

Is distributed energy storage in Denmark reliable





Overview

Can energy storage units be installed in the Danish power system?

Elsystemansvar A/S (subsidiary of Energinet) has asked Ea Energy Analyses to analyse the benefits and main drivers for the installation of storage units in the Danish power system. This will supplement the technology aspects in the recent Technology Catalogue on Energy Storage (DEA and Energinet, 2019).

Can a hydrogen-based energy storage system be used in Denmark?

Bulk physical storage of renewable energy produced gases can act as a longer-term storage solution (hours, days, weeks, months) to help maintain flexibility in a fossil-free energy grid (The Danish Partnership for Hydrogen and Fuel Cells). Without the hydrogen scenario, the potential for hydrogen-based energy storage in Denmark will be limited.

How much does electricity cost in Denmark?

Compared to the rest of Europe, the cost of electricity in Denmark is below average. In fact, the gradual phase out of the Danish green energy tax (PSO tax) will reduce costs even further to around 5 euro cent per kWh or less in 2021, according to Ørsted Energy. This makes Danish electricity price levels highly competitive.

How are energy services delivered in Denmark?

Some of the services are delivered through energy markets in Denmark (they are referenced in each of the subsections); certain are remunerated in other countries, e.g. in the US, or are not linked to any compensation at all.

Is a storage facility a challenge in Denmark?

In Denmark, a storage facility can by definition (Energinet, 2019): The participation of storage assets in different markets may be a challenge. These challenges might be just as much a consequence of regulatory design as technical limitations.



How is Energinet regulated in Denmark?

In Denmark, Energinet ensures the international obligation to have at least one top-down (i.e. through interconnectors) and one bottom-up (i.e. a unit) restoration system per market area. The market is regulated through bilateral agreements, which shall encompass the requirements in Table 4.



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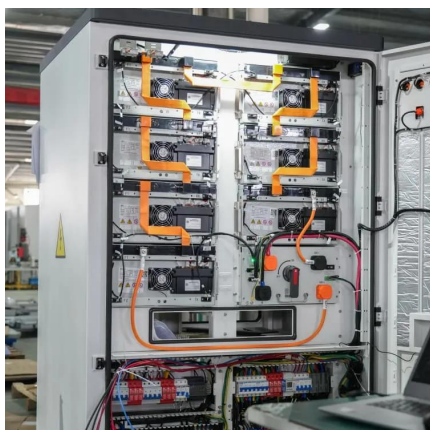


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The other means compressed air energy storage (CAES), Electricity storage in batteries and use of hydrogen (electrolysis-based) in the transport



sector will not directly affect the CHP-ville ...



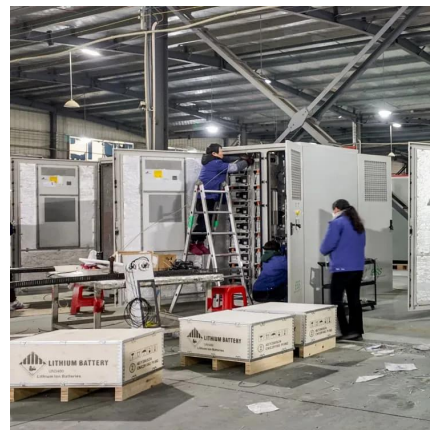
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