IEA REWP Workshop

The Role of Storage beyond Electricity

Concept and Draft Agenda

29 September 2020

13:00-15:15 CET

International Energy Agency
Virtual meeting – Registration Link

International Energy Agency

Last update: 14 Sept 2020

Renewables Energy Working Party

REWP Workshop – *The Role of Storage beyond Electricity*

The IEA's Renewable Energy Working Party (REWP) is concerned with the worrying slow overall uptake of renewable energy in the energy mix, reflecting slow penetration in the building, industry and transport sectors. Globally, modern renewables are expected to account for just 12.4% of total energy consumption by 2023, up from 10.9% at the end of 2018. This lag calls for a renewed effort on the development of appropriate policy instruments, to learn from the success story of solar PV and wind and to significantly expand the deployment of renewable energy in all end-use sectors, including transportation, industry and for heating & cooling in buildings.

Addressing energy system integration issues by adopting a holistic approach beyond just grid and electricity market integration, to address heating and cooling in the building sector, the industry and transport sectors, and ensuring investment in enabling technologies and infrastructure such as networks, storage and demand-side response measures when relevant.

REWP wants to explore with the IEA Technology Collaboration Programmes (TCPs) and with industry leaders how to enable a much stronger increase RES in all sectors. For this, REWP sees a need for extremely well interconnected energy infrastructures complemented by energy storage, conversion to energy carriers, changes in users consumption patterns etc.

Here, we want to focus on storage, its strengths, weaknesses and opportunities – in technical and commercial terms.

Storyline, Questions:

- Are there new technical solutions on the horizon or do we better rely on established ones, or both?
- How can deployment of storage infrastructure be financed?
- We cannot just add up all the difference in production and consumption and shift that to a "storage to be built by someone" black-box.
- The solution might be complex: technology, infrastructure, system integration, shift between sectors (electricity, heat, fuels..) a market and proper price signals will set the scene
- Complex value chains bear the risk of bringing the overall efficiency down and may not be practicable. But can we afford to rely on one single solution, given that their potential might be limited?
- Is storage an infrastructure to be built with public money (corona stimulus) or a genuine business model?

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12:45	**Virtual Connection**
13:00	**Welcome and opening remarks** • Gunter Siddiqi, REWP Chair
13:05	**Introduction** • The need for integrated energy systems – Paolo Frankl, Head Renewable Energy Division, IEA
13:15	**Session A: Storage solutions to help increase the share of renewables in the heating & cooling, industry and electricity sectors** *Moderator: Enrique Gutierrez Tavarez, IEA Secretariat* Presentations: • Canadian Energy Storage Roadmap – Kourosh Malek, Senior Research Officer, National Research Council Canada (10') • HEATSTORE: large-scale high temperature storage at Dutch ECW site – Bas Godschalk, IF Technology (10') • Emerging approaches for sector-coupling - Paul Kreutzkamp, NEXT Kraftwerke (10') Facilitated discussion amongst all participants (20')
14:05	**Wrap Up** *IEA Secretariat*
14:10	**Session B: Earning money with storage services – what are the options for sectors, sector coupling: e.g. pumped hydro-storage, batteries, heat, community self-consumption?** *Moderator: Alejandro Hernandez, IEA Secretariat* Presentations: • Extracting commercial value from the provision of energy system services (remuneration schemes for storage) – Alejandro Moreno, WPTO (10') • Flexibility Solutions for High Penetration Renewables - Steven Wong, Research Advisor NRCan's CanmetENERGY Laboratory (10') • Heat recovery from large data centres – Serge Conessa, CEO Immersion 4 (10') Facilitated discussion amongst all participants (20')
15:00	**Wrap Up** *IEA Secretariat*
15:05	**Closing - key take-aways** • Gunter Siddiqi, REWP Chair • Paolo Frankl, Head Renewable Energy Division, IEA
15:15	**End of Workshop**

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