



Batwind Energy Storage

Peterhead, Scotland

Batwind is the first energy storage system to be connected to an offshore floating wind farm.

The 1.3MWh battery stores excess electricity generated from the world's first commercial floating windfarm, the 30MW Hywind Scotland.

Both Batwind and Hywind Scotland are owned by Masdar and Equinor (formerly Statoil). Batwind was officially launched on 27 June, 2018.

Using sophisticated data-analysis algorithms, Batwind will determine when to store and release electricity when it is most needed, and for the best market price. The algorithms, which will be based on multiple data sources, including weather forecasts, market prices, maintenance schedules, consumption patterns and grid services, to "teach" the battery when to hold back and store electricity, and when to send power to the grid.

The smart energy system is located at an onshore substation in Peterhead, Scotland. Batwind will rely on electricity produced by the Hywind floating offshore wind farm.

Energy storage is key to unlocking the full potential of renewable energy by addressing the variability of solar and wind. Electricity grids are real-time systems and have to continuously match supply and demand to ensure smooth

Quick facts

- Storage capacity of 1.3MWh, equivalent to about 100,000 iPhones
- Battery operation and analysis expected to last till autumn 2020
- The energy storage system is provided by German specialist company Younicos, and augmented with smart functionality under development by Masdar and Equinor

operation. Therefore, the variation of energy from the sun and the wind can be a challenge. Storage solutions address this challenge by allowing operators to obtain electricity from solar and wind on demand.

Batwind is helping us to understand how storage technologies can improve the operational and cost efficiency of renewable energy power plants.

