ETIP Photovoltaics

2023 ETIP PV Annual Conference: Summary

R&I and industrialization must go hand in hand for successful PV "Made in EU"

The ETIP PV conference *„PV Innovation: Assuring Europe's Energy Independent Future with Photovoltaics"* took place on 10th and 11th of May in Brussels, Belgium. With speakers from the European Commission, PV research and industry, it focused on discussing how policy, supply chain factors, research and innovation, international trade, economic growth and environmental and climate concerns can deliver the resurgence of a European solar supply chain. Here is a summary of the main messages presented by the Speakers of the 2023 Annual ETIP PV Conference.

The EU is and will continue to be one of the leading markets for PV globally thanks to clearly defined ambitious renewable energy deployment targets (42.5% by 2030) and regulatory framework. As the PV production deployment globally grows towards more than 1TW annual PV installations by 2030 and as EU aims at meeting a rapidly-increasing demand for PV across the world, the EU has set a 30 GWp/year target for domestic solar PV production by 2025.

As part of an emerging European industrial policy towards the PV sector, and achieving the objectives set in the European Solar Strategy, the European Commission has temporarily lifted state-aid guidelines with its Net Zero Industry Act, facilitating the allocation of direct support to PV projects by the European Member States. Additionally, the European Commission has stated that research and innovation (R&I) should be developed in parallel and that efforts to bring results of European R&I onto the market should be strengthened. This could be achieved for instance via an Innovation Fund as well as a better involvement of the ETIP PV and the PV industry in R&I programmes designed via possible co-programmed partnerships.

The PV sector is highly appreciative of all of these policy steps; however, more work on the policy side is necessary to attract further investments and to create the right conditions for European and international players. In particular, greater clarity, visibility, and predictability for investors and project developers, for instance with a clear set of guidelines on which CAPEX and OPEX support is available and where and how one can obtain such support (as provided by DOE in the USA to assist with IRA) are missing.

There was a general consensus at the conference that R&I will remain the backbone of the European efforts to create a competitive PV supply chain, as investing in PV manufacturing cannot be conceived without innovation. Rebuilding an EU-based PV value chain requires establishing a strong industrial base of today's best available technologies, as Europe cannot transition directly into the next generation of PV technologies without catching up first. However, the PV field is developing quickly and the industry is undergoing rapid structural changes. Industrial policy and investment programmes must be implemented hand-in-hand with innovation to prevent the risk of investing only in technologies that might soon become outdated and/or obsolete.

In line with the rapidly growing deployment rate and industrial investments in Europe and globally, the EU should ensure that there is very strong and increased funding to maintain its PV R&I field and keep up its progress in this very dynamic and competitive field. The European Innovation in PV can be capitalized on if Europe aims at ensuring that it is innovative at the GW scale and that it is keeping on filling the pipeline in a technology-open way.

Additionally, the conference highlighted that when it comes to R&I, Europe can and should learn from the past: R&I is the sole reason why PV is so cheap today and will continue to be the reason for decreasing costs in the future. In particular, the potential of the industry to do R&I has doubled since 2018 with a doubling of turnover, much of which is currently not located in Europe, threatening the EU's capacity to maintain its leadership in this area. Moreover, Europe can become cost competitive as the currently higher prices for PV manufacturing are primarily due to higher energy costs and lack of a local value chain for PV and not because of lack of R&I (see ETIP PV White paper on PV manufacturing in the EU). Therefore, the first and most

important step is quick and robust scale-up and then, quickly ensuring that there is a continuous collaboration between R&I and industry.

Finally, Europe's 30GW/a production in the EU target is a promising one, but it represents only a 3% contribution from the global TW market and a marginal share of the rapidly growing European PV deployments. Nevertheless, this TW scale offers many opportunities for commercially-viable innovations, especially as the World will transition into a more circular industry. Europe is confident that it is at the start of a very promising European PV expansion and that with strong European PV industrial policy, better "lab to fab" programmes, and fast and agile translations of EU actions at national levels, the EU will not only reach, but also surpass its solar PV manufacturing and installations goals by 2030 and beyond.

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