



Concept Note

Workshop Series on Innovations in Renewable Energy Technology and Connectivity

Date: April – June 2025

Jointly organized by MCDF, Ministry of Finance of Saudi Arabia, Islamic Development Bank (IsDB), and Asian Development Bank (ADB)

Background

The IEA has called for an even faster deployment of existing renewable energy (RE) and the development of new RE technologies to achieve the 1.5°C warming goal of the Paris Climate Agreement.¹ The Global Renewable Energy Outlook of IRENA projects that 70% of the world's energy-related CO2 emissions can be cut by 2050, and 90% of this reduction would be achieved through renewables and energy efficiency measures.² The impressive cost reduction of renewable energy generation technologies such as photovoltaics and wind is allowing the rapid expansion of RE generation. However, the pace needs to accelerate.

Objectives

The main objective of the proposed workshops is to share practical experiences on innovations in renewable energy technologies and services among developing countries, technology companies, developing country financiers, and International Financial Institutions (IFIs). The scope of the workshops will include a discussion of connectivity and standards related to frontier RE technologies, given MCDF's focus on high-quality and sustainable connectivity infrastructure.

Approach

Considering the training that is already available on renewable energy, the following features of the Workshop Series are intended to make it uniquely valuable to participants:

- Combining presentations of companies developing innovative technologies in renewable energy with the latest regional and global studies on connectivity and renewable energy infrastructure from globally-renowned practitioners;
- Emphasizing knowledge-sharing from countries and IFIs that have implemented large-scale innovative renewable energy projects, including from Saudi Arabia as one of the largest investors in renewable energy, and co-hosts IsDB and ADB;
- Providing practical advice to policymakers to inform decisions on innovations in renewable energy and connectivity infrastructure.

¹ <https://www.iea.org/energy-system/renewables>

² https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2020/Apr/IRENA_Global_Renewables_Outlook_2020.pdf?rev=1f416406e50d447cbb2247de30d1d1d0

Topics

The Workshop Series will consist of:

Workshop	Scope	Date
Workshop 1: Energy connectivity, transmission and distribution	Innovations in energy connectivity infrastructure, including technologies (such as smart grids, high-voltage transmission systems, blockchain, AI, and IoT in RE systems, among others), and institutional mechanisms (regional power pools, cross-boundary PPPs, etc.)	April 10, 2025 6:00 – 8:00 PM Beijing time
Workshop 2: Solar	Innovations in solar energy, including technologies (e.g., new photovoltaic materials such as perovskite solar cells, concentrating solar thermal power materials, and minigrids) and institutional mechanisms to support these innovations	May 14, 2025 6:00 – 8:00 PM Beijing time
Workshop 3: Renewable energy storage	Innovations in renewable energy storage, including technologies (e.g., battery, pumped storage, sands, among others) and market mechanisms for development and scaling up	June 2, 2025 (TBC) 6:00 – 8:00 PM Beijing time

Additional topics and workshops may be added later if there is sufficient demand.

Design

Target Audience:

The Workshop Series will be designed for officials of ministries of energy, industry, technology, research, planning, and finance in developing countries, and power and grid utilities. While the series will be generally open to all developing countries, the promotion efforts will focus on Asia and Africa. Other participants will include renewable energy technology companies, project developers and, developing country financiers working in the energy sector, and IFIs.

The Workshop Series' co-hosts will be invited to promote the event among their contact lists in order to strengthen partnerships and synergies.

Language:

Presentations and discussions will be in English as it is widely spoken amongst the target audience.

Format:

The Workshop Series will be delivered virtually, in 2.0 to 2.5-hour panels, held approximately every month. Each panel will cover a specific topic among those listed in Section 3 of this Concept Note. The panels will include 2-4 experts from partner organizations and companies with specific expertise and practical experiences to share with the audience.

The Workshop Series may include overview presentations to help the audience connect to previous sessions and topics and understand the events' overall sequence. It will also include opening and closing remarks for senior officials of the sponsoring organizations.

The timing of the sessions will be defined to maximize the participation of key speakers with relevant experiences. The Workshops are proposed for April 10, 2025, May 2025 and June 2025.

Participant Interaction:

To ensure a comprehensive learning experience, the workshop will employ a mix of presentations, case studies, and panel interactions. Following the workshop, participants will be invited to JIGSAW, MCDP's online platform to engage in continued networking, knowledge sharing, and collaboration among participants.

Post-Workshop Support

Participants will receive the following materials through MCDP's JIGSAW digital platform: session videos, presentations, and reference materials. All participants will be invited to join JIGSAW to continue the discussion and for peer-to-peer learning.

A workshop report summarizing key insights and actions will be disseminated.

Feedback and Evaluation

All participants will be sent an online feedback form to assess their satisfaction with the workshop and learning and seek their suggestions on how to improve it.