



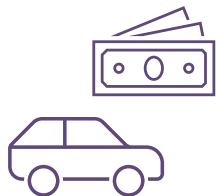
Zero-Emission Trucks in the Netherlands & EU

19-02-2026 in Jakarta – Workshop Zero-Emission Trucks – Dennis Zaitsev





Dutch Climate Agreement (2019): Zero-Emission transport ambitions



100% zero emission **new sales passenger cars** by 2030



A **reduction** of 8 billion **kilometres** in work related car mileage by 2030



100% zero emission **public transport** by 2030



Zero emission zones for commercial vehicles by 2025 in 30-40 largest municipalities



Zero emission construction traffic and **mobile machinery**



100% zero emission city **logistics** by 2030



30% CO₂ reduction by **cross-border** and continental transport by 2030



Emission-free (heavy) road transport

2050

- Europe: climate neutral -> transport emissions -90% vs. 1990
- Netherlands Climate Agreement: completely emission-free road transport

2040

- EU legislation: new trucks 90% CO₂ reduction vs. 2019
- Ambition Netherlands: New trucks & buses 100% emission-free (Global Memorandum of Understanding, Global MoU)

2030

- EU legislation: new trucks 45% CO₂ reduction vs. 2019
- Ambition Netherlands: At least 16,000 emission-free trucks (2,300 today)*
- All regional public transport buses zero emission (Apr. 5400 buses; today 30%)

* Source: IenW policy program 2022. Recent forecasts predict an emission-free fleet of 25,000 trucks in 2030.



Policy framework for decarbonizing HDVs

EU policy strongly focuses on scaling up supply of zero-emission vehicles, renewable fuels and minimum requirements for charging and refueling infrastructure

- European CO₂ standards trucks → *review 2027*
- AFIR (minimum requirements for charging & H₂-refueling infrastructure) → *review 2026*
- Renewable Energy Directive (RED-III).

NL policy is strongly focused on enabling the transition for the entrepreneur, by providing preconditions (3Bs: availability, affordability and reliability)

- Road charge on CO₂ basis with about 80% discount on ZE trucks → mid 2026
- Subsidize additional costs including, partly by recycling the truck levy back to decarbonize industry*
 - Subsidy for ZE trucks (AanZET), buses (STour) and clean and zero-emission building (SSEB)
 - Subsidy for private and public charging infrastructure (SpriLa and SpuLa)
 - Grant Hydrogen in Mobility (SWiM) → both vehicles and refueling stations.
 - Commitment to logistics efficiency and innovation

IenW facilitates and makes agreements with the sector and municipalities

- ZE zones 30-40 municipalities for vans and trucks (city logistics)
- Sustainable cleaning vehicles covenant
- Clean and Emission-Free Building Covenant

***Sector agreement truck toll**
Net proceeds (€400 mln. a year) from truck toll are used for innovation and sustainability of the transportation sector.



EU CO₂-standards for HDVs

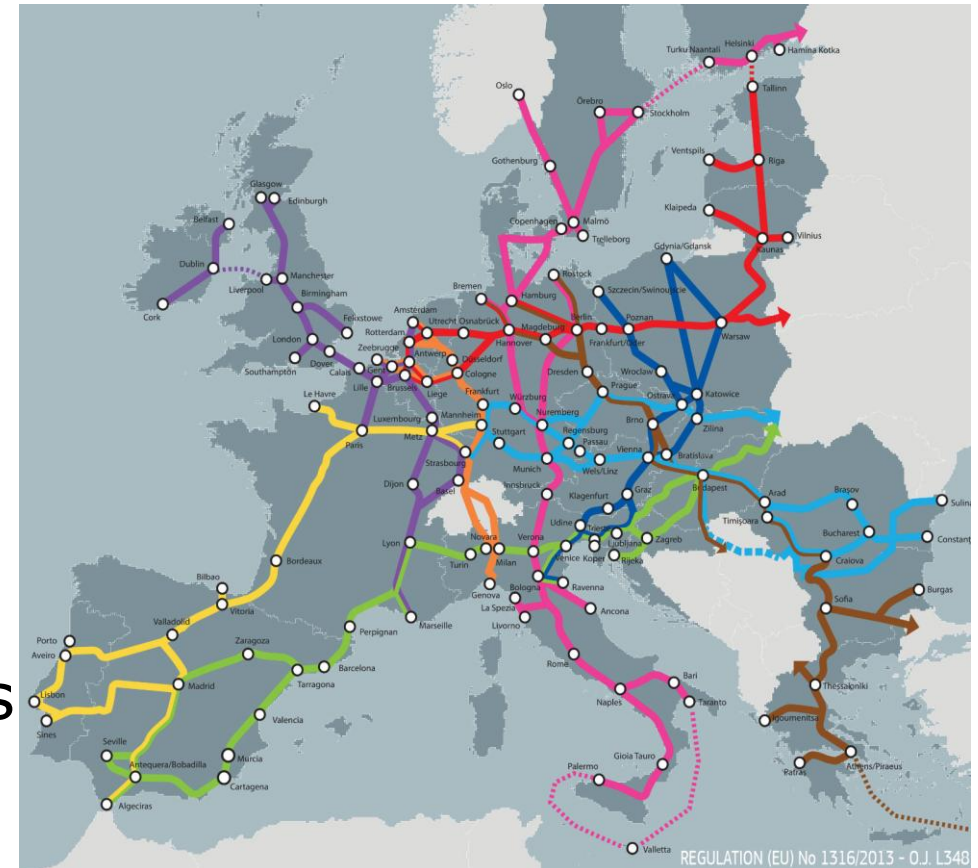
- The revised CO₂ standards for heavy-duty vehicles (HDVs) were adopted by the European Council and Parliament in 2024.
- It requires heavy-duty vehicle manufacturers to drastically reduce CO₂ emissions from trucks. The main reduction targets for new sales are as follows:
 - 45% reduction by 2030 (compared to 2019);
 - 65% reduction by 2035 (compared to 2019);
 - 90% reduction by 2040 (compared to 2019).
- Buses, construction vehicles and coaches are also in scope. A separate target applies to construction vehicles and city buses (construction vehicles are not covered until 2035). City vehicles: 90% reduction by 2030 and 100% by 2035).
- Trailers have an efficiency target (7.5% improvement by 2030 for small trailers and 10% for large trailers).
- Small manufacturers (with a production volume less than 100 vehicles) and a small group of vehicles (lighter than 5t) are exempt from the regulation.

Evaluation in 2027.



EU charging/refueling infrastructure legislation (AFIR).

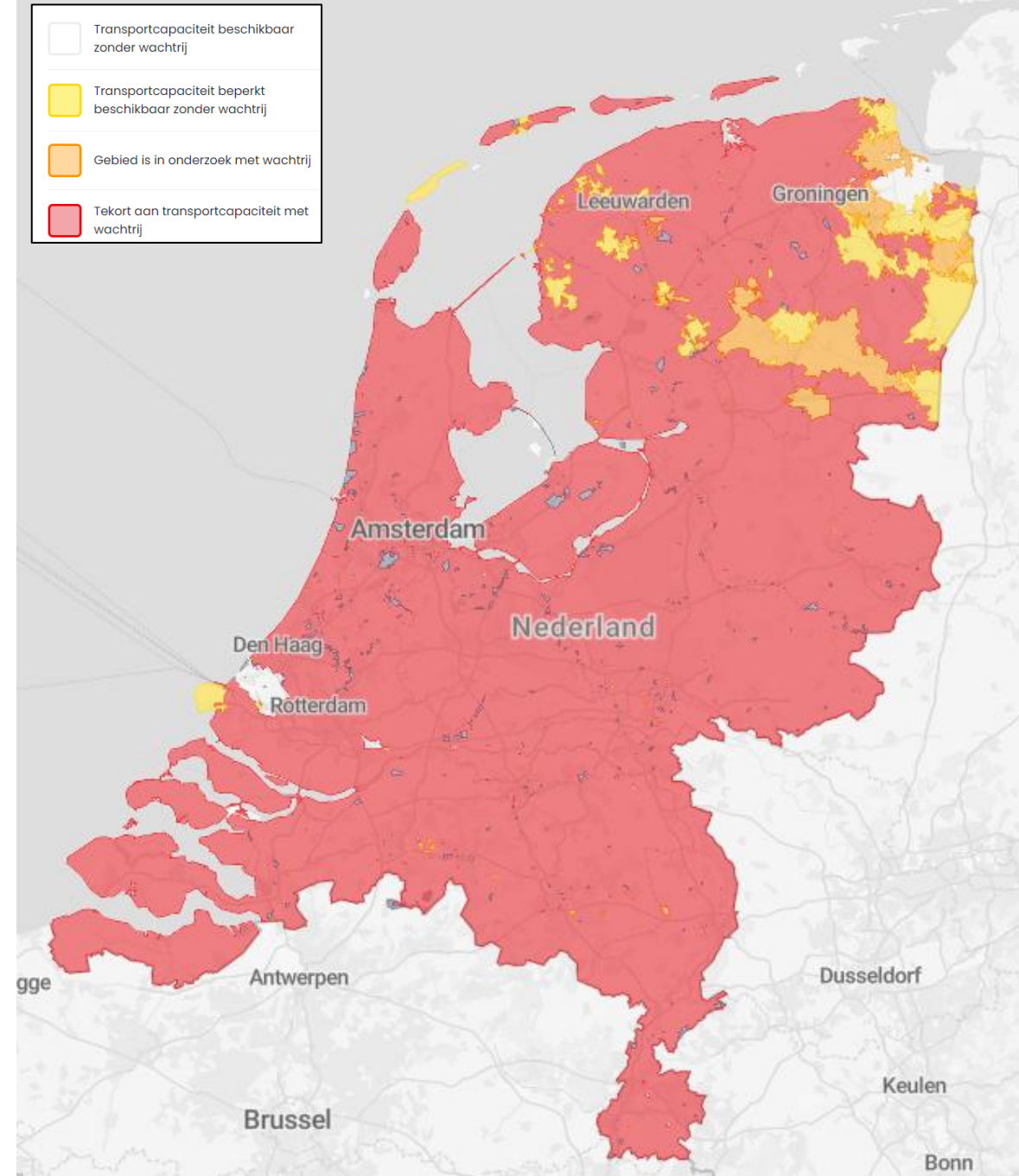
- AFIR (Alternative Fuels Infrastructure Regulation) requires member states to meet certain minimum requirements for charging/fueling infrastructure on the TEN-T* core road network:
 - *Charging infrastructure: every 60 km*
 - *Hydrogen: every 200 km*
- There are also minimum requirements for urban nodes and secure parking lots.



Challenge #1: Charging infrastructure & grid congestion



- Growth of loading & refueling infrastructure should not be a barrier to zero-emission trucks.
- Grid congestion as result of scarce capacity
 1. On the **power grid**;
 2. In **physical space**;
 3. Of **manpower** at municipalities, grid operators and contractors.
- What is IenW doing about this?
 1. Collaboration with KGG in the National Network Congestion Action Program (LAN);
 2. NAL: Implementation Agenda for logistical charging infrastructure
 3. The issue lies mainly with co-governments;
 4. IenW is working on measures to train more technical staff as mechanics for the charging infrastructure sector.



Source: [electricity grid capacity map](#), Netbeheer NL



Challenge #2: Affordable ZE trucks

Purchase cost of emission-free trucks

Emission-free trucks are (still) very expensive.

- Diesel truck = approx. €125,000
- Electric truck = approx. €330,000
- Hydrogen truck = approx. €300,000 (H2ICE*) & 500,000 (H2 fuel cell)

*H2ICE: abbreviation for hydrogen combustion engine

Total-cost-of-ownership (TCO).

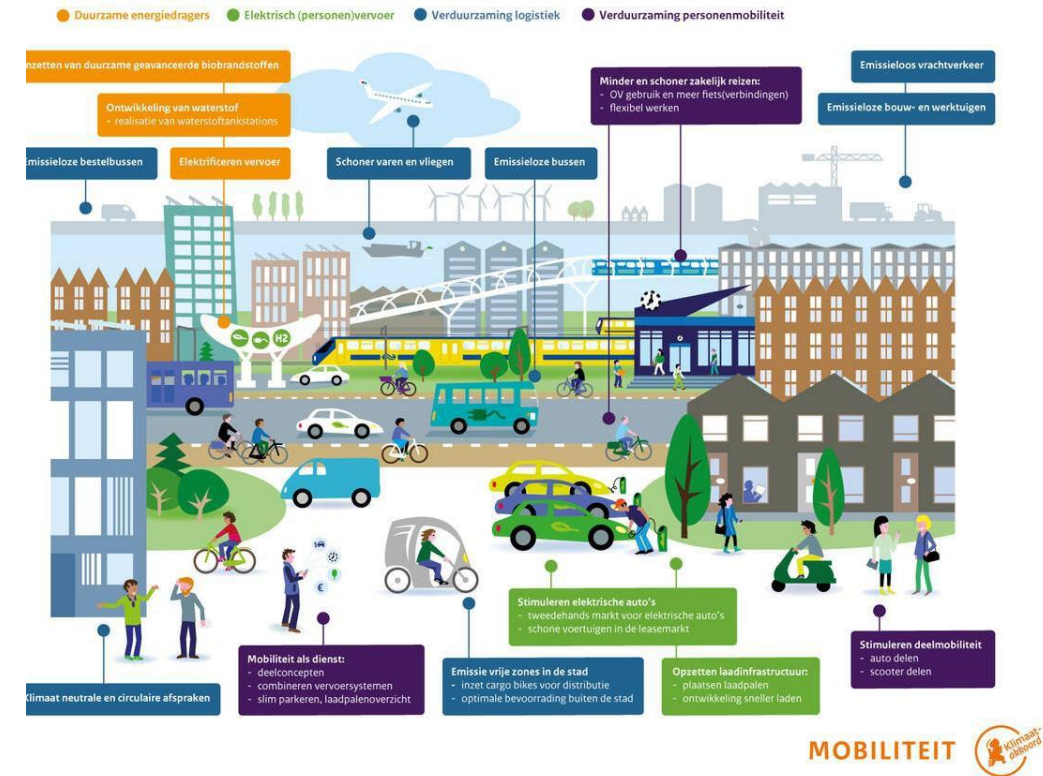
- Diesel truck costs (both purchase costs and diesel prices) will increase in the coming years, due in part to emissions requirements (Euro-7) and carbon prices.
- Prices of zero-emission truck will fall, due in part to lower battery prices, larger production numbers and low to negative electricity prices. Simultaneously, range increases.
- Small electric trucks will have a comparable TCO to diesel as early as 2026. Large trucks are expected to follow before 2030.

➔ The introduction of a truck toll with discounted ZE rate (up to 80%) gives a major boost to the affordability of zero-emission trucks. Purchase subsidies needed until 2030.



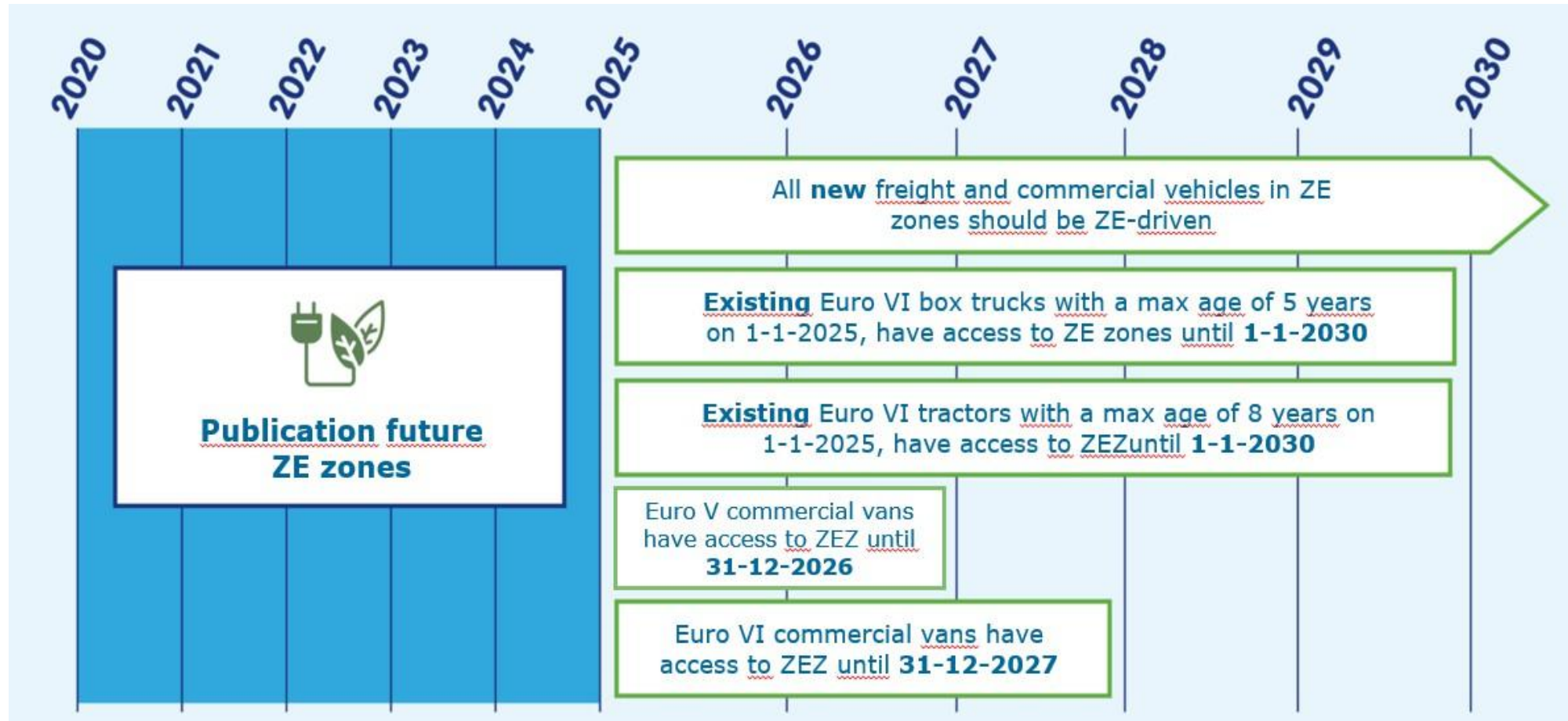
Zero-Emission Zones for city logistics

- Goal Dutch Climate Agreement: In 2025 30-40 cities will have a zero-emission zone for all logistical vehicles
- This is likely to result in a CO2 reduction of 1,0 Mton per year as of 2030 + cleaner and healthier cities.
- 29 municipalities have announced to implement a ZE-zone. 18 of them started in 2025, others follow in 2030 the latest
- Ministry of Infrastructure and Water Management is taking the lead on national coordination and harmonisation, together with municipalities and industry
- Decision to implement a zero-emission zone within the municipalities
- Some categories have centralized exceptions or exemptions
- Transitional period until 2030





Transitional period

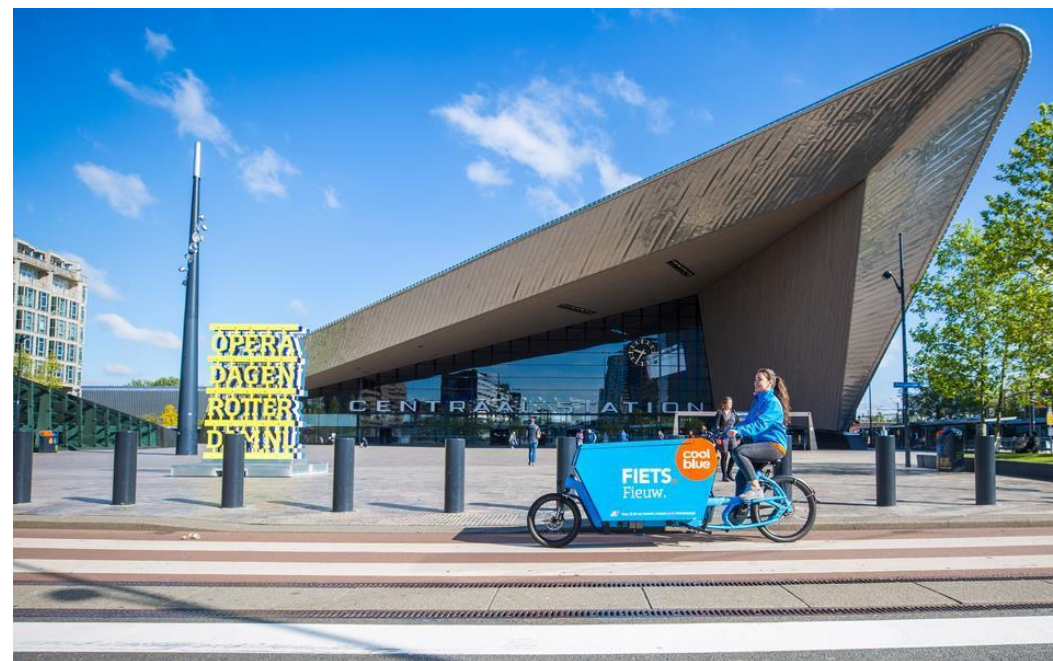




Zero-mission zones: approach

The logistics sector collaborates with national and local governments to focus on:

- › **avoid** (optimize current urban freight logistics)
- › **shift** (use different logistics concepts)
- › **improve** (electrify the remaining fleet)



<https://www.werkenbijcoolblue.nl/vacatures/fietskoerier/deventer/>

Where are we today?



2025

1. Amersfoort
2. Amsterdam
3. Assen
4. Delft
5. Den Haag
6. Eindhoven
7. Gouda
8. Leiden
9. Maastricht
10. Nijmegen
11. Rotterdam
12. Tilburg
13. Utrecht
14. Zwolle
15. Groningen
16. Enschede
17. Haarlem
18. 's Hertogenbosch

In consideration

30. Leeuwarden
31. Hoorn
32. Hilversum
33. Roermond

2026

19. Schiphol
20. Alphen aan den Rijn
21. Dordrecht
22. Arnhem

2027

23. Venlo

2028

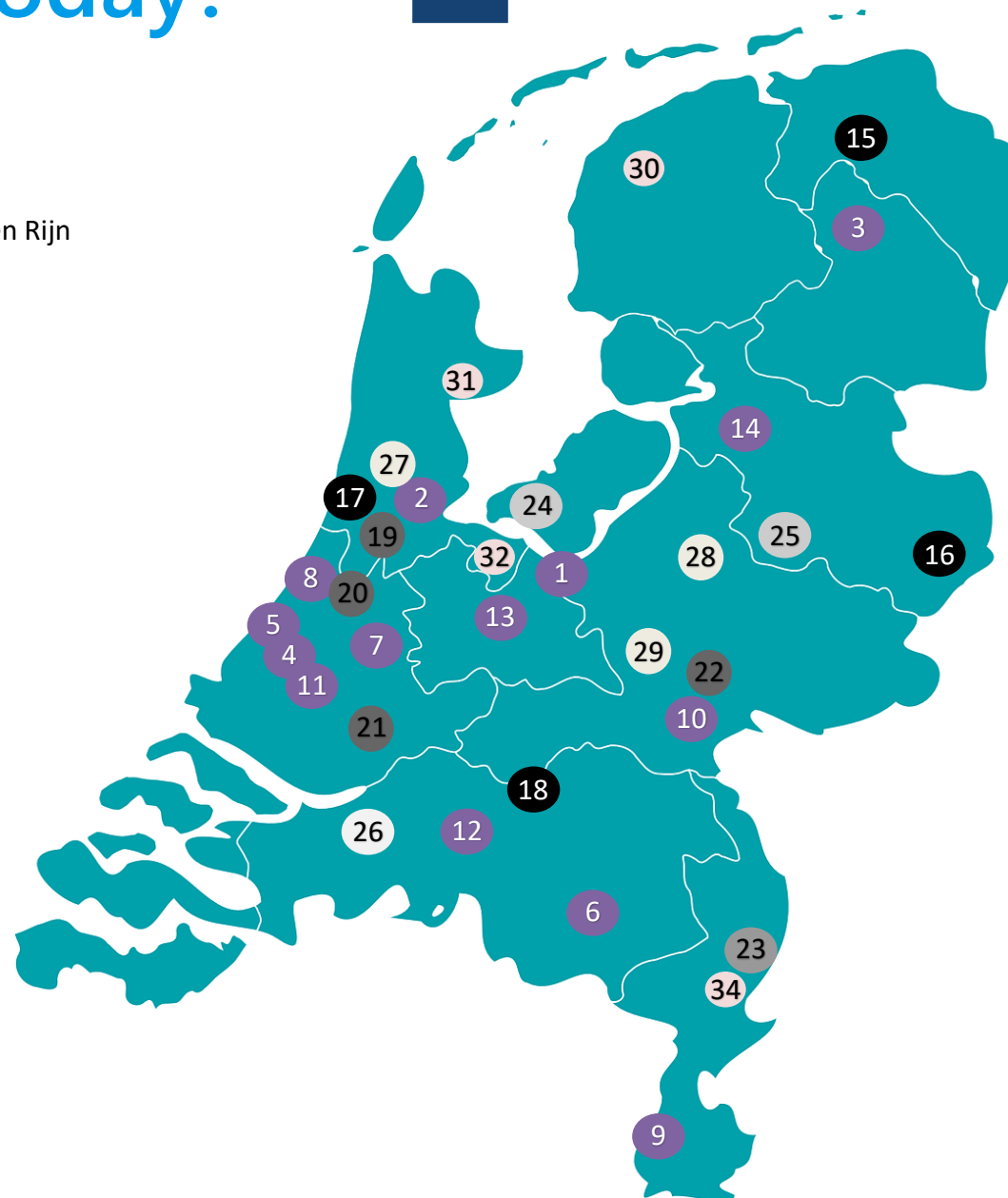
24. Almere
25. Deventer

2029

26. Breda

2030

27. Zaanstad
28. Apeldoorn
29. Ede

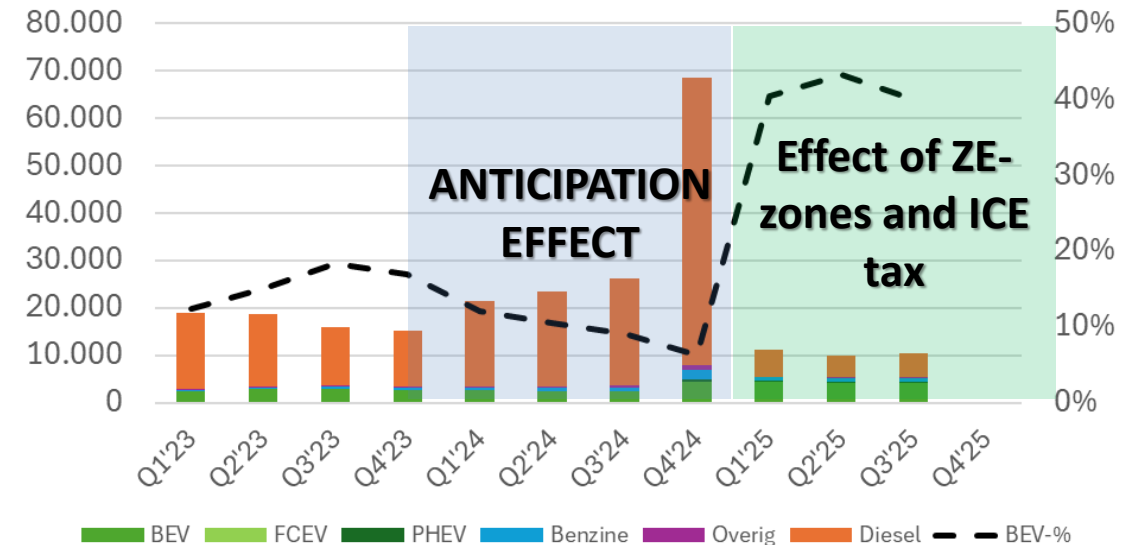




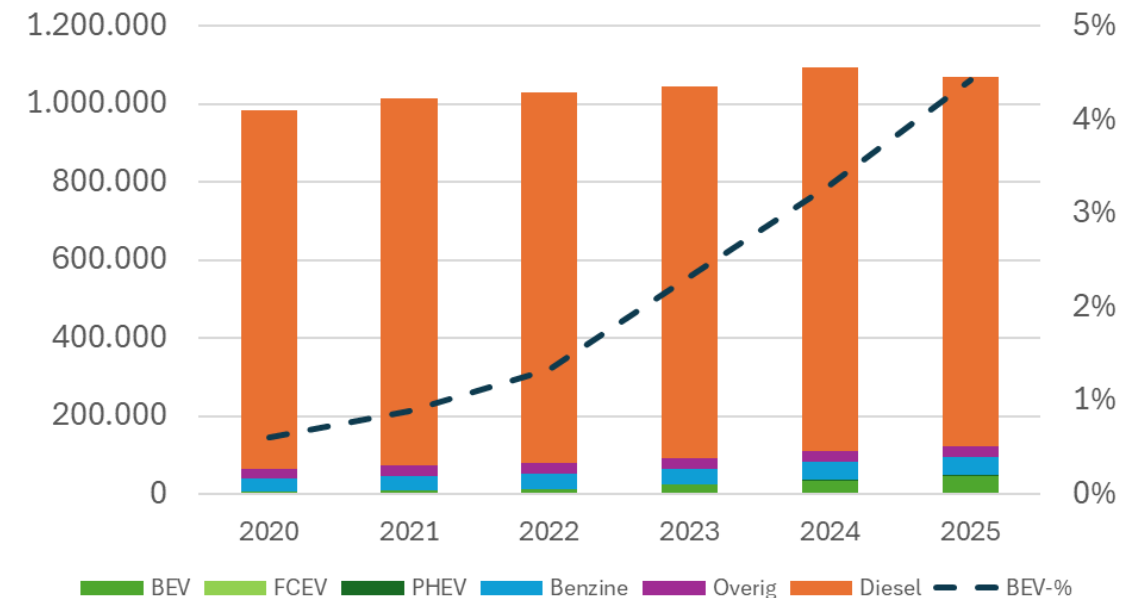
Effects 2025 - LCVs

- Netherlands counts about 1 million light commercial vehicles (LCVs), of which roughly 4% are zero-emission (predominantly battery-electric).
- **Since the start of 2025 the share of ZE-LCVs registrations has increased to 40%, including imported vehicles. The share in new-sales is even higher (86%).**
- This can be associated to the introduction of ZE-zones, as well as the introduction of a registration tax for diesel LCVs in 2025.
- Companies have anticipated on these policies, which resulted in increased sales of diesel vehicles in 2024. Since then, diesel sales have plummeted.

Amount (#) and share (%) of LCV registrations in the Netherlands



LCV fleet in the Netherlands

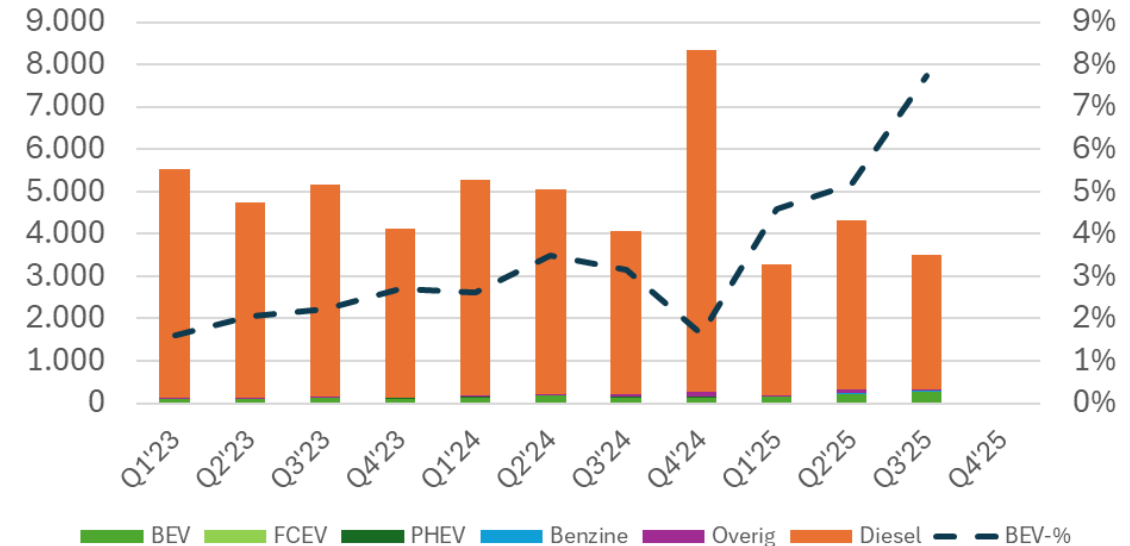




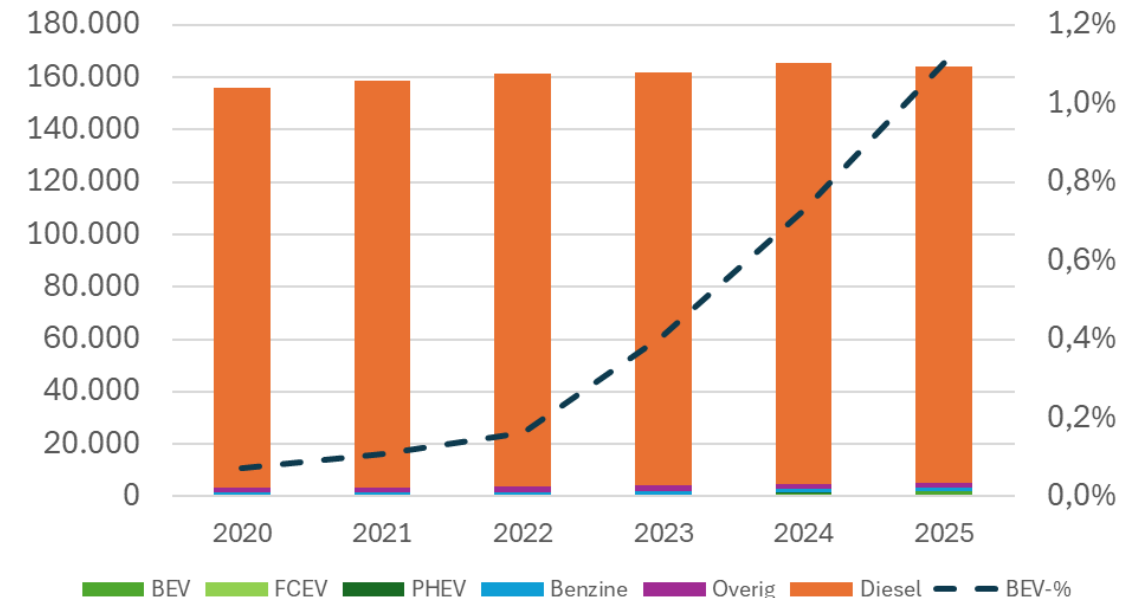
Effects 2025 - HDVs

- Similar effects can be observed for heavy-duty vehicles (HDVs), but to a lower extend.
- Companies have a longer transition period to adapt HDVs to the ZE-zones. Nonetheless, an increase in HDV diesel sales has been observed in Q4 2024.
- Overall ZE sales shares are low but increasing rapidly: ~8% in 2025.

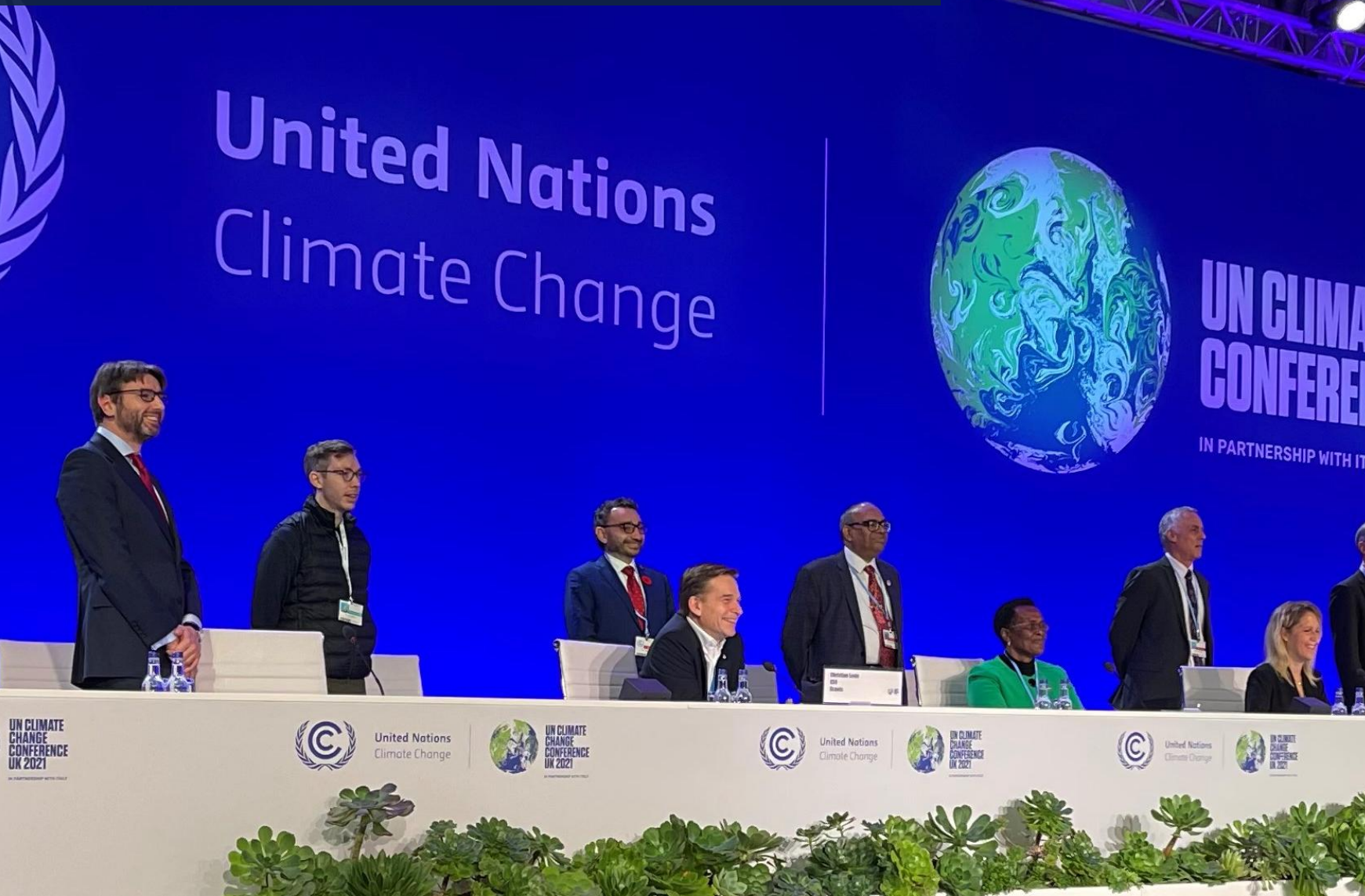
Amount (#) and share (%) of HDV registrations in the Netherlands



HDV fleet in the Netherlands



THE GLOBAL MOU SETS A WORLDWIDE STANDARD



GLOBAL
MEMORANDUM OF UNDERSTANDING

New ZE-MHDV sales

30% by 2030

100% by 2040

In line with:

- NL Climate Agreement
- Paris Agreement

Members

42 countries

>300 endorsers



Ministerie van Infrastructuur
en Waterstaat

Thank you for your attention!

Questions? Feel free to reach out at:
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