

International Energy Storage Policy and Regulation Workshop

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IRENA's Electricity Storage Roadmap, Workshop

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The mission of IEA-RETD is to accelerate the large-scale deployment of renewable energies

RETD stands for “Renewable Energy Technology Deployment”.

IEA-RETD is a **policy-focused, technology cross-cutting platform** (“Implementing Agreement”) under the legal framework of the International Energy Agency

- Created in 2005, currently **9 member countries**: Canada, Denmark, France, Germany, Ireland, Japan, the Netherlands, Norway, UK.
- RETD commissions annually **5-7 studies** bringing together the experience of some of the world’s leading countries in RE with the expertise of renowned consulting firms and academia.
- Reports and handbooks are freely available at www.iea-retd.org.
- RETD organizes **workshops** and presents at international events.

Our future power system requires a variety of technology options

- The aim is to optimize the whole power system, and to facilitate increasing shares of electricity generation from renewable energy sources.
- Coupling the electricity sector with the heat and the transport sector adds new sources for flexibility.
- Flexibility from electricity storage is one out of various flexibility options in the whole power system. It might not always be the most efficient and effective option.

Open questions

- What is the future role of storage in markets for flexibility and ancillary services?
- How to align the storage operation with system operations? How can we coordinate between market and grid operators?
- What are the impacts of future technical requirements on storage?
- How to facilitate multifunctional applications (like virtual power plants) for storage?

A prosumer revolution is not here yet

- Solar cost are close to parity, but for non-incentivized growth they need to be far below electricity end-user prices → support schemes remain key
- Economic, behavioral, and technical drivers as well as national specifics might enable or constrain prosumer growth → Opportunities and risks need to be clearly articulated and balanced by policy makers
- RE-PROSUMERS provides a framework to define these policies

1. Evaluate drivers and conditions
2. Balance opportunities and risks
3. Define policy strategy



- A. Constrain prosumers
- B. Enable prosumers
- C. Transition to prosumers

Flexibility is one key element to facilitate VRE Integration

- VRE integration strongly depends on specific system characteristics. Low interconnection capacity and internal flexibility raise challenges.
- Adjusted market design and new products provide further potential to increase flexibility of the power system. Options are market coupling, cooperation, and near to real time products.
- Future grid codes will extent requirements for VRE. They aim at a system friendly deployment of VRE.



THANK YOU!

For additional information on RETD

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