

30 November 2022

Dear Commissioner BRETON,
Dear Commissioner SIMSON,

ESMC MILESTONE PROPOSALS FOR THE EU SOLAR PV INDUSTRY ALLIANCE

The European Solar Manufacturing Council (ESMC), uniting 50 members of the European PV manufacturing community, welcomes the constant efforts of the European Commission to support the creation of a long-term competitive European PV manufacturing landscape. We highly appreciate the European Commission's preparedness to address the issues of strategic importance for Europe and our joint work in this direction during recent years.

The forthcoming launch of the European Solar PV Industry Alliance (Alliance) marks an important cornerstone in developing a competitive European PV manufacturing industry across the full PV value chain and securing the PV deployment in line with the ambitious targets declared in the EU Solar Energy Strategy. ESMC welcomes with high interest and appreciation the establishment of the Alliance and expects that this will be a decisive factor to create a long-term competitive ecosystem for the European PV manufacturers and the substantial European industrial suppliers. While implementing these goals the ESMC strongly proposes the Alliance to complement the 30 GW European PV manufacturing target for 2025 by at least an 80 GW manufacturing target for 2030.

It is absolutely clear that the success and the deliverables of the Alliance will depend on fast, concrete, mature and comprehensive support measures to ensure the global competitiveness of the European PV manufacturing industry. On a global scale, the European PV manufacturing industry currently is almost non-existing, due to fierce competition and an unlevel playing field. Currently, the possibilities for European PV manufacturers to attract investments are challenged by the extensive (by its scope and length) incentives and support measures from other potential global PV manufacturing players like the US and India. In such circumstances, the incentives and support schemes potentially to be proposed by the Alliance open up the historical opportunity for Europe to play a role in the global PV manufacturing environment. The cumulative effect of the incentives for the European PV ecosystem developed by the Alliance should be as equivalent as possible to non-EU manufacturers, so that the operational cost structure of the entire European PV value chain will be competitive globally. Now there is a critical need to create appropriate incentives for the scale-up of the European PV manufacturing capacities – this is the backbone of the competitiveness of the European PV industry.

By this letter and the enclosed 8 concrete proposals ESMC delivers a comprehensive package of measures as a potential guidance for the Alliance to take the necessary actions without any delay, including but not limiting to the creation of a € 20 billion special financial vehicle to de-risk the investments, developing effective off take agreements for local production system, and setting EU standards on labour laws, hidden subsidization, CO2 footprint and circularity.

ESMC is prepared to spare no efforts and dedicates all the necessary measures on behalf of our organisation, as well as of our individual members to take the concerted actions for the success of the Alliance and enable positive changes of the European PV manufacturing landscape.

ENCLOSURE: European Solar Manufacturing Council (ESMC) milestone proposals for the European Solar PV Industry Alliance (5 pages).

On behalf of the European Solar Manufacturing Council,



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EUROPEAN SOLAR MANUFACTURING COUNCIL (ESMC) MILESTONE PROPOSALS FOR THE EU SOLAR PV INDUSTRY ALLIANCE

SUMMARY

The EU needs a holistic industrial policy approach – an entire package of support measures targeting different important areas. For this reason, different support layers should be developed addressing the current bottlenecks to facilitate a well-functioning European PV manufacturing ecosystem. The EU PV manufacturing industry critically needs these key measures to be adopted by the European Solar PV Industry Alliance:

1. **EQUALIZED CONDITIONS TO IRA:** The US Inflation Reduction Act (IRA) framework should be transposed into an EU PV manufacturing support framework, to ensure strong European response. The equalizing measures could be implemented in two alternative directions: a) through implementation of a tax incentives model; b) by direct grants to manufacturing projects.
2. **TAX EXEMPTIONS, STATE GUARANTEES, CAPEX AND OPEX SUBSIDIES:** An access to low interest capital and OPEX subsidies to support (venture) capital investments (for risk mitigation) to foster investment into production facilities. Concrete mechanisms on lowering-equalising the price for energy (for example, electricity and natural gas) should be developed – competitive and plannable energy prices are particularly critical for the production poly-Si, solar glass, wafers etc.
3. **OFF-TAKE AGREEMENTS:** Securing significant demand for EU-made PV products through off take agreements, including pre-payments for local production. This measure would catalyze investments in large-scale PV manufacturing capacities in Europe. An effective insurance system should be created both for the buyers (in case of non-off take) and producers (in case of non-delivery) for the situations when the agreements can't be entirely fulfilled.
4. **EU STANDARDS:** EU standards for imported PV ingots, wafers, cells, solar glass and modules concerning labour laws, hidden subsidization, carbon footprint, and circularity would allow to immediately exclude imports in case any component of the imported product do not meet EU standards.
5. **SUPPORT FOR INNOVATIONS:** The establishment of an appropriate framework for innovative and breakthrough European technologies is critical for the European PV manufacturing – a PV-IPCEI is a low-hanging fruit. The Alliance should pursue the support for the development and further scaling of the technologies that might have a positive impact for the EU strategic autonomy and PV manufacturing competitiveness in the long-term.
6. **SPECIAL FINANCIAL VEHICLE:** Creating and developing a separate financing vehicle of at least € 20 billion, following the example of the European Chips Act, and allowing for easy adjustment of existing financing mechanisms, e.g. National Recovery and Resilience Plans.
7. **PERMITTING PROCEDURES:** Reduce the red tape for permitting, not only of PV deployment, but also for the construction of industrial PV manufacturing plants. Easy access and fast permits to setup manufacturing facilities will save time – a critical element in the current global competition.
8. **EU REGULATIONS:** Adoption of policy measures to specific EU regulations (revision of WEEE, VAT exemptions for integrated PV solutions) would have a cumulative positive effect for the competitiveness of European PV production.

All these measures should be implemented not separately, but as one framework. This is the key pre-condition to ensure both short-term and long-term competitiveness of European PV manufacturing. Dedicated efforts should be taken to ensure 30 GW PV manufacturing capacities along the entire PV value chain by 2025 including the ambition to raise the target to 80 GW PV manufacturing capacities by 2030, to adequately reflect the European PV demand side.

I. SUPPORT FOR THE EUROPEAN PV MANUFACTURING SHOULD BE GRANTED WITHOUT DELAY

The current energy crisis in Europe is, amongst others, the consequence of under-investments in PV deployment during recent years, as the transition from fossil fuels to renewable energy has clearly been too slow. Europe's current import dependency on hardware for the accelerating PV deployment, which is one of the corner stones in the REPowerEU strategy, put the transition to renewables in Europe in an exposed position, as the continent risks future supply chain shortages in the case of disrupted trade flows or geopolitical changes. Therefore, it is of utmost importance that domestic PV manufacturing capacities are secured in a fast and sustainable manner. The only alternative for Europe is to create appropriate and competitive business conditions for the domestic PV manufacturing and leverage the competitive advantages of PV manufacturing in China.

Although the global PV manufacturing environment is highly competitive, the future of European PV manufacturing can be secured through implementation of several concentrated key measures, which should be introduced as soon as possible by the European Commission and the Member States. An unthreatened transition of the EU to renewables depends on increased PV manufacturing capacities in Europe. The European Solar PV Industry Alliance (Alliance) initiated by the European Commission, is an important step into that direction. However, the actions and policy incentives should be developed, and more importantly – implemented – in the EU without delay, as the global PV manufacturing environment is highly dynamic due to the additional recent support measures under implementation in the US (Inflation Reduction Act – IRA) and India.

PV deployment targets of 600 GW until 2030 as well as the current low PV manufacturing capacities in the Member States of the EU raise serious concerns, not only about the unused potential of the PV manufacturing sector for the growth of the economies of the EU, but also serious concerns about the PV deployment capacities. The ambitious plans of the European Commission and the Member States – for instance, Germany declared a target of reaching 215 GW of PV installed by 2030 – cannot be delivered successfully without establishing a competitive and sustainable PV manufacturing value chain in Europe.

II. GENERAL OVERVIEW OF THE PROPOSED ACTIONS

In line with the target of 30 GW by 2025, the Alliance should confirm a European PV manufacturing target for 2030 on at least the 80 GW level.

The Alliance should seek to ensure all necessary measures so that the operational cost structure of the entire European PV value chain would be as equivalent as possible to non-EU manufacturers. In parallel, the support measures should be implemented to scale the European PV manufacturing capacities, and through this improve the competitiveness and reduce the manufacturing costs further. The Alliance should avoid going for short-term victories to attract some manufacturing, but rather focus on the long-term success.

Innovations and scale-up of the European PV manufacturing capacities are the key deliverables to be achieved through various policy instruments. These policy instruments could be implemented by CAPEX and OPEX support, including an appropriate scheme of off-take agreements in the EU:

- Next to the support on the CAPEX side, support measures for the OPEX are needed to equalize the conditions for the competition (China – subsidised loan rates, cheap/free land, utility subsidies for electricity and water, work force programs and relaxed labor laws; US – tax credits for each domestically produced component across the solar PV supply chain).
- Tax incentives, tax exemptions, state guarantees, competitive (~1% interest rates) loans and PV-IPCEI should be prioritised as the most important financial measures to be proposed by the Alliance.
- The inclusion of PV into the Carbon Border Adjustment Mechanism and the EcoDesign & Energy Labelling framework, Local content requirements and off-take agreements, and Rules on circularity should be prioritised as the most important regulatory measures to be proposed by the Alliance to secure the competitiveness and level playing field of European PV production.

Realistically, the European PV deployment market should be differentiated – one market for cheap Chinese modules and another for locally produced modules. Reasonable off-take agreements paired with tax exemptions and incentives would be the most sustainable way to boost European production in that direction.

III. PROPOSALS FOR THE EUROPEAN PV MANUFACTURING INDUSTRY TO BE COMPETITIVE

The business case for PV manufacturing is currently not attractive enough in the EU, and global competition is fierce, leading to low profitability margins for the European PV producers. Supporting policy frameworks for the PV manufacturing in the EU Member States are not yet developed.

Neither 2 or 3 individual policy measures can lead to a significant restart of the European solar PV manufacturing industry. The EU needs a holistic industrial policy approach, meaning an entire package of support measures targeting different important areas – for this reason different support layers should be developed addressing the current bottlenecks to facilitate a well-functioning European PV manufacturing ecosystem. EU PV manufacturing industry critically needs these key measures to be adopted by the Alliance:

1) The **US Inflation Reduction Act (IRA) framework transposition into an EU PV manufacturing support framework** ensuring a strong European response to the US IRA. The respective measures should be implemented within the next three to five months, before the capital leaves Europe in favour of the US. Before the end of the year the industry needs clarity on the actions to be taken in 2023. Otherwise, the investment funds will start to flow to the US, and the raw material and equipment pipelines will be taken by US, Indian, and Chinese companies. This could be implemented in two alternative directions:

a) **Implementation of tax incentives model** – tax incentives and support to local manufacturing that are directly connected to the sales of modules / cells (direct subsidies for manufacturing or tax breaks on a per watt basis) similar to the US, rather than further CAPEX incentives. This will support existing manufacturers and make it easier for them to take a decision to expand, in addition to only support new companies / new investments. Such a general support scheme, but not specific individual calls for the support, would be more efficient and targeted to the real PV production output and not to the potentially stranded assets. However, it might not be so powerful as it is in the US, due to the national implementation model in the EU;

b) **Immediate and direct grants to mature manufacturing projects** along the entire value chain – 60% grant on CAPEX to allow EU to compete with US IRA, minimum package of € 20 billion of grants for the period to 2025 to allow the industry to reach the 30 GW full value chain scale. This will create at least 30 000 direct and indirect jobs in only the cells and modules part of the value chain and will reduce the current € 10 billion negative trade balance on imported PV modules with China by half.

2) Support of local PV supply chain manufacturing through **tax exemptions, state guarantees** (backup of the state to have access to low interest capital), **OPEX subsidies** (concrete mechanisms should be proposed on lowering-equalising the price for energy like electricity and natural gas – competitive and plannable energy prices are especially critical for the production poly-Si, solar glass, wafers etc.) and support (venture) capital investments (mitigate risk) to foster investment into production facilities. Immediate availability of credit guarantees would help to reduce initial CAPEX investment risk and accelerate access to finance. Substantial direct subsidies on CAPEX and OPEX through a 10-year program would kick-start the EU PV value chain and help the industry to de-risk the investments and spur a fast growth. This would create certainty and allow for the EU to build sufficient critical mass in PV manufacturing. Investors will invest in PV if the business models are strong, attractive and with low risk.

3) Securing significant demand for EU-made PV products through **off-take agreements for local production**. This measure would catalyze the investments in the large-scale PV manufacturing capacities – upfront commitment from the buyers, at best supported by partial advance payments, may be one of the critical factors for the producers to secure the financing for the investments throughout the value chain. Demand creation and acceleration through local content requirements and off take agreements should be ensured in both the public and private sectors to have a positive impact for the PV production capacities. An effective insurance system should be created both for the buyers (in case of non-off take) and producers (in case of non-delivery) for the situations when the agreements will not be possible to implement in full extend. Default insurance for down-payments on PV delivery contracts might be a further effective tool to support investments in new PV manufacturing capacities – a special insurance fund could be created and operationalized for this purpose. Certain remuneration measures could be proposed for the buyers to be motivated to step in into such agreements as there are no regulatory measures for their legal commitments, e.g., local content could be giving project additional developers tax credit or feed-in tariffs based on the local added value on the product side.

4) Setting tough **EU standards on labour laws, hidden subsidization and CO2 footprint**, allows to immediately exclude imports in case any components of the imported product do not meet EU standards. Introduction of EU standards for imported PV ingots, wafers, cells, solar glass, modules, for i) labour conditions, ii) carbon footprint, iii) circularity, iv) excessive subsidization will largely exclude unfair competition, and thereby ensure demand for products produced in the EU. This will create a certainty for the EU supply chain actors and mobilize investments. Establishing certain hurdles against huge flows of imports is a necessary tool as a certain “protection” of a growing local manufacturing industry in the EU seems needed. EU should not block the PV hardware import, as we need the imported modules for our energy transformation. Protectionism is not the desired approach to spur local manufacturing, and it can hamper in the short-term PV deployment. However, considering the massive scale advantage of the Chinese PV industry, certain higher requirements on the products placed on the EU market (in addition to the up-coming EcoDesign and Energy Label regulations) are needed to set a level playing field, acquiring for time to scale up, increase cost competitiveness and pursue R&D and innovations.

5) Establishing an **appropriate framework for innovative European technologies** leading the PV manufacturing – support for innovative and breakthrough PV manufacturing technologies is critical to maintain a long-term and sustainable competitive advantage of European PV manufacturing. The European Solar Manufacturing Council (ESMC) has already initiated the Important Project of Common European Interest for PV (PV-IPCEI) to ensure long-term and sustainable development of innovative and breakthrough technologies in Europe. The success of the initiative will depend on Member States support for the PV-IPCEI framework. European PV manufacturers might have the competitive advantage while encompassing innovative and breakthrough PV technologies such as Heterojunction, Tandem, TOPcon, IBC, thin film technologies etc. – accordingly, the Alliance should pursue the support for further development and scaling of these technologies, which could potentially generate substantial positive impact for the EU strategic autonomy and PV manufacturing competitiveness in the long-term.

6) **Creating and developing a separate financing vehicle** of at least € 20 billion following the example of the European Chips Act and allowing the easy adjustment of existing financing mechanisms, e.g., National Recovery and Resilience Plans, to ensure timely investments in European PV manufacturing projects. The Alliance should not only ensure one-stop-shop financing approaches to the PV manufacturing projects, but also create new investments and capital security measures to reduce the CAPEX and OPEX in above-mentioned directions.

7) Hugely **reduce red tape** for permitting, not only of PV deployment, but also for **the implementation of industrial PV manufacturing plants** along the value chain. We need simplified and speedy permitting procedures for both industrial manufacturing and PV deployment projects – easy access and fast permits to set up manufacturing facilities will save time – a critical element in the current global competition. All these measures should be implemented as a package, and without delay, as the measures will be started on a national level.

8) **Adoption of policy measures to specific EU regulations** will have a cumulative effect for the competitiveness of European PV production. Creation of realistic European circular recycling processes, revision of the WEEE (especially for PV), clear incentives for ultra-low carbon solar for all installations and irrespective of size, ban of Fluoropolymers (PFAS) in all PV modules to be installed in Europe, VAT-exemptions for all types of integrated PV solutions, and support for the development of solar electric vehicles. These are several examples where an appropriate coordination is needed to ensure better competitive conditions for European PV manufacturing – the Alliance should investigate all potential along the full PV manufacturing and PV deployment value chain in the EU.

Currently, the European PV developers for 2030 are planning to have production capacities of more than 50 GW for poly-Si, more than 20 GW for ingots and wafers, and more than 35 GW for cells and modules. These plans could be realistically implemented only if an appropriate European PV manufacturing ecosystem will be created based on the above-mentioned policy measures and incentives. Moreover, we must dedicate all the efforts so that the appropriate manufacturing capacities are ensured along the entire PV value chain, as well as to raise the target to 80 GW PV manufacturing capacities by 2030, to adequately reflect the European PV demand side.

Implementation of these measures should be reflected in a concrete dedicated action plan of the Alliance to create clarity and trust for developers and investors. With every day passing, investors are flocking to the US due to the IRA – they will not come back fast once they have invested there. Moreover, both India and US projects will start to fill up EU equipment supplier pipelines. The longer we wait, the more difficult it will be to actually implement large scale European PV manufacturing projects.

All respective measures to ensure large-scale PV manufacturing capacities in Europe should be dedicated to balance the current unfair competitive conditions spreading from extensive and significant support from the Chinese Government to local PV manufacturing companies. In a scenario of proposing off-take agreements, appropriate capital under competitive conditions and ensuring the support for the innovative European technologies through a PV-IPCEI, the remaining competitive advantage of Chinese producers on prices could be comparatively easily tackled by the structural factors – logistical costs, supply chain issues, forced labor regulations and European advantages on lower CO2 footprint. European market players would be willing to source local PV production through off-take agreements in case the price differences vis-à-vis Chinese production will be comparatively low.

The role of the Member States of the EU is as critical as never before. Although several Member States are already implementing the incentives for PV manufacturing through the Recovery and Resilience Facility or planning support for innovative PV technologies through the PV-IPCEI, a more concentrated, extended and synchronized approach of the Member States towards European PV manufacturing is of vital importance. Considering that Member States in the EU are responsible for turning the concrete measures into laws, it is important to coordinate the implementation of these measures. The European Solar PV Industry Alliance, initiated by the European Commission as a part of the European Solar Energy Strategy, might be instrumental in addressing the challenges of a more extended and more synchronized Member States approach to the PV manufacturing industry.

All the above-mentioned measures should be implemented not separately, but as one framework. This is the key pre-condition to ensure both short-term and long-term competitiveness of European PV manufacturing. The positive impact of the implemented measures could be measured by net jobs created, GW of EU-manufactured PV deployed, degree of sovereign energy independence. These are the short-term and long-term deliverables, critically important not only for the smooth PV deployment in the EU, but also for the overarching industrial growth of the EU.



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Dear Mr Vaičiūnas,

Thank you for the message you addressed to Commissioner Breton on 30 November 2022. The Commissioner asked me to reply on his behalf.

We appreciated the proposals that the European Solar Manufacturing Council provided for the European Solar PV Industry Alliance. We have analysed them and considered them as valuable input in the period before the launch of the Alliance.

We would also like to take this opportunity to thank ESMC management, your members and you personally for your involvement in the preparations of the launch as well as attendance on 9 December 2022. We welcome your continued involvement and activity in the Alliance and especially the Alliance Steering Committee. We look forward to our cooperation in the future as well.

Yours faithfully,

(E-signed)
Stefano SORO