INTERNATIONAL SOLAR ALLIANCE

ADB

ASIA CLEAN ENERGY FORUM 2025

2–6 June | ADB Headquarters, Manila

ACEF 2025 Deep Dive Workshop

International Solar Alliance (ISA)

ISA is an inter-governmental organization with a membership of 122 countries dedicated to accelerating the deployment of solar energy solutions across its Member States. In working towards its strategic goals, ISA collaborates closely with partner organizations to mobilize resources — including finance, technology, and expertise — for solar deployment at scale in its Member Countries. As a key partner, ADB has supported ISA since 2018 through a Knowledge and Support Technical Assistance (KSTA), helping to advance shared goals in clean energy access and sustainability.

Ecosystem Readiness Assessment for Production and Utilization of Green Hydrogen

Green hydrogen has swiftly transitioned from an aspirational goal to a strategic necessity, offering immense potential to decarbonise hard-to-abate sectors such as fertilisers, refining, shipping, steel, long-haul transport, and power generation. Despite its promise, scaling remains constrained by structural and institutional barriers—including gaps in policy frameworks, capacity development, demand-supply assessments, cost analyses, infrastructure readiness, and access to affordable long-term financing.

Recognizing the pivotal role of GH in achieving global climate goals, ISA launched a programme on 'Solar for Green Hydrogen'[1-8]. The objective of this programme is to accelerate GH production, utilization, and trade in ISA Member Countries.

To address these challenges holistically, ISA is undertaking a study titled **"Ecosystem Readiness Assessment for Production and Utilisation of Green Hydrogen",** which covers the following:

1. Country-specific insights across 10 member nations, evaluating policy frameworks, market maturity, financing mechanisms, and infrastructure. Assesses demand potential in hard to abate sectors like fertilisers, refining, steel, and transport, supporting national green hydrogen roadmaps and pilot/project pipeline identification.
2. ISA is developing four tools to provide quantitative and qualitative guidance for green hydrogen project development:
   - **Cost Tool –** Simulates production costs across different electrolyser types, tariffs, sourcing, and financing.

- **Project Risk Assessment Tool –** Evaluates regulatory, technical, environmental, and commercial risks.
- **Carbon Emissions Accounting Tool –** Quantifies emissions from hydrogen production to align with ESG financing and global sustainability standards.
- **Country Readiness Assessment Tool –** Evaluates countries on policy strength, infrastructure, investment ecosystem, and demand signals.

3. Analysis of global hydrogen hub development to establish a framework for Green Hydrogen expansion, supporting member countries in evaluating key aspects such as hub models, optimal locations, and enabling conditions—including policy frameworks, infrastructure, and workforce development. ISA's Green Hydrogen Hub Framework is designed to offer structured guidance for planning the hubs, providing actionable steps to facilitate their implementation.

These tools, frameworks, and deep dive country assessments are designed to offer critical guidance to stakeholders as they prioritise interventions and work toward scaling up the green hydrogen ecosystem effectively.

The session will delve into the current global landscape of GH with focus on:

- **Green hydrogen readiness:** Assessing the factors that contribute to country readiness for green hydrogen adoption, examining policy strength, infrastructure preparedness, financing mechanisms, and industrial demand. Experts will discuss key gaps, opportunities, and strategic interventions required to accelerate national green hydrogen ecosystems.
- **Data-driven decisions:** Exploring how decision-support tools—including cost modeling, risk assessment, emissions accounting, and readiness benchmarking—can help policymakers, investors, and developers streamline hydrogen project planning, investment strategies, and regulatory alignment for scalable deployment.
- **Key enablers for successful green hydrogen hubs:** Examining the critical factors that drive the development of green hydrogen hubs, including policy frameworks, infrastructure investment, financing mechanisms, and demand aggregation. Experts will discuss global best practices, challenges in integrated hub development, and strategic interventions to scale hub deployment and achieve economies of scale in the green hydrogen ecosystem.

Workshop Agenda

Welcome Address (3 mins)
Ashish Khanna, Director General, ISA

Inaugural Address (3 mins)
Dr. Sujata Gupta, Director, Energy Sector Office, ADB

Special Address (5 mins)
Member Country

ISA Hydrogen Programme Updates & Presentation **'Evaluating Country Readiness and Embedding Frameworks & Tools in Green Hydrogen Scale-Up Planning' (20 mins)**

Dr. Mridula Bharadwaj, Programme Lead – Storage, E-Mobility and Green Hydrogen, (ISA-ADB TA

Anvesha Thakker, Partner and National Lead Clean Energy, KPMG India

Report Launch (2 mins)
ISA

Panel Discussion (45 mins)
Moderator:
Tron Andre Svanes, Energy Specialist, ADB

Panellists:

1. Patrick Aquino, Director of the Energy Utilization Management Bureau, Department of Energy, Philippines
2. Puneet Kumar, I.A.S., Addl Chief Secretary - Energy, Govt of Kerala, India
3. Reji Kumar Pillai, President – India Smart Grid Forum; Chairman – Global Smart Energy Federation
4. Mathieu Geze, President – Director APAC, HDF Energy
5. Emanuele Bianco, Energy Specialist, Asian Development Bank

Audience interaction (10 mins)

Tron Andre Svanes, Energy Specialist, ADB

Closing Remarks, way forward (2 mins)
Nar Bahadur Khatiwora, Regional Head, Asia, ISA

ISA Publication Links

1. Blueprint for Ecosystem Readiness Assessment for Green Hydrogen
2. Africa Solar Hydrogen Project (ASHyP)
3. A Roadmap for Developing and Scaling the Green Hydrogen Ecosystem
4. ISA-INAE Green Hydrogen Report for India
5. Green Hydrogen Innovation Centre
6. Readiness Assessment of Green Hydrogen in African Countries
7. Green Hydrogen Policy Accelerator Training Handbook
8. Global Green Hydrogen Startup Challenge