

Non-confidential attachment for comments for Annex XV restriction report about PFAS

Hanwha Qcells GmbH, is one of the world's largest and most recognized photovoltaic manufacturers for its high-quality, high-efficiency solar cells and modules. It is headquartered in Seoul, South Korea (Global Executive HQ) and Thalheim, Germany (Technology & Innovation HQ). With its diverse international manufacturing facilities in South Korea, Malaysia and China, Hanwha Qcells is in a unique position to flexibly address all global markets. Hanwha Qcells offer the full spectrum of photovoltaic products and solutions, from modules to systems and large scale solar power plants.

We acknowledge the reasoning behind the proposed restriction on PFAS. Preserving a clean planet and ensuring a safe environment is a shared objective. It is imperative that within the renewable energy sector, we set a positive example and promote the principles of sustainability, circularity, and environmental safety.

In the realm of PV products, viable substitutes are already available for specific components like backsheets. Backsheets stand as a prime example of products that can be produced without the presence of PFAS. The utilization of alternative materials contributes significantly to the overall sustainability of PV systems and bolsters the transition toward cleaner and more recyclable solar energy technologies.

However, it's essential to recognize that not all sectors, products and components have identified or developed alternatives to PFAS, and it is vital to extend a helping hand in these cases. A steadily increasing share of renewable energy is crucial to achieving. Furthermore, to sustain the current manufacturing capacity in Europe, it is essential to support manufacturers rather than creating additional hurdles. Different initiatives acknowledge the importance of supporting domestic manufacturing capabilities and fostering sustainable economic growth in alignment with climate and environmental goals. Staying committed to attaining ambitious environmental targets and supporting European manufacturers is pivotal to ensuring a successful dual transition.

The inability to manufacture products reliant on PFAS would have a profound impact on various industries, resulting in losses within key sectors associated with solar products and components, including manufacturing, chemicals, and electronics.

The most challenged sectors in PV value chain are:

- Polysilicon production: Polysilicon is the key building block of the most widespread PV module technology. PFAS are in chemical plant engineering (gaskets, pipe and reactor in liners, valves, pumps and other devices). As there are currently no alternatives available, the restriction poses an existential threat to the producers, like Hanwha Qcells, who does their prototyping and pilot line manufacturing in Germany.
- Inverters: Inverters, a crucial component of every PV system, contain PFAS. PFAS make these electricity-handling products waterproof, oil proof and high-temperature resistant. As there are no alternatives currently available, derogation is necessary.
- Energy Storage: the solar battery storage system, is the technology that allows to store excess electricity generated by solar panels for later use. Mostly Li-Ion battery are used as energy storage. In Li-Ion battery electrodes the industry uses PFAS (PVDF or PTFE) as binders. The binder is generally considered an inactive part of the battery. Currently there are hardly alternatives on the global market.
- Semiconductors: Semiconductors control and manage the flow of electric current in a PV module. As there are currently no alternatives to PFAS as of our knowledge, derogation is necessary.

In conclusion, as we strive to limit PFAS usage due to their environmental repercussions, it is of utmost importance to establish exemptions and foster the creation of alternatives. This is particularly vital in sectors where viable substitutes are currently lacking and where maintaining similar properties is essential to uphold the existing product safety standards and production processes.