



EASE response to ACER's call for comments on the Network Code on Emergency and Restoration

29 April 2015

Transparency Register:

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EASE Key Messages

EASE welcomes the opportunity provided by ACER to comment on the Network Code on Emergency and Restoration and calls for a level playing field for all the services energy storage can render to the system:

- through a definition that recognises energy storage as an own asset class in all electricity related regulations and that does not restrict its application to system balancing only;
- through the recognition of energy storage not only as a load but also as a power source capable to contribute to the Frequency Deviation management procedure;
- through a non-discriminatory consideration of and a fair treatment for energy storage at national level alongside other measures.

Energy Storage definition (article 2.6)

ENTSO–E puts forward additional definitions to the ones already in place in existing European legislation.

New definitions could have an impact on definitions used in other Network Codes, and therefore should not be restrictive.

In this regards, ENTSO–E defines Energy Storage as follows: *“Energy Storage means a device being used for storage of energy and that can be used to balance the system”*.

This definition not only does not define what energy storage is but it also restricts its applications to system balancing only.

It seems to be the understanding of ENTSO-E that once an energy storage device can be used to balance the system, it can also provide a range of other services, such as – but not limited to – Frequency Regulation.

It is nevertheless our opinion that without clearly stating that balancing capability is a minimum requirement, and therefore not the exclusive application, the value of all other energy storage services to the system may be lost.

Energy storage can both help ensuring system adequacy ('steady-state' balancing between generation and demand) but also provide ancillary services (for instance, reserves) to help addressing real-time imbalances (e.g. due to forecasting errors, sudden outages, etc.). When delivering electricity, energy storage acts as a power source, and is thereby eligible for e.g. Black Start Capability, quick resynchronisation, and Island Operation.

EASE understands from the structure of the document that until now the items were either considered as a load or a power source/generator. Since energy storage devices have different operating parameters, and in many cases can switch from demand (that is charging) to supply (that is discharging) at high speed, in the order of tens of milliseconds for example, EASE believes that the historical asset classes – load and power source/generator – need to be adapted to the new technical reality. For that reason, EASE supports the creation of a new asset class, neither load nor power source/generator, but a nimble class able to fulfil both requirements in split-seconds following the grid needs.

Key messages:

Energy storage must be defined due to its nature as an own asset class in all electricity related regulations.

The definition of energy storage should not be restricted and should acknowledge that different technologies and concepts need to be included in one single definition. Therefore the wording must be open and not discriminatory.

EASE proposes the following definition of Energy Storage to replace the current one:

An “Energy Storage Facility” for the electricity vector is a facility used for the intake and stocking of electricity in different suitable energy forms. The release of this energy, at a controlled time, can be in forms that include electricity, gas, thermal energy and other energy carriers.

System Defence Plan measures

According to Articles 13.6 and 14.3 on “Frequency Deviation management procedure” and “Automatic under-Frequency control scheme” respectively, the disconnection of energy storage when operating as a load by the network operator is envisaged.

Labelling energy storage as a “load” only recognises the devices in their charging mode. It thus neglects the provision of services by these devices as power sources.

As a matter of fact, the main energy storage functionalities, such as energy time-shift, quick energy injection and quick energy extraction, are expected to heavily contribute to the security of the power supply of the electrical systems and the security of the power quality.

In the specific case of System Defence Plan measures, energy storage can provide e.g. up and down Frequency regulation (all kind of reserves), Voltage Regulation and participate to Angular Stability¹.

By defining energy storage only as a load and by disconnecting it as soon as the frequency drops below 50Hz, the system cuts off one of the fastest reacting defence tools. It would be more appropriate, instead of manually disconnecting energy storage, e.g. in Art. 13.6, to switch the energy storage device from load to generation, before activating the automatic Low Frequency Demand Disconnection scheme.

Restoration Plan

It is our understanding that energy storage is not properly addressed in the Restoration Plan. Pursuant to articles 21, paragraphs 10 and 11, TSOs need to define power sources with black start capability.

Energy storage has this capability but the wording used across the network code creates uncertainty to whether or not energy storage can be considered as a power source.

The recognition of energy storage as a power source is fundamental as these devices constitute special and important assets of the complete energy value chain.

Articles 2, paragraph 2 and 3, on Top-down and Bottom-up Re-energisation Strategy respectively make this recognition far more important as they both refer to the connection of “load and generation”. According to Article 2 (17) of the Commission Regulation (EU) No 543/2013, a “generation unit” means a single electricity generator belonging to a production unit. Since energy storage is stocking and releasing energy (see energy storage definition proposed by EASE on the page above), and other parts of the network code mention the general term of “power source”, an energy storage device should be considered as a power source.

Key messages:

The provision of services such as Frequency regulation, Voltage Regulation and participation to Angular Stability can be done by market players that operate energy storage devices.

As such, it is therefore crucial that the text identifies energy storage as an own asset class and not only as a load but also as a “power source” to ensure at national level a non-discriminatory consideration of and a fair treatment for energy storage alongside other measures.

¹ When an accident occurs, some storage technologies can charge and discharge high levels of energy in short periods. Then, they are able to reduce the acceleration of the groups to stop synchronism perturbations. This is a “niche application”.

The European Association for Storage of Energy (EASE) is the voice of the energy storage community, actively promoting the use of energy storage in Europe and worldwide.

EASE actively supports the deployment of energy storage as an indispensable instrument to improve the flexibility of and deliver services to the energy system with respect to European energy and climate policy. EASE seeks to build a European platform for sharing and disseminating energy storage-related information. EASE ultimately aims to support the transition towards a sustainable, flexible and stable energy system in Europe.

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Disclaimer:

This response was elaborated by EASE and reflects a consolidated view of its members from an Energy Storage point of view. Individual EASE members may adopt different positions on certain topics from their corporate standpoint.