Neste develops new solutions to decrease the use of crude oil

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Neste launches a new research project which aims at developing sustainable and globally scalable raw materials and technology solutions for transportation fuels and the production of chemicals and polymers.

The new technologies will be based on scalable renewable and circular raw materials that have been difficult to utilize so far, such as forestry or agricultural residues, municipal waste, algae, waste plastics and carbon dioxide.

The commercialization of these raw materials requires long-term research and development of novel value chains with partners. Neste receives support for the project from Business Finland and works closely with companies, research institutes and universities.

“Innovation is an important enabler to strengthen our ambitious growth strategy. Our innovation activities focus on renewing the existing businesses and developing new raw materials and technology solutions for transportation fuels as well as chemicals and polymers,” says Lars Peter Lindfors, Senior Vice President, Innovation at Neste.

“We are developing waste carbon sources to substitute crude oil with a 5, 10 or 20 year horizon for significant commercial scale. Lignocellulosics could potentially provide a large pool of sustainable feedstock from agricultural and forestry waste and residues. Municipal solid waste and waste plastic are also interesting raw material sources, and could be a relatively short-term solution,” says Lindfors.

Further down the road are algae-based solutions, renewable hydrogen and Power-to-X, which use CO2 and renewable electricity as raw material sources.

The new raw materials have high potential globally and could replace a significant amount of the world’s crude oil use for transportation fuels by 2040, according to Neste.

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