THE DUTCH PILOT PRESENTED ON THE TECHNICAL COMMITTEE MEETING #11 IN EINDHOVEN.

On November 26th and 27th, the InterFlex Technical Committee meeting was hosted by Enexis, the Dutch demonstration leader for InterFlex, in Eindhoven. This meeting was the occasion for InterFlex project members to visit the Dutch demonstration site in the Strijp area.

The Dutch demonstration investigates the possibilities to develop a market place on a DSO level for flexibility to avoid network congestions due to Electrical Vehicle (EV) charging. For gaining this flexibility and testing the market model, Enexis installed 13 charging stations and one 250 kW battery in the Eindhoven Strijp area. These assets are used for real time testing in an operational environment of the market. Together with the ICT systems built by Enexis and its subcontractors, scenarios are rolled out to test the possibility of getting real flex on a DSO flex market in competition with the TSO market. For this purpose EV customers living and working in Strijp are involved in the project.

InterFlex team members visiting the battery used in the Dutch demo

Furthermore, a solar car called the Stella Vie, takes part in the Dutch demonstration, which will use its vehicle-to-grid capability to deliver energy back to the grid when needed. The Stella Vie is a car driving on self-generated solar energy. It was designed and built by students of the Technical University of Eindhoven and won the Bridgestone World Solar Challenge 2017 in Australia, the world's largest competition for solar cars.

One of the most interesting features with respect to InterFlex is the car's energy management system. A solar car can be seen as a mobile solar roof that can generate energy wherever you want. To make optimal use of this energy, the user is able to share a surplus of energy with the grid to, for example, power his house.

InterFlex team members in front of the solar car the Stella Vie

Stella Vie can seat 5 persons and is fully road legal in Europe. The car has two highly efficient in-wheel motors and can reach a top speed of 125 km/h. On the battery of 12,5 kWh, it can drive 600 to 700 km. The roof is covered with 326 solar cells that can deliver 1,3 kWp. The range of the car can therefore be extended up to a 1000 km with energy produced by the solar cells. Next to this, the team developed several concepts that help the driver to drive as efficient as possible. An example is the solar navigator and parking system. This system helps the driver to pick the most efficient route based on weather data and to park the car in the sun as long as possible based on data of the position of the sun and the built environment. Besides, a driving assistance system can give feedback on the driving style in terms of colour signals (red to green).