SOLUTION SHEET

# Distributed Energy Storage module

## EcoFlex eHouse to support the grid with battery energy storage

**Improved safety with arc tested equipment and easy to install and operate**

**Pre-engineered solution with high reliability, with extensive risk and failure mode analysis**

**Maximize ROI with pre-engineered and factory-tested solutions**

**Flexible with modular concept to allow ease of scalability in power and capacity**

ESM EcoFlex eHouse solution for distribution energy storage

The energy storage module (ESM) in EcoFlex eHouse solution, with integrated energy storage, provides a buffer of power and energy to maximize system efficiency. Typical applications are peak power demand control, energy back-up and frequency regulation. The different versions of the pre-engineered and industrialized ESM allow scalability, reduction of installation costs, high reliability and reduced project execution times. This solution utilizes a Connection Equipment Module (CEM) on a skid and battery module enclosed in the EcoFlex eHouse as a complete solution.

**Features of solution**

- Standard dimensions for ease of transportation
- Lockable enclosures to prevent unauthorized entry
- Compact design to reduce footprint installation
- Pre-tested at factory
- Robust design

**Equipment description**

The solution comprises two pieces of delivery to optimize transport. The EcoFlex eHouse typically houses a low voltage switchboard with protection devices, i.e. circuit breakers or fused disconnects, the battery system and the control system. The skid comprises the medium voltage switchgear (up to 40.5 kV), oil transformers and the bidirectional AC/DC converter.

**Technical data**

| **Key specifications** | |
|---|---|
| Medium voltage level | from 2.4 - 40.5 kV |
| Typical ratings (kVA) | Up to 4600 kVA in one skid |
| Storage power | Up to 1800 kW per EcoFlex |
| Storage capacity | Up to 1800 kWh per EcoFlex |
| Trafo type | Oil |
| Protection degree | IP 54 (MV SWGR, LV and storage- IP00 for trafo |
| Applicable standards | IEC, GB, AS, GOST, ANSI, CSA, and more |

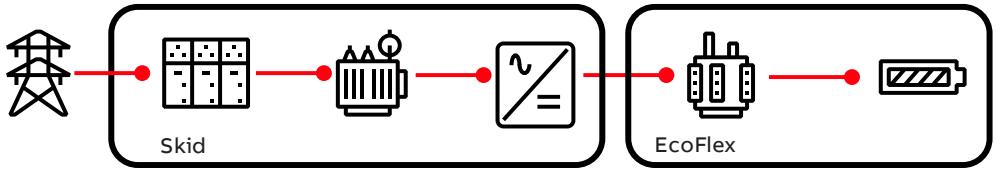
**Optional equipment**

- Seismic certifications
- HVAC
- Fire extinguishing system
- SCADA ready
- Remote monitoring
- Remote monitoring and control
- Energy management systems

**Installation**

- Factory assembled and tested
- MV connection and interconnection between two modules needed at site
- Reduced site works
- Compact design for reduced footprint
- No heavy crane needed

**Single line diagram**




Energy storage module with skid and EcoFlex eHouse

ABB Ltd.





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