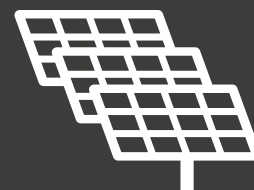




Snapshot of the Implementation Working Group (IWG)

PHOTOVOLTAICS


Towards higher performance, lower costs and enhanced applicability of photovoltaic systems



SET Plan Progress Report 2020

 11 Targets

 6 Activities

 109 Funding programmes reported

 131 M€ reported



Figure 1 Composition of the IWG

Supporting the EU Green Deal

The 2030 target on system cost reduction by 50%, set by the Photovoltaics Implementation Working Group in 2015, has already been achieved. The IWG is now updating and revising its targets to align with current societal needs and policy priorities to be optimally positioned for the challenges ahead of us. The corresponding research agenda will be consistent with the strategic research and innovation agenda (SRIA) recently prepared for the clean energy technology partnership (CETP).

The work of Photovoltaics (PV) IWG is relevant for the implementation of the renovation wave, energy system integration, hydrogen and offshore renewable energy strategies. In this context, great opportunities may arise taking in consideration the building applied and building integrated PV technology, the low and still decreasing PV generation costs enabling competitive combinations with storage and conversion (P2X), and the potential of offshore PV systems, also, in combination with offshore wind energy.

The research & innovation activities priority for the period 2020 – 2021 (A2, A3 and A5) and for the period 2022 – 2025 (A1 and A4) are already addressed by ongoing projects. While activity A6 - *Cross-sectoral research at lower TRL*, is set as priority for the period 2025 and onwards (Figure2). This type of (enabling) research is typically

addressed through research instruments and programs with a wider scope than photovoltaics or even energy, which requires additional monitoring efforts.

List of activities:

- 1. PV for BIPV and similar applications
- 2. Technologies for silicon solar cells and modules

with higher quality

- 3. New technologies & materials
- 4. Operation and diagnosis of photovoltaic plants
- 5. Manufacturing technologies
- 6. Cross-sectoral research at lower TRL

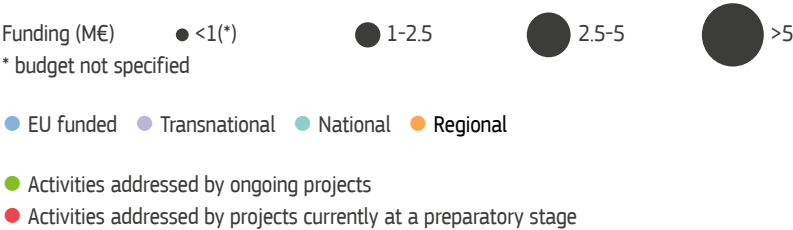


Figure 2 Status of activities

Areas for collaboration with the IWGs and beyond the SET Plan

The Photovoltaics Implementation Working Group can notably contribute to achieving the European Green Deal targets through enhanced collaboration with the Energy efficiency in buildings and Positive energy districts IWGs, and the building industry. The cooperation may concern, for instance, the advanced use of photovoltaics in building skins.

- The significant levelized cost of energy (LCoE) reduction from PV enables the large-scale deployment of integrated PV applications, storage and solar green hydrogen production. Benefits from this development can be maximized through collaboration with other Implementation Working Groups (e.g. Energy systems, Energy efficiency in industry, and Batteries) and must be reflected in the EU energy system integration and hydrogen strategies.

The IWG is involved in the International Energy Agency (IEA) photovoltaic power systems programme (PVPS) collaboration initiative.

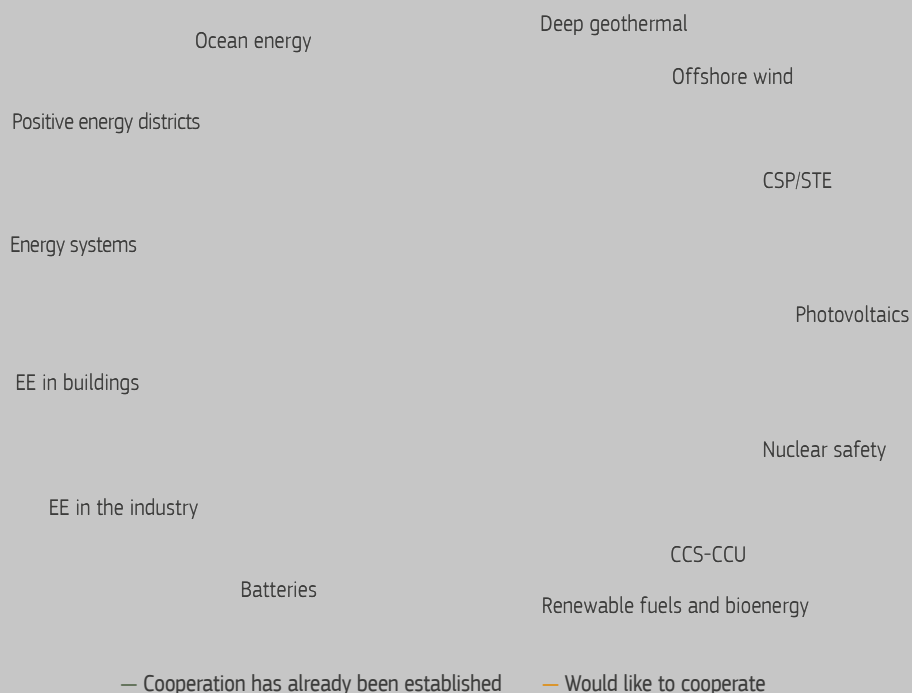


Figure 3 Collaboration with the IWGs

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Note: The document is based on and elaborated strictly on the inputs received from the Implementation Working Group.

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