

PRESS RELEASE

Battery energy storage has a viable future in grid operation support

Global Smart Grid Federation's worldwide view gives electrical storage in power grids a real economical chance, if regulation is willing to assist.

Today, GSGF published a report on electrical storage in power grids, assessing the possibilities of battery storage in the electrical grid as viable, on a global scale. GSGF envisions that batteries will be firstly used for frequency control, followed by local peak shifting. When this happens, battery production should increase and costs should decrease, creating opportunities to use batteries for other applications as well, such a microgrids and renewable energy integration use. However, in the end regulation will decide on whether GSGF's outlook on this technology becomes real or not.

So far batteries are often seen as too expensive to make economic sense in comparison with existing solutions. GSGF's work group on Battery Storage in the Electrical Grid however showcases in this whitepaper that there are already market conditions in several countries, where batteries can thrive as a solution for grid issues. On the other hand, it is also clear that further development is necessary to improve integration of distributed multiple batteries into the system control.

The work group identifies today that the largest obstacle is bridging the gap between using batteries for demonstration projects, and them becoming a viable economic solution. The key here is to create a regulatory environment that can adequately value battery energy storage economically. This will in turn increase production, lowering prices for batteries so they become economical for important applications, such as renewable energy integration, even without subsidies.

As a general rule frequency regulation will be the first market to appear and after that, load leveling/peak shifting will evolve into a feasible market. However, these two markets are limited in size. Finally, the market will progress such that renewable energy integration becomes economically viable. This represents the largest market for battery energy storage. This is but a general trend from which there can be many exceptions depending on country, especially in very small grids, where microgrid use will be an important market.

In order to realize these markets, a regulatory framework needs to be created to value the functions of batteries, such as the system services that are being created in Ireland. This will in turn help the power grid become more efficient, increasing the possible amount of renewable energy generation which can be integrated.

The introduction and integration of variable renewable and distributed energy generation into the power grid has occurred rapidly over the last decade, and the pace is likely to accelerate into the future. This will require a higher ability to keep the balance of generation and demand in the grid, even if dispatchable resources are diminishing. One asset that can greatly increase the reliability of the grid is battery energy storage.

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Global Smart Grid Federation

The Global Smart Grid Federation (GSGF) is a global stakeholder organization committed to creating smarter, cleaner electrical systems around the world. GSGF is comprised of national smart grid organizations from fifteen countries and the European Union. GSGF brings together the intellectual capital of smart grid stakeholder organizations from around the world to:

- facilitate the collaboration of national and international Smart Grid nongovernmental organizations and governmental organizations from around the world to conduct and foster research in the application of Smart Grid technologies;
- support rapid implementation of Smart Grid technologies by establishing itself as the global center for competency on Smart Grid technologies and policy issues;
- foster the international exchange of ideas and best practices on energy issues, including reliability, efficiency, security, and climate change;
- create avenues for dialogue and cooperation between the public and private sectors in countries around the world on issues relating to the deployment of Smart Grid technologies.

These and other activities help member organizations initiate changes to their countries' electric systems to enhance security, increase flexibility, reduce emissions, and maintain affordability, reliability, and accessibility.

More information

- [Download the full report](#) (low-res .pdf 311KB)
 - For a printed copy of the report, contact [Lee Coogan](#)
- GSGF: www.globalsmartgridfederation.org
- The working groups: www.globalsmartgridfederation.org/about-gsgf/working-groups/
- The members: www.globalsmartgridfederation.org/members/

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