EU Heroes
Connecting Communities

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PV Energy Community Case Study:

Jofemar Plant
Peralta, Spain

The industrial multi-Renewable Energy System (RES) factory microgrid facility is located on the premises of Jofemar's industrial facilities in Peralta, Spain.

The facility was set up as part of EU funding programme LIFE+ 2013 to demonstrate, through the implementation of a full-scale industrial smart-grid, that microgrids can become one of the most suitable solutions for energy generation and management in factories that want to minimise their environmental impact.

The installation has been designed to meet the specific energy needs of the Jofemar plant and features RES generation (a 120 kW wind turbine and a 40 kW roof-top PV installation) as well as different energy storage technologies (500 kWh Zn-Br flow batteries and 60 kWh Li-ion batteries).

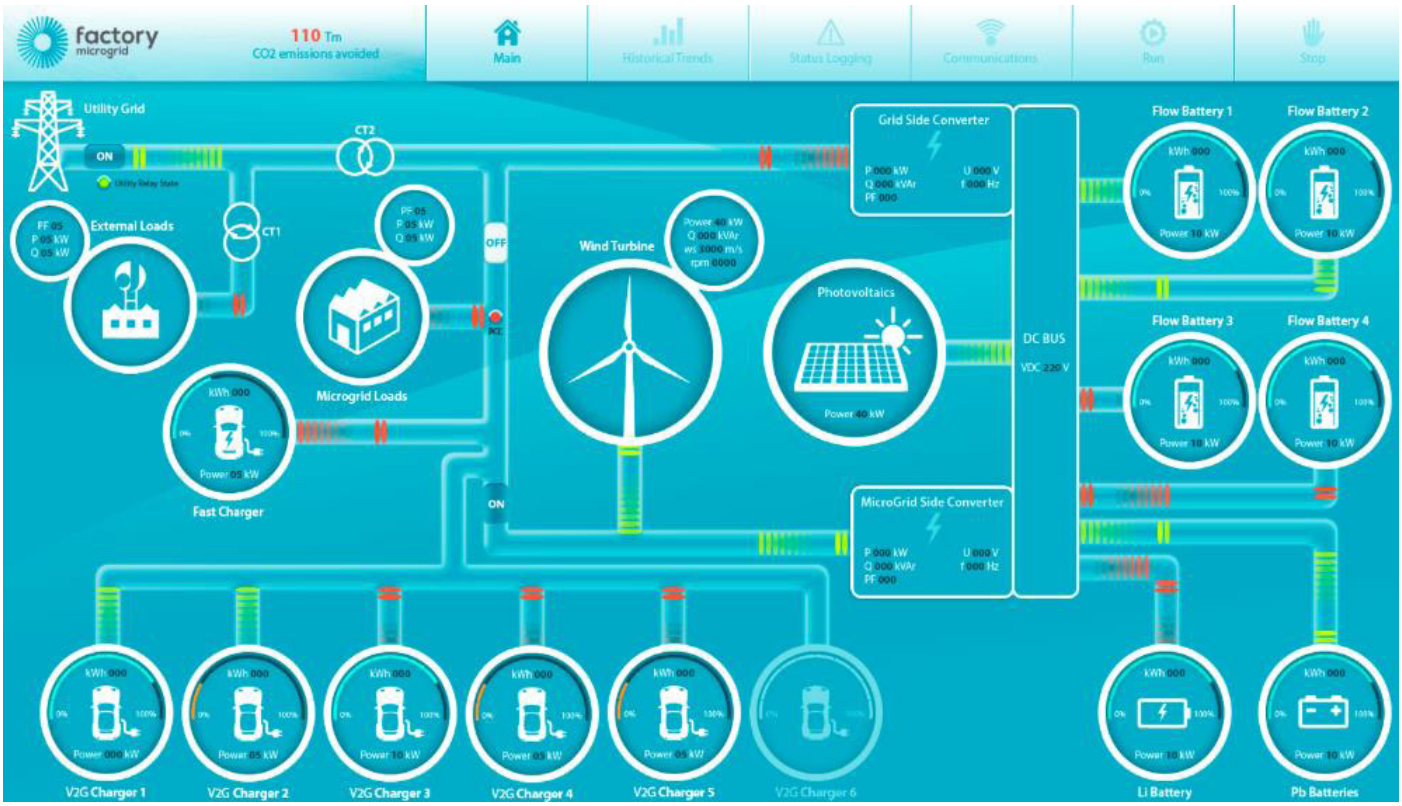
Peak consumption of the factory is 230 kW. The project aims to reduce energy consumption by the energy management of 100 kW of dispatchable loads, allowing a reduction of 73 million tons of CO2 emissions per year.

By storing the energy and managing the energy flows so that all renewable energy generated is consumed, 35.4 million tons of CO2 emissions can be saved. Additionally, a further reduction of 38 million tons of CO2 emissions is envisaged, with the operation of six electric vehicles as part of the microgrid.

RES electricity production is consumed within the industrial multi-RES ECO. In some cases, when loading and production conditions permit, this is done directly otherwise this is achieved by storing the surplus energy in storage systems.

One of the objectives of the industrial micro-grid multi-RES ECO is to test and validate different strategies for energy management. By managing storage and dispatchable loads, the use of renewable energies can be maximised.

The business model for Jofemar's facility is based on self-consumption in a microgrid which is an interesting case for installations in many countries where support schemes are being reduced or eliminated. By consuming all or most of the generated electricity, the impact on the grid is limited.



View of SCADA main menu of the industrial micro-grid multi-RES ECO (http://www.factorymicrogrid.com/en/media-center/gallery.aspx#prettyPhoto[gallery2]/9/)