

# Saitama Eco-Town Project

## Saitama Prefecture



### Background

Since the Great East Japan Earthquake and the accident at the Fukushima No. 1 nuclear power plant in March 2011, resolving the supply shortages of electricity and other energy sources has become a major challenge for Japan. In Saitama Prefecture rolling blackouts were conducted and fuel shortages occurred, causing anxiety for local citizens.

### Purpose of Project

We intended to establish a local-production-for-local-consumption model of energy and spread the approach across the country, under the banner of reshaping Japan from Saitama. We are aiming to promote *so-ene* (making energy) energy production and enhance *sho-ene* (saving energy) energy-saving thoroughly through a variety of measures. As we implement the project, we are also aiming to promote local revitalisation.

### Outline of Project

To implement the project progressively, we selected the city of Honjo and the city of Higashimatsuyama as model cities in fiscal 2012. One priority area (existing residential area where smart house functions would be introduced in existing homes intensively) was designated in each of the two model cities. In the designated areas, we offered subsidies to help residents install a home energy management system (HEMS) and solar power equipment, and refurbish their homes to add energy-saving features. We also introduced a community currency to support their purchases of eco-friendly home appliances.

In addition, we implemented an "initiative project" in the city of Chichibu, the city of Sakado and the town of Yorii. Specifically, we supported programmes such as biomass-based power generation, community revitalisation using proceeds from the sales of electricity generated by solar power facilities at apartment complexes, and the introduction of solar electricity to municipal offices so they can be used as bases in times of disasters. From fiscal 2015, programmes will be carried out in the two new model cities of Tokorozawa and Soka, and a mini eco-town programme will be implemented in 19 residential areas in the prefecture in cooperation with the home builders that developed the areas.

### Features and Advanced Aspects

- ◆Existing communities are revamped, rather than creating a totally new community, to achieve an energy self-sufficiency rate of 22.5%. (In other words, this means that the amount of energy procured from outside the areas is reduced by 22.5%, through *so-ene* and *sho-ene* measures.)
- ◆Research is conducted on the needs at each household in the model areas, and support is provided accordingly to reflect residents' viewpoints.
- ◆Local economic revitalisation is pursued through the participation by a variety of businesses.
- ◆An eco-friendly shelter was developed, and local shopping districts were revitalised through the introduction of eco-friendly systems.

## Effects of Project

### Planning Stage

Initially, we had considered creating a community-building model covering not only residential districts, but also business offices, factories and commercial facilities. As we pushed ahead with the project, we decided to target existing residential areas as "a model for changing Japan," or "a model applicable to any area in Japan," and to promote the project in the residential districts and surrounding areas. There has been no other programme designed to revamp existing areas in Japan, so we did not set a concrete goal. During the course of implementing our project, we tried to create an appropriate model.

### Actual Effects

We examined the outcomes of the first three years (fiscal 2012-2014) and confirmed following results in the model areas that covered a total of 880 households.

- ◆The proportion of residents who participated in the project came to 44.0%. The penetration rate for solar power equipment stood at 18.4%, triple the level for the entire prefecture. Of all works related to the project, 92.7% were completed by companies in Saitama Prefecture.
- ◆The energy self-sufficiency rate came to 22.5%.
- ◆In the model cities, various local community revitalisation models were produced to resolve regional problems based on eco-friendliness. In Honjo, a gym was picked to serve as a large-scale evacuation facility and was equipped with a solar power system. The move was taken so that the city can host disaster evacuees, after it accepted passengers of a Shinkansen train that was suspended in the wake of the Great East Japan Earthquake. In Higashimatsuyama, a programme was implemented, in which points were given to residents in accordance with the amounts of electricity

consumption they reduced and the points were exchanged for the corresponding amounts of a community currency that can be used at local shops.



A sun-tracking solar power system  
(Honjo City)



A solar power system installed in front of Tobu Railway Co.'s Higashimatsuyama Station

## Problems and Responses

### ◆Before Project Implementation

#### Challenge

The establishment of concrete models.

#### Problems and Responses

To implement the eco-town project, we decided to improve existing residential districts, instead of constructing new residential complexes, so that our project will become a model that can be applied in any municipality in the country. We then solicited model municipalities from all cities, towns

and villages in the prefecture. Through discussions with the two selected cities of Honjo and Higashimatsuyama, we were able to produce "a local-production-for-local-consumption" model for energy in existing residential districts based on collaboration among the administration, residents and businesses."

### ◆After Start of Project

#### Challenge

Improving the participation rate among residents.

#### Problems and Responses

To establish "a local-production-for-local-consumption" model for energy in existing residential districts based on collaboration among the administration, residents and businesses as "a model for changing Japan," or "a model applicable to any area in Japan," we had to seek the participation of as many residents as possible. We thoroughly understood the needs among residents in the model areas by trying to approach them through all possible means such as visiting each home, offering seminars, and arranging related tours and events, on top of setting up meetings to explain the project. As there were a wide range of needs among residents, including the introduction of solar power systems and improvements in insulation at houses, we, among other things, came up with a programme in which measures are taken following proposals from participating businesses.

### **Outlook**

The project was expanded from fiscal 2015, with the city of Tokorozawa and the city of Soka newly chosen as model cities. We are trying to enhance the universality of our models by conducting the initiative in municipalities having different characteristics. In addition, we picked 19 residential areas for the "mini eco-town" project, in cooperation with four housing companies that developed the areas. Using the companies' business know-how

and marketing power, efforts to convert the areas into eco-friendly communities were launched as we are striving to expand the project across the prefecture. Although we are working on these measures, we are still halfway toward disseminating our eco-town models nationwide based on the results in the first three years to fiscal 2014.

### **Reference**

<http://www.pref.saitama.lg.jp/a0503/kiseki.html>

\*Japanese

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