To the kind attention of:
European Commissioner Frans Timmermans
European Commissioner Kadri Simson
European Commissioner Maroš Šefčovič
European Commissioner Mariya Gabriel
French Presidency of the Council of the European Union
Rapporteurs from the European Parliament on the Delivering the European Green Deal package

More provisions for long duration energy storage needed in the Delivering the European Green Deal package

Brussels, 3rd February 2022

Dear colleagues,

The European Union's commitment to work towards net zero emissions by 2050 has been a landmark achievement in the fight against climate change. To achieve carbon neutrality by 2050, all electricity generation must be decarbonised, as the hard-to-abate sector cannot decarbonise as fast. This means that far more renewables need to be introduced into the energy system, leading to less back-up power from fossil fuel plants.

The more renewable energy is introduced, the more flexible the entire energy system set-up must be, and the more need there is for adding capacity, shifting load, and/or improving power quality through energy storage solutions. As electricity coming from renewable resources is fluctuating, solutions are needed to ensure power availability and grid stability. Energy storage therefore has a fundamental role to play in the clean energy transition, ensuring that more renewable energy can be introduced into the grid.

Currently, batteries are mostly used in up to 4-hour storage applications for frequency control or fossil-fuel peaking plant replacement. However, with more renewables in the energy system, adding longer-duration storage is inevitable. The study "Storage in the Loop", undertaken by the Fraunhofer Institute and the Institute of Information Systems and Marketing, investigated the possibility of implementing 100% renewable energy in the German land of Baden-Württemberg. The study identified "renewable gaps", where, in a one-hour period, the total renewables production is less than 50% of the total load. The results show large peaks for not only 1- to 2-hour gaps, but also 8- and 10-hour gaps, thus indicating that long-term storage solutions are fundamental to achieving carbon-neutrality.

Installing more long-term storage will also allow for significant savings in investment needed for our energy transmission infrastructure. This will keep electricity prices more stable and more affordable for the European end users. Large investments in energy infrastructure are needed for the energy transition, with capital flowing away from fossil fuels and toward clean power and other climate solutions. The years between now and 2030 are critical in the race to net zero, and long-term storage is still in its infancy, needing much stronger policy support and investment.

Therefore, we call for the following provisions in the Delivering the European Green Deal package:

- More favourable legal framework for the large-scale deployment of energy storage solutions across all EU Member States. This would include:

- New revenue streams for longer-duration storage: for example, revenues from the Emissions Trading Scheme or incentives for renewable projects to have the capacity to self-balance and dispatch against schedule, thus encouraging the plants to invest in energy storage.
- Easier permitting procedures.
- No double taxation or grid costs for stored energy.
- Consideration of energy storage as a separate asset class, alongside generation, distribution & transmission, and consumption. Defining batteries as an asset class and thus allowing for a market price for capacity, as opposed to only a market price for power, as exists in Europe, has allowed projects with long-duration natrium sulphur batteries in the Middle East to become financially feasible.
- Longer contracts to limit financial risk and revenue volatility risk. In the EU, most system operators are moving to shorter contract lengths, such as one-day contracts for balancing services, as asked by the Art. 6 of the Electricity Regulation. This poses a real risk to the storage business case, leading investors to focus on non-EU countries, where contract length is longer.
- Allow storage to provide all services it can deliver as well as revenue stacking. This is because energy storage technologies have multiple applications and need to derive income from multiple stacked revenue streams in order to be economically viable.
- Revise the EU system modelling: the current PRIMES model used by the European Commission does not properly look at the role of flexibility and omits intra-hours effects, the part where fast reacting devices have a huge added value.

- Increasing funding opportunities for not only short-term storage, but also long-term storage solutions. For the moment, mainly short-term energy storage, often Lithium-Ion, is in the focus of the funding. The funding should therefore be offered for all stages and should include:
  - Research & Development support.
  - Support for more demonstration projects.
  - Endorsement of storage projects as an important green investment opportunity, including potential provisions of EU Ecolabels to energy storage projects.

In the US, we see a strong push for long-term energy storage and believe Europe cannot stay behind. We remain at your disposal to answer any questions and provide support to help ensure that our energy system achieves carbon neutrality even before 2050.

Kind regards,

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