

PARITY

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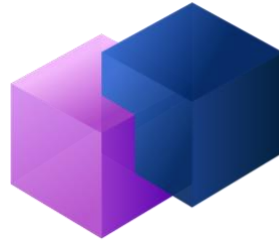
PARITY

parity-h2020.eu



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement no. 864319

Call identifier: LC-SC3-2019-ES-SCC



P A R I T Y

Latest News

PARITY Pilot sites deployment plan implementation

During the past 8 months, different works were implemented and finalized relevant to the procurement, deployment and commissioning of the PARITY equipment. The involved pilot sites are located in Spain, Greece, Switzerland and Sweden, and the equipment has been deployed in different environments, such as office headquarters (Spanish demo), office buildings and residential buildings (Spanish, Greek, Swedish and Swiss demo).

PARITY Demo sites:

Granada Demo: The Spanish Pilot is part of the distribution network operated by Grupo CUERVA and it will be used as the main electricity infrastructure to set the Spanish demo site. The area of the pilot will be the “Escuzar” community, a small village located near Granada. This area counts 273 supply points and a peak load close to 0,35 MW. The project pilot includes the installation of a D-STATCOM prototype for balancing the low voltage network. The D-STATCOM prototype, shown below, consist of a metallic cabinet which includes the power electronics, filters, control and communication components necessary for the operation of the device, allowing the DSO toolset a complete remote monitoring and control over the device.



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D-STATCOM front view (left) and back side of the mountain plate.

Zaragoza Demo: The pilot plants located in Zaragoza, which are the Urbener offices, Acesa building and CIRCE facilities will be used for the collection of real-time consumption data for subsequent study to offer flexibility solutions in Parity.

Greek Demo: PARITY's control automation system will be demonstrated at the Greek pilot in commercial and residential environments including a wider range of loads. In both cases, IoT devices and Raspberry Pi's were installed at each prosumer premises to host the PARITY gateway. For the commercial demo site, a group of small offices hosting 1-2 regular occupants and a meeting room were selected, offering the possibility of lighting control and HVAC control, and more specifically AC split units. The deployed IoT topology consists of energy meters for the total building consumption and AC consumption metering, multisensors for monitoring the indoor ambient conditions and occupancy of the buildings, smart switches for the lighting control and dedicated devices for monitoring and controlling the operational status of the individual HVAC units.

Swiss Demo: The Swiss pilot site consists of a residential neighborhood and an administrative Municipality building with offices. The residential pilot site is located in the north-east suburbs of Lugaggia, a small village nearby the town of Lugano, and consists of 12 eligible residential dwellings. The majority of the building stock are typical two-storey family houses constructed between 2010 and 2015. The building stock hosting approximately 50 residents and covering a total area of approx. 18'000 sqm. PARITY's control automation system will be demonstrated here as in the Greek Demo case.



The Lugaggia Innovation community

The building stock hosting approximately 50 residents and covering a total area of approx. 18'000 sqm. PARITY's control automation system will be demonstrated here as in the Greek Demo case.

Swedish Demo: The pilot site will be hosted in southern Sweden, and will include both residential and commercial sites. The residential site, BRF Kalkbrottet building complex, is a cluster of 3 buildings (4400 m2 living area), each equipped with a PV installation of 40 kWp as well as an EV charging station. In total, 48 apartments housing around 100 residents – pilot users will be involved.



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The BRF Kalkbrottet building complex

The commercial pilot site is represented by an office building (700 m²) providing shared space and individual workspace for around 30 employees. Regarding the equipment, it comprises a planned 30kWp PV installation, 6 EV charging stations and already available HVAC and lighting systems.

Focus of the Swedish demonstration activities is on PV and BESS management systems as the majority of the commercial spaces examined for the project activities were public places with multiple and diverse visitors daily, inhibiting the system's profiling mechanism. In addition, the existence of centrally controlled, collective HVAC and DHW systems for both the commercial and residential sites eliminated the possibility of personalized control automation.

Living Lab Workshops for the Greek and Swedish Demo participants:

To engage with pilot participants, inform them about the scope and objectives of the project as well as of the benefits they shall have by participating in the PARITY Demo activities a series of workshops were held. On June, 2022 NRG (sister company of the consortium partner BFS) presented to their clientele the equipment dedicated to Parity and its functionalities. The meeting was held digitally on Teams and the objective was to inform the residential prosumers in the Greek pilot site about the installations in their premises, as well as establish a dialogue between them and the responsible pilot partner. A similar event was held in May 2022 at the Swedish pilot with physical presence of the participants organised by E.ON, the PARIT partner running the demo in Sweden.



