Building a Global Solar Capability Ecosystem: The STAR-C Partnership Model

12 June 2026, 09:30 – 11:00 Hours

Brussels, Belgium

Registration link: https://isa.int/rcm_europe

Background/Concept/Introduction

Global cumulative solar power capacity is projected to reach approximately 2,390–2,500 GW. However, after several years of rapid expansion, the global solar power market is entering its first phase of moderated growth, with new installations in 2026 expected to stabilize at around 649–655 GW annually. Despite this strong overall growth, solar energy deployment has been unevenly distributed, with significantly faster expansion observed in developed economies compared to many countries in the Global South. For instance, a large share of solar energy capacity additions continues to be concentrated in regions such as Asia, Europe, and North America, while regions like Africa and small island states contribute only a marginal share of new capacity additions.

This disparity highlights persistent structural challenges including limited technical capacities, limited infrastructure, financing constraints, and weaker institutional ecosystems which slow down solar deployment in developing countries. At the same time, many of these regions possess some of the highest solar energy resource potential globally.

In this context, the global energy transition particularly the rapid scale-up of solar technologies demands robust human, institutional, and technological capacities across ISA Member Countries. While investments in infrastructure are increasing, many countries continue to face systemic gaps in skills, institutional capabilities, quality assurance, and knowledge ecosystems. Addressing these gaps through targeted capacity-building initiatives is therefore essential to ensure a more inclusive, balanced, and sustainable global energy transition.

Capacity building is a key enabler for achieving sustainable development and energy transition targets, strengthening institutions, enhancing techno-commercial capabilities, and enabling effective policy implementation. Under the International Solar Alliance (ISA), the Solar Technology Application Resource Centres (STAR-C) initiative has been conceptualized to address these challenges by creating regional hubs for training, research, quality control, innovation, and advisory support.

In this context, international and multilateral cooperation is critical to scaling capacities and capabilities across countries, enabling knowledge exchange, access to technology, and coordinated implementation efforts. Furthermore, with nearly 85% of future electricity demand growth expected to come from developing regions, strengthening capacity through partnerships is essential to ensure that no country

is left behind in the energy transition. However, experience indicates that standalone capacity-building programmes are often fragmented and lack long-term sustainability. There is a clear need for:

- Integrated approaches across the value chain (policy–technology–finance–implementation-operation)
- Structured and sustainable partnerships across stakeholders
- Institutionalized knowledge ecosystems beyond one-off trainings

Global frameworks emphasize that achieving sustainable development outcomes requires multi-stakeholder partnerships and coordinated capacity-building efforts aligned with national and global priorities.

Objective

To establish a holistic and integrated capacity-building ecosystem under the ISA's STAR-C framework, through sustainable partnerships to strengthen solar energy deployment capabilities across member countries.

Strategic Alignment with ISA / STAR-C

This initiative directly contributes to ISA's mandate of enhancing solar energy deployment through capacity building and technology transfer and STAR-C vision as regional Centres of Excellence delivering capacity building, quality control, enterprise and innovation, and knowledge management to support sustainable solar ecosystems.

The Integrated Capacity Development Framework adopts a comprehensive approach aligned with the four core functions of a STAR Centre, namely capacity building, quality control measures, enterprise and innovation, and knowledge management.

Accordingly, the framework covers:

- **Capacity Building**: Developing a skilled workforce, trainers, and policymakers through hands-on training programmes and regional certification mechanisms
- **Quality Control measures**: Strengthening quality assurance systems, standards, and regulatory frameworks through testing & certification
- **Enterprise and Innovation**: Promoting the adoption of advanced solar technologies through entrepreneurship development, innovation, and incubation of solar start-ups
- **Knowledge Management**: Enhancing access to data, tools, best practices, and global expertise through structured knowledge exchange and management platforms

Partnership through Sustainability

ISA in collaboration with the European Union (EU) and the United Nations Industrial Development Organization (UNIDO), is implementing a strategic sustainability-driven initiative under the EU–ISA Cooperation on STAR Cs. This partnership reflects a strong multilateral commitment to advancing inclusive, scalable, and long-term solar energy ecosystems across the Global South.

The initiative focuses on strengthening the technical, financial, and institutional sustainability of STAR-Centres, which serve as hubs for capacity building, quality control measures, enterprise and innovation,

and knowledge management. These centres are being supported across ten ISA Member Countries, enabling capacity building, improving quality infrastructure, and accelerating solar deployment.

A key pillar of this initiative is its strong global institutional partnership, bringing together:

- European Centres of Excellence (*such as INES and other EU technical institutions*)
- UNIDO and the Global Network of Regional Sustainable Energy Centres (GN-SEC)
- Specialised technical partners such as AEE INTEC, RHC-ETIP, and SOLTRAIN programme stakeholders
- Academic institutions including IIT Delhi and other research partners

These collaborations enable technology transfer, harmonised training, and knowledge exchange, ensuring alignment with global standards while addressing country-specific needs. To ensure long-term sustainability, the programme supports the development of viable business models and revenue-generating services for STAR-Cs, enabling them to operate beyond project timelines. Overall, the initiative adopts a triangular cooperation model (EU–India–Global South), positioning STAR-Cs as self-sustaining and globally connected platforms that drive solar adoption, capacity building, and sustainable energy transitions.

Expected outcome

The proposed initiative positions ISA's STAR-C as a global platform for integrated capacity building, moving beyond training delivery to a sustainable ecosystem of partnerships, knowledge exchange, and innovation. By embedding integrated capacity development within structured, long-term partnerships, the initiative will accelerate solar deployment, enhance institutional resilience, and contribute meaningfully to global energy transition goals.

The roundtable is designed as a high-level platform to bring together global institutions, technical partners, and policymakers to advance the sustainability of the STAR-C initiative. Through focused dialogue and collaboration, it will highlight how structured partnerships and knowledge exchange can transform STAR-C into an integrated global capacity-building platform, while supporting scalable solar deployment and long-term energy transition outcomes.

Key Focus Areas:

- Facilitate dialogue among global institutions and key stakeholders
- Showcase the role of partnerships in strengthening STAR-C sustainability
- Promote knowledge exchange and collaborative innovation
- Identify pathways for scaling solar deployment and capacity building
- Align stakeholders on advancing institutional resilience and energy transition goals

Agenda: Roundtable on ***"Integrated Capacity Building through Sustainable Partnership – STAR C Program of ISA"***

Time	Session	Speaker(s)
5 minutes	Opening remarks	**Mr. Ashish Khanna** Director general, ISA
10 Minutes	Integrated Capacity Building: The ISA Capability Platform	**Felipe Saliba** Chief of Unit – KMID, ISA
Roundtable (60 min)		

Moderator	Institution	Experts
TBD	Technical University of Denmark	**Prof. Lena Kitzing,** Professor and Head of Division Wind Energy Systems **Dr. Birte Holst Jorgensen,** DTU Senior
	Indian Institute of Technology Delhi, India	**Dr. Ramesh Narayanan,** Professor & HoD, DESE **Dr. Avanish Tripathi,** Professor, DESE
	United Nations Industrial Development Organization	**Mr. Martin Lugmayr** Industrial Development Expert
	Agence Française de Développement (AFD)	**Mr. Valentin Benoit** Energy Task Team Leader **Mrs. Basma Farhoud** Responsable équipe projet
	European Union (EU)	**Ms. Smita Singh** Sr. Project Manager
	Institut National de l'Énergie Solaire (INES)	**Mr. Guillaume TREMOY** Director of Operations
	University of Savoie Mont Blanc (USMB), France	**Mr. Christophe Menezo** USMB Head of French Solar Energy Fed.
	Certisolis, France	**Mr. Franck Barruel** CEO Certisolis
	Solar Power Europe	**Mr. Michael Schmela** Ex. Advisor & Director of Market Intelligence
10 Minutes	Q&A	
5 Minutes	Closing Remarks	**Mr. Martin Lugmayr**

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