ROAD AND RAIL TRANSPORTS
NEW LINKS TO BE EXPLORED?

Volvo Group

Dr. Anders Berger, Group Public Affairs

Volvo Group

Volvo Autonomous Solutions three strategic customer segments

Mining & Quarry / Industrial material handling segment

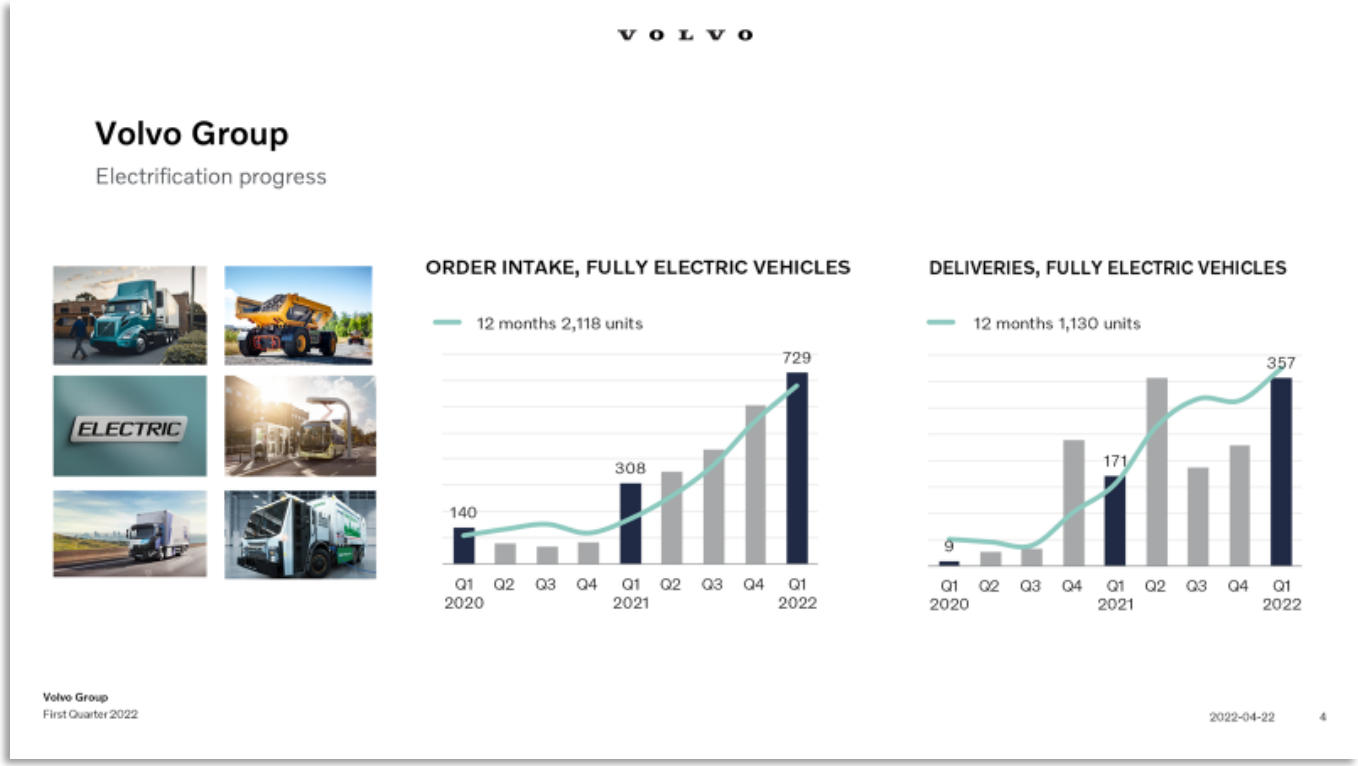
Ports & logistic centers segment

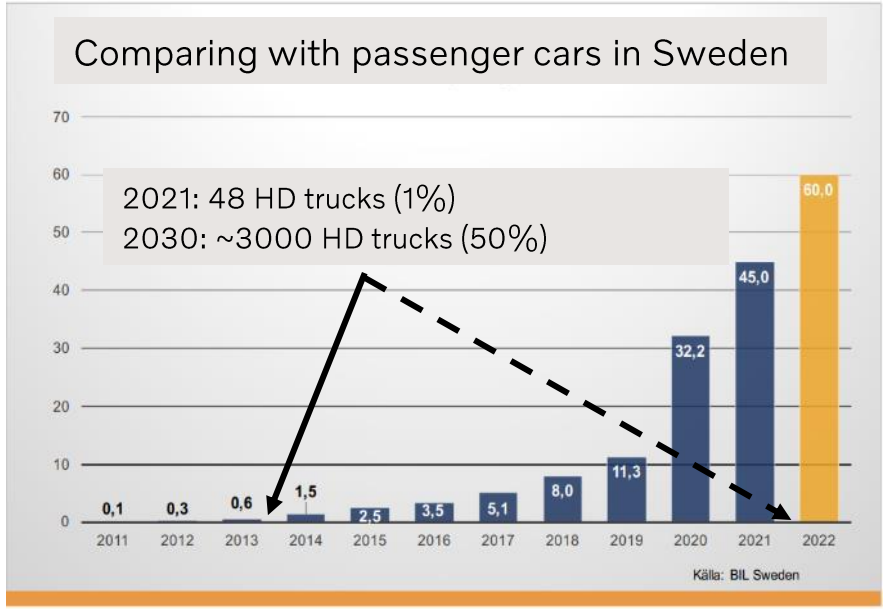
Hub to Hub Highway segment

All Ready – Electric

The widest offer available

Sales increasing and targets within reach



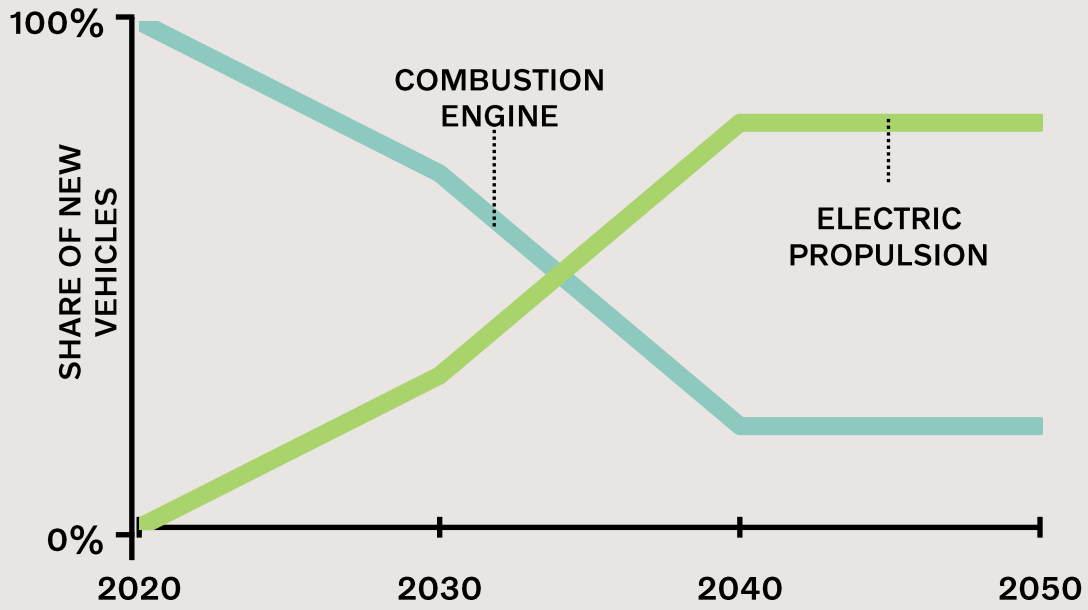


Accelerating the sustainable transformation 100% fossil-free fuel

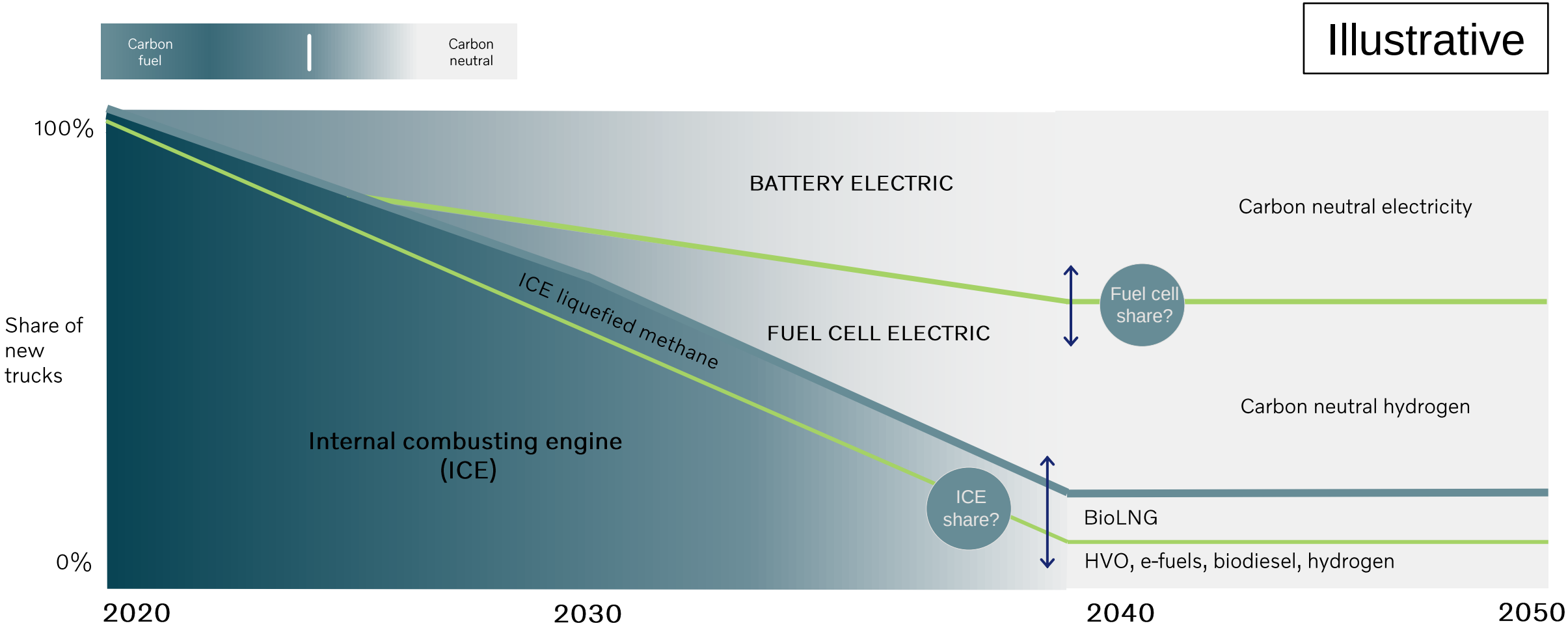
→ In order to deliver on our commitment to the Paris Agreement, the entire running fleet, provided by Volvo Group, needs to run on **100% fossil-free fuel by 2050.**

→ To contribute to an emissions-free future, there will be a **steady shift into electric propulsion,** and combustion engines will run on biofuel.

→ Our ambition is for 100% of our products to be driven **by fossil-free fuels by 2040,** as our products have an average life-span of 10 years.



Potential scenario



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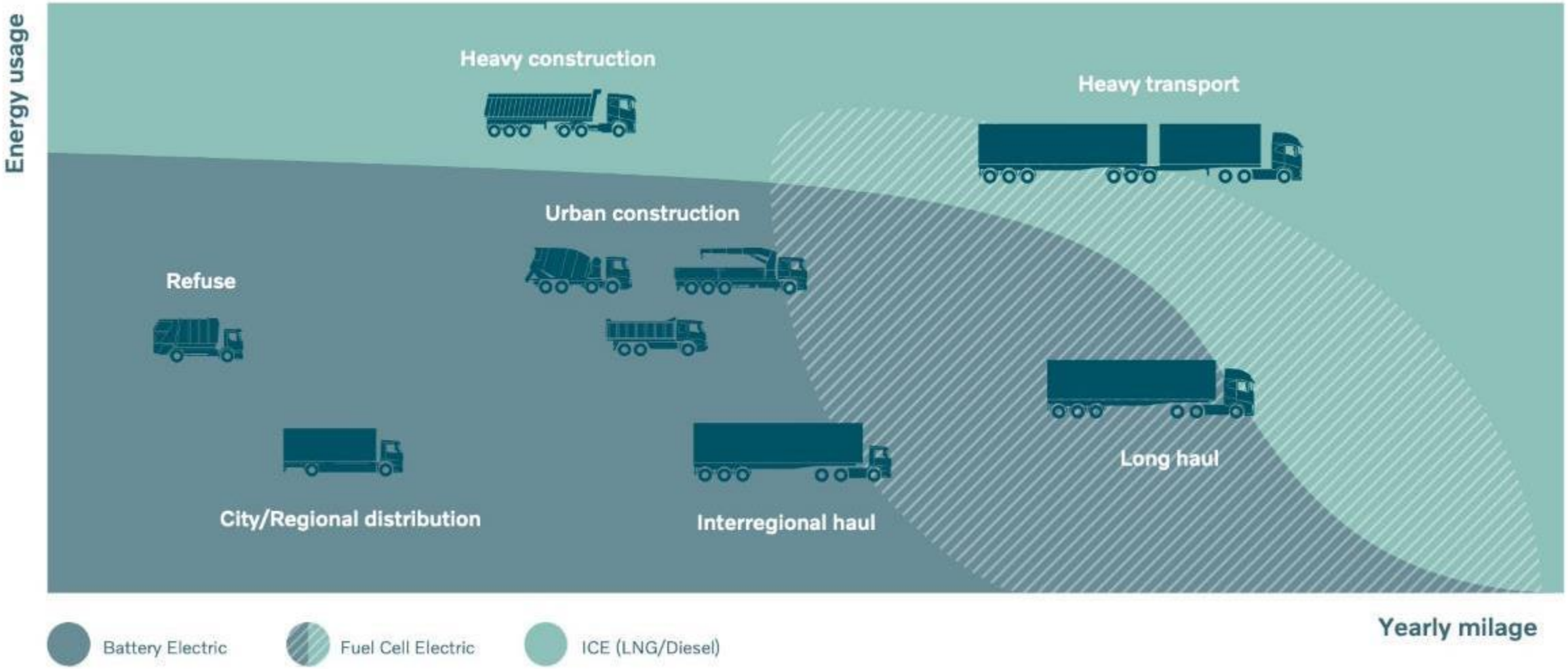
A scenario with complementary technologies

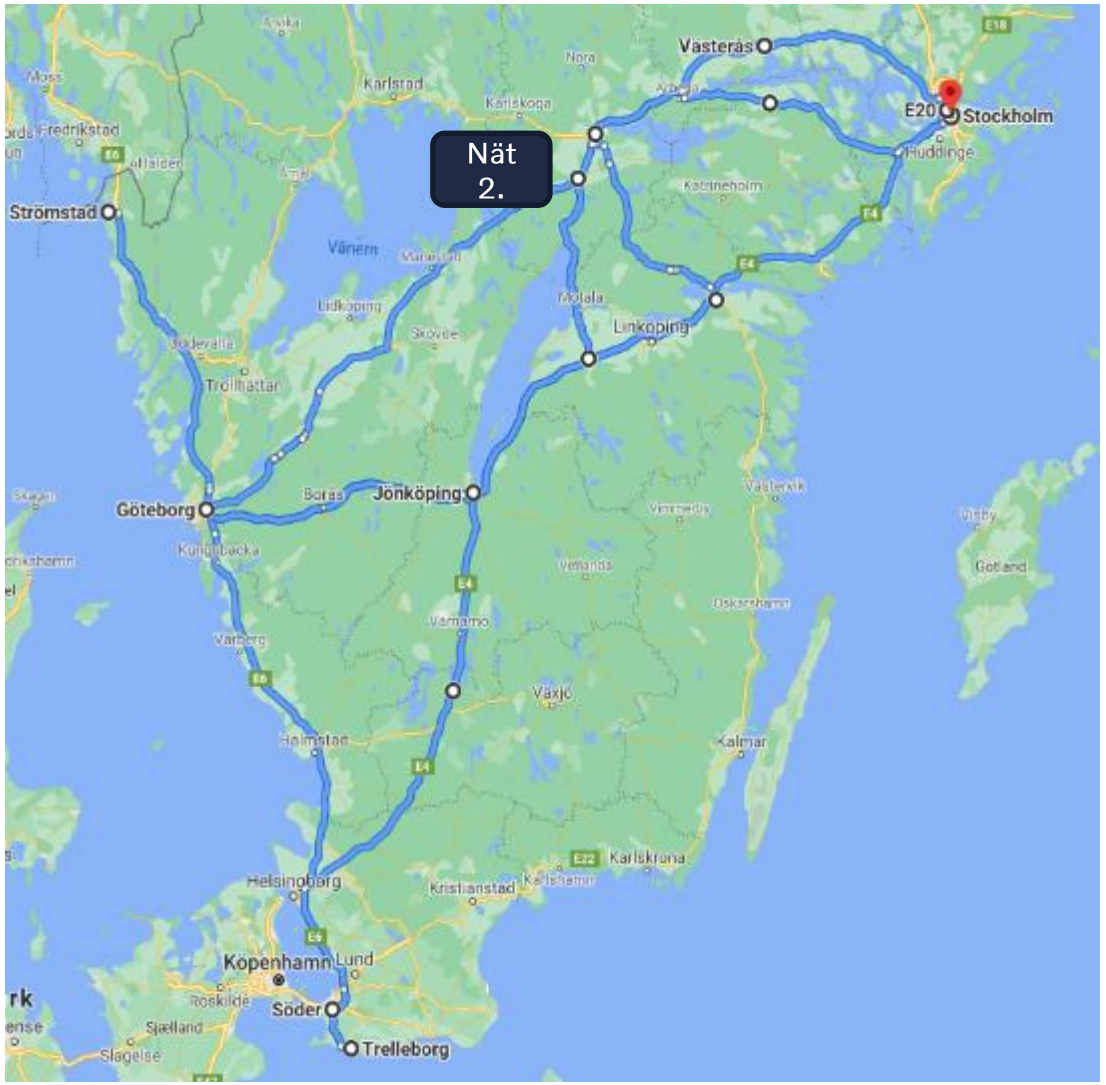


Possible utlization of Swedish ERS

(Electric Road Systems /E-Higways)

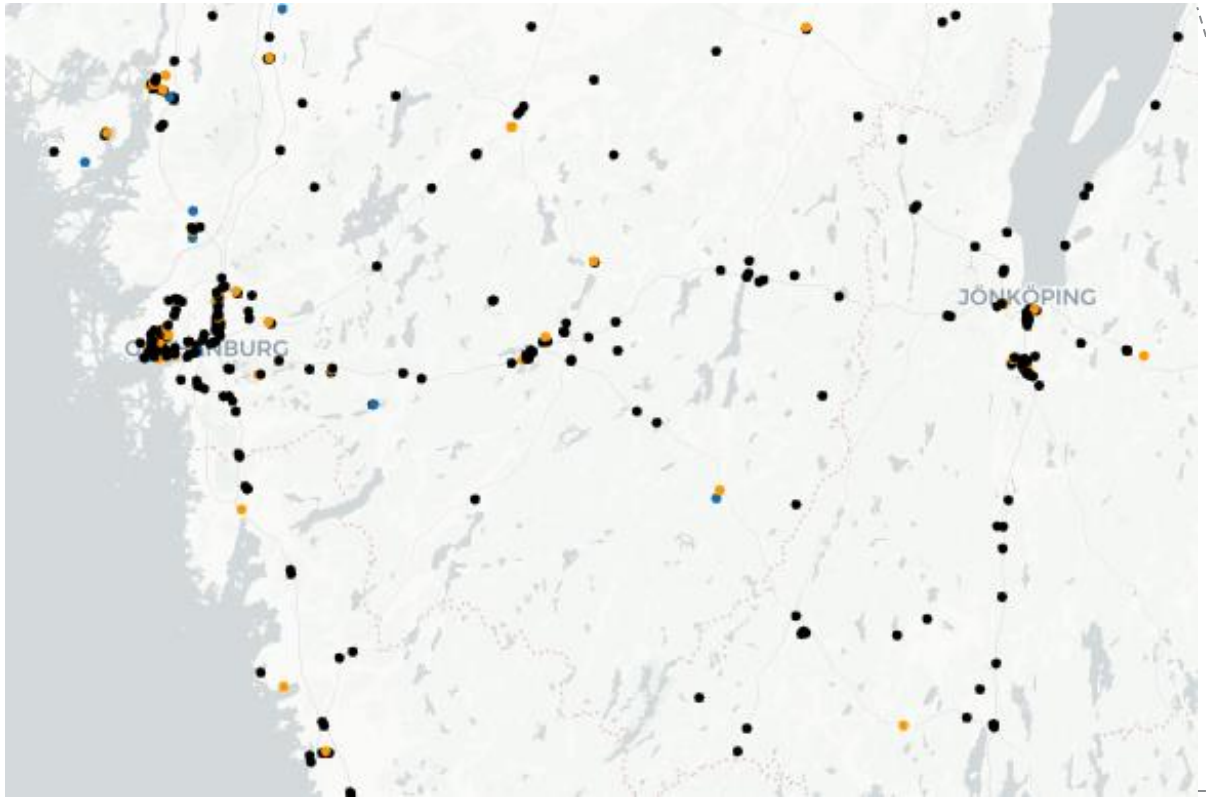
- Road network connecting Gothenburg, Malmö and Stockholm, approx 2300 km bi-directional ERS
- Share of mileage on network based on actual truck movement data (GPS) from Volvo and Scania fleet during 2020

	Unit	Road network 1	Road network 2	Road network 3
More than 40% of driving distance	Share of vehicles driving on road network	6%	23%	31%
More than 50% of driving distance	Share of vehicles driving on road network	4%	15%	20%
More than 60% of driving distance	Share of vehicles driving on road network	2%	9%	12%

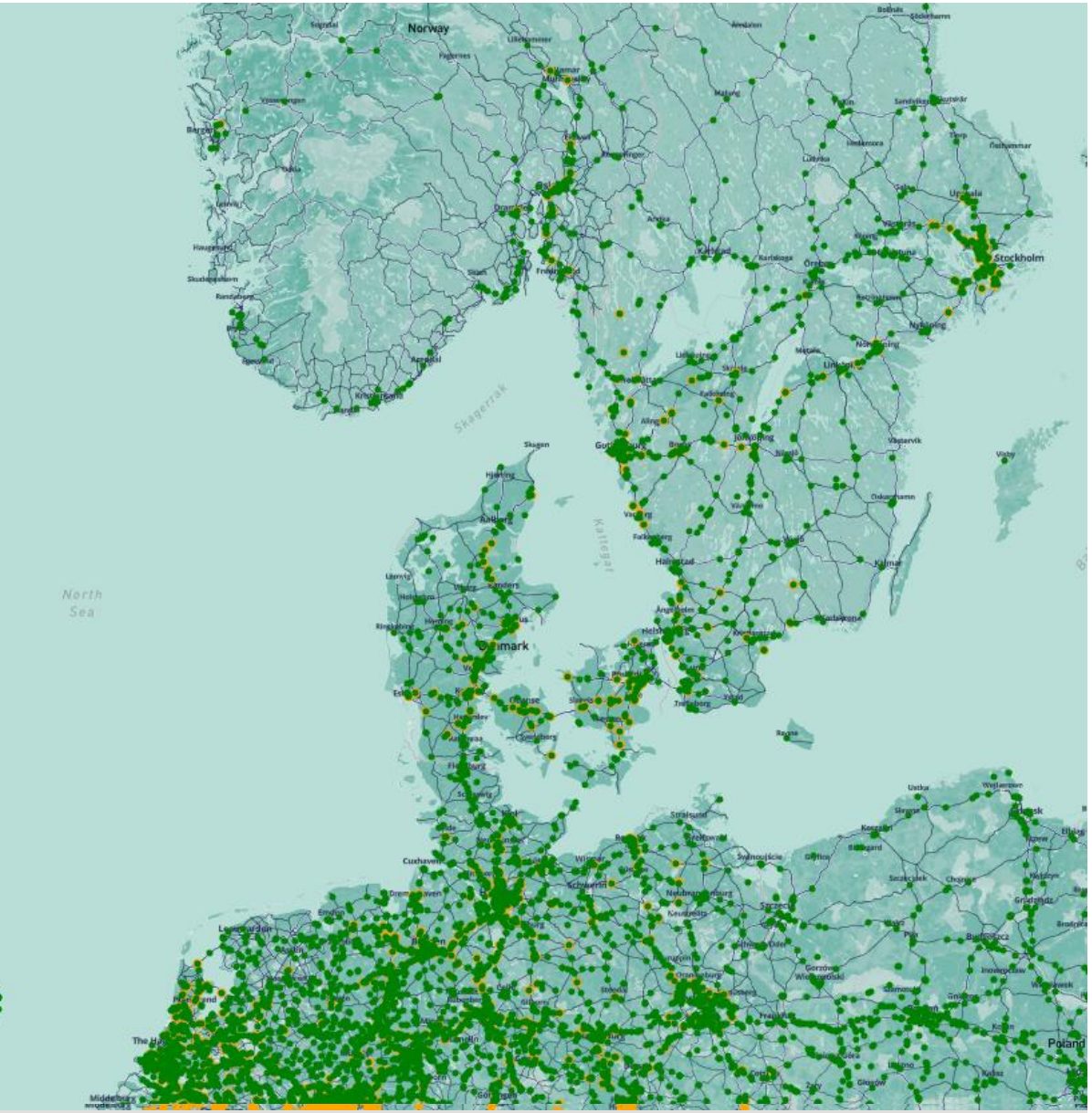


Source: Swedish Transport Administration, Febr 2021

ERS compared to where trucks stop and drive

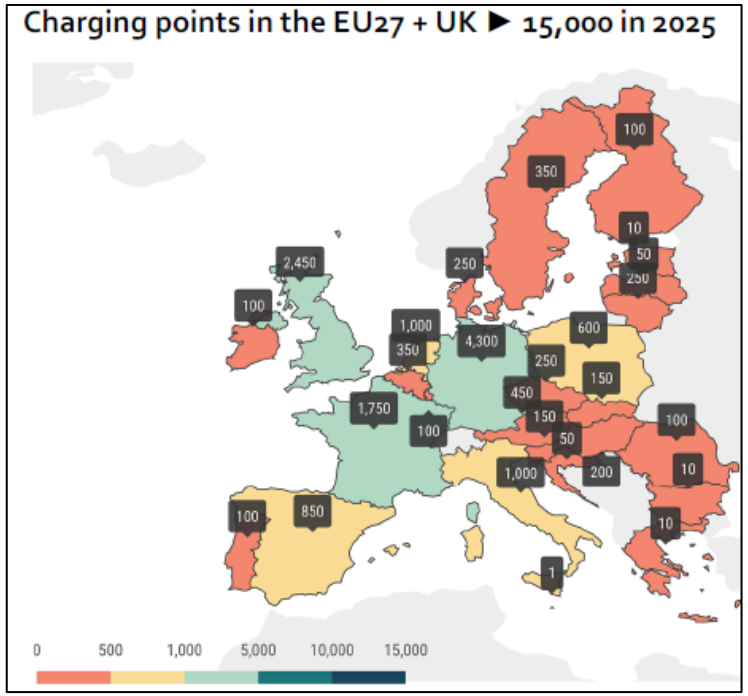


Potential shared charging locations for trucks in general applications



ACEA: Interactive map – Electric trucks: long-haul stop locations fit for charging point deployment in Europe

- Stop locations for regional and general operation cases correlate very well
- Infrastructure built for vehicles in regional operation will be equally relevant for the general vehicle



ACEA Position Paper Heavy-duty vehicles: Charging and refuelling infrastructure requirements

Charging options

Private (at home)

Vehicle dedicated charger

At vehicle ”home” base

Charging over night

8h+

20-100kW

Restricted Public (at destination)

Shared charging HW

At customer premises

During loading/unloading, change of driver

1-3h

150kW+

Public (along the road)

Shared charging HW

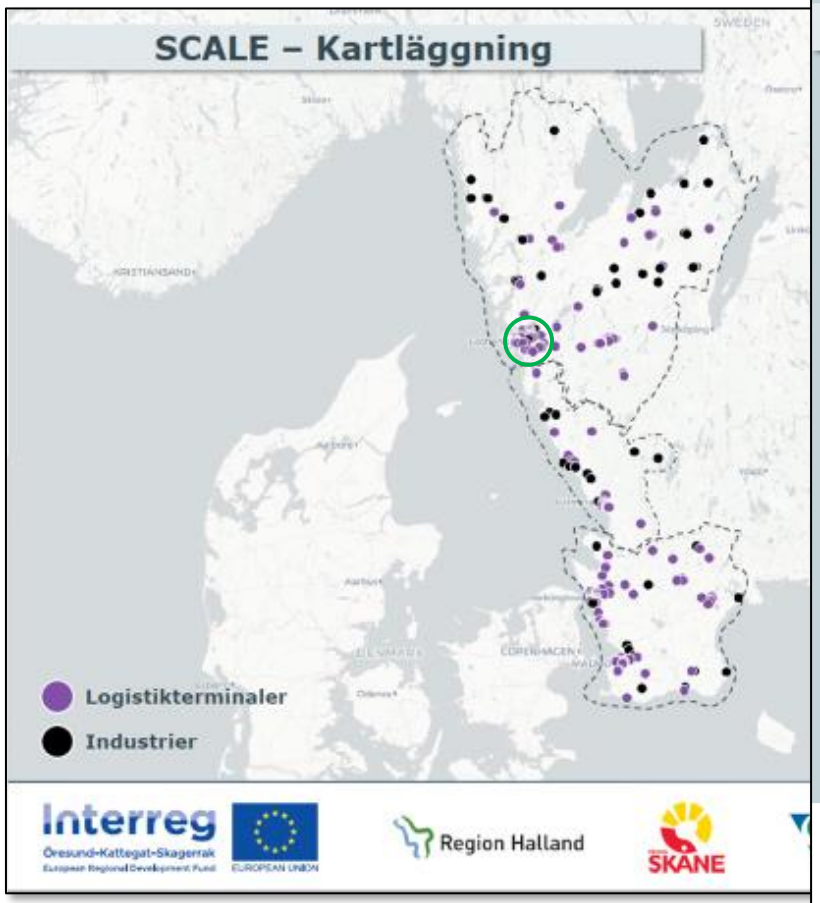
At public locations

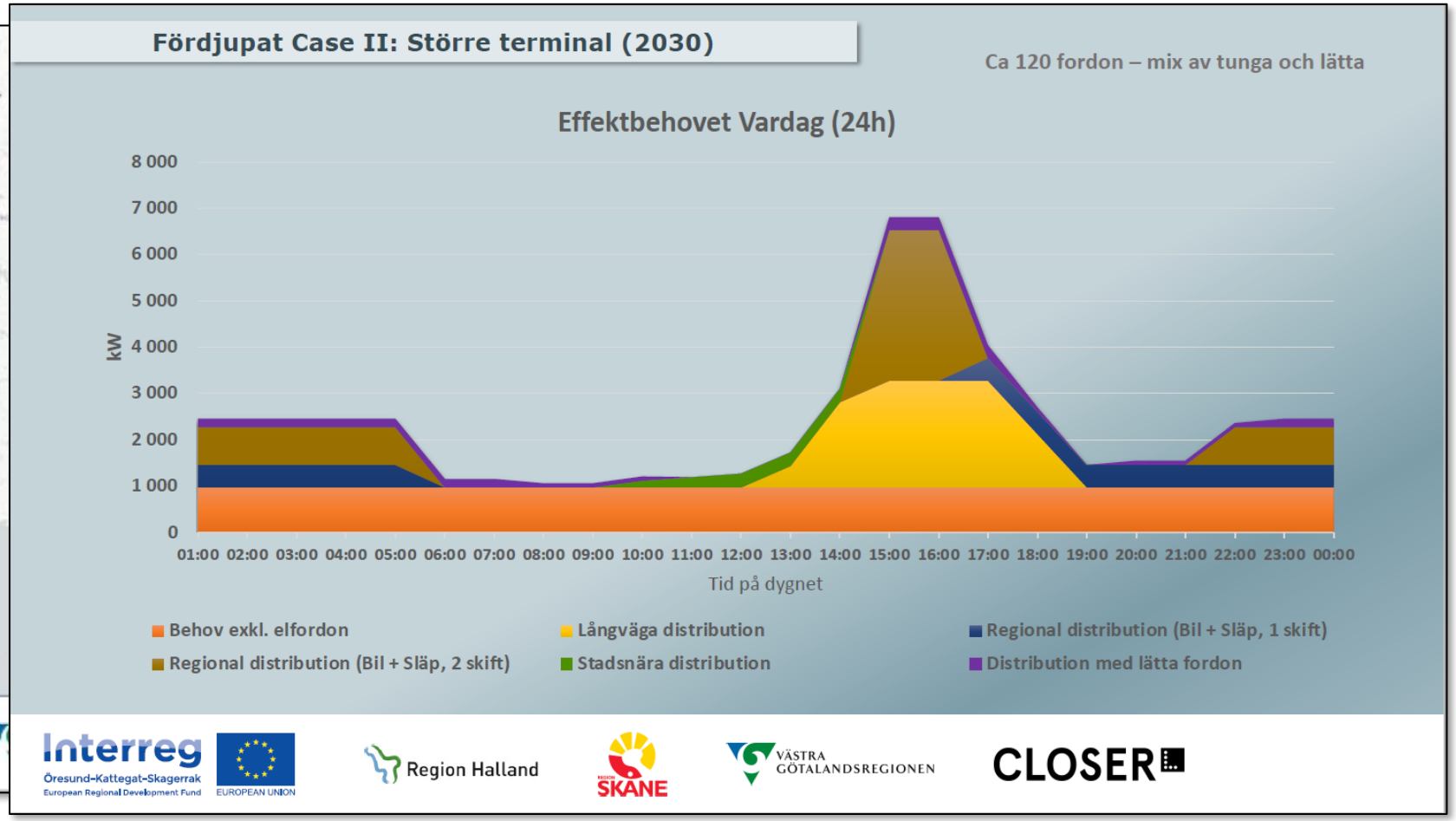
During non-charging related standstill

0,5-1,5h and 8h+

350kW+ and 20-100kW

Charging at logistic terminals





VOLVO AUTONOMOUS SOLUTIONS

Mission

To transform the movement of goods through efficient, sustainable and safe autonomous solutions for selected industry verticals.

Mining & Quarry

Ports & Logistic centers

Hub-to-Hub Highway

VOLVO

PORT OF GOTHENBURG - AUTONOMOUS TRANSPORT SOLUTION ON PUBLIC ROAD AND IN TERMINALS

Co-financed by the Connecting Europe Facility of the European Union

VINNOVA
Sweden's Innovation Agency

Ongoing: Pilot A in Port of Gothenburg

Mission and scope

A complete transport solution

PORT OF GOTHENBURG · Lifting Global Trade. APM TERMINALS · VOLVO · ivl SVENSKA MILJÖINSTITUTET · VINNOVA Sweden's Innovation Agency · DFDS · platzer FASTIGHETER

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TOGETHER WE SHAPE THE WORLD
WE WANT TO LIVE IN

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