



IEA Hydropower

IEA Hydro Annex IX Minutes of the Online Meeting held 14 September 2021

1. Welcome and introduction

2. News from IEA Hydro and IEA

- Klaus Jorde is the new secretary of IEA Hydro replacing Niels Nielsen. Official takeover is 1st November. Highlighted the recent report from IEA on hydropower and the important path moving forward.
- Work moving forward include:
 - Organize follow up activities as a conclusion of report
 - Engage more countries to Hydro TCP.
- Shortly presented new annexes. Information can be found on the IEA Hydro webpage.
- ExCo meeting will be digital on the 5 October 2021
- There will be two sessions organised at *Hydro 2021* in Strasbourg, France, 25 - 27 October 2021. There will be an informal IEA Hydro meeting 28 October in Strasbourg. Following the conference.

3. Status and recent progress in Annex IX (see pdf of slides)

4. Presentation of IEA Hydropower Special Market Report

Bahar Heymi presented the report (see pdf of slides)

- Governments contacted to communicate the key policy messages/main takeaways from the report. Organising local meetings to facilitate discussion with policy makers and stakeholders
 - First focus on India because of the growth potential
 - Plan to follow up with meetings with policymakers in USA
- Also want to continue discussion with stakeholders on market design and structures.
- Portfolio is important for IEA moving forward, not only wind and solar, but also increased focus on other technologies such as hydropower, bio, etc. Collaboration between the TCPs important.

5. Brief presentation of Report and White Paper "Valuing Flexibility in Evolving Energy Markets: Current Status and Future Outlook for Hydropower"

Audun Botterud presented the report

- Dissemination of report. Anyone special who needs to receive the report? Or thoughts on how to disseminate.
- Should the members send contact information of stakeholders in each country? Better that each one sends to stakeholders and others. Possible with short presentation to disseminate results from report?
- Whom is the target? What do we want to communicate? What type of information we want to highlight and what message to communicate? Policy advice?

6. Brief presentation of draft report "Hydropower providing flood control and drought management: Case studies"

- Collected several interesting case studies. Jean-Jacques Fry will review the report.
- Especially one case study from Norway with Ånund Killingtveit as main author, was extensive and very well written and has been published as an article in Hydropower & Dams. In the report we include a shorter version.
- Want to publish a shorter white paper and include some additional thoughts on the value of flood control and draught management.
- Jean-Jacques Fry has an interesting case study from France that can be included. Atle will send him the template.

7. Brief presentation of draft report "Role and Challenges of Pumped Storage Hydropower Under Mass Integration of Variable Renewable Energy"

- Draft version ready. Review and formatting under discussion.
- Covers PSH developments. Focus on PSH in Europe, US and Japan. Value to integration of renewables, business and market aspects and technical developments.
- Valuable report. Covers extensive investigations of PSH in Europe and US. Encourage for it to be published as soon as possible. The final format should be discussed, but priority to publish soon.
- Japan participants will finalize the report while Niels and Lori Nielsen takes care of formatting.

8. Further work and commitments to further work (see pdf of slides)

Fact sheets – [Toril Christensen](#) can contribute to this.

New initiatives/ideas:

- Electricity market solutions for VRE integration and value renumeration of long-duration flexibility and energy storage. The following wants to contribute to this report:
 - US (Audun Botterud, Argonne; Abishek Somani; PNNL)
 - Australia (Alex Beckitt, Luke Middleton, Hydro Tasmania)
 - Brazil (Albert Melo)
 - Norway (Magnus Korpås, NTNU)
 - Canada (Guillaume Tarel, Hydro Quebec)
 - France (Ghislain Weisrock, France Hydro Electricité)

- Hybrid solutions with hydropower, collaboration with other TCPs
 - HP-floating solar
 - HP -batteries
 - HP-wind

- Importance of collaboration with other TCPs and building on existing work (in the TCPs, world bank, IEA, etc) pointed out by several members.

Interest/relevant projects:

- Albert Melo, Brazil: ongoing project in Brazil: environmental impacts of floating PV
- Interesting for Hydro Tasmania, especially considering batteries
- Elena Vagnoni, ongoing projects in Switzerland, pilot project (batteries of PV)
- Sam Bockenbauer: Run of river hydropower and batteries or super capacitors, pilot project, black start from run-of-river, also interested in floating PV
- Toril Christensen: Hydropower and wind could be of interest, big difference onshore and offshore, what is the focus of the TCP?

Atle Harby and Audun Botterud to take contact with Wind TCP. Klaus Jorde is in contact with solar PV TCP.

9. Any other business

- “Final roadmap”: summary of way forward – recommendations to policy makers and stakeholders