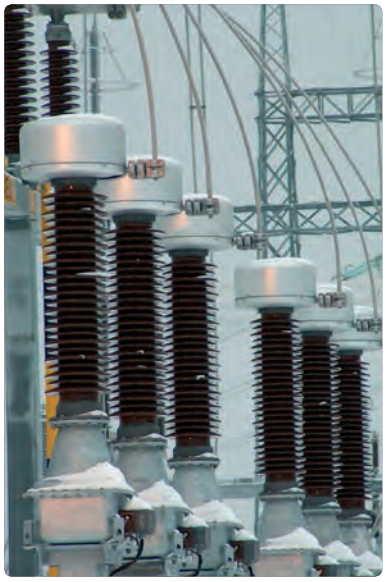
CASE STUDY

150kWh Energy Storage & STATCOM
European Commission, Joint Research Centre



Supply, installation and maintenance of a 75 kW/150 kWh battery storage system for grid-connected and island operation at the JRC-IET.

In terms of the storage system, Ingeteam is responsible for supplying the whole Battery Energy Storage System, including Power Converter, Lithium Ion batteries, EMS (Energy Management System), AAC (Advanced Automation Controller), installation, commissioning, training and and maintenance services.

STATCOM & Energy Storage System with Lithium Ion Batteries

Applications:

- Grid-tie and off-grid operation
- Grid code fulfilment
- Frequency Regulation.
- Voltage Control

The system was installed by Ingeteam in 2015

Increased penetration of renewable energy sources in electricity networks results in growing power production variability. Hence, reliable balancing technologies are required:

a) to provide extra power when RES power production is too low
b) to store energy when there is a surplus of produced RES power

This balancing task can be provided by energy storage technologies, not only in transmission and distribution grids but also in smaller-scale networks. The requested battery storage system must allow carrying out a variety of experiments in this field.

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Ingeteam

General Description

INGEGRID™

INGETEAM® Equipment Supplied for the Installation

1 x INGEGRID SH-B : Power Conversion System (PCS)
- 400V 166KVA 75kW air cooled

4 x Lithium Ion Battery racks
- 45kWh each

1 x INGESYS EMS : Energy management system

1 x INGESYS IT : Local SCADA

Services Provided

Electrical and electronic system specification.
System container specification.
Power flow simulation and modelling.
Electromagnetic modelling and simulations.
SCADA monitoring system configuration.
Comprehensive system tests in the Ingeteam Power Electronics laboratory, including the whole battery system.
Protection system.
Commissioning.

Other

1 x 20 ft container with the whole Battery Energy Storage System.

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