



SolarPower Europe

Response to draft Delegated Act of EU Taxonomy – EU classification system for green investments

The EU Taxonomy for Sustainable Finance is a crucial instrument to ensure that investments are directed towards projects and economic activities that have a substantial positive impact on the climate and the environment, in line with the European Green Deal objectives. With over €500 billion of investments needed annually to achieve climate-neutrality by 2050, the sustainable finance Taxonomy can become a true accelerator for clean-energy projects, and enabler for achieving climate-neutrality by 2050.

SolarPower Europe welcomes the requirement to perform an Environmental Impact Assessment (EIA) for solar PV installations and proceed with the required mitigation and compensation measures for protecting the environment. We also welcome the criteria set for the manufacturing of solar technologies both for sustainable use and protection of water resources and for the transition to a circular economy.

However, the draft of the Delegated Act of the EU Taxonomy [Annex I, section 3.9. Manufacture of hydrogen, Technical screening criteria], is unclear on whether hydrogen produced from solar power is deemed Taxonomy eligible, which could confuse public and private investors and therefore, jeopardize the crucial role that hydrogen from solar must play to contribute to decarbonize the EU economy by 2050. As the lowest cost clean energy electricity in the world, solar is indeed deemed to provide the bulk of cost-competitive renewable hydrogen soon.

- The life cycle emissions of electricity from solar PV are much lower than the threshold for electricity production of **100 gCO₂eq/kWh** in Taxonomy Technical Report 2019, with life cycle emissions in the range of **20-50 gCO₂eq/kWh**¹. According to this threshold which SolarPower Europe supports, solar PV to hydrogen would be clearly eligible.

- However, if the condition to deem hydrogen produced from solar eligible to the Taxonomy is the threshold defined in section 3.9. of **2.256 tCO₂eq/tH₂**, then the methodology used to estimate the life cycle emissions is crucial. The most recent literature shows that hydrogen from solar generates **1.4 to 2 tCO₂eq/tH₂**, which is fully compatible with taxonomy requirements. However, some

outdated studies show emissions in the range of 4.4 to 7.1 tCO₂eq/tH₂.

In this light, SolarPower Europe urges the European Commission to clarify the following:

- If the two calculation methods (100 gCO₂eq/kWh or 2.256 tCO₂eq/tH₂) can be used interchangeably to assess the environmental performance and eligibility of solar to hydrogen installations, or if the 100 gCO₂eq/kWh threshold exclusively applying to electricity would be the only assessment criteria.

- If the two calculation methods apply, the European Commission must have clear requirements on the methodology and calculations methods used to assess the CO₂ footprint of solar to hydrogen related to the threshold defined in section 3.9, in line with the most updated data available.

- On this note, we endorse the Product Environmental Footprint (PEF) Guidance and the template Product Environmental Footprint Category Rules (PEFCR) as potential solution for adopting a uniform and harmonized LCA methodological framework across Europe. We recommend extending the PEFCR beyond PV-modules and comprise inverters, PV-batteries and other solar components and thus adopt a solar power system perspective.

For this reason, in view of the EU's commitment to deliver on the EU Hydrogen Strategy and to successfully reach climate neutrality by 2050, these clarifications are essential to tap into the full potential of solar to hydrogen production to deliver the European Union's target.

¹ Life Cycle Inventories and Life Cycle Assessments of Photovoltaic Systems (IEA) (data update from 2020)