The important role of hydropower in the energy transition

Introduction

Prof. Dr. Anton J. Schleiss
Hon. President of the International Commission on Large Dams (ICOLD), Professor emeritus at Ecole Polytechnique fédérale de Lausanne (EPFL)
Coordinator of Hydropower Europe

HYDROPOWER EUROPE Forum Online Event
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Advantages of hydropower

- Renewable energy with lowest CO2/kWh, excellent energy gain or pay back factor
- Excellent efficiency, production can be easy adapted to the demand (flexible peak energy)
- In-country energy creating jobs and financial resources in remote areas (taxes and concession fees)
- Improvement of infrastructures and touristic attractiveness
- Strong contribution to flood and drought protection
Hydropower at the source of the development of Europe in the last century

According to the Hydropower & Dams World Atlas 2021, the situation of hydropower in Europe (with Turkey) is as follows:

- Generation (GWh/year)
- Installed capacity (MW)

The chart shows the generation and installed capacity from 2005 to 2020, with 65% of economically feasible potential represented.

According Hydropower & Dams World Atlas 2021
Generation and Potential of Hydropower in Europe

According Hydropower & Dams World Atlas, 2021
H2020 objectives for Hydropower: HYDROPOWER EUROPE Forum

ICOLD Leader

+ 7 core partners
+ 5 third linked Parties

ICOLD Leader

ICOLD - International Commission on Large Dams
EASE - European Association for Storage of Energy
EREF - European Renewable Energies Federation
EUREC - Association of European Renewable Energy Research
ICOLD - International Commission on Large Dams
IHA – International Hydropower Association
VGB - International Technical Association for Generation and Storage of Power and Heat
H2020 objectives for Hydropower: HYDROPOWER EUROPE Forum

The forum was producing a Strategic Industrial Roadmap (SIR) and a Research and Innovation Agenda (RIA) for the hydropower sector in Europe, targeting an energy system with high flexibility and renewable share.”
Hydropower as a catalyst for the energy transition in Europe
VISION “HYDROPOWER EUROPE”

1. Increasing hydropower production through the implementation of new environmental friendly, multipurpose hydropower schemes and by using hidden potential in existing infrastructures.

Pinios Dam, Greece, 50 m
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.

Moiry Dam, Switzerland, 148 m
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.

Hydropower as a catalyst for the energy transition in Europe
VISION “HYDROPOWER EUROPE”

Alpe Gera Dam, Italy, 172 m
Agenda of Event

9h30 - 9h40 Welcome and introduction  
(Anton Schleiss, Hydropower Europe)

9h40-9h50 Video « Hydropower as a key partner and catalyst for the clean energy transition »

9h50-10h05 Importance of hydropower for the energy transition in Europe - view of the European Commission (Hélène Chraye, European Commission)

10h05-10h15 Key results of the Research and Innovation Agenda (RIA)  
(Anton Schleiss, Hydropower Europe)

10h15-10h25 Highlights of the Strategic Industry Roadmap (SIR)  
(Jean-Jacques Fry, Hydropower Europe)

10h25 - 10h40 Feedback on the achievements of the HYDROPOWER EUROPE Forum  
(Sebastien Mortier and Thomas Schleker, European Commission)

10h40 - 11h20 Roundtable discussion « What are the strategic actions to be deployed across all stakeholders? »  
(Speakers and all participants, moderation Janire García, Hydropower Europe)

11h20 - 11h35 The future of the HYDROPOWER EUROPE Forum as a common and permanent voice in Europe (Mark Morris, Hydropower Europe)

11h35 - 11h45 Closing remarks (Jean-Jacques Fry and Anton Schleiss, Hydropower Europe)
Enjoy the closing event of HYDROPOWER EUROPE

“ The important role of hydropower in the energy transition “
Video

« Hydropower as a key partner and catalyst for the clean energy transition »