



ETIP HYDROPOWER

General Assembly 2nd meeting

December 5th, 2024



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Introduction - Agenda

Ref	Items	Time	Speaker / Action
1	Welcome <ul style="list-style-type: none"> - Introductory word from the Governing Board chairing team - Welcome by the Secretariat and overview of the current composition of the General Assembly 	14:00	Peter Stettner (Andritz) / Anton Schleiss (ICOLD)
2	Brussels Hydropower Day 2025 update <ul style="list-style-type: none"> - Outlook to Brussels Hydropower Day 2025 - Draft agenda - finalisation 	14:15	Anton Schleiss (ICOLD)/Federico Spadaro (EASE)
3	Working groups update <ul style="list-style-type: none"> - Current focus of the 3 working groups - Next steps 	14:30	Lee Estrellado (vgbe)
4	HERI Platform update	14:50	Lee Estrellado (vgbe)
5	Scientific Advisory Board update <ul style="list-style-type: none"> - Current focus and activities 	15:10	Anton Schleiss (ICOLD)/Ole Gunnar Dahlhaug (NTNU)
6	ETIP HYDROPOWER Business plan <ul style="list-style-type: none"> - Status of the business plan for a self-sustainable ETIP HYDROPOWER platform 	15:20	Anton Schleiss (ICOLD)/ Jean-Jacques Fry (ICOLD)
7	Q&A	15:30	ALL
8	AoB	15:55	ALL
	Meeting end	16:00	

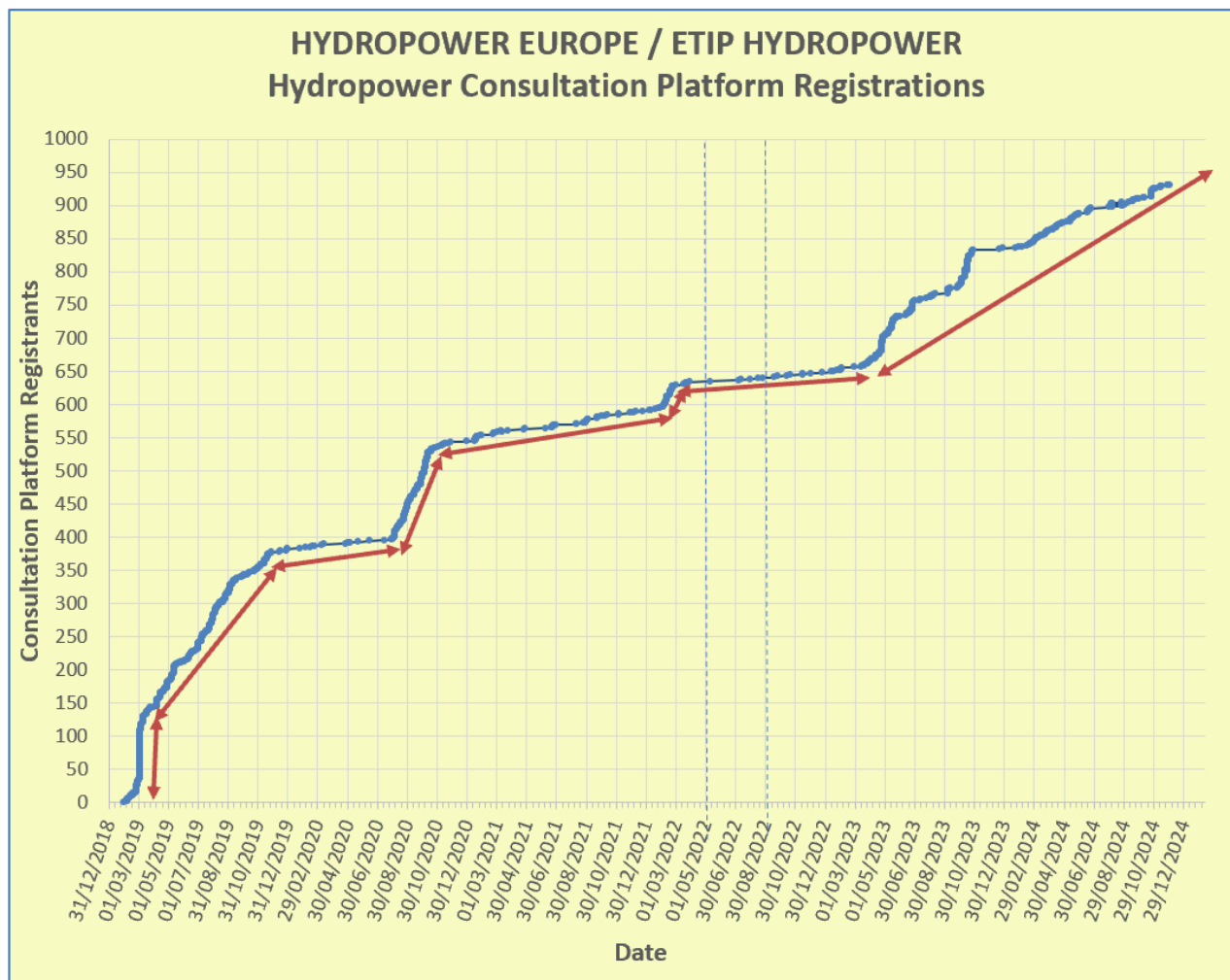
Welcome & introduction

Purpose of the Annual General Assembly meeting

- 1) Receive update about the:
 - ETIP HYDROPOWER platform and its on-going and future activities
- 2) Discuss issues and ask any questions you might have

Welcome & introduction

Overview of the current composition of the General Assembly



Country	Reg	Country	Reg	Country	Reg
Austria	45	Greece	24	Portugal	29
Belgium	52	Hungary	2	Romania	11
Bulgaria	9	Ireland	7	Slovakia	4
Croatia	2	Italy	78	Slovenia	8
Cyprus	0	Latvia	0	Spain	28
Czech Republic	4	Lithuania	3	Sweden	53
Denmark	0	Luxembourg	2	Switzerland	64
Estonia	2	Malta	0	Turkey	17
Finland	8	Netherlands	22	UK	28
France	208	Norway	27		
Germany	73	Poland	5		
				Total	815

87.8%

CP registrants across the European Region

Country	Reg	Country	Reg	Country	Reg
Albania	9	Guatemala	1	Pakistan	9
Afghanistan	2	Iceland	2	Peru	1
Argentina	1	Indonesia	1	Russia	2
Australia	3	Japan	2	Serbia	2
Bhutan	1	Kenya	1	Sri Lanka	1
Bolivia	1	Korea	1	Swaziland	1
Bosnia & Herzegovina	4	Kosovo	1	Uganda	2
Brazil	2	Laos	2	Uruguay	1
Canada	2	India	12	Ukraine	2
China	2	Macedonia	11	USA	11
Colombia	2	Moldova	2	Uzbekistan	2
Ecuador	1	Montenegro	1	Vietnam	1
Ethiopia	1	Nepal	6		
Georgia	3	New Zealand	1	Total	113

12.2%

CP registrants across other countries



Brussels Hydropower Day 2025 update

Anton Schleiss & Federico Spadaro



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Brussels Hydropower Day 2025 update

- The event will be held on 8 April 2025
- It will be organised in **5 main sessions**
 - Opening and **Keynote Sessions**
 - **Session 1:** *The added value of hydropower to energy security in providing flexibility and energy storage*
 - **Session 2:** *Hydropower and the environment in partnership*
 - **Session 3:** *Hydropower and climate change: challenges and opportunities*



ETIP HYDROPOWER

Working Group Updates

-

HERI Update

December 5th, 2024



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Working Groups

ETIP HYDROPOWER: Working Groups

- Established in Spring 2024 and began meeting in Summer 2024
- To support the achievement of the overall missions and goals of ETIP HYDROPOWER
- Consisting of all interested stakeholders and experts from different hydropower sectors and stakeholder groups
- Members of the GA will be invited to join a WG when such a group is created.

Working Groups: Tasks

- Per the Terms of Reference, the asks of the thematic working groups comprise among others:
 - To identify, prioritise and draft the key Hydropower R&I topics / messages based on the Research and Innovation Agenda (RIA) to achieve the Energy Transition and the REPowerEU targets;
 - To draft White papers to increase public awareness of hydropower based on the Strategic Industry Roadmap;
 - To propose urgent R&I topics to the European Commission to help achieve the European Green Deal;
 - To draft technical statement reports;
 - To update existing R&I documents including the RIA;
 - To facilitate strategic actions from the Strategic Industry Roadmap.

Established Working Groups

ETIP HYDROPOWER has established 3x topic-specific and 1x cross-cutting Working Groups (WG)

- **WG1: Hydropower role for flexibility and storage**
- **WG2: Hydropower and Biodiversity**
- **WG3: Hydropower and Climate change (adaptation and mitigation)**
- **WG-A: Overview on past and current European R&I projects for hydropower - Horizon Projects: follow-up and results dissemination**

WG1: Hydropower role for flexibility and storage

General Scope

- Establish and communicate with accessible language what flexibility and storage needs mean
 - Show the key and increasing role of Hydropower in response to these flexibility and storage needs, including market evolution consideration
 - Identify implications for operation, maintenance and resilience of existing equipment, identify the potential of innovations: XFLEX-Hydro innovations deployment, needs of new assets (pumped-storage), etc.
-
- WG1 kicked off on June, 20th 2024
 - Working Group Members:
73 (plus Chair Team)

	Name	Surname	Organization	Country
Chair	Eduard	Doujak	TU Wien	AUSTRIA
Co-Chair	Liv R	Hultgreen	FME HydroCen - NTNU	NORWAY
Co-Chair	Irena	Beloreshka	NEK	BULGARIA

→ Supported by vgbe energy

- SG1: Flexibility Definition
- SG2: Technical Aspects
- SG3: Economic Aspects

- **What are Europe's needs for flexibility?** Incl. regional differences in supply/demand, need for grid update/upscale, security of energy supply
- **Hydropower can offer operational flexibility:** Hydropower's advantage in offering flexible supply of power/energy, compared to wind/ solar/ thermo-plants/ etc. Pumped storage, short start-time, duration of flexibility, ...
- **Hydropower can offer flexibility with respect to multi-purpose use of hydropower:** Power, drinking water, industry water, irrigation, flood mitigation, ...
- **Hydropower can offer grid regulation flexibility:** Hydropower's ability to regulate and deliver good grid flexibility

Full Working Group	Sub-Group 1: Definition	Sub-Group 2: Technical	Sub-Group 3: Economic
10.02.2025	30.01.2025	27.01.2025	31.01.2025
13:00 – 15:00	13:00 – 15:00	14:00 – 15:30	14:00 – 15:30

SG1 – Flexibility Definition – Last Meetings Summary

Ongoing Work:

- A lot of information has been collected in the Draft to White Paper document
- Status of the topics:
 - **What are Europe's needs for flexibility** → Initial ideas have been included in the working document
 - **Hydropower can offer operational flexibility** → Will coordinate and get some ideas written in the working document
 - **Hydropower can offer flexibility with respect to multi-purpose use of hydropower** → Will write short descriptions of selected power plants
 - Cortes la Muela → Fernando
 - Grand Maison → Stevcho
 - Kopswerk II → Gottfried
 - **Hydropower can offer grid regulation flexibility** → Fernando and Matteo presented their developed **bike analogy**
 - This analogy will be the basis of the WG 1 video
- It was discussed that not all the information generated needs to be “crammed” into one White Paper deliverable
 - **We can also create other additional supporting documents/deliverables** → for example explaining the bike analogy

Next Steps:

- **Volunteers should continue to compile and write information** related to the four perspectives.
 - Please write your ideas **directly on our SharePoint** in the “[Draft to White Paper SG-1](#)” document
 - The input needed for the Final White Paper will be reduced/extracted from this

For Information

SG2 – Technical Aspects – Last Meetings Summary

Ongoing Work:

- Based on the four perspectives outlined in:
 - **What is Europe's need for flexibility?**
 - Not currently being discussed
 - The SG-1 will develop some ideas and come back to SG-2 for comment
 - **Operational flexibility**
 - Initial ideas have been shared and discussed → collection of content should be collected in the Draft to White Paper document
 - **Flexibility with relation to multi-purpose use of hydropower**
 - Various multi-purpose uses were laid out (tourism, flood control, etc.)
 - The idea of collecting a list of European plants to create supporting graphics was presented and discussed
 - See detailed note in Draft document (from Julia and Tassos)
 - **Grid regulation flexibility**
 - Initial ideas have been shared and discussed → collection of content should be collected in the Draft to White Paper document

Next Steps:

- **Continue to develop content/information** related to the four perspectives.
 - Collect relevant articles, publications, reports, etc.
 - Write down initial ideas for further discussion (bullet points, text, etc.)
 - **Exchange directly with the other colleagues**

For Information

Ongoing Work:

- Main topics:
 - Cost / benefit ratios → Collecting any existing numbers, and eventually considering open research questions for further study
 - Cost/Benefits are not so easily to clearly quantify → see existing literature on [Academic Literature on Hydro Externalities](#)
 - A rough list of potential points/examples to note in a White Paper was collected from the exchange (see [Draft to White Paper SG-3.docx](#))
 - Remuneration → Removal of barriers for fair remuneration. Research into best practices for fair remuneration of ancillary services provided by HPPs and PSHPP
 - A small questionnaire was developed by Irena to collect information from hydropower operators regarding fair remuneration
 - Flexibility needs assessment → awaiting release of report
 - Flexibility needs assessments – a new source of income for HPPs / PSHPPs and basis for non-fossil flexibility support schemes

Next Steps:

- **Consider supporting and collecting** info on the listed topics
 - Add any ideas for the White Paper to [Draft to White Paper SG-3.docx](#)
- Refine/expand on the rough list collected during the meeting (in the White Paper Draft)
- For hydropower operators (or experts with relevant knowledge) **please answer the three questions on Remuneration.** Please complete this by **26.01.2025** so we can discuss and start drafting in the following meeting. You can send this directly to Irena Beloreshka (irena.beloreshka@nek.bg) with me in CC.

For Information

WG2 Topic: Hydropower & Biodiversity

General Scope

- Highlight in accessible language state-of-the-art hydropower plants and existing solutions to key biodiversity issues politically discussed at national and EU level: Implementation of RED III and the Nature Restoration Regulation at national level; CIS WG discussion on ***free-flowing rivers, e-flows, sediment management, water quality in reservoir, GHG emissions***, etc.)
- Produce concise white-papers, fact-sheets etc. with actual representative case studies and update/maintain bibliography of scientific articles
- Identify needs for developing environmentally compatible solutions, incl. eco-design solutions, environmental footprint and LCA issues
- Foster the cooperation with national and European decision-makers and regulatory agencies
 - Help work on social acceptance of hydropower infrastructure

WG2: Status of Activities

- **Kick-off:** 25.06.2024
- **Chair:** Christoph Hauer (BOKU University Vienna, Austria)
- **Co-Chairs:** *Natalie Rojko* (Energyminer GmbH, Germany) and *Anastasius G. Youtsos* (Energy & Environment Scientific Committee of the National Research & Innovation Council, Greece)
- **Around 30 Members** (plus Chair-Team): Broad professional and national background to cover the WG 2 spectrum in 3 Sub-Working Groups (SWGs).
- WG2 is supported by EREF (European Renewable Energy Federation)

SWG	SWG Topic	SWG-Chair
SWG-A	Environmental impacts and good practise	Christoph Hauer
Team A1	Fish Mobility	Jeffrey Tuhtan
Team A2	Instream Flows	Klaus Jorde
Team A 3	Sediment Dynamics	Christoph Hauer
SWG-B	Legislative Follow-Up	Natalie Rojko
SWG-C	Scoping of the topic <i>Biodiversity and Hydropower</i> plus identifying RI needs	Tassos Youtsos

WG3: Hydropower and Climate Change

General Scope

- Scope covers both climate **adaptation** (resilience) and climate **mitigation** (reduction of GHG emissions)
- Establish and communicate with accessible language what are the **key issues in relation to climate change**, both in terms of **risks and opportunities** :
 - Risks: reduction of inflows in some regions and uncertainty on flow risk evolution
 - Opportunities: increase of inflows in some other regions and new equipment in periglacial areas; hydropower reservoirs as multi-purpose tools to increase the resilience of combined Hydro-Solar, Hydro-Wind power solutions to reduce GHG emissions in power generation; etc.
- Illustrate issues with some representative **case studies**
- Identify R&I **needs for increasing knowledge** and develop **solutions to limit climate change risk**, and foster **climate-induced opportunities**

WG3: Status of Activities

To work more efficiently, the WG was divided into 3x Sub-Groups (SG)

- Sub-WG1: **Adaptation**
- Sub-WG2: **Mitigation**
- Sub-WG3: **Water-energy nexus**

Chairing team				
	First Name	Surname	Organization	Country
Chair	Benjamin	Graff	CNR (Compagnie Nationale du Rhône)	FRANCE
Co-Chair	Ibrahim	Halil Demirel	Batman University	TURKEY
Co-Chair	Silvia	Richard	CONEXIG	FRANCE
Total number of members		38		

Key on-going and future activities:

- List of definitions and limits (i.e. scope of each sub-WG)
- SWOT Analysis: conduct a SWOT analysis to identify the Strengths, Weaknesses, Opportunities, and Threats related to the area of interest
- Use SWOT analysis to formulate key take-away messages and technical recommendations
- Prepare presentation on the outcomes of the above for the Brussels Hydropower Day 2025

[Supported by EUREC]

WG-A: Overview on past and current European R&I projects for hydropower - Horizon Projects: follow-up and results dissemination

General Scope

- Follow-up the Horizon projects related to hydropower
- Inform regularly with a webinars on the progress of these projects
- Motivate and facilitate the organization of Special sessions at conferences with hydropower as a topic on the outcomes of these projects. A first session moderated by ETIP HYDROPOWER could be during HYDRO 2025 Create a discussion forum among these projects with short webinars:
 - 21.5. 2024: **Boosting Hydropower I: Best practices for research**
 - 18. 9. 2024: **Boosting Hydropower II: Best practices for research**
 - 06. 12. 2024: **Boosting Hydropower III: Best practices for research**

Organization

ETIP Secretariat: ICOLD

Confirmed Members: ~20

WG-A

Chair: Emanuele Quaranta, JRC, Italy

Co Chairs: Stevcho Mitovski, University Ss C&M, Macedonia
Llias Zafeiropoulos, Ubitech Energy, Belgium

WG Next Steps: Deliverables

- **White Paper**

- will be prepared ahead of Brussels Hydropower Day (Q1 2025)
- will be 3 - 5 pages, with each SG contributing a section

- **Video script for WG Videos**

- Being developed by Zabala (Q1 2025)

Deliverables will be shared with the GB ahead of publishing for comment

HERI – Hydropower in Europe Research & Innovation

Overall Goals

HERI was developed under ETIP HYDROPOWER's Work Package 3, which aims to:

To provide strategic advice to the SET Plan and the European Hydropower industry and to facilitate the implementation of priority actions recommended by the HYDROPOWER EUROPE

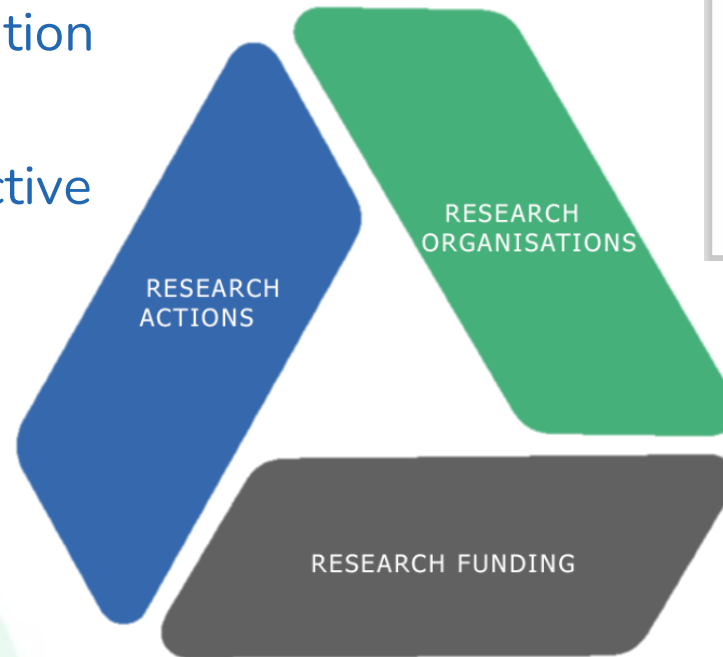


Through an easy-to-use, sustainable and public online platform for the European hydropower sector containing:

- List of research **(both basic and applied)**, innovation and strategic actions
- **Prioritized needs**
- List of available **funding options**

On Feb. 29th, ETIP HYDROPOWER the **HERI Platform** was opened. HERI aims to support the hydropower sector through:

- tracking of research, innovation and strategic actions
- tracking of organisations active in hydropower research
- compiling research funding organisations at European, national and local levels

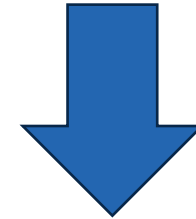


<https://hydro-consultation.eu/hydropower-europe-consultation-programme/HERI--Hydropower-in-Europe-Research--Innovation/>

Current Status

- Actions → 38 entries
- Organizations → 42 entries
- Funding Tracking → 90+ entries

Almost no movement since the original population



We need more entries from the hydropower sector

Recent Actions

- Attempt to have existing entries reviewed by project participants
- Presented HERI to:
 - EERA JP Hydropower: Steering Committee
 - Executive Director HydroCen (Liv Rande)
 - Hydropower Research Manager Energiforsk (Emma Hanger)
 - vgbe Hydro Technical Committee “Research & Innovation”
 - Shared HERI slides for HYDRO 2024
- Zabala has posted numerous times on LinkedIn

Next Steps

ETIP HYDROPOWER Consortium is currently:

- Going through steps to further promote HERI and its use
 - Social media posts
 - Focused social media campaign, highlighting specific topics (from RIA and SIR)
- Redesigning website slightly
- Making an very easy/short initial entry to capture more people
 - Also allowing responses via email

Next Steps: Shortened entry form

Project Details

Project Name *

Project Website
(i.e. <https://etip-hydropower.eu/>)

Project Description / Approach *

Please provide a short description of the action

Project Contact Name *

Project Contact Email *

Save

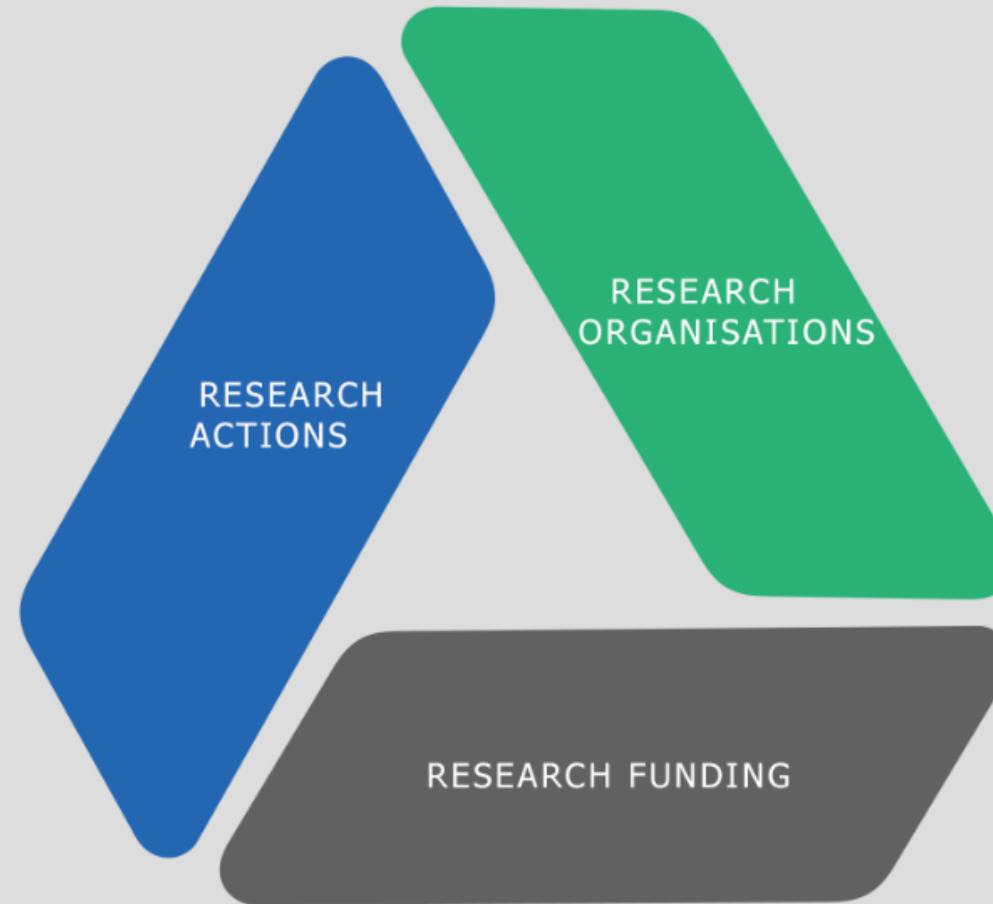
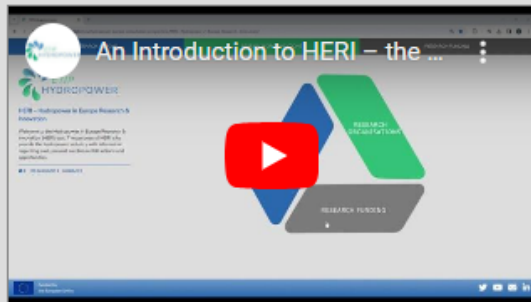
Please note, when you click the 'Save' button your Research Action entry will be sent to the ETIP Team for approval before being published online



HERI – Hydropower in Europe Research & Innovation

Welcome to the Hydropower in Europe Research & Innovation (HERI) tool. The purpose of HERI is to provide the hydropower industry with information regarding past, present and future R&I actions and opportunities.

A brief video introduction to HERI:



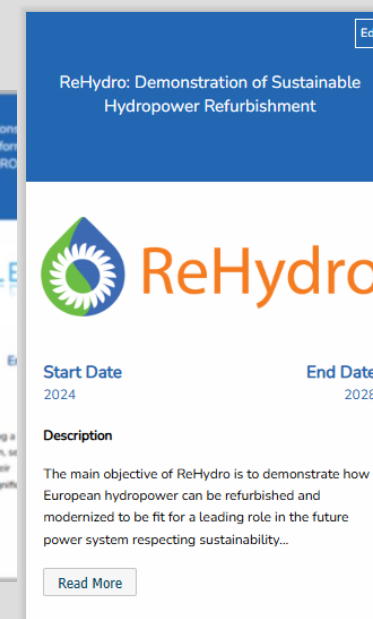
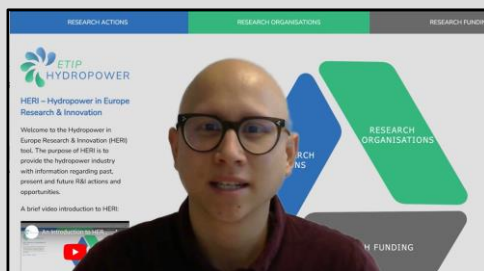
WHAT, WHY AND HOW WE USE DATA ▶



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A brief video introduction to HERI:



WHAT, WHY AND HOW WE USE DATA ▶



**Thank you for your
attention**



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Scientific Advisory Board

- Current focus and activities
 - ❖ Webinars “Boosting Hydropower: Best practice for research
 - ❖ Education in Europe (Ole G. Dahlhaug)
 - ❖ Horizon Europe 2025 Call (Ole G. Dahlhaug)



ETIP HYDROPOWER

Business Plan Development

5th December 2024

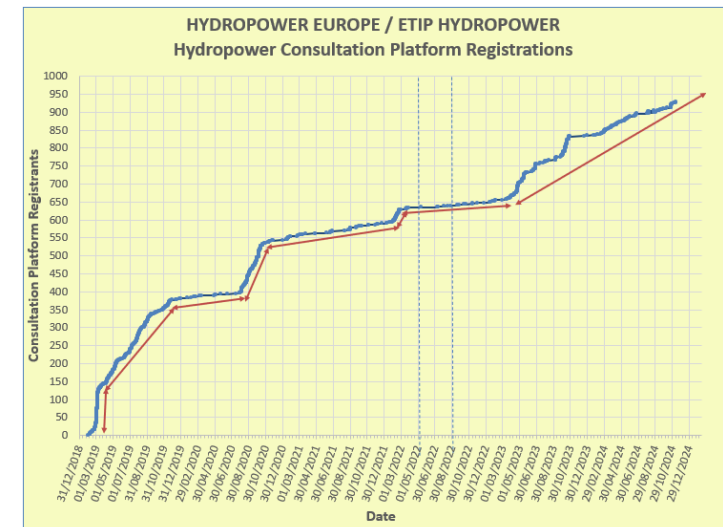
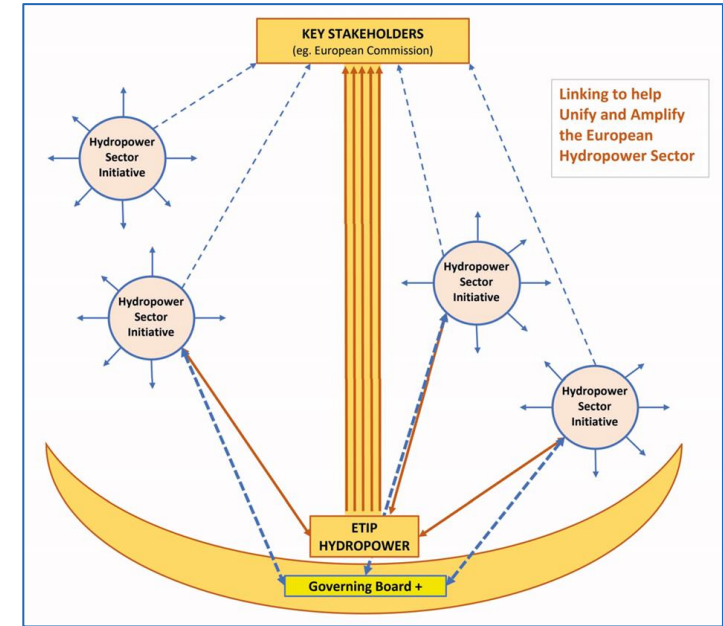


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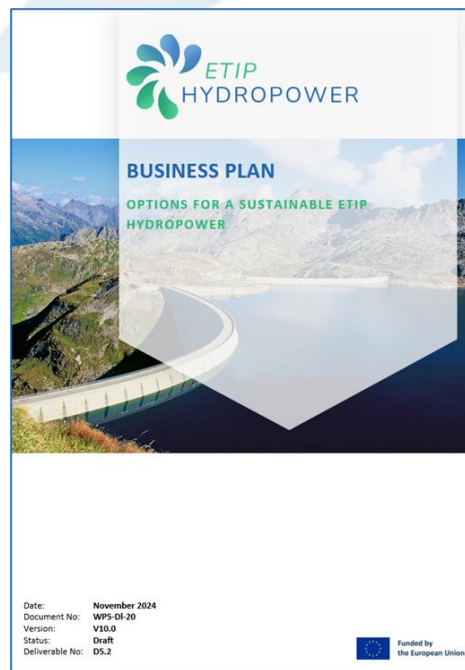
Business Plan for a Sustainable ETIP HYDROPOWER

The action to plan for a sustainable ETIP HYDROPOWER in the form of a business plan is embedded in the current work programme, prompted by the EC call text.



Business Plan for a Sustainable ETIP HYDROPOWER

We have been considering a variety of options including looking at short versus longer term issues, existing services & associations, potential service levels, benefit costs etc.



Potential Service Level	Description
[0] Minimum ETIP Service Level	Slimmed down / streamlined version of ETIP; minimum to classify as ETIP
[1] ETIP Continues with Current Service Level	Service level as existing ETIP programme
[2a] A Focus on Facilitating R&I (Expand HERI, RIA & SIR)	Create digital versions of RIA and SIR and system to update annually. Expand HERI
or :	
[2b] Focus on R&I and Implement Industry Collaboration on R&I Priorities (basic CEATI model)	Service Level [3a] + facilitation of industry funded R&I priorities
or :	
[2c] Focus on R&I and Implement Industry Collaboration on R&I Priorities (full CEATI model including small projects programme)	Service Level [3b] + facilitation of industry funded R&I priorities including small projects programme
[3] Focus on Raising Awareness of Hydropower in Industry, Public & NGOs	Increased CDE activities (webinars, video, social media, news etc.)
[4] Focus on Capacity Building for the Hydropower Industry	Increased training, networking & knowledge transfer activities

Table 1 Service levels for a self-sustaining ETIP HYDROPOWER

For the **Finance Options**, 6 potential scenarios were identified (Table 9):

Finance Option	Description
Finance A	No EC funding of ETIP; no industry funding
Finance B	No EC funding of ETIP; plus industry funding
Finance C	Reduced EC funding of ETIP; no industry funding
Finance D	Reduced EC funding of ETIP; plus industry funding
Finance E	Continued EC funding of ETIP (€1M/3yrs); no industry funding
Finance F	Continued EC funding of ETIP (€1M/3yrs); plus industry funding

Table 9 Finance options

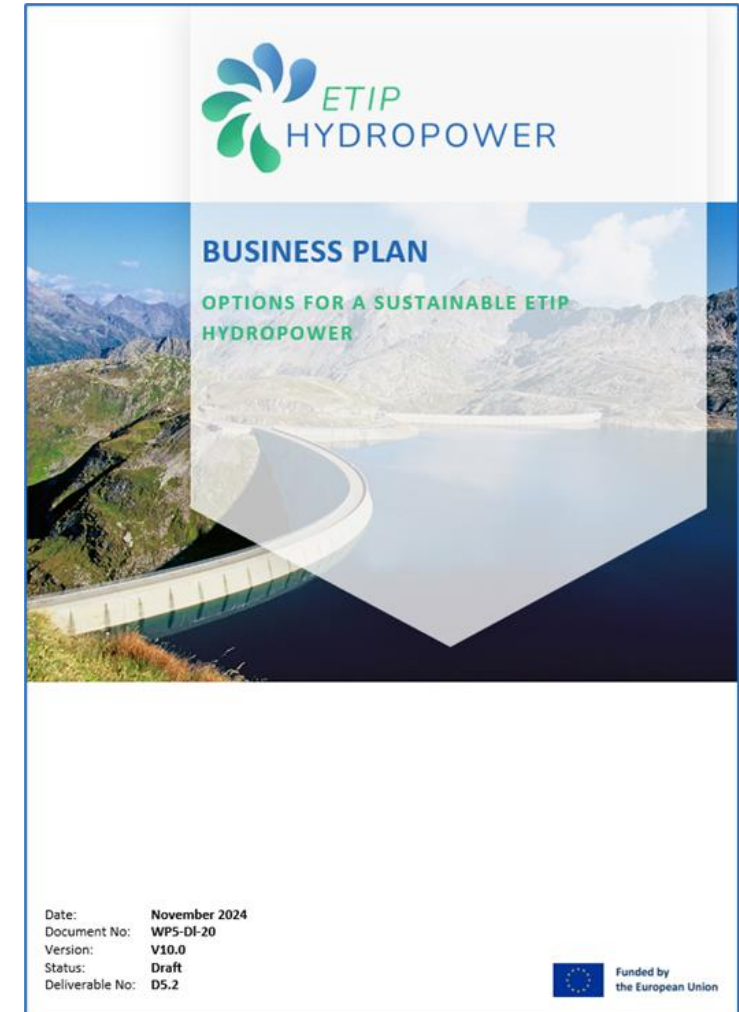
Considering potential **Instruments for Implementation**, three combinations of two approaches were identified, comprising:

- a) European CSA funded project
- b) European CSA funded project combined with industry funding
- c) Industry funding

Business Plan for a Sustainable ETIP HYDROPOWER

We are **probably** focussing on an approach which will entail the creation of an Association through which we can:

- **Maintain the ETIP Governance structure**
 - Supporting the EC & SET Plan
 - GB/SAB/GA/WGs etc
 - Hydropower Day
- **Facilitate Hydropower R&I**
 - Maintaining HERI, RIA & SIR
 - Facilitating Industry R&I Collaboration & Implementation of Research Actions
- **Maintain / Raise Awareness of Hydropower**
 - Industry / Public & NGOs



Business Plan for a Sustainable ETIP HYDROPOWER

Next steps...

We would like the GB to first consider the options identified and provide feedback. For this we are setting up an ad-hoc GB meeting to:

- Discuss the content
- Conclude on a preferred approach
- Identify the best ways for engaging industry

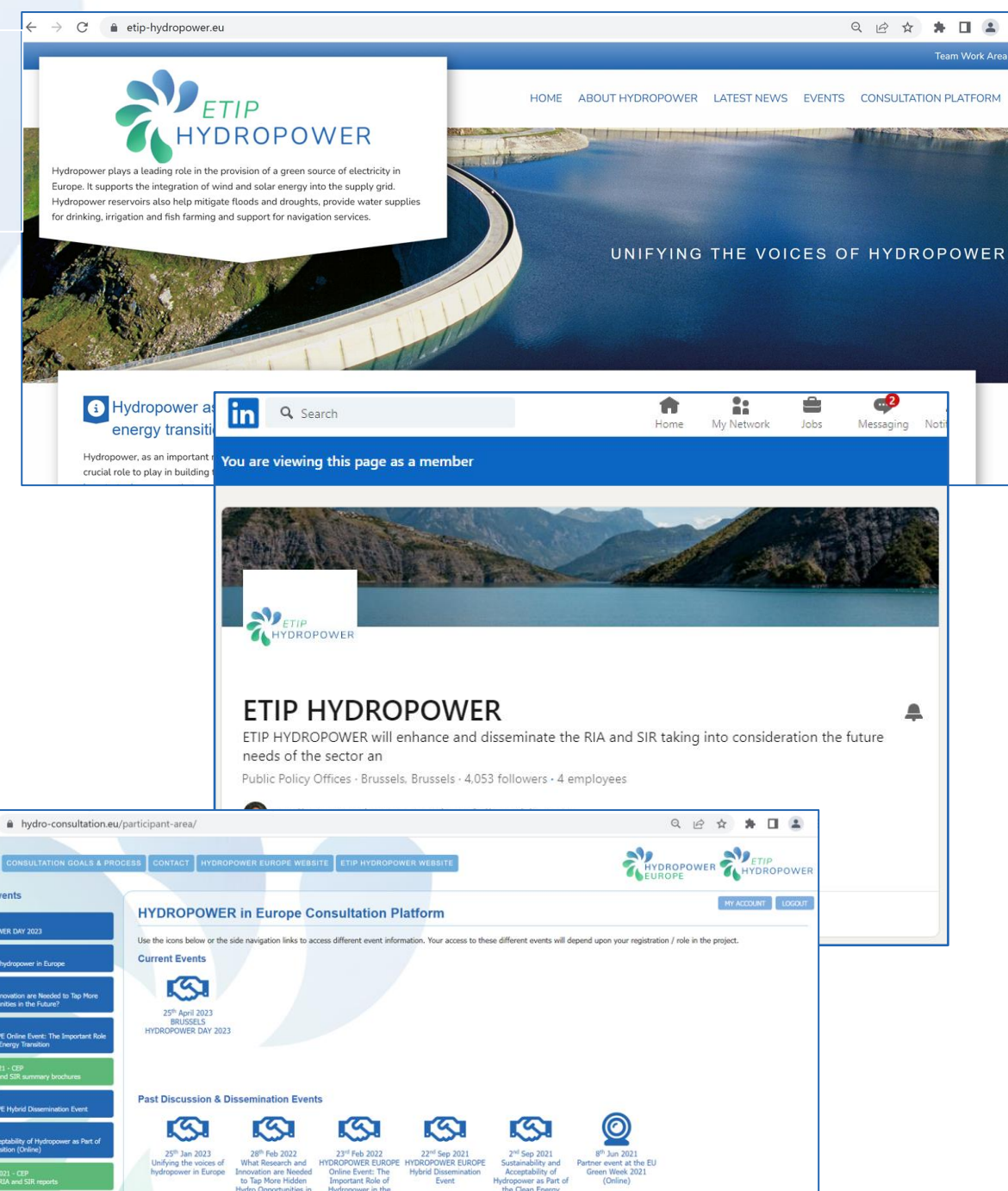
Following this we will share the details with the General Assembly for further feedback prior to implementation during 2025.



AOB & close of the meeting

A reminder that

- We provide information via our website at www.etip-hydropower.eu
- We have active social media accounts such as LinkedIn:
- We undertake consultation and communication events via our consultation platform at <https://hydro-consultation.eu>
 - (currently 928 consultees/members registered...)



AOB & close of the meeting

For further information please contact:

secretariat@etip-hydropower.eu

or visit:

www.hydropower-europe.eu

www.etip-hydropower.eu