



The Power to X Secretariat

Catalyzing sustainable fuels and feedstocks based on green hydrogen

Governments worldwide adopted the Paris Agreement in order to limit dangerous climate change to well below 2°C. To achieve this goal, significant and rapid emission reductions are needed in all sectors. A key task now is to identify technology pathways and associated regulatory design options. Successful strategies will require close cooperation, both internationally and between sectors. Sustainable, climate-neutral e-fuels and feedstocks based on green hydrogen offer tremendous potential for decarbonising a range of industries, including chemicals, fertilisers, steel and cement, as well as parts of the transport sector that cannot directly use renewable electricity. A shift from fossil-based oil and gas to renewable-based fuels and feedstocks could make a substantial contribution to decarbonising supply chains in areas in which the direct use of electricity is not feasible.

Objective of the Secretariat

Working with our partner countries and organisations, the newly founded Power to X Secretariat aims to facilitate a global breakthrough in sustainably produced synthetic e-fuels and feedstocks in sectors that cannot directly use renewable electricity. In line with the Paris Agreement (NDC) and Sustainable Development Goals (Agenda 2030), the Secretariat will contribute to:

- promoting sustainable production
- facilitating the climate-effective allocation of funding between sectors
- building international networks and partnerships
- broadening and sharing knowledge
- tapping country and market potential

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Power to X: How does it work?

First, hydrogen is produced from water. To ensure the entire process is green, this electrolysis should be performed with power from renewables. Carbon dioxide or nitrogen is then used to transform the hydrogen into a gas or liquid, allowing it to serve as a fuel or feedstock. The X stands for methane, ammonia or liquid fuels such as diesel, gasoline and kerosene, or solid synthetic fuel.

The conversion of renewable energy into synthetic fuels will finally allow the use of green energy in maritime transport and aviation as well as in certain areas of the chemicals sector. In this way, PtX can make a key contribution to international climate protection and reduce dependence on petroleum and natural gas.

Yet Power to X is not in and of itself environmentally friendly and sustainable. For PtX production to be truly climate-neutral and socially and ecologically beneficial, ambitious and binding sustainability rules must apply from the start. Such rules will also ensure reliable long-term conditions for investment in PtX systems.

Main activities in 2020

In 2020 the Power to X Secretariat will focus its activities on actively shaping the discussion surrounding sustainability criteria. It will also strongly support the development and implementation of these criteria at the European and international levels. In addition, we will help to elaborate business cases and facilitate market opportunities for Power to X adoption. In this connection, we will work with our global network to develop capacities in partner countries by providing training courses and e-learning tools.