

HYDROPOWER EUROPE

According to the International Hydropower Association (IHA)¹ and Eurostat², Hydropower remains one of the single largest source of renewable electricity across Europe, generating an estimated 600 TWh of clean electricity in 2017, about 15% of Europe's electricity generation (10.3% for EU-28). With more than 30% of hydropower potential still untapped, this clean source of energy has all the characteristics to serve as an excellent catalyst for a successful energy transition. Consequently, HYDROPOWER EUROPE seeks to address the challenges ahead to fulfil this potential in Europe.

HYDROPOWER EUROPE is a three-year EU funded project based on a multipartner initiative supported by the European Union's Horizon 2020 Programme. The project consortium is coordinated by ICOLD (the International Commission on Large Dams) and brings together different associations and networks spanning the whole research and industry value chain including :

- EASE, the European Association for Storage of Energy;
- EREF, the European Renewable Energy Federation;
- EUREC, the Association of European Renewable Energy Research Centres;
- IHA, the International Hydropower Association;
- SAMUI, which brings expertise in water / environmental research, and communication and dissemination;
- VGB PowerTech, the international technical association for generation and storage of power and heat;
- ZABALA, expert in energy-related platforms as well as project dissemination and communication.

The HYDROPOWER EUROPE platform has two main goals: to provide a forum for the entire European hydropower community (industry, research, policy-makers, end users and academia...), and to gather input from this community to define a Strategic Research and Innovation Agenda (R&IA) and a Technology Roadmap (TR). These two documents aim especially to help guide funding authorities and particularly the European Commission to prioritise support where it is most needed so as to adapt the sector to the constantly evolving energy system.

Stakeholder consultation is a key aspect of HYDROPOWER EUROPE and this engagement will start during March 2019 with an initial meeting in Brussels which will gather representatives of the whole hydropower community. A wider consultation process will be undertaken during the following 24 months through various online consultation events combined with a series of regional workshops, including meetings in Lullea (Sweden), Lausanne (Switzerland), Crete (Greece) and Brussels.

For further information please visit the HYDROPOWER EUROPE website at:

<https://hydropower-europe.eu/>

¹ [IHA 2018 Hydropower Status Report](#)

² [EUROSTAT 2017](#)



Vision of the HYDROPOWER EUROPE Forum

HYDROPOWER as a catalyst for the ENERGY TRANSITION IN EUROPE

The ambitious plan for energy transition in Europe seeks to achieve a low-carbon climate-resilient future in a safe and cost-effective way serving as a worldwide example. The key role of electricity will be strongly reinforced in this energy transition. In many European countries, the phase out of nuclear and coal generation has started with a transition to new renewable sources comprising mainly solar and wind for electricity generation. However, solar and wind are variable energy sources and difficult to align with demand. Hydropower already supports integration of wind and solar energy into the supply grid through flexibility in generation as well as its potential for storage capacity. These services will be in much greater demand in order to achieve the energy transition in Europe, and worldwide. Hydropower has all the characteristics to serve as an excellent catalyst for a successful energy transition.

With about 60 to 70% of the economically feasible hydropower potential used so far within Europe, there is still an untapped potential, which allows hydropower to perform this role. However, this will require a more flexible, efficient, environmentally and socially acceptable approach to increasing hydropower production to complement wind and solar energy production. In particular:

- 1) Increasing hydropower production through the implementation of new environmental friendly, multipurpose hydropower schemes and by using hidden potential in existing infrastructures.
- 2) Increasing the flexibility of generation from existing hydropower plants by adaptation and optimization of infrastructure and equipment combined with innovative solutions for the mitigation of environmental impacts.
- 3) Increasing storage by the heightening of existing dams and the construction of new reservoirs, which have to ensure not only flexible energy supply, but which also support food and water supply and thus contribute to the Water-Energy-Food NEXUS and achievement of the Sustainable Development Goals of the United Nations.
- 4) Strengthening the contribution of flexibility from pumped-storage power plants by developing and building innovative arrangements in combination with existing water infrastructure.

Through an extensive programme of review and consultation addressing the whole hydropower sector and stakeholders (including construction, production, environmental and social issues), the Hydropower Europe Forum will provide a focal point for reviewing and developing hydropower in Europe, and subsequently European hydropower in the wider world. Building from the extensive programme of consultation, the Hydropower Europe Forum will develop a strategic research and innovation agenda as well as a roadmap towards implementation of the vision.



Further information

HYDROPOWER EUROPE Consultation Platform

The HYDROPOWER EUROPE initiative is built on the ambition to achieve a research and innovation agenda and a technology roadmap for the hydropower sector, based on the synthesis of technical fora and transparent public debates through a forum that gathers all relevant stakeholders of the hydropower sector.

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HYDROPOWER EUROPE Consultation Platform

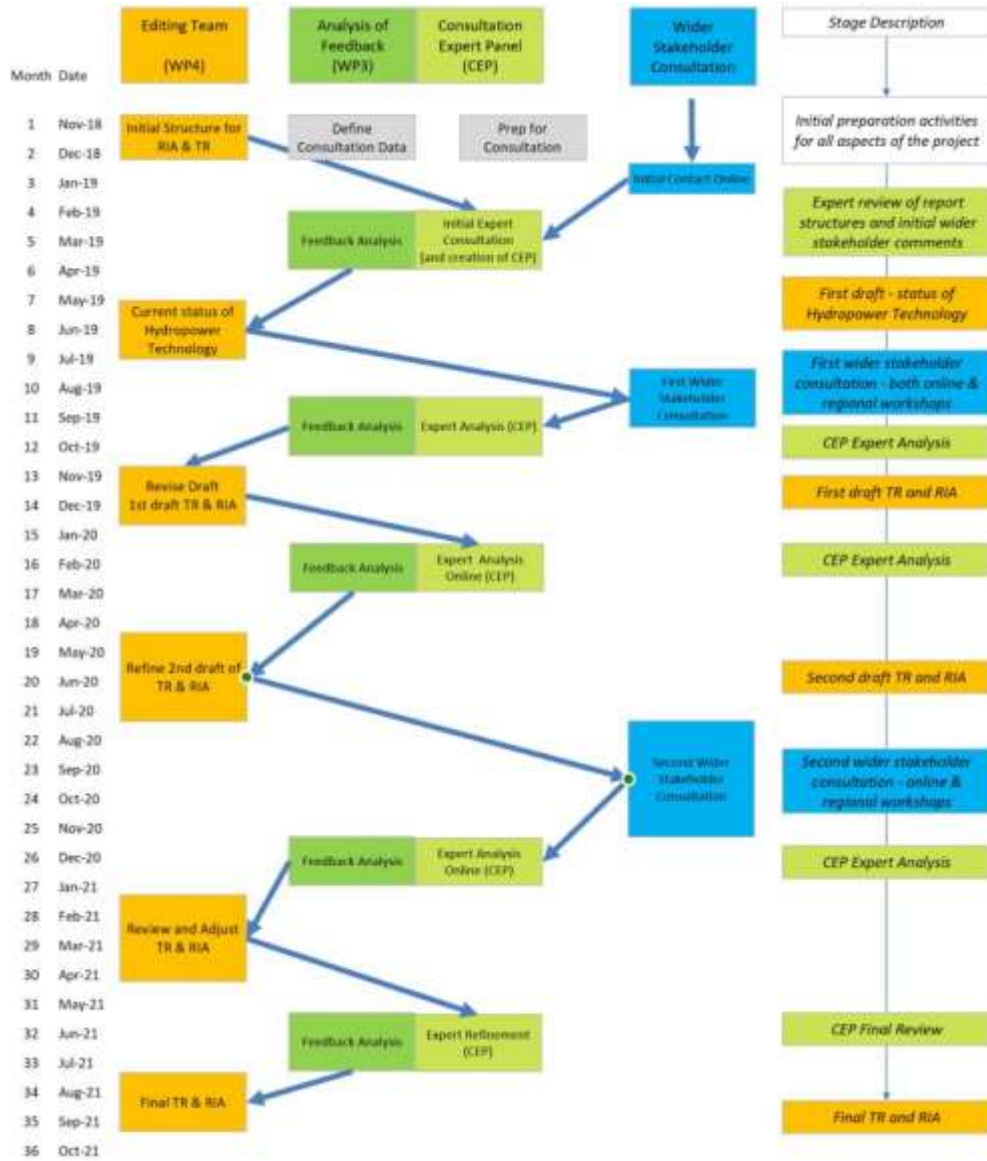
The HYDROPOWER EUROPE Consultation Platform supports the consultation process which starts in early 2019. Feedback from a series of online consultation events, regional and technical workshops combined with expert analysis and feedback will be integrated through the platform to support development of the HYDROPOWER EUROPE Research & Innovation Agenda (RIA) and Technology Roadmap (TR).

Consultation Goals and Process

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The diagram below provides an overview of the consultation and drafting process envisaged by HYDROPOWER EUROPE. This programme of work runs for 36 months and involves 5 cycles of consultation and expert review leading to the production of the Research and Innovation Agenda and the Technology Roadmap. These documents will define the direction of hydropower development in Europe.





Consultation registration

In order to ensure that we consult with experts covering all stakeholder and topic sectors for hydropower industry, we are asking each consultee to register their contact details along with a summary of their areas of expertise through the consultation platform. This process only takes a few minutes to complete via the following link:

<https://consultation.hydropower-europe.eu/participant-area/wgs-membership/>

