

NEWS



Smart city and technology

A pioneering public source of solar energy for the metropolis of Barcelona

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In the city of Molins de Rei, in the metropolitan area of Barcelona, is located **the first public bidirectional solar charging station (V2G) in Spain**, inaugurated in February. Designed and financed by the Metropolitan Area of Barcelona (AMB), this facility converts the sunlight into electricity not only to charge electric vehicles, but also to supply the municipal sports center with energy. The station was presented last

week to the energy experts from Grand Lyon and Montevideo who participate in the **pilot project Metropolitan Energy GovernAnce (MEGA)**.

The Molins de Rei public solar charging station is located at the parking lot of the municipal sports center. Apart from serving private vehicles, it will also be used to **charge the electrical fleet of the City Council**. When no vehicles are plugged-in, or whenever there is a surplus of energy from the connected vehicles, the electricity generated can be provided to the sports center.

'V2G'

One of the main challenges for the implementation of solar energy is how to **stockpile solar-powered energy regardless of the weather**, in order to have an energy source available even when there is less sunshine, or during the night. V2G is an answer to this challenge: an acronym for the **"vehicle to grid" technology**, it enables the energy stored in electric vehicles to be fed back into the electricity network ("grid") to help supply energy at times of peak demand.

The new charging station of Molins de Rei is of the latest generation as it integrates the V2G system, allowing the storage of solar energy through batteries which can be located inside either electric vehicles or buildings. Moreover, the facility features **a monitor that shows in real time all the parameters of production and energy consumption of the charging station**.

Involving the citizens in the energy transition

Thanks to this facility, **citizens become agents of the energy market, instead of passive consumers**: V2G impels users to decide if the electricity accrued in their vehicles shall be used for the consumption of other users, for a public edifice's energy supply or for redistribution into the electrical system. This allows raising public awareness of a new energy culture, especially for children and young people who intensively use the municipal sports center.

"The commitment of citizens to implement an energy transition to a low carbon society is crucial, and one way to achieve it is to having them involved directly in the initiatives addressing this issue", commented Ana Romero Càlix, Chief Service officer for Climate change and environmental awareness at AMB, at the presentation of the project.

The solar charging station of Molins de Rei is a concrete action towards the implementation of **AMB's Climate and Energy Plan 2030**, which sets the goal that at least **30% of the energy consumed in the metropolitan territory comes from renewable sources**. This commitment will be measured with a total of 100 solar charging points, as well as with 380 photovoltaic installations on municipal public buildings, and the creation of a crowdfunding platform to promote renewable.

The presentation of the metropolitan solar charging station was part of the program of the last workshop of the MEGA Pilot Project, which took place in Barcelona from February 28th to March 1st, 2019. Since November 2017, this pilot project has brought together experts from the Metropolitan Area of Barcelona, Montevideo and Lyon with the objective of looking at how energy transition is designed and implemented, with whom, and which are the results and impacts of the approaches taken. A publication summarizing the main findings of the different workshops in Lyon, Montevideo and Barcelona shall be released by the end of the first semester of 2019.