

France: Les Hauts de Feuilly

BIODATA

PV community name:	Les Hauts de Feuilly
Kind of urban area:	Residential – urban
Main building type in community:	Houses - Attached houses & Multi-story apartment buildings
New/Retrofit/Added:	New district/community – building integration
Type of project:	Commercial project
Start of operation:	Year 2006
City, state, etc.:	Saint-Priest, Grand-Lyon
Country:	France
Latitude:	N45 42' 20"
Longitude:	E4 56' 22"

PV SYSTEM CHARACTERISTICS

Total PV power:	25 kW
Number of houses/buildings:	22 (19 attached houses and 3 multi-story apartment buildings)
PV power per unit:	1 or 2 kW/house
Energy yield per year:	877 kWh/kW (calculated)
Main PV system type:	Grid-connected – supply side
Main PV application type:	Inclined roof – integrated: PV roof tiles
Main PV module type:	PV roof tile
Main PV cell type:	Crystalline silicon - multi
PV module manufacturer/brand:	Photowatt/IMERYS TC roof tile
Inverter manufacturer/brand:	SMA
Investment for PV systems:	10 000 EUR/house

OWNERSHIP

Building owner:	Inhabitant
PV owner:	Inhabitant
PV energy user:	Utility



COPYRIGHT: Grand-Lyon Local Energy Agency

PV COMMUNITY DESCRIPTION

PV Community Brief

Saint-Priest is a municipality of 40 000 inhabitants located in the Grand-Lyon conurbation, the second largest in France, with a mix of large commercial areas and industry. Les Hauts de Feuilly is a new housing district of 27 700 m² of useful floor area created by the Grand-Lyon Community in 1998 in order to develop a new form of housing based on high quality architecture and urban living. This project includes the construction of 117 individual homes and 81 dwellings in 6 multi-apartment buildings. At the very beginning of the project, PV was not part of the development scheme. Environmental issues were first discussed when one shareholder of the SERL, the public company in charge of the commercialisation of the land, raised the idea of using an environmental management method for the construction of this project. France-Terre, one developer selected for the construction of this project, chose then to install photovoltaic systems, which was an innovative alternative to solar hot water systems in urban and collective housing projects.

Grid issue

In France, in order to benefit from the feed-in tariff for the totality of the energy produced by a PV system, the utility has to create an additional connection point to the grid dedicated to the PV system. For this new development, the utility and the developer just first created the connection point to the grid to supply each house with electricity as done for regular development but did not anticipate to fact that an additional connection point to the grid was necessary for each PV system. This was done at a later stage of the project, once the inhabitants moved into their homes, which delayed the commissioning of all PV systems.

Urban planning and architectural issues

In order to offer the same quality to each house owner, the developer of this project, France-Terre, decided to integrate a 1 kW PV system in the roof of each house. But, due to the fact the urban planning was done before knowing that this development will be equipped with PV, some PV systems are installed on roofs that do not face south.

France-Terre also initially planed to build each roof with red clay tiles which is the traditional way of building roofs in Lyon. But, in order to improve the aesthetical integration of each PV system, the promoter finally designed each house with dark flat tiles that are compatible aesthetically and technically with the chosen PV tile.

Economic / financial issues

The price of each PV system was approx. 10 000 EUR including VAT, which represents less than 5% of the total price paid by private owners for each house, approx. 250 000 EUR. In order to help the promoter to correctly sell the houses and private owners to buy them, each PV system was funded by the European Commission thanks to the use of an innovative PV product, the IMERYS TC PV tile, the French National Agency for Environment and Energy Savings, ADEME, and the Rhone-Alps Regional Council. The final over-cost of each PV system was for private owners finally less than 1% of the total price of the delivered house.

At the completion of the project in 2006, the applicable feed-in tariff for PV systems was 0,14 EUR/kWh. But fortunately for the house owners, due to a delay in the official connection of each PV system to the grid, none of the PV systems were commissioned before summer 2006, when the new feed-in tariff was released by the government. Finally, as the PV systems are integrated into the roof, the applicable feed-in tariff for this project will be 0,55 EUR/kWh for a guaranteed period of 20 years.

Other remarks

-

COMMUNITY INFORMATION

Project leader company: SERL, www.serl.fr (company in charge of urban planning)

Other project company: Imerys TC, www.pv-starlet.com (PV roof tile supplier)

Project's www: -

Contact address: Hespul, France
info@hespul.org
www.hespul.org

