

## Overview of the city

- Population: 168,232 (as of the end of Mar. 2015)
- Area: 619.34 km<sup>2</sup>
- Land use: 38.6% agricultural land, 6.6% mountain forest, 5.8% residential land
- Main industries: Agriculture

## Vision

GHG emissions in FY2000 (base year): 1,459,517 tons



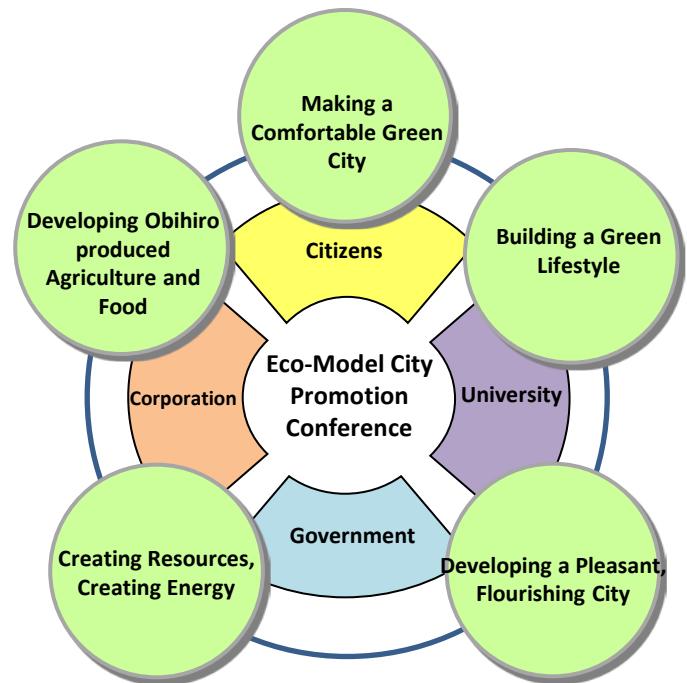
Reducing emissions by 15% or more by FY2018

Reducing emissions by 30% or more by FY2030

Reducing emissions by 50% or more by FY2050

Ensure compatibility between the environment and economy by transforming lifestyles, utilizing renewable energy, etc.

## Roles of government, citizens, corporations and other organizations

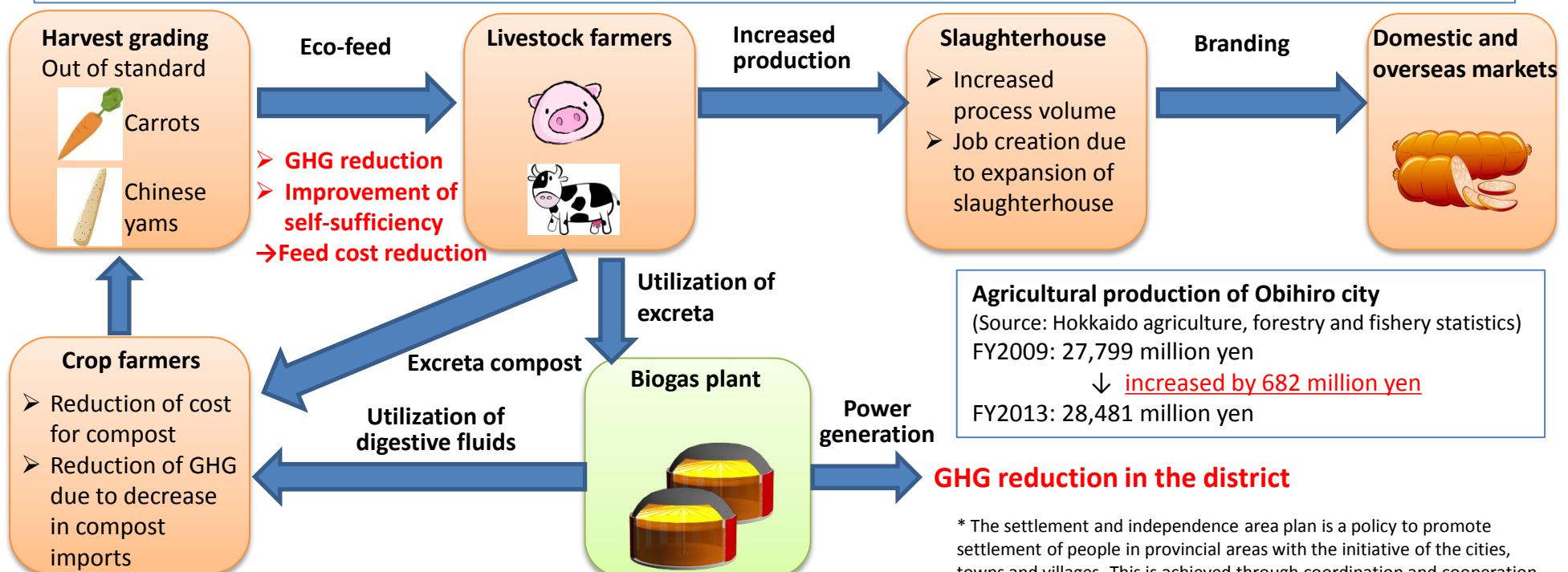


Aiming for establishment of a low-carbon society with the participation of diverse stakeholders

## Overview of characteristic efforts

### Utilization of agricultural biomass

- ✓ Revitalization of agriculture and reduction of GHG emissions have been made through cooperation between plant cultivation and animal cultivation, and promotion of biomass utilization.
- ✓ With the promotion of Eco-feed from FY2009 to FY2013, GHG emissions have been reduced by 57,518 tons.
- ✓ In accordance with the "settlement and independence area plan"\* and "Tokachi biomass industrial town plan" in cooperation with 18 towns and villages in the Tokachi district, we are strengthening the industrial base and revitalizing the local economy through utilization of biomass.



**Agricultural production of Obihiro city**  
(Source: Hokkaido agriculture, forestry and fishery statistics)  
FY2009: 27,799 million yen  
↓ increased by 682 million yen  
FY2013: 28,481 million yen

### GHG reduction in the district

\* The settlement and independence area plan is a policy to promote settlement of people in provincial areas with the initiative of the cities, towns and villages. This is achieved through coordination and cooperation among them, while leveraging urban functions of the central city and characteristics of the surrounding towns and villages such as agriculture, forestry, fishery and the natural environment.

## Contact

Attn: Masayuki Ishii, Environmental City Promotion Section, Citizens Environment Department, Obihiro city, Hokkaido  
Tel: 0155-65-4135 Fax: 0155-23-0161 E-mail: environment@city.obihiro.hokkaido.jp

## Overview of the city

- Population: 223,008 (as of Aug. 1, 2015)
- Area: 284.07 km<sup>2</sup>
- Land use: 16.4% rice field, 23% farmland for crops other than rice, 21.4% residential land, 17.9% forest, 0.7% wilderness, 5.8% miscellaneous use, 14.8% other (Source: 2014 property tax record)

Being designated as the Tsukuba International Strategic Zone, the city is the hub of Japan's international research, having about one-third of Japan's public research institutions as well as a number of private institutions.

## Vision



## Roles of government, citizens, corporations and other organizations

### Aiming for a low-carbon society through an "all-Tsukuba" effort

Tsukuba City has collective knowledge and technologies that can contribute to tackling global warming and other environmental issues, with a gathering of universities and institutions having diverse knowledge and broad technologies. Taking into account the concept that it is important to be a model low-carbon society for others, we have proposed "Tsukuba Environmental-Style" in 2008 aiming at a reduction of CO<sub>2</sub> emissions per citizen by 50% by 2030. **This has triggered the formation of the "all-Tsukuba" effort by citizens, corporations, universities, research institutions and the government aiming for a low-carbon society.** The city was designated as the Eco-Model City in March 2013. **Based on this all-Tsukuba collaboration system, we further aim for realization of a city where everyone from children to elderly people can smile, through an integrated approach composed of the four aspects of "S," "M," "I," and "Le."**

- Smart Community
- Mobility Traffic
- Innovation & Technology
- Learning & Education

## Overview of characteristic efforts

### Smart Community

#### Development of an integrated approach model area

Formation of a model low-carbon urban district is underway in the Katsuragi Northwest Urban District.

In 2013, Daiwa House Industry, NTT Urban Development and Tsukuba City have concluded an agreement to promote the resident-led sustainable community plan to realize the Tsukuba Eco-Style, "SMILe." Currently, we have constructed 175 houses with solar panels, batteries, fuel cells and HEMS, and three apartments with BEMS, and development of the surrounding area is in progress.

Also, we are proposing the utilization of advanced low-carbon facilities in public utilities, and are planning to install solar shelters on pedestrian walkways and bicycle roads in the district to provide information about the outcome of our efforts.

Additionally, introduction of low-carbon facilities is planned in the newly constructed public school in the district. The development of a low-carbon community is well underway in the whole district.



Impression of the model urban district



Ceremony to sign the agreement to promote the resident-led sustainable community plan to realize the Tsukuba Eco-Style, "SMILe"



Artist's impression of solar shelter installation

## Contact

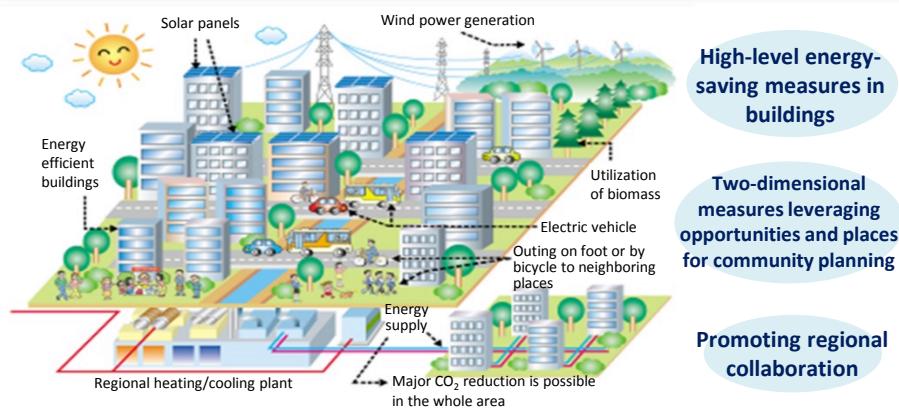
Smart City Promotion Division, Tsukuba City, Ibaraki  
Tel.: 029-883-1111 (main number) E-mail: igp010@info.tsukuba.ibaraki.jp

## Overview of the city

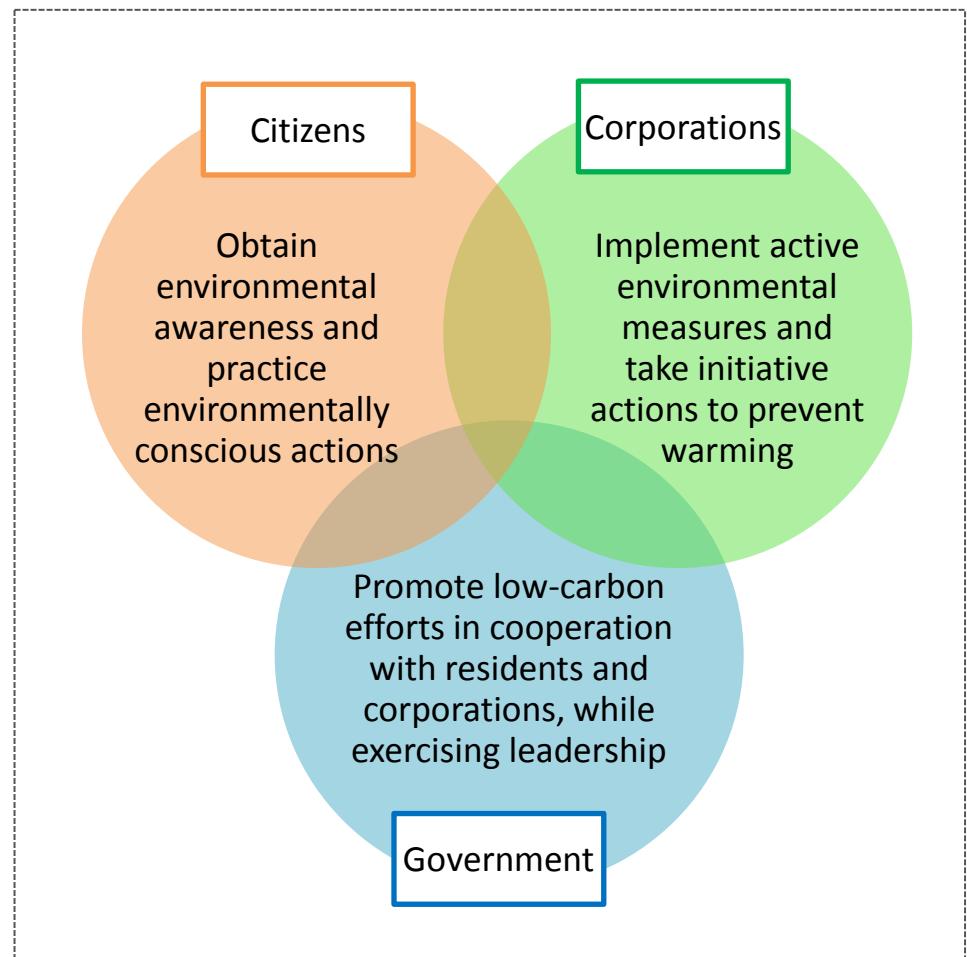
- Population: 58,273 (as of Aug. 1, 2015)
- Area: 11.66 km<sup>2</sup>
- Land use: 24.8% public use, 25.8% commercial use, 4.5% residential use, 1.4% industrial use
- Main industries: The city has administrative, legislative, and judicial centers of Japan, and head offices of large financial and trading companies are concentrated there.

## Vision

Three focuses to achieve the goal (reduction of CO<sub>2</sub> emissions by 25% by 2020 compared to 1990)



## Roles of government, citizens, corporations and other organizations

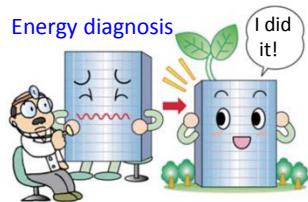


## Overview of characteristic efforts

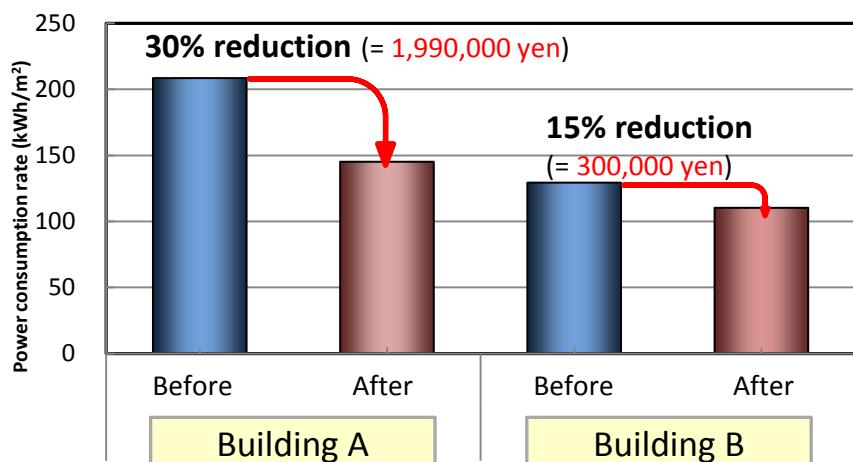
### Green Stock Operation — Low-carbon efforts in existing buildings

#### For business

To reduce CO<sub>2</sub> emissions from the business sector that accounts for three-quarters of the total emissions of the city, we promote checks on the condition of buildings and diagnoses for energy saving for small businesses. By extending support with funding programs, we promote operational improvement and facility renovation using the diagnosis results to increase the number of low-carbon buildings.

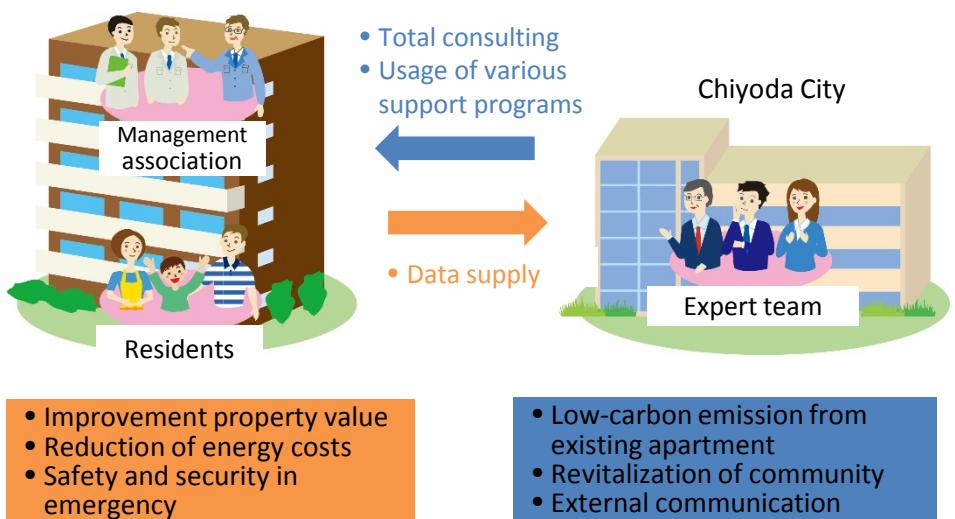


Effect of facility renovation based on diagnosis for energy saving



#### For apartment housing

We promote smarter (efficient) energy use in apartment buildings where 80% of the citizens are residing. Effective methods for energy saving are examined in cooperation between the government and private sector, and model apartments are selected to practice the methods. We examine the effects of such efforts, provide information about achievements, and promote renovation of existing apartments in the city.



## Contact



# Niigata Eco-Model City [Niigata City, Niigata]

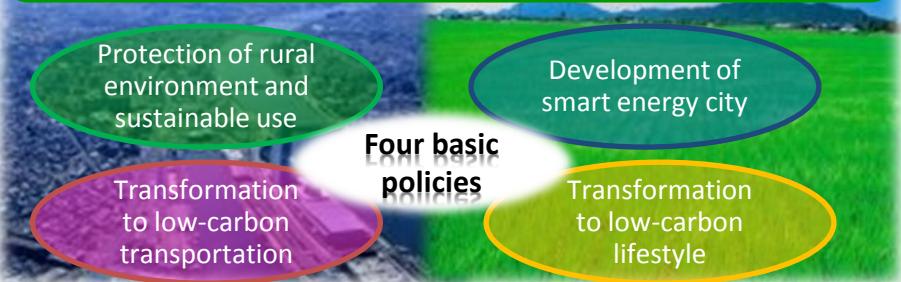
## Overview of the city

- Population: 803,000
- Area: 726.45 km<sup>2</sup>
- Land use: 56.0% rice field, 10.5% farmland for crops other than rice, 22.9% residential land, 7.2% forest, 3.4% other
- Main industries: Service industry, retail industry, manufacturing industry (food, chemical pulp/paper, etc.), agriculture

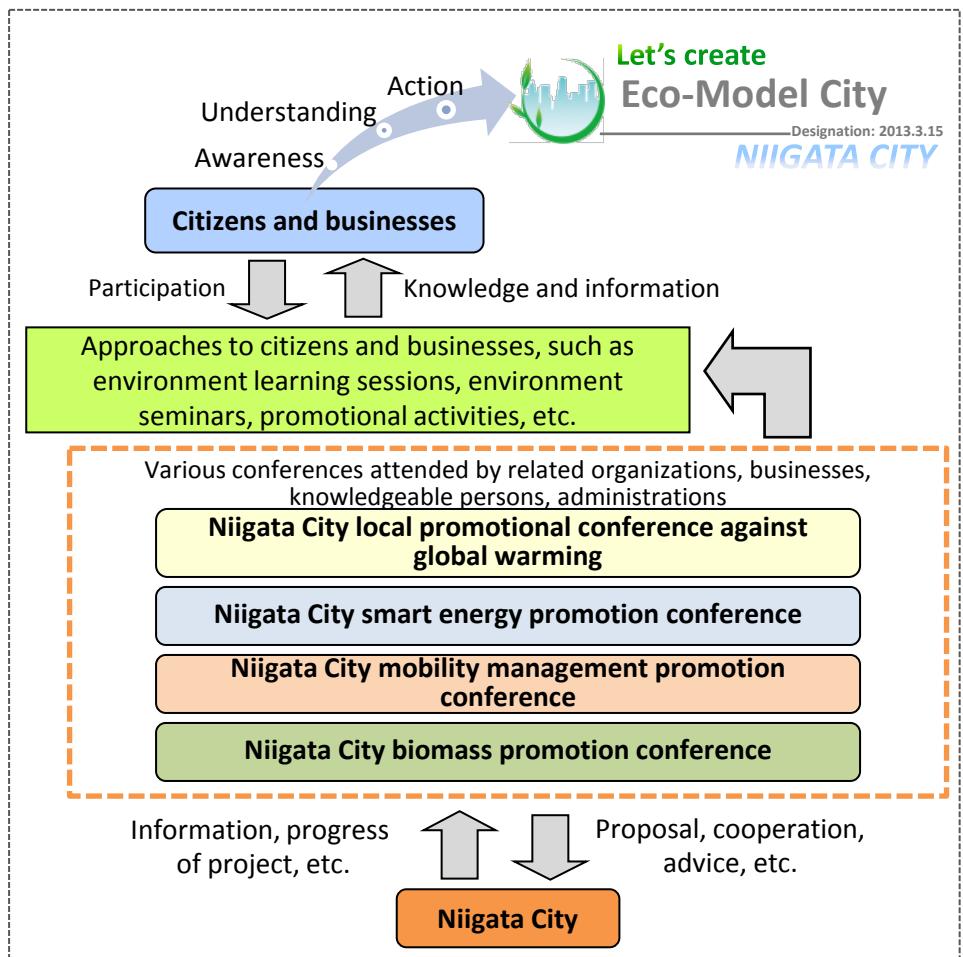
## Vision

### Rural eco-city

—A city that develops in harmony with rural areas, while recycling fertile values



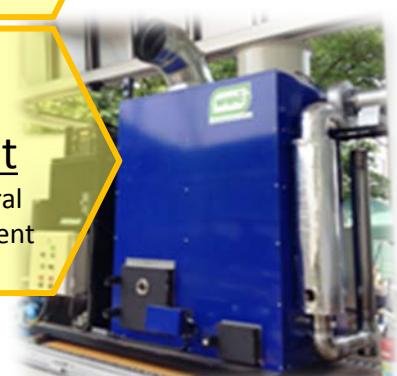
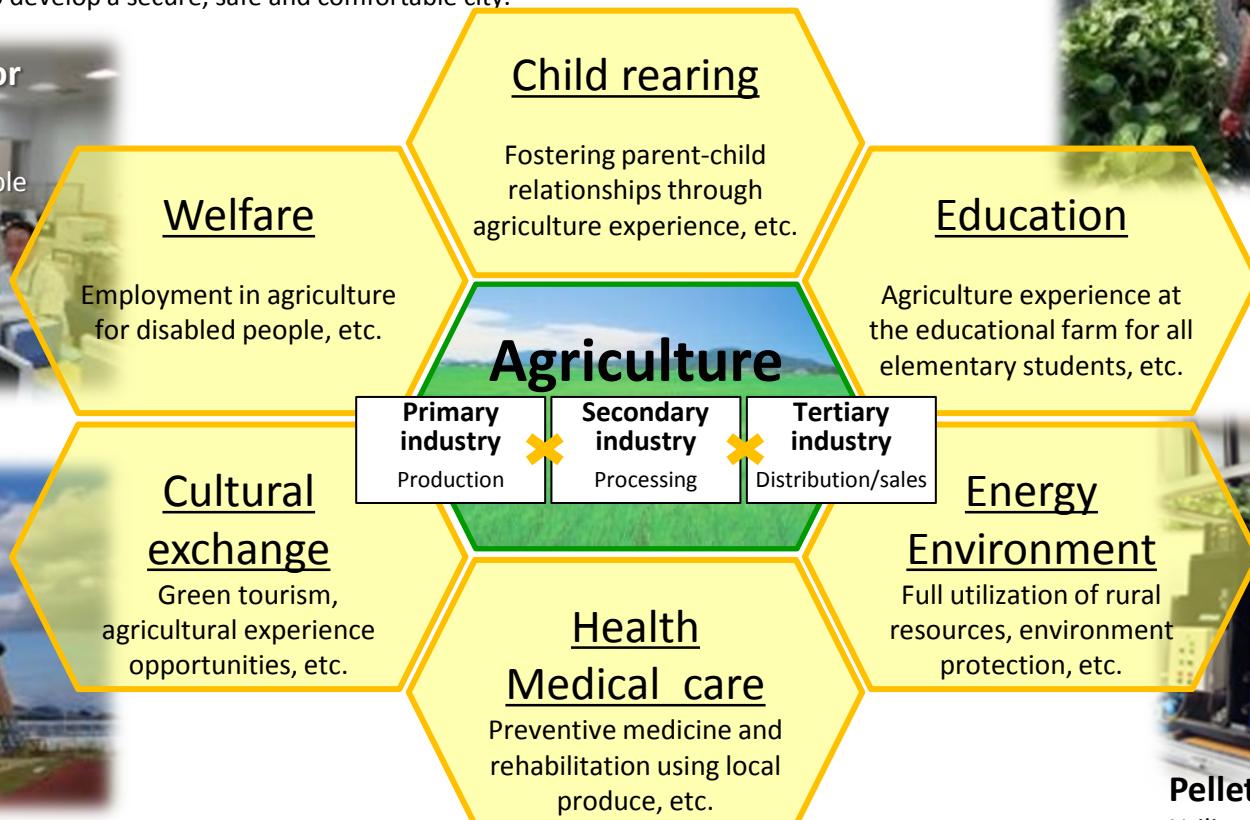
## Roles of government, citizens, corporations and other organizations



## Overview of characteristic efforts

### Value-added agriculture

Leveraging the city's rural and natural resources to the maximum extent, we create new values for agriculture by combining skills in welfare, child rearing, education, energy and the environment, health and medical care, and cultural exchange, thus aiming to develop a secure, safe and comfortable city.



**To be the top runner in regional revitalization leveraging agriculture**

## Inquiries

E-mail: kansei@city.niigata.lg.jp Tel.: 025-226-1363 Fax:025-230-0467

Attn: Kanari and Kobayashi, Environment Planning, Environment Policy Division, Environment Department, Niigata City

## Overview of the city

- Population: 104,000
- Area: 658.66 km<sup>2</sup>
- Land use: 7% agricultural land, 3% residential land, 30% forest and wilderness
- Main industries: Agriculture (fruits, livestock, etc.), manufacturing industry (precision instruments, electronics, electric, etc.), food industry

## Vision

Recirculate economic values within the region by supplying renewable energy resource that exit in the region.

Enhance the environmental value of the region using the renewable energy resource to the maximum extent for regional energy supply.

### Regional environmental rights ordinance

Ordinance relating to sustainable community planning through introduction of renewable energy

Citizens play key roles in locally led renewable energy businesses that produce economic values and environmental values.

Led by citizens, recirculate energy and wealth within the region to promote local revitalization from the viewpoint of energy autonomy.

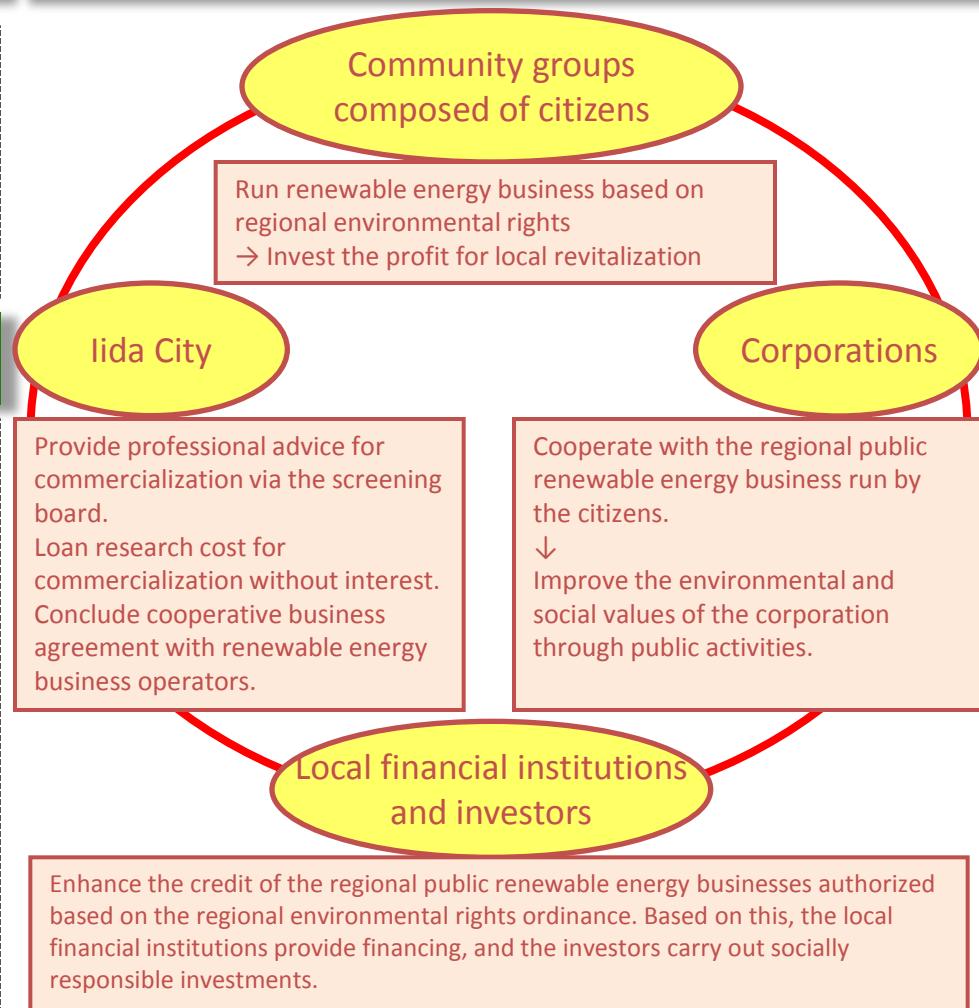
Renewable energy resource has close relationship with the citizens.

By defining the renewable energy resource as a common property of all citizens, assures the civil rights to utilize it for the community.

Fosters the self-governing capability of the citizens, through cooperative business-decision processes, such as financing, risk management, and investment of the profit, led by citizens.

Iida City shall extend the necessary support to citizen-led renewable energy businesses based on the regional environmental rights ordinance, to promote the eco-model city policy.

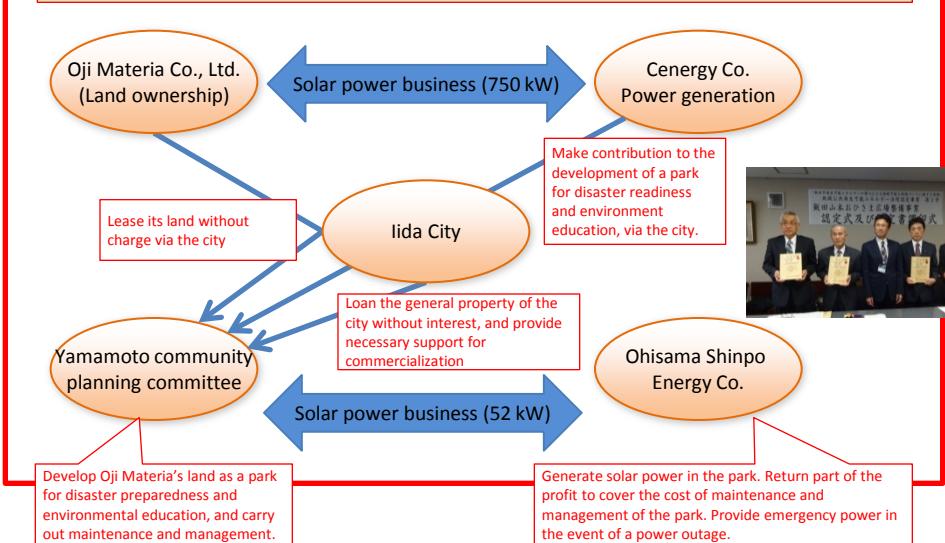
## Roles of government, citizens, corporations and other organizations



## Overview of characteristic efforts

### Iida Yamamoto Ohisama Park Development Project

#### Regional public renewable energy utilization project involving five parties



Development of the park in cooperation with citizens

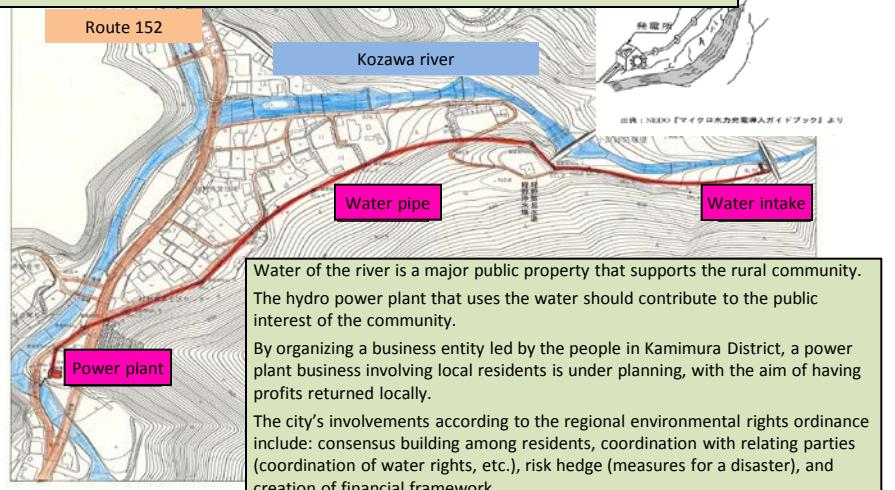


Large-scale solar power plant in Iida Yamamoto Ohisama Park

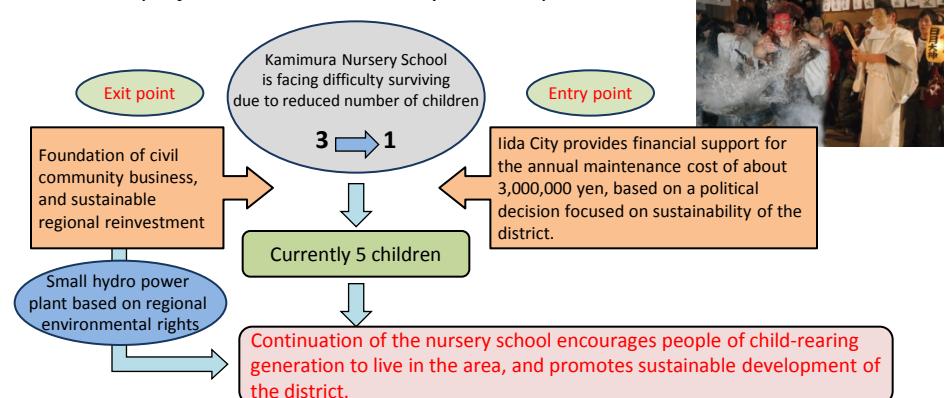
### Kozawa River small hydro power plant civil joint project

Kozawa River (Class A river managed by prefecture in Kamimura District, Iida City)

- Power plant with water volume of 0.3 qm/s throughout the year is under planning.
- Approximately 170 kW capacity is assumed with the channeled water from the water intake dam.



### Kamimura project—Measures at entry and exit points



## Overview of the city

- Population: 18,825 (as of Aug. 1 2015)
- Area: 56.61 km<sup>2</sup>
- Land use: Approximately 60% forest
- Main industries: With the improved access owing to the newly constructed loop road, establishment of corporations (mainly manufacturing) is increasing.

## Vision



## Roles of government, citizens, corporations and other organizations



▲ Forest development by corporation



▲ Use of public transit system



▲ Use of renewable energy



▼ Making green curtains



▼ Environmental education



To realize our vision of Eco-Model City, we promote use of

public transit, energy-saving activities at home, reduction of waste, etc. through coordination and collaboration among townspeople, corporations and government.

## Overview of characteristic efforts

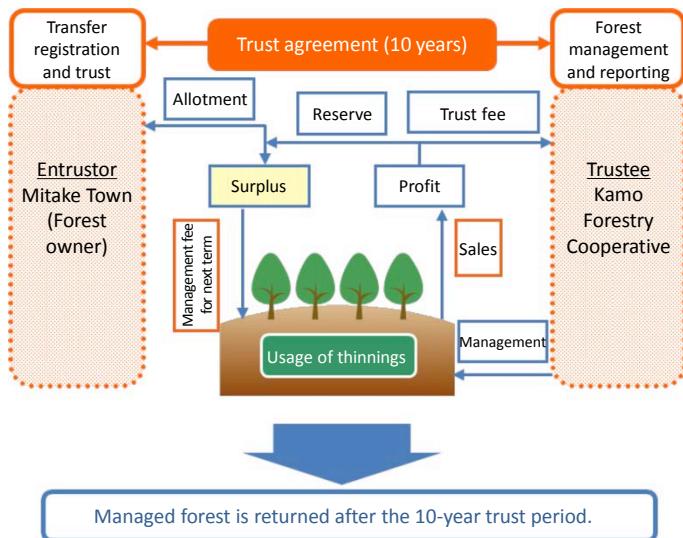
▼ Forest area that shares 60% of the total town area



▼ Forest development by the entrusted operator



▼ Site of forestry experience in cooperation with Shimokawa Town



### Promotion of sustainable forest management model (Entrusted forest management)

Mitake Town is blessed with a forest that shares about 60% of the town area. To utilize the forestry know-how of the private sector, and to achieve proper management and effective use of the town's forest, we have adopted the entrusted forest management method that requires no public expense. Establishment of a sustainable forest management model is helping to reduce CO<sub>2</sub> emissions, create new jobs, and cultivate human resources through collaboration with the town's forest volunteers.

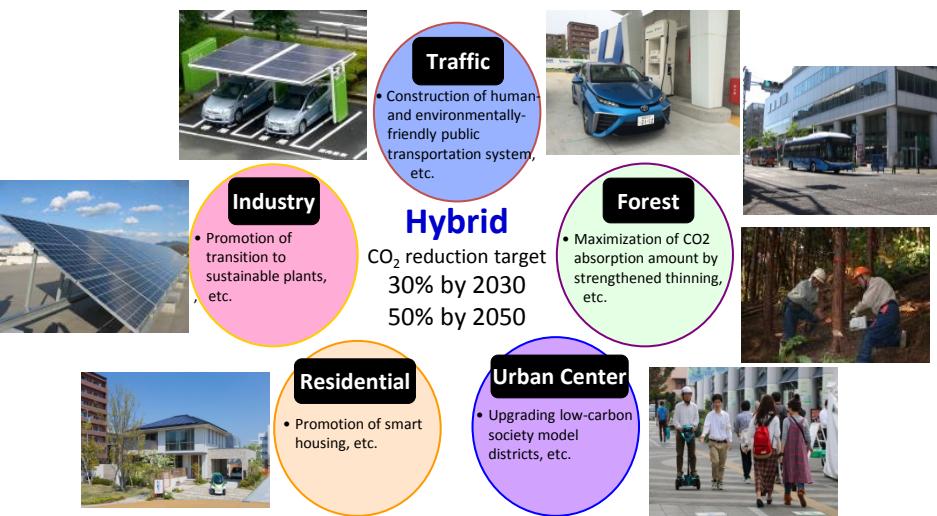
## Contact

Attn: Hayakawa, Deputy Office Manager, Eco-Model City Promotion Office, General Affairs Department, Mitake Town Office, Kani District, Gifu Prefecture Tel.: 0574-67-2111 Fax: 0574-67-1999 E-mail: eco@town.mitake.lg.jp

## Overview of the city

- Population: 422,784 (as of Sep. 1, 2015)
- Area: 918.32 km<sup>2</sup>
- Land use: 68% forest, 8% agricultural land, 7% residential land
- Main industries: Automotive, agriculture

## Vision



**Traffic**  
• Construction of human- and environmentally-friendly public transportation system, etc.

**Industry**  
• Promotion of transition to sustainable plants, etc.

**Forest**  
• Maximization of CO<sub>2</sub> absorption amount by strengthened thinning, etc.

**Residential**  
• Promotion of smart housing, etc.

**Urban Center**  
• Upgrading low-carbon society model districts, etc.

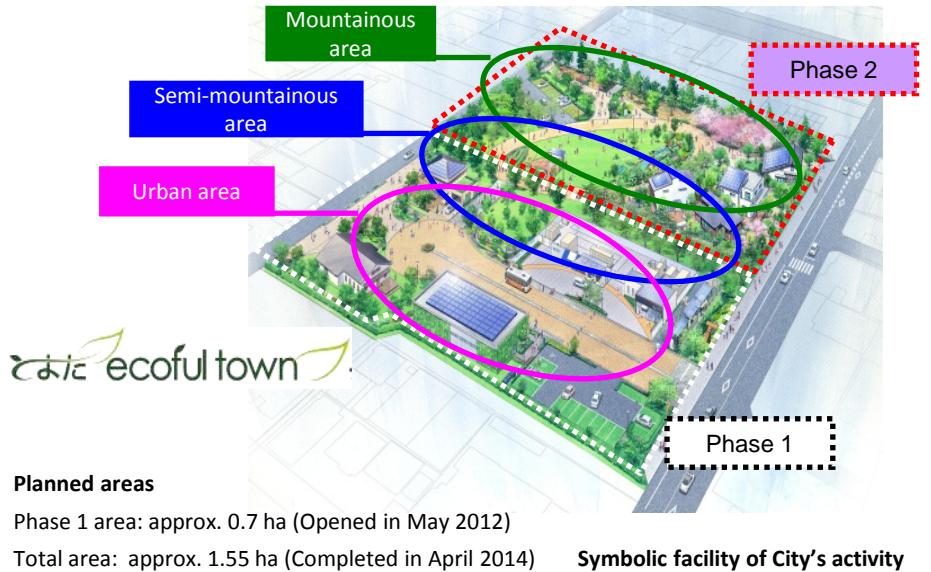
**Hybrid**  
CO<sub>2</sub> reduction target  
30% by 2030  
50% by 2050

## Roles of government, citizens, corporations and other organizations

### Roles and responsibilities

Corporations and organizations: Development of advanced eco-technology  
Government: Communication and development/familiarization support  
Citizens: Promotion of eco-activities

Toyota Ecoful Town has been developed to exhibit Toyota City's low-carbon efforts in cooperation with the private sector. It reproduces the city's regional characteristics on a small scale. Through the experience of the latest eco-technologies, it aims for lateral expansion of eco-activities. The facility has been visited by about 150,000 people from 80 countries worldwide.



**Planned areas**  
Phase 1 area: approx. 0.7 ha (Opened in May 2012)  
Total area: approx. 1.55 ha (Completed in April 2014)

**Symbolic facility of City's activity**

## Overview of characteristic efforts

### Development of low-carbon transportation system

Leveraging its characteristics as a city of automobiles, the ultra-compact EV-sharing system, "Ha:mo," that supplements daily movement paths between public transportation systems, such as rail and bus, and destinations, has been introduced in the city at the initiative of Toyota Motor. As of September 2015, there are 40 rental stations within the city.



Since October 2014, a demonstration experiment anticipating global deployment has been run in Grenoble, France



### International conference cohosted by the United Nations and Toyota City

The High-Level Symposium on Sustainable Cities: Connecting People, Environment and Technology was co-convened by the U.N. and Toyota City from January 15 to 16, 2015.



Lively discussions were made on issues such as the environment, aging and disaster preparedness.



During the "Toyota International Environment Week," from January 10 to 18, various events that promote people's understanding of the environment were held.



### Promoting local production for local consumption of renewable energy with tax reduction and various subsidy programs.

#### Toyota City Eco-tax reduction

- (1) Smart house tax reduction (first in Japan)  
Partial exemption of property tax, etc.
- (2) Renewable energy plant tax reduction (first in Japan)  
Partial exemption of property tax for power plants with an output of 10 to 2,000 kW
- (3) Electric light vehicle tax reduction (first in Aichi)  
Full tax exemption for the light EV and ultra-compact EV

#### Toyota City Eco-Family Subsidy

- (1) Solar power system
- (2) Fuel cell system
- (3) Next-generation vehicle (including charging facility and external power supply system)
- (4) Home Energy Management System (HEMS)
- (5) Li-ion battery system for home use



#### Granting Eco-Point

Points are granted for using the Oiden bus (community bus), visiting eco-facilities (Ecoful Town, etc.), and participating in urban-rural exchange events, etc.



#### Exchanging Eco-Point

Amassed points can be exchanged for a variety of goods, such as eco-products (waste bags, Oiden bus tickets), gift certificates, and Toyota's specialties, and for participation in rural experience and exchange activities.



## Contact

Eco-Model City Promotion Division, Planning and Policies Department, Toyota City  
Tel.: 0565-34-6982 Fax: 0565-34-6993 E-mail: hybrid-city@city.toyota.aichi.jp



# Kyoto Eco-Model City [Kyoto City, Kyoto]

## Overview of the city

- Population: 1,470,000
- Area: 827.9 km<sup>2</sup>
- Land use: 63.6% forest, 24.1% residential land, 8.7% agricultural land, 3.6% other
- Main industries: Tourism and conventions, traditional industry, manufacturing (machinery, instruments, etc.)

## Vision

Reduce GHG emission by 40% by 2030, 60% by 2050 (compared to 1990)

### Achievement

#### Activity policies

- (1) Pedestrian Friendly City, Kyoto, (2) Low-carbon town planning in harmony with the scenery, (3) Transformation to environmentally friendly low-carbon lifestyle, (4) Development of low-carbon economy and production based on innovation, (5) Full usage of renewable energy, (6) Creation of a civic environment fund

#### Symbol projects

1. "Pedestrian Friendly City, Kyoto" strategy aims to build the street and community where people are the major players

2. "Kyoto where the culture of the tree is cherished" strategy aims to create a low-carbon landscape.

3. "DO YOU KYOTO?" Transformation of lifestyle and technology innovations

## Roles of government, citizens, corporations and other organizations

Level	Roles
Citizens	Increase interest in and deepen the understanding of global warming issues. At the same time, practice resource- and energy-saving activities, utilize renewable energy, and use resource- and energy-saving products and services in everyday lives.
Business	Practice resource- and energy-saving activities, utilize renewable energy, and use resource- and energy-saving products and services throughout the entire business process, including production, distribution, use/consumption, recycling, and disposal. Furthermore, provide environmental education to employees while partnering and collaborating with citizens and the government on their global warming countermeasures.
Kyoto City	Using facilities oriented to the local community, such as ward offices and branch offices, support global warming countermeasures implemented by citizens and businesses, together with taking the necessary action, including creating systems that provide regulations and incentives. Furthermore, Kyoto City itself is one of the primary large establishments operating in the city. Accordingly, as an operating entity and a consumer, actively practice resource- and energy-saving activities, utilize renewable energy, and use resource- and energy-saving products and services in its office operations.
Environment-protection organizations	Tackle concrete environmental conservation activities, such as working flexibly in domains where the government either cannot meet or not do enough to meet the diversified needs of society. Tourists and other visitors.
Tourists and other visitors	Cooperate with global warming countermeasures implemented by citizens, businesses, the government and environmental conservation groups.

## Overview of characteristic efforts

### Environmental education program, "Children's Eco-life Challenge"

Kyoto City started "Children's Eco-life Challenge Promotion Project" in 2005, in cooperation with the Board of Education, volunteers and NPOs. In this project, children, who will lead the future of the city, look at their lifestyle using workbook and learn and practice eco-life. Children's Challenge has been in practice at every municipal elementary school since 2010.

Pre-meeting (before summer and winter vacation)



Practice eco-life with families and friends (during summer and winter vacation)



Post-meeting (after summer and winter vacation)



Courtesy call of children from Malaysia

The eco-life challenge is now spreading in Japan and overseas. In the Iskandar Development Region in Malaysia, an educational program based on Kyoto's program has been developed and has been in practice since 2013. In Malaysia, they have added competitions to select the best school of the year. In 2015, this program will be expanded to all 198 schools in the area.

We will explain global warming for children.

Why not exchange your eco-life goals with each other after your challenge?



Eco-chan, an eco-mascot of Kyoto City

## Contact

Eco-Model City Group, Global Environment Policy Office, Environment Policy Bureau, Kyoto City  
Tel.: 075-222-4555

## Overview of the city

- Population: 838,544 (as of Jul. 1, 2015)
- Area: 149.81 km<sup>2</sup>
- Land use: 54.8% residential land, 10.5% agricultural land, 3.0% forest, 31.7% other
- Main industries: Manufacturing

## Vision

### Cool City Sakai

A low-carbon city where a comfortable life and flourishing community are sustained

Achievement of reduction goal

### The Second Sakai City Eco-Model City Action Plan

Transformation of industrial structure      Transformation of city structure      Creation of eco-culture

Sakai City's potential that can be utilized to protect the Earth's environment

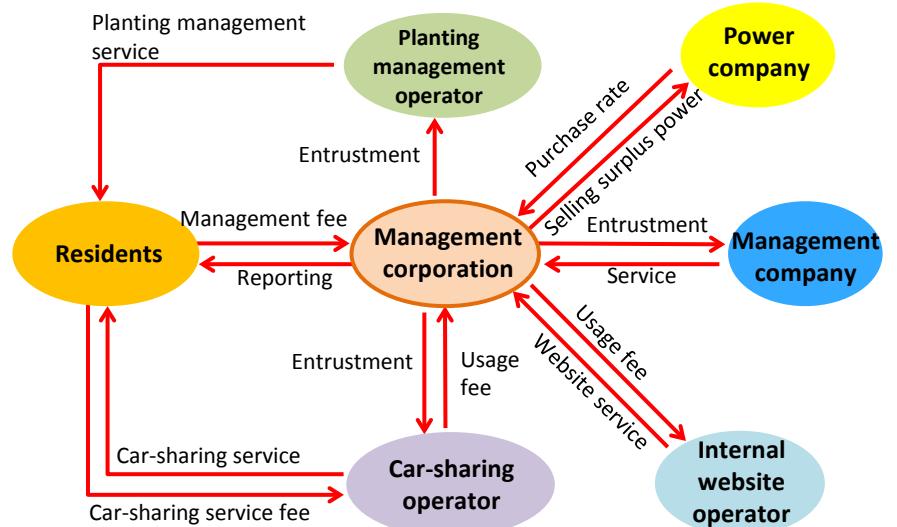
**Industrial structure potential**  
Collection of corporations and research institutions that are advanced in the energy and ecology field

**City structure potential**  
Infrastructure to support mobility of people and goods  
Greenery and waterfront with history and culture

**Eco-culture potential**  
Spirit of staying a step ahead that makes people say "everything starts from Sakai" for its diverse technologies and culture

## Roles of government, citizens, corporations and other organizations

### Autonomous Community Led by Residents Operational Scheme



Establish a housing complex management corporation to maintain a good living environment and enhance the value of the community, through **operations of autonomous community (housing complex) led by the residents.**

## Overview of characteristic efforts

### Harumidai Eco-Model Town Project

#### Overview of the project

Utilizing the public property, the site of a former elementary school, we have developed an environmentally conscious eco-model town, realizing **net Zero Energy Houses (ZEH)**.



Invitation of operator: May, 2011  
Launch: March, 2013



Solar power generation system (17.1 kW) over the regulating reservoir (common area)



EV car sharing at the community hall

#### Introduction of equipment capable of achieving 100% or more ZEH rate for all houses

All houses are equipped with a solar power generation system, lithium-ion battery system, high-efficiency water heater or fuel cell for home use, HEMS, LED lighting, and an exterior power outlet for an electric vehicle.

#### Disaster-resistant functions of the community hall

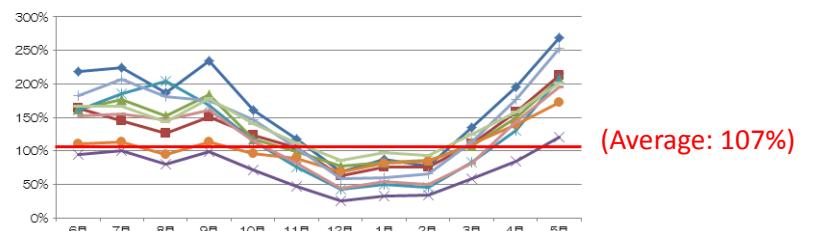
The community hall is equipped with a solar power generation system, large battery system, V2H system, etc. Daily life water is secured with a large rainwater storage tank and emergency food is stored. Benches that can be used as a cooking stove or a lavatory are also installed there.

All houses have been awarded S rank in the assessment of the CASBEE Sakai.

#### Disaster-resistant community planning

#### Verification of the effect—Monthly ZEH rate

Though there are some seasonal changes and variation between individual houses, almost all of them have achieved 100% annual ZEH rate. The average of the verification results for nine houses has marked 107%.



## Contact



Attn: Hamada, Ida and Sumihara, Environmental Policy Division, Environmental City Promotion Department, Environment Bureau  
Tel.: 072-228-3982 Fax: 072-228-7063 E-mail: kansei@city.sakai.lg.jp



# Amagasaki Eco-Model City [Amagasaki City, Hyogo]

## Overview of the city

- Population: 446,141
- Area: 50.72 km<sup>2</sup>
- Land use: 1/3 industrial land, 1/3 residential land, 1/3 business and multipurpose use
- Main industry: Manufacturing industry

## Vision

We have experienced severe pollution in the past and overcome it through the cooperative efforts of industry, citizens and the government. Environmental awareness and cooperative spirits have been nurtured among citizens and businesses in the process of overcoming the pollution, we aim to realize an ECO Future City incorporating three city visions with this historical backdrop.

**1. Economic growth compatible with CO<sub>2</sub> reduction**  
leveraging high technological and production capabilities

**2. Realization of eco-friendly and comfortable city life**  
leveraging compact city area and collective functions

**3. Realization of ECO Future City through collaboration**  
leveraging spirit of collaboration among citizens and businesses

## Roles of government, citizens, corporations and other organizations

Amagasaki 21st Century forest-preservation conference  
Forest of nature and culture association  
Various citizen groups

Establishment of Economy and Environment Bureau  
Amagasaki Green New Deal Promotion Conference

Citizens

Government

### Collaboration for ECO Future City Amagasaki

Declaration of ECO Future City Amagasaki

Academia

Industry

Osaka University  
University of Hyogo  
College of Industrial Technology  
Vocational Eco College  
Elementary, junior high and high schools

Conference for industry-academia-government network

Amagasaki Chamber of Commerce and Industry  
Amagasaki Employers' Association  
Amagasaki Industrial Association  
Amagasaki Institute of Regional and Industrial Advancement  
Local financial institutions, etc.

## Overview of characteristic efforts

### Amagasaki Smart Community Promotion Project

An area that constructs a local energy management system employing HEMS in a large housing development over a certain scale and builds the framework to stimulate the local economy by utilizing the system is certified as **"Amagasaki Smart Community"** and also financially supported by the government.



#### 1. Visualization of energy consumption in the JR Tsukaguchi Station area (approx. 8.4 ha)

The town energy management system has been developed to measure energy consumption in the whole area around the station.

Energy consumption of the whole area is displayed on the digital signage system in real time.



#### 2. On demand response linked to the community currency

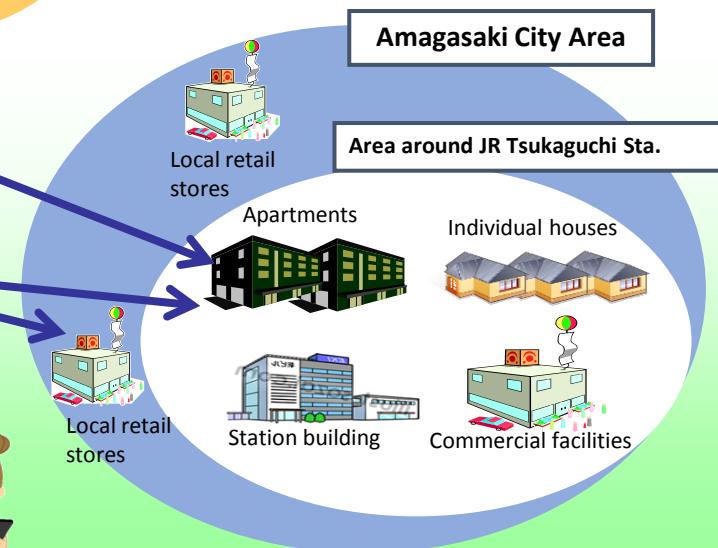
The scheme to connect with ZUTTO ECO MYPO, the community currency point system, has been established.

Residents going out to local retail stores, etc., in response to energy-saving request during peak electric demand period in summer and winter, will get double points.



#### Certified project in 2015

The sustainable activities for energy-saving and regional vitalization with introduction of ZUTTO ECO MYPO



## Contact

Environment Creation Division, Environment Department, Economy and Environment Bureau, Amagasaki City  
Office 1-23-1 Higashi Nanamatsu-cho, Amagasaki City, Hyogo Prefecture Tel.: 06-6489-6301 Fax: 06-6489-6300



# Kobe Eco-Model City [Kobe City, Hyogo]

## Overview of the city

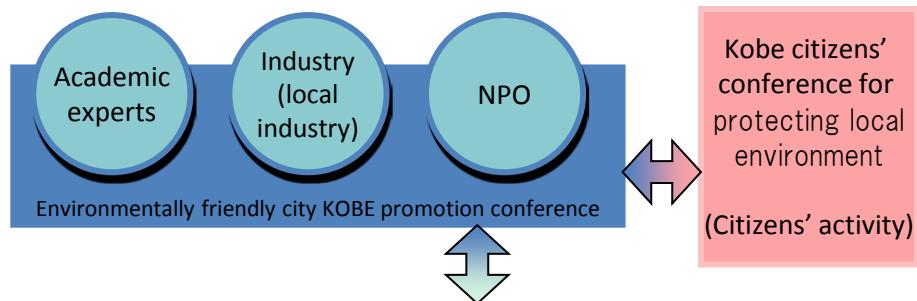
- Population: 1,535,000
- Area: 552.83 km<sup>2</sup>
- Land use: 37% Urbanization area, 63% Urbanization control area
- Main industries: Manufacturing industry, service industry, fashion industry, etc.

## Vision

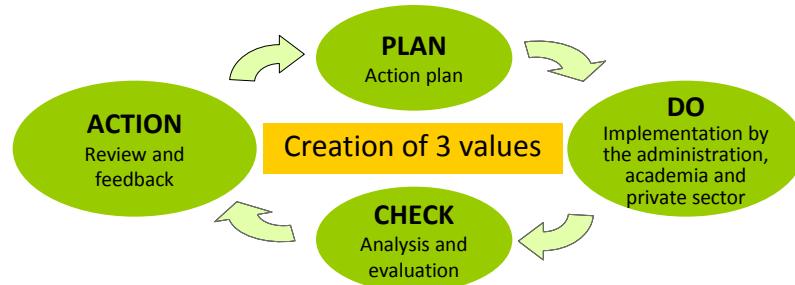
### Concept for Kobe Eco-Model City proposal

To create a sustainable future city by connecting the formation of a low-carbon community to the enhancement of disaster-prevention capability of the region and the improvement of healthcare, welfare and convenience of citizens, while achieving a major reduction in greenhouse gas emissions.

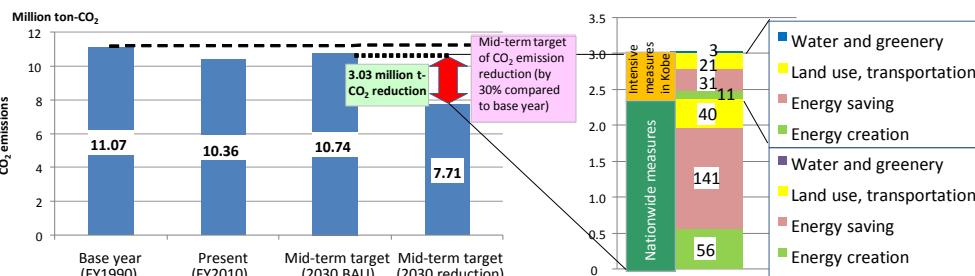
## Roles of government, citizens, corporations and other organizations



Organization within the Kobe City Office (Cross-sectional organization)



- The environmentally friendly city KOBE promotion conference composed of academic experts, businesses from various industries, NPOs and the government has been established.
- As an organization within the Kobe City Office, the Eco-Model City promotion council, led by the Mayor and composed of most departments and bureaus of the city, has been established.
- Promotion and follow-up activities using the PDCA cycle are carried out.
- In addition to the environmental value such as CO<sub>2</sub> reduction, the social value and the economic value are evaluated.



## Overview of characteristic efforts

### Promotion of hydrogen energy

Kobe City promotes various efforts relating to hydrogen energy in order to contribute to the realization of a hydrogen society. A subsidy system for fuel cell systems for home use was introduced in 2013. By introducing fuel cell vehicles (FCV) as official government vehicles and participating in various events, the city utilizes the vehicle to promote the environmental awareness of citizens and businesses. Development of a smart hydrogen station, which produces hydrogen using electricity generated with renewable energy and supplies the hydrogen to FCV, is underway, aiming at opening in spring 2016. We are also working on attracting commercial hydrogen stations.



Introduction of government public FCV



Development of smart hydrogen station



Subsidy for fuel cell system for home use

## Contact

Environmentally friendly City Promotion Office, Environment Policies Department, Environment Bureau, Kobe City  
Tel.: 078-322-5283

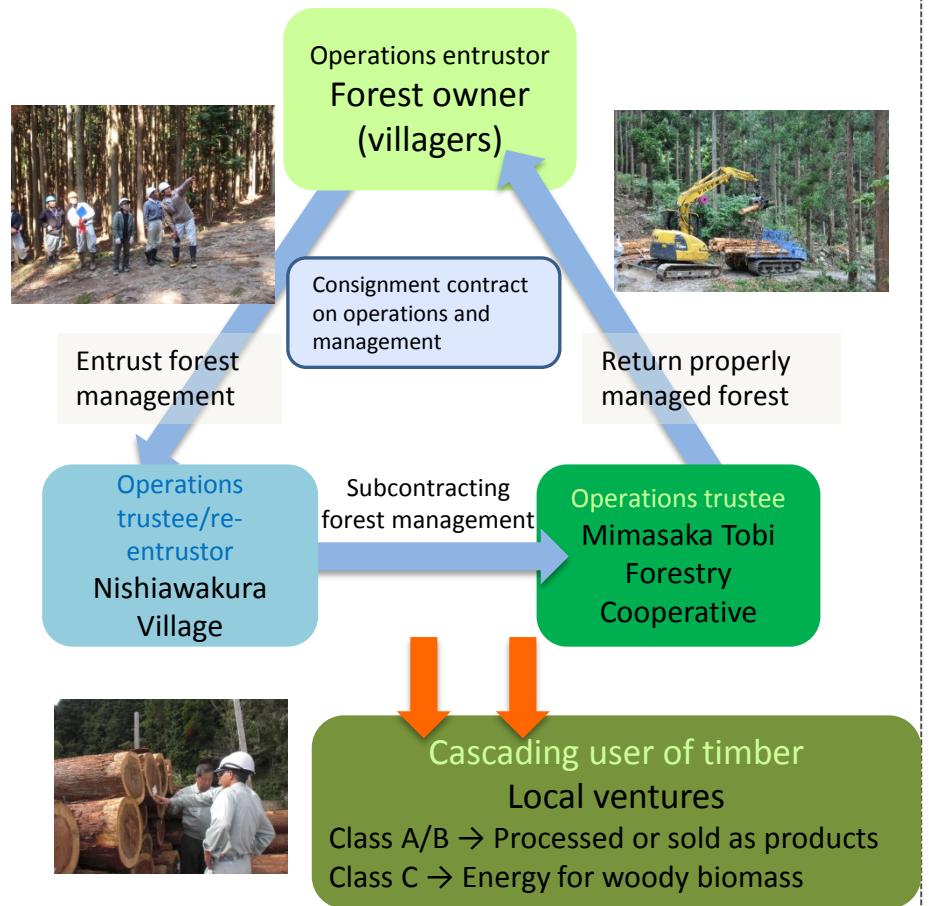
## Overview of the city

- Population: 1,525
- Area: 57.93 km<sup>2</sup>
- Land use: 95% forest, 5% agricultural/residential land and other
- Major industries: Forestry, tourism

## Vision

We never stop managing our forest that has been with us for 50 years. Let's continue 50 more years with the village-wide efforts, and achieve a "quality village" surrounded by a beautiful centurial forest.

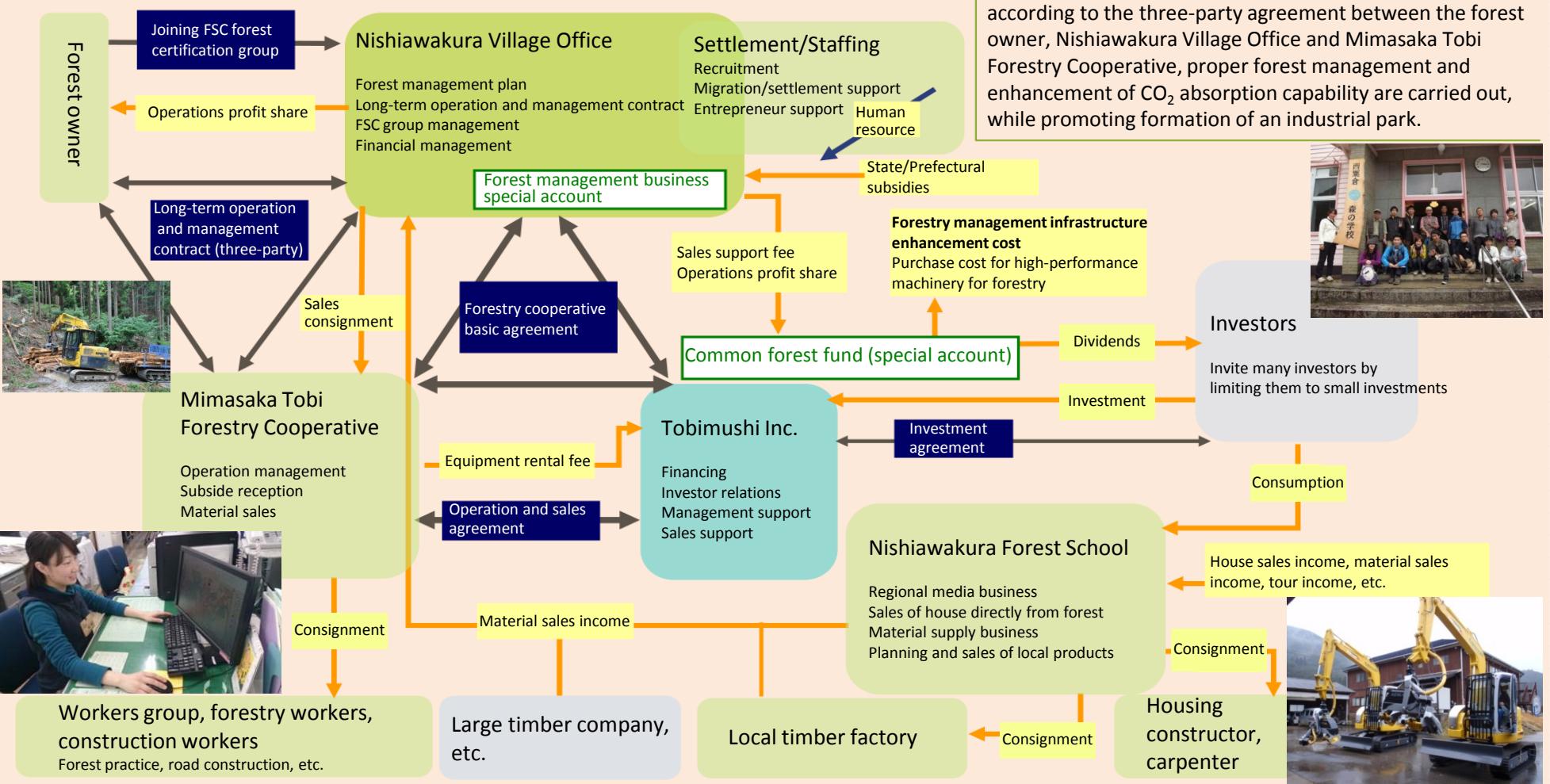
## Roles of government, citizens, corporations and other organizations



## Overview of characteristic efforts

### Nishiawakura Village Centurial Forest Project

With the long-term operation and management consignment according to the three-party agreement between the forest owner, Nishiawakura Village Office and Mimasaka Tobi Forestry Cooperative, proper forest management and enhancement of CO<sub>2</sub> absorption capability are carried out, while promoting formation of an industrial park.



## Contact

Eco-Model City Promotions, Industry and Tourism Division, Nishiawakura Village Office  
Tel.: 0868-79-2111

## Overview of the city

- Population: 515,865 (as of Aug. 1, 2015)
- Area: 429.37 km<sup>2</sup>
- Land use : 39% Forest, 35% Agricultural land, 21% residential land
- Main industries: Tertiary industry, such as wholesale, retail, service, restaurant and hotel

## Vision

Aiming for an environment compatible with the economy

**“Matsuyama, an eco-model city that people are proud of”**

Promotion of Matsuyama Sunshine Project

Promotion of Smart Community

Promotion of Compact City Where People Enjoy Walking

Promotion of Local Recycling System

➔ Create a sustainable low-carbon society, and value human resource development

## Roles of government, citizens, corporations and other organizations

### Promotion system

In order to solve diverse environmental issues, we promote our projects comprehensively and systematically, through cooperative efforts of the citizens, corporations, universities, NPOs and government.



### Promotion organizations

Eco-Model City Matsuyama Promotion Conference

Industry, academia, citizens and government work together as partners aiming to realize a low-carbon society.

Promotion Conference 21 board members

Steering Committee 32 members

Working Group

Supporters' Club 52 members

As of August 1, 2015

## Overview of characteristic efforts

Aiming for an environment compatible with the economy—“Matsuyama, an eco-model city that people are proud of”

### Promotion of Matsuyama Sunshine Project



The number of solar power generation systems subsidized by Matsuyama City is 10,506 or 45.12 MW (cumulative, as of the end of March 2015), the largest among heartland cities.

Anti-warming and creation of industry

### Promotion of Smart Community



Feasibility study of introduction of renewable energy in Nakajima island and Muzukijima island  
⇒Preparation of a master plan

Energy management

### Promotion of Compact City Where People Enjoy Walking

Establishment of Urban Design Center Matsuyama (UDCM)



To attract visitors and settlers, and to be compact

### Promotion of Local Recycling System



Goods such as furniture disposed of by households are collected, screened and repaired to be resold to citizens at a reasonable price.

Recycling and nature-friendly society

Eco-leader dispatch project



Matsuyama Recycling Center

Environmental education facilities



Matsuyama City Environment Learning Center

Human resource development



Hands-on environment bus tour



## Overview of the city

- Population: 3,657 (as of the end of Mar. 2015)
- Area: 236.51 km<sup>2</sup>
- Land use: 91% forest, 0.7% rice field, 0.6% field for other crops
- Main industries: Forestry, construction industry

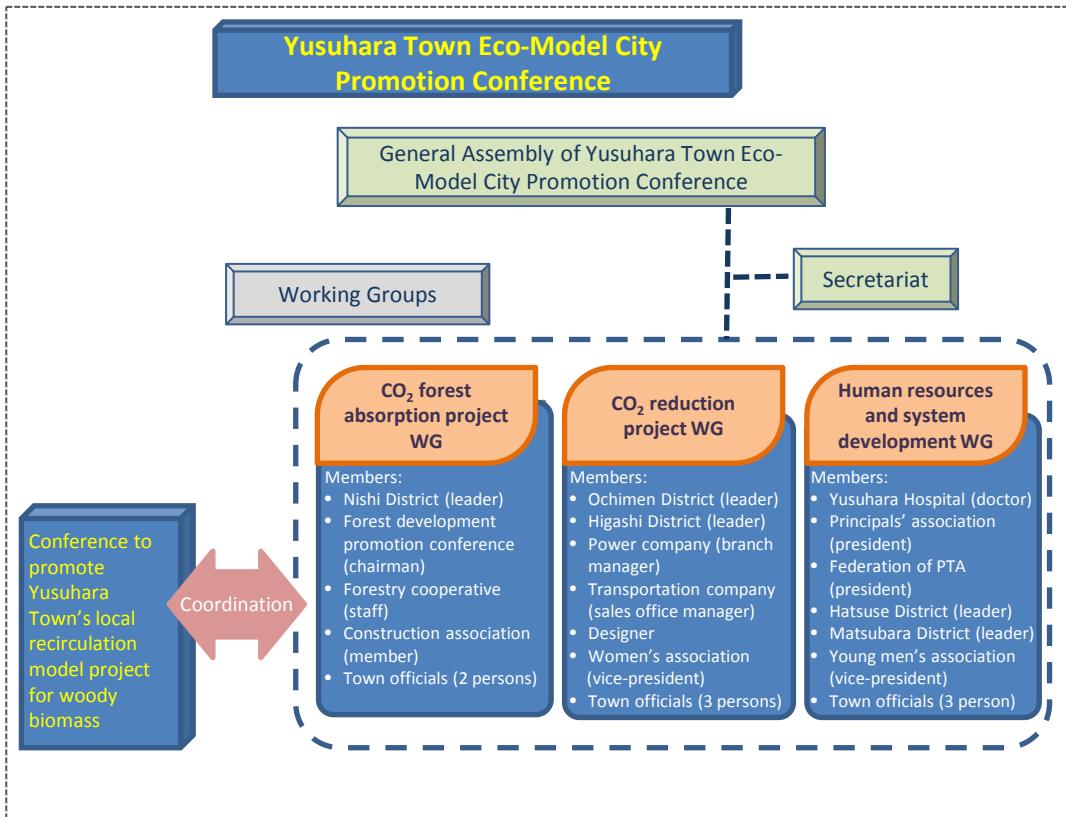
## Vision

- Create a low-carbon town friendly to life, through efforts leveraging natural energy such as forest, water, wind and sunlight.

### Target

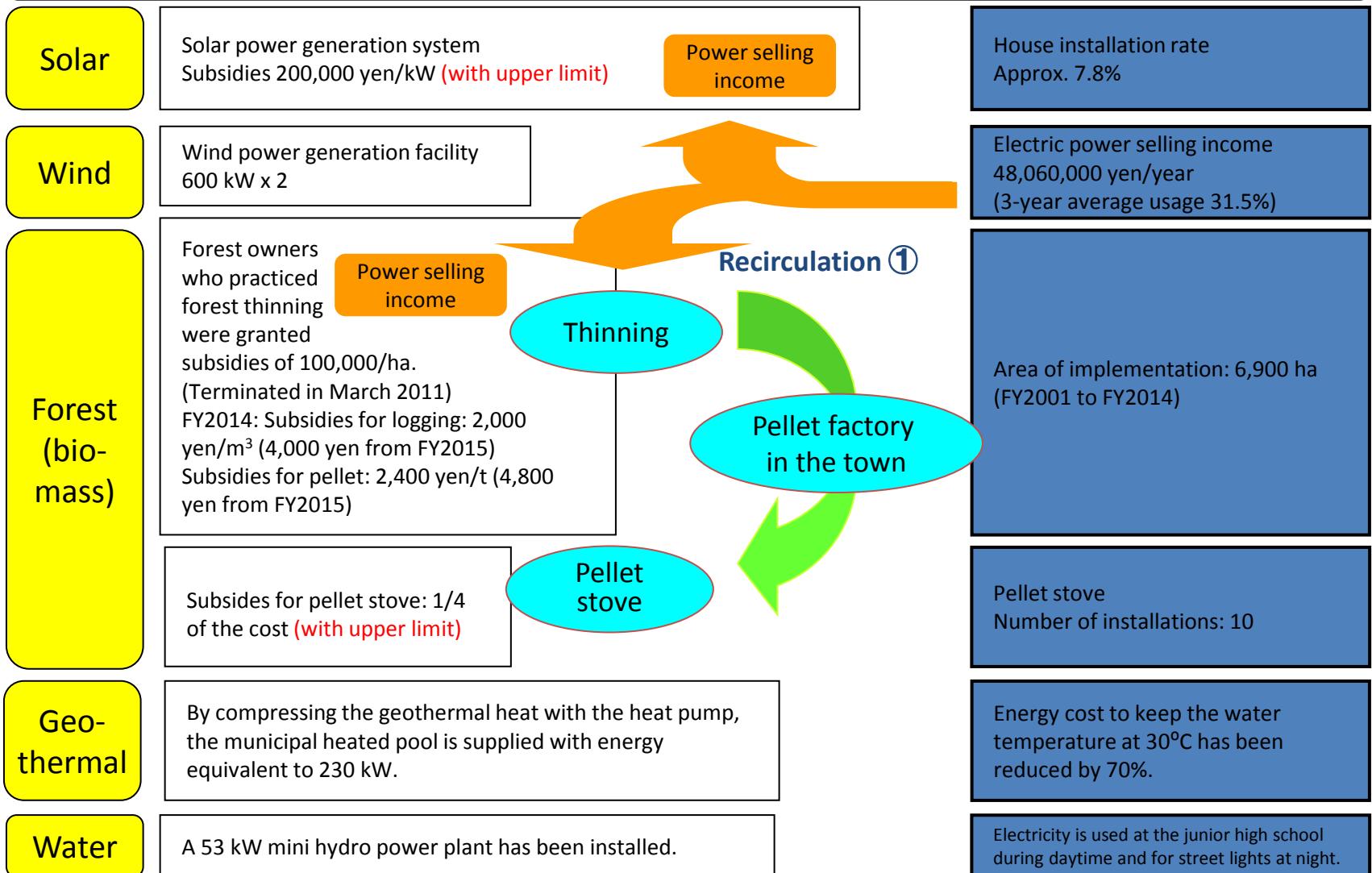
- Reduce GHG emissions by 70% and increase GHG absorption by 4.3 times by 2050 (compared to 1990).
- Achieve energy self-sufficiency rate of more than 100%, by using local resources.

## Roles of government, citizens, corporations and other organizations



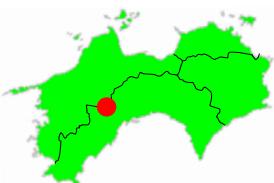
## Overview of characteristic efforts

### Best mix of renewable energy sources and two kinds of recirculation



## Contact

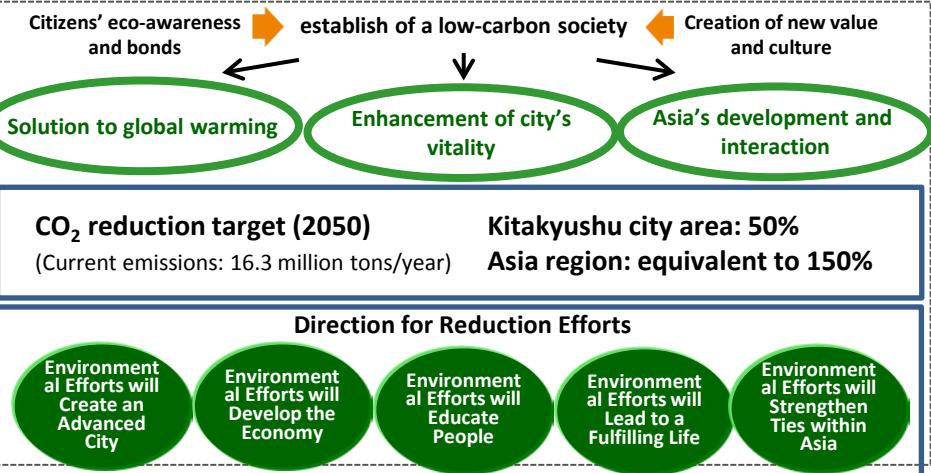
Eco-Model City Promotion Office, Environment Maintenance Division, Yusuhara Town Office  
 1444-1 Yusuhara, Yusuhara Town, Takaoka District, Kochi Prefecture 785-0695  
 Tel.: 0889-65-1251 Fax: 0889-65-0221



## Overview of the city

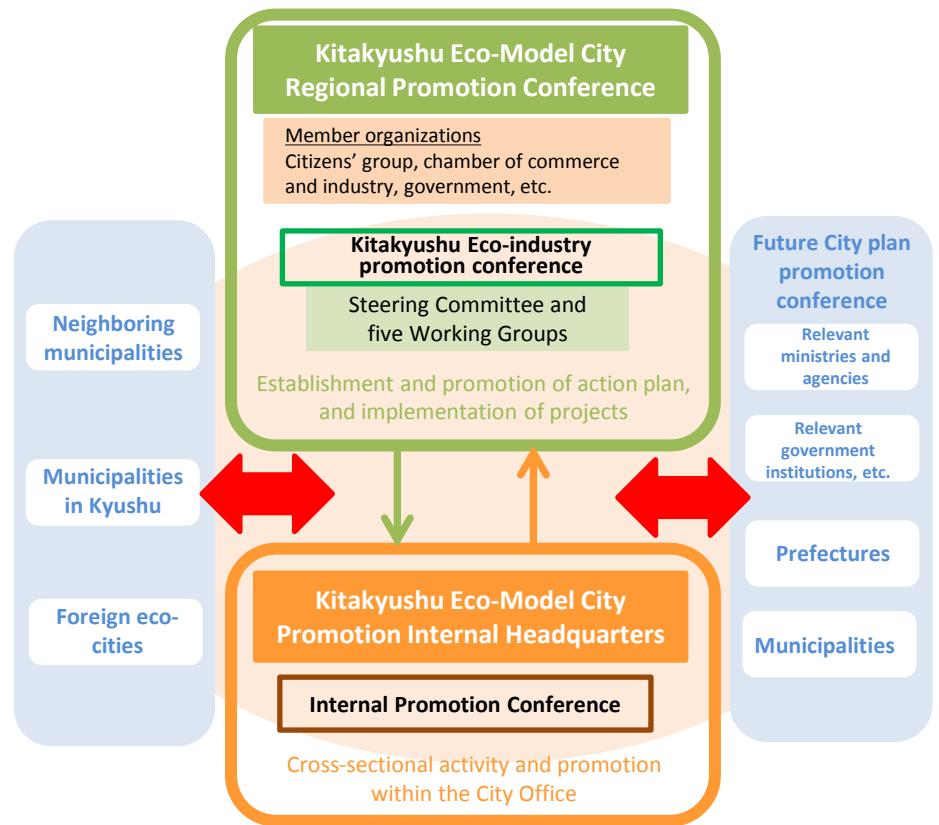
- Population: 959,000 (as of Aug. 1, 2015)
- Area: 491.95 km<sup>2</sup> (as of Oct. 1, 2014)
- Land use: forest (42.7%), residential land (14.0%), industrial land (7.0%), agricultural land (6.0%), commercial land (3.2%) (as of March, 2011)
- Main industries: Manufacturing industry, core manufacturing industry, automotive industry, electric components and devices industry, environment and energy industry, etc.

## Vision



## Roles of government, citizens, corporations and other organizations

### Promotion system



## Overview of characteristic efforts

### Kitakyushu Regional Energy Base Project

#### Forming an Energy Base for Stable and Cost-efficient Energy Supply through Low-Carbon Strategies

- Creates a city in which the lives of local residents are stable and businesses can conduct activities and achieve targets
- Forms a city that location of choice for many companies
- Builds a city that contributes to the success of both Kitakyushu and the broader region of Kyushu

Kitakyushu aspires to be a base that supports regional growth and discovers solutions to environmental/energy problems.



### Kitakyushu Asian Center for Low Carbon Society

The collective environmental technologies of the City of Kitakyushu and Japan are used to promote a "Low-Carbon Asia"

Asian Center for Low Carbon Society Established in June 2010

The Center is jointly operated by the city of Kitakyushu, the Environmental Cooperation Center of the Kitakyushu International Techno-cooperative Association (KITA), and the Kitakyushu Urban Center of the Institute for Global Environmental Strategies (IGES). It aims to reduce CO<sub>2</sub> emissions by 150% throughout Asia by 2050 (compared to 2005 levels in Kitakyushu).

#### Kitakyushu: Economical benefits

- Revitalization of local economy
- Creation of new businesses learning from Asia

#### Asian cities: Social Benefits

- Improvement of quality of life
- Solution to environmental issues
- Improvement of energy efficiency



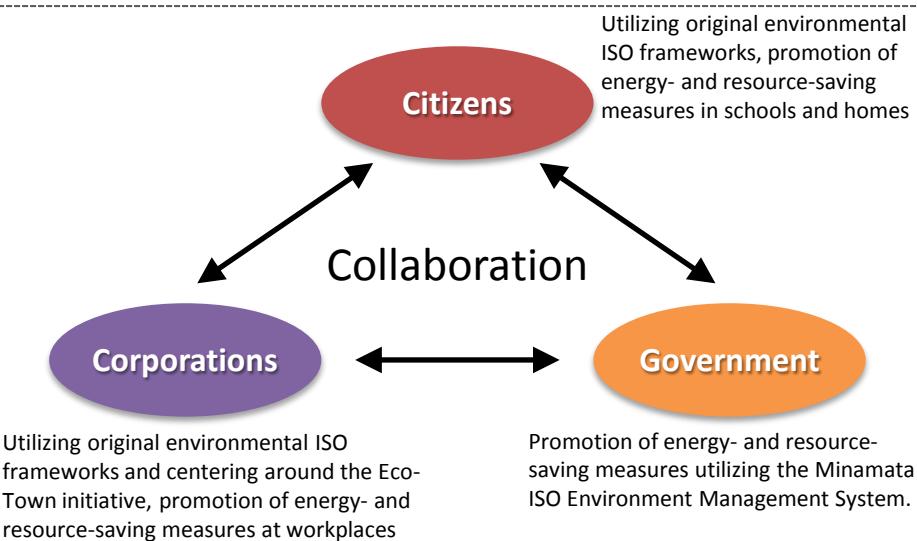
## Contact

Attn: Oda and Tsutsumi, Global Warming Response Division, Environment Bureau, City of Kitakyushu  
Tel.: 093-582-2286 Fax: 093-582-2196 E-mail: kan-ondanka@city.kitakyushu.lg.jp

## City Overview

- Population: 25,707 (as of Oct. 1, 2014)
- Area: 162.90 km<sup>2</sup>
- Land use: 6.1% agricultural land, 74.5% forest, 3.0% residential land
- Major industries: Manufacturing; medical care, welfare, nursing care

## Roles of government, citizens, and corporations



## Vision

### Revitalization of the local community

#### Previous examples:

Trash separation, Eco-Town, natural environment preservation, and others...

Citizens have high environmental awareness and act accordingly

Eco-Model City Initiatives

Enhanced environmental measures

Revitalization of local economy

Domestic and international interest and attention

Improvement of citizens' awareness  
Cultivation of human resources

Development of eco-industry  
Creation of new jobs

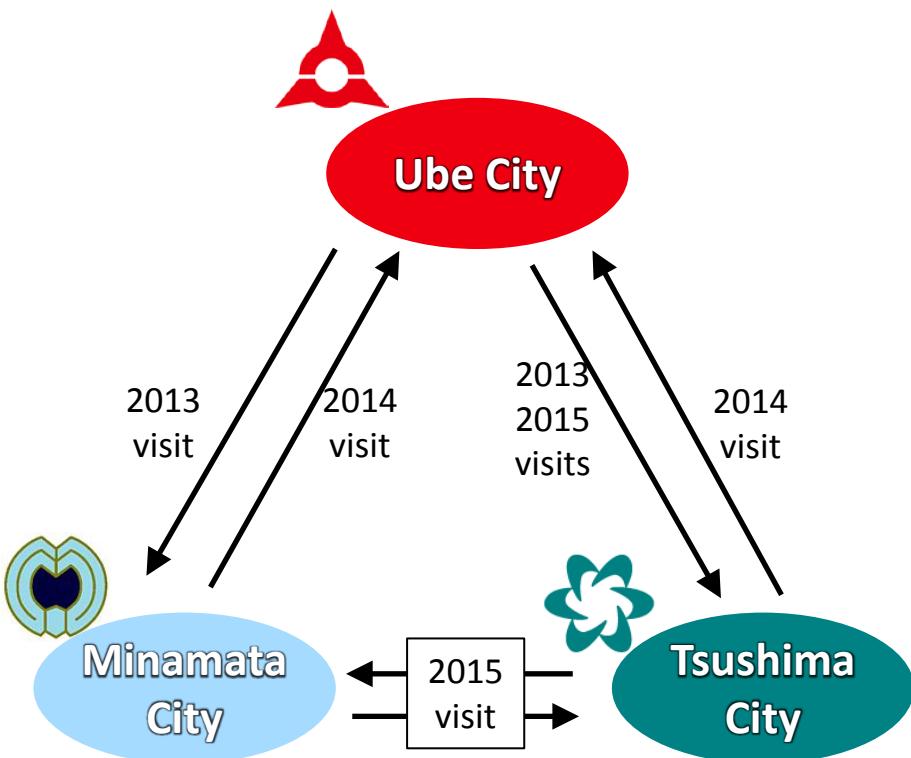
Improvement of citizens' lives

Revitalization of local economy

Aiming for a sustainable society compatible with the environment and economy

## Overview of characteristic efforts

### Study tour



Ube Industries (anti-pollution measures taken via cooperation between industry, government and academia)



Marine debris on the shore of Tsushima City; plastic liquidation factory



### What is the study tour?

As municipalities at the forefront of advanced environmental initiatives, Ube City, Tsushima City, and Minamata City are working together to cultivate human resources in order to realize a sustainable society, as well as promoting efforts to become low-energy cities and preserve biodiversity.

## Contact

Environment Division, Welfare and Environment Department, Minamata City  
1-1-1 Jinnai, Minamata City, Kumamoto Prefecture 867-8555 Tel.: 0966-61-1612 Fax: 0966-63-9044 E-mail: [ecomodel@city.minamata.lg.jp](mailto:ecomodel@city.minamata.lg.jp)

## Overview of the city

- Population: 55,000
- Area: 205 km<sup>2</sup>
- Land use: 53% agricultural land, 16% forest, 31% other
- Main industries: Agriculture, forestry, fishing, tourism, etc.

## Vision

### 1. Social system unique to the island

Development of a low-carbon society unique to the island leveraging local resources such as sugar canes

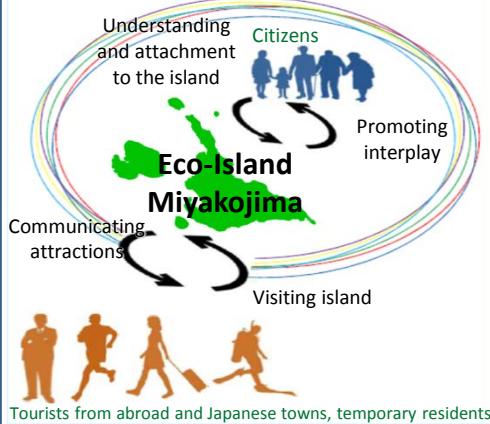
### 2. Citizens' eco-action

Aiming to be an Island of unity that connects people's hearts through citizens' activities to create beautiful island including eco-actions for CO<sub>2</sub> reduction

Branding of tourism resources

### 3. Promotion of tourism and

Promotion of tourism and interplay by formation of Eco Island Miyakojima



## Roles of government, citizens, corporations and other organizations

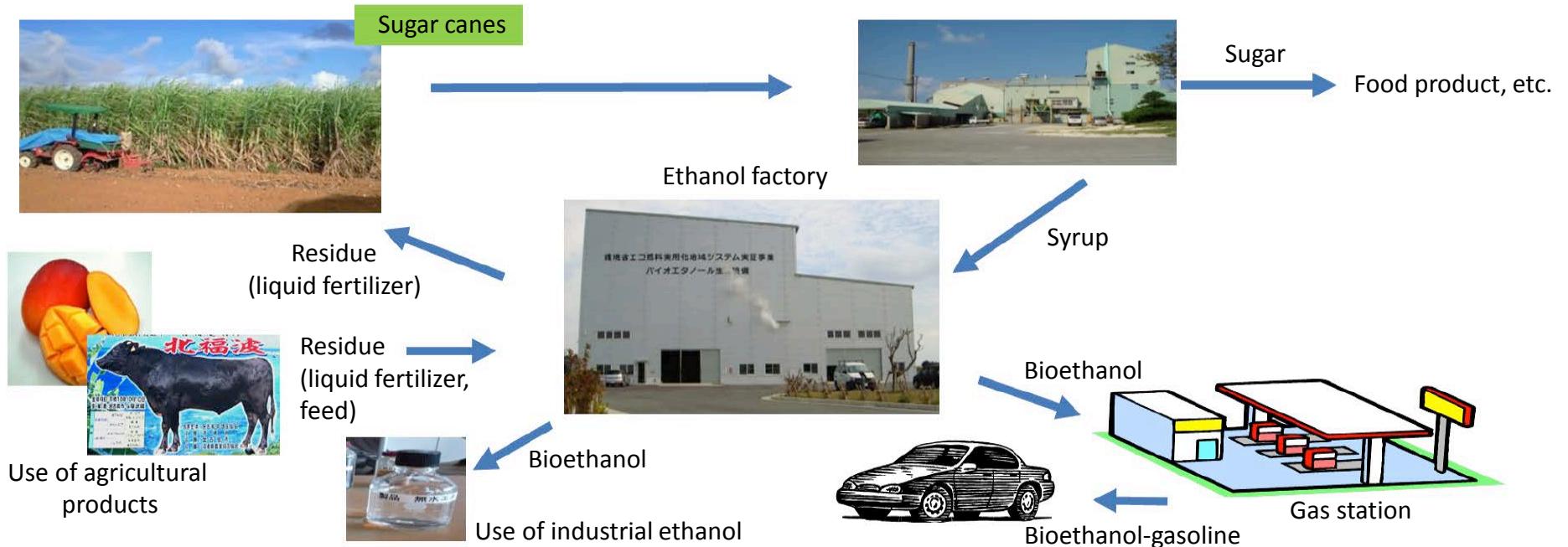
### Eco-Island Promotion ordinance



## Overview of characteristic efforts

We aim for a recycling society by making cascading use of sugar canes, the primary produce of the island. For example, we aim to use bioethanol that is made from the residue generated in the process of sugar refining from sugar canes, and return the residue generated during the process of ethanol production to the soil.

### Miyakojima Bioethanol Project



- ❑ Formation of resource-recycling low-carbon society leveraging sugar canes
- ❑ Revitalization of industries by adding value to sugar canes, which is the primary industry of the island

## Contact

Eco-Island Promotion Division, Planning and Policy Department, Miyakojima City, Okinawa Prefecture  
 186 Hirara Nishizato, Miyakojima City, Okinawa Prefecture 906-8501  
 Tel.: 0980-72-3751 Fax: 0980-72-3795 E-mail: ts.ecotown@city.miyakojima.lg.jp

## Overview of the city

- Population: 7,632 (as of May 1, 2015)
- Area: 137 m<sup>2</sup>
- Land use: 78% forest
- Main industries: Agriculture, forestry, tourism

## Vision

Local development leveraging abundant **geothermal** and **forests**

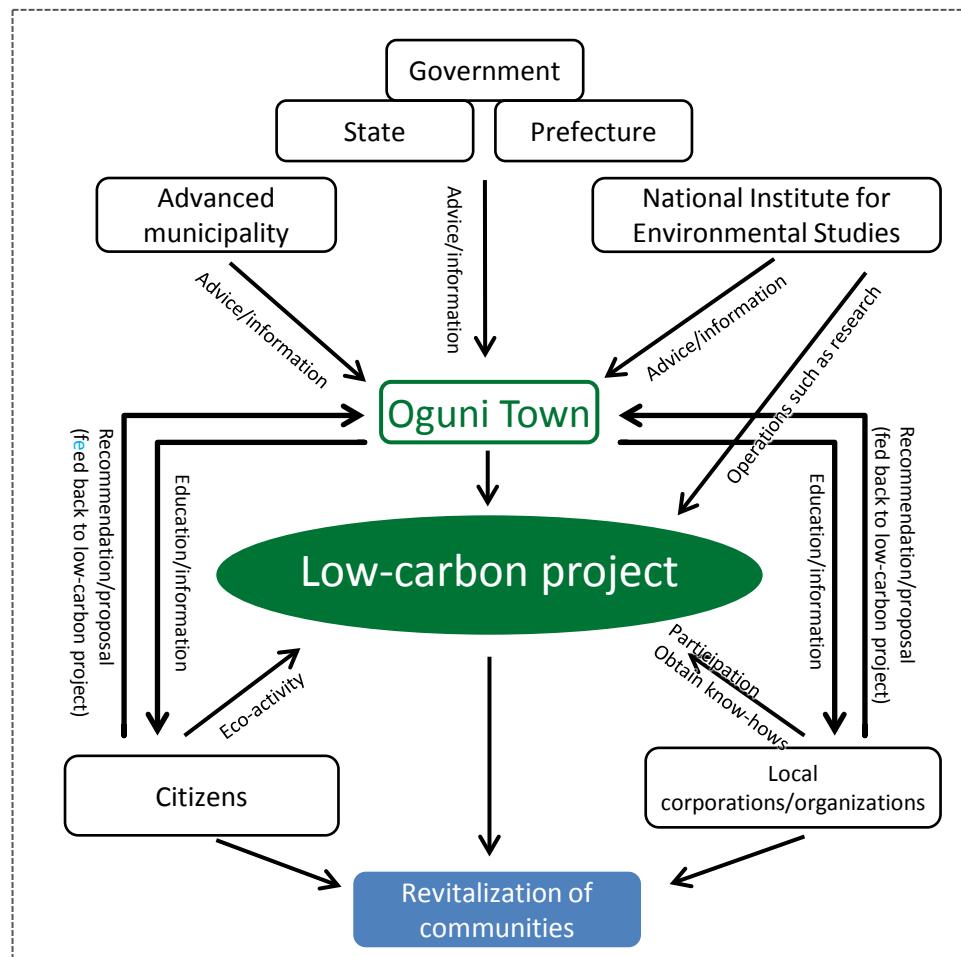


Local development

Agriculture Forestry Tourism

(Agriculture and forestry town plan leveraging geothermal and biomass)

## Roles of government, citizens, corporations and other organizations



## Overview of characteristic efforts



### Geothermal lumber drying facility

This facility uses **geothermal** upwelling from the ground to dry lumber. Currently 14 lumber driers have been constructed. This **ecological** method, requiring no fossil fuel, allows timber to dry slowly compared to other methods, thus putting less burden on the timber and achieving a true color and luster.

### Traditional geothermal drying cabin



← Applying this method ...



Geothermal hot-water supply



Geothermal kotatsu, a leg warmer



Geothermal heater

In Waita Area, Oguni Town, people have traditionally made use of **geothermal** for various purposes such as **cooking, heating and hot-water supply**, and it has become rooted in their local life. This **geothermal drying cabin** is used for drying washed clothes and, at the same time, for drying crops.

## Contact

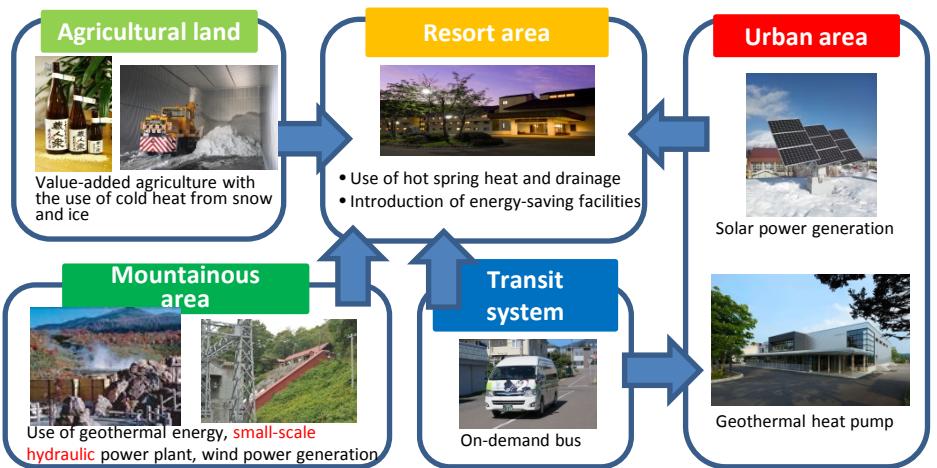
Daisuke Hasebe, Assistant Section Chief, Policy Division, Oguni Town Office  
Tel.: 0967-46-2118 Fax: 0967-46-2368 E-mail: kankyo@town.kumamoto-oguni.lg.jp

## Overview of the city

- Population: 4,886 (as of the end of Jun. 2015)
- Area: 197.13 km<sup>2</sup>
- Land use: 46.8% forest, 20.2% wilderness, 14.4% agricultural land, 1.2% residential land
- Main industries: Tourism, agriculture

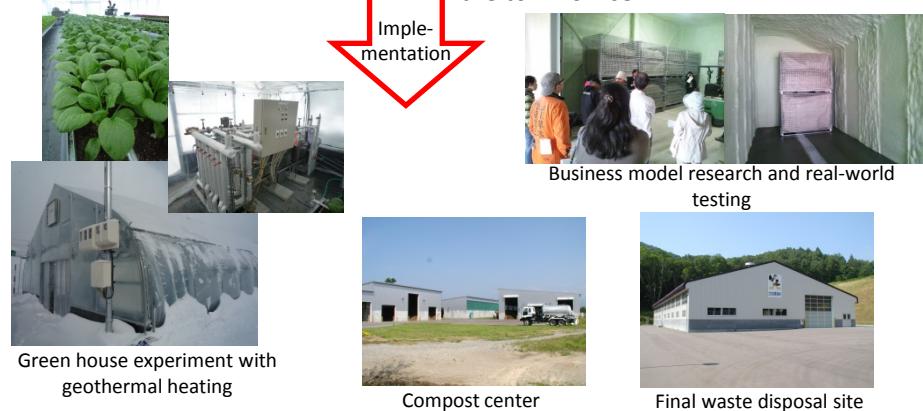
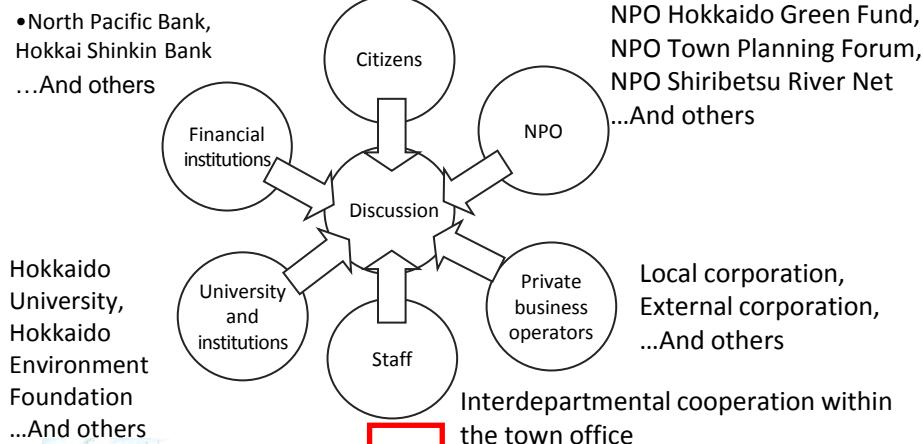
## Vision

### International eco-resort city Niseko

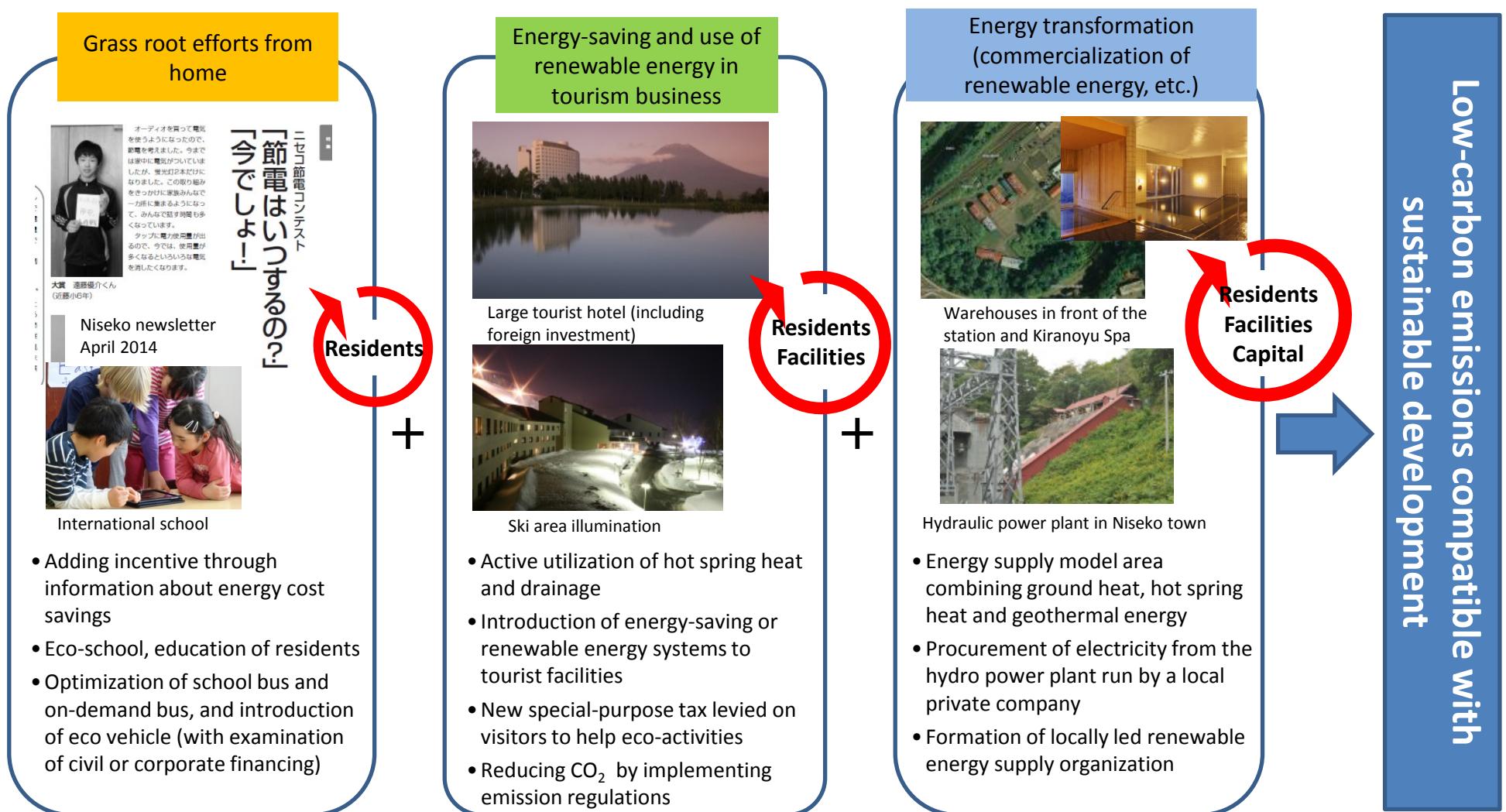


## Roles of government, citizens, corporations and other organizations

### The concept behind the promotion system and business promotion strategy



## Overview of characteristic efforts



## Contact

Eco-Model City Promotion Officer, Planning and Environment Department, Niseko Town Office  
47 Fujimi, Niseko-cho, Abuta-gun, Hokkaido 048-1595  
Tel.: 0136-44-2121 Fax: 0136-44-3500 E-mail: [kankyo-e@town.niseko.lg.jp](mailto:kankyo-e@town.niseko.lg.jp)



# Ikoma Eco-Model City [Ikoma City, Nara]

## Overview of the city

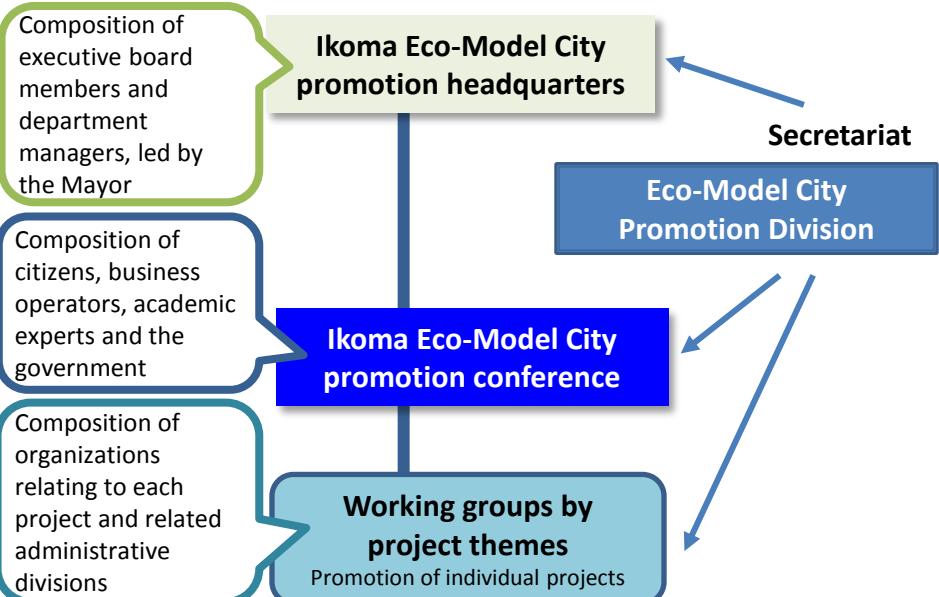
- Population: 120,967 (as of Jul. 1, 2015)
- Area: 53.15 km<sup>2</sup>
- Land use: 32.8% forest, 35.3% residential land, 23.2% agricultural land, 8.7% other
- Main industries: Tertiary industry

## Vision

We set our goals to be “a recycling-oriented low-carbon residential city constructed through collaborative efforts of citizens, businesses operators and the government.” To realize this vision we promote the following five models:

1. Generation recycling model
2. Low-carbon and resource recycling model
3. Environment, energy and agriculture recycling model
4. Citizens-businesses operators -government collaboration model
5. Low-carbon businesses and new community services recycling model

## Roles of the government, citizens, corporations and other organizations



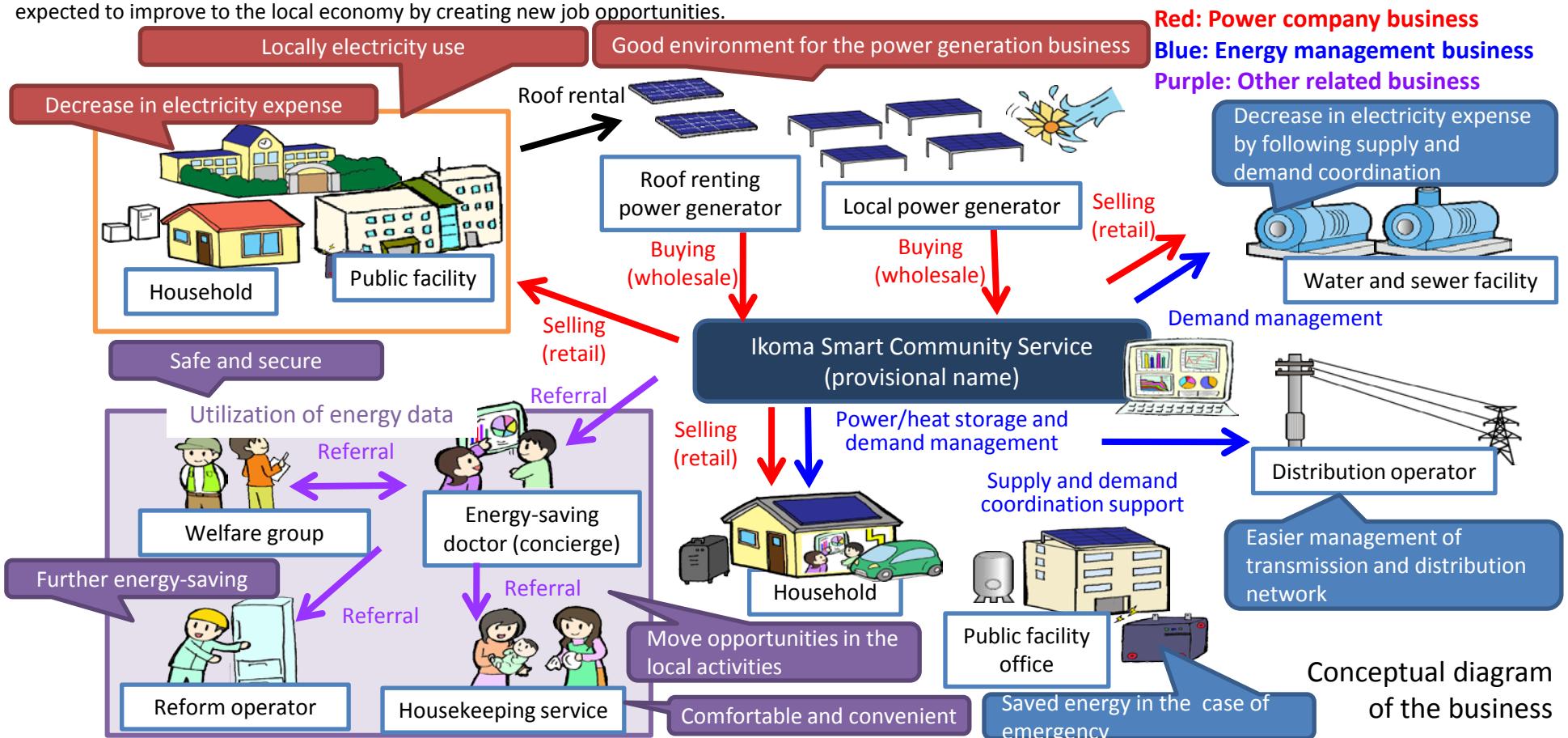
The Ikoma Eco-Model City promotion headquarters and the Ikoma Eco-Model City promotion conference have been established. The government takes charge of overall follow up on the projects, the businesses provides professional know-how, academia including universities contribute to the projects with leading knowledge, and the citizens support the project as the core members. Four key entities – businesses operators, the government, academia and citizens -- collaborate with each other to realize the future vision.

## Overview of the characteristic efforts

### Consideration to the establishment of the local power company (PPS)

#### Establishment plan of a community-based local energy company

A local public company invested by the city, citizens and business operators will develop the “local production for local consumption” model by selling locally generated electricity to the citizens and business operators. Also, by monitoring electric power consumption, the company is going to provide things such as monitoring service and preventive care for senior citizens, support for shopping and child rearing, and the transmission of governmental information. It is also expected to improve to the local economy by creating new job opportunities.



## Contact

Eco-Model City Promotion Division, Environment and Economy Department, Ikoma City Office

8-38 Higashi Shinmachi, Ikoma City, Nara Prefecture 630-0288 Tel.: 0743-74-1111 (Ext. 375) Fax: 0743-75-8125