

ESIA Action Plan 2024

10 key actions to support the solar PV industrial value chain

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CONTEXT

The European Solar PV Industry Alliance (ESIA) was established in 2022 with the objective of creating the right conditions for investment in large-scale PV manufacturing capacity in Europe, targeting the reshoring of 30 GW of domestic manufacturing capacity across the value-chain by 2025 (in line with [RepowerEU](#), the [EU Solar Energy Strategy](#), the Critical Raw Materials Act and the Net-Zero Industry Act).

Despite widespread recognition of the European PV sector being strategic for Europe, 2023 has nevertheless been a very difficult year for European industry. The collapse of PV module prices, the accumulation of stocks of modules, high electricity prices, and the perceived lack of commitment to urgently support European industry has had a major impact on investor confidence. As a result, some of the remaining manufacturing companies in Europe have announced termination of their activities, and those standing and upcoming, are in need of urgent action and support. The most affected segment of the value-chain, where Europe remains the least competitive, is the production of ingots and wafers, a metallurgical industry with high energy intensity which nevertheless remains very strategic for the PV sector. However, the ESIA monitors a pipeline of projects that have the ambition to reach industrial scale in Europe (with most segments of the value chain represented, including wafers, cells and modules as well as recycling).

In this challenging context and with the objective to accelerate and de-risk investments in the remaining and new industrial initiatives, the Alliance undertook analysis of the European PV industry led by its members through four working groups focused on finance, supply chain, demand side policies and skills. Notably, the Alliance delivered a detailed analysis of the cost gap between European and Chinese production, by compiling data from members and from companies' proprietary pricing models. The results, which found a significant cost gap between Chinese and European products, are available in the paper [here](#) and presented in December 2023 to Commissioner Thierry Breton and the relevant Ministers from the Member States.

PRIORITIES FOR 2024

The Alliance has put forward ten key actions to support the reshoring of the industry. It is urgent and imperative, if we are to reach our industrial ambition, to support the scaling-up of European production and to level the playing field with non-European players. There will be no business case for PV manufacturing in Europe without a targeted and coordinated effort, bringing together the industry, the European Commission, the Member States, and private and public investors like the European Investment Bank (EIB).

The Alliance has worked on the following concrete recommended actions for policymakers to be implemented in 2023 in order to bridge this cost gap and allow European manufacturers to be competitive in the European market. Figure 1 below illustrates the estimated impact of these actions on bridging the cost gap.

Temporary support to upscale the industry

In order to be competitive, the European manufacturing sector needs to scale-up significantly, so as to reach sufficient economies of scale. To ensure adequate speed and scale in this process and to de-risk the projects, temporary financial support should be provided through European and national instruments (using existing instruments as far as possible to ensure swift delivery). This financial support should consist of a smart mix of CAPEX and OPEX support. We estimate that a total of €18-24 billion in CAPEX support and an annual amount of €4-6 billion in OPEX support are temporarily needed to achieve the ESIA target.

Action 1: Implement the Temporary Crisis and Transition Framework (TCTF) for State aid in the Member States and assess the need for the European Commission to adapt the conditions and prolong until 2027 in view of the maturity of the PV value-chain.

Action 2: Privilege support to PV manufacturing projects in the use of ETS Member States revenues each year from 2024 to 2034. ETS revenues for the Member States amounted to €30 billion in 2022 feeding national budgets for investments in renewable energy, energy efficiency improvements and low-carbon technologies.

Action 3: Earmark €1 billion from the EU Innovation Fund to support 20 GW of PV manufacturing capacity equivalent with CAPEX and enable OPEX support and reward best performers in sustainability and local content.

Action 4: Formulate an EIB-ESIA partnership to trigger 15Bn€ investment in PV manufacturing by 2027.

Action 5: Implement a European Solar Academy to train 100,000 workers by the end of 2025 for the PV value-chain. The Alliance strongly encourages the European Union to put in place appropriate training programmes swiftly as we anticipate that the availability of a skilled workforce will become a bottleneck in the short to midterm.

Action 6: Dedicate public funding to training programmes. The Alliance estimates that 400,000 jobs (direct and indirect) could be created from the reshoring of the industry. Many of these new positions will require upskilling and reskilling of workers for the PV value-chain. To this end, dedicating 1% of the European Social Fund (ESF+) budget is needed for retraining workers.

Capitalise on the ‘Made in Europe’ brand value

Securing offtake for the European industrial project pipeline is critical to attract investors. Capitalizing on the ‘made in Europe’ brand which is considered worth paying a small premium for by certain offtakers for European-made PV modules should be encouraged and facilitated by the European Commission and the Member States.

Action 7: Promote the implementation of the actions proposed in the Solar Charter, based on the recent European wind charter, to encourage (and track) voluntary commitments from private and public offtakers to buy European-made PV modules towards an aggregated volume of 30 GW per year till 2030.

Implementation of non-pricing conditions to level the playing field

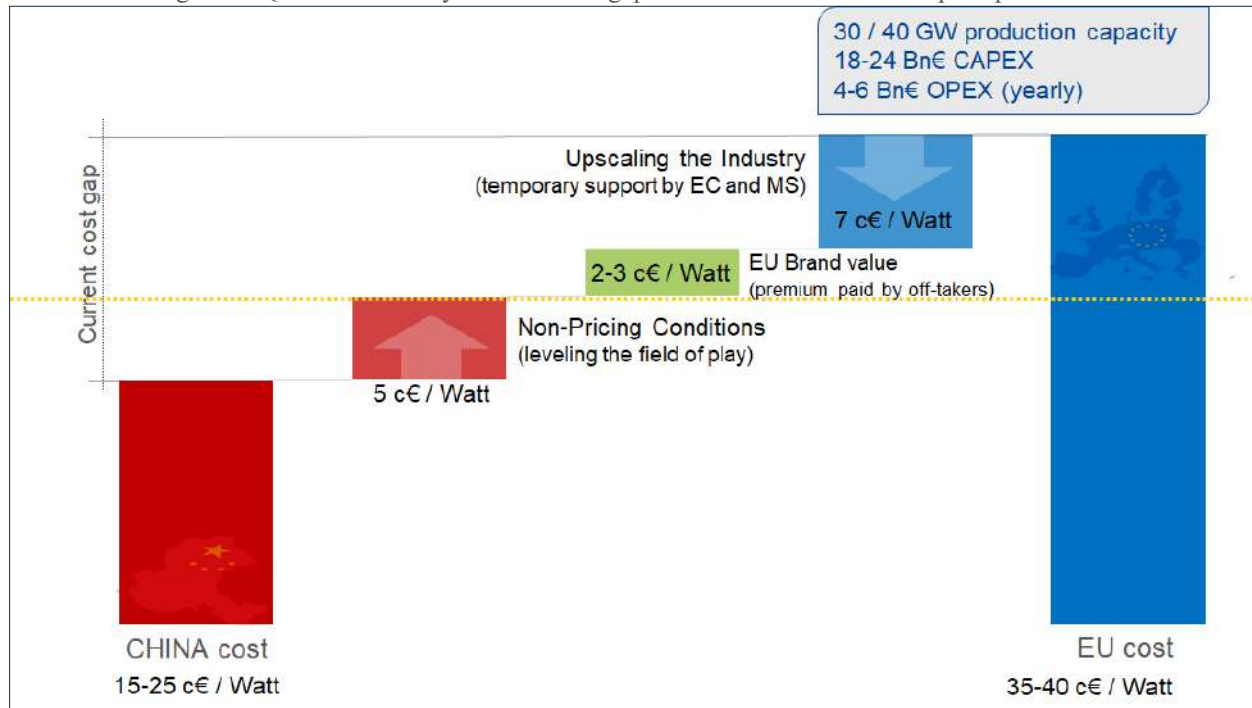
The current market conditions do not facilitate fair competition between European and non-European PV manufacturers. Without a level playing field, there will be no solid business case for European projects (whether led by European or non-European players), no incentives for investors, and hence no possibility to reshore the PV industry. It is therefore crucial to correct this. Putting sustainability, traceability, and circularity at the core of the internal market is the best way to reward sustainable best performers (wherever production takes place) while enhancing the competitive edge of European manufacturers. This starts with defining and implementing high environmental and social standards for PV products placed on the European market.

Action 8: Implement strict sustainability standards through ecodesign requirements. High environmental standards will allow the EU to rule out the most harmful products, lower the carbon and material footprint of the PV value-chain globally, and maintain the trust of end-consumers in the PV supply-chain.

Action 9: Define and implement ambitious sustainability and resilience criteria in public procurement and auctions as required by the Net-Zero Industry Act and explore ways for applying as early as possible (in line with the suggested action in the Solar Charter already before NZIA entry into force).

Action 10: Foster a European industry-led initiative to develop a PV Passport (digital product passport) to improve transparency and traceability of PV products placed in the European market.

Figure 1- Quantitative analysis of the cost gap between Chinese and European production



ANNEX

The following Work Plan for the Alliance in 2024 has been developed to support the implementation of the key actions described above.

Table 1 - ESIA WORK PLAN 2024

| WG | Actions | Task Force | Goal |
|-----------------------------|-----------------------------------|---|---|
| FINANCE | Portfolio Management | 1 Pipeline Definition | Identify the whole project pipeline within ESIA per segment, size, country, etc. |
| | | 2 EIB and ESIA partnership (4) | Define the best collaboration scope with the EIB |
| | | 3 Strategic Projects guidance | Support with standards for projects quality check |
| | Financial mechanisms | 4 Innovation Fund (3) | Understand the priorities in PV and a potential replication of Hydrogen Bank or battery manufacturing earmarked Innovation Fund budget. |
| | OPEX support | 5 Energy prices | Identifying best practices and compile recommendations |
| SUPPLY CHAIN | Equipment | 6 Equipment supply needs | An in-depth look at the European ingot wafer supply chain |
| | IPCEI PV | 7 Development of a PV IPCEI | Moving ahead with the creation of a PV IPCEI from the framework initiated by ESMC in 2021 |
| | PV Passport | 8 PV Passport content & development (10) | Specific tool to be developed based on (e.g. blockchain) for traceability where criteria agreed in other taskforces can be later applied |
| | Industry Scale Up | 9 Trade aspects | Understand trade situation, instruments and potential barriers and future bans |
| Demand Side Policies | Eco-design (8) | 11 Recyclability and sustainability criteria | Keep on the work on antimony for all the value chain. Propose the best method for carbon footprint calculation. Define best practices in recyclability and sustainability |
| | | 12 Carbon footprint | |
| | NZIA | 13 Implementing act on resilience criteria and sustainability criteria (9) | Implementation act on the NZIA with resilience and sustainability criteria for public auctions |
| | PV Charter | 14 Charter and offtake agreements (7) | Understand the needs of PV manufacturers and requirements of offtakers to sign such a charter |
| Labour and social standards | 15 Forced labour and human rights | Reflect, based on European Charter of Fundamental Human Rights and in light of the upcoming Force Labor Regulation, the need of free of force labor PV supply chain | |
| Skills | Solar Academy (5) | 16 Manufacturing skills gap per segment | Map the skills gap inside every segment of the manufacturing value chain |
| R&D | R&D PPP | 17 Creation of the private public partnership | Development of the framework for the partnership in line with the work of the ETIP PV and the ESIA (replicate Batteries) |
| Member States | Member States Taskforce | 18 Finance, non-pricing criteria and strategic projects | Launch discussion on several topics between the technical experts at member states level in order to agree on harmonised approaches, strategic commitments and cooperation. |