European Solar Manufacturing Council AISBL
146 rue Royale | 1000 Brussels – Belgium

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Contact for inquiries: holm@esmc.solar

Going beyond the NZIA: Recommendations for the Clean Industrial Deal and a New State Aid Regime

Recent major economic changes require us to rethink the ecological transition within a global framework of sovereignty and resilience. China has succeeded in capturing a significant share of the production of net-zero energy transition technologies (with a virtual monopoly on photovoltaic (PV) manufacturing) thanks to the deployment of its five-year plans fueled by a strategy to offset the domestic real estate bubble that has been building for years fostering industry capacity in net-zero technologies for export. Furthermore, The United States has launched the Inflation Reduction Act, which makes it possible to combine the closure of markets with massive production investments and India has set up the Production Linked Incentive measures for photovoltaics and batteries to the tune of $4.6 billion.

Europe has responded with the Net Zero Industry Act, an important first step towards reindustrializing Europe's energy transition technology value chain. Coupled with the demand-side Fit-for-55 package, Europe has thus set the first milestones for a resilient energy transition.

The Mario Draghi's report[1] states that "...solar PV manufacturing costs in China are around 35%-65% lower than in Europe and costs for manufacturing battery cells are 20%-35% lower. The EU announced a comprehensive response in 2023 with the Net Zero Industry Act (NZIA). However, EU financial support remains fragmented among different programmes, characterised by higher complexity and lead times, and generally excludes operating costs where cost gaps are greatest. Overall, financing for manufacturing at the EU level is five to ten times less generous than under the IRA. Finally, while the NZIA specifies EU manufacturing targets, they are not backed by explicit minimum quotas for local products and components – quotas which other regions regularly apply – meaning EU demand is not predictably channelled towards EU clean tech output." (p. 43)

The current gaps will need to be filled in by the Commission's future work on the Green Industrial Deal and in the new state aid framework that will follow the current Temporary Crisis Transition Framework after the end of 2025.

These shortcomings include:

- The absence of provisions in the NZIA to financially support European manufacturing projects that do not benefit from state support through public tenders or auctions. Indeed, not all Member States use feed-in tariffs or calls for tenders to support projects, leaving a large share of the PV market outside the NZIA.
- The failure to mobilize Community support mechanisms, in particular project financing, to support reindustrialization.
- The absence of reciprocity rules on foreign investment in this strategic sector.

[1] The future of European competitiveness – A competitiveness strategy for Europe, Sept 2024

In addition to the technical measures presented below, it is also vital that the European Commission maintains a strong and ambitious message on the need to reindustrialize the energy transition sector to help mobilize private funding.

1. Extending the provisions of the NZIA

1.1. Request the application of NZIA criteria in projects receiving public money, directly or indirectly.

It is foreseen that the NZIA shall include "non-price" criteria for selecting PV projects as part of public procurement or support schemes , through calls for tender or tariff orders. An analysis of the seven main EU markets shows that only 21.5 GW are covered by calls for tender. As the NZIA is currently only asking for 30% of this volume to be covered by non-price criteria, this represents only 6.4 GW on a European scale, far from the 30 to 40 GW manufacturing goals set by the European Solar Industry Alliance (ESIA), or as part of NZIA, respectively, by 2030.

Many renewable energy (RE) projects are being developed with financing from a national institution (e.g. a public bank) or a European institution (e.g. European Investment Bank), either at project level or at group level. This form of public support should be considered as a support mechanism and should incorporate resilience and sustainability criteria. A first example is the inclusion of a resilience criteria in the Hydrogen Bank tenders, requesting that electrolyser stacks that “have been assembled, contain cells manufactured or have received surface treatment in China” may not exceed 25% MW of the installation. In Italy, the government introduced bonification of the tax credit for PV project in self-consumption if modules and cells are made in Europe, under the EU Resilience and Recovery Fund.

A minimum of resilience content would thus be systematically required for projects receiving such public funding.

Additionally, member states funding calls for municipalities could include criteria of purchasing a minimum amount of made-in-EU PV modules, or generally other NZIA technologies. This would also ease the maintenance of the systems through easier O&M services provided by EU manufacturers.

1.2. Having a differentiated European Central Bank rate for RE projects using resilient hardware

In addition to the obligation to have resilience and sustainability criteria for projects receiving public funding, a differentiated interest rate could be allocated by public entities. This differentiated rate would make it possible to lower the development costs of renewable energy projects using resilient hardware.

This measure would allow certain European bodies, such as the European Central Bank (ECB), to intervene in support of the States in the implementation of the NZIA objectives. This would reduce the cost to governments' public finances, by allowing part of the savings to be reallocated

to supporting national production of net zero technologies. By way of example, such differentiated rates are already in place in China and Japan.

1.3. Allow differentiation of Value Added Tax to favor European products

EU tax rules do not allow Value Added TAX (VAT) to be differentiated according to the European content of a product, e.g. lowering or exempting European products from VAT. Changing this principle would give Member States additional leverage to achieve the NZIA objectives, by modulating VAT for projects using resilient equipment.

1.4. Request Member States to include reindustrialization objectives in their National Energy and Climate Plan

The National Energy and Climate Plans (NECPs) represent the Member States' roadmap for energy transition. In addition to the renewable energy deployment objectives, Member States should describe in their NECPs the measures taken to achieve the NZIA objectives, i.e. that 40% of the net zero technologies deployed must be of European manufacture.

1.5. A common framework for monitoring and tracking net-zero technologies

In order to ensure rigorous implementation of the NZIA and avoid circumvention, a mechanism should be put in place to monitor and control the information transmitted by manufacturers to ensure its reliability, in collaboration with European manufacturers. In the context of PV modules Ecodesign, Energy label & under-development of recyclability index a high amount of data will need to be managed. Additionally, the planned WEEE changes in regard to ownership of end-of-life management change from importer to original manufacturer under extended-producer-responsibility will make another impact on information of each PV module accessibility.

An Asset database could bring together the information supplied by manufacturers, particularly European manufacturers. Currently, the EU Horizon project RETRIEVE (2023-2027) is scaling up PV database platform, which would be capable of handling NZIA-related data.

Provision should also be made for a framework for extra-territorial action by the EU to enable verification of the criteria for products placed on the market. This can be achieved by allowing laboratories that certify PV modules under the International Electrotechnical Commission (IEC) PV-related standards conduct additional tests to verify NZIA-relevant criteria for the PV modules. As IEC standards are mandatory in some member states, almost all producers are already requesting such a certification.

2. Work towards an extension of the TCTF beyond the end of 2025

2.1. Provide a more favorable investment and support framework for European manufacturing plants essential to the energy transition.

The temporary state aid scheme (section 2.8 of the Temporary Crisis and Transition Framework) put in place in March 2023 to finance strategic green industries is due to expire at the end of 2025.

The relaxation of state aid rules has proved to be effective and beneficial in supporting the investments needed to foster the transition to a green economy. By way of example, France has been able to introduce the Green Industry Tax Credit (C3IV)[2], which provides capital expenditures (CAPEX) support for industrial projects, partially de-risking the projects and facilitating their financing. Without the continuation of this facilitating framework, it is unlikely that new net-zero industry projects will come to fruition.

State aid rules should also be reviewed to facilitate support for demand, in particular in order to align with the Net Zero Industry Act. A facilitated notification process should be put in place so as not to delay the implementation of the NZIA by the Member States. In particular, the place given to price rating criteria in call for tenders — currently 70% — could be reviewed.

This measure is consistent with Vice-President Teresa Ribera's mission statement, which calls for the European Commission to "develop a new framework for state aid to accelerate the deployment of renewable energies [...] and guarantee sufficient production capacity for clean technologies".

2.2. Use TCTF extension to reinforce OPEX support

The NZIA criteria will help re-establish fairer market rules. Nonetheless, European manufacturers have to compete with Chinese manufacturers who benefit with strong operational (Opex) support, such as a low electricity price or rebate on the raw material prices well as competition from the U.S. with strong financial support from IRA, including Opex.

To face this competition, the new state aid rules should allow Member states to bring specific operational support when needed. For example, Member states should be allowed to bring low electricity price to strategic industries to ensure European manufacturing capacity. The OPEX support can be limited in time to help the start of the manufacturing site.

3. Reinforce CAPEX support for green industrial projects in the very early stages.

3.1. Climate Tech Sovereignty Fund

Industries producing equipment for the energy transition are highly capital-intensive projects. Against a backdrop of global tensions on project financing, an ambitious support plan is crucial to enable the reshoring of industry to Europe.

There are currently few mechanisms in place to support greenfield reindustrialization projects. Industrial start-ups, which are considered neither as infrastructures (high capital, moderate risks) nor as more traditional start-ups (gradual increase in capital, in parallel with the marketing of their product), therefore encounter major financing difficulties, which considerably slow down

[2] https://www.europe-en-france.gouv.fr/sites/default/files/sa_109334_c3iv.pdf

the completion of projects. The Innovation fund itself doesn't really answer the needs of deeptech start-ups, as it requests a strong financial credibility, often hard to achieve at early stage. Moreover, the lengthy procedure of the Innovation Fund isn't adapted to the fast calendar of the projects.

Setting up a Climate Tech Sovereignty Fund within the European Investment Fund can be a solution. The idea of a public EU sovereignty fund to strengthen the EU's investment capacity in strategic sectors such as climate technologies was first proposed by the European Commission in 2023. Setting up a joint investment vehicle that draws on public investors, private equity and pension funds would make it possible to meet the financing needs of net zero industrial projects. The investment thesis should be aligned with the objectives of the NZIA and the Green Deal Industrial Plan.

3.2. Dedicated pre-seed fund for industrial start-ups

Europe is witnessing the rise of a new force in the pursuit of climate net-zero energy technologies: the industrial start-up. These emerging companies hold immense potential not only for reducing CO_2 emissions, but also driving job creation and economic growth at Member State level.

Launching new industrial champions demands equity capital from the onset — even before incorporation and the seed round (SEED). On average, initial shareholders contribute approximately €10 million, as demonstrated by several prominent European flagship's venturers.

Today, the EU does not have the necessary tools to support these companies at a very early stage, when they need it the most. Existing schemes have a strong tendency to give priority to more mature applicants or those presenting a technological innovation rather than a business model and a market innovation. As an example, start-ups can't be supported by the Innovation Fund if their financial maturity in not sufficient, whereas being awarded the Innovation Fund will help attract investment and increase financial maturity.

An EU Kickstarter program dedicated to pre-seed funding for industrial start-ups that meet the objectives of the Green Deal Industrial Plan would be a valuable addition to the current financial toolbox.

3.3. Stimulate private investment in net-zero industries

The success of reshoring PV production in Europe will depend on the ability for the projects to attract private money. It is more difficult now to raise private money for investment than it was a few years earlier.

Private financing should be stimulated by:

- Providing some insurance to the investor to limit their exposition to the risk for PV & other NZIA technologies.
- Provide some compensation for investors who are keen to take the risks to reshore European production.

- Increasing market stability via clear industrial policies that aim to reshore in EU.

4. Create a level playing field ion the EU market

4.1. Extend the CBAM to solar PV

Carbon Border Adjustment Mechanism (CBAM) is a mechanism requesting that imported goods must pay a contribution equivalent to the one under ETS mechanism if it was not paid in the country of origin. Currently European solar manufacturers will be hit by CBAM if they import components to assemble solar modules, such as aluminum or glass, whereas Chinese companies selling whole modules from China will pay no carbon border fee at all. That can easily be resolved by adding solar PV modules to products listed under CBAM. Applying the CBAM to the PV Sector will thus help create a level playing field while generating new revenues to help investing in the reindustrialization. Since almost all the PV manufacturers, including Asian PV manufacturers have life-cycle-assessment done and approved through third parties (Environmental Product Declarations or French-based LCA through CERITSOLIS), the implementation could be done at ease.

4.2. Align or reflect taxes on the import of raw materials in the import of finished products.

For several components, European manufacturers will, at least initially, have to import them from Asia because European production of these components is not available.

This is the case, for example, with solar-grade glass, for which there are no longer any producers in Europe. European producers are therefore subject to import taxes on glass if it's manufactured in China, unlike imports of "finished" modules made by China, with PV glass made in China, which not taxed.

This puts European manufacturing at a disadvantage compared with imports of finished products containing the component that is taxed.

Aligning or reflecting taxes on the import of raw materials in the import of finished products can be an alternative or a complement to the CBAM extension, by re-establishing a balance between the taxation of imports of raw materials and that of finished products.

5. Provide a framework for foreign investment in Europe in strategic sectors for the energy transition

Foreign investment in Europe should be subject to a reciprocity rule. It should therefore be required to create a joint venture with a minority shareholding in the case of investment by a company from a country applying this rule.

These joint ventures could be criteria for non-EU manufacturers to access EU-relevant incentives, such as NZIA.

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