

Abu Dhabi, 21 October 2024

Twenty-eighth IRENA Council and related meetings

INFORMATION NOTE

Reports on Collaborative Frameworks

In response to Members' requests from the tenth to twelfth sessions of the Assembly on several technologies and other themes for which they wished the Agency to facilitate targeted collaboration tailored to the associated opportunities and challenges, IRENA's Collaborative Frameworks have been established to promote engagement, facilitate peer-to-peer exchange, and enrich programmatic output. Mindful of the work already undertaken by the Agency, the wealth of knowledge and expertise that exists within the Membership and the advantages that may be reaped through wider global cooperation with other entities, the work of the Collaborative Frameworks continue to evolve to highlight the Agency's commitment to enhancing Member engagement and fostering ownership of programmatic output, while enabling peer-to-peer collaboration and exchange of national experiences, challenges, and respective solutions, including with stakeholders, where appropriate.

To date, eight Collaborative Frameworks have been established on relevant themes that reflect growing interest amongst the Membership for deeper insight into specific topics and technologies that are critical to accelerate the energy transition across countries, regions and the world. These include Critical Materials for the Energy Transition, Enhancing Dialogue on High Shares of Renewables in Energy Systems, Geopolitics of Energy Transformation, Green Hydrogen, Hydropower, Just and Inclusive Energy Transitions, Ocean Energy/Offshore Renewables, and Project Facilitation to Support on-the-ground Energy Transition.

The Collaborative Frameworks serve as effective vehicles for dialogue, cooperation and coordinated action for the benefit of the global renewable energy transformation, and have successfully held several meetings to date, guided by their scope of work as agreed by their respective members. To ensure a member-driven approach to the activities, each Collaborative Framework is Co-Facilitated by two IRENA Members who are elected to serve for a term of one to two years. The Co-Facilitators steer the meetings and discussions held under the respective Collaborative Frameworks.

The following reports on the Collaborative Frameworks, presented to the twenty-eighth meeting of the Council, provide an update on the latest developments and activities of the Collaborative Frameworks. Members may wish to provide their feedback on these activities during their interventions at the twenty-eighth Council and related meetings on 24-25 October 2024.

Collaborative Framework on Hydropower

Since its inception in 2020, the Collaborative Framework on Hydropower has worked to facilitate dialogue, cooperation, and coordinated action to promote the sustainable deployment of hydropower. To date, the Collaborative Framework has held eight meetings and a High-level Meeting, bringing together over 100 Members, as well as industry associations and banks. Through the meetings, Members have shared experiences, defined priority areas, and updated one another on the latest developments in the sector. Since 2023, Canada and Zimbabwe serve as Co-Facilitators of the Collaborative Framework in a two-year term.

Hydropower plays a critical role in the energy transition, both as a mature renewable energy source, and as emerging provider of flexibility services to the power systems. However, the large-scale deployment of hydropower also carries social and environmental implications. The eight meeting of the Collaborative Framework on Hydropower was held virtually on the 14th of August 2024. The meeting showcased experiences from North America, Latin America, Africa and Asia in incorporating sustainability into project planning, development and operation, effectively utilizing hydropower to advance in a just energy transition. The meeting counted with the participation of Technical Focal Points from IRENA Members Countries, as well as experts from partner institutions. Fifty-two experts from twenty-six different countries joined the meeting.

The meeting was opened by a presentation from the International Hydropower Association (IHA), which provided an outlook of the current situation and expected grow of hydropower in the years to come, considering the new role of the technology as provider of flexibility for the power system.

The Hydropower Sustainability Alliance (HAS) presented the Hydro Power Sustainability Standard (HSS), which is a framework assessing and certifying Environmental, Social and Governance (ESG) practice in hydropower. The experience in applying the HSS in projects in Canada and in the Zambezi River basin, shared by Zimbabwe and Zambia, was shared by presentations from the local utilities.

Afterward, the China Society for Hydropower Engineering (CSHE) provided a glance of the development of Pumped Hydro Storage (PHS) in China and the good environmental practices and requirements that have evolved with this development. The CSHE also presented the case of 1.5 GW Xianju PHS facility, which was developed using the most demanding environmental protection requirements and in 2019 won the title of National Soil and Water Conservation Ecological Civilization project.

The Inter-American Development Bank (IADB) discussed its approach to ensuring sustainability practices in Latin America. The IADB highlighted the advantages of modernizing hydropower plants. This modernization minimizes environmental and social impacts while enhancing hydropower's role in providing flexibility for wind and solar generation.

Despite the differences in regional contexts and types of hydropower projects there was a common consensus within the CF members on the fact that the only acceptable hydropower today is sustainable hydropower. A common topic remark on most of the discussions was the need to enhance communication and engagement with indigenous communities affected by hydro project development. The use of sustainability standards was recognized as a powerful tool to plan, develop and operate sustainable hydro power projects. The common experience of Canada and Zambezi River basin with the same sustainability standard facilitated their exchange of experiences and knowledge between two utilities from different contexts but common sustainability targets.

Collaborative Framework on Ocean Energy/Offshore Renewables

The Ninth Meeting of the Collaborative Framework on Ocean Energy/Offshore Renewables (CFOR) took place on 8 October 2024. Co-facilitated by Denmark and Colombia, Mr William Lim, Chief Advisor and Wind Industry Expert within Danish Energy Agency, opened and moderated the meeting, and Dr Roland Roesch, Director of IRENA's Innovation and Technology Centre delivered opening remarks.

The first part of the meeting consisted in three presentations addressing different angles of the wind offshore supply chain challenges in diverse geographies and aspects. First, Vestas, a leader wind turbine manufacturer stressed that plans and commitments for deploying new offshore wind parks are not actual commissioning of these parks, which needs continued action to make such plans to become a reality. The presentation, on offshore wind policy trends, challenges and assessment, explained how aspects as auction designs, grid development and permitting uncertainties, are drivers of manufacturing volumes and thus, constrainers of the supply chain capacities.

It was followed by a presentation by DNV Brazil, a global assurance and risk management company. Its representative detailed the installed capacities of different components for onshore wind parks in Latin America, most of which are located in Brazil. Additionally, he pointed out the different readiness levels for offshore wind in the region, showing strengths in services for development, operation and maintenance. On the other hand, the complex setting up of needed specialized facilities for turbines and foundations, needs of governmental clarity and signs, and the availability of installation vessels is also identified as a shortfall.

The third presentation was delivered by Navantia Seanergies, a leader manufacturer of foundations, floaters and substations for offshore wind. Its representative described how cost factors as steel prices, affected by carbon pricing mechanisms, and market uncertainties impact the supply chain capacities. Early planning on ports development, strategy alignment with local stakeholders and agility in procurement processes, are identified as mitigation actions to tackle present and future challenges.

A panel discussion followed, with participants from GWEC, as the voice of the industry, the World Bank Group, providing financial institution's perspective, and Colombia's Ministry of Mines and Energy, with views from emerging economies. It included questions from CFOR Members, and led to conclusions as:

- Lack of volume and predictability emerged as the main limiting factors for scaling up manufacturing capacities and avoid bottlenecks.
- Regional collaboration plays a very relevant role to sum-up volumes that trigger investments in new or upscaled facilities, also supporting the deployment of dedicated vessels.
- Green-tech-corridors and enhanced permitting processes are also part of the solution.
- Manufacturer's risk-aversion, is driven by volume uncertainty, influenced by the spatial constraints of the technology, which notably benefits from factories near the ports or installation zone.

The meeting concluded with Member interventions from Spain, Portugal, and China, sharing the status and readiness of their supply chains towards acceleration of offshore renewable. Spain and Portugal underlined ongoing efforts on auctions definition, including non-price criteria, as clear signals from the policy makers to unlock investments. China stressed affordability, sustainability, and resilience, as enabling factors towards a stronger cooperation around the offshore wind supply chains.

The CFOR members decided that the following meeting, to take place in the first half of 2025, will address financing and auction schemes for offshore renewables.

Collaborative Framework on Just and Inclusive Energy Transitions

This virtual meeting of the Collaborative Framework on Just and Inclusive Energy Transitions held on 7 October 2024, provided an opportunity for sharing perspectives and recent experiences on fostering a just and inclusive energy transition among IRENA members. The session also served to appoint the new co-facilitators for the next two-year term.

Mr Francesco La Camera, Director-General of IRENA emphasized the Agency's dedication to ensuring all countries benefit from the energy transition and noted the importance of IRENA's Collaborative Frameworks in fostering member engagement and advancing multistakeholder action. The outgoing co-facilitators, South Africa and the United States, reflected on their roles, underscoring their commitment to inclusive transitions, and welcomed the new co-facilitators, Sierra Leone and Spain.

Thematic priorities raised throughout discussions included harnessing the vast opportunities for inclusive and sustainable development particularly local value creation and industrial development. Participants further highlighted the importance of guaranteeing access to affordable energy for all, ensuring equitable benefit and burden sharing, promoting inclusive workforce development, supporting stakeholder engagement as well as empowering communities, especially in rural areas. Members also stressed the need to deepen understanding on suitable legal, regulatory and institutional frameworks that can enable just and inclusive energy transitions. Adequate financing mechanisms and support, especially for countries in Africa, Small Island Developing States, and the Global South more broadly were stressed.

Knowledge sharing and peer-to-peer exchanges with a particular focus on identifying concrete instruments as well as insights from pilot projects that can enable just and inclusive energy transitions were highlighted. Partnerships, strong international collaboration along with dedicated financing across thematic areas were also discussed.

Insights from the discussion among IRENA Members will also inform the priorities of future activities of the IRENA Secretariat and the Collaborative Framework. The meeting concluded with Sierra Leone and Spain, emphasizing their commitment to building on the efforts of their predecessors, leveraging partnership opportunities and facilitate knowledge sharing under the Collaborative Framework for Just and Inclusive Energy Transitions.

Collaborative Framework on Critical Materials for the Energy Transition

The Collaborative Framework on Critical Materials for the Energy Transition, co-facilitated by Italy and Mexico, convened its fourth meeting on 15 October 2024. The meeting was moderated by H.E. Luis Alfonso de Alba, Ambassador of Mexico to the UAE and Permanent Representative to IRENA.

The meeting provided an update on IRENA's activities related to critical materials, including the recent publication of three reports:

- ***Critical materials for the energy transition: EV batteries.***
- ***Critical materials for renewable energy: Improving data governance.***
- ***Constructing a ranking of critical materials for the global energy transition.***

The last two reports were developed in collaboration with the Norwegian Institute of Foreign Affairs (NUPI).

The meeting also featured Mr. Selwin Charles Hart, Assistant Secretary-General and Special Adviser to the Secretary-General on Climate Action and Just Transition at the United Nations, who provided an update to IRENA members on the progress of the UN Panel on Critical Energy Transition Minerals.

The recent report of the panel: *Resourcing the Energy Transition: Principles to Guide Critical Energy Transition Minerals Towards Equity and Justice* proposes a set of voluntary guiding principles and actionable recommendations. These are aimed at promoting trust, justice, equity, and diversified supply chains, and at directing green investments across the critical energy transition material value chain.

The Fourth Collaborative Framework on Critical Minerals highlighted the projected increase in demand for critical minerals to achieve the *UAE's COP28 consensus* target to triple renewable energy capacity by 2030, as well as the major role that innovation can play in reducing the demand for these materials. Concerns from resource-rich developing countries were also brought forth, highlighting the need for local value addition, benefit-sharing and economic diversification.

During the meeting, IRENA Members shared updates on efforts to secure sustainable and responsible supply chains for critical minerals, including for EV batteries. They highlighted ongoing strategies focused on key minerals, the importance of ESG standards, and promoting responsible labor practices. Members also emphasized the importance of updating critical minerals lists and leveraging partnerships to enhance data transparency and diversify supply chains.

The next meeting of the Collaborative Framework will take place in the first half of 2025. Members are kindly encouraged to nominate Focal Points to attend future meetings.

Collaborative Framework on Enhancing Dialogue on High Shares of Renewables in Energy Systems

The Collaborative Framework (CF) on Enhancing Dialogue on High Shares of Renewables in Energy Systems convened its eighth meeting dedicated to modernizing and expanding physical energy infrastructure on 17 October 2024. The meeting addressed key action areas needed to advance modernising and expanding physical energy infrastructure with a focus on planning, incentives, permitting procedures, mobilisation of public and private finance. The meeting highlighted that modernized and new energy infrastructure is critical for economic development, reducing poverty and inequality, creating jobs, and ensuring environmental sustainability.

The meeting featured presentation summarising the key takeaways from IRENA's recent publication, "Smart electrification of end-use sectors: Benefits for distribution grids." Japan has shared its national experiences. El Salvador has highlighted key findings from IRENA's recent publication "Investment opportunities for utility-scale solar and wind areas: El Salvador". Italy and Costa Rica have made interventions to share national experiences and best practices.

Kenya with experts from ENTSO-E, GEAPP, Hitachi Energy, FSR Global and Iberdrola have participated in a panel discussion with deep-dive on related to infrastructure development including forward looking planning, infrastructure needs, flexibility, sectors coupling, grid reinforcements, digitalization, smart solutions capacities.

The participants concluded that major barriers to massive deployment of renewables infrastructure include among others: long permitting, lack of energy storage and grids; limited readiness of the distribution infrastructure for renewables-based electricity. There are number of solutions including but not limited to: forward-looking planning, modernisation and expansion of supporting infrastructure, storage, distribution, transmission and consumption of renewables.

The meeting underlined the importance of effective policies to promote investment and large infrastructure projects, and to facilitate cross-border energy trade. Public acceptance and data sharing are critical for any large-scale undertaking and can be secured through project transparency and opportunities for communities to voice their perspectives. Energy infrastructure should facilitate national, regional, and global strategies for new supply-demand dynamics.

It was highlighted that coupling and sectors collaboration with electricity infrastructure is key in guaranteeing the reliability of the energy system and integrate increasing shares of renewables. Smart electrification enables allows to accommodate new loads in a cost-efficient manner, creates flexibility in power systems, and enabling high shares of renewable energies.

In conclusions, the Co-Facilitators have noted that it has been rewarding for Japan and El Salvador to lead the CF and serve in this role over the last two years. As Co-Facilitators are changed every two years, IRENA Members have been invited to express interest to act as Co-facilitator of the CF on Enhancing Dialogue on High Shares of Renewables in Energy Systems. Japan and El Salvador will co-Facilitate the next meeting in first half of 2025 and hand over the role to new Co-Facilitators.