

SET plan issue paper – photovoltaics

Dear SET plan secretariat,

Feedback here is given based on the targets stated in the issue paper.

Yours sincerely,

Siim Meeliste
Expert, Energy Department
Ministry of Economic Affairs and Communications, Estonia

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1. Re-build EU technological leadership in the sector by pursuing high-performance PV technologies and their integration in the EU energy system. Achieve major advances in efficiency and lifetime of established technologies (c-Si and CIGS thin film) and new concepts;

- **Increase PV module efficiency by at least 20% by 2020** compared to 2015 levels, **and by at least 35% by 2030;**
- Increase **module lifetime** to a guaranteed power output time (at 80% of initial power) **longer than 35 years, by 2020;**
- Increase large scale manufacturing concepts and capabilities by **demonstrating PV production capabilities of at least 20 m² per minute by 2020.**

Targets seem feasible. The key here to re-start EU leadership is the last target: increasing large scale production. Thus the main way of tackling the issue would be to incentivise and support financially projects that aim to demonstrate a large scale efficient production/assembly chain of PV modules or aim to develop more efficient manufacturing processes. This is actually the basis to build the PV industry on that is feasible looking at the spike in demand expected after 2020 and the nZEB regulation. Support measures should aim to enable EU manufacturers keep most of the value chain in Europe.

2. Reduce the cost of key technologies

- **Reduce turn-key system costs by at least 25% by 2020** as compared to 2015;
- **Reduce turn-key system costs by at least 50% by 2030** with the introduction of novel potentially very-high-efficiency PV technologies manufactured at large scale.

This target is closely related to the last target at point 1 (large scale manufacturing concepts) and maybe these two can be integrated.

3. Make "(near) Zero Energy Buildings" possible thanks to Building-Integrated PV (BIPV)

- **Develop BIPV modules**, which include thermal insulation and water protection, to replace entirely roofs or facades **at costs below 100 €/m² and a module efficiency of [we solicit proposals] by 2020, and 75 €/m² and a module efficiency of [we solicit proposals] by 2030**

The nZEB process is the key starter/motivator for the EU industry. There should be 'soft' measures applicable here to prospect the flexible use of calculation methods of energy labelling for houses and

other policy support measures to assist in integrating PV to the concept of nZEB. It would be helpful to extend the target beyond BIPV.

4. Achieve major advances in installation

- **Develop PV modules designed for fully automated installation** for both ground-mounted arrays and building renovation, **by 2020**.

This target seems not to be necessary. There seems to be no feasible way, and in fact, no need for automated installation with a view to 2020. Instead, there should be a soft support measure to enhance and speed up the development and adoption of industry standards for inverters, PV modules (e.g. connectors, roof fixtures) etc. Harmonised EU industry standards strengthen the competitiveness of the industry.