MERUS POWER

Energy Storage System

Merus™ ESS (6 MW / 6.6 MWh) in 20 MW Wind Farm

Operation as a part of wind farm

A 6 MW / 6.6 MWh energy storage system provides energy storage for excess wind production for better income on the spot markets. During the windless conditions the energy storage allows a black start ability for the wind farm turbines. The energy storage enhances the power quality while fulfilling the grid code and minimizes losses in different electrical components such as transformers, cables etc. It also extends the lifetime of different electrical devices and components.

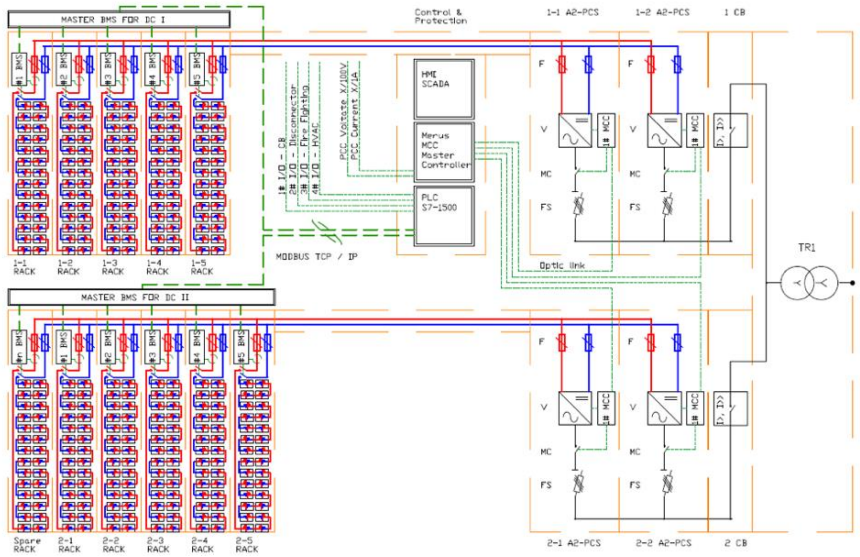
The energy storage is participating to the well-paid national frequency regulation reserve markets (FCR).

Scope of supply

Full turn-key contractor's responsibility including manufacturing, installation and commissioning works.

Delivery of Transformers, 20 kV-Switchgear, Power Conversion System (PCS), Battery System (SAFT) – all installed and delivered in air-conditioned fire protected containers. An Energy Management System (EMS) and it's integration to External Energy Trading system. The PCS's integration to the Battery Management System. The turnkey contractor's project responsibilities.

Energy storage service contract with annual maintenance and spare parts management contract. Remote monitoring and operation support with performance and energy storage condition reports.



Application:
Supporting the 20 MW wind farm and enabling participation to the national frequency regulation reserve markets.

Location:
Finland, Viinamäki

Customer Background:
The customer is a 20 MW Wind Farm

Customer Benefits:

- National frequency markets
- Black start ability
- Storing wind energy
- Electricity markets
- Power quality

Merus Power Plc.

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