veturi

program
for tackling
climate crisis

Chemical Recycling of Waste Plastics

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NESTE

Chemical recycling serves two strategic priorities: circular growth and refinery transformation

Renewable Road Transportation

Renewable Aviation

Renewable Polymers and Chemicals

Oil Products

Marketing & Services

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Renewable Polymers and Chemicals

Target
To become a global leader & preferred partner as a provider of sustainable renewable and circular solutions for forerunner brands.

Market
About 50% of consumer goods companies are pledging to switch completely to either renewable or recycled plastics in their products by 2030*

Offering
Renewable and circular solutions for polymers and chemicals to reduce crude oil dependency, to tackle climate change and global plastic waste challenge.

Customers
Global consumer brands, chemicals companies and value chain partners interested in improving the sustainability of their offering.

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*) Source: Ellen MacArthur Foundation, the Plastics Economy

Introducing Neste RE

Neste RE is a raw material for plastics and chemicals production that is made entirely out of **REnewable and REcycled** raw materials.

Neste RE is a **drop-in replacement** to commonly used fossil feedstock in the production of new plastics. Materials produced with Neste RE are of high quality - **identical to traditional plastics** and **fully compatible** with existing production and recycling infrastructures.

NESTE RE

Renewable and Recycled

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Neste RPC is accelerating the circular bioeconomy

Renewable Polymers
Reduction of fossil oil dependency & climate emissions

Bio-based feedstock

Waste Plastics
Rethinking the end-of-life, circularity

Cracking

Refining

Liquefaction

Polymerization

Compounding

Distribution

Converting

Brand owner

Retailer

Consumer

Waste management

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Recycled waste plastics

Neste is a **solution provider for chemical recycling** and committed to speeding up transition to circular economy.

Neste's ambitious goal is to process

>1 Mt/a

of waste plastic from 2030 onwards.

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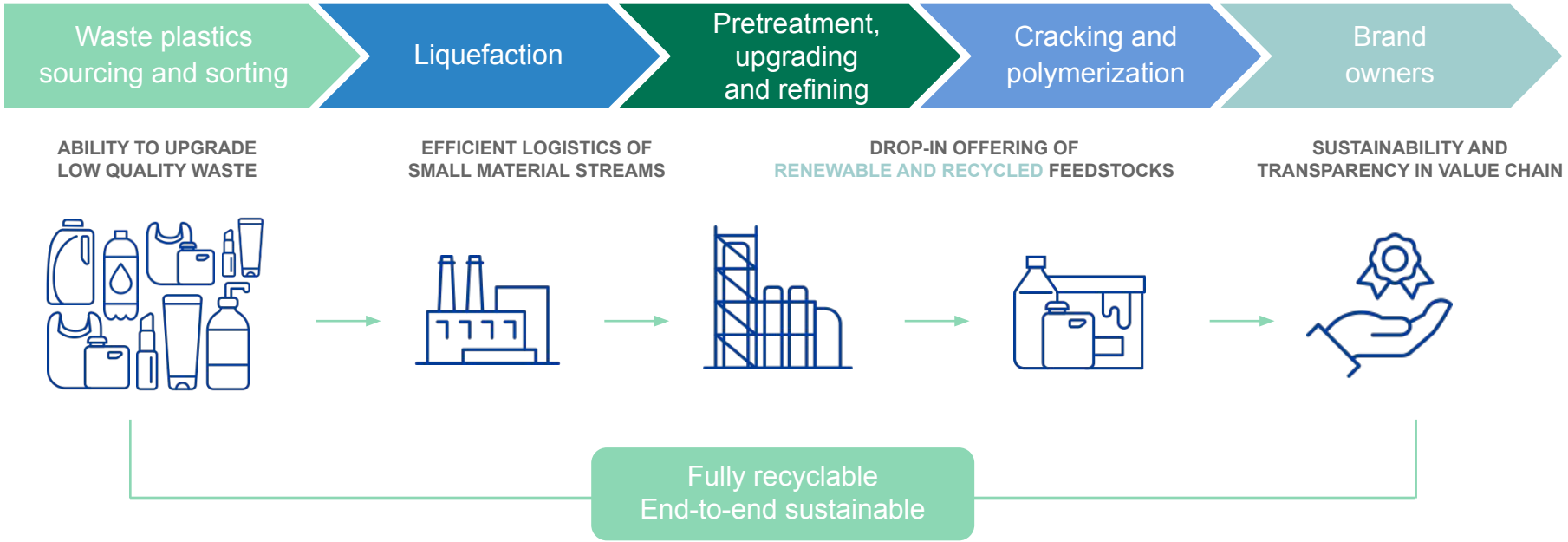
Neste’s expertise in upgrading low quality feedstocks to drop-in products gives us a competitive advantage in the fast-developing chemical recycling market



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Replacing crude oil with circular feeds

Processing liquefied waste plastic at industrial scale

Neste successfully completed its first industrial-scale processing run with liquefied waste plastic at its refinery in Finland during Autumn 2020.

By January 2022, Neste had refined 800 tons of liquefied waste plastic to petrochemical feedstocks.

By processing liquefied packaging and mixed plastic waste to high-quality recycled feedstock for petrochemical industry uses, Neste has proven the concept of closing the loop in the plastics value chain and making circularity a reality.

"With the latest trial runs in Porvoo, we are laying the foundation for replacing crude oil based raw materials with liquefied waste plastic and strengthening circularity together with our customers. Based on the successful trials, we can conclude that liquefied waste plastic is a viable alternative to fossil raw material.

MARKKU KORVENRANTA, EVP, OIL PRODUCTS, NESTE

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Bridging the quality gap for chemical recycling

PULSE - pretreatment and upgrading capabilities in Porvoo, Finland

EU's Innovation Fund granted up to 135 MEUR support for Neste's chemical recycling project PULSE (Pretreatment and Upgrading of Liquefied waste plastic to Scale up circular Economy). PULSE implements proprietary technologies at the Porvoo refinery.

Neste is targeting pretreatment and upgrading capacity of 400,000 tons per year as the first step.

Following the ongoing feasibility study, investment decision readiness is targeted for 2023. Gradual implementation is expected to start in 2024.

To turn chemical recycling into a viable and industrial-scale feed source for our downstream partners in the polymers and chemicals value chain, we have to bridge the quality gap between unprocessed liquefied waste plastic oil and our customers' raw material requirements."

MERCEDES ALONSO, EVP, RENEWABLE POLYMERS AND CHEMICALS, NESTE

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Advancing commercialization of chemical recycling

Partnership to build capacity in chemical recycling

In October 2021, Neste and Ravago announced their plan to set up a joint venture and build an industrial liquefaction facility in the Netherlands.

Neste started collaborating with Ravago in 2019 with the target to build chemical recycling capacities of more than 200,000 tons per year by 2030. The companies are now planning to build an industrial facility for chemical recycling in Vlissingen (NL) with an estimated capacity of 55,000 tons. The liquefaction technology for the site will be provided by Alterra Energy.

"We are truly excited about the progress of our joint project work. Together with Neste, we have the necessary ingredients for a successful recipe to create scalable solutions, converting non-recyclable waste streams into valuable end products."

THEO ROUSSIS, CEO, RAVAGO

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Investing in industry development

Investment and joint development to commercialize chemical recycling technology

Neste acquired a minority stake in liquefaction technology developer Alterra Energy in December 2020. In 2022, Neste acquired exclusive rights to Alterra's technology in Europe.

ALTERRA ENERGY

Collaboration between Neste and Alterra includes joint technology development, global technology licensing, and jointly working towards commercializing Alterra's proprietary liquefaction technology. Neste owns the European rights to Alterra's technology.

"The Neste-Alterra partnership will unlock the full potential of the circular economy, bringing our technology to more partners around the world, creating a cleaner planet."

FREDERIC SCHMUCK, CEO, ALTERRA ENERGY

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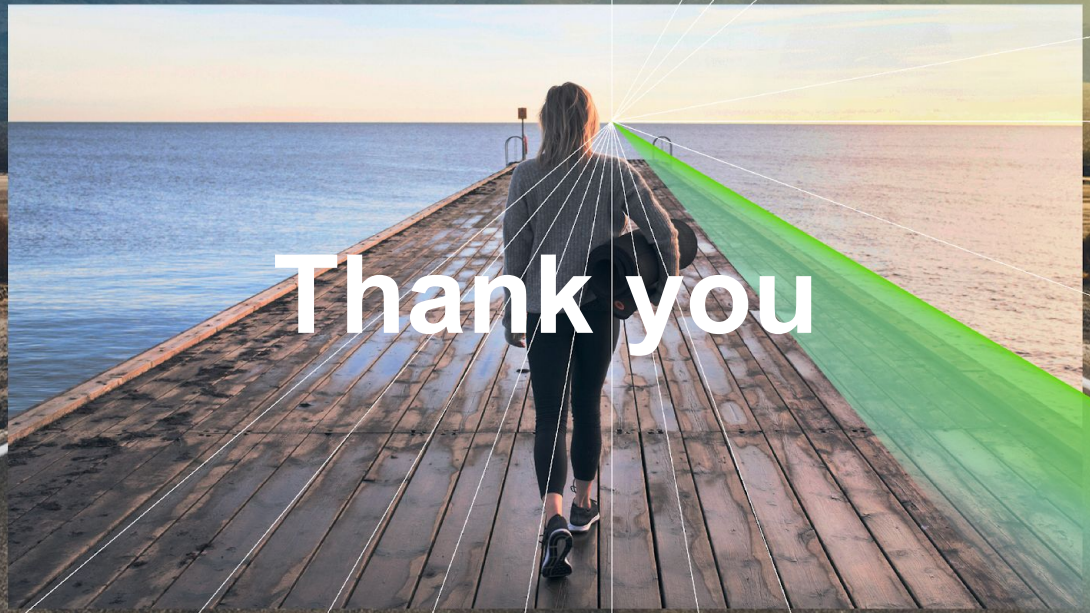

Thank you

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