MERUS POWER

Energy Storage System

Merus™ ESS (2.6 MW / 1.55 MWh) in 20 kV microgrid and national frequency regulation reserve markets

Operation as a part of microgrid

A 2.6 MW / 1.55 MWh 20 kV Li – ion battery energy storage system provides buffer for excess solar production for later use and enables emergency diesel generators' (2x1300 kVA) network connection in real-time. The energy storage also executes a peak shaving where maximum peak power demand is compensated from the storage, so the power intake from the network will be stabilized. The energy storage enhances the power quality and minimizes the losses in different electrical components, such as transformers, cables etc. It also extends the lifetime of different electrical devices and components.

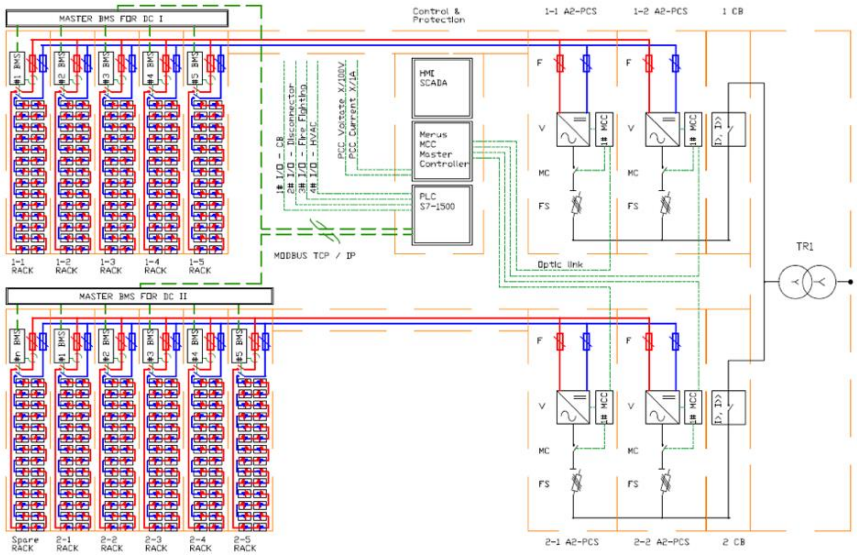
The energy storage is participating to the well-paid national frequency regulation reserve markets (FCR) and also bridges the emergency generators to the markets.

Scope of supply

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

Delivery of Transformers, MV-Switchgear, Power Conversion System (PCS) System, Battery System – all installed and delivered in an air-conditioned fire protected container. An Energy Management System (EMS) and it's integration to External Energy Trading system. PCS's integration to 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 a 60000 m2 delivery center 20/0.4 kV microgrid, solar power storage, participating to the national frequency markets, off-grid operation.

Location:
Finland, Järvenpää

Customer Background:
The customer is a 60000 m2 delivery center for daily grocery stores

Customer Benefits:

- Energy and cost savings
- National frequency markets
- Solar power optimization
- Off-grid capability
- Improved power quality

Merus Power Plc.

www.meruspower.com

Address: Pirkkalaistie 1, 37100 Nokia, Finland
Email: sales@meruspower.fi
Phone: +358 20 7354320
Y-No: 2230775-9
VAT No: FI22307759