

VISIT TO EDPR WIND FARM CONTROL CENTER

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On Tuesday 1st July, Medow ESRs were invited by EDP Renewables (EDPR) to visit their real-time dispatch control centre located in Porto, for all renewable power assets (wind and solar) spread around the world. Besides that centralized control centre in Porto, company has dedicated regional control centre in Houston (US), Bucharest (Romania) and Oviedo (Spain).

The centre is responsible of three main tasks i.e. technical monitoring and operation of all wind farms, substations and photovoltaic solar units, representation of the main interlocutor with the transmission system operators (TSO) and commercial operation of the assets. One of the main objective of the centre is to harmonize the operation of all the wind farms of different size and according grid connection constraints. In total, EDPR is operating wind farms with 31 different wind turbine models from 13 manufacturers onshore and one offshore floating wind turbine. At the time of visit, around 3.5GW of wind energy were producing throughout the Europe. The centre operators 24 hours a day and 365 days a year in two shifts.

From the control centre at Porto, EDPR can operate in real time all substations, wind turbines and remotely controllable components within their wind farms. The main operations are schedule maintenance, monitoring and operation according to grid operator request such as active and reactive power management, frequency and power factor control, and voltage set-points adjustment. Operational communication is executed via



telecommunications based on a customized SCADA system that collects the data from all turbines. All of the wind farm is radial ring configuration. Besides that, every country has a different grid code and power management policies. ESRs express their high interest by some profound technical discussion with the presenters. Apart from the presentation, EDPR gave an insight about the future second stage of the floating wind farm project which will consist of 4-5 turbines with a power rating of 6-8 MW each. The project will be extension of currently install single 2MW turbine which is placed around 5 km of the coast on a floating sub-structure.

Thanks to a fire simulation and following building evacuation, ESRs were able to see the number of employees at EDPR headquarters at Porto. Further information about the company can be found on link: <http://www.edpr.com/>