Avenue Jules Bordet, 142
B-1140 Brussels, Belgium
Tel: +32 2 761 1653
Email: eurobat@eurobat.org
Web: www.eurobat.org

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The role of Battery energy storage in the new energy market design

EUROBAT input to the EC public consultation on new energy market design

EUROBAT[1] welcomes the support expressed by the European Commission to the deployment of storage in its Communication on New Energy Market Design[2]. EUROBAT is convinced that battery energy storage (BES) can offer several services to European energy market: BES can empower citizens to take an active role in the energy transition, increase the necessary flexibility, favoring the deployment of renewables and the stability of the grid. **The consultation process on new market design is an important step for the creation of a more balanced EU energy market.** It is fundamental to take into account the contribution offered by new technologies such as battery energy storage, removing legislative barriers and creating the correct incentives to modernize the energy market.

Batteries can offer several important services at every level of the grid. **Battery energy storage is an optimum solution to store energy from on-peak renewable energy and discharge it when it is more needed** on central, decentral and off-grid situations. Batteries can store energy when it is not needed and release it when generation is scarce, reducing the burden on grid infrastructures. They can be used by consumers to increase their share of self-consumed renewable electricity and allow them to fully participate in the new energy market. Besides, battery energy storage can offer ancillary services to the grid like voltage and frequency control, ensuring grid stability, flexibility and security of supply. **All four batteries technologies – lead, lithium, nickel, sodium – can provide distinctive and important functions to grid operators** and have potential for significant further technological and economic improvement.

EUROBAT fully support the efforts of the European Union towards the decarbonisation of the energy mix and the development of renewables. With increasing shares of renewables into the energy mix, we are convinced that in the near future battery energy storage and battery services will be needed to support the deployment of renewables: now is the time to prepare the ground and remove legislative barriers to BES.

Electricity prices

EUROBAT is convinced that **electricity prices reflecting scarcity represent an important market signal** for demand-response, smart appliances (including electric vehicles) and storage solutions like batteries and overall will be crucial tools to ensure

1 The Association of European Automotive and Industrial Battery Manufacturers.
2 European Commission Communication "Launching the public consultation process on a new energy market design", 15/07/2015,http://ec.europa.eu/energy/sites/ener/files/documents/1_EN_ACT_part1_v11.pdf

flexibility. Besides, we are also convinced that **electricity prices should reflect transmission costs**: storage solutions could be used for transmission congestion relief, deferring expensive investments and extending the life of the existing transmission infrastructures. Transmission costs integrated in the final cost of electricity would allow a fair market selection of the most efficient solution.

Balancing market

The balancing market should allow the participation of individual producers or aggregators on a fair ground. An appropriate regulatory framework for aggregators is needed to allow their participation to the market. Besides, today the ancillary services offered by storage systems are not properly rewarded by the market. **The regulatory framework should include rewards for grid services and overall capacity of energy storage to stabilize quality and supply for renewables generation.**

Taxation

We are convinced that **double grid fees for energy storage systems should be avoided.** Energy storage is today often defined as generating facility, but in some cases storage systems are also treated as end consumers, resulting in double fee imposition. **Direct additional taxation on energy stored for self-consumption should also be avoided**, as it represents a strong dis-incentive to the deployment of energy storage.

Definition of energy storage

The lack of agreed definition of energy storage and the unclear situation of ownership rights of storage systems represent an important barrier to the development of storage, creating a remarkable uncertainty for investments**. A proper definition of energy storage should be included in network codes and relevant EU legislation**. Defining energy storage as a separate asset would improve market conditions for take-up of market technologies, and should work towards enabling utilities to own and operate those technologies within their asset portfolio.

Renewable generation

The EU should remove existing barriers to tools ensuring the proper integration of renewables. For instance, curtailment of renewable energy is simply energy waste. **Curtailment of renewable energy should always be avoided where and when possible.** Storage systems can substantially reduce curtailment rates absorbing renewable energy when needed. Grid constraints naturally preventing renewable energy from having priority of dispatch could be addressed through the deployment of BES.

Demand-response

Energy storage systems are important tools to stimulate demand-response. By storing their self-produced energy, prosumers can significantly increase their self-consumption levels, shifting demand to off-peak hours. **Flexibility is a key market signal to kick-start storage and demand-response and should be properly rewarded.**

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