

**ESMC note, 14 July 2023**

**EU PV manufacturing plans are under pressure from sharp drop in prices for solar modules from China**

- During the last several weeks, the **EU PV manufacturing industry has come under severe pressure from sudden and sharp drop in the prices of imported PV modules from China. The prices of PV modules has dropped by more than 35% to 0.15 €/W in recent weeks, impacting current European PV manufacturers, their future plans for scale up capacities, and the plans of potential European PV manufacturers to establish production facilities in the EU.**
- **One of the reasons for the drastic drop in PV modules prices is the foreclosure of the U.S. market for PV modules, which are manufactured with forced labour in China.** Comparatively large volumes of PV modules have been redirected to Europe, as sellers have been forced lower PV modules prices to find buyers for additional volumes redistributed from the U.S. market.
- **Secondly, China's PV companies are ramping up production capacities much faster than the speed at which the market can develop.** It is now estimated that the utilization rate in China is around 50% of the production capacity. While the market is expected to pass the 300 GW mark in 2023, production capacities are expanding above 600 GW and more in some segments of the PV value chain.
- Another reason, for which the European Solar Manufacturing Council (ESMC) does not yet have direct evidence, but which encompasses the assessment of industrial stakeholders, are the EU's actions on shift and re-shore PV production to Europe, and the corresponding response to that of companies from China. **The well-timed collapse in prices is likely a response from China to block the Europe's plans to re-establish PV manufacturing in Europe.** The European Solar PV Industry Alliance, Temporary Crisis and Transition Framework (TCTF), REPowerEU chapters in national Recovery and Resilience Plans (RRPs) are just a few examples how the European PV manufacturing industry is planning to re-shore and scale up PV manufacturing capacities in Europe. **These actions could potentially trigger a targeted and coordinated response from companies in China to widen the price gap between the PV modules manufactured in Europe and China. Evidence for this is given by the current actions of Chinese PV manufacturers, as they are aggressively proposing (for European customers) 2 years contracts with price uniformly lower than 0.18 €/W, for minimum orders of 2 MW/year and requiring exclusivity.** These trends are extremely perilous for European PV manufacturers, as they may face losing clients for an extended period over the next years when they are in the initial phase of establishing larger manufacturing capacities.
- **ESMC has surveyed its members (in week 28, 2023) on PV modules in their stock. Because of the sharp drop in PV modules prices, the majority of European PV modules manufacturers have already stopped production of PV modules and suspended implementation of projects for the production capacity expansion.**
- **Currently, on average, there are more than 25% of PV modules in stock comparing with annual production capacities in each of European PV manufacturer because of diminishing demand for European products attributed to the sharp prices drop of the PV modules imported from China.** Consequently, this factual situation should be a serious

warning signal for the EU in the planning of any measures dedicated for European PV manufacturing. It is important to note that these capacities in stock do not yet account for suspended requests from distributors.

- **The European PV manufacturers with production lines for PV modules with annual capacity of 100 to 200 MW currently have 50 to 70 MW of PV modules in stock, which means that about 40% of this year production are already frozen, with no prospect for sale, resulting in losses of €6 to €8 million in each of the companies including already stopped production of more PV modules.** EU measures should aim to reduce this large price gap to ensure the competitiveness of European PV production in the short and long term.
- It is important to point out that **the absolute majority of the European PV manufacturers have already stopped, reconfigured, and scaled back their production lines due to the current price situation for PV modules in the European market, as currently it is impossible to sell in the market when the prices are now exceptionally low**, while there is a very high capacity and actual production in China. There are no moderate prices from a strong demand that would making the industry to expect a rise of prices (at least to return to previous price levels) in the near future.
- **Announcements for new production capacities in China show no pause and more companies are ramping new production lines, against all prudent business rules: inevitably it is expected that the strong imbalance that already exists between market demand and production will lead to a prolonged situation of low prices, pushing for a consolidation of the industry in China and the absolute inability outside of China to develop any competitor.** This situation is reinforced for the announcement of the Chinese government that it will support the industry by increasing its local market, from 92 GW in 2022 to possibly 150 GW in 2023. This increase is anyway much lower than the new additions in PV deployment and will lead to further price decreases.
- **The drastic drop in prices of PV modules imported from China has two negative systemic consequences. *Firstly*, EU PV companies are unable to sell their European-made products in the short term and are therefore forced to reduce staff working in European facilities. *Secondly*, it is highly unlikely that investors will participate in funding new European PV manufacturing facilities if the current price trends in the EU market remain at the same level for a year or more.** As a result, the EU's dependence on imported PV modules will increase further, diminishing any possibility to strengthen the resilience of the European energy transition in general, and PV manufacturing in particular.
- **As a timely and systemic response, EU needs to take urgent action. The combination of additional costs, lack of industrial experience and an incomplete value chain will result for years in higher production costs in Europe, while the current market imbalance will result in a fierce price war over the next several years. We consider that such a situation cannot be solved only by voluntary and financial (CAPEX and OPEX) support measures (which indeed are also essential), opposed by a significant part of the PV downstream sector in Europe.**
- **A renaissance without harming the energy transition could be achieved by segmenting the European PV market to ensure progressively 40% of local content through the entire value chain.** Focus should be on market segments where non-pricing measures can be easily set-up while keeping other market segments free:
  - Distributed segments where cost-competitiveness is less important;
  - Utility-scale if cost-competitiveness is granted;
  - Public procurements and auctions.

- Despite various efforts already announced, including the provisions of the Net-Zero Industry Act (NZIA) on permitting, European PV manufacturing lacks investors' trust mainly because the off-take market for European-made PV products is not yet secured. Without securing at least some part of the market, EU will be vulnerable to price fluctuations such as this, and any efforts to re-shore European PV manufacturing will be delayed or become extremely difficult.
  - **NZIA makes a right shift into this direction by proposing non-pricing incentives through articles 19-21, however, the smooth functioning of the proposed system would be efficient only in case in the NZIA (or in alternative but timely implemented legislative form) three factors would be included as a package:**
    - **Height of price incentives would be increased from 10% to at least 30%, as current price difference of European PV modules and the PV modules supplied from China currently differs for almost 50%,**
    - **The sustainability and resilience criteria would be clearly defined including the respective verification system and instruments,**
    - **The market segmentation for European PV manufacturing products would be defined to at least 40 % of the market share by envisaging the respective instruments in giving priority access to the electricity grid, priority in public procurements and public auctions to those PV deployment projects which guarantees at least 40 % delivery of European produced materials in the PV deployment supply chain.** Without sizeable “demand security”, it will be practically impossible to get sufficient investor appetite for relaunching “made in Europe” solar production.
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