5 Key Demands for a Global Scale-Up of E-Fuels Production

Joint letter from industries and consumer organisations along the value chain of E-Fuels for the international E-Fuels conference on September 4th in Munich.

As organisations representing industries and consumers involved in the production or use of hydrogen derived synthetic fuels, so-called E-Fuels, we highly appreciate the initiative by German Transport Minister Dr. Volker Wissing to organise an international E-Fuel conference. The invitation of transport ministers from the G7, the European Union and from around the globe takes into account the global challenge we face in fighting climate change. **Global solutions are needed and can be delivered by scaling-up E-Fuels**. E-Fuels have the great advantage to harvest the worldwide potential of renewable energy. This solves two main problems of the energy transition: storage and distribution of renewable energy. Many regions, especially Central Europe, will depend on energy imports due to high population and industry demand. Other regions like Chile, Sub-Saharan Africa, Middle East, or Australia have abundant resources of wind and sun. E-Fuels are chemically identical to well-known conventional fuels. For that reason, the conversion of renewable electricity to E-Fuels enables climate protection by using an existing infrastructure and addressing a large and growing fleet stock of 1.5 billion vehicles, 27,000 aircrafts, 90,000 ships, millions of heating devices and plenty applications in industry. This approach preserves the economic value of these assets. E-Fuels and sustainable biofuels are both needed. The availability of sustainable biofuels is today more advanced than E-Fuels, and over time renewable fuels and renewable electricity will complement each other in providing energy for decarbonisation of transport.

We welcome the recognition of E-Fuels as important technology to reach our climate targets. During the past years, regulators have done important steps to incentivize the production of hydrogen and E-Fuels in Europe and USA. Nevertheless, further steps are required:

Accelerate scale-up by addressing the first mover disadvantage and unlock private investments in E-Fuels and sustainable biofuels:
E-Fuels production needs to reach industrial-scale as fast as possible to address the global climate challenge. As E-Fuels production improves over time, first production facilities would quickly become uncompetitive. Complex, small-scale subsidies are not sufficient to address this. As with the successful expansion of solar and wind energy, a reliable support program with a long-term vision is needed to drive expansion that is necessarily limited in time and degressive in design.

Develop international markets and energy partnerships:
Hydrogen derivatives such as ammonia, methanol or synthetic crude are key to a diversified and resilient global supply of renewable energy. Trade barriers need to be reduced and consistent global standards established. This includes comprehensive sustainability requirements covering aspects such as working conditions and local water management.

Establish a broad demand-base:
Demand-side measures such as temporary quotas for the ramp up are important to establish target-markets. As E-Fuels can be used in a wide range of sectors and applications, target-markets should not be defined too narrowly. This can impede investments, slow down the scale-up and lead to higher costs for all users.

Provide a clear pathway towards a global CO_2 price:
Internalising the costs of greenhouse gas (GHG) emissions is essential to make E-Fuels competitive to fossil fuels. First steps can be taken on national or regional level. An emission trading system as well as energy taxes can be used to differentiate between E-Fuels as well as sustainable biofuels and fossil fuels based on their GHG intensity.

Accompany the measures with a global carbon strategy:
The production of many hydrogen derivatives such as methanol or sustainable aviation fuel requires CO_2. Consequently, the development of CO_2 logistics, carbon cycle management and industry-scale direct air capture technology needs to be addressed. This includes globally consistent standards for the use of CO_2 e.g., from industrial sources.

List of signatories: