Response to the Joint Research Centre and the European Commission on the draft Task 1-3 reports of the Preparatory study on the feasibility of applying EU sustainable product policy instruments to solar PV modules, inverters and systems

1. Use phase: putting the focus on Performance Ratio is misleading

The Task 3 report suggests that due to the nature of the MEErP methodology "it might be needed to consider direct impacts in negative terms i.e. those parameters that may constrain or reduce the amount of electricity generated during the use phase, or which may be considered as direct losses from a system during the use phase". This approach could potentially lead to sustainable product policy requirements aimed at minimising system losses and maximising system Performance Ratio (PR) or yield. We strongly disagree with this approach as:

1. For the minimisation of system losses and maximisation of system PR and yield there exists a clear economic incentive as they are directly and immediately linked to the economic performance of the solar power plant, hence sustainable product policy requirements addressing PR or yield would be superfluous.

2. A focus on PR and yield with the "aim to maximize the overall Performance Ratio (PR) […] minimising the impact of each Derate [solar PV system loss] factor" is misleading as solar PV is already the lowest cost power generation source and prices are continuously falling and therefore solar PV is increasingly expected to fulfill a multitude of requirements other than PR/yield maximisation such as peak/load shifting and other grid integration aspects[1], land-use requirements, consumer requirements such as aesthetic aspects, maintenance requirements etc.

3. Referring to the new Renewable Energy Directive that foresees a binding renewable energy target for the EU for 2030 of 32%, we point out that in line with the EU political consensus, the share of renewables including solar must be increased significantly in the coming years. In this light, even the deployment of solar power plants which are not PR/yield-optimised but fulfil different requirements such as outlined in point 2 will be necessary for the achievement of the EU objectives. A focus on PR/yield-optimisation as

[1] See IEA (2014), The Power of Transformation – Wind, Sun and the Economics of Flexible Power Systems, Web: https://webstore.iea.org/the-power-of-transformation

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proposed in the current draft could lead to sustainable policy measures that are detrimental to the achievement of the EU renewable energy targets.

4. Degradation and lifetime are the use phase parameters that have biggest influence on the life cycle environmental impacts of solar PV (see the sensibility analysis in the PEFCR for PV modules) and degradation and lifetime are the parameters with the biggest incertitude due to the time horizon to be considered. Therefore, only degradation rate (for modules) and lifetime (for modules and inverters) should be considered as significant modelling parameters for the purpose of the preparatory study. For lifetime, product reliability differences should be taken into account based on guarantee data. For the other derate (system loss) factors influencing the Performance Ratio (PR) reference values should be used. Excluding these derate factors from the modelling parameters and using reference values instead would significantly simplify the model.

2. Include the manufacturing and end-of-life phases in modelling environmental impact

The preparatory study analysis should put a stronger emphasis on the manufacturing phase as well as the end-of-life (recycling) phase, and not be limited to the use phase, since:

1. The majority of the environmental impact (hotspots) associated with solar PV products is generated in the manufacturing phase rather than the use phase, and solar PV has purely positive environmental impacts and minimal to no negative impacts during the use phase;

2. The evaluation of sustainable product policies for solar PV was initiated by the EU Ecodesign Working Plan in line with the EU Circular Economy Package, which foresees the enhancement of material efficiency and circular economy aspects of products.[2]

Even if the Product Environmental Footprint methodology has not been officially approved yet, the JRC/DG ENV has access to the final version that will be approved in October and should rely on this methodology in identifying environmental impact categories and hotspots. PEF results should also be used for the definition of the Base Case and Best Available Technology scenarios in the upcoming Tasks.

3. Avoid implementing measures on system level aimed at yield/PR maximisation

The suggested modelling assumptions related to direct and indirect impacts suggest that the preparatory study analysis will be highly complex. We welcome the efforts made to account for all complexities in the preparatory study analysis, but stress that any resulting recommendations for implementing measures should be simple, proportionate and create results that go beyond business as usual in terms of environmental performance. We encourage the JRC to take into account the possible repercussions of possible sustainable product policies on the growth of solar in Europe and seek product policies that create growth above business-as-usual and are simple, proportionate and do not add red tape. Especially for small and medium size systems, simplicity is key and complicated procedures have the potential to sincerely harm business.

Therefore, in line with the considerations presented in the above sections, we demand to avoid considering yield/PR optimisation possibilities and implementing measures on the PV system level in the preparatory study analysis.

[2] See COM(2016) 773 final p.3: "This Ecodesign Working Plan contributes to the Commission's new initiative on the Circular Economy, which promotes a transition towards a more circular economy in the EU through a series of measures covering the whole lifecycle of products and materials. There is an increasing need, and political priority, to improve resource efficiency in the EU. Product design is a key aspect in this respect, as it can have significant impacts across the product life cycle e.g. in making a product more durable, easier to repair, reuse or recycle. (...) In future, Ecodesign should make a much more significant contribution to the circular economy, for example by more systematically tackling material efficiency issues such as durability and recyclability."