THIS IS NESTE

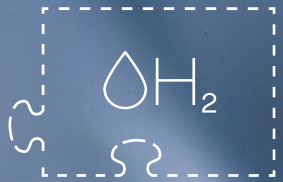
Change runs on renewables

Mats Hultman | Head of OEM Partnerships

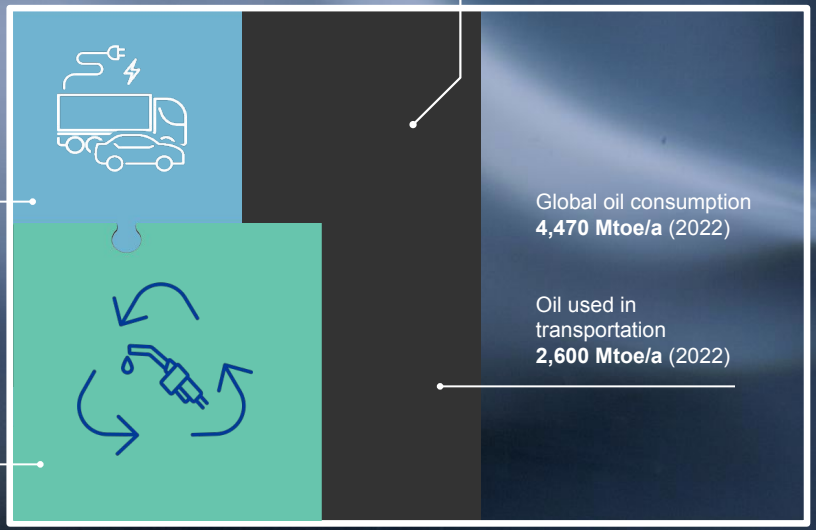
SMTF Göteborg, Oct 6th 2025

We need all solutions to combat climate change

Power-to-liquids and hydrogen hold **significant potential** for fossil-fuel displacement in transport in the long term



By 2040 there could be 800 M electric vehicles (cars and trucks) replacing around **550 Mtoe** of fossil transport fuels



Biofuels have the potential to replace up to **1,000 Mtoe** of fossil transport fuels by 2040

Global oil consumption **4,470 Mtoe/a** (2022)

Oil used in transportation **2,600 Mtoe/a** (2022)

Source: Neste based on IEA (2023) World Energy Outlook, Announced Pledge Scenario; WEF Clean Skies for Tomorrow (2020) and other sources.

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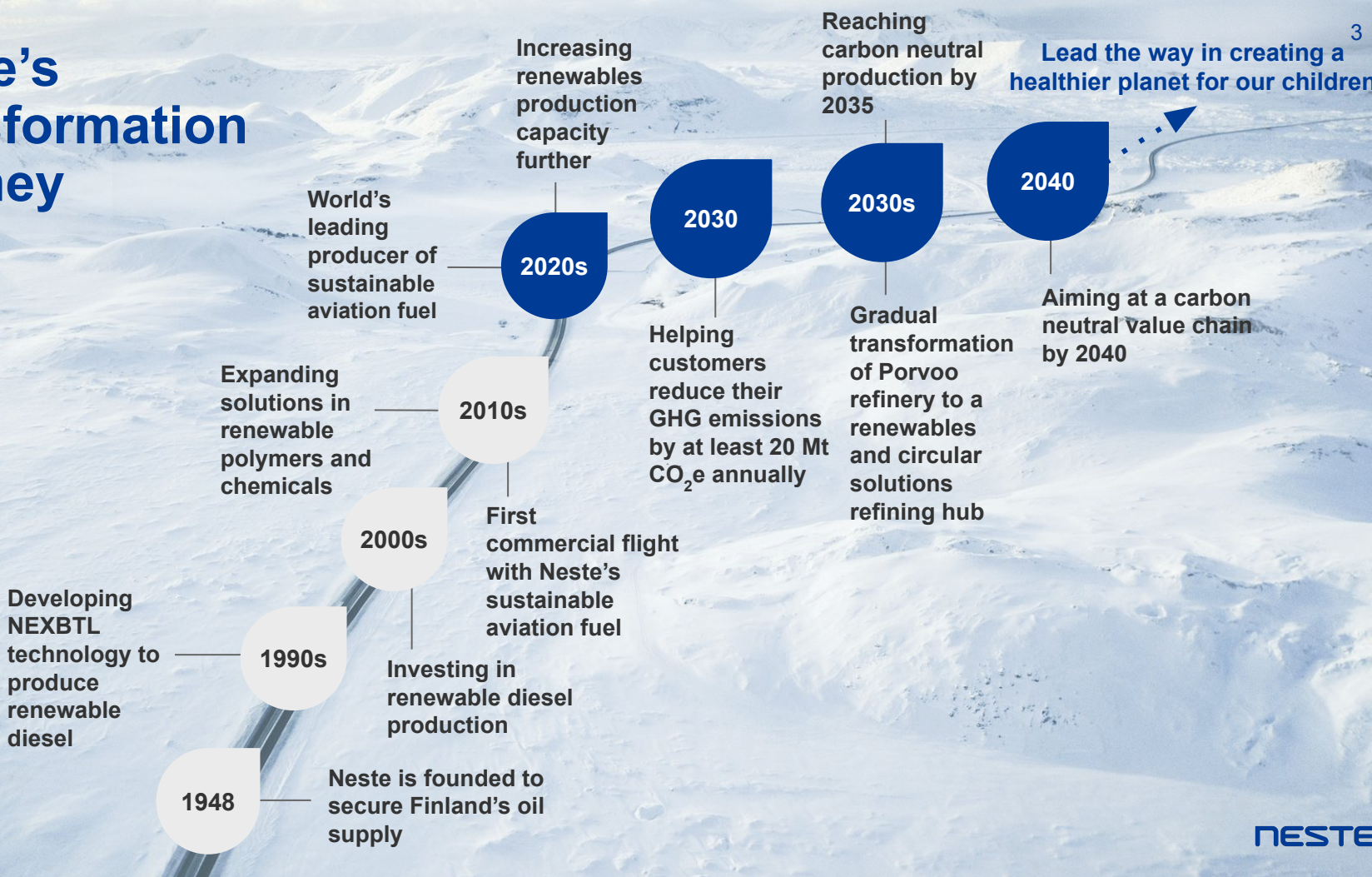
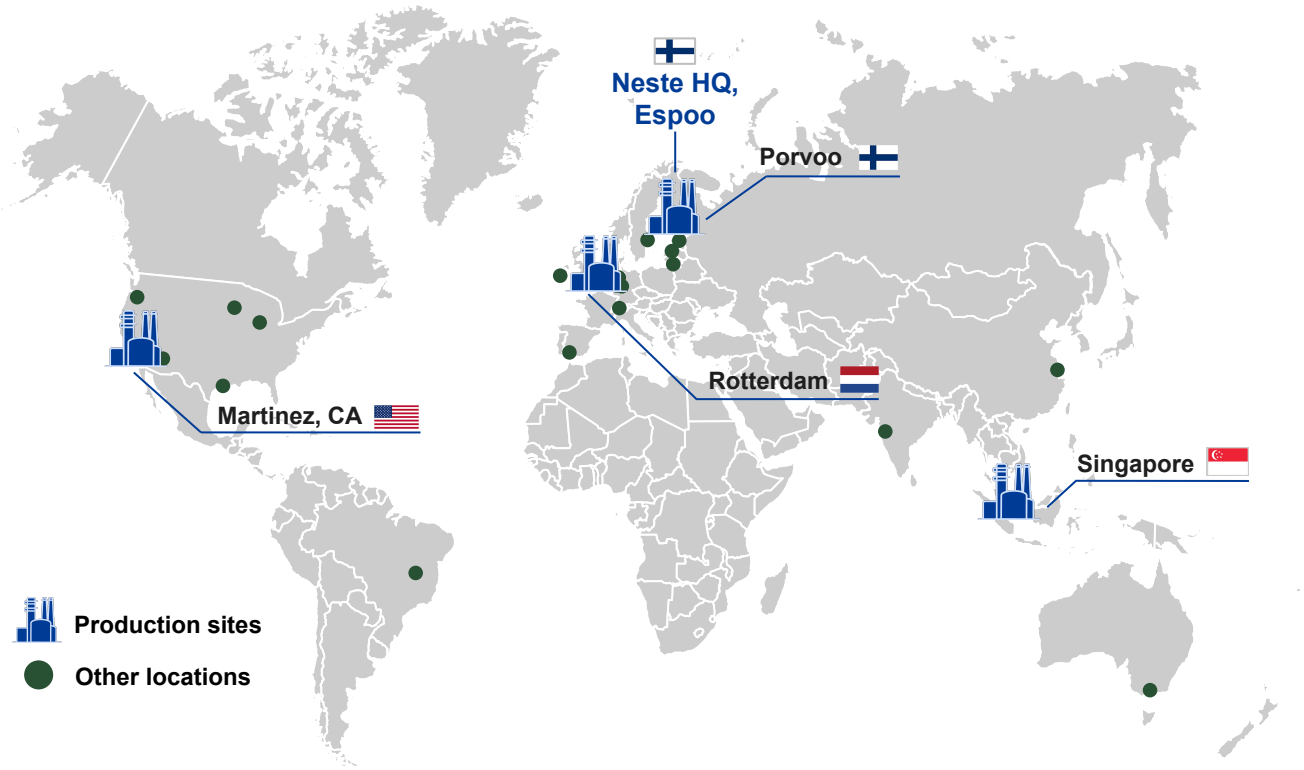
Neste's transformation journey



Operations on five continents



Production

- Porvoo, Finland
- Rotterdam, the Netherlands
- Singapore
- Martinez, CA, the U.S. (joint operation)

Other locations

Europe

- Finland
- Belgium
- Estonia
- Germany
- Ireland
- Latvia
- Lithuania
- Netherlands
- Spain
- Sweden
- Switzerland

Asia and Australia

- Australia
- China
- India
- Singapore

Americas

- U.S.
- Brazil

Focused on refining waste and residues into renewable products

Renewables production on three continents

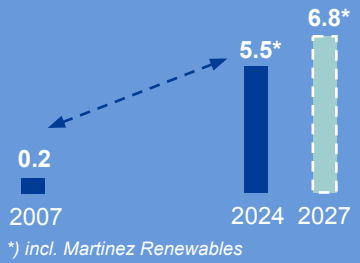
- Rotterdam, the Netherlands
- Singapore
- Porvoo, Finland
- Martinez, CA, U.S. (joint operation)

Our Rotterdam refinery capacity expansion project will further increase the total production capacity of renewable products to

6.8 million tons

in 2027

Renewables production capacity growth, Mt



*) incl. Martinez Renewables

Waste and residues

90%

of our annual renewable raw material inputs globally

Neste Renewable Products business area helps customers reduce greenhouse gas emissions

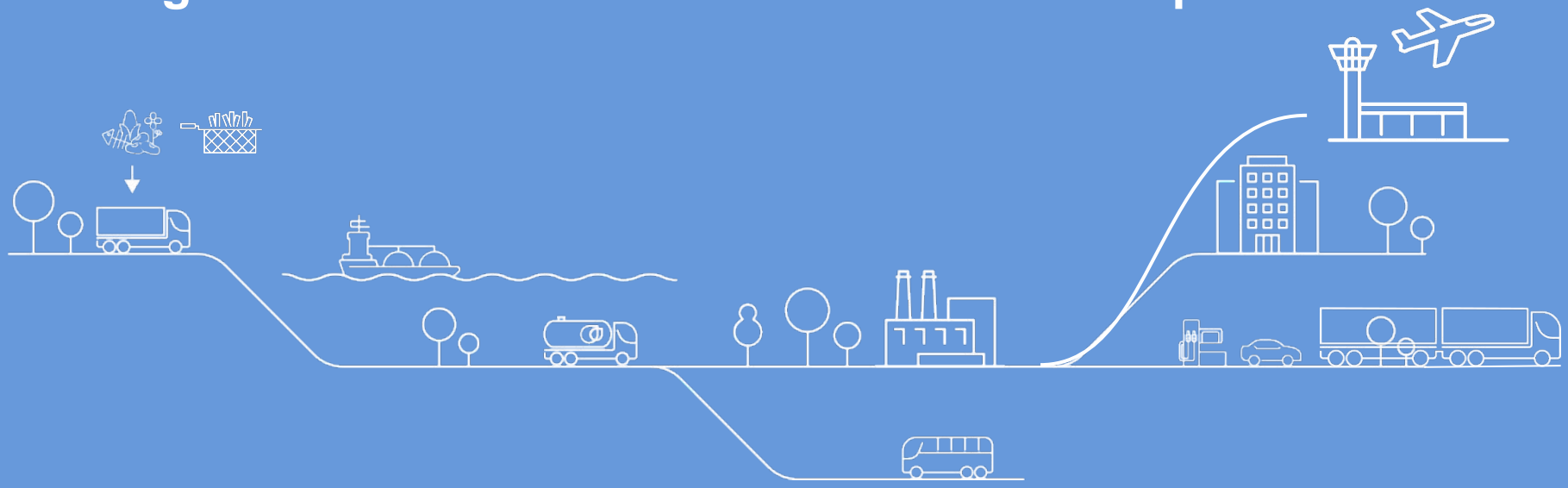
Aviation

Neste MY Sustainable Aviation Fuel™ is a solution for replacing fossil jet fuel to reduce aviation related emissions.

Road transportation and other segments

Neste MY Renewable Diesel™ is a lower-emission solution to replace fossil fuel in all diesel-powered engines.

Turning renewable raw materials into renewable products



Raw materials

A wide variety of different renewable raw materials are sourced around the world

Waste and residues account for approx. 90% of our renewable raw material inputs globally.

Pretreatment

Pretreatment of the renewable raw materials ensures impurities are removed before refining.

Refining

Pretreated raw materials are hydrotreated with Neste's own NEXBTL™ technology or other hydrotreatment technologies.

Oxygen is removed from raw materials with hydrogen. The created pure hydrocarbons are isomerized to tune the end product properties.

Output

5.5 million tons of Neste renewables per year

→ Increasing to 6.8 million tons in 2027

NESTE

Customer have often multiple solutions in use

New solutions

We help our B2B and B2C customers reduce greenhouse gas emissions - also with the EV charging services for electric vehicles.

Neste Charge™

Electric vehicle charging service and related smart charging solutions for logistics companies and their subcontractors in Finland.

Neste MY Renewable Charge™

is a public high-power charging (HPC) service for light and medium-duty vehicles.
We opened dozens of new HPC stations in 2024 along the main roads in Finland and our service expanded also in Baltics.
In 2024 Neste opened its first HPC charging station for the heavy duty vehicles along the main highway 3 in Janakkala Finland.

“Sverige, en föregångare i tillgänglighet”

NESTE MY
Förnybar Diesel

2020
64
stationer

2021
200
stationer

2024
460
stationer

BIOFUEL EXPRESS QSTAR OKQ8 energifabriken tanka

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Neste’s transport solution


NESTE MY
Renewable Diesel
HVO 100
Fossil
Diesel

Neste MY Renewable Diesel™ Benefits compared to fossil diesel

100% renewable raw materials

Neste MY Renewable Diesel™ is produced from waste, residue and other renewable raw materials. It is classified as hydrotreated vegetable oil (HVO).

Reduced carbon footprint

Greenhouse gas emissions are reduced by 90% on the average when emissions over the fuel's life cycle are compared with fossil diesel.

Compatible with all diesel engines

Neste MY Renewable Diesel is an easy and convenient drop in solution for all diesel engines. Thus, you do not need to invest in new fleet or machinery to become more sustainable.

What makes renewable diesel a different solution?

	Conventional fossil diesel	Renewable Diesel (HVO)	Biodiesel (FAME)
Raw material	Crude oil	Waste and residue vegetable oil	Waste and residue vegetable oil
Chemical composition	C_nH_{2n+2} + aromatics	C_nH_{2n+2}	O II $H_3C\text{-}O\text{-}C\text{-}R$
Oxygen (wt-%)	≈ 1 (in B7)	0	≈ 11
Cetane number	> 46	70- 90	> 51
Aromatics (vol-%)	< 4.8	0	0

Chemical composition
Compatibility with all diesel engine and infrastructure

Oxygen
Bad impact on long storage time, water absorption…

Cetane
Quicker and better combustion, reducing the formation of NOx…

Aromatics
Increase engine-out emissions, toxic, bad smell...

RME / UCOME = Rapeseed Methyl Ester/Used-cooking-oil Methyl Ester

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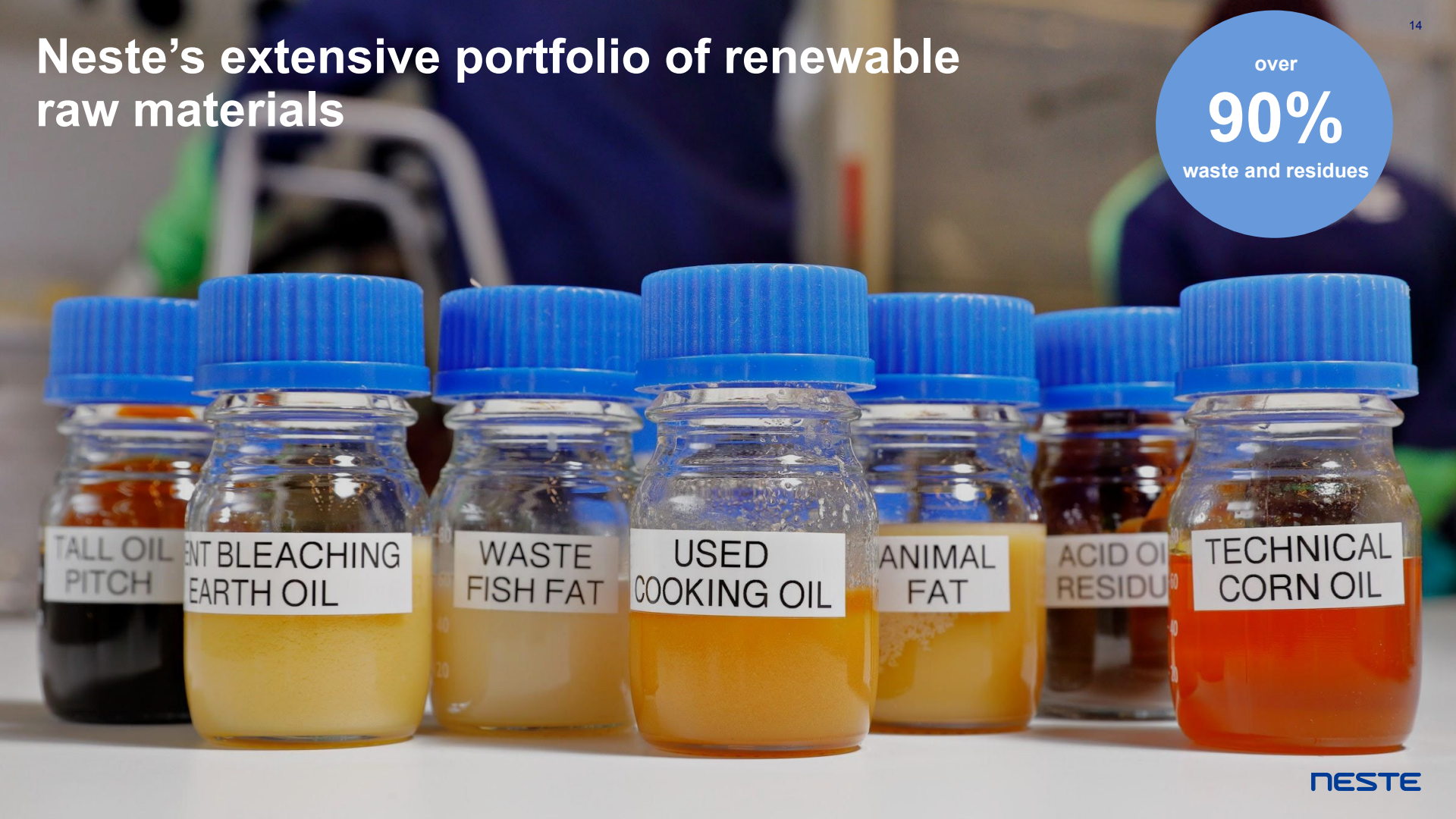
Neste's extensive portfolio of renewable raw materials

over **90%** waste and residues



Scalable solutions for the future

Renewable oils and fats

Novel Vegetable Oil

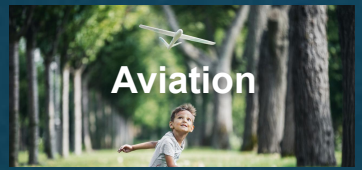
Lignocellulose

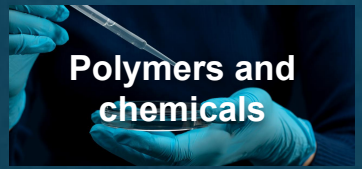
Waste plastics*

Renewable H_2 & PtX

Now

Mid- to longer term options





*Used for polymers and chemicals industry only

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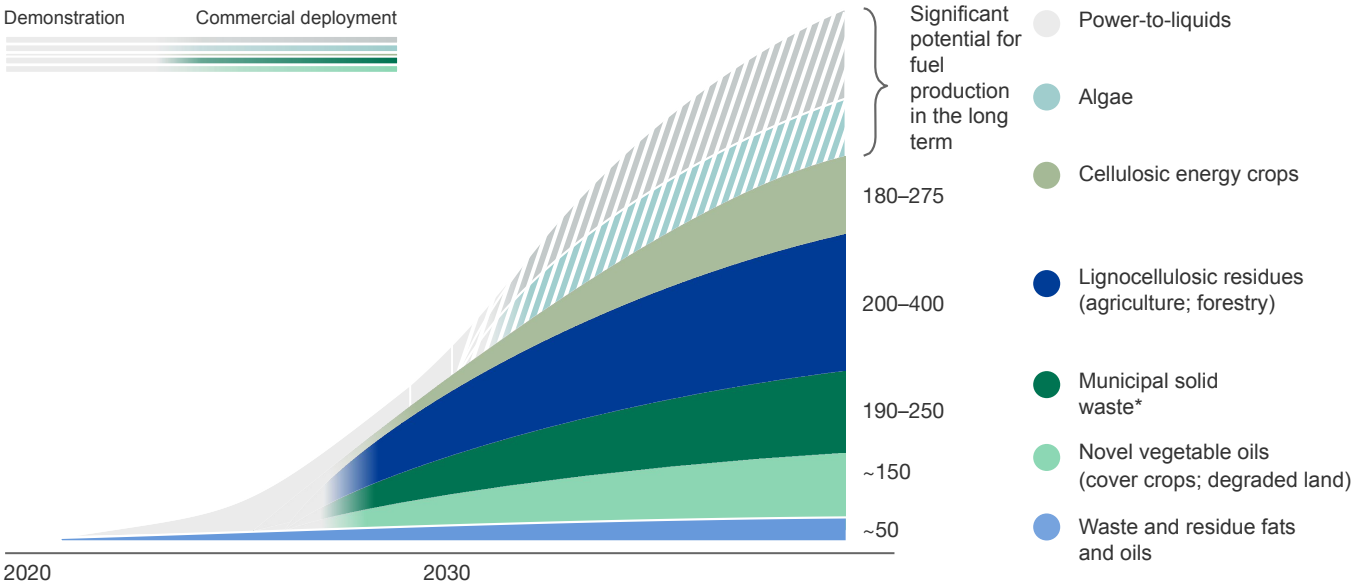
New raw material pools to accelerate emission reductions

Global raw material potential for renewable fuels (Mtoe)



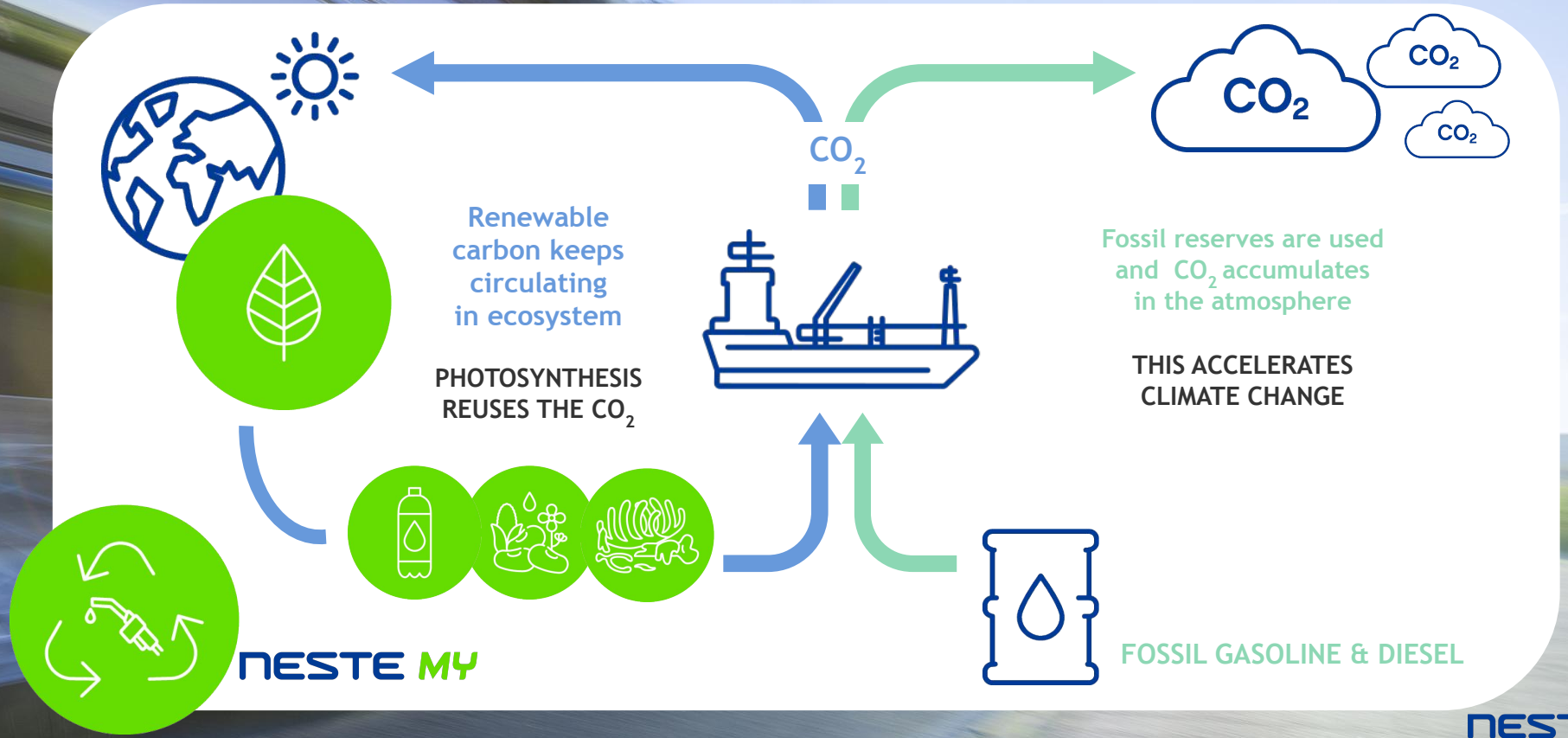
Long-term fuel potential (Mtoe)

Significant potential for fuel production in the long term

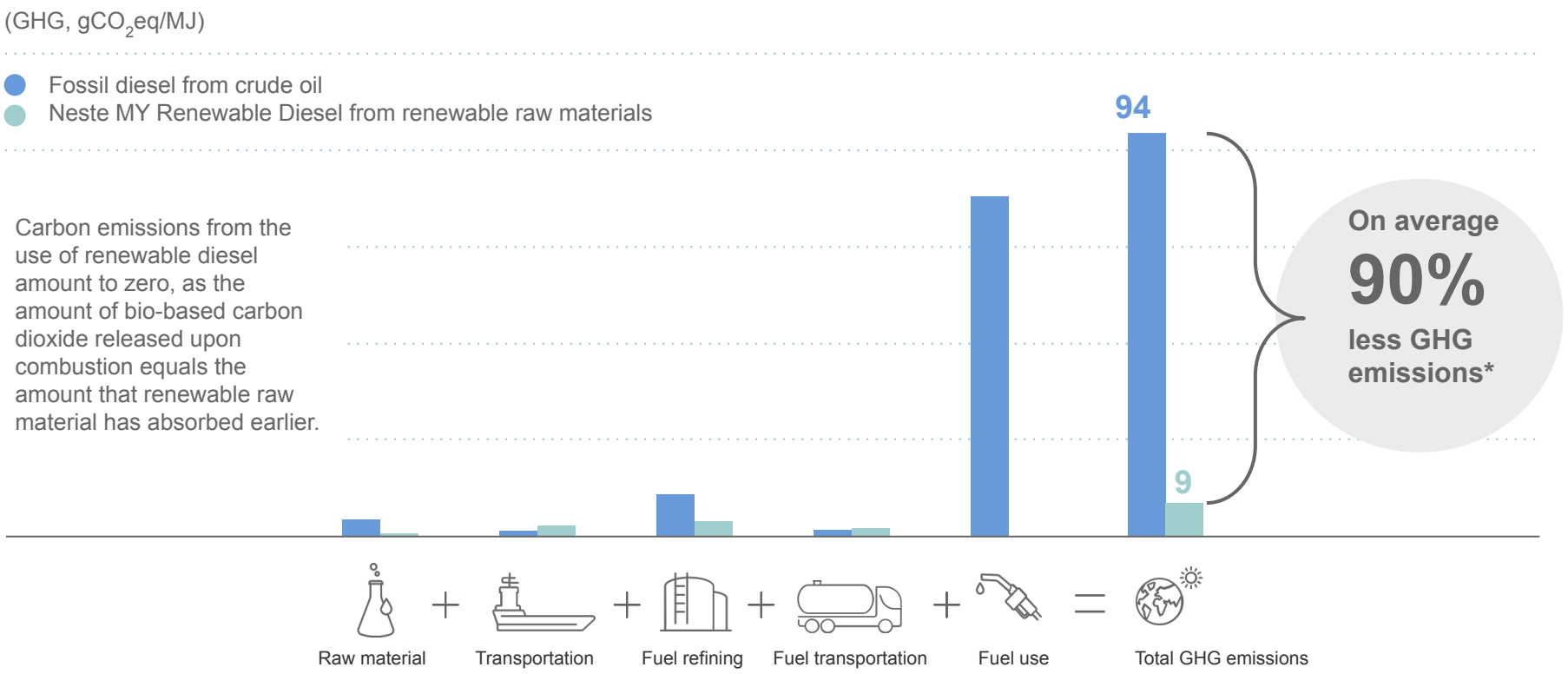
- Power-to-liquids
- Algae
- Cellulosic energy crops — 180–275
- Lignocellulosic residues (agriculture; forestry) — 200–400
- Municipal solid waste* — 190–250
- Novel vegetable oils (cover crops; degraded land) — ~150
- Waste and residue fats and oils — ~50

Source: Neste analysis based on WEF Clean Skies for Tomorrow and other sources. Biomass potential converted to fuel potential, using around 85% conversion efficiency (weight-based) for fats and oils and novel vegetable oils; around 25% efficiency for lignocellulosic biomass and municipal solid waste.
*80% organic waste, with 20% non-reusable, non-separable plastic waste

In the case of Neste renewable diesel, renewable carbon keeps circulating in the ecosystem



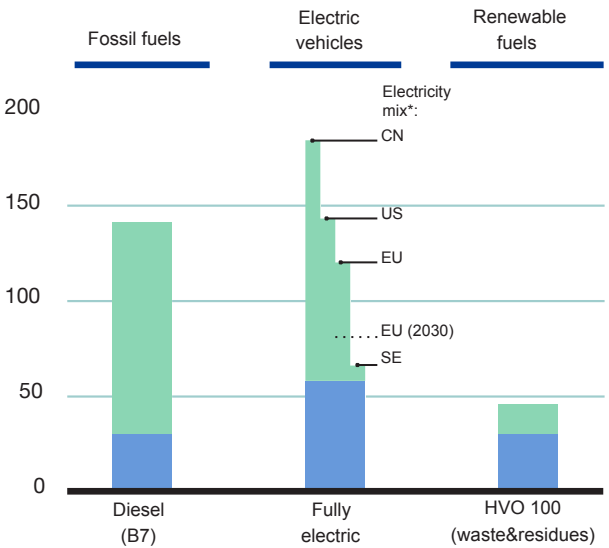
Neste MY Renewable Diesel helps reduce the greenhouse gas emissions by an average 90% when emissions over the fuel's life cycle are compared with fossil diesel.



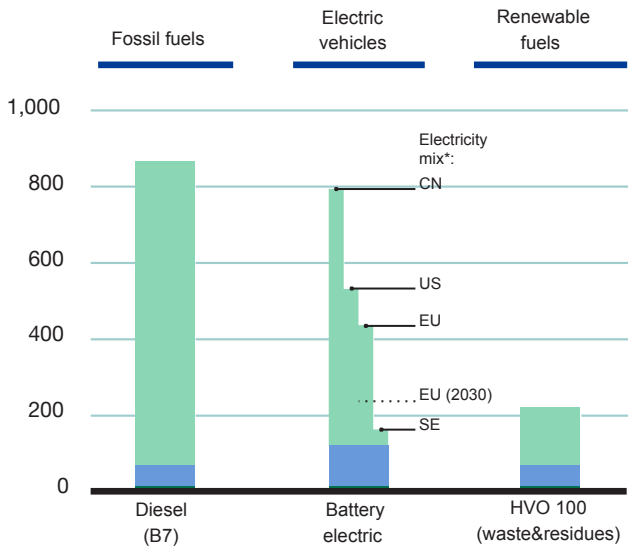
** The methodology for calculating life cycle emissions and emissions reduction complies with the European Union's Renewable Energy Directive II (2018/2001/EU)*

Exploring multiple routes to achieve low-emission vehicles

Passenger cars: life cycle CO_2 emissions (g CO_2/km)



Heavy-duty trucks: life cycle CO_2 emissions (g CO_2/km)



Well-to-Wheels (LDV) / Fuel use (HDV) | Production of vehicle | Vehicle end-of-life

Renewable diesel made from waste & residue feedstocks can deliver substantial emission reductions in both passenger cars and trucks.

Electric vehicles have a great emission reduction potential, if running on renewable or low-carbon electricity.

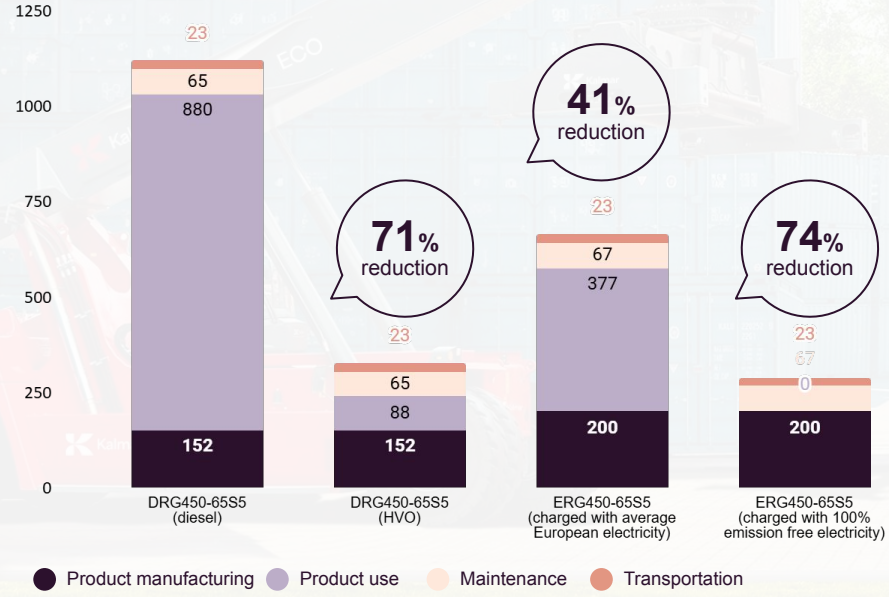
*Power sector CO_2 intensity varies across countries depending on their fuel mix. In 2018, Sweden's intensity was 43 t CO2/GWh, followed by EU's 320, US's 416, and China's 682, according to the IEA. With a greener power mix, the intensity is expected to decline to 132 t CO_2/GWh for the EU, 257 for the US and 531 for China by 2030, according to IEA's stated policy scenario.

Source: Neste based on Volkswagen, IEA and Scania; 200,000 km life-cycle mileage assumed for passenger cars and 500,000 km for heavy-duty trucks (6.1 tons as an average payload).

Example: Lifetime emissions of Reachstackers

Net lifecycle greenhouse gas emissions

Tons CO2 eq.



Kalmar

OEMs continue to approve Neste MY Renewable Diesel™

Most OEMs have approved Neste MY Renewable Diesel for all or some engines:

- Heavy duty
  - **Volvo**, Scania, Daimler, DAF, Iveco, MAN, Renault, Cummins, VDL ...
- Passenger car
  - Citroën, DS, Peugeot, Mercedes, Smart, Volvo, Renault, Dacia, Opel, Ford, **BMW**, VW, Mini, Toyota, **Skoda**, Audi...
- Non-road applications
  - **Liebherr**, **Komatsu**, Caterpillar, Deere, Agco Power, Steyr, Deutz, **Volvo**, Scania, MAN, MTU, **Valtra**...

* OEMs marked with bold text uses Neste MY as fist fill in the production also

NESTE

WGMM

The Working Group on Monitoring Methodologies of CO_2-Neutral Fuels

The working group report is now released and handed over to the European commission

AECC Aurobay BDBe bft BIOAGRA
Bioéthanol FRANCE BMW BOSCH
cecod CLEPA DAF DENSO Crafting the Core
DOVER FUELING SOLUTIONS Drivkraft Sverige EBB eFuel alliance
ELAFLEX en2x eni ePURE
ETANOLI AUTOILIJAT eurogas ewaba
FuelsEurope GILBARCO VEEDER-ROOT Haltermann Carless HELLENIQ ENERGY
HEXAGON AGILITY HIF HUTH HYUNDAI Liquid Gas Europe
IVECO GROUP jama LKQ LOTHER
NESTE PORSCHE prio REPSOL
SCHAEFFLER spah UNIKE UPEI
VDA vitesco TECHNOLOGIES VW

Link to the report

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Fueling Technologies for Vehicles & Retail:

11 technical options were evaluated and described in the report.

Option 1 – Mechanical adaption of tank filler / nozzle

Option 2 – Fuel Marker along upstream and downstream

Option 3 – Digital fuel tracking on upstream and downstream

Option 4 – Hybrid approach –fuel marker & digital handshake

Option 5 – Vehicle Onboard Fuel Detection Function

Option 6 – Vehicle Onboard Fuel Molecular Sensor

Option 7 – Communication between vehicle and filling station

Option 8 – EU market exclusively supplied with CNF

Option 9 – Mass-Balanced CNF supply to each CNF vehicle.

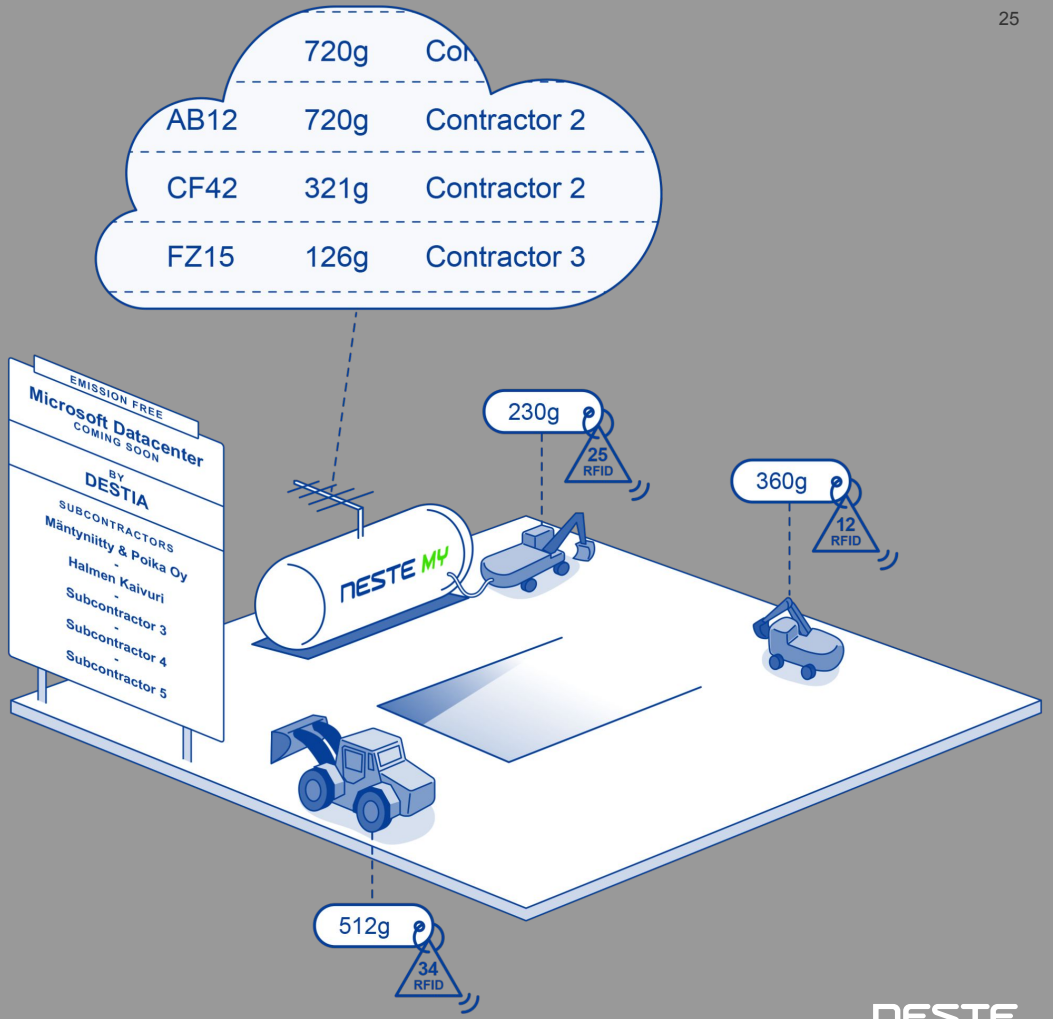
Option 10 – Fuel Usage Balancing – FUB

Option 11 – Combined – Upstream: mass balancing – Downstream: digital handshake

On-site reporting

Our goal is to offer a centralised renewable refueling system for all contractors on site with a partner.

- Tanks & Automatic deliveries
- RFID tag Identification
- Site Fuel data reporting & Emissions
- Proof of sustainable act



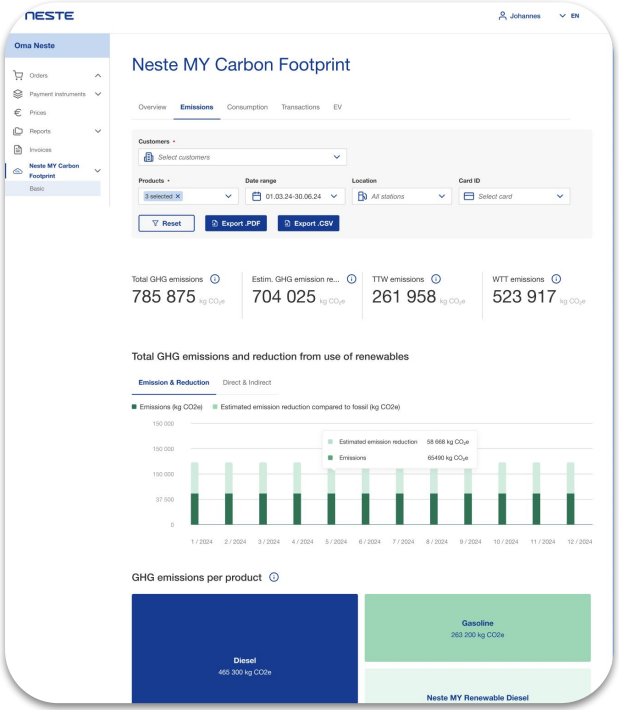
Emission reduction is not enough as such
- Customers need to validate and report it

FILTER & EXPORT OPTIONS

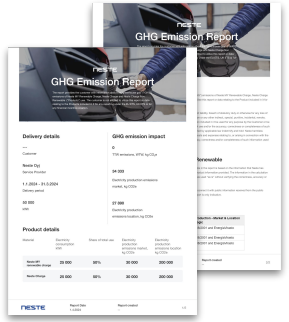
Filtering options based on customer ID, product, date, location and fuel card ID for which the data can be exported. Export the data in .csv format or get ready visual .pdf reports from the liquid fuels and/or EV Charging.

GHG EMISSION DATA

GHG Emissions have a more **advanced break down** from WTW into WTT and TTW which is needed for scope 1 & 3 reporting. And we provide now also GHG emission data from **EV charging** which is needed for scope 2 reporting.



Liquid Fuel .pdf report



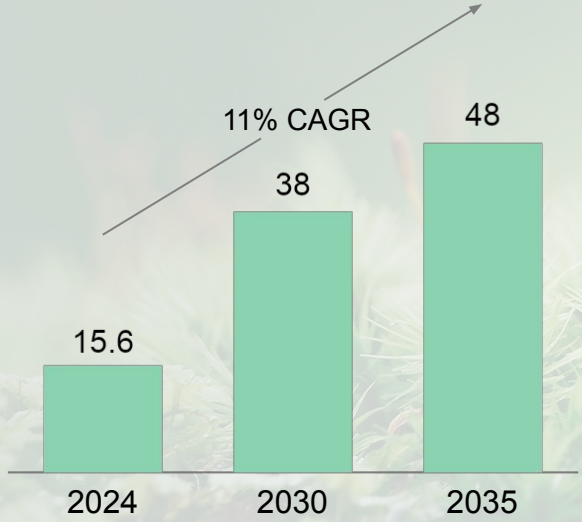
EV Charge .pdf report

WTW: Well-to-Wheel WTT: Well-to-Tank TTW: Tank-to-Wheel

Outlook

Solid growth trajectory continuing in renewable diesel

Global renewable diesel demand (Mt/a), external estimate

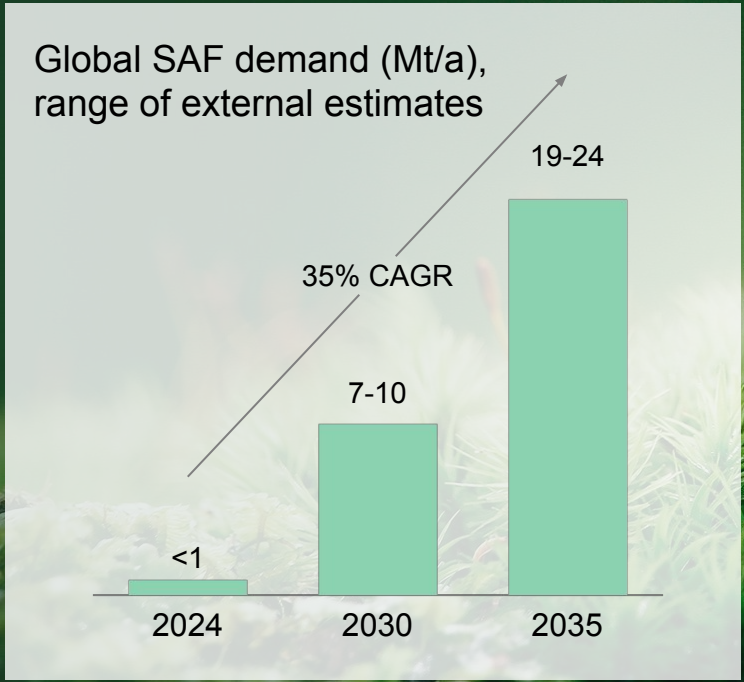


Majority of expected growth from mandates, incl.:

- **EU RED III:** 29% renewable share or 14.5% emission reduction obligation in transport by 2030, with sub-quota for advanced biofuels
- **California LCFS:** 30% reduction in the carbon intensity of transportation fuels by 2030 and 90% by 2045. Other US states are increasingly following California's example
- **National road mandates**: in e.g. UK, Canada, and Brazil

LCFS = Low Carbon Fuel Standard
Source: Argus Biofuels Analytics

Rapid increase in global SAF demand, especially from 2030 onwards



Majority of expected growth from mandates and incentives including:

- EU: 2% in 2025, 6% by 2030
- UK: 2% in 2025, 10% by 2030
- US: Various incentive schemes
- Singapore: 3% by 2030
- British Columbia (Canada): 3% by 2030
- Japan (proposed): 10% by 2030

Estimate range driven by uncertainty of voluntary demand

Source: SAF demand range based on externally available sources

Main takeaways

Climate targets cannot be met without renewable fuels

More ambitious and persistent regulation for renewable fuels is crucial

Reporting the emission reductions plays an important role

Thanks!

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