

## Japan: Cosmo-Town Yumemino Saizu Licht paadje

### BIODATA

<b>PV community name:</b>	Cosmo-Town Yumemino Saizu Licht paadje
<b>Kind of urban area:</b>	Residential – urban
<b>Main building type in community:</b>	Houses - single houses
<b>New/Retrofit/Added:</b>	New district/community – building integration
<b>Type of project:</b>	Commercial project
<b>Start of operation:</b>	Year 2003
<b>City, state, etc.:</b>	Matsubushi, Saitama
<b>Country:</b>	Japan
<b>Latitude:</b>	N35 55' 34"
<b>Longitude:</b>	E139 49' 17"

### PV SYSTEM CHATACTERISTICS

<b>Total PV power:</b>	180 kW
<b>Number of houses/buildings:</b>	88 houses
<b>PV power per unit:</b>	2 kW/house
<b>Energy yield per year:</b>	-
<b>Main PV system type:</b>	Grid-connected - demand side
<b>Main PV application type:</b>	Inclined roof – integrated: PV roof tiles
<b>Main PV module type:</b>	PV roof tile
<b>Main PV cell type:</b>	Amorphous Si
<b>PV module manufacturer/brand:</b>	Kubota corporation
<b>Inverter manufacturer/brand:</b>	Kubota corporation
<b>Investment for PV systems:</b>	800 000 – 850 000/kW

### OWNERSHIP

<b>Building owner:</b>	Inhabitant
<b>PV owner:</b>	Inhabitant
<b>PV energy user:</b>	Inhabitant



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## PV COMMUNITY DESCRIPTION

### PV Community Brief

Yumemino Licht paadje is located in Matsubushi-town, Saitama.

A development of the area was planned and promoted by the Urban Renaissance Agency of Japan (the UR). Hakushin corporation proposed a concept of 'Earth friendly town' and was allowed to develop and sell 90 house compartments in the area.

Taking advantage of their experience of 'Kiyomino PV town', Hakushin promoted developing a PV community, e.g. all houses equipped with PV system. In addition, all houses were all-electric in this community.

### Grid issue

To avoid negative influences against a grid network caused by a high-density of PV system installation in a limited area, a precise negotiation with a utility company (Tokyo Electric Power corporation) was implemented.

The electricity distribution line in the area was designed and constructed by the utility company, and each transformer was set for four houses, e.g. four PV systems.

### Urban planning and architectural issues

To create a well-designed appearance of the houses and a harmonized streetscape as a community, PV roof tiles were selected for the PV systems.

It was decided that roofing geometry of all houses be designed as a gable roof and PV modules were installed on the south-face of the roof. Based on the design of the roof, an energy consumption pattern and a price level of house etc. a capacity of PV system was standardized as 2kW.

At the beginning of development, it was planned to develop built-for-sale houses equipped with PV and all-electric facilities. However, many customers had a great deal of empathy for their plan and concept to coincide with release, most of the compartments was sold before building houses.

### Economic / financial issues

The target was to reduce the price level of the houses while keeping a quality and performance of houses.

Due to the PV system capacity and the roof geometry design for maximizing amounts of PV electricity the house price increased, the capacity of PV system was then limited to 2kW.

The PV system received a governmental subsidy, available through Japan's residential PV program. After starting operation, a net-metering scheme was applied so that surplus PV is traded between the inhabitant and the utility company, at the same price of the residential electric tariff.

### Other remarks

This 'Yumemino' project was implemented by taking advantage of experiences of 'Kiyomino' project.

In this project, an all-electric house is standardized and all houses are equipped with a high-efficiency electric water heater, called "Eco-Cute", as well as PV system. Then, the project was attention-getting as a high efficiency all-electrified community and contributed to increasing publicity of the project companies.

## COMMUNITY INFORMATION

**Project leader company:** Hakushin Co., Ltd. and Urban Renaissance Agency

**Other project company:** Kubota corporation

**Project's www:** <http://www.hakushin.com>

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