



# CEO Caucus

Roundtable at the EU, Brussels

13th June 2024





# KEY DISCUSSION POINTS

## Background

The International Solar Alliance (ISA) constituted a high-level forum of select CEOs to deliberate on issues around developing a diversified and resilient global supply chain, enabling access to technology and support for technological innovations, mobilizing capital, and developing an enabling policy environment. With this objective, ISA officially launched the CEO Caucus and held its inaugural meeting virtually, on the 6th of June 2024.

The roundtable is the second in order of a series of roundtables, which focused on barriers for building Europe's thriving solar manufacturing sector and identifying potential measures to address these through collective deliberations.

Discussants for this session included industry leaders representing solar manufacturers, solar developers, financial institutions, and clean technologies in Europe. Participants also included senior representatives from industry associations, donors, think tanks, philanthropies, and research organisations. (See Annex for list of participants)

## Context

Dr. Ajay Mathur, DG ISA, in his opening remarks, outlined the technological progression of solar technology over the past quarter-century, highlighting the synergy between the private sector and policymakers. Redoubled efforts are required to achieve the ambitious goal of tripling renewable energy by 2030, a target set during COP28 deliberations. The current concentration of 95% of solar module production in a single country, is leading to supply bottlenecks and adversely impacted regions such as Africa, the DG said while stressing the importance of diversification of manufacturing supply chains.

The DG touched on the possibility of designing and implementing country specific support measures, such as 'Production Linked Incentives', to foster local manufacturing while maintaining competitiveness. Advanced research and development coupled with integration of new technological innovations into the manufacturing process, is the need of the hour. Dr. Mathur also advocated for the establishment of international standards to ensure the recyclability of solar panels.





## Key deliberations

The roundtable deliberated on four critical themes:

### **a) Incentivizing the domestic solar industry of Europe to ensure self-sufficiency and global competitiveness.**

#### **The Issue:**

The EU solar sector has access to funding through initiatives like the National Recovery and Resilience Plan and the Innovation Fund. However, the current funding support is proving to be inadequate to achieve the 40% self-sufficiency in strategic technologies. There is urgent need for targeted incentives to support solar manufacturing in the Net Zero Industry Act.

#### **Points of Discussion:**

Several countries have already introduced financial mechanisms such as Spain's financial support through PERTE, Italy's tax credit scheme, and Austria's Made in Europe Subsidy Bonus to enhance domestic manufacturing. However, there is a felt need for establishing a region-level scheme to support solar manufacturing.

Countries such as China have been ramping up outlays on industrial subsidies, which are significantly higher than those in Europe. There is a case to be made for European countries to examine such subsidies to protect its domestic market, while also maintaining the industry's competitiveness. Balanced regulations on imported products, that are as stringent as those applied to European goods, could be explored. In addition, some protective measures such as additional taxes on imported solar modules can be adopted to level the playing field.

### **b) Linking solar R&D centres for accelerating technological advancements.**

#### **The issue:**

Europe has one of the strongest R&D ecosystems for solar energy, however, there is a pressing need to enhance collaboration between these centres to accelerate innovations which could ease competitive pressures from global markets. Favourable policies and additional funding would facilitate a steady demand for solar technologies and support expansion of the industry.

#### **Points of discussion:**

The Innovation Fund grants show promise but to leverage this opportunity, it is necessary to facilitate enhanced collaboration between research institutes, universities, and companies. The SUNREY project, which focused on overcoming the drawbacks of perovskite-based solar cells by bringing together various R&D organizations across Europe, clearly demonstrates the benefits of this collaborative approach.



By pooling the expertise of European partners, SUNREY aims to enhance the development of highly efficient solar cells relying on non-critical materials, thereby strengthening the European industry's capacity for innovation. The European Union also supported SUNREY through its Horizon Europe program, under the Green Deal Initiative. More initiatives along the SUNREY model will surely boost the expansion of solar industry.

### **c) Policy interventions/amendments needed to commercialise and scale next-generation solar technologies.**

#### **The Issue:**

Shipping constraints have led to the periodic shortages of solar panels in regions such as Africa and these disruptions will only increase given the rising demand for solar panels. Furthermore, the geographical spread and concentration of module manufacturing units have been linked to creating market distortions causing temporary low prices.

Thus, the need to adopt the diversified approach for solar panel production and distribution is becoming increasingly urgent.

#### **Points of Discussion:**

##### **Focusing on circular economy, subsidies, and innovation:**

The EU's Innovation Fund and Horizon Europe research program provide substantial support to early-stage clean technology innovators through competitive funding for selected projects. To ensure environmental integrity, circular economy criteria are now being promoted for the solar manufacturing industry. Forthcoming EU policies that specify minimum standards for circularity, energy performance, and environmental sustainability will help achieve this objective.

In addition to increasing production volumes, innovative approaches are crucial to enhance the efficiency and form factors of solar panels. Encouraging new applications, such as direct solar energy to hydrogen, also demand concerted attention.

##### **Addressing barriers to private sector investments, public investments, and global cooperation:**

Attracting private investments and creating more financial instruments are essential to achieve scale. While efforts are underway to tackle ESG issues like forced labour and promote transparency through certifications in RE projects, challenges such as information security, manufacturing diversification, and aligning with EU job concerns remain. Furthermore, there is an increasing need for increased public financing and the establishment of standardized international frameworks to support the development of the solar industry.



Global cooperation can also be a potential solution for developing resilient supply chains. However, potential trade defence measures act as barriers to the industry's growth potential and these could negatively impact employment generation necessitating urgent action.

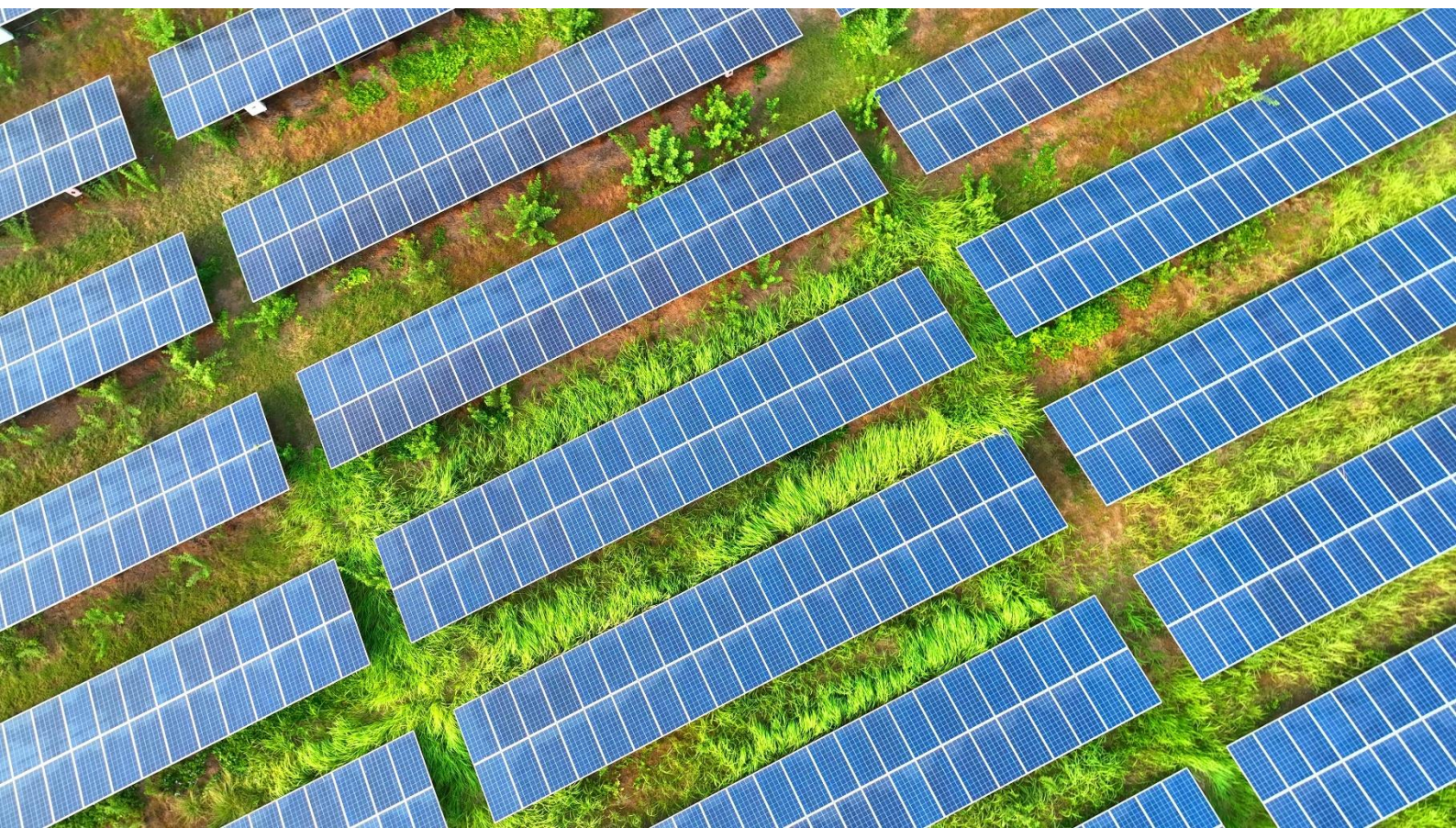
#### **d) Learnings from Europe for the successful solar adoption.**

##### **Points of discussion:**

Through favourable policies and enhanced focus, solar installations in Europe have seen impressive growth with capacity being doubled since 2019. Thus, solar energy provides 8% of the European Union's electricity and creating over half a million jobs with promoting energy security. To become more self-reliant, the EU has set a target to produce 40% of its strategic technologies domestically by 2030 and provide incentives to support the transition to Net Zero emissions. Clearly, the EU has sent its private sector strong short and long-term signals to support solar energy.

To enable financing for solar based facilities, the Climate Bonds Certification scheme has been recently introduced. The transparent certification process will appeal to diverse investors and requires that 85%+ electricity is from solar, with leeway of up to 15%. Such financial innovations can spur solar deployment and support local solar industries.

Furthermore, to ensure long-term policy stability and investment security in the solar sector, government-to-government cooperation is being enhanced, including inter-ministerial cooperation.





# Annex 1: List of Discussants and Participants

1. Keynote Address: Kadri Simson, European Commissioner for Energy
2. Chair: Dr Ajay Mathur, DG, ISA
3. Gaetan Masson, CEO, Becquerel Institute
4. Anett Ludwig, Head of Supply Chains, Solar Power Europe
5. Anna-Maria Spyriouni, Head of EU Affairs, Climate Bonds Initiative
6. Sébastien Mahieu, Managing Director, Belga Solar
7. Anes Jusic, Senior Banker, EBRD
8. Michel Casselman, General Manager, PMV EU
9. Elisabeth Cremona, Energy and Climate Data Analyst at Ember, and EU Young Energy Ambassador at EUSEW
10. Abdallah Alshamali, Policy Director, Global Solar Council (online)
11. Johan Lindahl, Secretary General, European Solar Manufacturing Council (ESMC) (online)
12. Noam Boussidan, Manager Policy Engagement and Regional Action, World Economic Forum (online)



## **Annex 2: Event Background Note**





Private sector roundtable discussion: **Brussels**  
**‘Empowering Europe’s Solar Future:  
A Roadmap to Diversify,  
Innovate, and Sustain’**

June 13, 2024 | 11:30am -1:00pm CEST

Venue: Borschette Building, European Commission  
Conference Center (CCAB), Rue Froissart 36,  
1049 Brussels, Belgium







## Context

The European Union is poised for a significant expansion in solar PV capacity, aiming to grow from 263 GW today to nearly 600 GW by 2030. Currently, almost all of the solar panels used in the EU are imported. This heavy reliance on imports poses economic security and geopolitical risks that outweigh the short-term cost savings of these cheaper panels.

With the EU set to more than double its solar power output by 2030, committing to a 40% self-sufficiency benchmark in strategic technologies, there is a need to ensure the required market demand and supply for making this feasible and achieving the target. The challenge, lies in maintaining the affordability of domestically manufactured solar components, especially for the upstream components, considering the huge investments required to set up their manufacturing in Europe, relative to their counterparts outside the region. Nevertheless, Europe's strong foundation in innovation, advanced technological base, and robust R&D infrastructure presents a significant opportunity to create a supportive environment for incentivizing domestic production; whether for making solar panels or solar cells.

By leveraging world-leading research institutions and a highly skilled workforce, Europe can drive innovation in solar technologies. Reaching this target requires overcoming substantial challenges. If the domestic solar market has to thrive, it will only be possible with the collective efforts of all the stakeholders involved. Moreover, the fragmented market and inconsistent regulations across member states complicate the implementation of large-scale projects.

Europe has always been a key innovation center for the world. Its advanced technological base, with world-leading research institutions and robust R&D infrastructure is what needs to be capitalised on to drive innovation in renewable energy technologies. The EU's comprehensive policy framework, including the Net-Zero Industry Act, Green Deal and national renewable energy plans, provides clear guidance for solar expansion in the region. Additionally, Europe's highly skilled workforce fosters innovation and maintains high manufacturing standards, enhancing its competitive edge in the global solar market. However, the task of fostering a thriving domestic solar market is immense and necessitates collective effort from all stakeholders and collaboration is essential to meet these goals.



## The Meeting

A private sector roundtable discussion on the issue is being hosted by ISA, in partnership with the Global Solar Council, as a side event of ISA's Regional Committee Meeting for Europe and others region, on 13th June 2024 in Brussels, which will be an invite-only and closed-door session.

The meeting aims to discuss challenges and opportunities and create pathways for collaboration amongst stakeholders to promote the domestic solar manufacturing industry in Europe.

The participants for this session will include European leaders working on clean technologies, solar manufacturing and deployment, renewable energy companies, and leaders from global conglomerates with significant net-zero commitments.

## Themes of deliberations

Deliberations will be focusing on issues related to diversifying and strengthening solar manufacturing supply chains and capacities.

Outlined below are the prospective questions that could be brought up during the meeting.

1. How can the EU member states incentivize the domestic solar industry to ensure self-sufficiency and competitiveness in the global market while addressing the challenges of investment costs and affordability?
2. How can the EU member states develop a mechanism to interlink the efforts of different solar R&D centres to accelerate advancements in the solar technologies?
3. Given the challenges of making new R&D technologies economically viable at scale, what interventions is required at policy-makers level to support the commercialization and scalability of next-generation solar technologies in Europe?
4. What are the strategic steps necessary to create a comprehensive network of domestic manufacturing units that collaborate effectively to exponentially increase the shareholding in solar energy?

## The outcome of the session and next steps

The session aims at facilitating issue-focused deliberate efforts from the stakeholders involved to ensure the sustenance of the domestic Solar manufacturing market of Europe. It would also provide an understanding and inputs needed to assess the solar demand growth in Europe, as well as the scale and economics of solar panels and solar cell manufacturing.

Fair distribution in solar energy manufacturing capacity will not only help in reducing the concentration risk of the -solar manufacturing market but also in technological advancement for a better and greener future by creating a healthy competitive environment. The discussion hopes to pave the way to establish a collaborative network of domestic manufacturing units towards this goal.



# Agenda

Time (in CEST)	Agenda Item
11:30 am to 11:35 am	Opening remarks and context setting by ISA
11:35 am to 11:40 am	Welcome Address by Dr Ajay Mathur, DG ISA
11:40 am to 11:45 am	<b>Special Remarks</b> by Nandita Parshad, Managing Director, EBRD
11:45 am to 12:45 pm	<b>Roundtable participants</b> <ul style="list-style-type: none"> <li>•Representatives from solar companies</li> <li>•Global Solar Council</li> <li>•Solar Power Europe</li> <li>•Representatives from ISA Member Countries</li> <li>•Representatives from Solar Industry Associations</li> <li>•Representatives from Investors and Financiers</li> <li>•Representative from Multilaterals, Bilaterals and Philanthropies</li> <li>•Representative from Research organizations</li> </ul>
12:45 pm to 12:55 pm	Q&A from participants
12:55 pm to 1:00 pm	Summary and Closing Remarks by ISA

## **Annex 3: CEO Caucus Series Note**





CEO  
**CAUCUS**  
INTERNATIONAL SOLAR ALLIANCE



**CEO Caucus:**  
A Global High-Level  
Consultative Platform for  
Industry Collaboration



## 1. Building an industry collective to unlock full capacity of solar

Achieving net-zero emissions by mid-century to maintain the 1.5-degree Celsius climate target is critically dependent on a successful transition to clean energy. To achieve this transition, and meet the goal of tripling renewables by 2030, it is essential to add at least 600 GW of solar power annually from 2023 to 2030, requiring investments of USD 500 billion per year. However, the road to accelerate solar deployment remains full of obstacles. There's a need to create a diversified and more resilient global solar manufacturing supply chain, conditions to unlock financing and for fostering technological innovations, and to strengthen solar powered applications as demand drivers to boost deployment of solar at scale across the world. The private sector plays a critical role across all these aspects and their perspectives on these issues are essential for framing the way forward.

To catalyze this, the International Solar Alliance (ISA) is constituting high-level forum of select Leaders to deliberate on measures and potential collective action for addressing challenges to unlock the full potential of the sector. The 'CEO Caucus' will provide industry leaders with a platform to collaborate with key stakeholders to create pathways for global growth through interventions across the solar value-chain. In this process, ISA will also collaborate with like-minded organisations from across the world to achieve its mission of facilitating the private sector for accelerating clean energy transitions.

This initiative is in continuation to ISAs on-going efforts to further strengthen public-private partnerships to enhance adoption of solar energy across the globe.





## 2. A consultative platform to build pathways for global growth

The CEO Caucus will bring together global leaders working on clean technologies, solar manufacturing and deployment, renewable energy companies, and leaders from global conglomerates with significant net-zero commitments. The platform will enable targeted discussions on the shared challenges within the industry, foster private sector's engagement with key policymakers and propose solutions to accelerate the adoption of solar energy across regions

ISA will conduct a series of roundtables under the 'CEO Caucus' and also gather global viewpoints on the solar sector on the sidelines of ISA's Regional Committee meetings (RCMs). The discussion points from each session will be developed into specific discussion notes. Finally, all of the topics and suggestive measures covered in every meeting will be combined into a "*Pathway Document*", outlining a suggested path forward for all stakeholders—both private and public—to promote the growth of solar markets.

This platform will serve as an ongoing forum, continuously engaging with stakeholders to develop and actualize a comprehensive roadmap for expanding solar adoption.

## 3. Key themes of discussion for the CEO Caucus

### 1. Expanding the global footprint of solar manufacturing

The main challenge in manufacturing is that it is highly concentrated in specific regions which can lead to supply chain disruptions. Through initiating deliberations, ISA wants to boost the global footprint of solar manufacturing. Direct support measures for solar manufacturing play a key role in incentivizing the exponentially large scale-up needed for new market entrants to be competitive. However, some of these measures can be perceived as protectionist. Furthermore, concerns are increasing about recyclability, waste, and the total life cycle footprint of solar modules and other components. Therefore, ISA CEO Caucus will work towards designing a holistic strategy for solar manufacturing, targeting both upstream and downstream parts of the value chain.

### 2. Unlocking capital to propel solar manufacturing led growth

One of the major obstacles to developing resilient global solar supply chains is the lack of adequate financing for solar manufacturing. Support for both capital and operating expenses is especially crucial in emerging markets. Currently, financing for solar manufacturing is concentrated in a few countries, and the significant multi-billion dollar investments required for polysilicon, wafer/ingot, and cell production pose an even greater challenge for smaller and less developed nations. Innovative ways of capital deployment can help overcome these challenges and drive ecosystem growth by propelling solar manufacturing. There is a significant opportunity for nations and international institutions to gradually increase their investments in clean energy manufacturing within their energy portfolios.

### 3. Fostering technological innovations

Emerging markets that have significant plans for solar installation may have limited expertise and R&D funding to develop solar supply chains domestically. Research on next-generation higher-efficiency technologies, including interdigitated back-contact cells, which supersede existing crystalline silicon cells are even more concentrated with only few countries. Further, critical equipment (particularly in the polysilicon, wafer/ingot and cell manufacturing) are often bottlenecked, with a small number of suppliers worldwide. Emerging markets may be challenged in procuring or gaining access to this equipment. Therefore, there is a need to increase access to technology for all regions through collaborative action.

### 4. Applications oriented demand generation

Market depends on demand and therefore countries may consider offering "guaranteed demand" to manufacturers setting up new capacity, as a buyer of last resort at a guaranteed price, but only after market forces have been exhausted. Further, the 'CEO Caucus' can look at leveraging the platform for cross-sectoral partnerships and engagements to foster application-based demand generation in the solar sector.



## 4. Series of consultative forum

Leading up to the Solar Festival and at the Festival, a series of roundtables sessions will be organized. Below is the proposed calendar for this year under the first CEO's Caucus.

1. **Private Sector Roundtable- June 6, 2024 (Virtual):** To initiate the roundtables, ISA will hold a meeting with invited organizations, to inform them of the objectives, approach and planned activities.
2. **Private Sector Roundtable - July, 2024:** Building on the previous roundtable, a High-Level Political Forum (HLPF) will be organized for select private sector participants. These will include lead discussants representing relevant corporates and industry associations, and sector experts.
3. **Private Sector Roundtable - August, 2024 -** The final roundtable will be organized with technical experts and key industry representatives for reviewing the revised draft of the white paper, which will be presented, so that it maybe finalized for a launch at the Solar Festival.
4. **Engagement at RCMs -** Gathering viewpoints from global experts on the sidelines of ISA Regional Committee Meetings:
  - **ISA RCM for Europe and the Others Region - June 11-13, 2024:** To be held in Brussels, Belgium
  - **ISA Regional Committee Meeting for Asia and the Pacific Region:** To be held on July 22-24, 2024, in Abu Dhabi, UAE
  - **ISA Regional Committee Meeting for Africa Region:** To be held on August 27-29, 2024, in Abidjan, Côte d'Ivoire
  - **ISA Regional Committee Meeting for Latin America and the Caribbean Region:** To be held in August. 2024.
5. **Solar Festival - September 5-6, 2024:** A high-level plenary, building on the Private Sector Roundtable series, with select CEOs will be convened during the two days of the festival. The final white paper will released at the festival\*.

**\*Note: The finalized policy briefs/ white paper may be shared with the CEM Secretariat for consideration and informing the discussions at the CEM Ministerial (1-3 October, 2024 in Brazil).**

