



Pre-requisites to create a business case for Energy Storage

2 June 2016

Energy Community Electricity Forum Athens, Greece

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Introduction to EASE

European Association for Storage of Energy...

...is the European voice of the Energy Storage community

...advocates the role of Energy Storage as an indispensable instrument for the energy system

...supports a sustainable, flexible and stable energy system

...shares and disseminates information

Strategic objectives:

- Promotion of the role and benefits of Energy Storage
 - Fair market design for Energy Storage
 - Promotion of funding for Energy Storage (mainly RD&D)





EASE Members

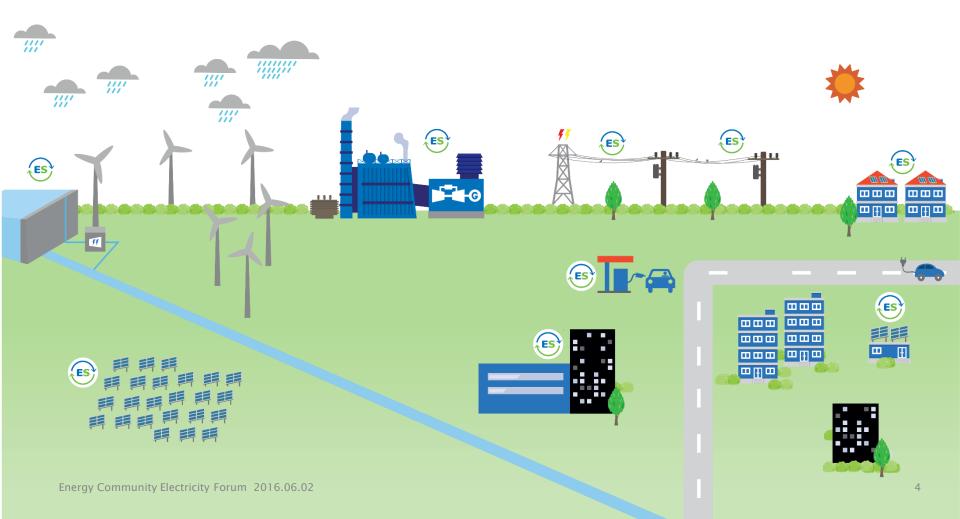






Energy Storage in the energy system

Energy Storage is being deployed at all levels of the grid

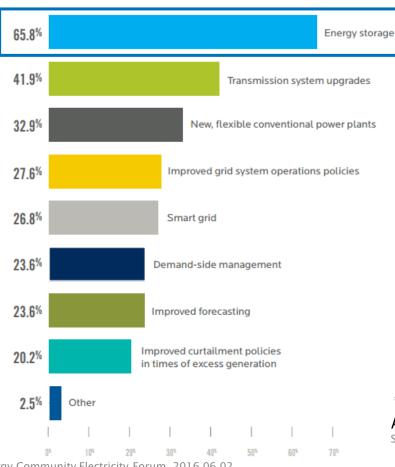






Energy Storage and the integration of renewables

Energy Storage is seen as the most important factor for facilitating the integration of variable renewable energy sources*



Energy Storage is a key enabling technology because it can help compensate for the challenges of variable RES (output variability, negative effects on the electrical grid,...)

*Results of a 2014 survey among 576 electric industry participants in the US

Source: Black & Veatch: 2014 Electric Industry Report

Energy Storage and the integration of renewables

Energy Storage and renewables integration are inherently linked

Energy Storage and renewables were identified as the two most important issues (out of 19) for the European power sector in both the short and longer term in a 2015 survey*

Changes in Importance of Issues

Issues are ranked by % of respondents who identified the topic as "very important" The Growing Share of Renewables in **Energy Storage** the Energy Mix The Growing Share of Renewables in 2 Energy Storage 2 the Energy Mix *** Plant Modernisation & Optimisation 3 3 Electric Vehicles & Related Infrastructure Offshore Wind Offshore Wind 4 Transition from Centralised to Transition from Centralised to 5 5 Decentralised Power Systems Decentralised Power Systems

*Results of a survey among 700 power generation experts in Europe

Source: PowerGen Confidence Index 2015





Energy Storage policy 'pre-requisites'

The business case for Energy Storage is viable but fragile; it can be strengthened by regulatory reform (1/2)

- Establishing a definition of electricity Energy Storage in the EU regulatory framework
- Defining a separate asset category and rules for Energy Storage systems.
 Energy Storage should be recognised as the 4th element of the energy system (alongside Generation, Distribution/Transmission and Consumption)
- Eliminating technical barriers and discriminatory practices against Energy Storage in the electricity network codes
- Eliminating unwarranted fees and taxes (e.g., double-taxing for the charging and discharging of Energy Storage)
- Allowing RES to be fully integrated into the market and driving down prices by integrating all energy system components into the market





Energy Storage policy 'pre-requisites'

The business case for Energy Storage is viable but fragile; it can be strengthened by regulatory reform (2/2)

- Ensuring that the procurement of all energy and ancillary services is market-based. Energy Storage should compete on an equal basis with other providers
- Ensuring well-designed and properly functioning capacity markets, including eligibility for Energy Storage
- Introducing "pay-for-performance" schemes, which value the properties provided by fast-reacting, flexible resources in energy and ancillary service markets
- Permitting long-term contracts for Energy Storage (e.g., in the context of primary/frequency control reserves)





Thank you for your attention.

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