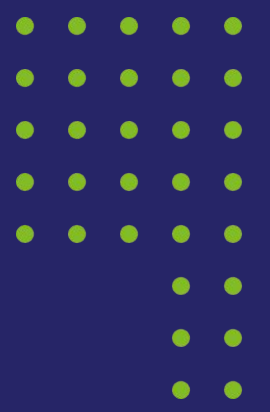
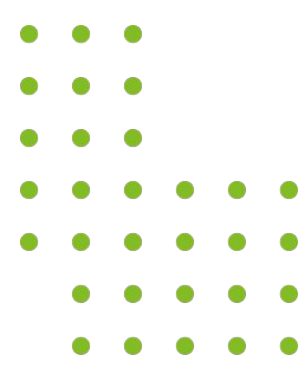




Eurovignette in Action: Unlocking Zero-Emission Trucking in Europe

Tuesday, June 30, 2026 14:00–15:30 CET



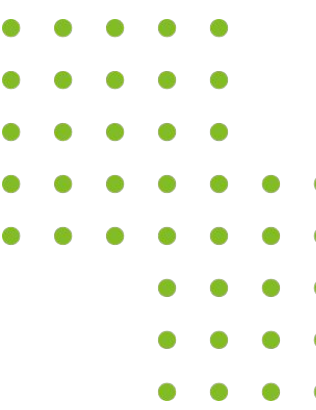


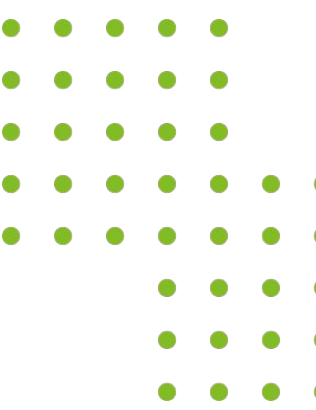
Moderator

SITA HOLTSLAG

EUROPE DIRECTOR,

CALSTART/DRIVE TO ZERO





AGENDA

Welcome & Framing

Eurovignette Policy Landscape & Market Potential

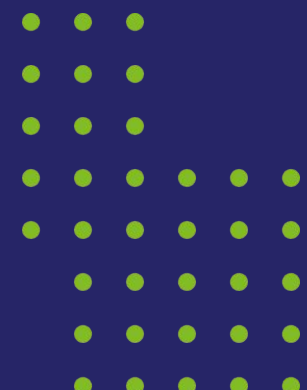
**Country Perspectives:
Implementation in Practice**

Industry Lightning Insights

Transition to Breakouts & Instructions

Breakout Discussions

Closing & Key Takeaways





Eurovignette — Economic Context

- Fuel prices across Europe remain volatile, exposing the road transport sector—and the broader economy—to ongoing cost shocks
- Reducing dependence on imported fossil fuels is a matter of economic security

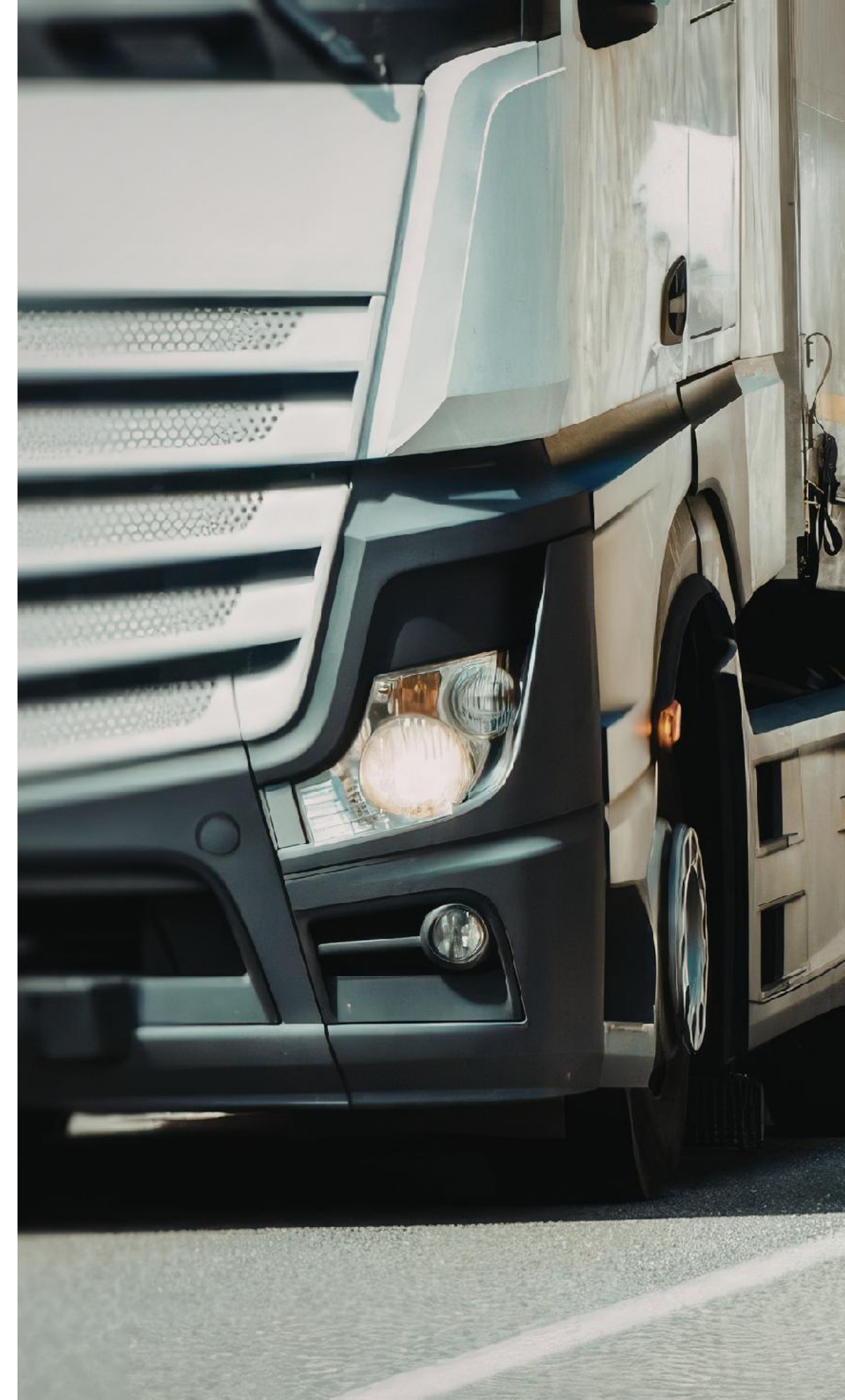
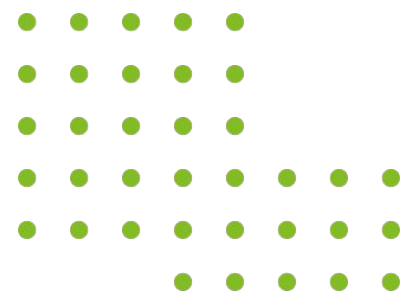




Eurovignette—An Immediate Opportunity for Action

Toll Exemptions Can:

- **Reduce total cost of ownership of fleets**
- **Accelerate market uptake of zero-emission trucks**
- **Send strong signals to manufacturers and infrastructure providers**





Eurovignette— Strong Industry Support

- A coalition of 58 companies has urged EU governments to implement toll exemptions, introduce CO2-based road charging, and reinvest revenues into a fair transition



Eurovignette Directive: Impact of road toll and CO2-based charges on TCO

Albert Alonso i Villar, Associate Researcher

30.06.2026

icct

THE INTERNATIONAL COUNCIL
ON CLEAN TRANSPORTATION

ABOUT THE ICCT & OUR MISSION

- An independent nonprofit research organization since 2005
- Providing exceptional, objective, timely analysis to environmental regulators
- Empowering them to improve the environmental performance of transportation to benefit public health and mitigate climate change

The impact of the Eurovignette policy levers on Total Cost of Ownership (TCO)



Road tolls and CO₂-based charges

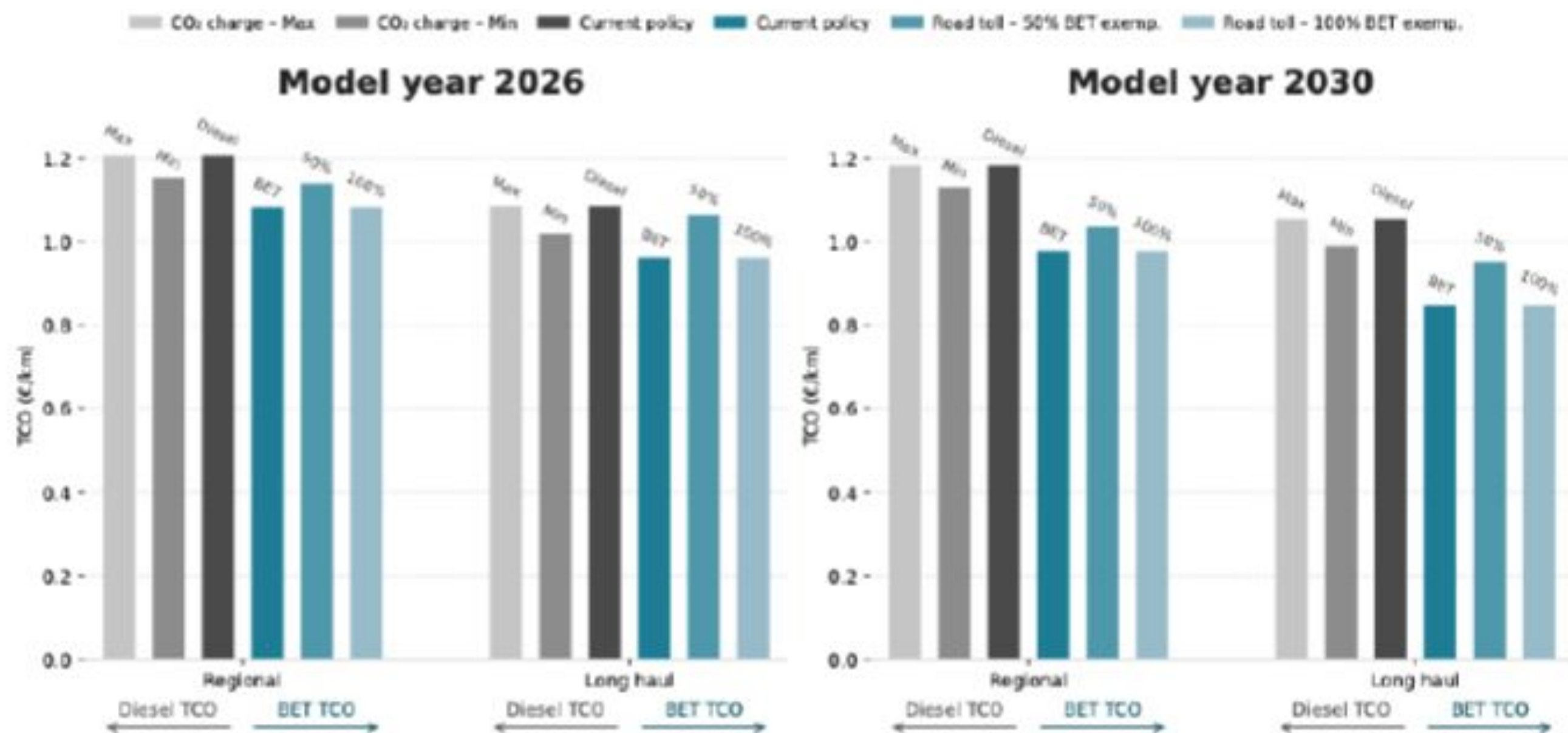
Several EU Member States impose charges on road use, often determined by the vehicle's gross weight, axle configuration, and emissions class.

To support the transition to zero-emission logistics, the EU's Eurovignette Directive allows Member States to **vary road charges for heavy goods vehicles based on CO₂ emissions and grant road toll exemptions to zero-emission trucks.**

- The Directive allows Member States to grant **full toll exemptions for zero-emission trucks** until June 30, 2031, after which the maximum exemption is limited to 75%.
- **CO₂-based road charges** for trucks are calculated according to their emissions class, with typical long-haul trucks subject to charges of between €0.08/km and €0.16/km.

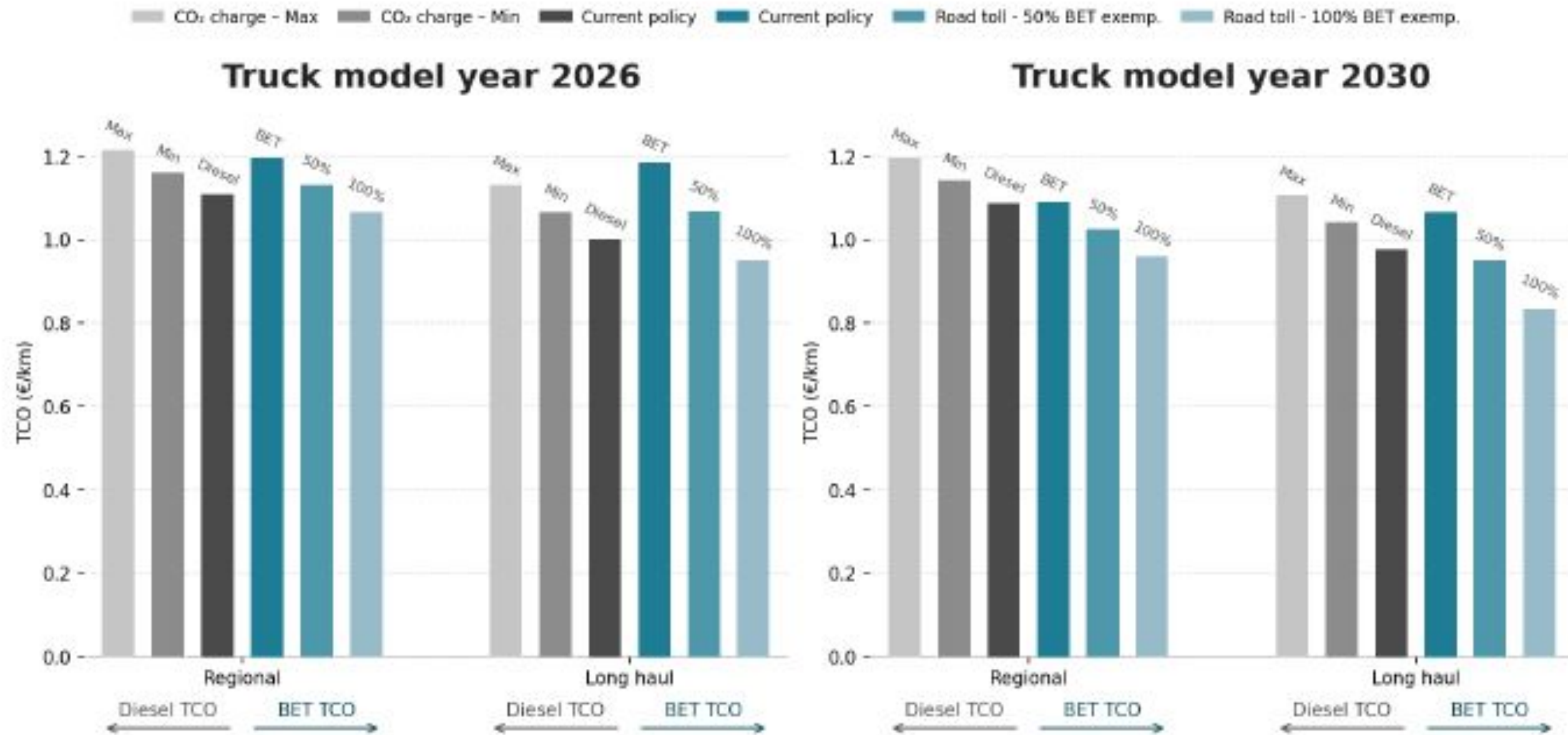
In this brief analysis, we examine the impact of road toll exemptions and CO₂-based charges on the total cost of ownership (TCO) of regional and long-haul trucks in the following major European markets: Germany, France, Italy, and Poland.

Germany



- Germany already applies the Eurovignette (full road toll exemption + CO₂-based charge (0.158 EUR/km), which makes **BET's TCO cheaper than diesel across all years and segments.**
- These findings highlight the strength of Germany's existing road toll design and illustrate how CO₂-differentiated charging and ZEV incentives can substantially reduce BET operating costs.

France

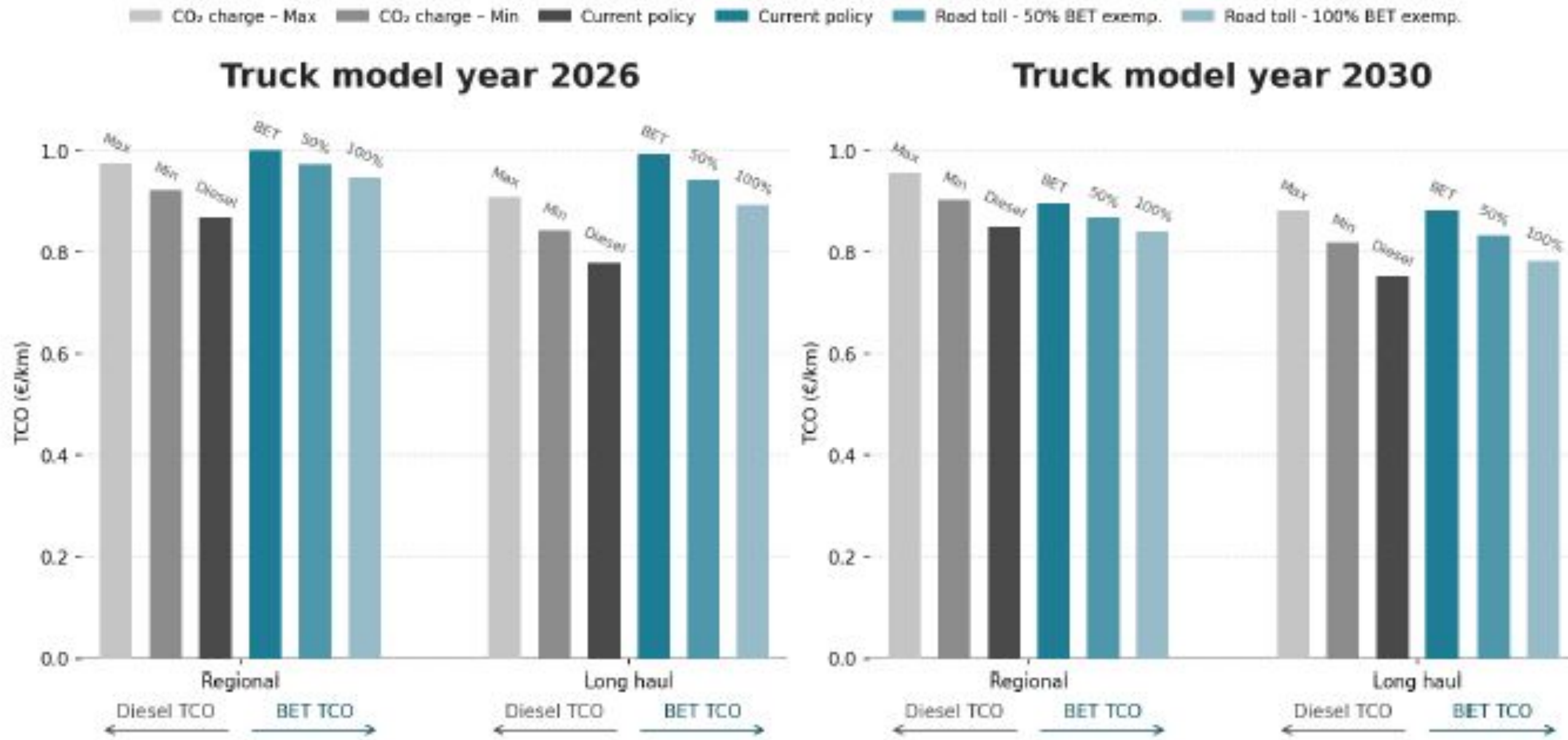


- **For regional trucks:** 100% BET road toll exemption would be enough to achieve cost parity with diesel trucks by 2026. By 2030, BETs are expected to reach cost parity even without policy support, although the Eurovignette would highly accelerate deployment.

Full Eurovignette implementation: 12.3% lower BET TCO in 2026 and 19.7% in 2030.

- **For long-haul trucks:** Full BET road toll exemptions would be required to achieve cost parity with diesel trucks for 2026 trucks, while 50% exemption would be enough by model year 2030.

Full Eurovignette implementation: 15.8% lower BET TCO in 2026 and 24.5% in 2030.



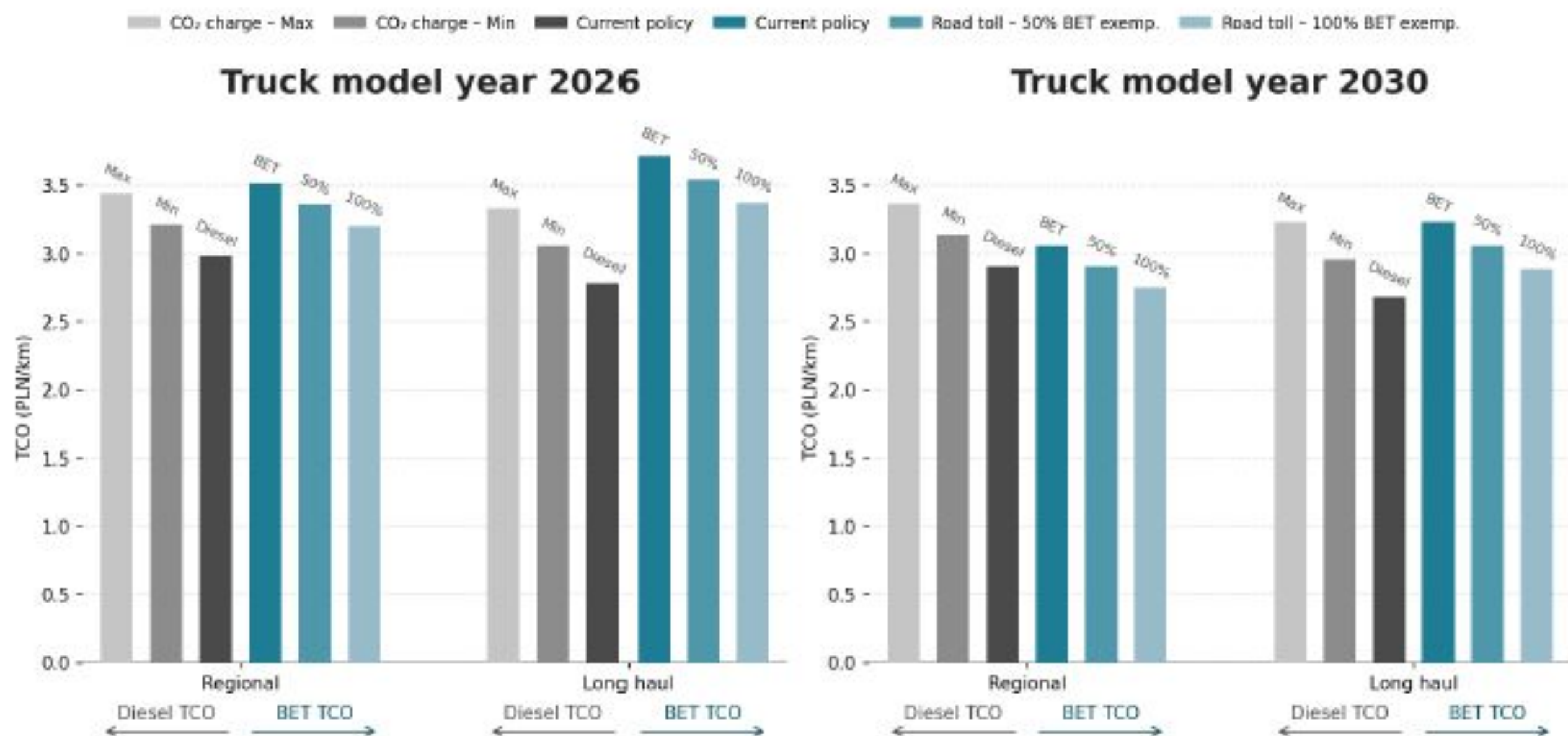
- **For regional trucks:** 100% BET road toll exemption and maximum CO₂-based charges would be required to achieve cost parity in 2026. By 2030, 100% road toll exemptions alone would be sufficient to achieve cost parity.

Full Eurovignette implementation: 3.1% lower BET TCO in 2026 and 12.2% in 2030.

- **For long-haul trucks:** Full BET road toll exemptions would be reduce the TCO gap with diesel trucks from 27.4% to 14.6% in 2026, and from 17.1% to 3.8% in 2030.

Full Eurovignette implementation: 1.7% lower BET TCO in 2026 and 11.4% in 2030.

Poland



- **For regional trucks:** 100% BET road toll exemption and maximum CO₂-based charges would be required to achieve cost parity in 2026. By 2030, 50% road toll exemptions alone would be sufficient to achieve cost parity.

Full Eurovignette implementation: 6.9% lower BET TCO in 2026 and 18.2% in 2030.

- **For long-haul trucks:** Full BET road toll exemptions would narrow the TCO gap with diesel trucks from 33.6% to 21.2% in 2026, and from 20.5% to 7.6% in 2030.

Full Eurovignette implementation: BET TCO gap reduced to 1% with diesel trucks in 2026 and BET TCO 10.7% lower in 2030.

Questions?
a.alonso@theicct.org





Eurovignette Implementation Across Europe



Silvia Haas-Memedovic
Austria



Stijn Gründeman
The Netherlands



Andreas Toft-Schaldemose
Denmark



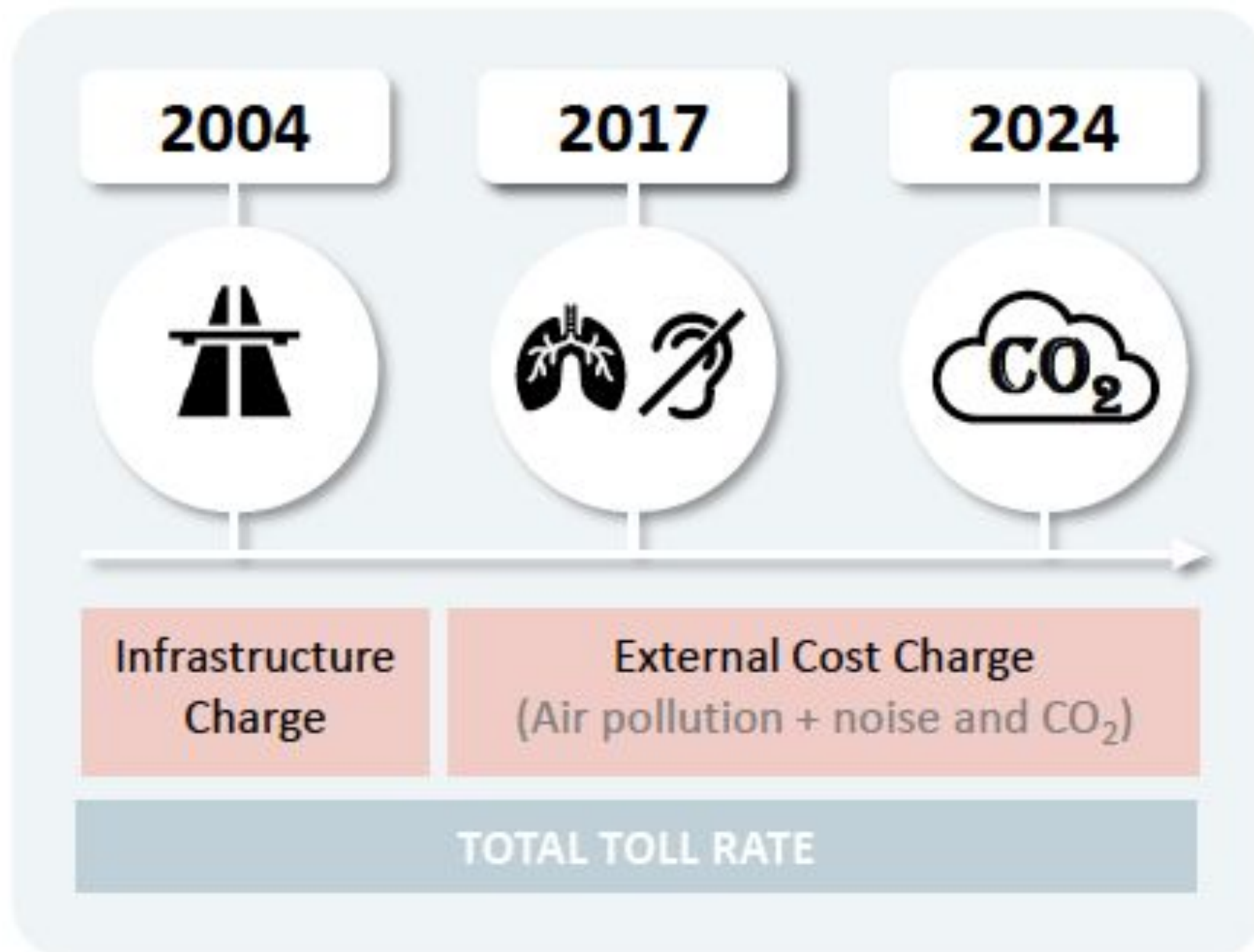
Aleksander Jensen Bentsborg
Norway



Christoph Schreyer
Switzerland

Eurovignette: Country Perspective Austria

TOLL RATE COMPONENTS



Relevant **vehicle characteristics** for toll rate level:

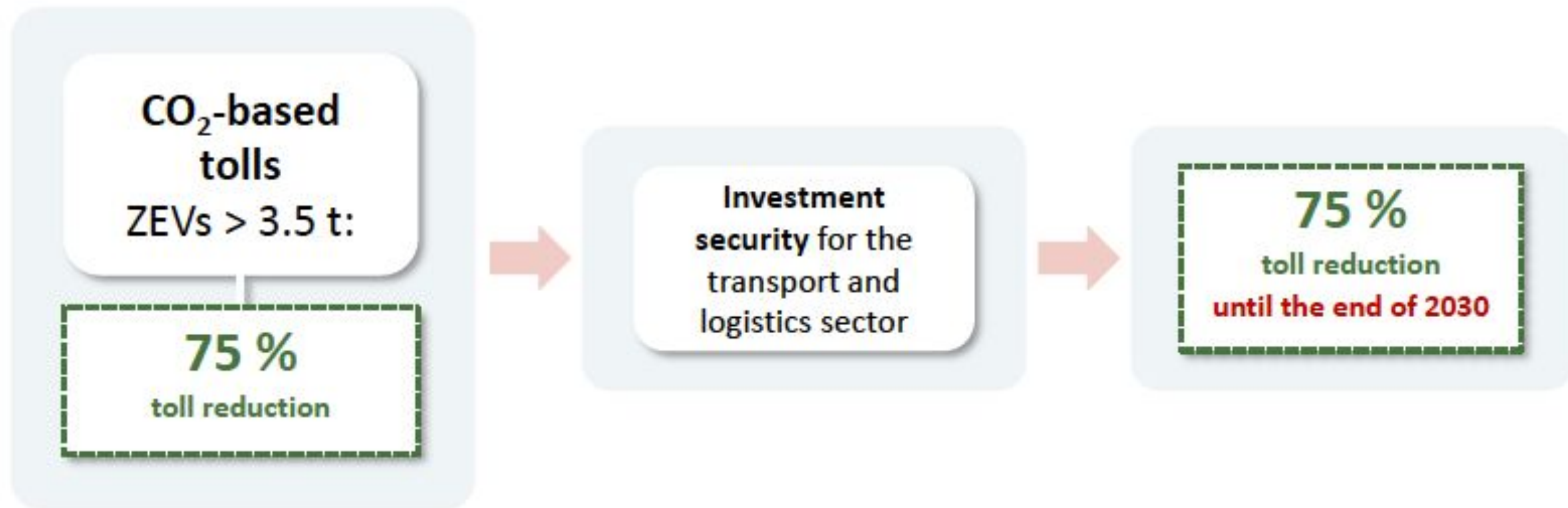
- Number of axles
- EURO emission class
- CO₂ emission class

Tolling on Austrian motorways and expressways

- 100 % funded by road users
- No government subsidies

Eurovignette: Country Perspective Austria

LESSONS LEARNED





Q&A



Ministerie van Infrastructuur
en Waterstaat

Trucktoll in the Netherlands

On the road to a sustainable
transport sector

Ministry of Infrastructure and Water Management

Stijn Gründeman
Senior Policy Officer



Approach to TruckToll

- 1) Introduce pay-per-use for trucks driving in the Netherlands
 - Specifically: vehicles in category N2 and N3
 - Eurovignette stops in NL
 - Road tax for trucks lowered
 - Starting July 1st 2026
- 2) Make the Dutch road transport sector more sustainable and efficient





How does Trucktoll relate to sustainability?

- > Improves the business case of ZE trucks in NL
 - Much lower rates for ZE
 - Net proceeds used for subsidies for electric trucks and charging infrastructure
- > Paying per km promotes logistical efficiency
 - Also, subsidies available for logistical efficiency





Effects

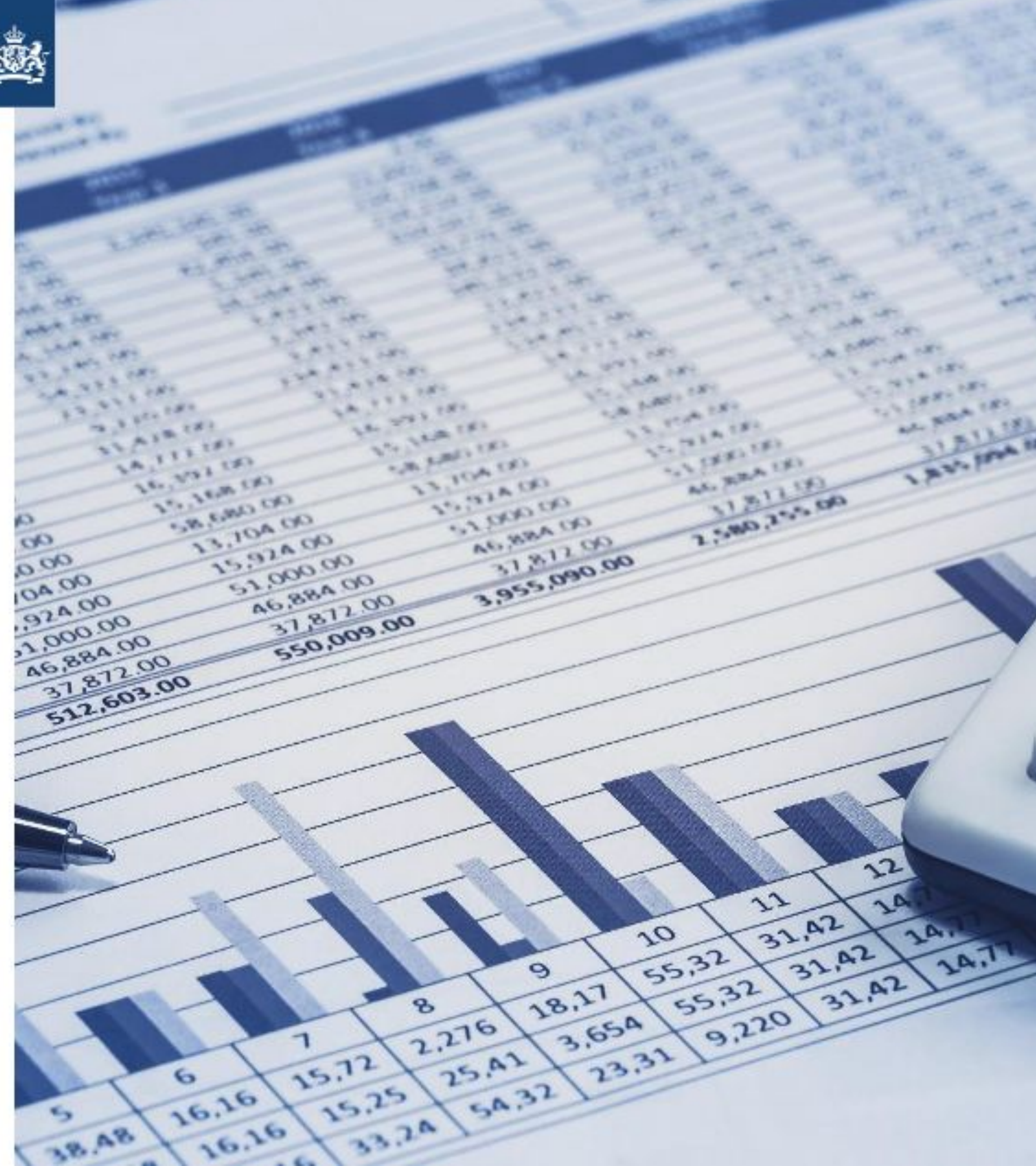
- > ZE-trucks become more attractive coming years
- > Equal effects of the TruckToll itself and the subsidies
- > **13.000** extra ZE-trucks by 2030
- > At that point $1/6$ trucks in NL will be ZE





Differentiated rates

- › We go live with CO₂-based rates
- › Rates also based on:
 - EURO-emission class
 - within CO₂-emission class 1
 - Technical maximum mass of the combination
- › Average rate is € 19,1 cent
- › 80% discount for ZE-trucks
- › No general exemption for ZE
 - Except for ZE-trucks up to 4.250kg





Examples (38-ton trucks)

- > **€ 34.9 cent** for euro 3
- > **€ 20.1 cent** for euro 6
- > **€ 3.8 cent** for ZE
- > See www.trucktoll.nl for the rates



Which roads?

- › Almost all highways
- › Some provincial and municipal roads
- › Carefully chosen
 - to prevent diversion to local roads
 - Also, monitoring possible diversion traffic on other roads



— Motorways (A-roads)
— National roads (N-roads)
— Municipal roads



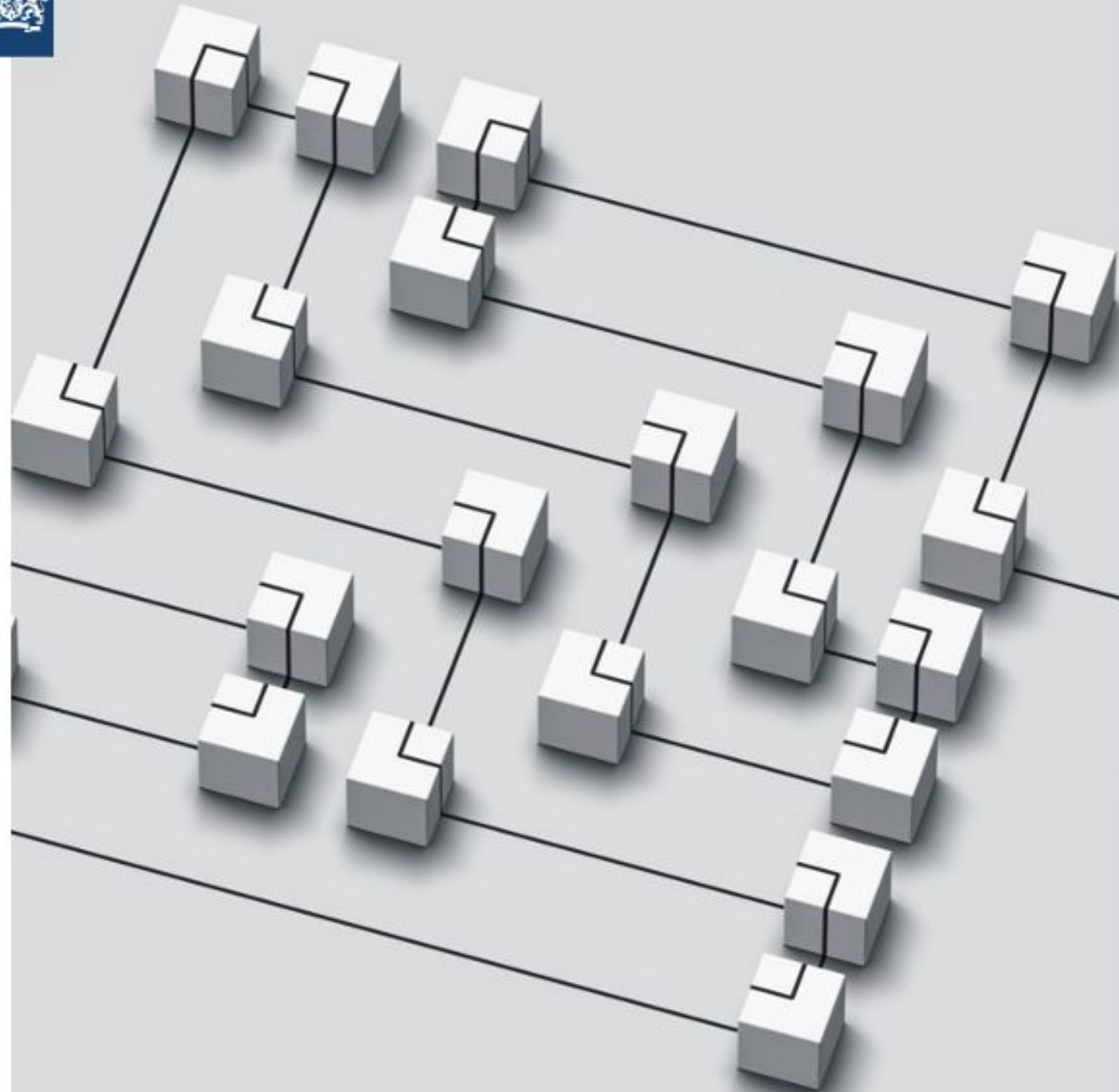
RDW





The 3 components of the charge

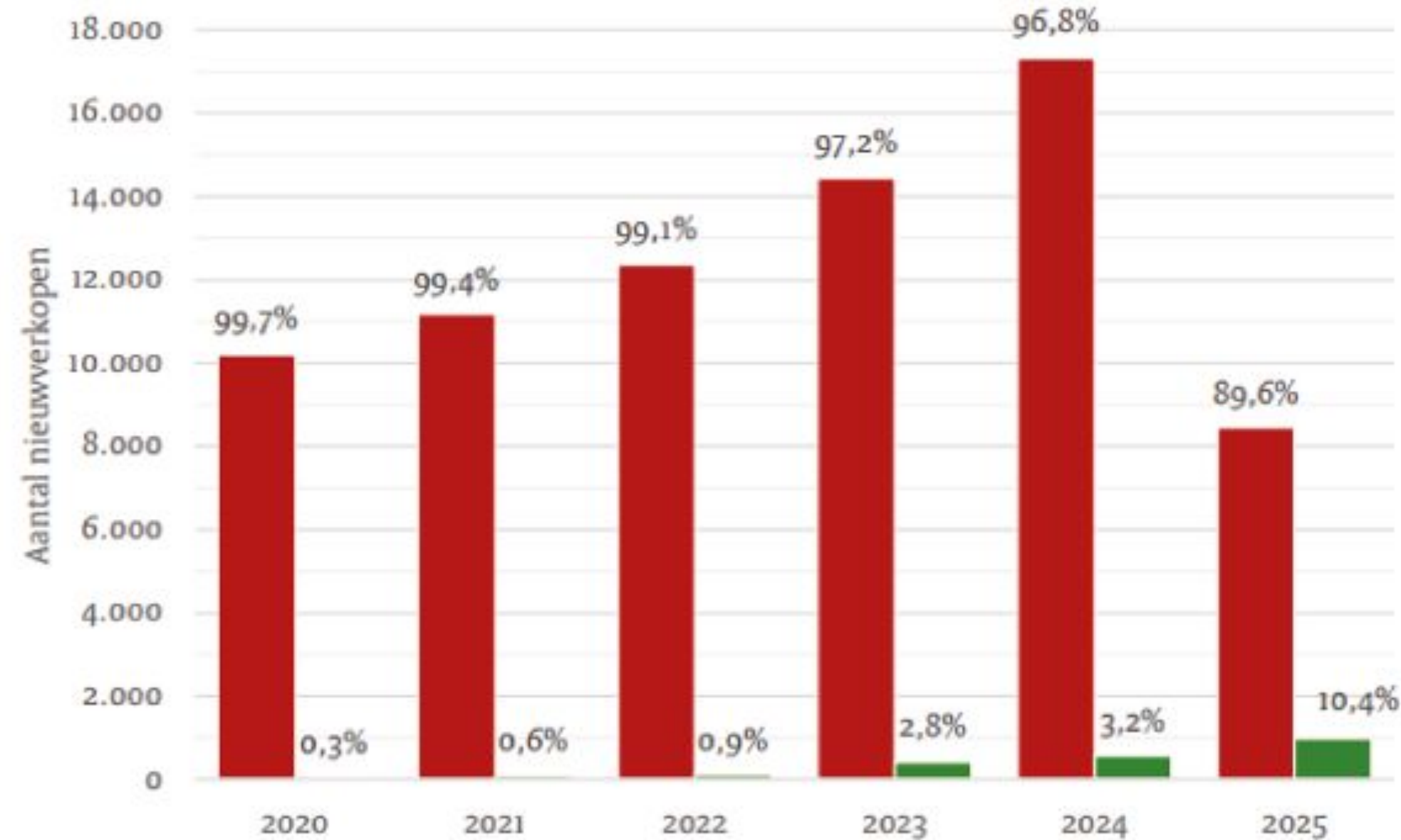
- > Trucktoll formally consists of:
 1. An infrastructure charge
 2. An external cost charge for CO₂-emissions
 3. An external costs charge for noise and air pollution
- > Discount on infrastructure charge for ZE-emission trucks





Sharp increase in share of ZE trucks (in green) in truck sales in NL in 2025

Figuur 12 Samenstelling nieuwverkopen





Trend will continue coming years:

Expected Division of millions of kilometers driven per year per emission class in 2026 and 2030

2026

CO2-1								CO2-2	CO2-3	CO2-4 (PHEV)	CO2-5 (ZE)	Total
EU0	EU1	EU2	EU3	EU4	EU5	EU6	EU7					
29	6	12	19	19	116	7.276	0	358	90	3	246	8.173
0,4%	0,1%	0,1%	0,2%	0,2%	1,4%	89,0%	0,0%	4,4%	1,1%	0,0%	3,0%	100,0%

2030

CO2-1								CO2-2	CO2-3	CO2-4 (PHEV)	CO2-5 (ZE)	Total
EU0	EU1	EU2	EU3	EU4	EU5	EU6	EU7					
12	2	3	4	2	21	5.902	1674	0	0	0	639	8.260
0,1%	0,0%	0,0%	0,0%	0,0%	0,3%	71,5%	20,3%	0,0%	0,0%	0,0%	7,7%	100,0%

Source: Varianten voor tariefstructuur vrachtwagenheffing bij implementatie herziene Eurovignet-richtlijn Revnext, 2023



Danish Kilometer-based and CO₂-differentiated toll for trucks



About the Danish Kilometer- based and CO₂-differentiated toll for trucks



Effects

- The toll is expected to reduce CO₂-emissions with around 0.3 mill. ton in 2025 and 0.4 mill. ton in 2030

Weight

- The toll is paid for heavy goods vehicles with technically permissible maximum laden mass at 12 ton and above
- As from 1 January 2027, trucks from 3.5 ton will be included in the toll

Rates and differentiation

- The average toll rate will be around 1.2 kr. (ca. 0.16 EUR)/km in 2030
- Kilometer-based and differentiated according to weight and specific CO₂-emission of the truck.
- 50 percent higher rates on roads within the environmental zones of the larger cities

Road network

- The road network covered by the toll is the state road network (motorways and other primary roads) – about 11.000 km of roads
- As from 1 January 2028, the road network is planned to be enlarged to the whole public road network – about 75.000 km

Toll rate structure under the EU legal framework

- The Danish road toll consists of three elements:
 - Charge for traffic-based CO2 emissions,
 - Charge for infrastructure costs, and
 - Charge related to traffic-based noise and air pollution
- CO2-differentiated in five CO2 emission classes following art. 7 ga in Directive 1999/62/EC, with later amendments.
- The toll rates provide for the maximum possible differentiation in terms of CO2 emissions and charge for infrastructure costs in order to reduce CO2 emissions as much as possible
- ZEV's in CO2 emission class 5 receive 75 percent discount compared to vehicles in CO2 emission class 1

Kroner pr. kilometer	Teknisk tilladt totalvægt på 12.000- 17.999 kg	Teknisk tilladt totalvægt på 18.000- 32.000 kg	Teknisk tilladt totalvægt på over 32.000 kg
CO ₂ -emissionsklasse 1	0,86	1,00	1,10
CO ₂ -emissionsklasse 2	0,79	0,92	1,01
CO ₂ -emissionsklasse 3	0,69	0,82	0,91
CO ₂ -emissionsklasse 4	0,46	0,53	0,58
CO ₂ -emissionsklasse 5	0,13	0,13	0,13



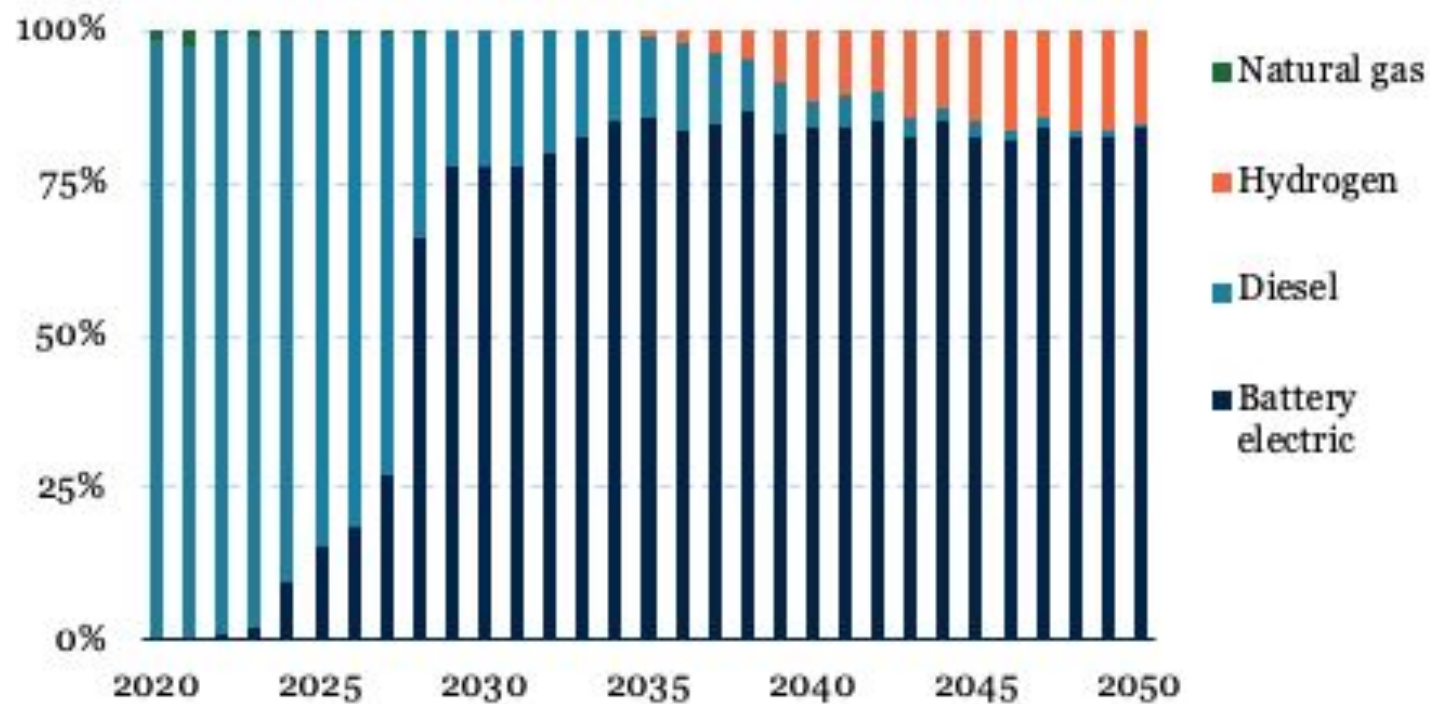
Supporting decarbonization and electrification through a broader policy approach

- The Danish road toll for heavy goods vehicles is one element in Denmark's broader approach to decarbonising heavy road transport.
- It also includes:
 - State subsidies for purchase of zero-emission trucks, charging infrastructure, etc.
 - Energy taxation measures, including a relatively higher taxation on diesel fuel from 2025
- Heavy-duty road transport is already facing quite strong CO₂ incentives in Denmark — through higher diesel fuel taxation, state subsidies for purchase of zero-emission trucks and charging infrastructure, and a CO₂-differentiated road toll with a substantially lower rate for zero-emission trucks.

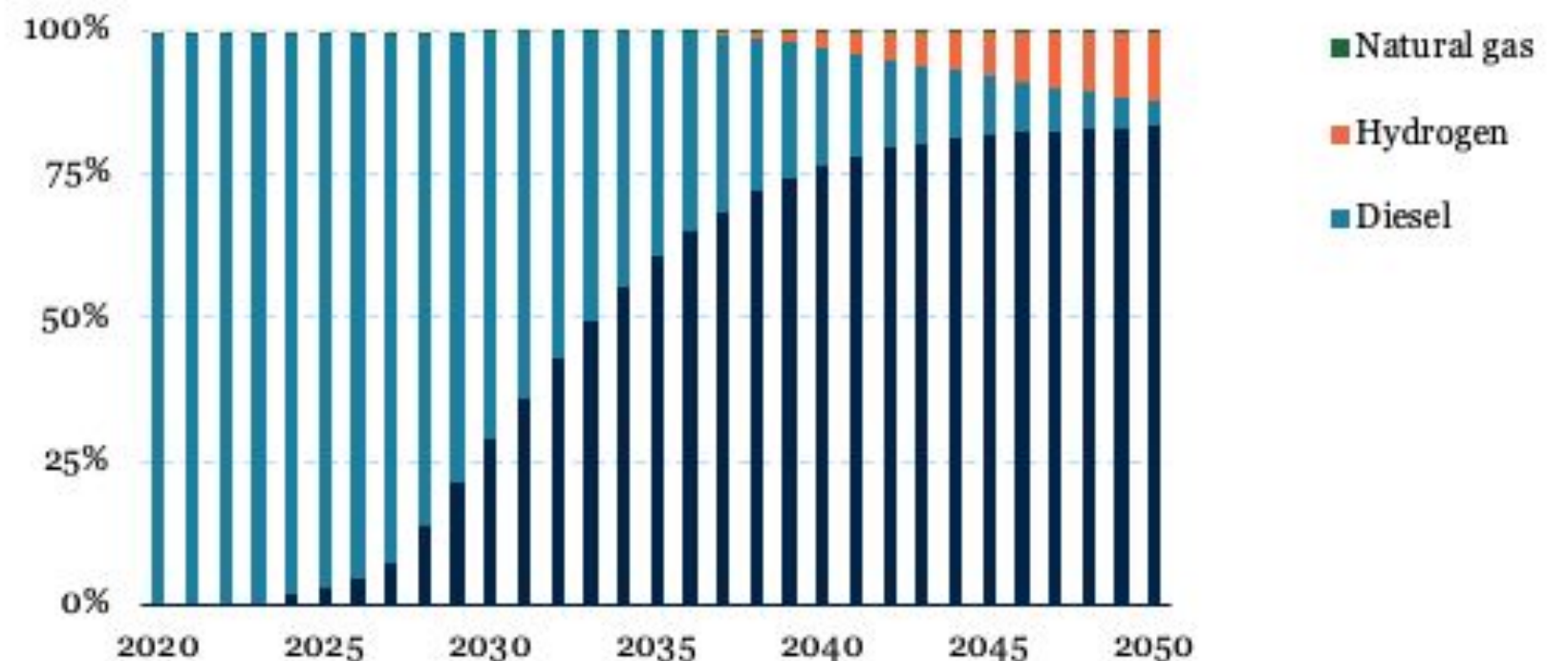
Where are we in terms of electrification of heavy road transport in Denmark?

- Diesel fuel is still the most widespread propellant in Denmark used by trucks, but...
- In 2026, we expect zero-emission trucks to constitute ca. 19 percent of *new sales* in Denmark. By 2030, we expect 77,6 percent of new sales to be zero-emission trucks rising to 84 percent in 2040.
- In 2026, only 2 percent of the fleet consists of zero-emission trucks. In 2035, we expect the share to be 27 percent, and 45 percent by 2050.

Share of total sales



Share of fleet






Questions?



Statens vegvesen



Zero emission trucking in Norway from a road tolling perspective

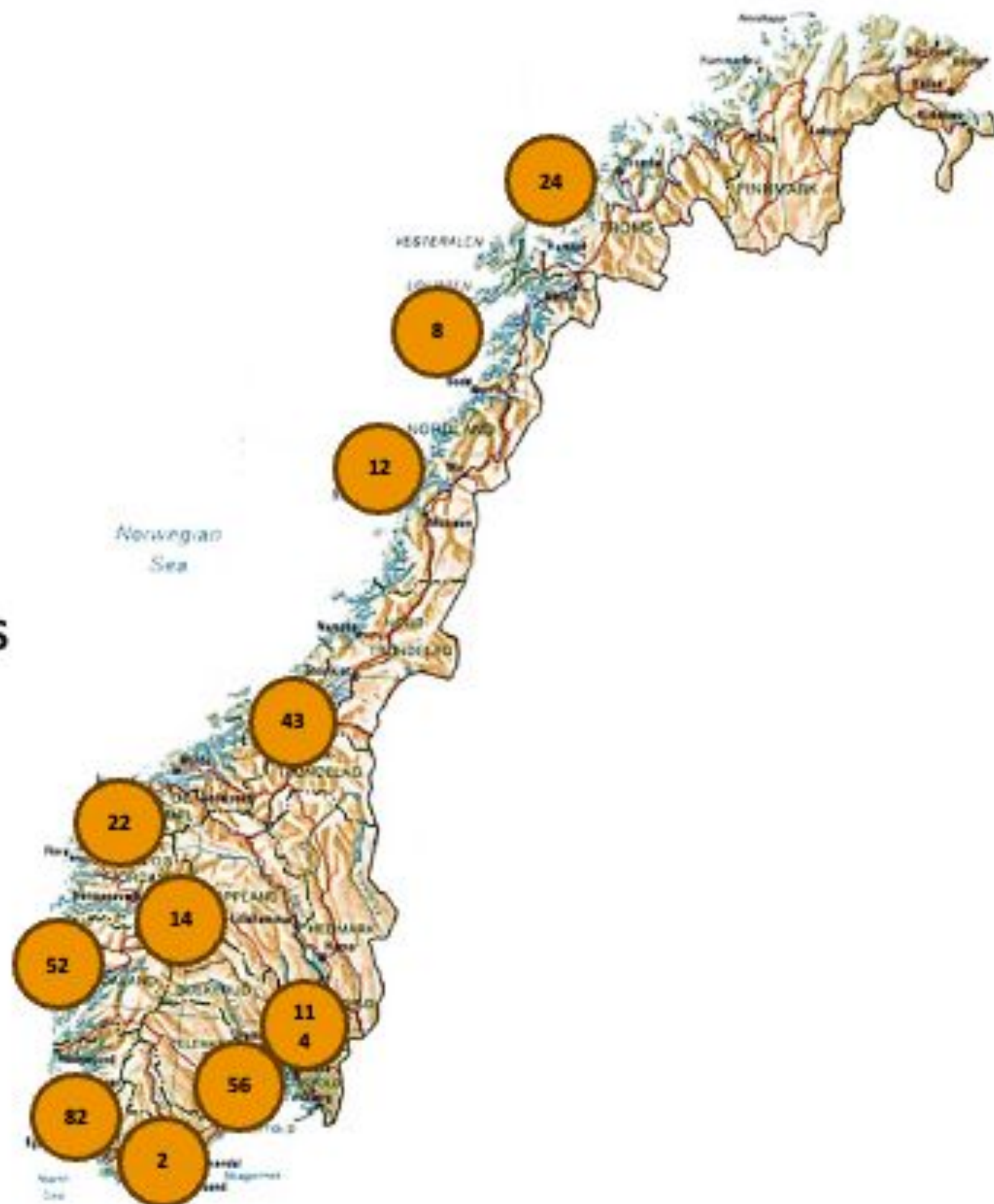
Unlocking Zero-Emission Trucking in Europe, 30th June 2026

Senior adviser Aleksander J. Bentsborg

Norwegian Public Roads Administration

Norway

- Population: 5,6 million
- Area: 386 186 km²
- Road network: 97 746 km
- Five regional Toll Collectors



Road Tolling Principles

- The main purpose of road tolls in Norway is financing road infrastructure.
- Road tolling is also used as a measure to reduce traffic and emissions.
- Prices vary based need for financing, vehicle type and traffic load.
- Heavy veichles (above 3500kg) typically pay 2-3 times more than lighter veichles.
- From approximately 3,5 euro to 50 euro per passing.

Road tolling for heavy zero-emission vehicles

- Electric heavy duty vehicles do practically not pay road tolls in any road toll projects today.
- Exceptions:
 - Ferries
 - No Autopass appointment (mandatory)
- Future:
 - National transport plan (NTP) 2025-2036:
 - The government has stated that there will be no toll fees until 2030.



Example of bridge with high tariffs



Photo: Møre og Romsdal fylkeskommune

Tariff group 1 (up to and including 3500 kg)

Vehicles with permissible total weight **up to 3500 kg** and passenger cars in vehicle category M1 in Autosys with a valid agreement.

Toll booths	Full price	By appointment	Zero-emission vehicles with agreement
No. 659 Nordøyvegen	DKK 188,00	DKK 148,80	DKK 104,16

Tariff group 2 (from 3501 kg)

Vehicles with permissible total weight **from 3501 kg** with the exception of passenger cars in vehicle category M1 in Autosys with a valid agreement.

Toll booths	Full price	By appointment	Zero-emission vehicles with agreement
No. 659 Nordøyvegen	DKK 657,00	DKK 657,00	DKK 0,00

Statistics: Does it work?

Road toll passings heavy duty vehicles: share of electric vehicles in this category

2022	3,8 %
2023	6,7 %
2024	10,0 %
2025	12,6 %
2026 (per. 30th mai)	14,8%



Heavy duty vehicles = above 3 500kg

Statistics: Does it work?

Road toll passing heavy duty vehicles: share of electric vehicles in this category	
2020	
2021	
2022	3,8 %
2023	6,7 %
2024	10,0 %
2025	12,6 %
2026 (per 10th june)	

Heavy duty vehicles = above 3 500kg

Registration of new heavy lorries: Share of electric vehicles in this category		Total number
2020	0,4 %	0,1 %
2021	1,5 %	0,2 %
2022	4,2 %	0,5 %
2023	4,2 %	0,9 %
2024	8,4 %	1,8 %
2025	10,3 %	2,7 %
2026 (per 10th june)	14,8%	3,2 %

Heavy lorries = above 12 000kg

Registration of new light lorries: Share of electric vehicles in this category		Total number
2020	0,5 %	0,1 %
2021	2,3 %	0,1 %
2022	39,5 %	1,5 %
2023	62,4 %	5,1 %
2024	46,9 %	7,4 %
2025	61,9 %	10,9 %
2026 (per 10th june)	63,4 %	12,4 %

Light lorries = between 3 500 kg and 12 000 kg

Updated status for zero-emissions vehicles

All new passenger cars, light vans and city buses are to be zero-emission vehicles by 2025.

Share of zero-emission vehicles

The graph shows what share of vehicles for a given year that were zero-emission vehicles.

Vehicle: Year: County: Municipality:

Include used vehicle imports



Statens vegvesen, Statens vegvesen, Statens vegvesen, Statens vegvesen



Thank you for the attention

Statistics link:

- [Share of zero-emission vehicles](#)
- [Statbank Norway – SSB](#)

Questions?

aleksander.jensen.bentsborg@vegvesen.no



Atlanterhavsvegen - photo: Jarle Wæhler



Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Bundesamt für Energie BFE
Office fédéral de l'énergie OFEN
Ufficio federale dell'energia UFE
Swiss Federal Office of Energy SFOE



THE PERFORMANCE-RELATED HEAVY VEHICLE FEE IN SWITZERLAND: INCENTIVES FOR THE ELECTRIFICATION OF HEAVY-DUTY VEHICLES

An aerial photograph of a two-lane asphalt road winding through a dense forest. The trees are in various stages of autumn, with some showing bright yellow and orange foliage against a backdrop of green. A white truck is driving on the road, moving away from the viewer. The road has white lane markings and a grassy shoulder.

MARKET DEVELOPMENT

ELECTRIC TRUCKS

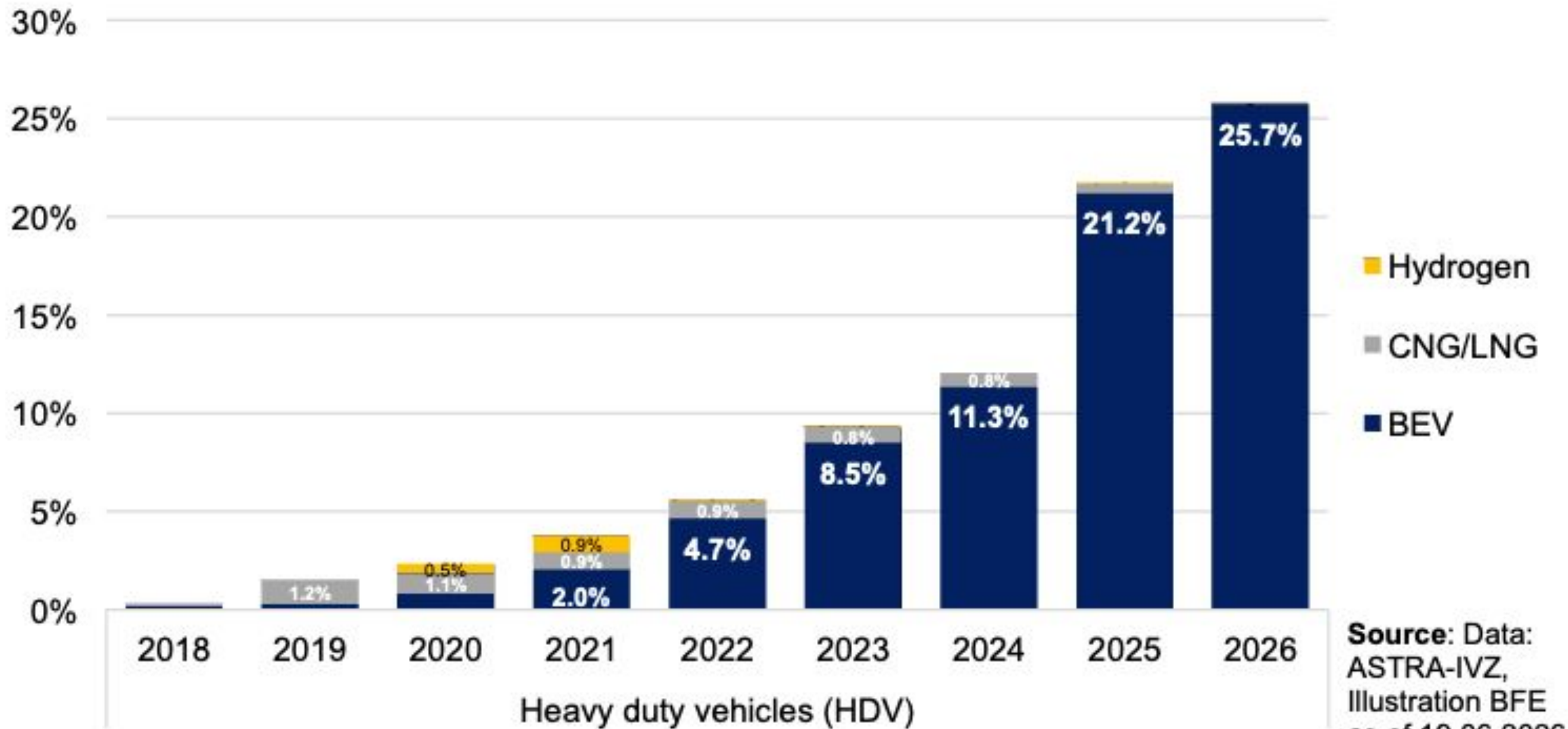


HEAVY GOODS VEHICLES

NEW REGISTRATIONS 2018 – JUNE 2026

Share of new registrations of alternative power trains

Heavy commercial vehicles > 3.5 tonnes, 2018 - June 2026



Source: Data: ASTRA-IVZ, Illustration BFE as of 19.06.2026

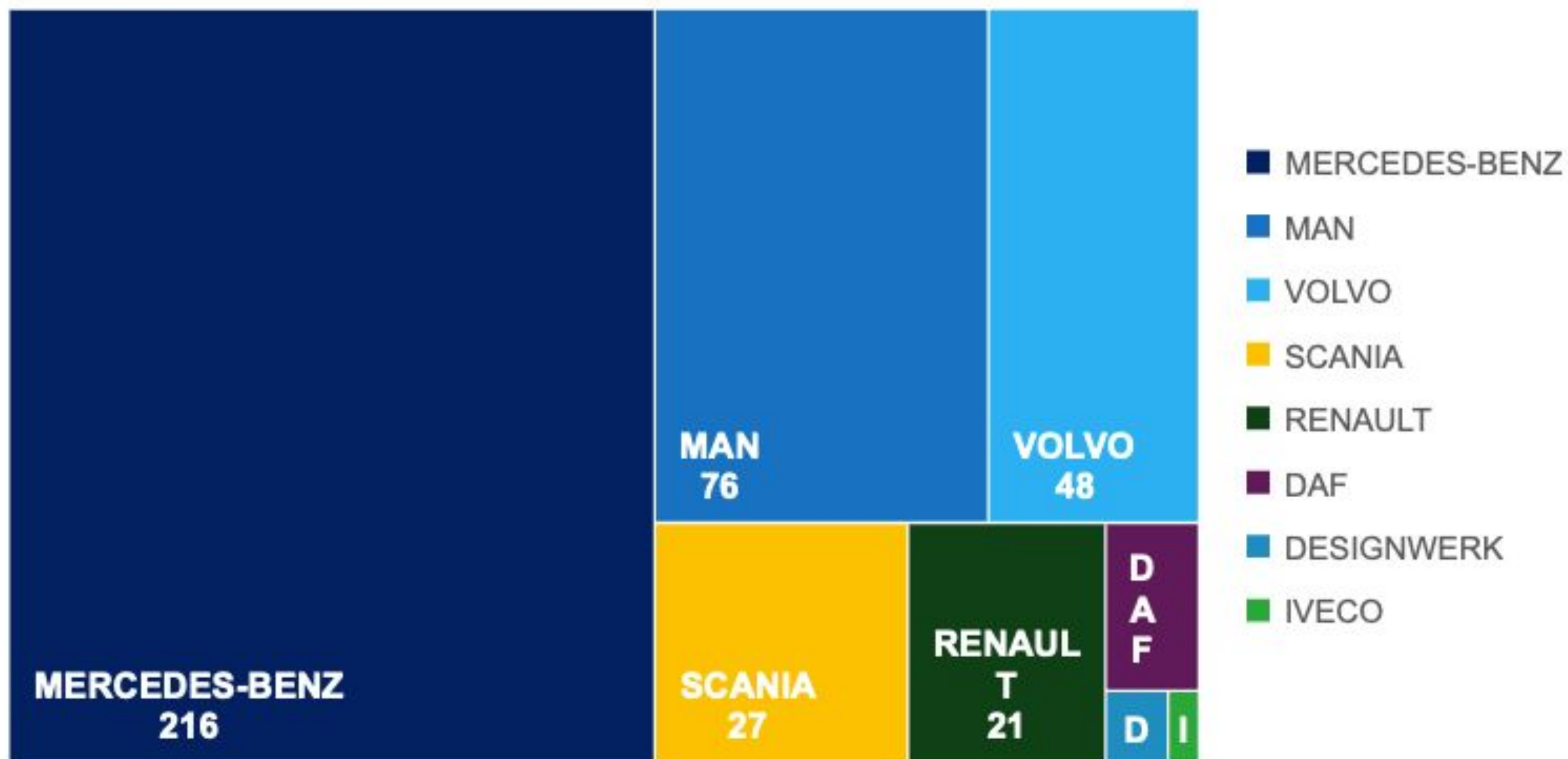
Source: Illustration SFOE, Data IVZ ASTRA, June 19, 2026



HEAVY ELECTRIC TRUCKS

BIG DIFFERENCES BETWEEN MANUFACTURERS

New registrations of electric trucks > 16 tonnes by manufacturer
January-June 2026



Source: Illustration SFOE, Data IVZ ASTRA, June 19, 2026

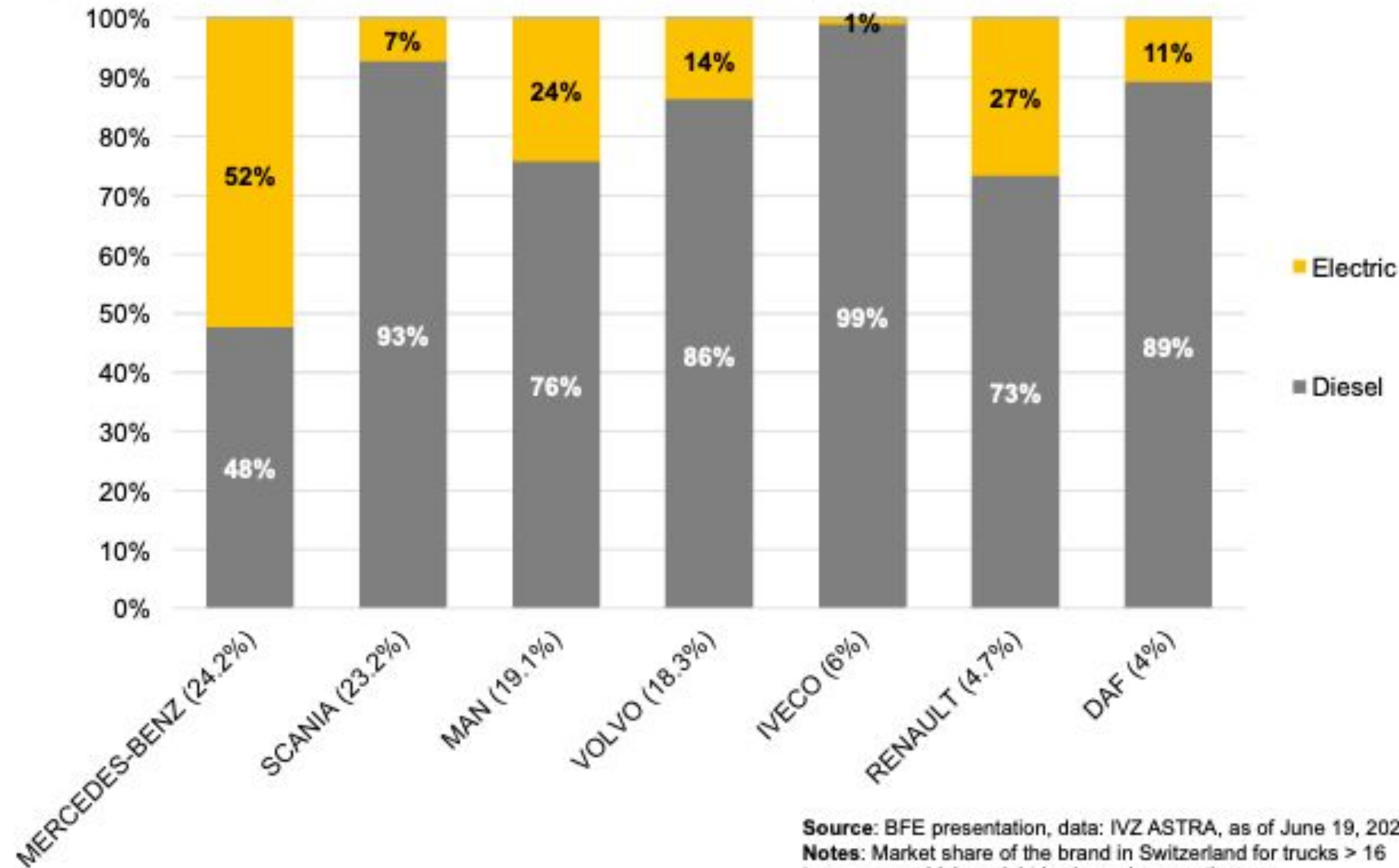


HEAVY ELECTRIC TRUCKS

BIG DIFFERENCES BETWEEN MANUFACTURERS

Powertrain mix for trucks > 16 tons by manufacturer Switzerland 2026

Powertrain technologies for trucks and semi-trailer trucks > 16 tons, January–June 2026



Source: BFE presentation, data: IVZ ASTRA, as of June 19, 2026

Notes: Market share of the brand in Switzerland for trucks > 16 tons gross vehicle weight is shown in parentheses

Source: Illustration SFOE, Data IVZ ASTRA, June 19, 2026

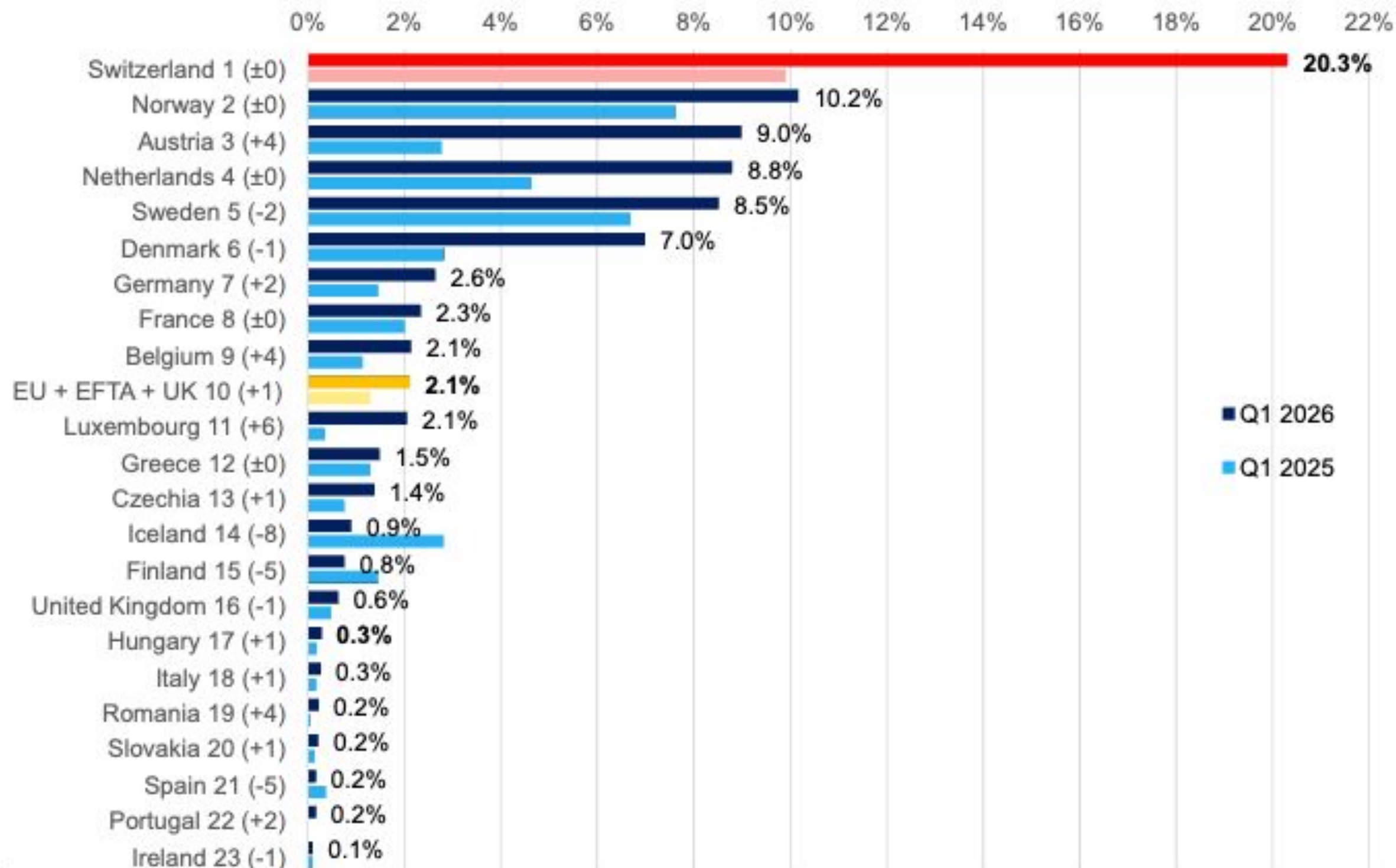


ELECTRIC HEAVY TRUCKS > 16 T IN EUROPE

NEW REGISTRATIONS 1ST QUARTER 2026

Share of new registrations of heavy electric trucks Q1 2026 vs. Q1 2025

Switzerland + Europe, Share of electric trucks >16 tons of all trucks > 3.5 tons.



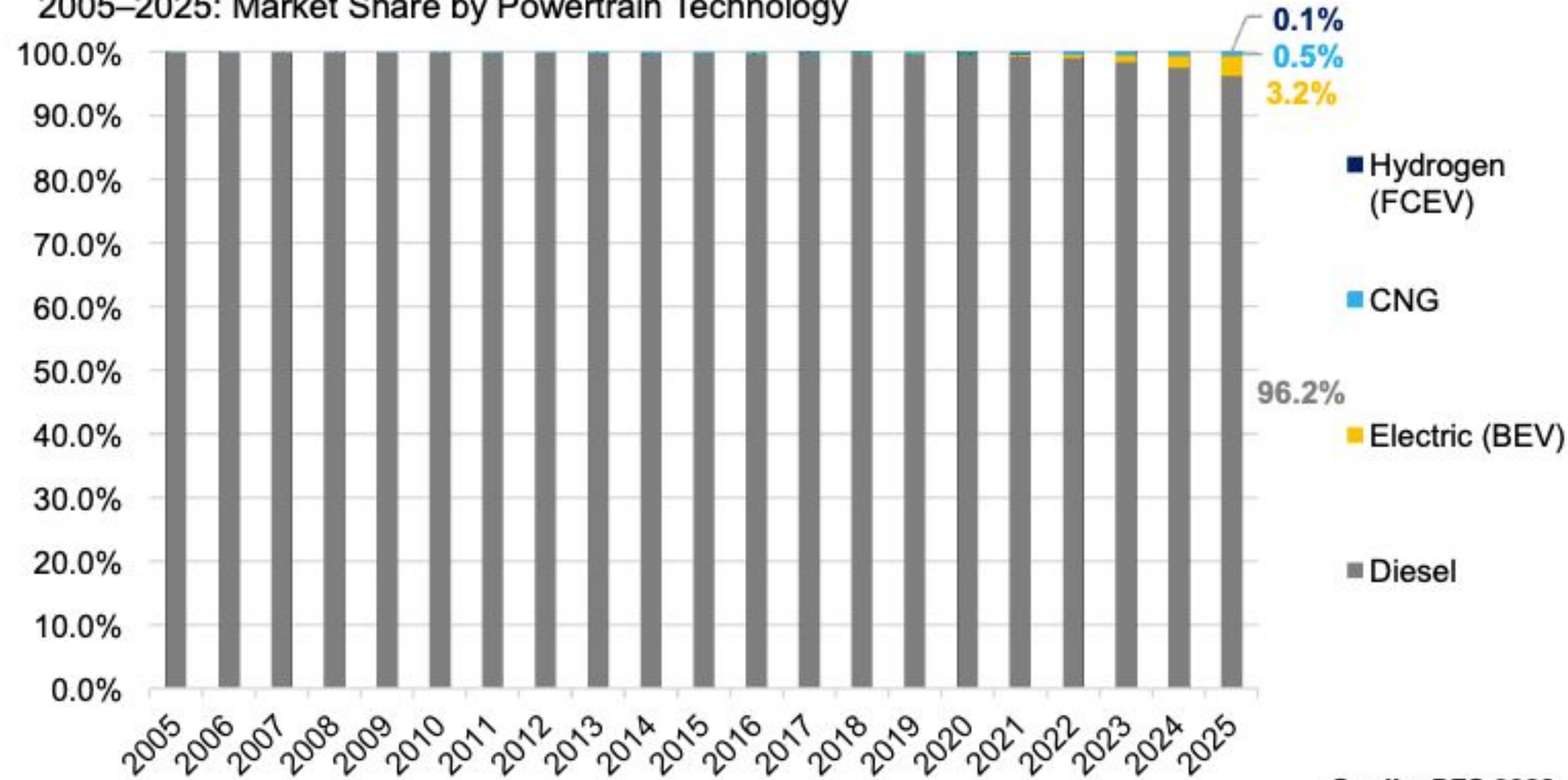
Source: ACEA, April 29, 2026: <https://www.acea.auto/cv-registrations/new-commercial-vehicle-registrations-vans-2-3-trucks-10-7-buses-24-5-in-q1-2026/>



HEAVY GOODS VEHICLES IN SWITZERLAND FLEET 2025 BY POWERTRAIN TECHNOLOGY

Fleet Composition: Trucks and Semi-Trailers

2005–2025: Market Share by Powertrain Technology



Quelle: BFS 2026

Quelle: Federal
Statistical Office FSO,
2026



FRAMEWORK CONDITIONS **HVF**

TRUCK ROAD T




PERFORMANCE-RELATED HEAVY VEHICLE FEE

BASIC FEATURES - 2026

<u>Tax category</u>	<u>Euro category</u>	<u>Tariff</u>
I	Euro 0 to 5	3.26 Cts./tonne-km
II	-	2.82 Cts./tonne-km
III	Euro 6	2.39 Cts./tonne-km
<u>Battery and fuel cell electric</u>		0.00 Cts./tonne-km



PERFORMANCE-RELATED HEAVY VEHICLE FEE CALCULATION EXAMPLE

		Total weight	Tariff cents/tkm	CHF/km	Annual mileage km	Annual HVF CHF
Diesel		18 t	2.39	0.43	80'000	34'416
Electric		18 t	0	0.00	80'000	0

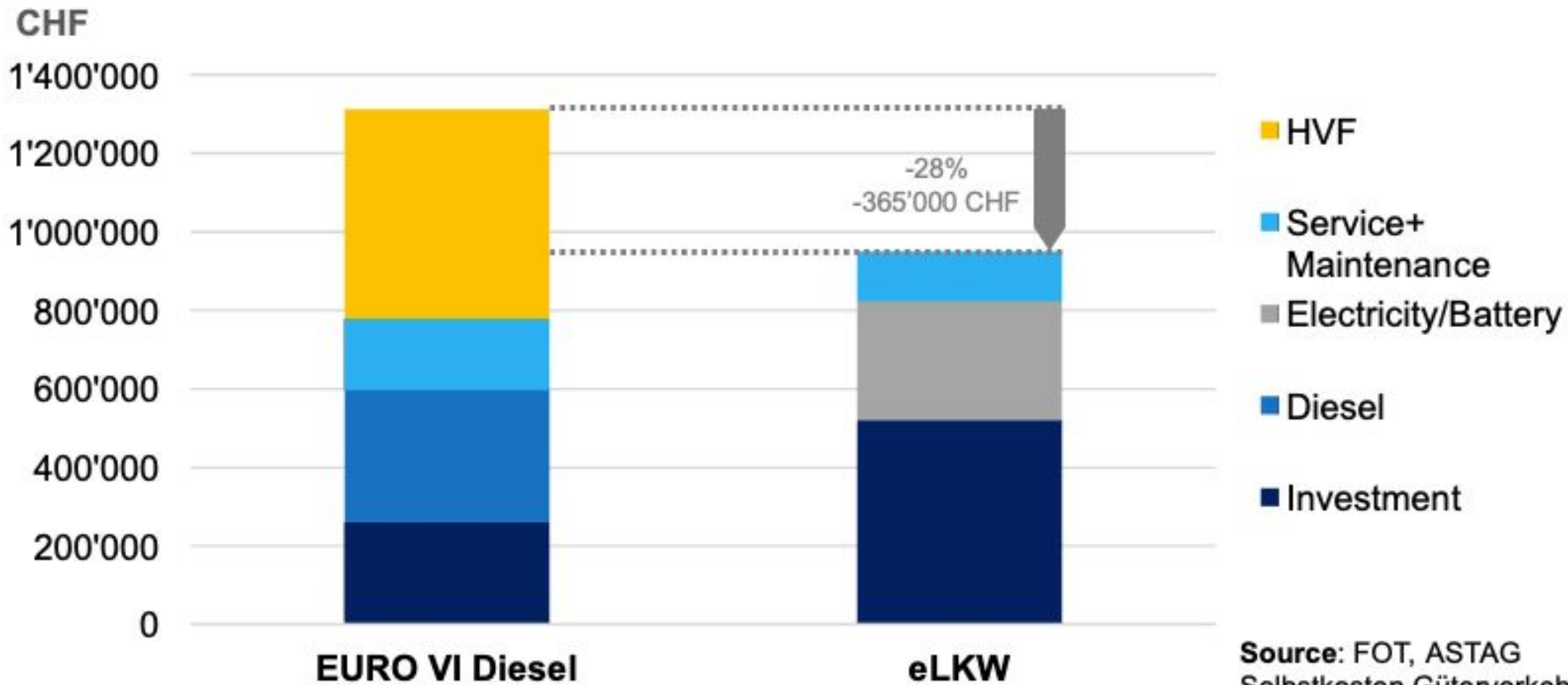


EXAMPLE FOR A 40 TONS TRUCK

ELECTRIC TRUCK WITH LOWER TCO

Comparison total costs of a 40 tons truck

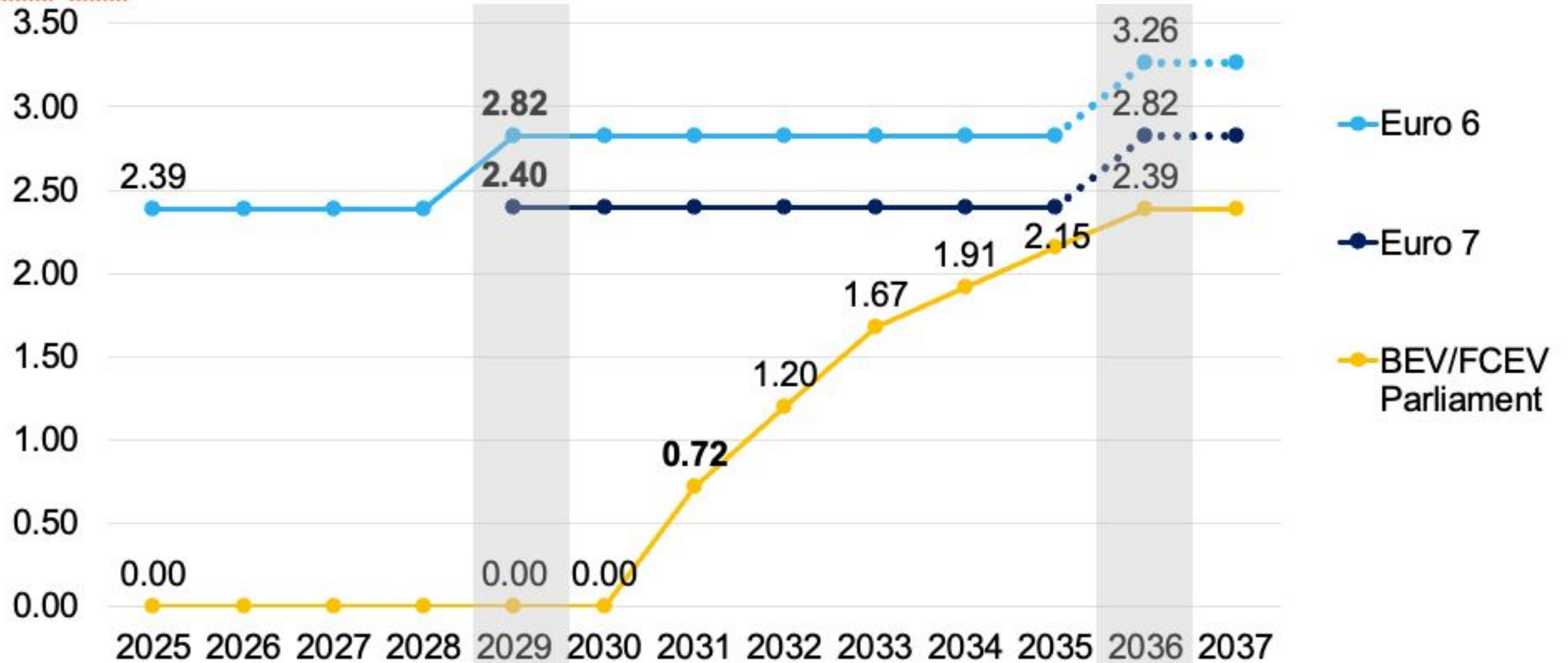
Diesel EURO VI vs. Electric truck, 80'000 km per year for 7 years





HVF TARIFFS TODAY AND... ... FUTURE DEVELOPMENT

Cts./tkm



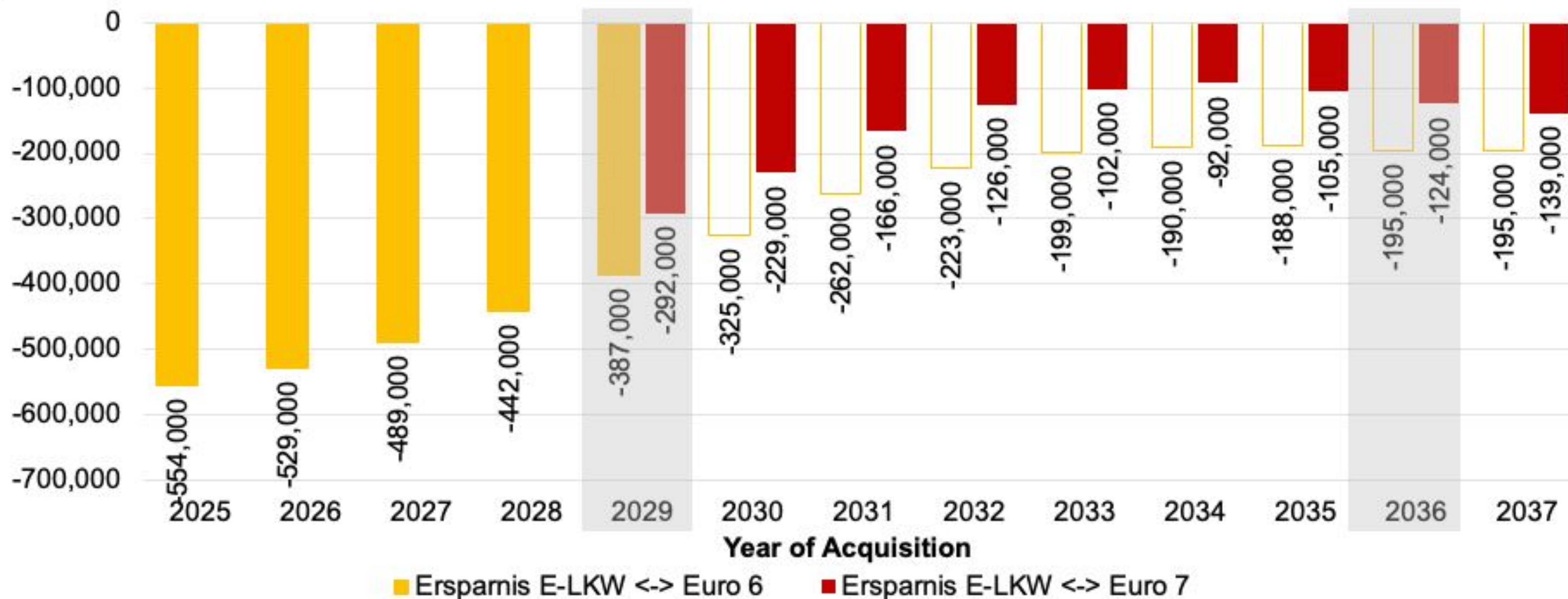


HVF SAVINGS COMPARED WITH EURO 6/7 ELECTRIC TRUCK, GROSS WEIGHT 40 TONS

Heavy Vehicle Fee savings for a 40-ton e-truck in the corresponding acquisition year
Annual mileage 80'000, 7-year operating period, in CHF over the operating period



CHF





KEY MESSAGES

- The HVF provides strong incentives, especially for vehicles with high annual mileage
- HVF savings offset the higher purchase costs of electric trucks and, in most cases, the cost of charging infrastructure
- As electric trucks continue to become more affordable, the TCO advantages will remain even after the HVF is introduced for electric trucks



Thank you

Christoph Schreyer
Head of Energy-Efficient Transport

Federal Department of the Environment, Transport, Energy and Communications DETEC
Swiss Federal Office of Energy SFOE, Energy-Efficient Transport Section

Pulverstrasse 13, 3063 Ittigen, postal address: Swiss Federal Office of Energy, 3003 Bern
Tel.

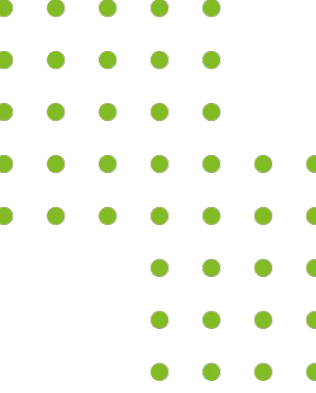
christoph.schreyer@bfe.admin.ch

www.bfe.admin.ch / www.energieschweiz.ch





Q&A



Eurovignette—Industry Insights



Graham Major-Ex
Sennde

r



Caryn-Ann Allen
Geopost



Tomas Fabian
ACEA

FOCUS:

- Early business impacts & operational experience
- Investment and fleet transition signals
- Opportunities and remaining challenges



sennder

EUROPE'S GREEN FREIGHT FORWARDER

FAST FORWARDING ROAD LOGISTICS



Opening Question:

**What if there were a technology
that could produce Diesel fuel
for EUR .37 per litre?**

(77% fuel cost reduction)

Cars

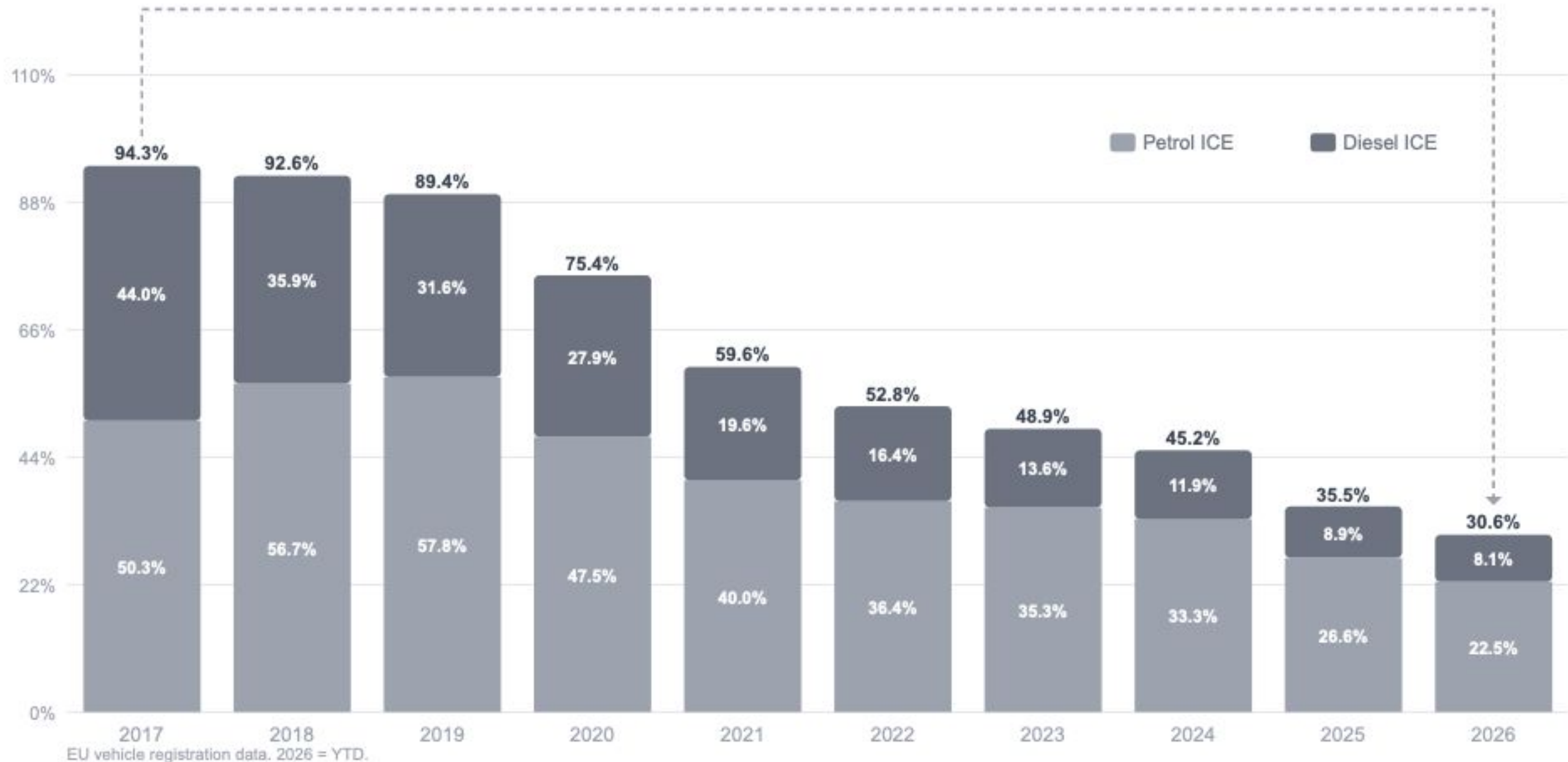
ALL NEWLY PURCHASED CARS IN EU: 2017 PREDICTIONS VS. TODAY

CAR MARKET SHOWS THE FUNDAMENTAL TRANSITION ALREADY CONCLUDED



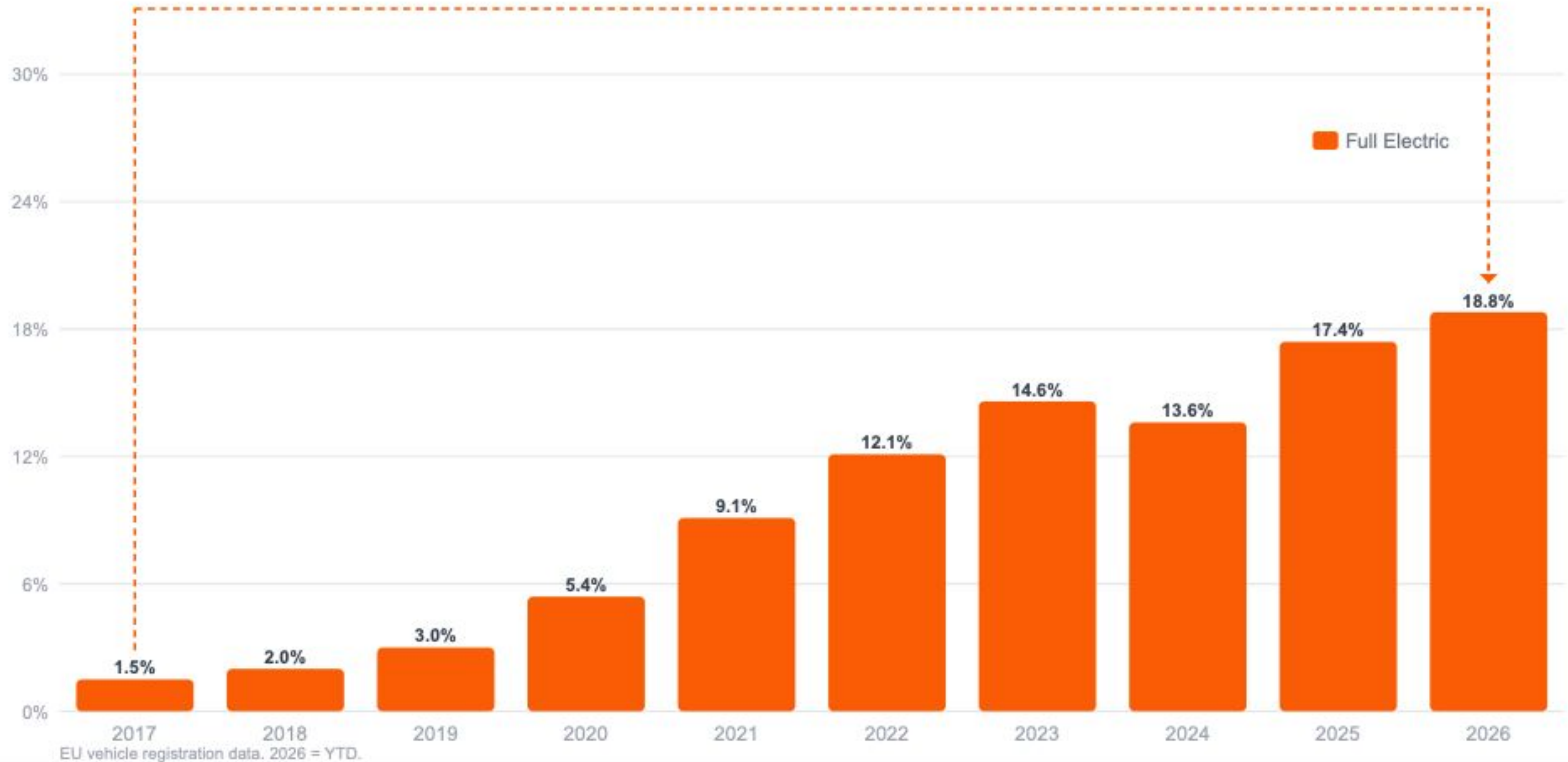
ALL NEWLY PURCHASED CARS IN EU: DIESEL + PETROL AS % OF TOTAL

CAR MARKET SHOWS THE FUNDAMENTAL TRANSITION ALREADY CONCLUDED



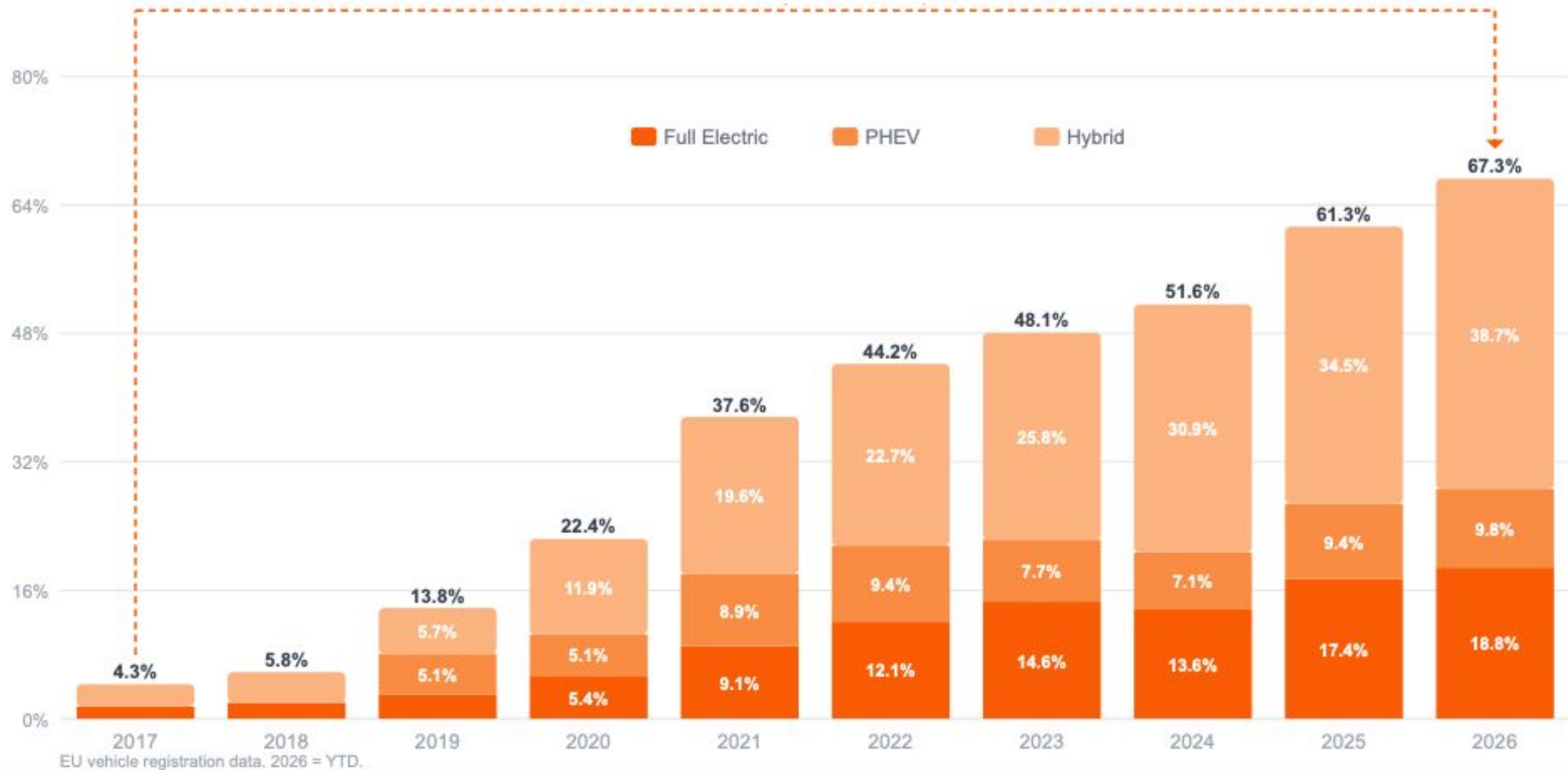
ALL NEWLY PURCHASED CARS IN EU: FULLY ELECTRIC AS % OF TOTAL

CAR MARKET SHOWS THE FUNDAMENTAL TRANSITION ALREADY CONCLUDED



ALL NEWLY PURCHASED CARS IN EU: ELECTRIC DRIVETRAINS + BATTERIES

67% OF TOTAL MARKET IS ALREADY ELECTRIFIED FOR NEW CARS



Trucks

FOUR FUNDAMENTAL CHANGES IN ELECTRIC TRUCKING

FUNDAMENTALLY SHIFTING TRANSPORT TO THE ELECTRIC TECHNOLOGY



RANGE



BATTERIES



POWER SOURCE



FREIGHT ECONOMICS



5 YEARS TECHNOLOGY IMPROVEMENT

4X RANGE EXPANSION VS. 2021



160 km

2021



175 km

2022



220 km



300 km

2023



370 km

2024



500 km

500 km

2025

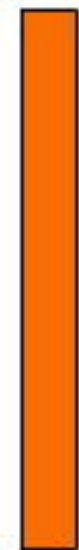
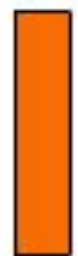


600 km



600 km

2026





ELECTRIC TRUCK BATTERY TRANSFORMATION

BATTERY IMPROVEMENTS FUNDAMENTALLY SHIFT ECONOMICS THROUGH 2030

Year	Usable Battery Percentage Best in Class (%)
2023	80%
2024	83%
2025	97%
2026	97%
2027	97%
2028	98%
2029	98%
2030	98%

10x Improvement Unused Efficiency

50% Reduction

62% Reduction

70% Reduction



+ PRONE TO DRASTIC FLUCTUATIONS

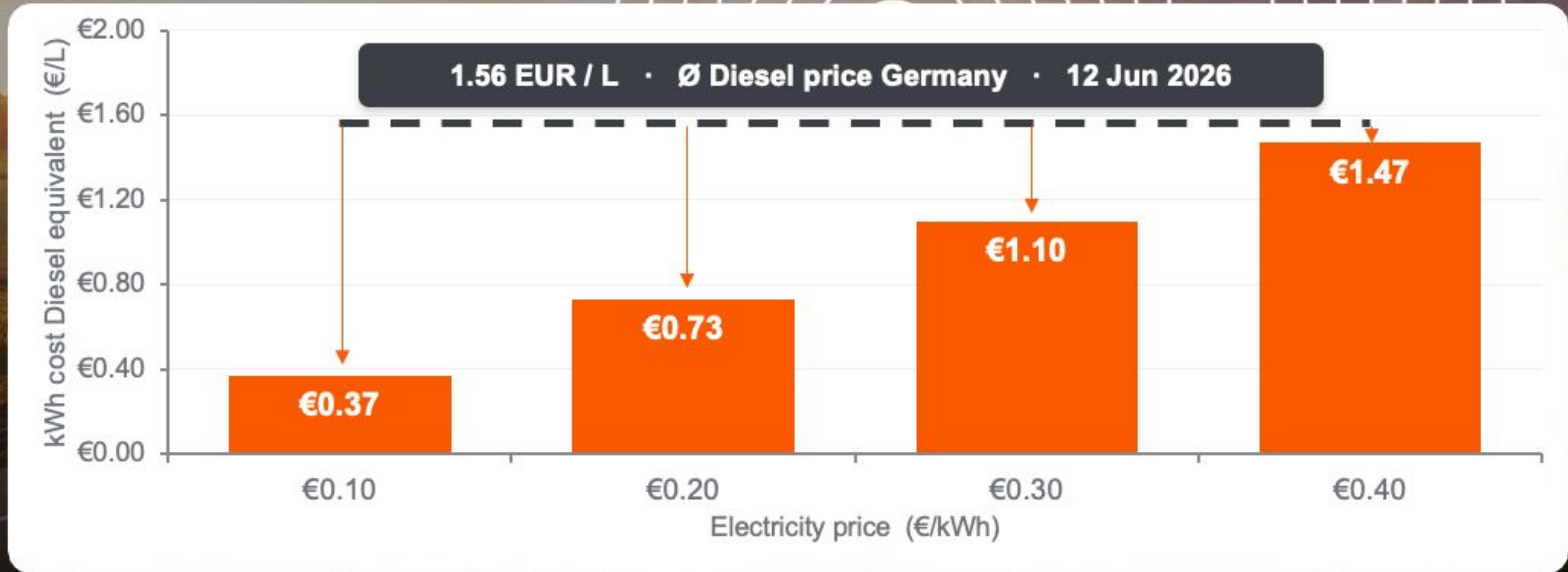
Country	24 Feb 2026	16 Mar 2026	Change (EUR/l)	Change %
EU-27 average	€1.492	€1.835	+€0.343	+23.0%

ELECTRONS CAN BE ECONOMICALLY **PRODUCED, PROCURED AND STORED BY LOGISTICS COMPANIES**



ELECTRICITY POWERS MORE CHEAPLY THAN DIESEL FUEL

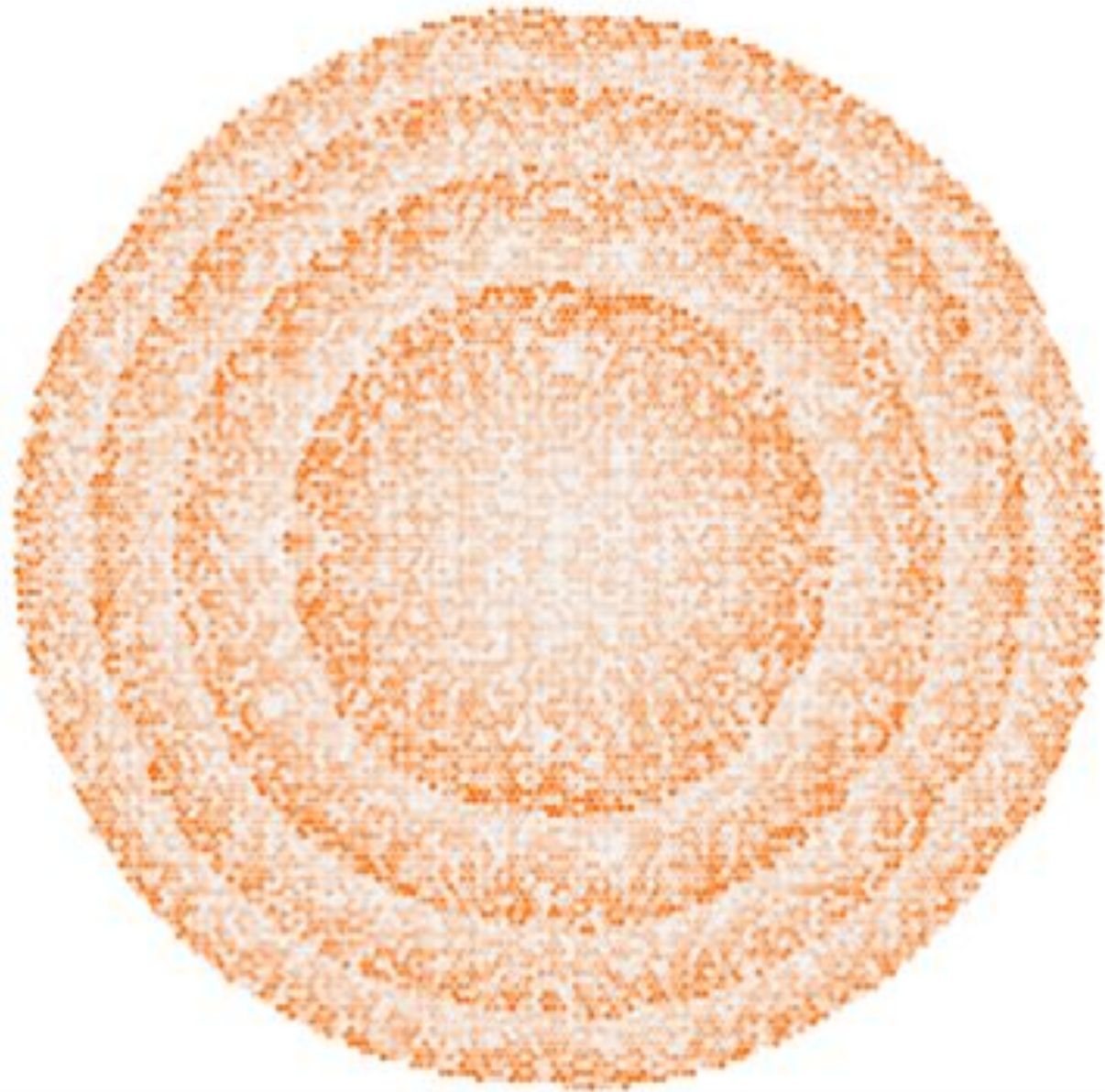
THEY KEY TRUTH TO UNDERSTANDING THE FUTURE OF HEAVY DUTY TRANSPORT



EV Truck Economics

WE CALCULATED ALL THE MAIN COST FACTORS IN 2.9 MILLION SIMULATIONS

DEMONSTRATES PRECISELY THE FACTORS THAT MOVE ELECTRIC OPERATIONS COST VS. DIESEL



2.9 MILLION SIMULATIONS

COST FACTOR INPUTS FOR EV AND DIESEL

1 Road Tolls
EV vs Diesel tolls | 0% - 100%

2 Diesel Price
2023, 2024, 2026 Feb | April

3 Electricity Price
€0.05 - €0.50/kWh

4 Carbon Price
0 - 200 EUR/tonne

5 Driver Cost

6 Daily Kilometres
240 - 640km range

7 EV Truck Costs
2025 - 2030

8 7 Countries

MOST CONSERVATIVE SCENARIOS: NO SUBSIDIES OF ANY KIND: 2025 + 2030

SCENARIO PARAMETERS

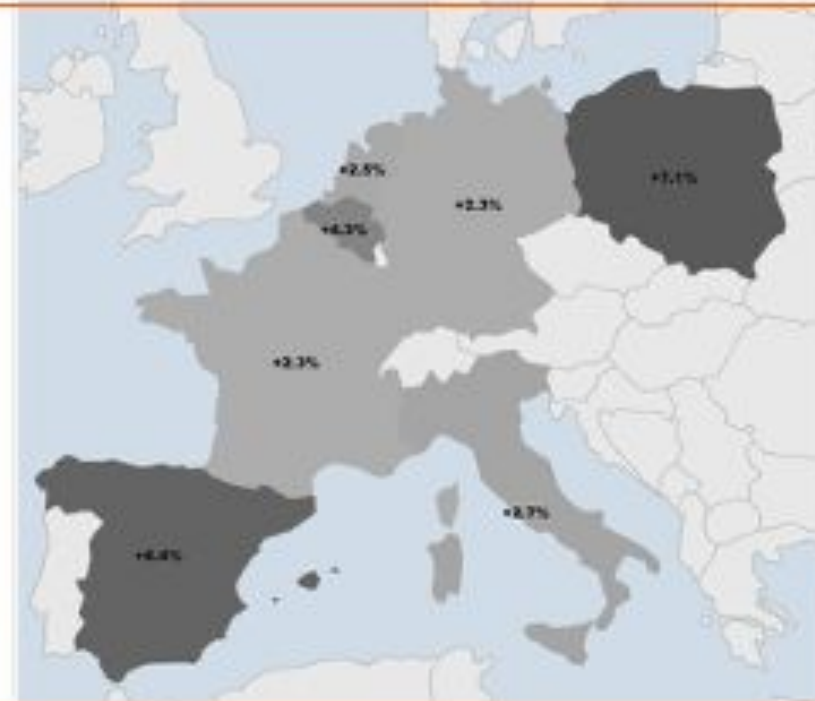
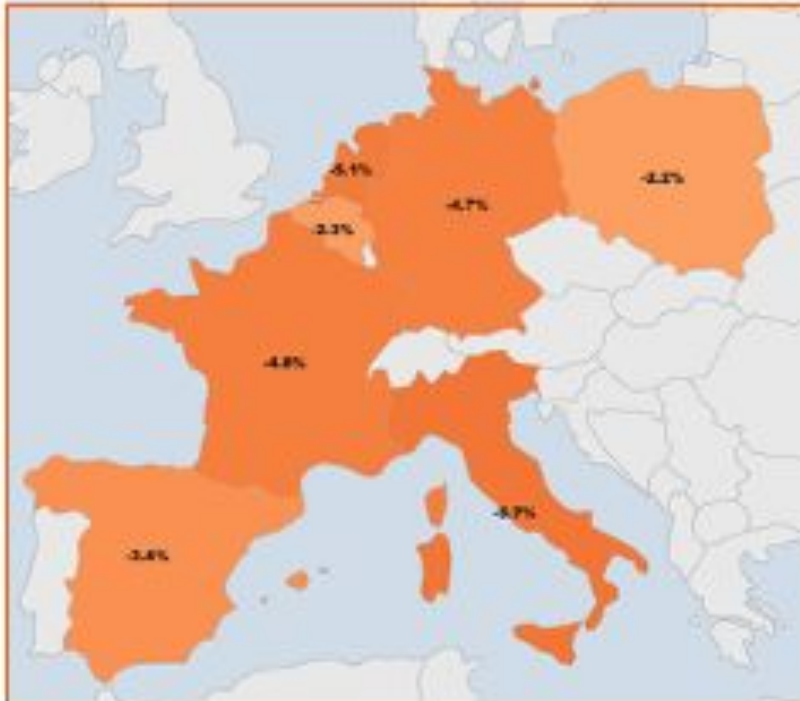
- Diesel ● Electric
- EV ROAD TOLL 100%
- CARBON PRICE €0
- DIESEL PRICE 2023-4



2025



2030



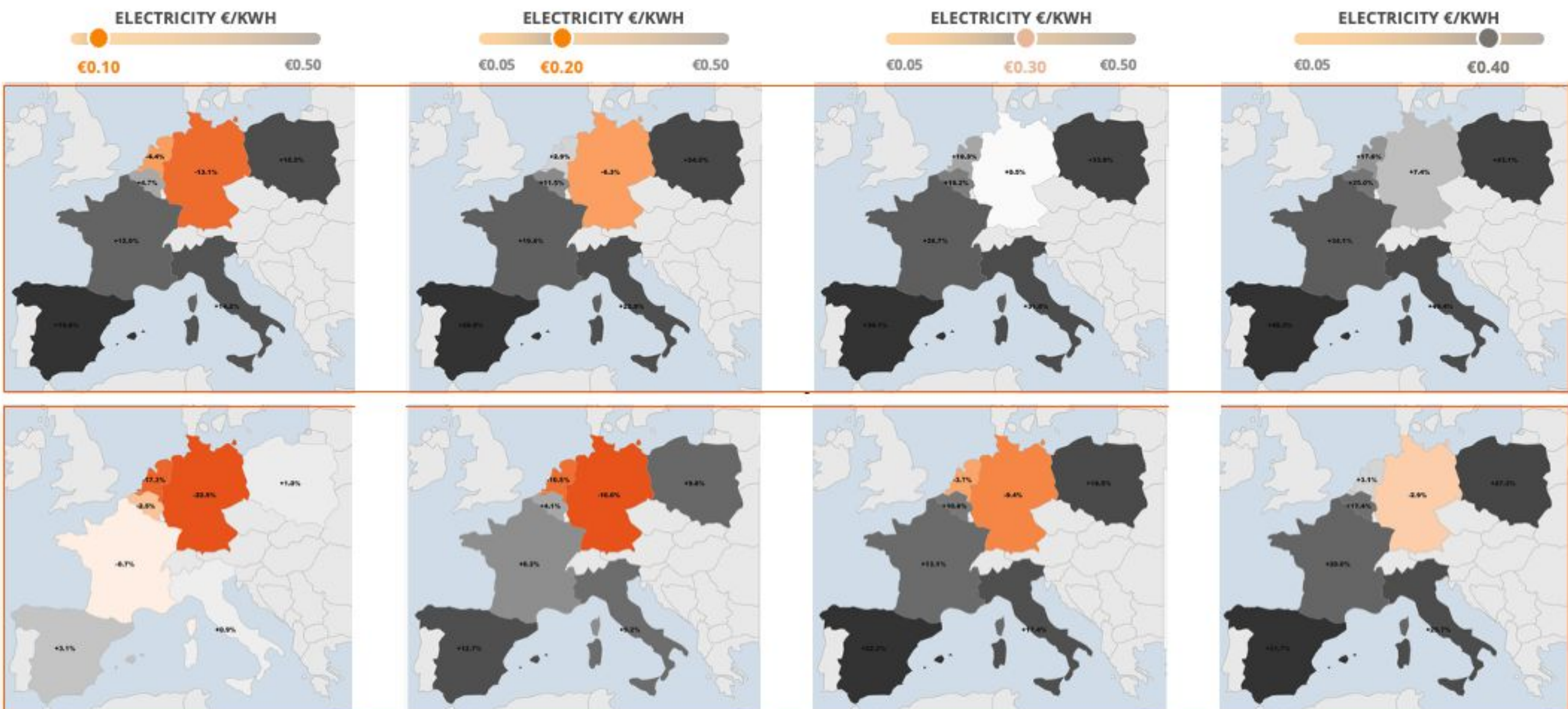
FEBRUARY 2026 & APRIL 2026 EV WINS IN DE + NL | BE + FR IN PLAY

SCENARIO PARAMETERS

- Diesel ● Electric
- EV ROAD TOLL: By country
- CARBON PRICE: €0
- DIESEL PRICE: =Apr 2026

Feb 2026

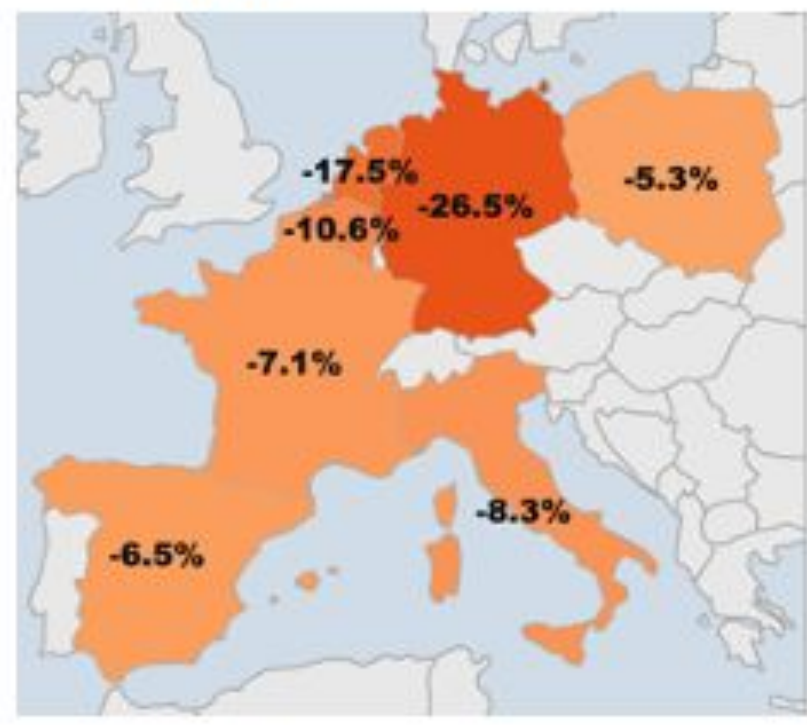
April 2026



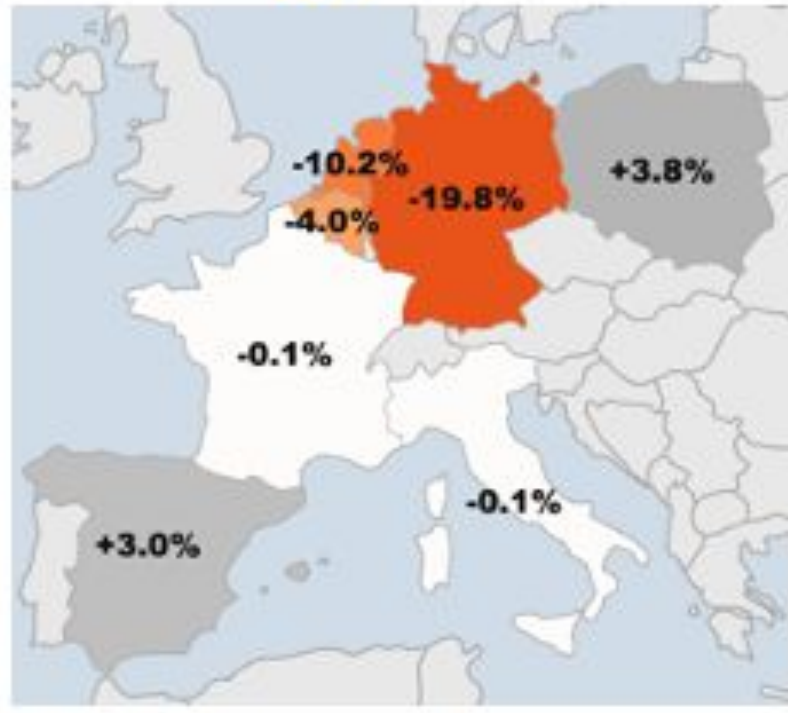
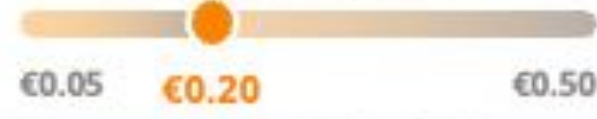
2030 EV WITH CURRENT POLICY BUT CHEAP DIESEL: EVS WINNING MASSIVELY

WILL TRANSFORM BOTH DOMESTIC AND CROSS BORDER BUSINESS

ELECTRICITY €/KWH



ELECTRICITY €/KWH



SCENARIO PARAMETERS

EV ROAD TOLL



CARBON PRICE



DIESEL PRICE PER LITRE



EV TRUCK PRICE



UTILIZATION KM/DAY



**DON'T GET STUCK
WITH OLD TECH!**



sender

Thank
you



Graham Major-Ex
Executive Director of
Green Business and eMobility

graham.major.ex@sender.com



EUROVIGENTTE ROUNDTABLE

30 June 2026














Thomas Fabian

Chief Commercial Vehicles Officer



acea

WHO WE REPRESENT

MEMBERS	BMW GROUP  		DAIMLER TRUCK		
	 HYUNDAI	IVECO • GROUP			
Renault Group	STELLANTIS 		TRATON	VOLKSWAGEN GROUP	

THREE KEYS TO ZERO-EMISSION ROAD TRANSPORT

Commitment to **climate-neutrality by 2050 at the latest**

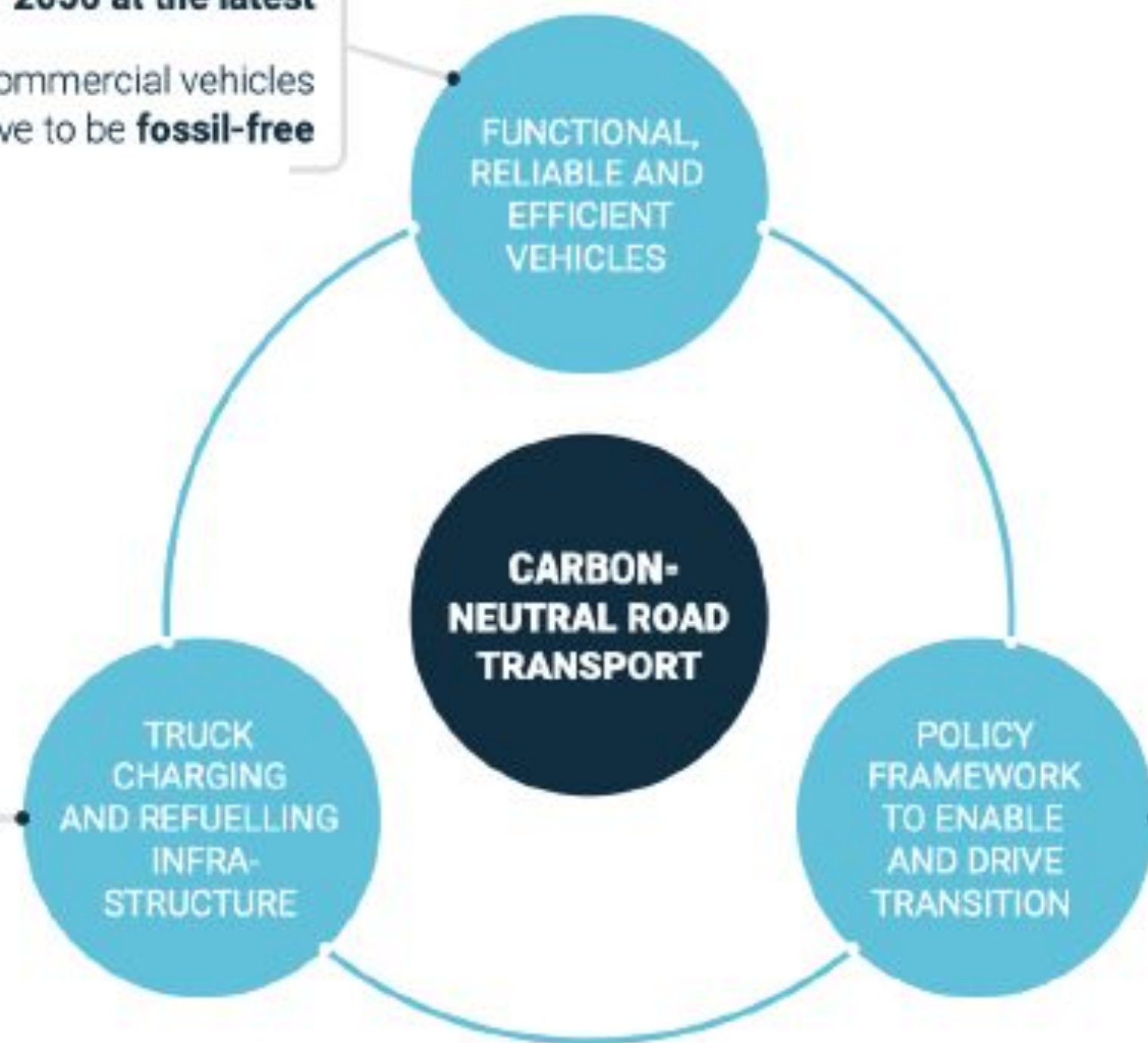
By 2040 all new commercial vehicles sold will have to be **fossil-free**

Clean electricity, hydrogen and low-/zero-carbon fuels are crucial for the transition

Vehicle deployment will only be successful if **infrastructure** is rolled out rapidly

Commitment of **all stakeholders/ policy makers must match ambition** level set for vehicle industry

Manufacturers ready to support roll-out by collaborating with public and private stakeholders



Zero-emission vehicles will have to become **best option and preferred choice of transport operators**

Enabling **policy framework** is indispensable **to shift key cost factors**

In line with science, an **ambitious carbon price**, which gradually increases to significantly higher levels than today is crucial to drive the deployment of zero-emission technologies

Decarbonisation requires **clear focus and all resources to be devoted exclusively** to reaching target as soon as possible

DRIVING EUROPE'S GREEN TRANSITION WITH ZERO-EMISSION TRUCKS AND BUSES



- **Europe's truck and bus manufacturers are leading road transport's transition** to climate neutrality by introducing state-of-the-art zero-emission vehicles.
- **45+ zero-emission truck models now available** – from city deliveries to long-haul transport.
- **20+ zero-emission bus models on the market** – powering clean, quiet mobility in cities & beyond.

Source: <https://www.acea.auto/news/driving-europes-green-transition-with-zero-emission-trucks-and-buses/>

Zero and low-emission heavy-duty vehicles (trucks)

Model	Power (kW)	GVW (t)	GVW (t)	Application (e.g. Long-haul, Construction etc.)	Range (km)	Availability (series production, announced)
EVCS						
S-Rifer	80V	48		general regional application	up to 350km	in series production
S-Rifer Fuel Cell						

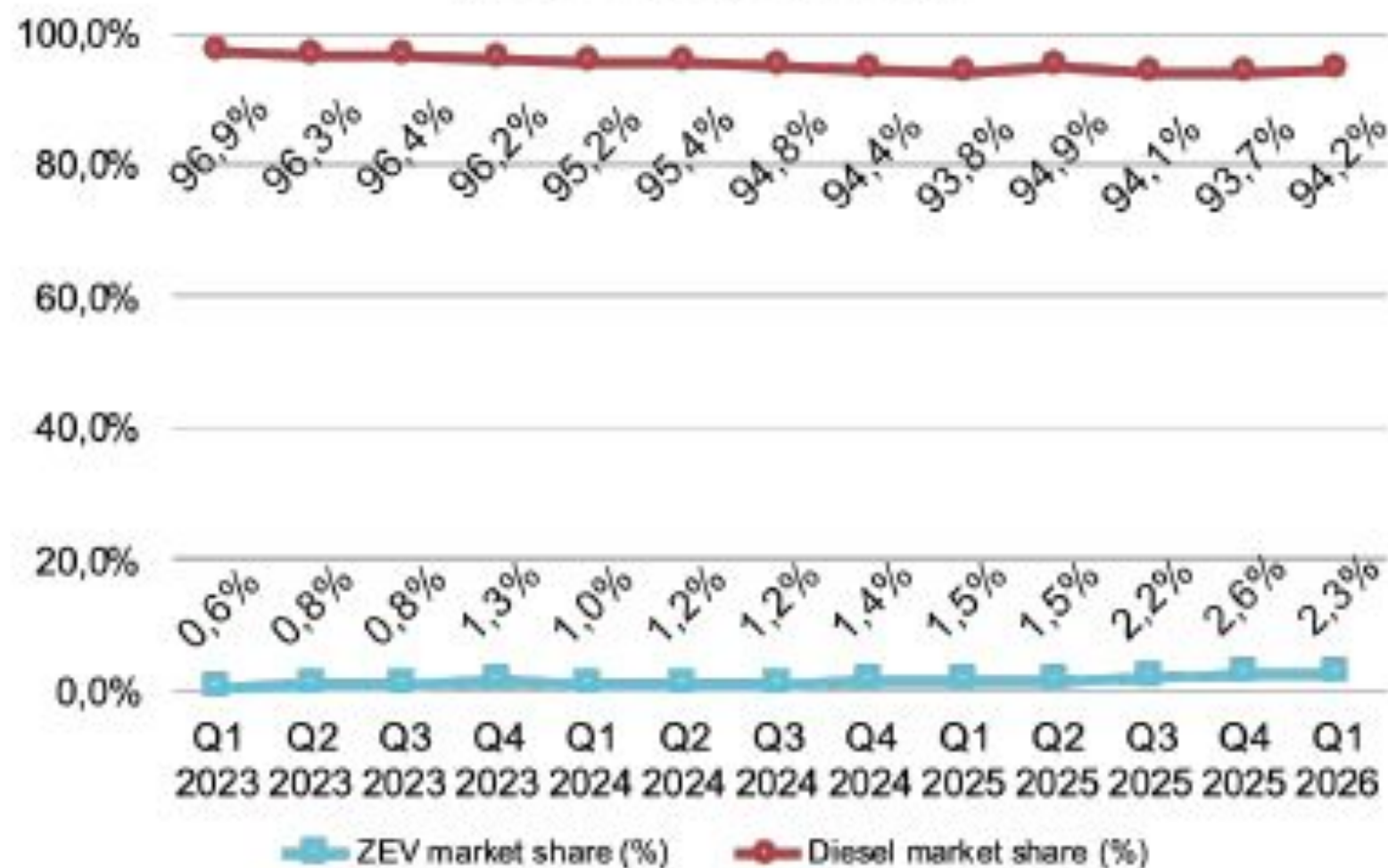
Zero and low-emission heavy-duty vehicles (trucks)

Model	Power (kW)	GVW (t)	GVW (t)	Application (e.g. Long-haul, Construction etc.)	Range (km)	Availability (series production, announced)
Trucks						
L, P						
L, P	80V	18-20t	34t	city	up to 300 km	in series production
P, G, B	80V	18-20t	up to 17t	construction	up to 300 km	in series production
G, B	80V	18-20t	up to 17t	regional	up to 400 km	in series production
B, C	80V	18-20t	up to 17t	long-haul	up to 500 km	in series production
Urban Trucks						
FA Aero Electric	80V	44		regional	300 km	in series production
FA Aero Electric	80V	38		long-haul	400 km	first orders from Q1 2024
FA Electric	80V	44		regional	300 km	in series production
FA Electric	80V	48		long-haul	400 km	first orders from Q1 2024
FA Electric	80V	44		regional	300 km	in series production
FA Electric	80V	44		construction	300 km	in series production
FA Low City	80V	22		city	300 km	in series production
FA Electric	80V	25		distribution	370 km	in series production
FA Electric	80V	18.0t		distribution	400 km	in series production
Special Trucks						
ETech Tado	80V	3.7		distribution	up to 200 km	in series production
ETech Mover	80V	3.0 and 4.2t		distribution	up to 400 km	in series production
ETech 2	80V	12-14t		distribution	up to 200 km	orders from Q2 2024
ETech 2	80V	14-18t		distribution	up to 300 km	in series production
ETech 2 Wide	80V	20-22t		distribution & city construction	up to 300 km	in series production
ETech 1	80V	20-22t	up to 30t	distribution & regional	up to 200 km	in series production
ETech 1	80V	20-22t	up to 30t	distribution & regional	up to 400 km	orders from Q2 2024
ETech 1	80V	20-22t	up to 30t	long-haul	up to 400 km	orders from Q2 2024
ETech 1	80V	20-22t	up to 30t	construction	up to 200 km	in series production
ETech 1	80V	20-22t	up to 30t	construction	up to 400 km	orders from Q2 2024
Van Trucks						
FUSO E-BOX	80V	1.9		regional	up to 200 km	series production in September 2023
FUSO E-BOX	80V	2.5		regional	up to 200 km	series production in September 2023

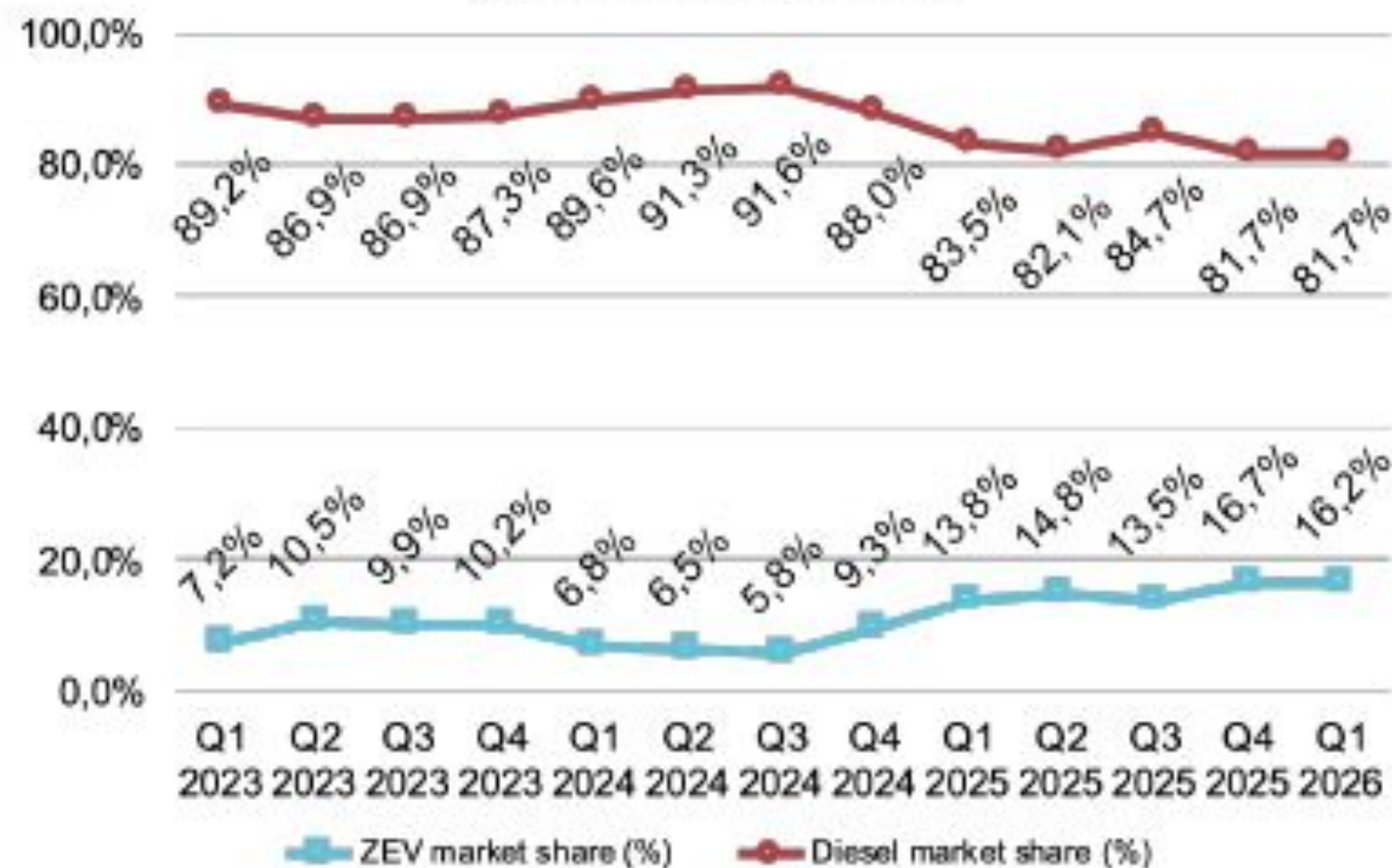
ZEV UPTAKE: PROGRESS STILL TOO SLOW

Q1 2026: 2.3% HDV, 16.2% MDV

Heavy-duty trucks (>16t)
Market share by powertrain
(new EU registrations)

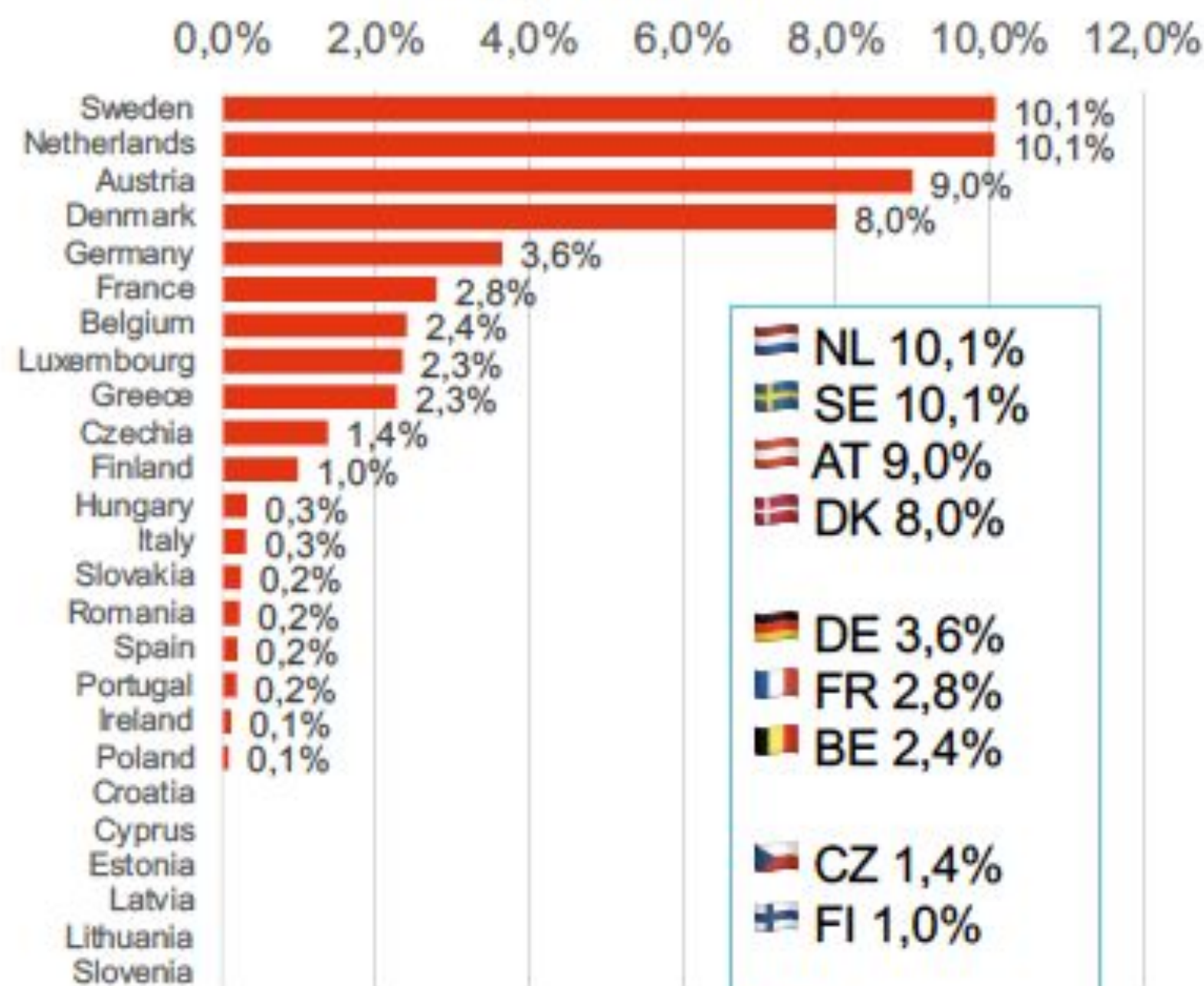


Medium-duty trucks (3.5 – 16t)
Market share by powertrain
(new EU registrations)



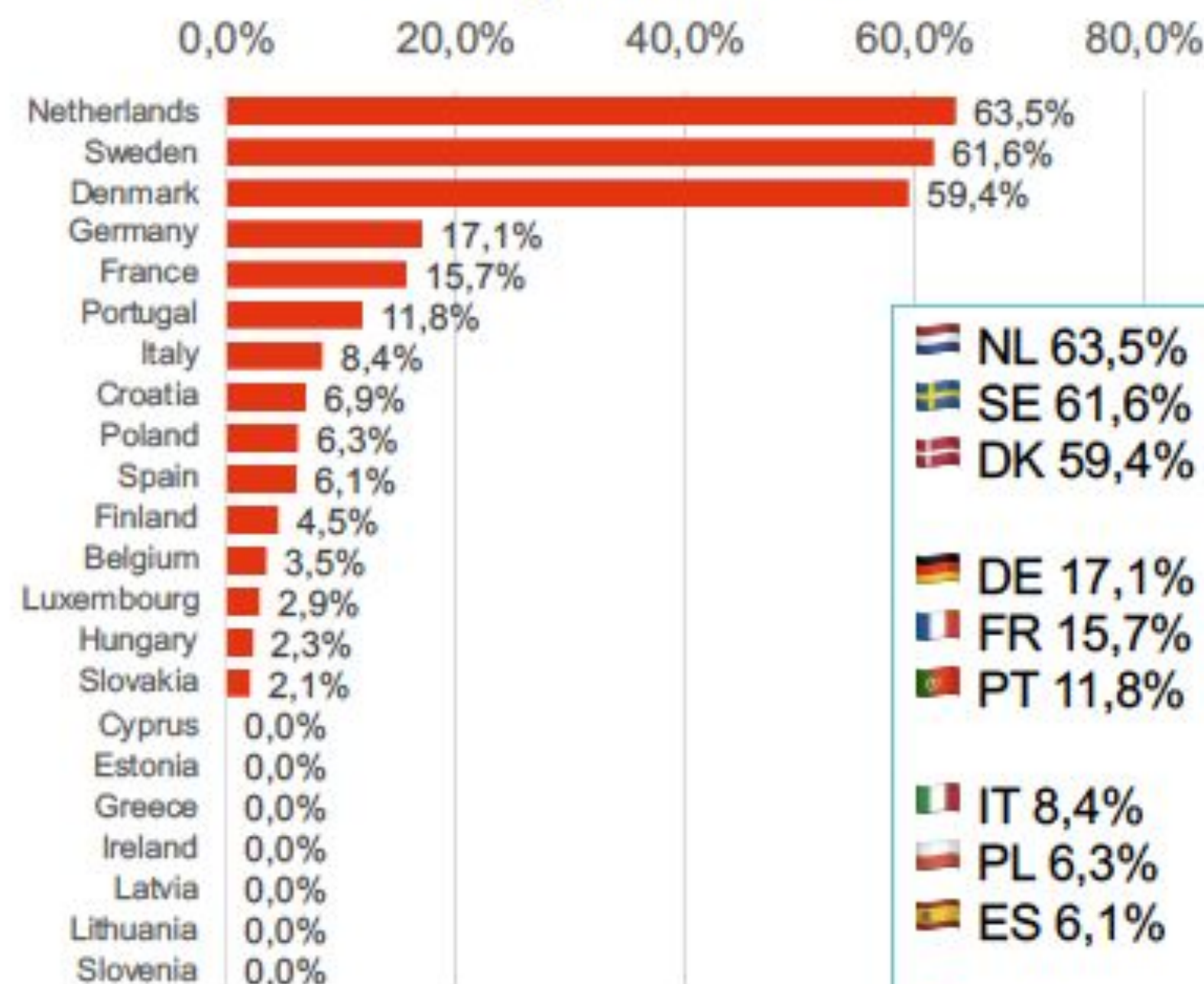
EUROPE'S ZEV MARKET (Q1 2026)

Heavy-duty trucks (>16t)
ZEV registrations EU-27



NL 10,1%
SE 10,1%
AT 9,0%
DK 8,0%
DE 3,6%
FR 2,8%
BE 2,4%
CZ 1,4%
FI 1,0%
CH 25,1%
NO 12,4%

Medium-duty trucks (3.5 – 16t)
ZEV registrations EU-27



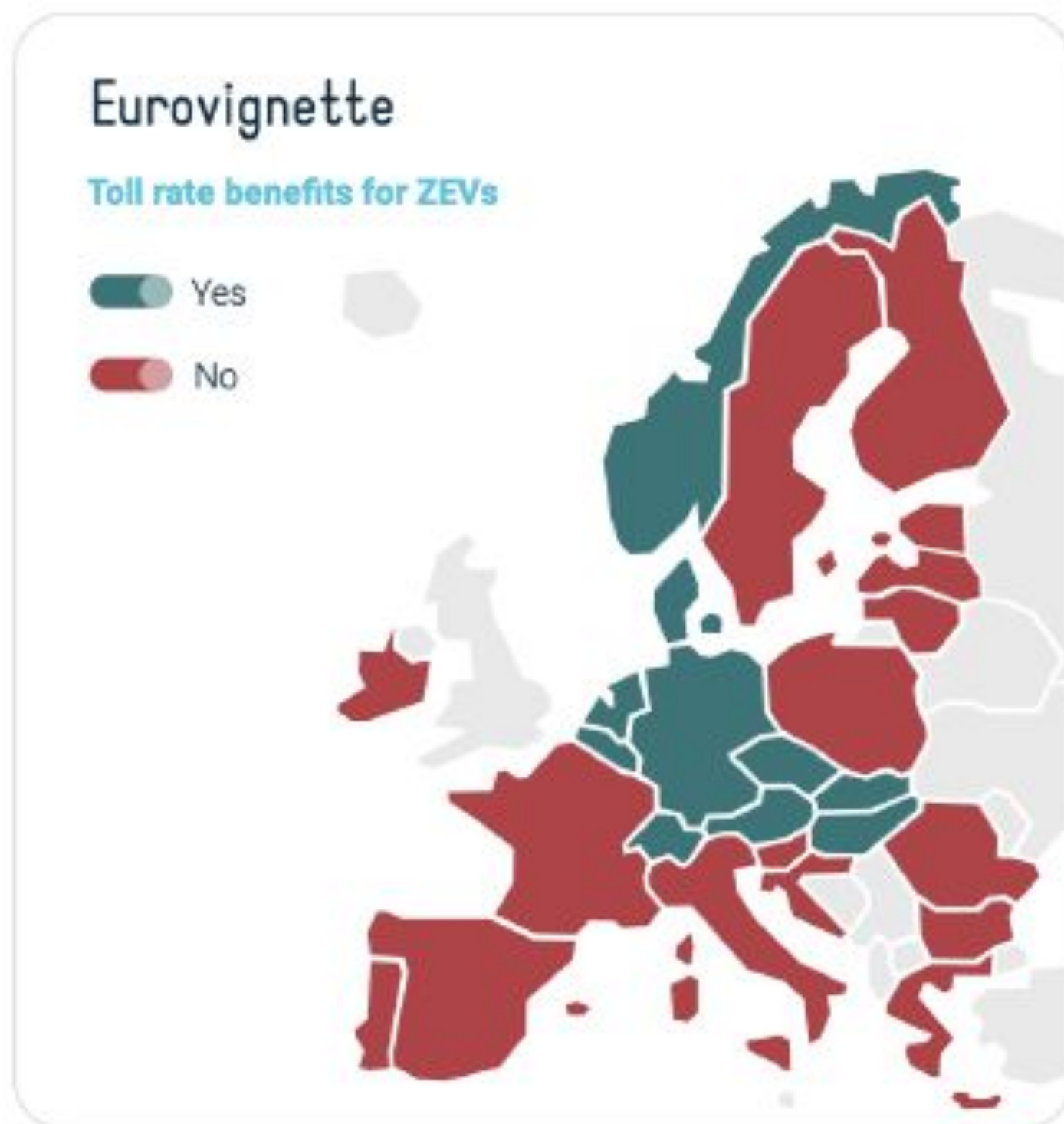
NL 63,5%
SE 61,6%
DK 59,4%
DE 17,1%
FR 15,7%
PT 11,8%
IT 8,4%
PL 6,3%
ES 6,1%
NO 70,0%
CH 34,1%

COST PARITY FOR ZEV IS ESSENTIAL TO UNLOCK THE TRANSITION

- **HDV road transport is a B2B market!** Achieving cost parity for zero-emission vehicles is essential to enable the transition
- Without **robust business cases** across a wide range of use cases and member states the ZEV market uptake will remain insufficient
- A wide range of policy measures are needed to support **competitive Total Cost of Ownership (TCO) for ZE HDVs**
 - CO2-differentiated road user charges, favourable taxation for renewable fuels, hydrogen and electricity, ETS-2, competitive charging prices, vehicle-related regulations (e.g. Weights & Dimensions Directive), demand-side measures (incentives, public procurement), etc



CO2-BASED ROAD CHARGES TO ACCELERATE ZEV UPTAKE



- **CO2-based road user charges with full exemption for zero-emission vehicles** are one of the most effective, targeted measures to enable ZEV cost parity
- However, on its own it is insufficient to fully reduce the TCO gap between ZEVs and conventional vehicles
 - Only in Germany, Austria, and Switzerland discount levels are currently high enough to drive ZEV demand
- Currently, **only two member states fully exempt ZEVs** from road tolls
 - Belgium and Germany
- **Ten member states apply reduced toll rates** for ZEVs
 - Austria, Bulgaria, Czechia, Denmark, Hungary, Latvia, Luxembourg, the Netherlands, Slovakia, Sweden



acea

REPRESENTS EUROPE'S 17 MAJOR CAR, VAN, TRUCK AND BUS MANUFACTURERS

ACEA

European Automobile
Manufacturers' Association

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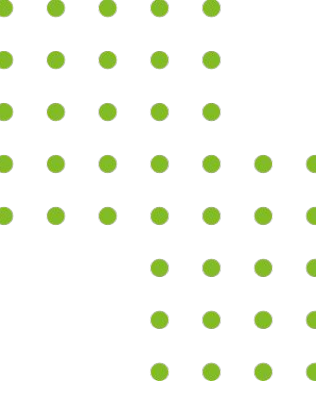
x.com/ACEA_auto



linkedin.com/company/acea



youtube.com/c/ACEAauto



Breakout Discussions



Room 1: Austria

Moderator: Marrida Di Giroiamo

Room 2: The Netherlands

Moderator: Ricardo Garcia Coyne

Room 3: Denmark

Moderator: Adrian Sema Tamez

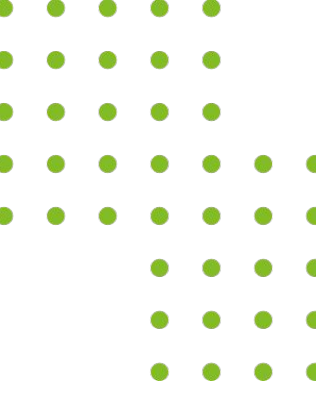
Room 4: Non-EU

Moderator: Albert Alonso-Villar

FOCUS:

- Key barriers and solutions
- National opportunities
- Peer exchange & practical insights





Moderator Summaries



Marida Di Girolamo
EV100 Climate Group



Ricardo Garcia Coyne
CALSTART Drive to Zero



Adrian Serna Tamez
CALSTART Drive to Zero



Albert Alonso-Villar
ICCT





Takeaways

Moderator:

Giacomo Migliore

**Policy Officer, Directorate-General
for Mobility and Transport**

European Commission

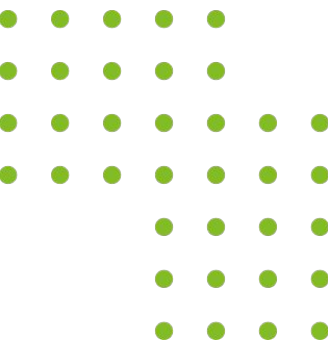




NEXT STEPS

- DG MOVE July 2
- ECTA event July 7





**Contact: Sita Holtslag
sholtslag@calstart.org**

