

Climate



Climate change is a global challenge, and responding to it effectively calls for a number of parallel approaches. Combating

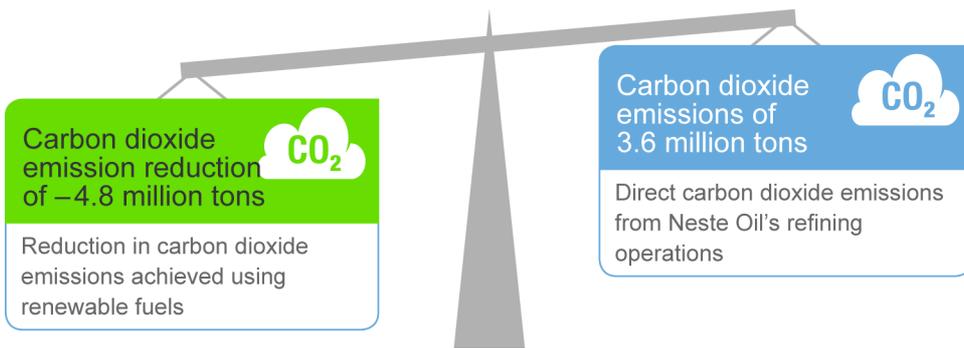
climate change is one of the central drivers behind Neste Oil's cleaner traffic strategy. The company aims to reduce traffic- and transport-related greenhouse gas and other emissions by producing cleaner traffic fuel solutions.

The annual emission achieved with using NExBTL diesel equals to over 40% of the annual greenhouse gas emissions generated by traffic in Finland.



Neste Oil began work on drawing up a climate program towards the end of 2012. During 2013, work focused on reviewing the current status of existing policies and measures aimed at combating climate change. The long-term goal of the climate program is to reduce traffic-related tailpipe emissions through renewable fuel solutions and reduce the climate impact of Neste Oil's own operations through cost-effective improvements. Development work on the program will continue in 2014.

Net climate impact*



*Calculated in accordance with the method defined in the European Union's Renewable Energy Directive.

Carbon footprint calculations covering the entire product life cycle

Neste Oil calculates the carbon footprint of its products over their entire life cycle, from the production of the feedstocks they are refined from to their end-use. Neste Oil has developed greenhouse gas calculation tools on the basis of international standards and legislation for a number of years. The methods have been verified by independent, third-party experts as meeting

the strict quality standards required for biofuels, such as the requirements of the EU's Renewable Energy Directive.

Using NExBTL renewable diesel results in 40–90% lower greenhouse gas emissions than fossil diesel. The majority of the greenhouse gas emissions associated with renewable diesel are generated during feedstock production and are linked to factors such as fertilizer usage.

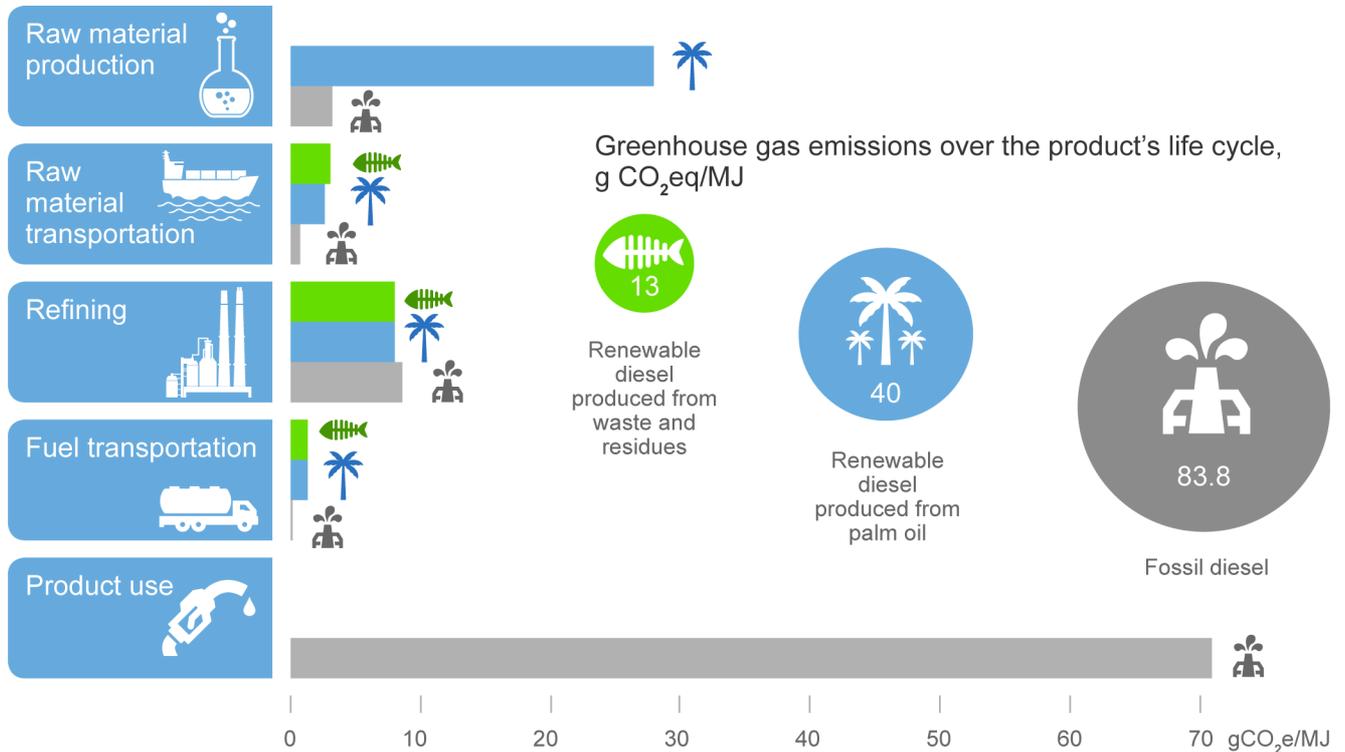
Feedstock	Emission reduction
Waste and residues (e.g. waste animal fat, waste fish processing fat, palm fatty acid distillate (PFAD), and stearin)	85–90%
Crude palm oil	52%
Other vegetable oil (e.g. rapeseed and camelina oils)	42–55%

Neste Oil reports on the carbon footprint associated with its operations in accordance with the criteria established by the Carbon Disclosure Project. Regular reporting on the company's forest footprint takes place through the CDP Forest program.

Read more about carbon footprint reporting and the [Carbon Disclosure Project](#).

Greenhouse gas emissions throughout a product life cycle

(by clicking some phase in a product's life cycle you will see information related to that particular phase)



Greenhouse gas balances have been calculated in accordance with the method defined in the RED directive.

Raw material production

Greenhouse gases generated in raw material production (e.g.):

- Crude oil extraction and flaring
- Using fertilizers in renewable raw material production
- Methane released from wastewater during palm oil production. The amount of methane can be significantly reduced by capturing it at mills.

Raw material transportation

Greenhouse gases generated in raw material transportation (e.g.):

- Fuel usage during marine, rail, and road shipment
- To reduce fuel consumption at sea, basic tanker speed has been reduced to 13.5 knots. Ships' hulls and propellers are cleaned of growth that reduces ship speed.



Refining

Greenhouse gases generated in refining (e.g.):

- Energy production
- Burning fuel in furnaces
- Hydrogen production
- Part of the carbon dioxide generated during production is recovered for re-use



Fuel transportation

Greenhouse gases generated in fuel transportation (e.g.):

- Fuel usage in marine, rail, and road shipments
- Emissions from road shipments are reduced by measures such as optimizing load levels.
- Engine efficiency and the condition of machinery affect emission levels, for example.



Product use

Greenhouse gases generated in product use (e.g.):

- Emissions released when using renewable fuels are carbon-neutral, as their CO₂ is bound to the biomass used to produce them
- The majority of the life cycle emissions of fossil fuels are generated when they are used