

Brussels, 07.05.2024

**EUROPEAN SOLAR PV INDUSTRY ALLIANCE  
RECOMMENDATIONS PAPER SERIES V**

**Fostering the Solar PV Industry: ESIA's Roadmap proposal for the Net Zero  
Industry Act**

*Endorsements, adoptions of opinions and recommendations in this paper do not necessarily represent the views of the European Commission. The Commission cannot be held responsible for any use which may be made of the information contained therein*

The EU solar photovoltaic (PV) manufacturing sector stands at a critical juncture, facing a unique blend of **opportunities and critical challenges** that could shape European manufacturing but also the transformation development for years to come. ESIA thus calls for **quick action from policymakers to set, as soon as possible, suitable conditions for consolidating existing manufacturers and massively scaling-up the European solar industry**, to meet the 40 % target for European content market share on net zero technologies in 2030.

The EU has opted for a policy of incentives through the Net Zero Industry Act (NZIA), taking a different path from its global partners such as the United States of America with the Inflation Reduction Act (IRA), which provides direct production subsidies.

Nevertheless, the NZIA **could provide a solid basis for bolstering reindustrialization projects** that align with Europe's dual vision for a green transition and enhanced energy security and strategic autonomy, **provided EU policymakers expedite the Implementing and Delegated Acts' implementation.**

Following unprecedented yearly growths in PV deployment, it is now crucial for Europe to expand its PV manufacturing to match, to a certain extent, its own surging demand (overall PV capacity expected to move from 195,4 GW in 2022 to 600 GW in 2030) while **promoting sustainability, innovation, and resilience**, as set by the 40% target of the NZIA. Currently, a dozen significant PV production capacity projects, together spanning the entire manufacturing value chain, have gained private investors' strong interest. **They are now waiting expectantly for EU policymakers to set out favorable conditions for their installation on European territory.**

For the European Solar Industry Alliance (ESIA), the NZIA is a tool to **relocate strategic value chains back in Europe. The ESIA thus urges Member States to make use of the NZIA provisions at their full extent, thereby supporting an ambitious European-based industrial ramp up.** Furthermore, the ESIA calls for the introduction of additional instruments, such as a European Sovereignty Fund supporting CAPEX or a specific scheme to support OPEX.

The ESIA also regrets that some member states are *de facto* not concerned by very important parts of the NZIA, like articles 26<sup>1</sup> and 28<sup>2</sup>, because they do not use auctions or public support schemes.

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<sup>1</sup> Auctions to deploy renewable energy sources

<sup>2</sup> Other forms of public intervention

## The ESIA is committed to assist European policymakers with the NZIA implementation

Over the next coming months, the **European PV manufacturing ecosystem stands ready to assist the Commission** by providing the essential data required to specify the list of final products and their main specific components for solar energy (see Annex I [below](#)).

Our proposition for the list of final products, semifinished products, components, materials, and raw materials\*

**MG Silicon / Polysilicon / Ingots / Wafers / Cells / Modules / Inverters / Solar Glass**

*\*Definitions in Annex I*

In the upcoming weeks, the **ESIA will provide further suggestions concerning the implementation of the NZIA Chapter IV<sup>3</sup>**, starting with specifications for non-price criteria.

## The ESIA recommends setting tight, yet realistic milestones for the publication and implementation of the NZIA

The ESIA shares the views of Commissioners Simson and Breton for **“full implementation of the NZIA and rapid adoption”** of the acts required to that end. Setting out a calendar is crucial for addressing the strong dependence of the PV deployment upon foreign manufactured components and preventing further escalation, associated risks and negative socio-economic impacts. **A clear and accelerated action schedule would provide legal security to the European industry**, which stands ready to deliver on relocation, scaling-up and optimization of strategic industrialization projects and to participate in public procurements, auctions, and large-scale deployment, including citizens-driven initiatives of distributed solar formats.

Considering the critical situation the industry faces, **early and ambitious deadlines are essential**. In the first instance, the ESIA calls for publication and entry into force of the NZIA by the end of June 2024, in order to give PV manufacturing projects greater visibility and security. In the absence of necessary documentation for the different types of net-zero technologies listed by NZIA, the ESIA strongly encourages the Commission to proceed as soon as possible with the **enactment of implementing and delegated acts and guidelines. In any case, all the secondary legislation should be published by the 1st quarter of 2025 at the latest**. This short agenda is certainly challenging for both the Industry and the Commission, but time is running and the ESIA is confident that, together, Europe will be able to meet its ambitious targets. Even with a short timeframe, discussion is essential

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<sup>3</sup> Access to markets

to define the most effective tools. ESIA thus **calls for exchanges between the Commission and Stakeholders during this process.**

Of course, the Alliance stands ready **to assist the Commission in writing the Implementing and Delegated Acts in a way that would effectively foster the European PV industry and the resilience** of the Union. The ESIA also encourages the Commission to set very precise and effective instruments promoting Resilience and European Manufacturing either through the initial Acts or through additional Guidances if necessary.

Following the adoption of delegated and implementing acts, European manufacturers will also need the Commission to publish, as quickly as possible, **updated information on the shares of the Union supply originating in different third countries.** Once again, the ESIA stands ready to assist the European Commission in gathering all the necessary information.

The ESIA believes quick action is necessary to safeguard and extend existing European production capacities and suppliers, while fostering greenfield manufacturing projects. Swift, early adoption and publication of the NZIA and of the implementing and delegated acts would provide European manufacturers with much-needed visibility while sending a strong political message in favor of European industrial sovereignty, commitment to European production and energy security. **Every day is vital to the European PV industry.**

### **Next steps for the ESIA on the NZIA implementation**

In the following weeks, the ESIA will publish a **first recommendation paper on criteria that could be used by Member States to implement the chapter IV of the NZIA** regarding access to markets. This toolbox will be designed to provide inputs for the Implementing and Delegated Acts. The ESIA stands ready to provide the needed support to the Commission and Member States for a swift, smart, efficient and ambitious implementation of the NZIA, making possible the achievement of the 40% target for European content market share on net zero technologies, particularly solar PV.

Finally, the ESIA will publish, every 3 months (June – September – December), a **monitoring-assessment paper to report on the progress of the NZIA Implementation**, and in particular of the Implementing and Delegated acts.

## ANNEX I: List of final products, semifinished products, components, materials, and raw materials

Our proposition for the list of final products, semifinished products, components, materials, and raw materials:

**MG Silicon / Polysilicon / Ingots / Wafers / Cells / Modules / Inverters / Solar Glass**

### Definitions:



**Metallurgical Grade Silicon (MG-Si)** refers to the result of a carboreduction of silica using quartz and carbon (in the form of coal or charcoal) in an electric arc furnace. The silicon obtained to be used in the PV value chain has to be at least 98% pure, avoiding critical impurities for PV and with the right size to be used in the production of polysilicon.



**Polysilicon** refers a semiconductor material used for the manufacturing of solar wafers. To be suitable for the use in PV manufacturing a high level of polysilicon purity is required.



**Ingot** refers to a block of crystalline silicon coming from controlled solidification of melted polysilicon.



**PV Wafer** refers to a thin slice of silicon of at least 120 square centimeters, either directly from molten polysilicon, or through formation of an ingot from molten polysilicon and subsequent slicing, or through direct deposition from the gas phase.



**PV Cell** refers to the smallest semiconductor element of a solar module which performs the immediate conversion of light into electricity.



**Solar Module** refers to the connection and lamination of PV cells into an environmentally protected final assembly which is (i) suitable to generate electricity when exposed to sunlight, and (ii) ready for installation without additional manufacturing process.



**Solar inverter or photovoltaic (PV) inverter** refers to a type of power inverter which converts the variable direct current (DC) output of a photovoltaic solar panel into a utility frequency alternating current (AC) that can be fed into a commercial electrical grid or used by a local, off-grid electrical network.

**Solar Glass** refers to a sheet of patterned or float glass suitable for light transmission when exposed to sunlight that serves as the front or back of a solar module.