

International Forum on Pumped Storage Hydropower Terms of Reference

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Terms of Reference

Terms of reference is valid until 30 September 2021.

1. Mission

The Forum aims to provide a platform to shape and enhance the role of pumped storage hydropower (PSH) in future power systems. Through the establishment of a multi-stakeholder network, the Forum seeks to serve all stakeholders to expand and transfer best practice and experience with the aim of delivering sustainable, affordable and reliable power for all, while contributing to climate mitigation goals.

2. Areas of Work

The Forum engages in activities such as, but not limited to, the following areas:

- (1) Improve understanding of the role of PSH in providing storage and flexibility services, and the capabilities, values, costs and potentials of PSH in addressing the needs of future power systems.
- (2) Develop guidance and recommendations to support the design of policy and market frameworks that appropriately compensate and incentivise PSH development.



- (3) Ensure that all PSH development is sustainable and aligned with good ESG practice.
- (4) Support the research and development of innovative and complementary technologies to enhance PSH.
- (5) Explore the 'full' value of PSH's wider services beyond the power system – e.g. regulating water availability for society, industry and agriculture, reducing the impact of flood and drought, and helping to adapt to climate change.
- (6) Communication and dissemination of the Forum.

The Forum's work programme will be advanced through establishing defined working groups.

3. Steering Committee

Steering Committee membership is limited to governments, intergovernmental organisations and international financial institutions and they are invited to designate one or more representatives to the committee. Members are strongly encouraged to attend all Steering Committee meetings at the appropriate level. The functions of the Steering Committee shall be:

- (a) To provide guidance and direction to the Secretariat on all matters relevant to the implementation of work programme.
- (b) To provide active participation and support for the work programme and to assist the Secretariat in encouraging stakeholders to participate.
- (c) To consider and approve the work programme, including their financial implications, submitted by the Secretariat in Steering Committee meetings.
- (d) To approve the dates and venue for meetings of the Steering Committee and Forum.

In carrying out its functions, the decisions and recommendations of the Steering Committee will be taken on a consensus basis. The Steering Committee shall seek geographical diversity.

On a voluntary basis, Steering Committee members are encouraged to provide financial contributions to support the functioning of the Forum.

4. Chairperson of the Forum

The duties of the chairperson of the steering committee shall be:

- (a) To determine, in consultation with the Secretariat, the draft agenda and the list of documents for meetings.
- (b) To conduct meetings according to the agenda and encourage inputs from members.
- (c) To ensure that decisions and recommendations are adequately resolved and agreed.

5. Forum Partners

The following organisations are able to participate as Partners:

- (a) Owners, operators, developers, equipment manufacturers, engineering and construction companies, and consultancies.
- (b) Universities and research institutes.
- (c) Electricity network and market operators, including transmission system operators, independent system operators and electricity market authorities.
- (d) Investors, financiers, legal and financial service providers.
- (e) Civil society organisations, industry associations and NGOs.



Partners will participate in Forum meetings and will directly or indirectly support the activities of the Forum on a voluntary basis by helping to leverage skills, expertise and other resources that will support and advance its mission.

6. Secretariat

The International Hydropower Association (IHA) will act as the Forum's Secretariat to facilitate the operational and functional aspects of the Forum. The functions of the Secretariat shall be:

- (a) To organise and host regular meetings.
- (b) To coordinate and contribute to the work programme.
- (c) To communicate and disseminate the Forum's work, including website development, publication of briefings, webinars and media engagement.
- (d) To plan and execute events including at the World Hydropower Congress in 2021.

7. Working arrangements

The working language of the Forum and the Steering Committee will be English. The Forum shall:

- (a) Meet periodically to maintain dialogue, collaboration and advance the work programme.
- (b) Liaise closely with existing international and regional programmes, and other efforts that promote the clean energy transition.
- (c) Present findings of its work at major climate and renewable energy events.

8. Partner Contributions

Forum Partners may provide voluntary contributions via two options:

- (a) Voluntary contribution to core funding of the Forum:
Forum partners may provide a voluntary monetary contribution up to a maximum of US\$ 10,000 to support the work of the Secretariat. All contributions will be publicly disclosed on the Forum's website to ensure transparency and to protect the reputation of the Forum.
- (b) Voluntary in-kind contribution to specific projects:
Forum partners may contribute in-kind to specific projects under the Forum's work programme. This could include, for example, staff time, resources, and the provision of data in undertaking a specific task towards the objectives of the Forum.



Annex A: Work programme of the Forum

The Steering Committee has agreed that the Forum's work programme should focus on three areas through to September 2021 – 'Market and Policy Frameworks', 'Sustainability' and 'Capabilities, Costs and Innovation'. The Steering Committee encourages Partners to actively contribute to the areas of work where they are best able to leverage their skills, expertise and resources that will support delivery of the Forum's objectives.

Market & Policy Frameworks

Numerous studies have shown that with increasing shares of wind and solar energy across the world, energy storage will be critical in the managing the variability of these sources. However, many of the services that PSH provides are not fully recognized nor adequately remunerated. In addition, many policy frameworks do not adequately incentivise investment in greenfield PSH development. This is particularly the case in liberalised markets where privately led PSH development is limited. Given the long lead times involved, investment decisions are needed now to ensure solutions are available in advance of market needs.

This area of work will seek to explore the various markets, services and contract options to highlight the current investment barriers but also opportunities for PSH development. Furthermore, it will examine how new and innovative market mechanisms could be applied to PSH to incentivise and de-risk development, including learning lessons from other sectors.

Sustainability

While PSH is a key enabler of a more reliable and cleaner grid, its development and operations can have environmental and social impacts. It is therefore critically important that these are well understood, and measures are taken to avoid and mitigate such impacts. To do so, international industry good practice in sustainability should be adopted at every stage of a project's life cycle.

This area of work will seek to promote a greater understanding of PSH's sustainability profile across different locations, including ways to best utilise the tools and latest approaches available such as the [Hydropower Sustainability Tools](#).

Capabilities, Costs and Innovation

PSH is often absent in discussions concerning the need and deployment of energy storage technologies due to a lack of understanding about its capabilities, costs and potential. This area of work will seek to raise awareness of the role of PSH in addressing the needs of future power systems in a cost-effective manner. It could also provide comparisons of different storage technologies and highlight the latest technological developments driving even greater PSH flexibility.



Annex B: Forum Sponsorships

GOVERNMENTS	FINANCIAL CONTRIBUTION (IN USD)
UNITED STATES DEPARTMENT OF ENERGY	75,000
SWISS FEDERAL OFFICE OF ENERGY	10,000
GREEK HELLENIC MINISTRY OF ENVIRONMENT AND ENERGY	10,000
NORWEGIAN MINISTRY OF PETROLEUM AND ENERGY	25,000
TOTAL	110,000

PRIVATE SECTOR	FINANCIAL CONTRIBUTION (IN USD)
HYDRO TASMANIA	10,000
TERNA ENERGY	10,000
ILI GROUP	10,000
SSE	10,000
SOUTHERN COMPANY	10,000
POSOCO	5,000
GE	5,000
HATCH	2,000
TOTAL	62,000

GRAND TOTAL	172,000
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