

Deep dive session: Harnessing ocean potential and securing sustainable energy access in the Asia Pacific

Organizers: Technology Executive Committee (TEC), Regional Collaboration Centre – Bangkok, International Renewable Energy Agency (IRENA)

Time: Wednesday, 7 July 2021 | 8:00 - 9:30 GMT+9 (15:00 - 16:30 JST)

Venue: Virtual platform, Asia Pacific Climate Week 2021

Watch on-demand: <https://www.youtube.com/watch?v=iHE3VF1tJMk&t=952s>

Link to event page: https://unfccc.int/ttclear/events/2021/2021_event03#deepdive



The banner features a background image of a large, curling ocean wave. Overlaid on the image are several text boxes and logos. At the top, a dark grey box contains the title 'HARNESSING OCEAN POTENTIAL AND SECURING SUSTAINABLE ENERGY ACCESS IN THE ASIA PACIFIC' in white, all-caps font. Below this, a lighter grey box contains the subtitle 'A DEEP-DIVE SESSION AT ASIA PACIFIC CLIMATE WEEK'. On the right side, there are logos for the Technology Executive Committee (TEC), IGES (International Greenhouse Gas Institute), the Regional Collaboration Centre – Bangkok (Promoting Climate Action in Asia and the Pacific), and IRENA (International Renewable Energy Agency). At the bottom, a dark grey box contains the date and time: '7 July 2021 | 15:00 – 16:30 GMT+9 (8:00 – 9:30 CEST)'.

List of speakers

- Francisco Boshell, Analyst RE Technology Standards and Markets, IRENA (*moderator*)
- Mareer Mohamed Husny, Vice-Chair, Technology Executive Committee (TEC)
- Purnima Jalihal, Vice-Chair, Ex.Com Ocean Energy Systems (OES) Technology Collaboration Program (TCP) under IEA
- Phaedora Harris, Project Manager, Department of Climate Change and National Resilience, Nauru
- Nadia Febina, Founder & CEO, Lumare Energi
- Mary Ann Quirapas Franco, Research Fellow, National University of Singapore
- Minh Khoi Le, Senior Research Analyst – Renewable Energy, Rystad Energy AS

Description

Oceans have vast renewable energy potential, which is largely untapped. Offshore renewables can contribute to the decarbonization of the power sector, ensuring energy security for small island developing countries (SIDS) and contributing to achieving the Paris agreement. In addition, offshore renewables are a crucial component of the blue economy, providing significant socio-economic opportunities through job creation, enhancing livelihood, local value chains and synergies among blue economy actors. The session focused on two ocean technologies.

Ocean energy technologies

Most of the ocean energy technologies are in the development stage with different technology readiness levels. The tidal range is the only technology that has reached a commercial scale, with two large installations in France and the Republic of Korea. Various wave energy concepts are gaining attention; however, their deployment is in the demonstration and pilot phase.

Ocean thermal energy conversion (OTEC) is still in the research and development (R&D) phase. Kiribati plans to deploy 1MW, the largest OTEC plant globally, with support from the Republic of Korea. This plant is expected to generate multiple co-benefits other than energy generation like desalination, aquaculture and cooling.

Floating Solar Photo Voltaic (FPV)

Floating solar PV is emerging rapidly worldwide, with an installed capacity of 1.1 GW in 2018. While most of the installed capacity is on freshwater reservoirs, more attention has been recently given to seawater installations. FPV installation is highly dominated by the Asia Pacific region, with the world's top ten largest FPV installed in Asian countries.

This event on offshore renewables will bring together experts, policymakers, industries and the private sector to discuss the current status and future opportunities of these technologies in the region. Experts also discussed the technological, organizational, and collaboration needs for developing and deploying these technologies.

Key takeaways

Offshore renewable Plays a significant role in sustainable energy development, energy transition and rural economy agenda. Offshore renewables have immense potential with multiple co-benefit promoting blue economy, particularly in Small Island Developing Countries, yet remain unexploited.

There is a huge opportunity to promote innovation, research and development in scaling up offshore renewables.

Most countries in the Asia and the Pacific region have low marine infrastructures and that demonstration projects are not large enough in scale. This leads to perceived risks not only from the environmental perspective but also whether a project can generate the desired amount of energy

One of the challenges in scaling up offshore renewables is making it economically competitive to fossil fuel and even to other renewable energy.

A coordinated approach is among different stakeholders is needed to utilize the potential of ocean renewables.

Quotes from the session

- *The real need is to have a local supply chain value that can be established to bring down the cost of importing the necessary technology and skill set needed to deploy the ocean energy technology - Mary Ann Quirapas Franco*
- *Regulations covering ocean energy are scant. Government should consider adopting more regulations related to ocean energy acknowledging the contribution of ocean renewables in the energy landscape - Nadia Febina*
- *Specific policy for floating PV is needed to streamline the development process. To get people on board, we need to get communities early in the development process, allowing them to have specific access and financial gain from the project partly distributed grid or with the combination of fishing or other commercial activities - Minh Khoi L*