Advanced Recycling Conference
Abstract
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Role of Chemical Recycling in industrial transformation - Neste view

Neste's Renewable Polymers and Chemicals business serves the industry with renewable and recycled feedstocks to replace virgin fossil resources in the manufacture of plastics and chemicals. The purpose of Neste is to create a healthier planet for our children. At our Renewable Polymers and Chemicals business, we are working towards this goal by introducing more sustainable feedstocks in terms of climate and resource impacts and combating plastic pollution - by using renewable raw materials such as wastes and residues as well as waste plastics. We want to move the needle by advancing circularity through chemical recycling and upgrading activities. Neste is committed to processing more than one million tonnes of waste plastic annually by 2030. To achieve that goal, we are looking into opportunities to expand plastic waste liquefaction capacities as well as providing keys to scale up chemical recycling by investing into pretreatment and upgrading capacities. We are bringing chemical recycling to the next level as we consider the role of upgrading to become a crucial one in enabling scale-up of the liquefied waste plastic feed into existing steam crackers. Neste has so far refined more than 800 tons of liquefied waste plastics and recently received up to 135 MEUR funding from EU's Innovation Fund for our chemical recycling project PULSE (Pretreatment and Upgrading of Liquefied waste plastic to Scale up circular Economy). PULSE implements proprietary technologies at the Porvoo refinery in Finland. Investment decision readiness is targeted for 2023 and the gradual implementation is expected to start in 2024. In October 2021, Neste and Ravago announced their plan to set up a joint venture and build an industrial liquefaction facility in the Netherlands. While our commitment is clear, advancing chemical recycling will also require the right political framework. What do we ask from policy makers? For a successful transformation, the chemical industry requires a clear direction that promotes the use of renewable and recycled raw materials and prioritizes their use over conventional fossil materials, recognizing their contribution to reducing climate emissions and achieving circularity of materials and carbon. A smooth but effective transition can be achieved by allowing credible mass balance schemes to be implemented and by applying technology and raw material neutral frameworks. Sustainability of actions shall be secured by building on certified value chains where traceability from product to raw materials in complex value chains can be achieved.