Expert group: Identification of storage devices (EG STORAGE)

Chair: ENTSO-E, Emilie Milin

Vice-Chair: EASE, name tbc

Problem Statement

On 11 June 2018, the Grid Connection European Stakeholder Committee (GC ESC) decided to establish an expert group on the definition of storage devices. The creation of this EG was proposed by ENTSO-E to elaborate on connection network code (CNC) issues, which had been raised by stakeholders during the CNC implementation. The ENTSO-E proposal was based on a stakeholder survey to identify priority topics.

In order to prevent a confusion of the definition of the storage devices and the energy storage as defined in the forthcoming recast of the Electricity Directive a different title has been chosen for this EG, i.e. identification of storage devices.

Target (objectives)

The objectives of the EG Storage are to:

- identify storage technologies/applications/topologies;
- investigate the possibility of a useful definition of storage device which could lead to the definition of connection requirements at EU level (due to cross-border relevance); and
- categorize storage devices (if reasonable).

Task description

Without prejudice to national grid codes, the Network Code on Requirements for Generators (NC RfG) and Demand Connection Code (NC DC) do not currently apply to storage devices, except pump-storage power generating modules.

Discussion with stakeholders / stakeholder interventions at the GC ESC / in workshops with stakeholders have revealed some questions related to storage devices, especially regarding the connection requirements for such units, because of the growth of energy storage projects. The EG Storage is tasked to consider the following actions:

- identify energy storage technologies and topologies: for each, case of application including in combination with other system users, present penetration and growth potential, main characteristics;
- categorize the different storage technologies: depending on their cross-border impact at the grid connection point characterized (e.g. facility size, functionalities, robustness, protection settings, etc.,) while taking into account the findings from the previous point;
- identify relevant functional applications for storage devices: Limited frequency sensitive mode at overfrequency/underfrequency (LFSM-O/U), Frequency Sensitive Mode (FSM), Demand Response (DSR), Fault Ride Through, ramping rates etc.; and
- define if/how these applications could be implemented by standalone storage devices, in association with other system users (e.g. storage device as part of a new or existing power generating facility or demand facility).

Deliverable

Proposal for the technical definition and categorization of storage devices, on the functional applications of such devices and the consequences on technical requirements.

Timing

6 months from 01 October 2018.

Team

The following nominations to participate in EG Storage have been received (name and association):

- Emilie Milin ENTSO-E
- Tony Johnson ENTSO-E
- Carlos Izquierdo (substitute) ENTSO-E
- Ioannis Theologitis ENTSO-E
- Thomas Lescarret VGB
- Tassi Giannikopoulos VGB
- Eric Dekinderen VGB
- Jacek Aronowski EASE
- Jean-Michel Cocciantelli EASE
- Secil Torun EASE
- Lionel Nadau EASE
- Manuel Weindorf EASE
- Raquel Garde EASE
- Fernando Morales EASE
- Kevin Bradley EASE
- Brittney Elzarei EASE
- Michael Van Bossuyt IFIEC
- Guy Baret CEDEC
- Florentien Benedict CEDEC
- Marc Malbrancke CEDEC
- Bernhard Schowe EFAC
- Mike Kay GEODE
- Garth Graham EURELECTRIC
- Karol O'Kane EURELECTRIC
- Pat Dowling (substitute) EURELECTRIC
- Mahder Hoof EURELECTRIC
- Guillaume Pelton EDSO for Smart Grids

Commented [UG1]: EU associations participation shall be limited to 3+1 participants so as to achieve a balanced representation

- Manuel Jaekel EDSO for Smart Grids
- Jesus Varela EDSO for Smart Grids
- Juan Marco (substitute) EDSO for Smart Grids
- Christina Flaskühler BNetzA

Estimated resource

- Monthly webinars
- 2 physical meetings
- Total commitment of 10 days per member

Target audience

- GC ESC
- Relevant and/or interested stakeholders on the Connection Network Codes