing demand in the future and in order to use its rich local forest resources to further promote forestry, a council of authorities and organizations plays a leading role in the efforts to design and build model houses that have characteristics such as high insulation and airtightness, use of solar cells and storage cells, etc., and build a housing production system.

Sumita Town
A pellet boiler at Setamai Nursery

Broad Kesen Area FutureCity’s Industrial Promotion Seminar

Higashimatsushima, Miyagi Prefecture [“FutureCity”]

Population: 40,457 (As of October, 2012)
Area: 101.86 km²

Higashimatsushima City is located about 30 km northeast of Sendai City, a central city in the Tohoku region that faces the Pacific Ocean as a scenic city as one of the Three Views of Japan. Its population as of March 1, 2011, was 43,142. Its main industries are nori and oyster farming and agriculture, and since the city is located midway between Sendai City and Ishinomaki, the city had increased the number of households as the salaried workers’ bedroom suburb.

Regarding the Great East Japan Earthquake, the city suffered significant damage as the number of missing and dead was 1,100. The vision that the city aspires to as “FutureCity” accords with the Reconstruction and City Developing Plan and with an eye toward earthquake disaster reconstruction and the formation of a sustainable society, the city makes efforts under the slogan of Higashimatsushima Isshin (One Heart, One Step Forward, and Complete Change).

Efforts on Environment

With an eye toward the formation of a sustainable Higashimatsushima where all the resources in the area circulate, the city moves forward with the efforts toward the “FutureCity” while working with each phase of earthquake disaster reconstruction.

With regard to energy, the city raises the self-sufficiency ratio within the area by constructing a self-sufficient and decentralized power source using various renewable energy sources, such as sunlight, biomass, wind, etc., and enhances self-sustained living functions in shelters in a disaster. The city also generates a synergistic effect in the fields of the Environment, Super Aging, and Disaster Prevention by reducing energy through low carbonization of buildings and promoting health housing as the response to super aging and intends to develop a sustainable Matsushima city.

FutureCity’s Projecct Examples

Cooperation with Kingdom of Denmark

The Kingdom of Denmark has been continuously supporting us right after the earthquake disaster. In June, 2011, Crown Prince Frederik visited Higashimatsushima City.

For the efforts toward earthquake disaster reconstruction and “FutureCity”, the city has been working to form a system to cooperate with Danish companies involved in various fields thanks to the coordination by the Royal Danish Embassy in Japan.

Also in July 9, 2012, the city concluded an agreement with Lolland City, which is famous in Denmark as an advanced municipality using renewable energy and has been organizing a close cooperative system with respect to the use of renewable energy, policies, etc.

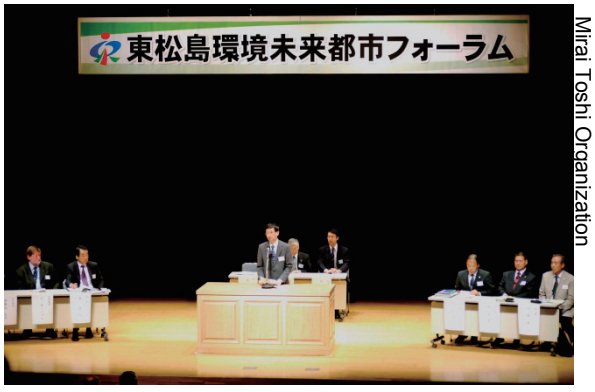
Cooperation with Kingdom of Denmark

Higashimatsushima Mirai Toshi Organization, a General Incorporated Association

As an intermediate support organization to promote earthquake disaster reconstruction and “FutureCity”, Higashimatsushima Mirai Toshi Organization (nickname: HOPE), a General Incorporated Association, was established on October 1, 2012.

In addition to the existing administrative resources, the organization introduces various resources within and outside the city (volunteer groups, individuals, various industries, academic research institutes, and government agencies at home and abroad) and sponsors projects, pilot programs, etc., in the urban area that makes the most of what they have.

On the other hand, the organization also re-evaluates and uses various resources in the city that had not been conventionally emphasized and conducts various projects with the aim of reconstructing industries and ensuring their permanence.



Establishment of Hibashimatsushima Mirai Toshi Organization

Iwanuma City, Miyagi Prefecture [“FutureCity”]

Population: 43,753
Area: 60.71 km^2

A view of the coastal area from GreenPia Iwanuma’s observatory deck

Iwanuma City is located in the central part of Miyagi Prefecture, 17.6 km south of Sendai City, stretches about 13 km from east to west and about 10 km from north to south, and the total area is 60.71 km^2. An extensive plain spreads from the mountanious area in the western part to the Pacific Ocean coastline in the eastern part, and Abukuma River runs into the city limit in the southern part from the east and goes to Sendai Bay. The city is also an important point for transportation as it has a divergent point on the Tohoku Honsen Line and the Joban Line, as well as a junction of Route 4 and Route 6; moreover, Sendai Airport, the gateway to Tohoku Region’s internationalization, is located in the area. The city used to flourish as a temple town, post town, and castle town, then large and small companies moved into the area because of the locational advantage as part of the Airport and Industrial Zone, so the characteristic as an industrial city was added and developed as a commercial and industrial city. The municipality was incorporated in November 1, 1971.

Creation of Sennen Kibou No Oka

In order to secure the lives of refugees who failed to escape the affected coastal district, the city will build Sennen Kibou No Oka (Hill of One Thousand-Year Hope), which enables them to temporarily escape and newly build and upgrade memorials and disaster-prevention parks to tell the story of the disaster to people within and outside the country, as well as future generations like one thousand years from now by preserving the affected buildings and areas as remains that became damp areas due to the land sinking as strongholds of the disaster prevention education.

The disaster waste caused by the Great East Japan Earthquake is to be used for the Sennen Kibou No Oka, and the city has been conducting follow-up research on the growing status of the trees planted in the tree-planting ceremony on May 26 and sinking condition of the banks.

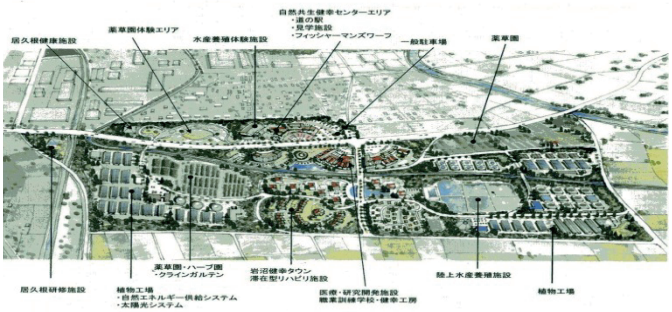
The area of an demonstration experiment, Sennen Kibou No Oka, where planted trees are growing

Natural Symbiosis and Upgrading of International Medical Industrial City

Although the city is close to Sendai City, which has a population of more than 1 million with various academic institutions, such as Tohoku University and medical facilities, Miyagi Prefecture has less medical-related industries, and the value of shipments is ranked low in national rankings; therefore, the city will revitalize the local economy by maximizing its location as a junction transportation hub because of the airport, highways, and railroads and attract medical-related industries.

The city will also create jobs for those who lost jobs in the city and the neighboring cities due to the earthquake disaster and for younger people who are part of the next generation.

The city will develop a master concept and concurrently conduct feasibility surveys in accord with the moves of medical and health industries and research institutes.



Concept Illustration of Natural Symbiosis and International Medical Industrial City (The drawing is a conceptual illustration and it will be changed according to the progress of the plan)

Development of the Next-Generation Agribusiness

As most agricultural lands will take time for the regeneration of rice cultivation and farming due to salt damage and sediment from the tsunami, as well as poor drainage caused by land sinking, the city will establish an agricultural production corporation with investments by companies, etc., in order to promptly regenerate agriculture and to put farmers’ lives back in order and empirically introduce the next-generation agribusiness, which will create a super energy-saving type of highly value added agriculture production system.

The effort is expected to produce a 40% energy-saving effect and 3 to 6 times greater production compared to the existing greenhouse horticulture. Therefore, the agricultural shipping volume per 1 ha will increase, farmers’ income about three times, and the energy consumption volume per plant production will be 6-13%. The city intends to build a business model of an eco-friendly agricultural regeneration.

Concept illustration of the business development of the next-generation agribusiness

Shinchi Town, Fukushima Prefecture ["FutureCity"]

Population: 7,786 (As of October 1, 2012)
Area: 46.35 km^2

The town that suffered significant damage from the Great East Japan Earthquake on March 11, 2011, decided on the following three points in Shinchi Town's First Reconstruction Master Plan developed in February 2012: (1) the town that prioritizes the people's lives and life, (2) the town that nurtures human bonds, and (3) the town with an ocean that coexists with nature. In accord to these points and as the future vision of the "FutureCity", the town intends to promote Local Energy Production for Local Consumption through the use of renewable energy, sustainably developing local industry backed by this, creating workplaces and job opportunities where the young to elderly people can vigorously work, and create old and new social connections KIZUNA (Bond) in which regeneration of conventional local community and highly advanced information and telecommunications infrastructure are fused.

Realization of Local Energy Production for Local Consumption

To increase the use of renewable energy, the town intends to smoothly shift to the electricity supply that has less of an environmental burden and based on the experience of the Great East Japan Earthquake, the city is to realize Local Energy Production for Local Consumption in each area unit in order to secure a stable energy supply not only during normal hours but also in a disaster. Specifically, the town will promote self-sufficient and decentralized power generation through the optimized combination of renewable energy from sunlight, biomass, wind, etc., in which the town's characteristics are maximized and build Smart Hybrid Network, Shinchi's networked smart grid.

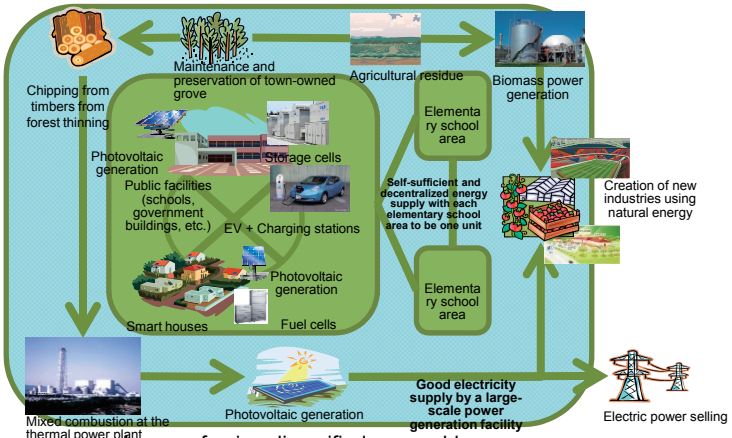
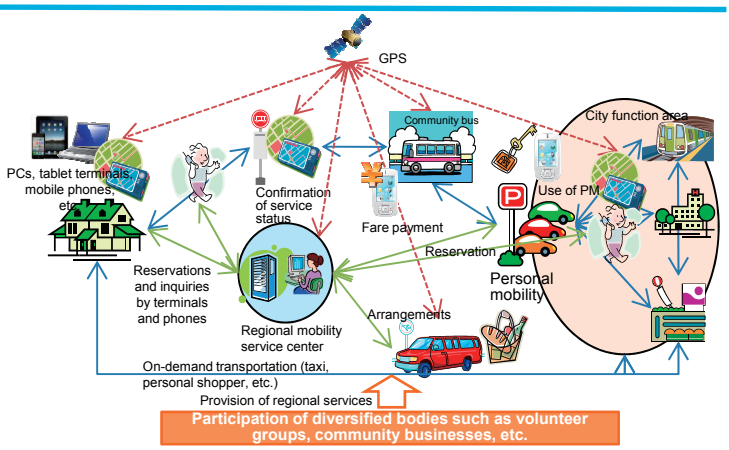


Image of using diversified renewable energy

Building of a New Local Mobility Model

In addition to the shared-taxi Shin-Chan Go that is currently operating in the town, the town will operate community buses that all residents can use, including elderly people's daily hospital visits, etc. The town also promotes Mobility Sharing (a tentative name), which enables the residents to choose their means of mobility according to their outing needs by sharing personal mobility, such as bicycles, electric motorcycles, etc. Furthermore, the town intends to build a new community model by promoting various community businesses using this transportation infrastructure such as outing assistance and personal shopper services for elderly people.



The image of a new local mobility model

Introduction of Photovoltaic Generation in Elementary and Junior High Schools

As a case example of efforts for self-sufficient and decentralized power generation, the photovoltaic generation systems with maximum output of about 20 kW and storage cells with power output of 16 kWh to strengthen the disaster prevention function were installed in four elementary and junior high schools in town (Fukuda Elementary School, Shinchi Elementary School, Komagamine Elementary School, and Shoei Junior High School) with a subsidy from the Coca-Cola Japan Reconstruction Fund (completed in September, 2012). Also, with the purpose of promoting education on clean energy to the students, monitors that displays the status of power generation and utilization of the photovoltaic systems were installed in the schools, and the whole town has been making efforts for environmental education by establishing different research and learning themes: hydro power (Fukuda Elementary School), wind and photovoltaic power (Shinchi Elementary School), thermal power (Komagamine Elementary School), and atomic and photovoltaic power (Shoei Junior High School).

The photovoltaic generation systems installed in four elementary and junior high schools in town

Minamisoma City, Fukushima Prefecture [“FutureCity”]

Population: 65,132 (Population as of October 1, 2012)
45,451 (Resident population as of October 24, 2012)
Area: 398.5 km²

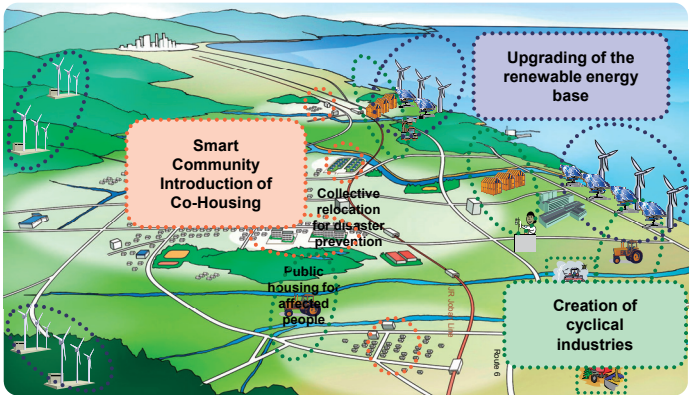
Minamisoma City is located in the northern part of the Fukushima Hamadori Region surrounded by the rich nature of mountains, ocean, and rivers as its east side faces the Pacific Ocean and the Abukuma Mountains in the western part.

The city suffered catastrophic damage due to the unprecedented earthquake and tsunami caused by the Great East Japan Earthquake and because of the damage to the nuclear power plant, which have not yet converged and the harmful rumors, the city is facing daunting problems of the evacuation of residents and the withdrawal and closure of companies, etc. In the midst of all this, the city has been working on the “FutureCity” Initiative with the keyword of circulation of energy, generations, and industries in order to recover the safe and secure city with citizens as soon as possible and pass the town on to the next generation.

Energy Cyclical City through Smart City

Aiming at getting away from nuclear dependency and become a low-carbon society, the city will work on the following:

- Renewable energy to be facilitated mainly in the tsunami-affected areas and mountain areas under the slogans of local energy production for local consumption and reduction of environmental burden and aim for a city that does not rely on the nuclear power generation.
- For the collective relocation for disaster prevention, the city will promote energy-saving housing in the new community and expand the energy-saving community by installing solar panels in each homes.
- In order not to forget the nuclear power plant accident, the city will arrange opportunities for the citizens to learn about electricity and the environment.

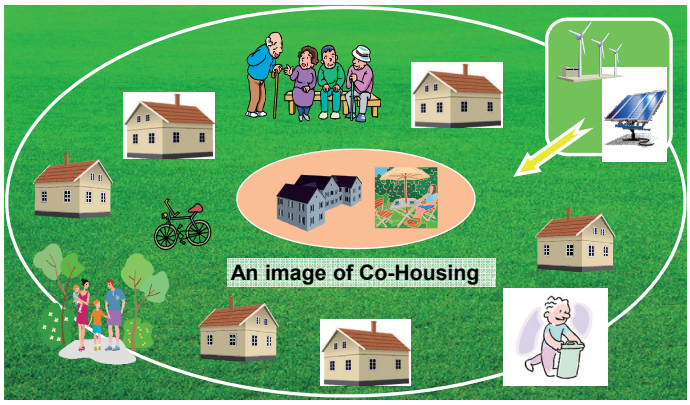


Generation-Circulating City where Everyone can Easily Live

In conjunction with the collective relocation for disaster prevention and in order to improve residents’ quality of life, the city intends to become a city where residents can independently live for a long time by incorporating the characteristics of Co-Housing and revitalizing the community activities.

[Co-Housing]

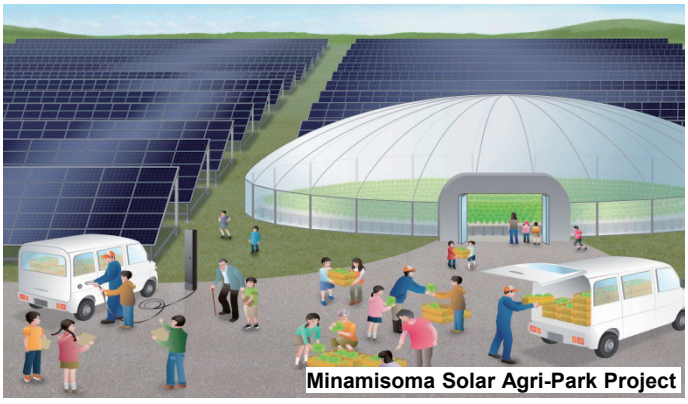
(1) Universally designed and high heat insulation material-used houses
(2) Securing of the place for local exchange by establishing common facility
(3) Reduction of environmental burden by using renewable energy
(4) Reduction and recycling of waste by the collective



Creation of Cyclical Local Industries with EDEN Plan as a Core

Through the building of a new industrial structure with primary industries as the core, the city will work on the regeneration of agriculture.

- The city will realize the redevelopment of agriculture, revitalization of local industries, and year-round employment by promoting the compound management that integrally conducts the production, processing, and sale of agricultural products and energy supply.
- The city will support the growth of children who will take roles in the reconstruction in the next generation by implementing experiential learning and exchange projects and aim at sweeping away the harmful rumors due to the effect of radioactive materials and recovering confidence by deepening the exchange with the whole country.



Kashiwa City, Chiba Prefecture [“FutureCity”]

Population: 404,578
Area: 114.9 km^2

Kashiwa City is located in the northwestern part of Chiba Prefecture and is a major urban area about 30 minutes away from Tokyo. The city is a bedroom suburb for those who commute to Tokyo, and there are national academic institutions, such as Kashiwa Campus of the University of Tokyo and Center of Environment, Health and Field Sciences, Chiba University, and an industrial complex of major companies.

Kashiwa City presents three problem-solving models of a Smart City, The City of Health and Longevity, and New Industry Creating City and envisions and makes proposals by combining Most-Advanced Wisdom from its universities, etc., and local bodies, such as citizens and companies, to continually and autonomously conduct the management of its programs and initiatives. The city intends to realize a mechanism that anyone, from elderly people to young people who are responsible for the next generation, and to children with freewheeling thinking and who wish to do something for the community, can participate in developing the city.

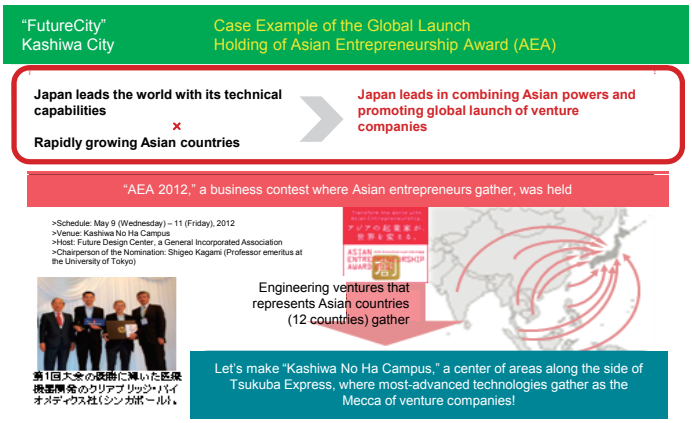
Building a Low-Carbon Compact City and an Emergency Smart Energy System

After the Great East Japan Earthquake, Kashiwa City also experienced a shortage of energy, and a planned outage was implemented. As a response to the outage, the city is planning to accommodate other facilities with electricity from storage cells in the region. Fundamentally, transmission of electric power that goes beyond public roads requires authorization by the competent minister as a specified supplier but the city is requesting the easing of the relevant regulations only when conducting inter-block electric power interchange in an emergency and is promoting the commercialization of the project.

By conducting energy management and transmitting electricity generated and stored in the region to elevators in high-rise condominiums and evacuation centers, the city will develop communities that enhance regional safety and security.

Holding of Asian Entrepreneurship Award

In order to solve economic problems, creation of new industries is required. To solve the problem that techniques do not lead to commercialization, Kashiwa City established TX Entrepreneur Partners (TEP), a community-led company to develop venture companies, in November, 2009. TEP provides the know-how on commercialization, makes investments, and nurtures markets by providing financial and management assistances. The number of its members has already exceeded 240 companies and it has steadily achieved satisfactory results. Also, in order to network the venture projects created by the universities in Asia, the city hosted Asia’s own business contest (Asian Entrepreneurship Award). This is one of Kashiwa City’s key projects as this is related to the creation of new industries in the “FutureCity”.

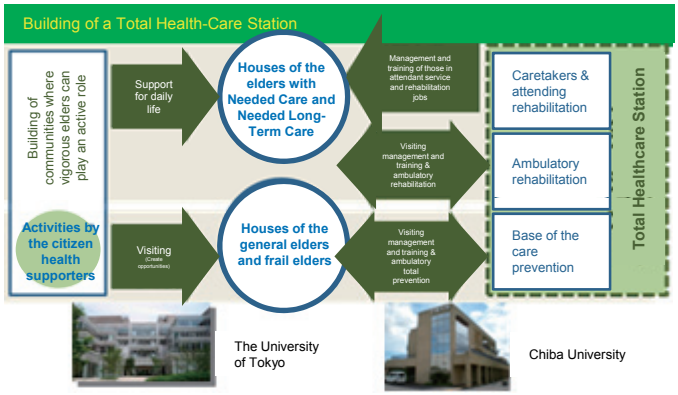


Realization of a Total Health-Care Station

The city will introduce a mechanism to provide comprehensive disease prevention and care prevention services to all of the healthy senior citizens, frail senior citizens, and senior citizens with Needed Support and Needed Long-Term Care and promote the sophistication, efficiency, and penetration of the local health maintenance and rehabilitation services.

Services are comprised of (1) rehabilitation, oral care, and nutritional guidance services for frail senior citizens and senior citizens with Needed Support and Needed Long-Term Care, (2) visiting oral care, and (3) disease and care preventive education and enlightenment activities for all senior citizens.

For the disease and care prevention, it is ideal that two or all of the locomotorium rehabilitation, oral care, and nutritional guidance are interlocked and provided; therefore, the city will provide the services integrated as Total Health-Care Station.



Chiyoda Ward [Eco-Model City]

Population: 52,180
Area: 11.64 km^2

Chiyoda Ward is the center of politics and economy located in the central part of Tokyo, the capital of Japan, and is a large city where advanced corporate functions are gathered.

On the other hand, the ward has a rich natural environment surrounded by water and green areas, such as the Imperial Palace. While the number of residents is about 50,000, the population reaches 820,000 during the day which is about 16 times more.

Currently, about 70% of the CO_2 emissions is from business operations, such as offices. As active economic activities and upgrading of corporate functions are expected in the future, the emissions in the ward will keep increasing if no measures are taken.

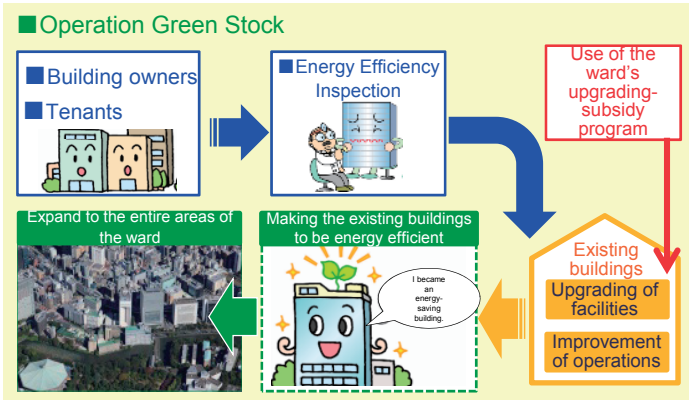
In order to promote global warming countermeasures while conspiring for the coexistence of the economy and nature, Chiyoda Ward established the Chiyoda Ward Global Warming Countermeasure Ordinance in 2007 in which numerical targets were set for the first time in Japanese municipalities. Toward achieving the goal, the ward has been making pioneering efforts together with 820,000 of the ward residents.

Operation Green Stock –Energy Saving in the Existing Buildings-

As part of its high level energy-saving strategy for buildings, Chiyoda Ward has implemented Operation Green Stock. This is to improve energy efficiency of more than 10,000 existing buildings by implementing energy efficiency inspections by experts and improving operations and upgrading facilities based on the inspection.

This is Japan's first attempt that promotes the efforts not only for buildings but also for block units, such as shopping streets and neighborhood associations, as this covers a huge number of existing buildings. Based on the results of the energy efficiency inspection, the ward proposes countermeasures suitable for each building to building owners and tenants and leads to the upgrading of energy-saving facilities by using the ward's upgrading-subsidy program.

This is a low-key approach but the ward will promote the energy efficiency in the existing buildings while cooperating with communities.



Community-Fostered Eco-Kids –Environmental Education for Children

Chiyoda Ward is promoting environmental education for the children responsible for the next generation and has been cooperating with companies and schools and implementing various approaches.

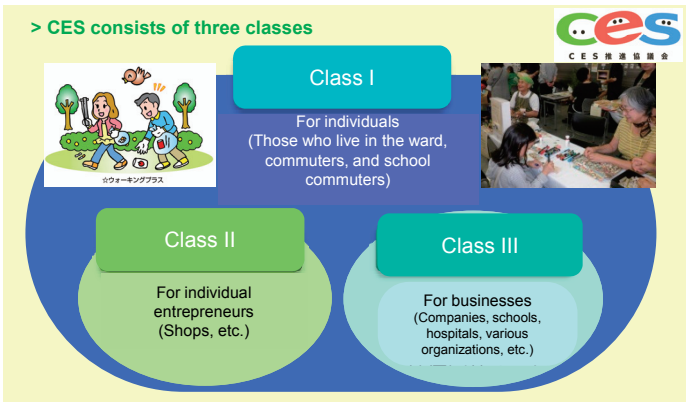
During the summer, in an attempt to heighten the awareness of the energy saving among children, the ward implemented Chiyoda, Wagaya No Setsuden Kanteidan (Appraisers of Energy Efficiency in Our Home) in July and August in which elementary and junior high school students and their families worked on the energy saving based on the Efforts Sheet distributed by the ward. 776 people participated in this, and the ward could reduce 50,265 kWh of electricity consumption as compared to the previous year.

In addition, companies in Otemachi, Marunouchi, and Yurakucho zones took a leading role and held Otemachi, Marunouchi, and Yurakucho Eco-Kids Tankentai (Expedition Team) (about 1,000 participants), an event for environmental education. Also, six programs were implemented as delivery classes in six elementary schools in the ward and about 340 pupils experienced company-specific environmental education programs. The ward further promotes these efforts to heighten children's environmental awareness.

CES –The Ward's Own Local Environmental Management System-

In Chiyoda Ward where the daily population increases to about 820,000, upgrading of an environmental management system in which not only the ward residents but also workers and students can participate became imperative. Therefore, the ward uniquely built CES (Chiyoda Ecosystem), which enabled everyone in Chiyoda could make his/her efforts. Its characteristics are that targets are divided into the following three classes: (1) Class I is the enlightenment and awareness through lectures and events for ward residents, commuters, and school commuters; (2) Class II is the efforts on energy saving and waste reduction by individual entrepreneurs and shops; and (3) Class III is the environmental management system that companies and schools set their schedules and make their efforts.

CES activities bring certain advantages such as raising of environmental awareness, improvement of corporate and organizational images and their waste reduction, streamlining of operations, etc.



Yokohama City, Kanagawa Prefecture ["FutureCity" and Eco-Model City]

Population: About 3.7 million
Area: 434.98 km^2

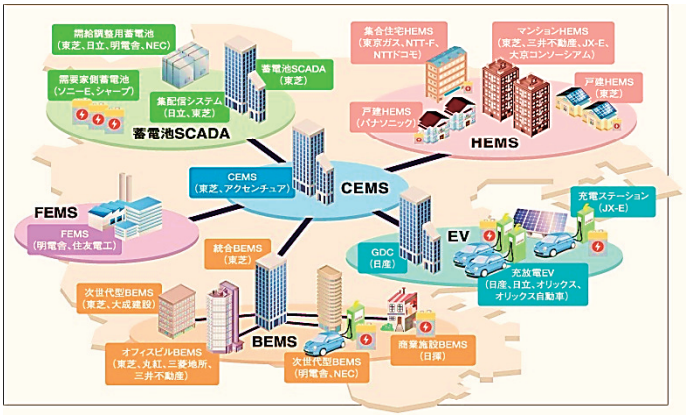
Over the past 150 years, Yokohama City had grown to become Japan's largest municipality with a population of about 3.7 million. Yokohama City is a city that is unprecedented worldwide as the city had overcome various problems such as earthquake disaster, war damage, population explosion, response to environmental pollution associated with economic growth, etc. The history of Yokohama is exactly the history of sustainable urban development.

Today, Yokohama is facing great challenges, such as rapid aging of the population, energy problems associated with the Great East Japan Earthquake, etc. Under these circumstances, the city has been selected as "FutureCity" by the national government, balancing environmental measures and economic growth, and has been making its best efforts for urban development that further increases citizens' happiness. The city will keep developing a prosperous city that is filled with and well-balanced Yokohama's own characteristics and attractiveness.

Yokohama Smart City Project

Yokohama Smart City Project (YSCP) is a project that was selected as the Next-Generation Energy and Social Systems Demonstration of the Ministry of Economy, Trade and Industry in April, 2010 which was the efforts to build Japan's smart grid and realize its overseas development.

Under the cooperation between Yokohama City and private companies (Accenture, Tokyo Gas Co., Ltd., Toshiba Corporation, Nissan Motor Co., Ltd., Panasonic Corporation, Meidensha Corporation, Tokyo Electric Power Supply Company, etc.), the city has been making efforts for projects for the introduction of renewable energy and unused energy, energy management in homes, buildings, and communities, and a next-generation traffic system.



Evaluation of Yokohama City and Its Global Network

Yokohama City's various efforts have received a high evaluation in Sustainable Development which is promoted by the World Bank and is the only city in Japan that has been selected as one of ECO^2 Cities.

Also, the city received the World Smart City Award in the city category at the Smart City Expo International Conference 2011. Moreover, the city made a presentation of its efforts "FutureCity" Yokohama at United Nations Conference on Sustainable Development (Rio+20) and attracted much attention from the people around the world.

The city is also promoting global warming countermeasures through cooperation with C-40 (world's largest climate leadership group) cities and network with CITYNET (The Regional Network of Local Authorities for the Management of Human Settlements).

THE WORLD BANK
Eco^{2}Cities
C40 CITIES
CITYNET

Awarded "World Smart City Award"

Presentation at Rio+20

A Project for Sustainable Residential Zone Models

By using the private-sector initiative, Yokohama City has been promoting a project to build sustainable residential zone models that give consideration to super aging and the environment. In Tama Plaza Station's north section, one of its model zones, the city has concluded an agreement with Tokyu Corporation and has been promoting their efforts.

In areas on the Tokyu Denentoshi Line, residential zones had been built by large-scale development projects since the mid 50s and 60s and now, the aging of residents, deterioration of houses, decline in local vitality, etc. have been exposed and there is a concern that these circumstances will further progress in the future. So, the city has been promoting to build Yokohama Models that are aimed at Sustainable Suburban Residential Areas in which the life in Existing Towns is emphasized and which have vitality.

Toyama City, Toyama Prefecture ["FutureCity" and Eco-Model City]

Population: 421,953
Area: 1,241.85 km^2

Toyama City is a major urban area with a population of about 420,000, has diversified landscapes from Toyama Bay to Tateyama mountain range in the Northern Alps, and is rich in nature blessed with water and greens.

With its flat ground, high road-maintenance rate, and strong aspirations of owning detached houses, the urban area rapidly expanded to the suburbs and the population density within DID is the smallest among prefectural capitals in the 47 prefectures. Also, vehicle's apportionment rate as the means of transportation is high among the major urban areas in the country and with the excessive dependence on automobile traffic, public transportation has significantly declined.

For this reason, the city has been promoting the development of a compact city centering on the public transportation with the focus on rapid aging in its society and falling birth rates in the future and population decline.

Formation of LRT Network

Toward the realization of the development of a compact city centering on the public transportation, the city has made efforts to convert JR Toyamako Line into LRT and to make a belt line for trains in the city. In addition, the city intends to form a LRT network with its total length of 25.3 km by connecting north and south-bound street cars under the elevated tracks of Toyama Station and expanding trains in the city to Toyama Chihou Tetsudou's Kamidaki Line .

These efforts resulted in creating the effects of multifaceted regional vitalization such as significant increase in the number of users, reduction of greenhouse gas emissions, creation of outing opportunities for senior citizens, increase in housing starts along railroad lines, increase in the number of visitors at tourist facilities along railroad lines, etc.

▲Figure of future LRT network

▲Train's belt line in the city (Centrum)

The Sixth Industry of Agriculture with the Use of Heat from Ushidake Onsen

The city intends to create new specialty products under the theme of the environment and health by upgrading a hydroponic plant factory with complete artificial light that uses heat from Ushidake Onsen (hot spring), photovoltaic generation, etc. in the Yamada Area (in Akameyachi), which suffers from depopulation and where the population is aging and by conducting production, processing, distribution, and sale of perillas in a unified manner.

Also, the city intends to become a city with health and longevity such as the employment of local senior citizens at the plant factory to create motivation in their life, using perillas that contain effective ingredients in the food services at hospitals and schools in the city, etc.

▲Image of the plant factory

Creation of a City with Health and Exchanges

In order to realize the development of a compact city in which senior citizens can securely and safely walk around and live, the city will create a pedestrian network by upgrading pedestrian roads in the central city, promote the improvement in senior citizen's outing and exchange opportunities, as well as the guidance on attracting Toyama version of a day service facility, and build a city with health and exchanges useful for senior citizens' health promotion.

By developing a mechanism that uses walking support tools that are useful for senior citizens' health maintenance and enhancement, the city will realize the living that senior citizens can spend healthy and independent life and aims at controlling social security spending such as medical charges, care insurance benefits, etc.

▲Images of the pedestrian network

Iida City, Nagano Prefecture [Eco-Model City]

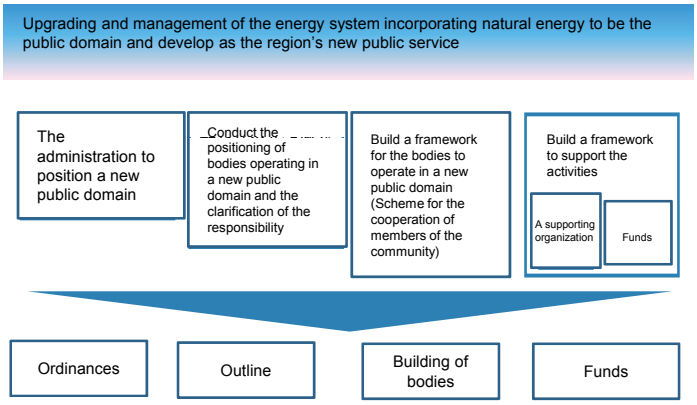
Population: 106,389
Area: 658.73 km^2

Since the city was given city status in 1937, Iida City, which is located in the southern part of Nagano Prefecture, has repeated municipal mergers of the former Iida Town, which used to be a castle town, and surrounding farming and mountain villages. The people in the city live in a harmonious combination of mountains, villages, and towns, and the city has fostered traditional culture in its long history.

In the Master Plan in the Second Half of the 5th Master Concept marking the fiscal 2012 milestone, the city has set promotion of a low-carbon society as one of its priority policies and as part of its strategic community development in the 21st century focusing on the future image of the region where Linear Chuo Shinkansen to be opened 15 years later, the city has been promoting various efforts as the Eco-Model City.

Ordinance Establishing Project for the Development of a Sustainable Low-Carbon Society

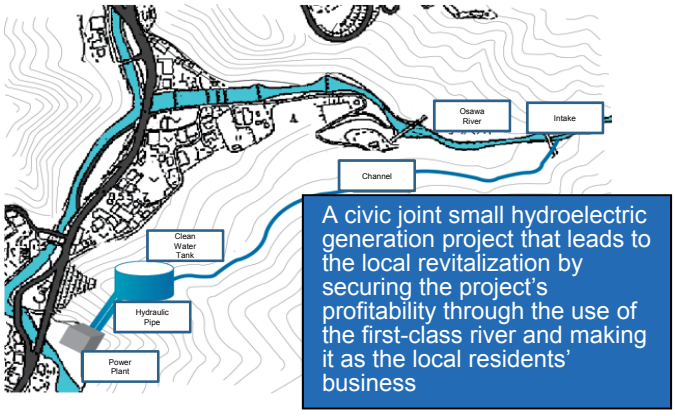
With the introduction of the feed-in tariff for renewable energy, time has brought the opportunity to develop a sustainable low-carbon society through natural energy businesses using regional resources. Therefore, the city has organized a task force with experts within and outside the region and advanced the consideration to aim for establishing the Local Energy Business Coordinating Organization that supports the renewable energy business using Iida City's rich natural environment that is conducted mainly by the citizens and toward the establishment of Ordinances Relevant to the Development of a Sustainable Community through Introduction of Renewable Energy in Iida City, as well as the establishment of the outline to manage the ordinances.



Promotion of the Civic Joint Small Hydroelectric Generation

Using Kamimura Region in Iida City as a model and with the support from the local energy business coordinating organization, the city has been promoting the building of a small hydroelectric generation project of which the total output will be sold and in which the local residents will take the initiative.

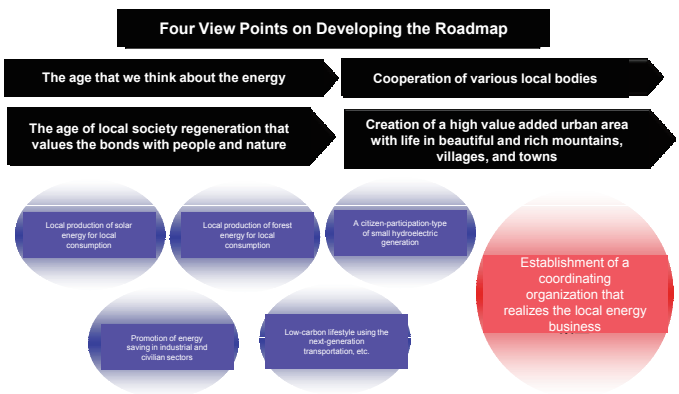
In this fiscal year, brief surveys, such as the flow rate survey and geological survey on the model river, simulation of the project's profitability, etc., have been conducted. In addition, in collaboration with the task force from the local energy business coordinating organization, the city intends to build a model to create a sustainable community with self-sufficient renewable energy while forming consensus mainly with the Citizen's Council for the Project Promotion and Review.



Promotion of the Projects based on the Eco-Model City Roadmap

With the opening of the Linear Chuo Shinkansen 15 years away, the city has engaged in the project to create a smart community suitable for various life styles in the mountains, villages, and towns based on the Roadmap for the Eco-Model City Suitable for the Linear Ag,e which was developed in fiscal 2011.

As the focused efforts, with a goal of generating 30% of the civilian sector's energy demand by 2030 through Creation of Energy and Energy Saving and in collaboration with various local bodies, the city has been promoting projects on the promotion of using the energy from sunlight, forest, and water and the building of a mechanism for the virtuous circle of environment and economy in collaboration with the local industrial world.



Toyota City, Aichi Prefecture [Eco-Model City]

Population: 423,744
Area: 918.47 km²

<Brief Summary of Toyota city>
- A core city with the population of about 420,000 located in the north end of the central part of Aichi Prefecture
- An industrial city that has developed with the automobile industry, its core industry, 70% of the urban region is forest, and it is a local city that also has a characteristic of farming and mountain villages

<Brief Summary of Its Action Plan>
- Plan Name

Toyota City's Eco-Model City Action Pan
(Hybrid City Toyota Plan Efforts in five fields)
[People's Livelihood] Optimization of energy use in homes and regions
[Transportation] Building of a low-carbon transportation system
[City Center] Upgrading of a low-carbon model zone
[Industry] Promotion of creating sustainable plants
[Forest] Intensified implementation of tree thinning

- Target for the reduction of greenhouse gas emissions (Compared to 1990)

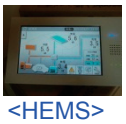
30% reduction by 2030 and 50% reduction by 2050

Optimization of the Use of Energy

Toyota City intends to build a local city type of the next-generation low-carbon society in which the use of energy *in homes, during transportation, and at destinations* is optimized and the use of energy in the entire living area is also optimized.

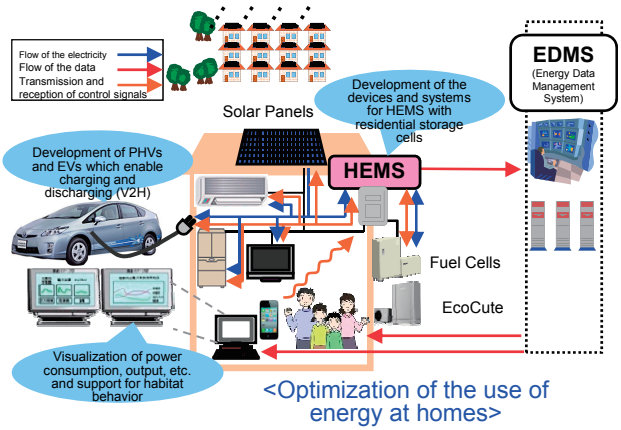
With regard to homes, the city has been conducting a demonstration of integrating and controlling the photovoltaic power generation, energy-saving appliances, and storage cells in the next-generation cars by HEMS (Home Energy Management System) at 67 Smart Houses. Furthermore, for The Entire Living Area, the city has been promoting the local energy production for local consumption by controlling the supply and demand for the local electricity through the cooperation between EDMS (Energy Data Management System) and HEMS.

<Smart House>



<HEMS>

<Storage Cell>



<Optimization of the use of energy at homes>

Building of a Low-Carbon Transportation System

By taking advantage of the strength of the city that had developed as The Automobile City, the city has been promoting the introduction of next-generation mobility, improvement of the public transportation, provision of a new traffic information using ITS, etc. in a unified manner and building a low-carbon transportation system.

The fuel-cell-powered buses and hybrid buses have already been used as community buses and as a terminal traffic, the city has started a demonstration of micro electric vehicle sharing.

Also, as the EV and PHV charging network, the city has upgraded 33 charging facilities in 22 locations in the city and started upgrading hydrogen stations. From this fiscal year, the city has started a demonstration of Ha:mo Navi which optimizes the traffic demand.

<Fuel-cell buses (Main bus line)>

<TDMS (Ha:mo Navi)>

Linkage

<Solar power charging station>

Linkage

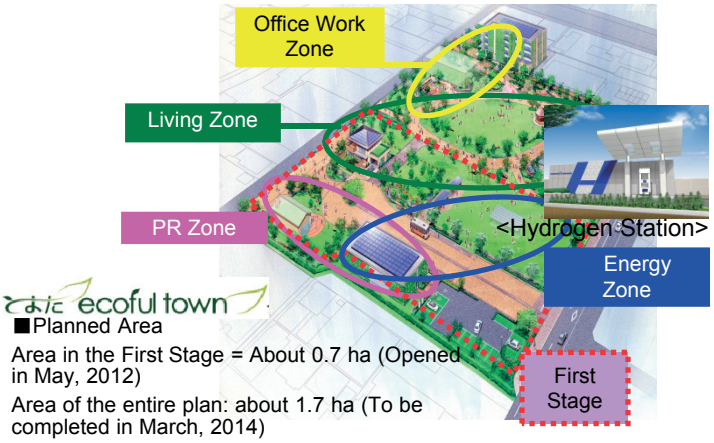
<TDMS (Ha:mo Ride)>

Upgrading of Toyota Ecoful Town, a Model Zone of the Low-Carbon Society

As a facility that Visualizes various efforts, the city has been upgrading Toyota Ecoful Town with the area of about 1.7 ha in the midtown district which is a model zone of the low-carbon society.

In May of this year, a PR pavilion and a smart house, where people can experience the low-carbon urban development and life, had opened. The city will also upgrade the hydrogen station, local-production-for-local-consumption house, and multi-mobile station by March of next year. The fully-shared use is scheduled to start in April, 2014.

With Ecoful Town as a base, the city intends to popularize environmental technology in the conversion of lifestyle and urban development .



■Planned Area

Area in the First Stage = About 0.7 ha (Opened in May, 2012)

Area of the entire plan: about 1.7 ha (To be completed in March, 2014)

Kyoto City, Kyoto Prefecture [Eco-Model City]

Population: 1.473 million
Area: 827.9 km^2

Kyoto City was nurtured by 1200 years of long, multifaceted histories with forest covering three-fourths of its area. It has the beautiful scenery of nature and a peaceful urban landscape and is a traditional city where inherited and polished traditional culture still exists, which is rare worldwide. The city also is a modern metropolis with a population of 1.47 million and is an international cultural and tourist city where about 50 million tourists visit annually.

Furthermore, it is also the *City that Creates the Future* with its progressive spirit and creative mind to constantly challenging new things while maintaining its tradition.

By taking advantage of its characteristics and the 3rd Conference of the Parties to the United Nations Framework Convention on Climate Change (COP3), which was held in December, 1997, Kyoto City, as the birthplace of Kyoto Protocol, has promoted advanced countermeasures for global warming to aim to become a sustainable city with less environmental burden under the spirit of partnership backed by the history of autonomy and with the cooperation of the citizens, business operators, and government.

DO YOU KYOTO? Credit System, Kyoto's Own CO_2 Credit System for Local Production for Local Consumption

In order to promote the reduction of greenhouse gas emissions led by the citizens' groups, shopping district associations, and small and medium sized business operators, the city has established the DO YOU KYOTO? Credit System, a credit system for the local production for local consumption, in August, 2011.

The reduction of CO_2 which is realized by the efforts for energy-saving and energy efficiency by the small and medium sized business operators and communities such as citizens, shopping districts, etc., is to be certified as a tradable credit by the city and a financial incentive for such creation appropriate to the credit amount is to be granted.

The credits certified by Kyoto City have been used for carbon offsets in the events in the city, home games of Kyoto Sanga F.C., Kyoto's soccer team, etc.
(Credit's transaction value: 1 ton = 10,000 yen)

→ Kyoto Sanga F.C.'s flyer for carbon offset
↓ A ceremony for the carbon offset match conducted in the presence of a mayor of Kyoto City

Eco-School Districts, Low-Carbon Model Districts

In order to reduce CO_2 emissions from the civilian and residential sectors, the city has been comprehensively making efforts toward the realization of a low-carbon society using School Districts (equivalent to the elementary school zone), which has been taking a leading role in the local activities in the city from time immemorial, as a unit.

The community's own environmental activities such as the active promotion of energy saving, environmental learning, experimental projects based on proposals from the school districts have been implemented by the community as a whole and the city has been trying to convert the lifestyle in the entire school districts and improve its regional power.

This has been implemented in 14 school districts for two years since the last fiscal year and from now on, the city will verify achievements and issues of the projects with cooperation from authorities concerned and lead to a mechanism to revitalize the environmental activities in all of the school districts in its urban area.

→ Lectures on energy saving, etc.
↓ An experiment on the efficient thermal conduction

Transmit the Importance of the Countermeasures for Global Warming from Kyoto to the World

[KYOTO Global Environment Hall of Fame]

Since 2009, the city has been rewarding those who significantly contributed to the conservation of the global environment and passed their achievements down the generations. The city holds an awards ceremony for those enshrined in the Hall of Fame around February 16 which is the day the Kyoto Protocol became effective.

[Cooperation with ICLEI]

Since 1996, the city has been a member of ICLEI, an international federation consists of municipalities, etc. that have been actively working on sustainable developments. Also, the city has been serving as an executive board member of the East Asian Community representing Japan since February, 2012 and made presentations on Kyoto City's efforts in Rio+20 related projects, etc.

An exhibit space in the main building of Kyoto International Conference Center (KYOTO Global Environment Hall of Fame)

Sakai City, Osaka Prefecture [Eco-Model City]

Population: 842,699
Area: 149.99 km^2

Sakai City intends to realize the Cool City Sakai, a low-carbon city in which Comfortable Life and Bustle of the City are sustained.

As Sakai has been referred to as *everything starts from sakai from time immemorial*, the city has the characteristics of constantly challenging and creating new things. The city inherits such characteristics and intends to realize a pioneering low-carbon city in which environment and industries will harmonize and which will develop together and become the world's model city.

A Project to Create Harumidai Eco-Model Town

The city intends to realize a Net Zero Energy Town in the entire urban area by realizing Net Zero Energy House (ZEH) in houses in all of the 65 plots.

[Characteristics of the Project]

- Photovoltaic power systems, residential lithium-ion cells, HEMS, etc. are to be introduced to all the houses.
- With the use of photovoltaic power systems and large lithium-ion cells to be installed in the meeting places, etc., the city intends to realize self-sufficient in the electricity used in the communal areas (LED street lights, etc.).
- The city intends to develop a disaster-resistant city such as a power feeding system [V2H] to meeting places in which EVs are used for car-sharing, electric pole clearance, etc.

[An image of the completed model]

[EVs shared at meeting places]

Sharing of Public Electric Vehicles

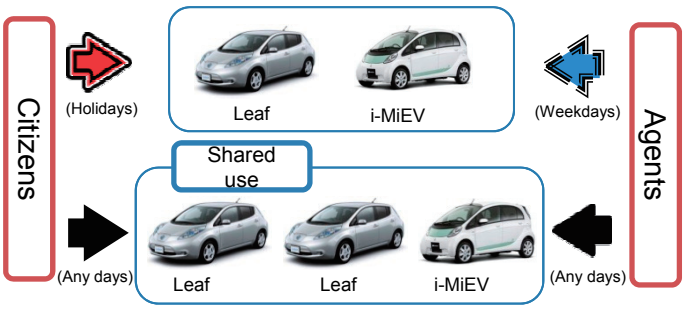
Sakai City has been implementing car-sharing since February 2012 in which five electric vehicles are shared by agents and citizens.

Unlike the existing structure, the city created a structure in which the agents use, as official use, the vehicles introduced not by the city but by private businesses during weekdays, and citizens use the vehicles on weekends and holidays and other vehicles to be collectively used by the agents and citizens on any days are also introduced.

Through this project, the city will consider new ways of using public vehicles and work on the reduction in the total number of cars in the city through the promotion of car sharing.

The number of EVs introduced: **5**

(EV-exclusive station: Established around the government building)



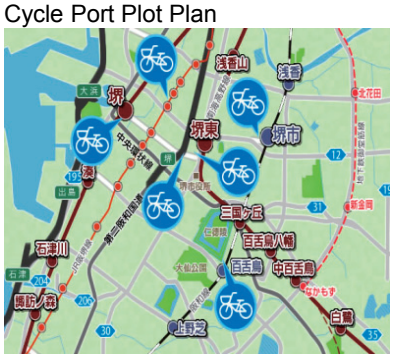
Management of a Community Cycle System

Community Cycle is a low-carbon transportation system which uses eco-friendly bicycles that do not produce greenhouse gases. Currently, lending and returning of 450 shared bicycles (410 bicycles and 40 power-assisted bicycles) at 6 Cycle Ports (exclusive parking spaces) in the city are available. In accord with the usage situation, the city will expand Cycle Ports and try to convert the excessive use of cars into the use of public transportation and bicycles.

- Lend and return can be made at any Cycle Port.
- In case of fixed-term use, you can take the bicycle home.
- User-friendly low charges and no maintenance of the bicycle needed

(300 yen per day and 2,000 yen per month)

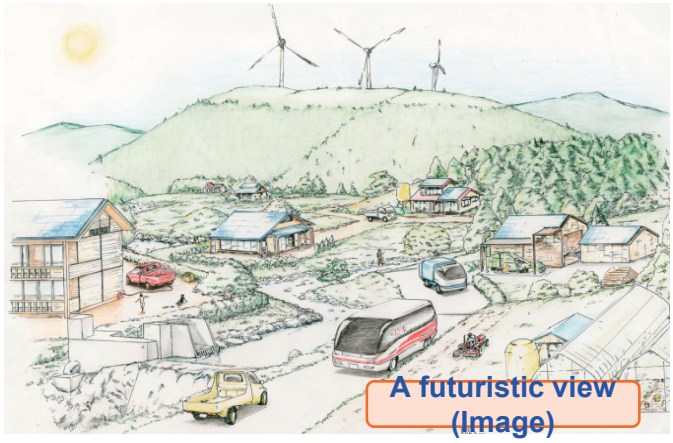
Cycle Port Plot Plan



Top picture: South Exit of Sakai-Higashi Station (Rack type: 24-hour use)
Bottom picture: In front of Sakai-Higashi Station (Gate type)

Yusuhara Town, Kochi Prefecture [Eco-Model City]

Population: 3,984
Area: 236.51 km^2



A futuristic view (Image)

With the philosophy of coexistence with and circulation of the environment (nature) as its fundamental principle, Yusuhara Town has promoted the policies and measures that value the environment, education, and health.

In accord with this principle, the town has set the theme of the *Development of a Low-Carbon City in Collaboration with Members of the Community where Green Resources Circulate and which Treats Living Creatures Kindly* and has been designated as an Eco-Model City.

The town has set the energy independence as its major goal in the Eco-Model City's goal.

To achieve the goal, the town will keep valuing the *Philosophy of Coexistence and Circulation,* accelerate its various activities using the local resources, and build the *Most Brilliant Rural Society in Japan.*

The Pillar of the Eco-Model City

Two wind turbines that have been in operation since 1999 proved that Shikoku karst located in the backbone range in Shikoku has leading wind conditions in Japan.

While optimally mixing this excellent local resource with its environment and landscape, the town will work on the construction of a wind farm.

The town will also work on a model project for the local circulation of woody biomass that promotes the comprehensive use of forest resources and set this as a pillar in achieving the absorption and reduction of CO_2 and 100% in the energy self-sufficiency rate.

Figure of Shikoku Karst Wind Farm

A Model Project for the Local Circulation of Woody Biomass PJ

A Project to Educate People and Create a Structure

The fact that Yusuhara has been designated as an Eco-Model City is deeply related to the fact that the town has inherited the philosophy of coexistence and circulation that values the relationship with nature from our predecessors.

We believe that carrying on the good way of thinking handed down for generations to the people in Yusuhara from their predecessors is essential in realizing the Development of a *low-carbon city that treats living creatures kindly*.

This past summer (August, 2012), adults and children in the town challenged on the efforts to turn on the lights in the community by using natural energy through learning to creation.

The street lightings using hand-crafted solar panels illuminate the town

Fare-Paying Transportation and Lending of Mobility Scooters

Cars are essential means of transportation in depopulated areas. Two areas in the town that are particularly and rapidly aging have cooperated and established Kizuna, an incorporated non-profit organization, to secure means of transportation for the local people, such as senior citizens who do not have means of transportation, by providing fare-paying transportation using hybrid cars that have less CO_2 emissions and long travel distance.

The progress in aging also means an increase in senior citizens who have car-driving experience.

To provide transportation for those people and disabled people to be able to move around the central town to shop and take a walk, the city is also lending mobility scooters which they can easily use and have less CO_2 emissions.

Hybrid Cars for fare-paying transportation in the depopulated areas that is run by Kizuna, a NPO

Lending electric mobility scooters

Kitakyushu City, Fukuoka Prefecture ["FutureCity" and Eco-Model City]

Population: 971.788
Area: 488.78 km²

Higashida District in Yahata-Higashi Ward, Kitakyushu City which is working on the Kitakyushu Smart Community Creating Project

Kitakyushu City is an industrial city that led our country's industrial modernization, which started from the operation of the state-owned Yahata Steel Works in 1901. Meanwhile, the city has a history where economic development caused serious pollution problems. In the wake of the civic movement, companies and the government worked together and overcame the pollution problems. Then technology and human resources concerned with the environment had been accumulated, and the city has been actively making efforts for global environmental cooperation using its experience and technology of overcoming pollution problems and has been honored several times by international organizations.

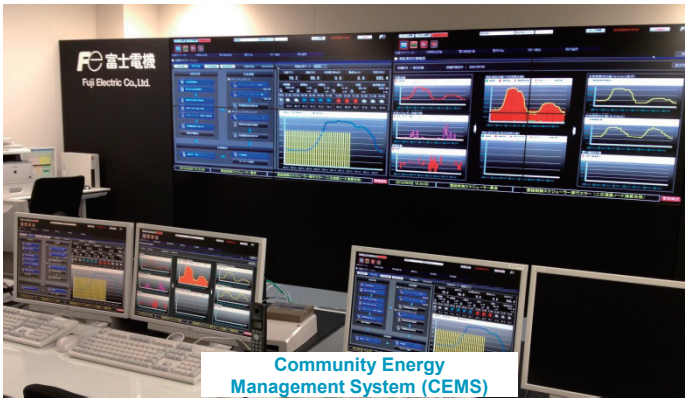
Currently, while utilizing the citizen power, which is the most valuable asset Kitakyushu City has, the city has been promoting various efforts that aim to become an Environmental Capital of the World and secure compatibility between the environment and the economy.

Formation and Dissemination of a Low-Carbon Urban Area in which the Local Energy Management Function is Implemented

●Kitakyushu Smart Community Creating Project

This is to aim for a Smart City that realizes an affluent civic life, such as building of a new energy management system with a focus on the smart grid, response to the next-generation transportation system super-aging issue, etc., and has been selected as one of four demonstrating areas nationwide by the national government.

So far, the city had promoted the installation and introduction of devices, such as Community Energy Management System (CEMS), smart meters (next-generation electricity meters), etc. but from fiscal 2012, the city has introduced Dynamic Pricing that fluctuates electric utility charges according to the electricity's supply-demand situation for the first time in Japan and started a full-fledged demonstration experiment.



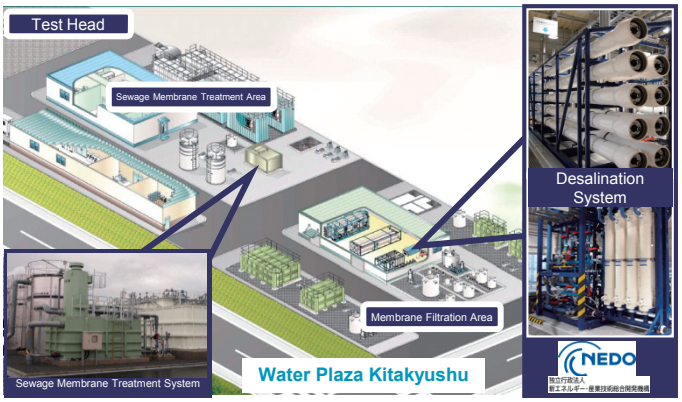
Community Energy Management System (CEMS)

Promotion of the International Environmental Business

●Development of the overseas water infrastructure business under cooperation between the public and private sectors

The overseas water infrastructure business is one of the pillars of the wide range of environmental businesses operated overseas, centering on the Kitakyushu Asian Center for Low Carbon Society, and with the aim of receiving orders of various businesses, such as the planning of water and sewage, facilities improvement, and a packaged type of full-fledged project, including administrative operation, the public and private sectors have been making efforts for order reception, centering on Kitakyushu Overseas Water Infrastructure Business Promotion Council.

In April 2012, the city was registered as the Alliance Advanced Agency (AAA) of the Water and Environmental Solution Hub by the national government. From now on, with a core of Water Plaza Kitakyushu, an advanced fresh water generating system, the city will utilize the International Strategic Point for the Water Infrastructure Business that is now upgrading and further accelerate the overseas water infrastructure business.



Promotion of the Education that Bonds with the Community and Connects Generations

●A cheering squad for elementary schools formed by the business persons in Kitakyushu

There had been no structure in which local companies support schools and, except for the social studies field trip to visit companies, the educational assets that companies have had not been fully utilized.

Therefore, about 150 companies participated and established a Cheering Squad for Elementary Schools to support children's education and started a project to make effective use of the companies' educational assets for Education for Children. In fiscal 2012, the model project was conducted in 11 elementary schools, and the project will be spread to the entire city in the future.

This is an epoch-making experiment that as a supporter of schools, homes, and communities to provide support for child raising and education, the companies play an active role.

A class about recycling taught by the Cheering Squad for Elementary Schools

Minamata City, Kumamoto Prefecture [Eco-Model City]

Population: 27,169
Area: 162.89 km²

Based on the experience and lessons of Minamata disease, Minamata City made the following Eco-Model City Declaration in 1992 for the first time in Japan and has made efforts for the development of the Eco-Model City with cooperation from citizens. Such efforts were appraised and the city was certified as Environmental Capital of Japan in March, 2011.

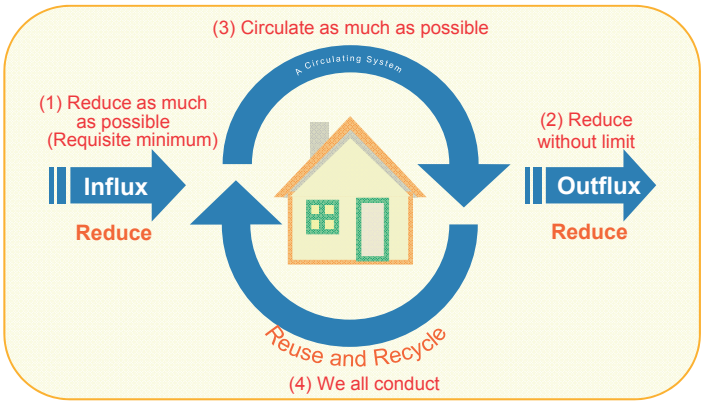
1. Learn the lesson of Minamata disease and pass it down the generations.
2. Ensure the remedy for the victims of Minamata disease and reconciliation with the citizens.
3. Promote the shift to industrial activities that give consideration to people and many living creatures in the circulating natural ecosystem.
4. Protect the ocean, mountains, and rivers as our life base and carry on to the next generation.
5. Question the modality of a civilized society and promote the development of a social system that is based on the recycling of finite resources.

We will achieve the true realization of Eco-Model City and aim to realize a sustainable low-carbon society in which the environment and economy are harmonized.

Development of a Zero-Waste City

From the experience of Minamata disease where the environment and health supersede everything, Minamata City made the Minamata Declaration of Developing a Zero-Waste City in 2009 in order to make efforts to develop a mechanism and city not contaminating the nature of our hometown, not jeopardizing the lives and health of all living creatures, and not wasting finite resources and energy but maximizing the effective use.

By further promoting the efforts for advanced separation of waste, reuse/recycle in the Eco-Town, simple packaging, etc. that the city has worked on and through new efforts such as Chanomi Ba (tea-drinking place), the city will promote the shifting of awareness from recycle to reuse and reduce and work on the realization of an affluent life that does not produce waste, together with the people who have the same spirit.



<Conceptual Diagram of Zero Waste>

Development of an Environmentally-Sound City that Coexists with Nature

Minamata City is a city rich in water and nature as the watershed ecosystem from the headstream (mountain) to the mouth of a river (ocean) are formed within the city area.

In order to protect the immediate mountain, river, and ocean and to sustainably use their resources, we will work on the development of the water-origin forest and forest of sea algae and promote the conclusion of the regional environmental agreement in which the residents establish living rules.

By using local resources, the city also has been proposing and disseminating a way of life through building traditional eco-friendly wooden houses (Minamata Eco-House) that are suitable for the local climate and natural features, promoting energy saving and resource saving through efforts such as ISO for environment, etc., and promoting efficient introduction of renewable energy.

<Photovoltaic Generation>

<Development of Water-Origin Forest>

<Development of the Forest of Sea Algae>

<Minamata Eco-House>

<School Version of ISO for Environment>

Development of a City of Environmental Education

In order to make sure the cost of Minamata disease is not wasted and to be sure that disastrous environmental pollution like Minamata disease will not happen again, the city has been making efforts to develop a city of environmental education to spread the lessons learned and development of an Eco-Model City across the globe.

Learning about Minamata disease at the Minamata Disease Municipal Museum, regional waste separation, environmental industry, traditional way of life in villages, the people in Minamata, nature, day-to-day life, efforts, etc., everything will become learning materials as regional resources here. Mura Marugoto Seikatsu Hakubutsukan which likens the life in a village to a museum and Minamata Environmental College in which people stay in Minamata for a short period of time and learn about Minamata's efforts lead to foster the awareness of the people in Minamata and to develop the community through the exchange with visitors. Also, the city is accepting trainees from developing countries.

<A storyteller giving a lecture at Minamata Disease Municipal Museum>

<Mura Marugoto Seikatsu Hakubutsukan> <Minamata Environmental College> <Trainees from overseas>

Miyakojima City, Okinawa Prefecture [Eco-Model City]

Population: 55,000
Area: 204.57 km^2

Miyakojima City is located about 300 km southwest of the main island of Okinawa, surrounded by ocean, and an island city consists of six small and large islands. The entire island is basically flat, and there is no river, so people rely on subsurface water for their daily water supply. Its climate is subtropical with high temperatures and humidity. The annual average precipitation is about 2,000 mm.

Through the use of the subsurface dam utilizing the natural landscape, the city is a leading production area for sugar cane, vegetables, and mangoes in the prefecture. About 400,000 tourists visit the city annually and staying at farmers' houses is particularly increasing .

With the aim of becoming an affluent island where people can indefinitely live, the city made a declaration as Eco-Island Miyakojima in 2008, was designated as an Eco-Model City in 2009, and has been making efforts on building an island version of a low-carbon society.

Self-Sufficient Energy Supply through the Use of Sugar Canes, etc.

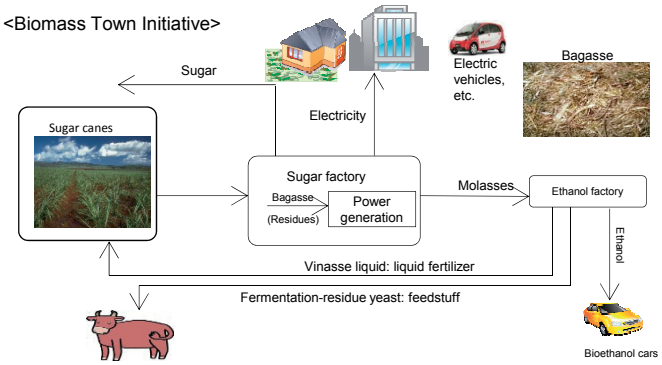
By making effective use of sugar production residues of sugar cane, which is the island's key crop, the city intends to take advantage of low carbonization of energy on the island and tries to reduce the dependency on resources from outside the island.

- Countermeasures on electricity through bagasse power generation

Sugar factories are to reduce the use of fossil fuel by power generation using bagasse that is produced during sugar production process as fuel.

- Use of biomass such as bioethanol, etc.

The city will determine the use of sugar cane-derived bioethanol and cascading of residues produced during the production of bioethanol for livestock food, fertilizer, etc. to aim for the building of a resource circulating society in the island and the revitalization of local industry by making sugar cane highly value added.

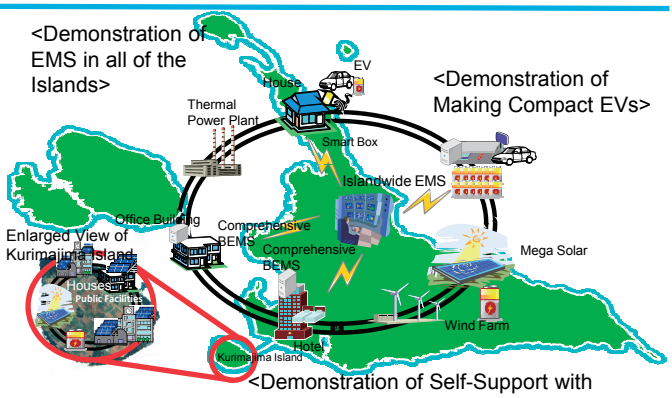


Island-Type Smart Community Demonstration Project

To build a smart community in Miyakojima City, the city will optimize the electric power supply and demand on the island and raise the energy self-sufficiency rate by introducing renewable energy on a large scale and by using IT technology.

Simultaneously, the city will promote the revitalization of the local economy and create jobs by building a business model associated with the building of a new energy supply system.

- Demonstration of EMS in all of the islands
- Demonstration of the self-support with 100% of RE in Kurimajma Island
- Demonstration of making compact EVs

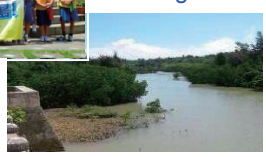


<Demonstration of Self-Support with 100% of RE in Kurimajima Island>

Eco-Action Using Energy of the Sun and Citizens

Eco-Island Miyakojima Tour is a tour in which the learning of the environment and energy and sightseeing are combined and which is based on renewable energy facilities, such as photovoltaic and wind power generation, operated on the island, the bioethanol production facility that uses residues from sugar cane, the island's key crop, the energy circulating facility in the compost production facility, the world's largest subsurface dam facility, Eco-House using solar heat and wind, and Miyakojima's natural environment (planting of mangroves, etc.), which is the foundation of its industrial activities, and culture.

As a sensory tool of the city's Eco-Island Miyakojima declaration, it is used to transmit information outside the island to tourists, companies' training, overseas groups of observers, et al., and within the island to students, citizens, et al.



Promotion Council for "FutureCity" Initiative

List of the Members of the Promotion Council for "FutureCity" Initiative

Municipalities (110 Organizations)

Kushiro City, Hokkaido	Obihiro City, Hokkaido	Shimokawa Town, Hokkaido	Toyako Town, Hokkaido	Aomori City, Aomori Prefecture	Ofunato City, Iwate Prefecture
Rikuzentakata City, Iwate Prefecture	Kamaishi City, Iwate Prefecture	Sumita Town, Iwate Prefecture	Sendai City, Miyagi Prefecture	Iwanuma City, Miyagi Prefecture	Higashimatsushima City, Miyagi Prefecture
Shinchi Town, Fukushima Prefecture	Minamisoma City, Fukushima Prefecture	Tsuchiura City, Ibaraki Prefecture	Tsukuba City, Ibaraki Prefecture	Utsunomiya City, Tochigi Prefecture	Oyama City, Tochigi Prefecture
Tatebayashi City, Gunma Prefecture	Minakami Town, Gunma Prefecture	Saitama City, Saitama Prefecture	Kawagoe City, Saitama Prefecture	Kumagaya City, Saitama Prefecture	Kawaguchi City, Saitama Prefecture
Higashimatsuyama City, Saitama Prefecture	Kasukabe City, Saitama Prefecture	Toda City, Saitama Prefecture	Kashiwa City, Chiba Prefecture	Nagareyama City, Chiba Prefecture	Urayasu City, Chiba Prefecture
Chiyoda Ward, Tokyo	Chuo Ward, Tokyo	Minato Ward, Tokyo	Koto Ward, Tokyo	Toshima Ward, Tokyo	Arakawa Ward, Tokyo
Itabashi Ward, Tokyo	Musashino City, Tokyo	Chofu City, Tokyo	Yokohama City, Kanagawa Prefecture	Niigata City, Niigata Prefecture	Nagaoka City, Niigata Prefecture
Kashiwazaki City, Niigata Prefecture	Mitsuke City, Niigata Prefecture	Joetsu City, Niigata Prefecture	Toyama City, Toyama Prefecture	Kaga City, Ishikawa Prefecture	Hakui City, Ishikawa Prefecture
Yamanashi City, Yamanashi Prefecture	Hokuto City, Yamanashi Prefecture	Nagano City, Nagano Prefecture	Iida City, Nagano Prefecture	Gifu City, Gifu Prefecture	Ogaki City, Gifu Prefecture
Takayama City, Gifu Prefecture	Nakatsugawa City, Gifu Prefecture	Kakamigahara City, Gifu Prefecture	Shirakawa Town, Gifu Prefecture	Mitake Town, Gifu Prefecture	Kakegawa City, Shizuoka Prefecture
Nagoya City, Aichi Prefecture	Toyohashi City, Aichi Prefecture	Kariya City, Aichi Prefecture	Toyota City, Aichi Prefecture	Anjo City, Aichi Prefecture	Shinshiro City, Aichi Prefecture
Hikone City, Shiga Prefecture	Omihachiman City, Shiga Prefecture	Moriyama City, Shiga Prefecture	Higashiomi City, Shiga Prefecture	Aisho Town, Shiga Prefecture	Kyoto City, Kyoto Prefecture
Miyazu City, Kyoto Prefecture	Kyotango City, Kyoto Prefecture	Kizugawa City, Kyoto Prefecture	Osaka City, Osaka Prefecture	Sakai City, Osaka Prefecture	Toyonaka City, Osaka Prefecture
Suita City, Osaka Prefecture	Izumiotsu City, Osaka Prefecture	Hirakata City, Osaka Prefecture	Kadoma City, Osaka Prefecture	Kobe City, Hyogo Prefecture	Amagasaki City, Hyogo Prefecture
Kasai City, Hyogo Prefecture	Minamiawaji City, Hyogo Prefecture	Ikoma City, Nara Prefecture	Izumo City, Shimane Prefecture	Okayama City, Okayama Prefecture	Kurashiki City, Okayama Prefecture
Hiroshima City, Hiroshima Prefecture	Ube City, Yamaguchi Prefecture	Kamikatsu Town, Tokushima Prefecture	Naka Town, Tokushima Prefecture	Takamatsu City, Kagawa Prefecture	Matsuyama City, Ehime Prefecture
Kochi City, Kochi Prefecture	Yusuhara Town, Kochi Prefecture	Kitakyushu City, Fukuoka Prefecture	Fukuoka City, Fukuoka Prefecture	Okagaki Town, Fukuoka Prefecture	Nagasaki City, Nagasaki Prefecture
Goto City, Nagasaki Prefecture	Kumamoto City, Kumamoto Prefecture	Minamata City, Kumamoto Prefecture	Oguni Town, Kumamoto Prefecture	Kagoshima City, Kagoshima Prefecture	Naha City, Okinawa Prefecture
Miyakojima City, Okinawa Prefecture	Nanjo City, Okinawa Prefecture				

Prefectures (46 Organizations)

Hokkaido	Aomori	Iwate	Miyagi	Akita	Yamagata	Fukushima	Ibaraki	Tochigi	Gunma
Saitama	Chiba	Kanagawa	Niigata	Toyama	Ishikawa	Fukui	Yamanashi	Nagano	Gifu
Shizuoka	Aichi	Mie	Shiga	Kyoto	Osaka	Hyogo	Nara	Wakayama	Tottori
Shimane	Okayama	Hiroshima	Yamaguchi	Tokushima	Kagawa	Ehime	Kochi	Fukuoka	Saga
Nagasaki	Kumamoto	Oita	Miyazaki	Kagoshima	Okinawa				

Relevant Ministries and Agencies (12 Ministries and Agencies)

Cabinet Secretariat	Cabinet Office	National Police Agency	Ministry of Internal Affairs and Communications	Ministry of Foreign Affairs	Ministry of Finance	Ministry of Education, Culture, Sports, Science and Technology	Ministry of Health, Labour, and Welfare
Ministry of Agriculture, Forestry and Fisheries	Ministry of Economy, Trade and Industry	Ministry of Land, Infrastructure, Transport and Tourism	Ministry of the Environment				

Relevant Government Agencies (29 Agencies)

Japan Science and Technology Agency	Building Research Institute	National Institute for Environmental Studies	National Institute of Advanced Industrial Science and Technology
New Energy and Industrial Technology Development Organization	Urban Renaissance Agency	Japan Sewage Works Agency	Institution for Transport Policy Studies
Osaka Science & Technology Center	Japan Institute of Wastewater Engineering Technology	Institute for Building Environment and Energy Conservation	Waterfront Vitalization and the environment Research Foundation
Japan Center for Regional Development	Institute for Global Environmental Strategies	The Organization for Urban-Rural Interchange Revitalization	Institute for Future Urban Development
Organization for Landscape and Urban Green Infrastructure	The Institute of Energy Economics, Japan	Japan Environment Association	Heat Pump & Thermal Storage Technology Center of Japan
Organization for Promoting Urban Development	Urban Energy Association	Japan District Heating & Cooling Association	The Japan Gas Association
The Japan Machinery Federation	Parks & Open Space Association of Japan	Japan Transportation Planning Association	Japan Boiler Association
Foundation for Promoting Personal Mobility and Ecological Transportation			

Private Organizations (31 Organizations)

Infomex Inc.	EX Research Institute Ltd.	NTT DATA INSTITUTE OF MANAGEMENT CONSULTING Inc.	Osaka Gas Co., Ltd.
OMRON Corporation	CARBON FREE CONSULTING CORPORATION	JCB Co., Ltd.	JTB Shutoken
JTB Corporate Sales	Sinfonia Technology Co., Ltd.	SuperSoftware Co., Ltd.	Sekisui House Ltd.
TAISEI CORPORATION	Daiwa House Industry Co., Ltd.	TOKYO GAS Co., Ltd.	Nikkei Business Publications, Inc.
NIKKEN SEKKEI Research Institute	NHK SALES CO., LTD.	IBM Japan	Nihon Unisys, Ltd.
Biomass Industry Organization	Pacific Consultants Co., Ltd.	Fuji Taxi Corporation	Fujitsu Limited
Fulltime System Co., Ltd.	myclimate Japan	Sumitomo Mitsui Banking Corporation	Mitsui Global Strategic Studies Institute
Mitsubishi Motors Corporation	Mitsubishi Research Institute, Inc	Forum for East Japan Smart City Project	

Efforts by the members and working groups are described from the next page.

Municipalities

The Foggy City　The City of Sunlight

(Kushiro City)

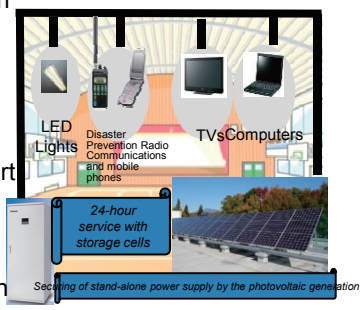
Our city is known as Foggy City but is a city suitable for photovoltaic generation as it has less snowfall in Hokkaido and fine weather, and the climate in the city is microthermal. In order to take advantage of this local resource, the city has been promoting the housing subsidy system (286 cases and 1,083 kW by fiscal 2012) and the installation of solar panels in elementary schools, a child's hall, an arena, etc.

<Solar panels installed at Kohan Elementary School: 10 kW>

Development of a Low-Carbon and Disaster-Resistant City

(Sendai City)

Based on the Great East Japan Earthquake that caused unprecedented damage, the city has been making efforts to develop a low-carbon and disaster-resistant city by building an Eco-Model Town using a smart grid in the urban area, which is under development, installing disaster-response photovoltaic generation systems at evacuation centers, in which renewable energy and storage cells are combined, etc.

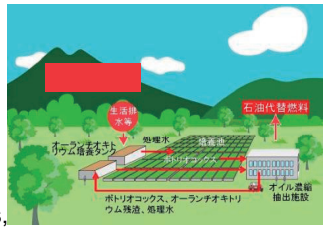


< An image of a disaster-response photovoltaic generation system>

Practical Realization of Algae Biomass Energy

(Tsukuba City)

The city has been upholding the Tsukuba Environment Style and promoting the development of a low-carbon society. As the Tsukuba Comprehensive Special Zone for International Competitiveness Development Project, the city will establish a large-scale outdoor culture technique using farmland toward the practical use of algae biomass, which is expected as an alternative fuel to oil, contribute to the resolution of a world-wide energy problem, and create an algae industry.



<An image of the outdoor demonstration field>

Development of an Environmental City Using Bicycles

(Utsunomiya City)

To develop a city using bicycles, Utsunomiya City has been promoting the upgrading of bicycle stations, bicycle-running areas, and rest areas.

Since the consumption of gasoline and light oil is high, the city has been actively promoting such efforts that lead to the reduction in the environmental burden.

<Upgrading of bicycle running areas>

Promotion of Oyama Nanohana: Bio-Project

(Oyama City)

Oyama City, the second largest city in Tochigi Prefecture, has been promoting local resource circulation by cultivating rapeseeds in the unused farmland, squeezing from the rapeseeds, selling the oil to schools to be used for school lunches, and for general households, producing biodiesel fuel from the waste oil collected from kitchens and collection points to be used for cars and agricultural machines, etc.　So far, the city has contributed to a reduction of about 100 tons of CO_2.

<Oyama-made canola oil>

Special Zone for the Next-Generation Cars and Smart Energy

(Saitama City)

With the aim of realizing the "FutureCity", the city has been designated as the Local Revitalization Comprehensive Special Zone by the national government and has made efforts on disseminating Hyper Energy Station, Smart Home Community, and Low-Carbon Personal Mobility to develop a low-carbon city, secure energy, and secure diversified means of transportation.

Use of Solar Energy

(Kawagoe City)

The city's daylight hours are longer than the national average, so it is suitable for solar energy.

The city has been giving grants when installing photovoltaic power systems (since fiscal 1997) and/or solar heating devices (since fiscal 2009). About 9989 kW of the photovoltaic power systems and 77 solar heating devices were installed by fiscal 2011.

<Recycle Center: 166.9 kW>

A total of 886.3 kW of the photovoltaic generation systems installed at 80 public buildings in the city

Atsusa Harebare Kumagaya-Ryu! Project

(Kumagaya City)

With the temperature in the city reached 40.9 degrees Celsius in 2007, the highest temperature in Japan, the city launched Atsusa Harebare Kumagaya-Ryu! (Refreshing Hotness, Kumagaya Style) and has been making efforts for grants for green curtains in elementary and junior high schools, installation of new-energy and energy-saving devices, repurchasing fuel-economy/low-emission cars, etc. as the global warming mitigation measures, health measures, and local revitalization measures.

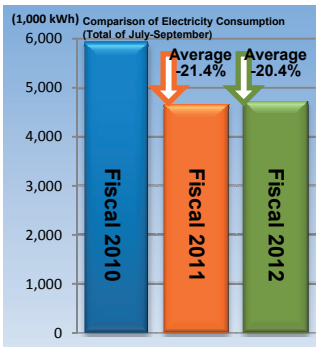
<Mist spray at South Exit of Kugagaya Station>

Low-Carbon Government with the Summer-Time Electricity Saving Measures

(Kasukabe City)

Kasukabe City implemented electricity saving measures in public buildings, such as the city hall's main building, from July to September and achieved a reduction in the average of 20.4% as compared to fiscal 2010.

Toward the realization of a low-carbon city, the city hall will keep taking the initiative and work on electricity saving to further promote a Low-Carbon Government.



Development of a Low-Carbon City through Partnership

(Toda City)

The city has been cooperating with citizens and businesses to develop a low-carbon city through the implementation of domestic food waste composting (a project to exchange with flower seedlings), cooperation for the Eco-Life Day (a Eco-Life awareness campaign), etc. The city developed the Global Warming Countermeasure Action Plan (a district policy version) in March 2011 and intends to reduce 25% of greenhouse gas emission per citizen.

<Recycle Flower Center>

Popularization of Green Curtains in the Entire City

(Nagareyama City)

To promote the development of a low-carbon city, Nagareyama City has been making efforts to popularize green curtains in collaboration with Nagareyama Goya (bitter gourd) Club. In fiscal 2012, the city distributed 10,614 bitter gourd seedlings to about 2,000 households and public facilities. The city also holds lecture classes about how to grow bitter gourds, as well as the bitter gourd photo and recipe contests.

<The lecture class on how to grow bitter gourds>

Reduce CO_2 Emissions from the Civilian Sector! Chuo Ward Eco-Act

(Chuo Ward)

CO_2 emissions from the civilian sector in Chuo Ward account for about 80% of total emissions. Therefore, Chuo Ward has been putting most of its efforts into the popularization of Chuo Eco-Act, a certification system to promote the reduction of CO_2 emissions from households and business establishments, since 2009. The increase in the energy-saving subsidy is one of the awards of the certification system. An average of about 11% reduction in the CO_2 emissions was achieved among the participating business establishments.

<The brochures for households and business establishments were distributed>

Eco-Town Development through Community Cycle

(Koto Ward)

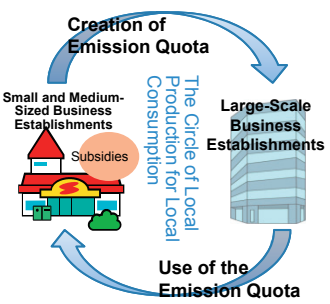
Koto Ward established Toyosu Green Eco-Island Initiative in June 2011. The ward intends to develop the most environmentally conscious eco-town, which covers the entire areas of 5 and 6 Chome, Toyosu. As its specific measures and policies, the ward has started the Community Cycle in the waterfront area since November 2012.

(An image of the station)

Local Production of the CO_2 Emission Quota for Local Consumption

(Toshima Ward)

Toshima Ward is the nation's leading highly populated city as it has the Ikebukuro sub-center and nearly 270,000 people living in about 13 km^2 of its area. The ward has been conducting a ward-subsidized project for the introduction of energy-saving equipment at small and medium-sized business establishments, subject to participate in Tokyo's emissions trading system. Additionally, the ward aims at local production for local consumption where the CO_2 emission decreases achieved in the project are used for the large-scale business establishments in the area.



The Efforts of Green Curtains

(Itabashi Ward)

The ward has started efforts in 2006 and has promoted the popularization of green curtains for the public facilities, ward residents, and business establishments. Through their cooperation, the ward has planned and implemented a registration system (327 registrations), lectures (12 times), inspection tour (once), and contest (89 applications).

The ward also made a presentation overseas, held a national forum in collaboration with NPOs, and recruited the members of the Green Curtain Support Club.

<Installation of green curtains in the public facility>

Aim to become Eco-City Musashino!

(Musashino City)

Musashino City is a city that is harmonized with nature. The city has the waterfront, such as Tamagawa Water Supply System, and many parks where various kinds of plants and animals inhabit. Each citizen's awareness of the environment is high, and the citizens and the government work together to develop a sustainable city.

◆ The city's key measures and policies on the reduction of greenhouse gas emissions: subsidies for the installation costs of the residential photovoltaic power systems, etc., scheduled installation of photovoltaic power system at public facilities such as municipal schools, etc.

<The photovoltaic power system at a municipal school>

Building of a Smart Energy City

(Niigata City)

In order to promote the development of a sustainable low-carbon city and the development of a secured and safe city with a self-sufficient and decentralized energy system, the city intends to build a Smart Energy City that realizes the efficient use of energy in the entire city.

The city will expand the use of renewable energy and energy savings and particularly promote the effective use of biomass resources.

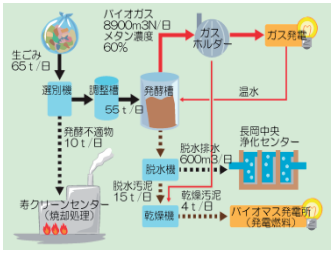
<An image of a Smart Energy City>

Nagaoka City' Project to Produce Biogas from Garbage

(Nagaoka City)

The city will shift garbage disposal from the conventional thermal disposal to biogas-producing disposal and effectively use the biogas produced in large amounts during the disposal process (methane gas).

As a model project of the low-carbon society development, the city has been constructing the facility aimed at operating the facility from July 2013. New energy will be produced from the garbage.



〈Flow of the processing at biogas production facilities>

Kashiwazaki City ECO2 Project

(Kashiwazaki City)

With the aim of developing a city in which the environment and the economy are harmonized, Kashiwazaki City started the Kashiwazaki ECO2 Project in fiscal 2011. Currently, the city has obtained support from 210 business establishments, and the circle of global warming mitigation measures with the cooperation of the entire community is expanding. The city will support the business establishments' environmental activities and the introduction of the new energy/energy-saving equipment.

<ECO2 Project Sticker>

Low Carbonization with All Citizens

(Mitsuke City)

Toward the realization of low carbonization with all citizens, the city has been promoting the collection of used tempura oil and the use of BDF for public vehicles. Also, to popularize photovoltaic power generation, the city has installed solar panels at all of the 12 elementary and junior high schools in the city and the schools have been using them as the teaching material for environmental education.

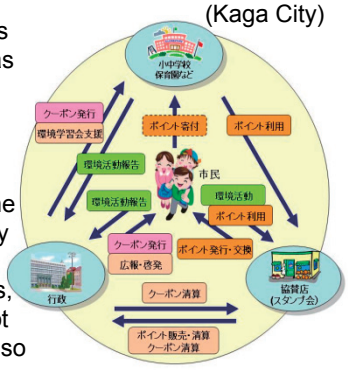
Currently, 8,249 people have been verifying garbage disposal in which garbage disappears that does not rely on the fossil fuel.

<Educational activity and Garbage Disposal Tour>

Eco-Point Project in Solidarity with the Local Shopping Areas

(Kaga City)

To reduce the greenhouse gas emissions by 50%, Kaga City has been promoting the Eco-Point Project. The Eco-Points are issued for the citizens' environmental activities and can be used as shopping points in the shopping areas in the city and by issuing points to customers who brought their own shopping bags, the shopping areas are trying not only to popularize ecology but also to revitalize the areas.



<An image of the Eco-Point Project>

Promotion to Introduce Small Hydro Energy

(Hokuto City)

While seeking a new way in what Japan should be like, Hokuto City and Mibugawa Electric Power Co., Ltd. built three small hydro power plants (total output: 650 kW) in the same water channel through public-private partnership as an eco-friendly and value-added small hydro power plant project. They are expecting an annual output of about 4,600 MWh, and the CO_2 reduction effect through this is expected to be 1,932 tons annually.

<PR brochure>

Woody Biomass Energy Utilization Promoting Project

(Yamanashi City)

Yamanashi City has made the entire city area as the Next-Generation Energy Park and has been working on it. Among its efforts, the city has been promoting the use of woody biomass, which is abundant in the city. So far, the city has upgraded the pellet production facility, pellet refrigeration and heating equipment, pellet stoves to elementary and junior highschools , and wood-fired boiler at Manrikibayashi Capybara No Yu (capybara's bath), etc.

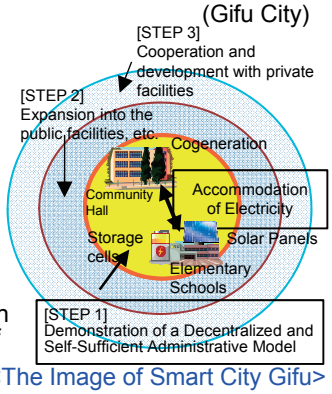
<The wood-fired boiler at Manrikibayashi Capybara No Yu>

Building of a Smart City Gifu

(Gifu City)

In order to cleverly and laconically produce renewable energy, such as the blessed sunlight and rich, high-quality groundwater in the community to be consumed in the community, Gifu City has been promoting decentralization and self-reliance of energy and intends to realize a sustainable and disaster-resistant Smart City Gifu.

In fiscal 2012, the city made efforts on Jo-Ene (accommodation of energy), the accommodation of energy among public facilities.



<The Image of Smart City Gifu>

Implementation of Visiting Consultation on the Energy Efficiency

(Nagoya City)

In order to promote energy efficiency measures among small and medium-sized companies, the city has created Answer Books for the Energy Efficiency Measures according to business categories such as shops, offices, etc.

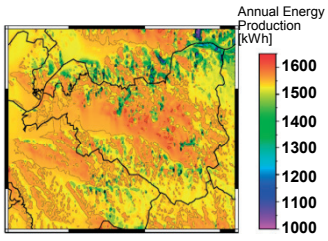
By using the created Answer Books, the city has conducted about 1,800 visiting consultations on the energy efficiency in four years from fiscal 2008 to 2011.

<Answer Books for the Energy Efficiency Measures>

Mitake Town's Photovoltaic Power Generation Map

(Mitake Town)

Mitake Town is a town in Satoyama (village forest) where the history and culture of Nakasendo remain. Even though it is a hilly and mountainous area, it has many sunny days, so it is expected to have photovoltaic power generating capacity that is 10% more than the national average. In order to support households considering the introduction of photovoltaic power systems, the city has opened its website to show the photovoltaic generating capacities and capacity predictions and intends to popularize the use of solar energy.



<Photovoltaic Generating Capacity Map>

Becoming an Eco-Cycle City!

(Anjo City)

Anjo City has positioned eco-friendly bicycles as one of the urban transportation and has been promoting them. As part of its efforts, the city held Tour de Jandararin, a bicycle riding event, on the courses from 125 km (longest) to 22 km (shortest). On the day of the event, 1,000 people participated and experienced the convenience and mobility of bicycles.

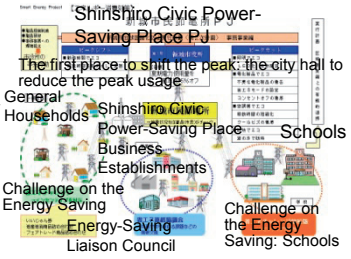
<Tour de Jandararin>

Shinshiro Civic Power-Saving Place

(Shinshiro City, Aichi Prefecture)

In order to promote a comprehensive energy policy to prevent global warming, the city established the Sinshiro City Energy Task Force. As the first civic power-saving place, the city hall could reduce electric energy in the period between June and August by 24% (as compared to fiscal 2010).

The city also held an energy-saving contest for citizens.



<Figure of the Civic Power-Saving Place>

Development of a City Aimed to Become a Self-Sufficient and Circulating Society

(Miyazu City)

The city intends to develop a resource-circulating and low-carbon city by effectively utilizing the biomass available in the city as the local resource for the energy and materials.

Currently, the city has been working on projects, such as the considerations of a biogas generating system using the methane fermentation from waste and the use of methane fermentation digestive fluid, as well as the technical demonstrations of the bamboo gasification/power generation and the production of bio-methanol.

<Bio-methanol production and power generation facility>

Realization of an Environmental Cycling City

(Kyotango City)

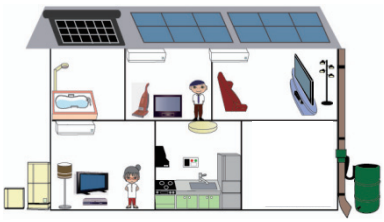
As the global warming mitigation measures by reducing CO_2 emissions, the city has been providing support for the introduction and popularization of wood stoves and pellet stoves. The number of subsidized cases so far is 25 and the CO_2 reduction effect is about 46.4 tons as the CO_2 equivalent or about 17.7 kiloliters annually as the crude oil equivalent. Also, the use of wood stoves leads to the revitalization of the village forest as local trees are used.

<Wood stove>

A Challenge to Develop a Sustainable City

(Toyonaka City)

Toyonaka City is a residential city located in the northern part of Osaka Prefecture. The city has developed the Toyonaka City Global Warming Preventing Regional Plan: Challenge Minus 70 Plan in fiscal 2007 and set a ultra-long-term goal of reducing the CO_2 emissions per citizen by 70% (as compared to fiscal 1990) by fiscal 2050.



<The image of the life style in 2050>

- Popularization of highly energy efficient home appliances
- Increase of the eco-friendly houses
- Air-conditioner to be installed only in the main rooms
- Travel by the public transportation or bicycles

A City where People are Connected, Grow Up, and Live

(Suita City)

Suita City has the best access to transportation and a residential environment with rich green areas, and is a city filled with attractive environment.

The city will realize the Environmentally Innovative City through the efforts for development of an environmental city, the countermeasures for the heat island phenomenon, the Smart Mobility Management, and the partnership-based shifting of the life style.

<Environmentally Innovative City>

Develop a Collabo Mega Solar Power Plant City with Citizens

(Hirakata City)

Hirakata City has been subsidizing part of the installation costs of 1,600 residential photovoltaic power systems from November 2011 to the end of fiscal 2014. With this, the city intends to realize the Collabo Mega Solar Power Plant with its output equivalent to ten 1,000 kW-capacity mega solar power plants.

Also, the city has been promoting the preparation of the introduction of the large photovoltaic power systems to the public buildings.

<Collabo Mega Solar Power Plant (Conceptual Image)>

Supply Base of the Renewal Energy Based on the Local Production for Local Consumption

(Kobe City)

Kobe Municipal Higashinada Sewage Plant highly refines digestive gas and produces Kobe Biogas, and this biogas is used as automobile fuel and utility gas. Currently, the plant is trying to increase biogas by combining woody biomass and food-waste biomass which are suitable for sewage. Look forward to a new energy produced by KOBE, a town of nature and gourmet cooking.

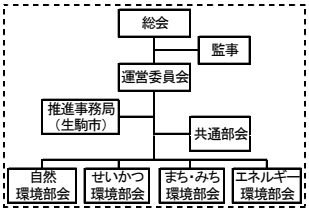
<Kobe Biogas Station>

Promotion of Ikoma City Environmental Master Plan through ECO-net Ikoma

(Ikoma City)

Ikoma City has developed as a residential city with good access to suburban areas.

ECO-net Ikoma, the Promotion Council for Ikoma City Environmental Master Plan, consists of citizens, business operators, and the government and the number of its members exceeds 100. The members have been working in subcommittees such as Nature, Life, City and Roads, and Energy and working on the efforts with supermarkets in the city and popularizing green curtains, eco-cooking, etc.



<ECO-net Ikoma's organizational structure>

The Steering Committee coordinates the cooperation among subcommittees and promotes activities. Ikoma City works as a secretariat and the office space is secured in the city hall's main building.

Introduction and Promotion of New Energy

(Izumo City)

Izumo City intends to realize a sustainable low-carbon society by introducing a new energy using eco-friendly local resources.

As its efforts, the city has been considering the introduction of a large-scale wind-power plant, chip boilers using woody biomass resource, a large-scale photovoltaic power plant (mega solar power plant), and a small-scale hydroelectric system.

<New Izumo Wind-Power Plant>

Encouragement for the Civic Joint Power Generation

(Okayama City)

By utilizing the area characteristics that is blessed with sunlight and cooperating with citizens, business operators, etc., Okayama City positioned the entire city as the Photovoltaic Power Plant and has been promoting the introduction of photovoltaic power systems.

The Civic Joint Power Generation Project is that the NPO installs solar panels at the city-owned facilities based on the donations by the citizens, popularizes the panels using the achievements, and conducts environmental education.

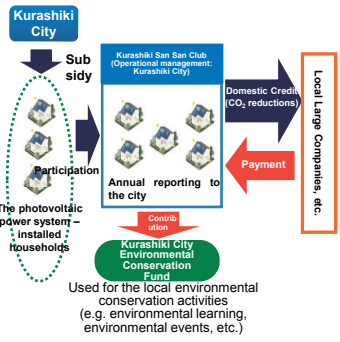
▲The 4th Civic Joint Power Plant

▲<Okayama Municipal Seto Town Library>

Urban Development Using Solar Energy

(Kurashiki City)

By utilizing the blessed sunshine conditions of the area, Kurashiki City has been promoting the subsidization of the introduction of the photovoltaic power systems and is taking the initiative for the introduction of the systems to the city-owned facilities. Also, the city has been making efforts to develop a low-carbon city by using the Domestic Credit System, gathering the CO_2 reductions achieved by the citizens using the photovoltaic power generation, trading with the business operators in the city, and using the earnings for the environmental conservation activities in the city.



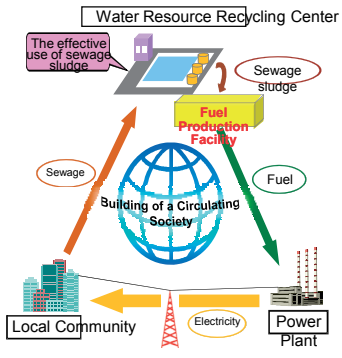
<Efforts of the Domestic Credit System>

Promotion of the Conversion of Sewage Sludge to Fuel

(Hiroshima City)

In order to reduce greenhouse gas emissions, Hiroshima City has been making efforts for project to convert sewage sludge to fuel as a new measure relating to the sewage sludge incineration.

This will enable the 100% effective use of the sewage sludge and the greenhouse gas emissions will be reduced.

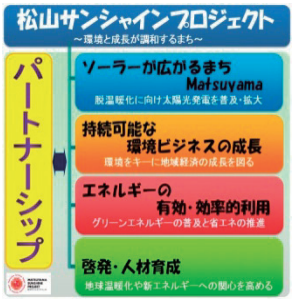


<Project to convert sewage sludge to fuel>

Promotion of Matsuyama Sunshine Project

(Matsuyama City)

The city has been deploying the Matsuyama Sunshine Project to popularize and expand photovoltaic generation that effectively utilizes the area characteristics and to promote the development of companies related to power generation. In order to effectively promote the project, companies, universities, NPOs, the government, etc., are cooperating as partners with the intention of developing a city in which the environment and economy are harmonized.



<The promotion scheme of the Matsuyama Sunshine Project>

Building of Island City and Zero-CO_2 Urban Area

(Fukuoka City)

The city will build Zero-CO_2 Urban Area (178 detached houses), a model zone, in the Island City in Fukuoka City and intensively introduce advanced energy-creation (photovoltaic power generation and residential storage cells) and energy-saving technologies. The city is to achieve zero CO_2 emissions in the entire urban area. With the introduction of HEMS, the city is also intending to realize the visualization of the energy consumption and CO_2 emissions in not only each household but the entire urban area.

<Image of the completed Zero-CO_2 Urban Area>

Nagasaki EV & ITS (EVITS) Project

(Goto City)

Goto City is a marine city in the sea west of Nagasaki, blessed with a beautiful ocean and rich natural environment. The city has been using the Goto region, which is a Christian-related World Heritage candidate, as a demonstrating area and making efforts for the realization of a future-oriented driving and sightseeing system in which EVs (electric vehicles) and ITS (Intelligent Transportation System) are interlocked to address environmental problems and the building of an energy system.

<An event to introduce 100 Evs>

Development of a Low-Carbon City Using Water, Greens, and Sunlight

(Kumamoto City)

By using its rich water and greens called the city with the *most abundant subsurface water in Japan and the forest city*, the city is promoting the mitigation of the urban climate by conserving subsurface water and greening the street car track fields under the wide-range cooperation in order to realize a low-carbon Kumamoto City by popularizing and promoting renewable energy such as the use of solar energy, its area characteristics, sewage sludge biomass, and small-scale hydropower generation.

<▲Green carpet for street cars
Greening of the street car track fields was implemented>

Carbon Offset through Maintaining Forest

(Oguni Town, Kumamoto Prefecture)

The total area of Oguni Town is 13,700 ha and 78% of its area is covered by forest, and the city has rich greens and pure water and is surrounded by the grand mountains. The average temperature is 13 degrees Celsius and it is an area with much rain as annual precipitation is 2,500 mm, which makes the area suitable for cultivating Oguni Sugi (cedar). The city has been conducting environmental activities that maintain and strengthen the sustainability of forestry by promoting the appropriate forest thinning at an appropriate timing.

<The panoramic view of Oguni Town>

Promotion of Urban Area Greening

(Kagoshima City)

Kagoshima City has been promoting conservation of the environment to develop a city decorated with flowers and greenery. In particular, in the nation's first full-fledged greening of street car track fields (planting lawns) that the city has been working on since 2006, the total extension of the green carpet by this fiscal year is about 9 km or 3 ha, which became a symbol of urban area greening and has been one of the urban scenes representing the city.

<Greening of the street car track fields>

Prefectures

Aomori Eco No Wa (Circle) Smile Project

(Aomori Prefecture)

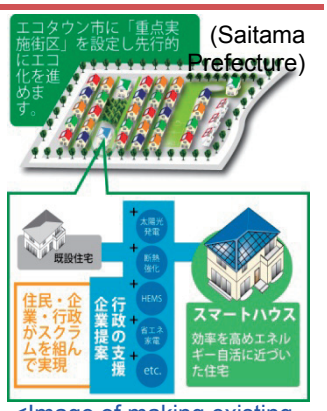
With economic incentives using the market mechanism and the conscious incentive of local contributions, Aomori Prefecture has been working on a project in which residents of the prefecture participate to promote pro-environmental behaviors by the residents of the prefecture and business operators and expand regional environmental practices under the cooperation of the concerned bodies since fiscal 2012.

<The mechanism of the project>

Promotion of Saitama Eco-Town Project

Saitama Eco-Town Project intends to work on the energy creation for renewable energy and thoroughgoing energy saving and create a vibrant and comfortable local community through the standpoint of environment. As the project implementation cities, Honjo City and Higashimatsuyama City were selected. The prefecture will start working on making existing homes eco-friendly using various proposals from private business operators.

(Saitama Prefecture)

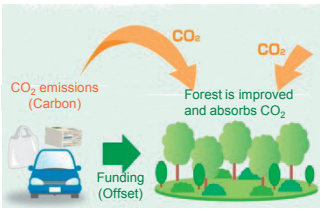


<Image of making existing homes to be eco-friendly>

Popularization of Niigata Prefecture Carbon Offset System

(Niigata Prefecture)

As global warming mitigating measures, Niigata Prefecture has been promoting Niigata Prefecture Carbon Offset System using an economic mechanism. The prefecture certifies the amount of CO_2 absorption through the forest improvement and issue the offset credit. This credit is used for various carbon offsetting efforts by companies nationwide, and the fund is used for forest improvement.



<Symbol>

Implementation of Energy-Saving and Power-Saving Action Plan

Ishikawa Prefecture has been implementing the Energy-Saving and Power-Saving Action Plan in the entire prefecture, which is the enhanced Ishikawa Version of ISO for Environment, Ishikawa Prefecture's own environmental management system, to improve the energy-saving and power-saving effects.

Ishikawa Eco-Ticket is presented according to the efforts and the prefecture intends to increase eco-families who work on the plan.

(Ishikawa Prefecture)

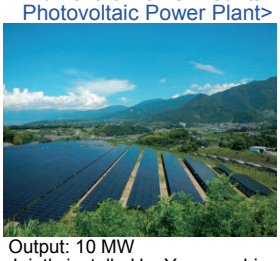
<Efforts Sheet>

Toward the Realization of Yamanashi, a Solar Kingdom

By using the leading rich sunshine conditions in the nation, Yamanashi Prefecture has upgraded the nation's largest photovoltaic power plant in the inland area and is working on the development of the electricity storing technology utilizing superconductivity. Also, the prefecture intends to realize Yamanashi, a Solar Kingdom as the prefecture and the first municipality in Japan that attracted the mega solar power plant after the Act on Special Measures Concerning Procurement of Renewable Electric Energy by Operators of Electric Utilities was enacted.

(Yamanashi Prefecture)

<Komekura-Yama Mountain Photovoltaic Power Plant>



- Output: 10 MW
- Jointly installed by Yamanashi Prefecture and Tokyo Electric Power Company

Introduction of Seiryu No Kuni Gifu Shinrin Kankyozei

With a goal of maintaining and improving the public functions of the forests and rivers for the conservation of water resources and prefectural lands, prevention of global warming, securing of biodiversity, etc., Gifu Prefecture has newly introduced Seiryu No Kuni Gifu Shinrin Kankyozei (Gifu the Land of Limpid Stream Forest and Environmental Taxation) since fiscal 2012.

By using this financial resource, the prefecture will promote the Development of Gifu, the Land of Limpid Stream, which is a rich natural green area, such as improving the rich forests and clean rivers, etc.

(Gifu Prefecture)

<The image of specific measures and policies>

Development of a Low-Carbon Cities that Use EVs, Etc.

Mie Prefecture designated Ise City, where many people visit, as a model area, established the Council for Ise City's Creation of a Low-Carbon City Utilizing Electric Vehicles, Etc., in order to promote the Creation of an Environment to Use EVs, Etc., in the Community and the Creation of an Environment for Tourist to Do Sightseeing with EVs, and has been supporting the development of action plans in which various people take the initiative.

(Mie Prefecture)

Creation of a Road Map to Realize a Low-Carbon Society

(Shiga Prefecture)

In order to realize a low-carbon society, various efforts need to be implemented in the medium and long terms. In order to efficiently and effectively implement the efforts, it is effective to share the road map among relevant bodies such as what kind of efforts are to be implemented, when to be implemented, in what scale, etc.; therefore, the prefecture has created the Road Map to Realize a Low-Carbon Society.

Support for the Efforts on Energy Saving and CO_2 Saving by Small and Medium-Sized Companies

(Osaka Prefecture)

Osaka Prefecture established Consultation Service for the Energy Saving and CO_2 Saving in fiscal 2011 and has been introducing how to improve operations, its subsidy system, etc., to small and medium-sized companies and providing the professionals' advice when needed. The prefecture also widely transmits the information through its website and popularizes and enlightens such efforts in collaboration with relevant industry organizations.

<Website for the consultation service>

Introduction and Promotion of the Renewable Energy

(Tottori Prefecture)

Tottori Prefecture developed Tottori Environmental Initiative Plan in March, 2012 and has been making efforts on introducing and promoting renewable energy.

A large-scale photovoltaic power plant (output: 42.9 MW) is planned to be constructed in Sakitsu District in Yonago City located in the western part of Tottori Prefecture by a private company and it is expected to run in fiscal 2013.

: Planned areas

<Sakitsu District in Yonago City>

Upgrading of Charging Infrastructure to Popularize EVs

(Okayama Prefecture)

In order to popularize EVs and install rapid chargers in the entire regions of the prefecture in a balanced manner as a safety net when out of batteries, the prefecture has been considering the arterial road network and the cooperation with Tottori Prefecture, setting the candidate sites (20 sites) to be able to cover the prefecture in 30 km radius, and accelerating the installations. Currently, the installations at the 16 sites have completed.

<The installation of rapid chargers>

Introduction and Promotion of the Photovoltaic Generation

(Kagawa Prefecture)

Based on its many hours of sunshine, Kagawa Prefecture has been actively putting its efforts into the introduction and promotion of photovoltaic generation with subsidies for the installation of residential photovoltaic generation and support for the establishment of the mega solar power plant.

In fiscal 2012, the prefecture subsidized about 2,300 houses by the end of October and 11 mega solar power plants with an output of 1 MW or more have been decided to be established.

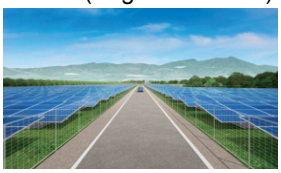
<Mega solar power plant>
(Sakaide Solar Way>
<Photo by Japan Asia Group Limited):

To Aim for Saga, Sunlight Kingdom

(Saga Prefecture)

Saga Prefecture has been the leading prefecture in Japan in the proliferation of residential photovoltaic generation for 10 consecutive years until fiscal 2011.

As we are in the turning point of a new era, the prefecture will promote the popularization of mega solar power plants and the photovoltaic power generation for companies, in addition to the residential ones, at an accelerated pace to become Saga, a Sunlight Kingdom, together with the residents of the prefecture who have supported the prefecture as Japan's No. 1 prefecture.



<Saga Prefecture, No. 1 for 10 consecutive years.
(The proliferation rate of the residential photovoltaic generation)

Promotion of Forest Improvement Using Forest-Absorbing Credit

(Kochi Prefecture>

Kochi Prefecture established the Kochi Offset Credit (Kochi Prefecture J-VER) System for the forest management activities conducted in the citizen-owned forest in the prefecture in February, 2010.

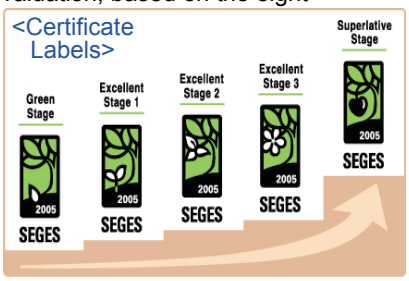
So far, 11 projects to enhance CO_2 absorption through forest improvement (forest thinning) have been registered.

Relevant Government Agencies, Etc.

Social and Environmental Green Evaluation System

(Organization for Landscape Urban Green Infrastructure

SEGES is a system to evaluate and promote greening activities by the private companies who have heightened awareness of society and the environment from an independent standpoint. By evaluating the green spaces, which are the targets for evaluation, based on the eight fundamental rules and the three principles of the evaluation items, the green spaces' degree of contribution and the Images of the future goals can be specifically understood.



Development of CASBEE City

(Institute for Building Environment and Energy Conservation)

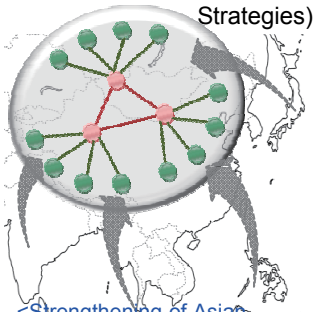
CASBEE (Comprehensive Assessment for Built Environmental Efficiency) City is a system that comprehensively evaluates the cities' environmental performance from the viewpoints of environment, society, and economy. The aspect of the quality of the environment of the whole city and the richness of the urban activities as well as the aspect of the greenhouse gas emissions associated with the urban activities are the targets for evaluation and by adding the municipality's efforts for environmental measures and policies the span the present to the future, the effect of their environmental measures and policies can be specifically understood.

Strategic Study on Sustainable Cities

(Kitakyushu Urban Center, Institute for Global Environmental Strategies)

The Center conducts cross-sectional studies on the development of sustainable cities with respect to the important issues in cities, such as the waste management, pollution control, traffic, etc.

Through close cooperation with municipalities, the national government, ASEAN, etc., it also makes efforts for management of the network that facilitates intercity cooperation and the improvement of its function.



<Strengthening of Asian intercity cooperation and promotion of the low-carbon measures and policies through the network>

Realization of Low-Carbon and Energy-Saving Cities

(Japan District Heating & Cooling Association)

With an eye toward urban improvement that incorporates the advanced technologies of the energy and the promotion of the extended use of energy, the association has been actively making efforts for the realization of low-carbon and energy-saving cities through various investigative research and the reporting of their results by holding of symposiums, technical training workshops, opportunities to exchange information on urban developments as its support activities for municipalities, etc.

<The Urban Environment and Energy Symposium 2012>

Development of Low-Carbon Cities

(Institute for Future Urban Development)

Through the UIT Promotion Council in which companies, municipalities, etc., who conduct urban infrastructure and technology developments participate, the institute conducts business activities of the urban developments utilizing the Guideline for the Low-Carbon Urban Development. In its independent study, the institute has also been working on the low-carbon urban development utilizing the earth thermal heat pump system.

<Dissemination brochure>

Private Organizations

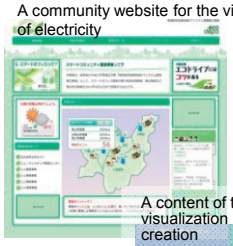
A Support System for Energy Saving in Local Communities

(Infomex Inc.)

Our company promotes the energy management projects for the visualization of energy.

Changes in the energy consumption, supply and demand, etc., are posted in the communication website for the local community. We support the residents' energy consumption forecasts and make efforts for dissemination and enlightenment activities for energy saving.

A community website for the visualization of electricity



A content of the visualization of energy creation

The energy-visualized chart

NEXT21, an Experimental Housing Complex

(Osaka Gas Co., Ltd.

In NEXT21, Osaka Gas's residential experimental housing complex, the company has been conducting experiments and verifications of the advanced system of next-generation fuel cells, etc., as well as the highly efficient system using the characteristics of the housing complex, such as the accommodation of electricity and heat within the residential building, and the near-future life style while actually living in the complex and pursuing the sustainable housing and energy that can be passed on to the next generation.

(NEXT21)

Low-Carbon Urban Development that Leads to the Revitalization of the Local Economy

(Carbon Free Consulting Corporation)

We will provide consultations to create environmental values in the local revitalization, urban development, and urban planning and achieve a good balance between local revitalization and environmental friendliness. For example, we can create a mechanism in which the CO_2 reduction is used as the environmental value and the CO_2 reduction effect is visualized and quantified to lead to the local revitalization. We also plan and organize pilot programs and demonstration experiments.

http://carbonfree.co.jp/

<Other Menus>
Survey measurement, carbon offset, energy saving, BEMS, waste management, biodiversity, community's original emission credits, support for developing energy business companies (managerial support), revitalization of environmental NGOs and NPOs, support for the environmental human resource development, use of domestic credits and J-VER system, and use of bilateral offset credit system (tentative)

Environmental Policy that Utilizes Points

(JCB Co., Ltd.)

Eco-Action Point has been promoted by the Ministry of the Environment since fiscal 2008 in which points are provided for the purchase or use of a wide variety of products and services and the activities that lead to the contribution to the environment, and CO_2 reduction is visualized.

Through the management of the point program, JCB supports the environmental contribution activities by companies and municipalities.
Eco-Action Pont Official Website:
http://eco-ap.jp/

JCB

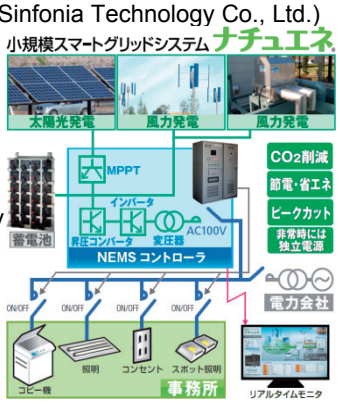
Building of Small-Scale Smart Grids

(Sinfonia Technology Co., Ltd.)

We have started delivering Natu-Ene,a small-scale smart grid system to power facilities such as small business establishments by renewable energy, such as wind, hydro, and photovoltaic generation.

This is a system that creates energy and contributes to energy saving through its load control system and storage cells.

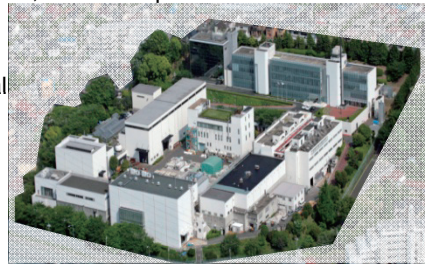
You can come and see the situation of the demonstration experiments at our Toyohashi Factory.



Establishment of the Technology Corresponding to Smart Community

(Taisei Corporation)

Through participation in the Yokohama Smart City Project (YSCP) at Technology Center in Yokohama City which is promoted by Yokohama City as the Ministry of Economy, Trade and Industry's Demonstration of the Next-Generation Energy and Social System, Taisei Corporation will contribute to achieving a good balance of comfort in the building and optimal use of energy and optimization of the use of regional energy by the demand response.

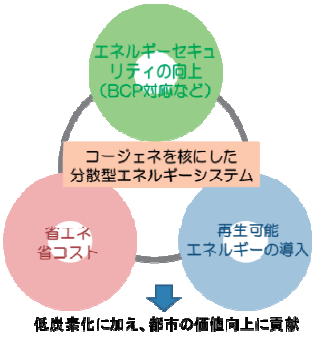


Building of a Smart Energy Network

(Tokyo Gas Co., Ltd.)

By utilizing information and telecommunications technology, Tokyo Gas has been working on the building, popularization, and promotion of Smart Energy Network (SMAENE), which optimally and extensively uses heat and electricity between buildings and between communities.

The company has been conducting a SMAENE demonstration project in Senju, Arakawa Ward and has achieved the reduction of CO_2 by 35% which was more than its original target.

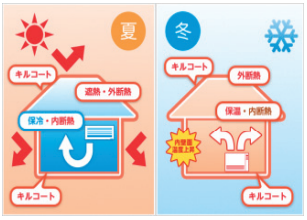


Kirucoart, a Multifunctional Coating Material: Cool in Summer and Warm in Winter with the Power of the Coating Material

(NHK Sales Co., Ltd.)

By popularizing Kirucoat, an earth-friendly water-based coating material, our company will contribute to the realization of a low-carbon society. Kirucoart is an acrylic water-based coating material in which fine hollow beads are blended and because of the hollow beads' heat keeping effect, the temperature rises inside and outside the house are controlled during summer, which significantly reduces the power consumption of air conditioners.

The coating material keeps the rooms inside warm and keeps out the cold air during winter, which reduces heating bills; therefore, the material contributes to energy saving all year round.



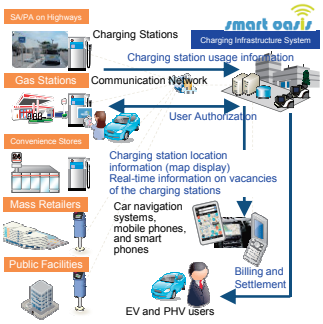
KRC キルコート KIRUCOAT

Building of a Charging Infrastructure Network for EVs and PHVs

(Nihon Unisys, Ltd.)

Upgrading of the charging infrastructure is essential for the popularization of electric vehicles (EVs) and plug-in hybrid vehicles (PHVs).

By utilizing ICT, Nihon Unisys provides charging station user authorization, as well as billing and settlement services and has been working on the building of charging infrastructure, which is highly convenient for EV and PHV users.



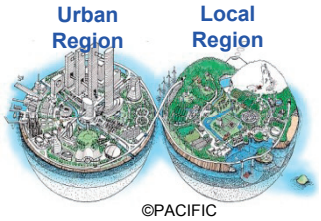
<Charging Infrastructure Network>

Toward the Realization of a Society in which Local Regions and Cities both become Affluent

(Pacific Consultants Co., Ltd.)

Toward the building of a low-carbon society, the company has been providing support for the development and commercialization of policies and plans that are rooted in the community from the aspect of environmental energy.

Specifically, the company has been providing support for the development of policies and plans related to low carbon and energy, considering their commercialization, and promoting local projects that use renewable energy.



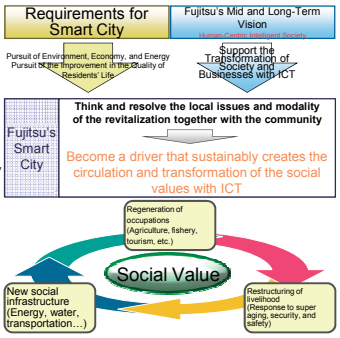
©PACIFIC CONSULTANTS

<An image of developing a low-carbon society>

Contribution to the Local Community Using ICT

(Fujitsu Limited)

Fujitsu sets the "Create Circulation of and Innovative Changes in the Sustainable Social Values by ICT" as its smart city concept. In addition to realizing the social infrastructure's shift to high functionality by ICT, the company aims at thinking and resolving local issues together with the local community and will contribute to improving the life of the residents in the community and creating local industries and jobs.



Support for the Creation of Emission Credit and Provision of Carbon Offset

(myclimate Japan)

Our company is an offset provider who will provide support from the creation of emission credit to the provision of the carbon offset service or from upstream to downstream. We have many actual achievements in creating J-VER and domestic credits and offer planning and consultation on carbon offsets using these credits.

<Procedure of the credit creation and provision of carbon offset>

Working Groups of the Promotion Council for the "FutureCity" Initiative

A picture of the 1st WG on Sharing of Issues in the Low-Carbon Urban Development and Solution Consideration in fiscal 2012 (August 23, 2012)
At the 1st Common Meeting Room on the 1st floor of the Nagata Town Joint Government Building (Tokyo)

WG to Share Issues in the Low-Carbon Urban Development and Consider Solutions

●Coordinator:
Pacific Consultants Co., Ltd.

●Participating Organizations (As of November 6, 2012):
55 organizations (Municipalities: 33, prefectures: 3, relevant ministries and agencies: 4, relevant government-affiliated agencies: 4, and private organizations: 11)

●Purpose of the Establishment:
With a view to organize issues and obstacles that local public authorities promoting advanced efforts are facing, then vitalize the exchange of information among members and consider the solutions, this WG started its activities in fiscal 2011.

In fiscal 2012, the WG focuses on the efforts of the introduction and management of renewable energy, as well as extensive improvement and development and the building of a Smart Community, based on the WG results in fiscal 2011, works under the theme of the working methods relevant to the low-carbon urban development from the three viewpoints of community's future vision and creation, cooperation between the public and private sectors, and funding.

Themes of the Meeting in fiscal 2012
First: Community's Future Vision and Its Creation
(To be held in August 23, 2012)
Second: Cooperation between the Public and Private Sectors
(To be held in December 20, 2012)
Third: Funding
(To be held around February, 2013)

●The Activity Results and Future Development:
(Activity Status)
- Established in fiscal 2011. Three meetings were held in fiscal 2011.
- Three meetings are scheduled to be held in fiscal 2012.

(Activity Details)
- Themes of meetings will be the ones described in the right box.
- At each meeting, WG members exchange their opinions and share the issues, obstacles, and solutions.
- After each of the meetings, Newsletter in which results are summarized are to be prepared and publicized. Also, the final results are to be summarized and publicized.

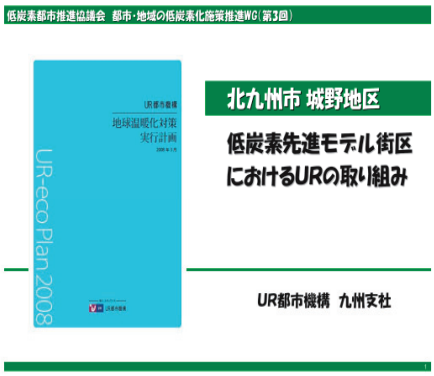
WG to Disseminate and Promote Best Practices Nationwide

- Coordinator:
  Regional Revitalization Bureau (Cabinet Office)
- Participating Organizations:
  26 organizations
- Purpose of the Establishment:
  Among the best practices by the members of the Promotion Council for Low-Carbon City, disseminate practices considered able to develop nationwide to other municipalities by sharing the learning and issues found with members with actual experience.
  (*Their activities were finished in fiscal 2010)

WG to Consider the Uniform Criterion for the Early Calculation Method of the Greenhouse Gas Emissions, ETC

- Coordinator:
  Regional Revitalization Bureau (Cabinet Office)
- Participating Organizations:
  34 organizations
- Purpose of the Establishment:
  Share information on the method of collecting data needed for the early calculation of greenhouse gas emissions and absorption, as well as its method of calculation, consider the method of calculation of the efforts in which quantification of the greenhouse gas emissions is difficult, and establish uniform criteria for the calculation of greenhouse gas emissions in the Eco-Model Cities.
  (*Their activities were finished in fiscal 2011)

WG to Promote the Low-Carbon Measures and Policies in Cities and Regional Communities



- Coordinator:
  Kitakyushu City
- Participating Organizations:
  41 organizations
- Purpose of the Establishment:
  In order to promote low carbonization by the city unit and community unit, it is necessary to have an urban foundation, facilities, and cooperation from residents and build a support mechanism and an evaluation method to realize this. Therefore, municipalities that have similar awareness of the issues cooperate and conduct studies on the issues toward the realization of low-carbon cities. (*Their activities were finished in fiscal 2010)

Green Economy WG

- Coordinator:
  Yokohama City
- Participating Organization:
  75 organizations
- Purpose of the Establishment:
  In order to sustainably realize low-carbon urban development, it is necessary to achieve a good balance of global warming mitigation measures and local revitalization. The WG intends to have municipalities, etc., participating in the council, such as Eco-Model Cities to establish new business models and to create the local revitalization models through the promotion projects and creation of mechanisms for low carbonization and to disseminate them. (*Their activities were finished in fiscal 2011)

Inquiries

Regional Revitalization Bureau (Cabinet Office)

1-11-39 Nagata Town, Chiyoda Ward, Tokyo 100-0014
7th Floor of Nagata Town Joint Governmental Building
TEL: 03 (5510) 2199　E-mail: g.futurecity@cas.go.jp
g.eco_model@cas.go.jp