

WindEurope statement on PFAS restriction

In April 2023, following recommendations from five Member States, the European Chemicals Agency (ECHA) tabled a proposal to restrict the use of per- & polyfluoroalkyl substances (PFAS) in Europe.

PFAS are a class of thousands of substances that are widely used in industrial and domestic applications. In the media they have been dubbed 'forever chemicals'.

Many PFAS are used in closed industrial applications with a limited impact on the environment. This includes several use cases in the energy sector.

However, not all PFAS are the same and they can have very different environmental impacts. Indeed, some PFAS constitute significant long-term health and environmental hazards and can rightly be described as 'forever chemicals'. But others are not bio-accumulative and break down into non-hazardous compounds after 30 years.

Before a restriction is put in place the functionality, criticality, and availability of suitable alternatives should be assessed for each specific PFAS use. In addition, a possible restriction on PFAS should not contain retroactive measures and must be aligned with the EU's wider climate and energy goals.

PFAS and the wind industry

The ECHA proposal points to potential PFAS use in coatings for rotor blades. And it recommends restricting the use of PFAS in these applications. The restriction proposal also mentions the possible use of PFAS in cable insulation, lubricants, and greases. Some of these may be used in wind turbine components.

The wind industry is already using PFAS-free coatings for the rotor blades. And it continuously assesses whether other components and materials may contain PFAS and, if so, whether PFAS-free alternatives are available. The wind industry acknowledges that in certain use cases downstream industries may need time to develop performant substitute materials.

PFAS and the grid

The ECHA proposal includes provisions to ban the use of PFAS in electrical switchgear and circuit breakers over time. PFAS are used in insulation materials and seals in switchgear, and in the nozzles of circuit breakers. The use of PFAS in these cases is critical. Alternatives do exist but have limited availability. But technology continues to develop. A restriction on PFAS in grid equipment and spare parts could impact the reparability and maintenance of the installed grid.

Some of the gas alternatives to SF₆ might also contain PFAS. SF₆ is widely used in electrical switchgear and circuit breakers as a dielectric insulator. It is a greenhouse gas that is 23,000 times more potent than CO₂. The PFAS gasses used in some of the SF₆-free alternatives may not be climate neutral, but they are also not bio-accumulative and have a dissipation half-life of 30 years or less.^{1 2}

To deliver the energy transition, Europe needs to accelerate the build out of transmission and distribution grids and ensure that existing grids can be repaired and maintained. The European Commission and ECHA must consider whether a possible restriction on PFAS use in grid equipment aligns with the EU's climate and energy policies.

¹ <https://echa.europa.eu/brief-profile/-/briefprofile/100.233.498>

² <https://echa.europa.eu/registration-dossier/-/registered-dossier/31289>

PFAS and renewable hydrogen

The ECHA proposal also contains provisions to restrict the use of PFAS in hydrogen equipment. Most electrolyser technologies used to make renewable hydrogen rely on fluoropolymers, a subset of PFAS. Fluoropolymers meet OECD requirements as ‘polymers of low concern’. As such they do not raise significant toxicity concerns, cannot degrade into other PFAS, and are not bio-accumulative or water soluble.

There are no alternative materials available at this stage that can replace fluoropolymers in electrolyser technology. The European Commission and ECHA must assess whether a possible restriction on PFAS use in electrolyzers aligns with the EU’s hydrogen strategy to produce 10 million tonnes of renewable hydrogen by 2030. The wind industry supports the hydrogen industry in its call for a more considerate policy framework for the use and production of fluoropolymers.³

³ [Link to joint statement with Hydrogen Europe when ready](#)