

EUROPEAN VEHICLE MARKET STATISTICS

Pocketbook 2024/25

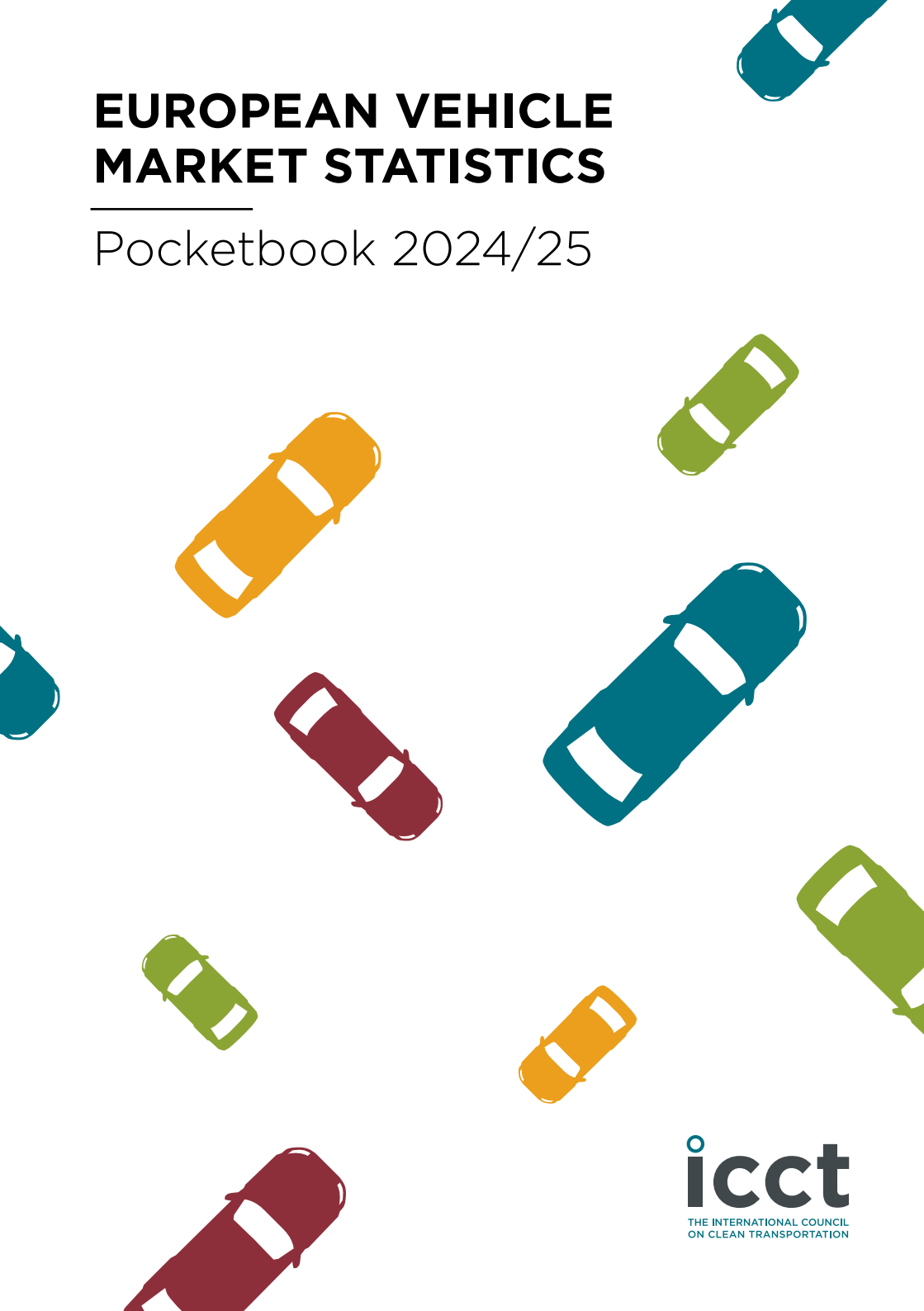


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1 INTRODUCTION

The 2024/25 edition of European Vehicle Market Statistics offers a statistical portrait of passenger car, light commercial, and heavy-duty vehicle fleets in the European Union (EU) from 2001 to 2023. It is focused on new vehicle registrations, technologies, fuel consumption, and tailpipe emissions.

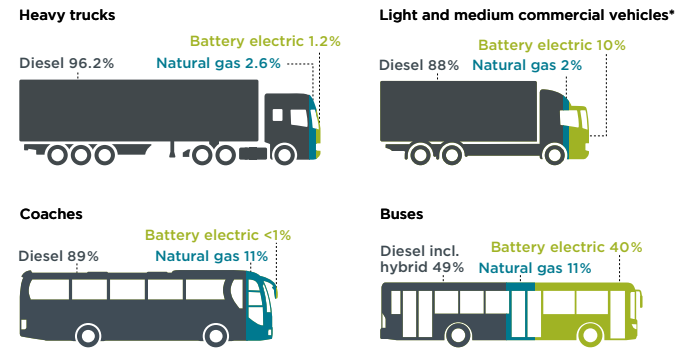
The first few pages are a concise overview of the data in subsequent chapters and summarize the latest regulatory developments in the European Union. More comprehensive tables are included in the Annex, along with information on sources.

Number of vehicles

The year 2023 saw the first rise in new car registrations across all Member States in the European Union since 2019. About 10.6 million new cars were registered in the 27 Member States in 2023, 14% more than in 2022. While sales in the Mini segment stagnated, the sport utility vehicle (SUV)/off-road vehicle segment remained the market leader; these were 48% of new registrations in 2023, followed by the Lower medium segment (19%).

Looking at commercial vehicles, battery electric technology is advancing steadily and made up 40% of buses and 10% of the light and medium commercial vehicles sold in 2023. In contrast, the electrification of heavy trucks and coaches remains nascent, with just 1% of the market or less in 2023 (**Fig 1-1**).

Sales of heavy duty vehicles by powertrain, 2023



*With a gross vehicle weight between 3.5 and 12 tonnes

Fig. 1-1

Sales of new commercial vehicles by powertrain, 2023

Fuel consumption & tailpipe emissions

The official level of average carbon dioxide (CO₂) emissions from new passenger cars registered in the EU-27, as measured in the laboratory via the Worldwide harmonized Light vehicles Test Procedure (WLTP), decreased marginally in 2023 to 108 g/km, 2 g/km lower than in 2022.

With the introduction of the fleet-average CO₂ target of 95 g/km using the New European Driving Cycle (NEDC) in 2020, new car emission levels fell at the unprecedented rate of more than 1 g/km per month in 2020 and 2021. However, since 2022, this rate of CO₂ reduction has been slowing down. According to preliminary data published by the European Environment Agency (EEA), all manufacturing groups nevertheless complied with their respective 2023 CO₂ targets.

When examined by technology, a different story of CO₂ reduction emerges. As depicted in **Figure 1-2**, little-to-no improvement in the efficiency of internal combustion engine vehicles (ICEVs) has been made since 2021, and the average CO₂ emissions for diesel vehicles even increased in 2023. Instead, the increasing market share of battery electric vehicles (BEVs) and plug-in hybrid electric vehicles (PHEVs) has been the key factor in driving down overall average CO₂ emissions values in recent years (Tietge et al., 2024).

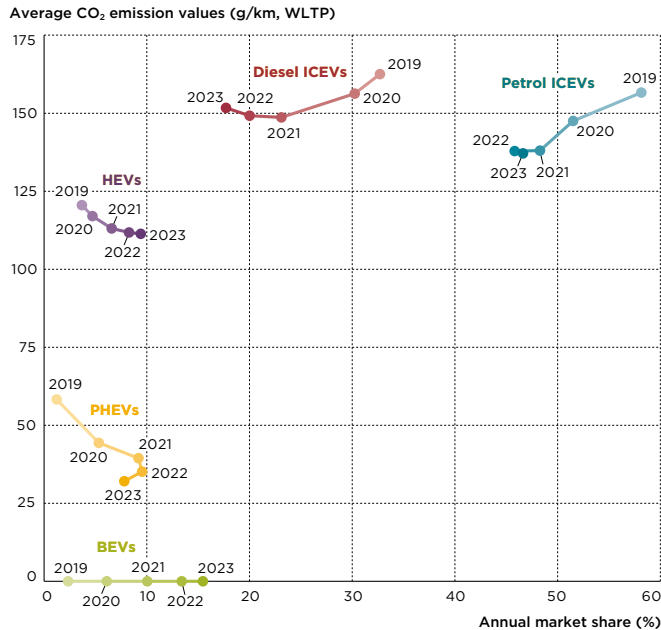
New mandatory CO₂ standards for the years 2025 and 2030 were adopted in early 2019 (Mock, 2019) and revised in March 2023 (Dornoff, 2023). For passenger cars and vans, fleet-average emission reduction targets are 15% by 2025, 55% for new passenger cars and 50% for new vans by 2030, and 100% by 2035 for both cars and vans, all relative to a 2021 baseline. Compliance with the targets will be measured using the WLTP test procedure, which became mandatory for new vehicles in September 2018.

For new heavy-duty vehicles, the CO₂ standards revised in May 2024 set a 15% emissions reduction target by 2025, or 2.5% per year; a 45% reduction by 2030; a 65% reduction by 2035; and a 90% reduction by 2040, all relative to a 2019 baseline (Regulation (EU) 2019/1242 of the European Parliament and of the Council, 2019). The revision further expanded the scope of vehicles regulated by the CO₂ standards, and they now cover 92% of the heavy-duty vehicles sold in 2023.

The light-duty vehicle CO₂ regulation adopted in 2019 requires the European Commission to monitor the on-road fuel and electric energy consumption of passenger cars and vans to prevent growth in the gap between type-approval and real-world CO₂ emissions. Since 2021, to collect the necessary monitoring data, manufacturers have been required to install on-board fuel and energy consumption monitoring devices (OBFCEMs) in new vehicles. The Commission was tasked with assessing how OBFCEM data may be used to ensure that type-approval CO₂ emissions remain representative of real-world CO₂ emissions. Furthermore, at the latest by the end of 2026, the Commission is to assess the feasibility of a mechanism that prevents the gap from growing by adjusting each manufacturer's annual CO₂ emission performance, beginning in 2030 (Dornoff, 2023).

Fig. 1-2

Annual average CO₂ emissions and market share per fuel and power-train technology, 2019–2023



Technologies & key technical parameters

Although the vast majority of Europe’s new cars continue to be powered by gasoline or diesel engines, the share of alternatives is steadily increasing. In 2023, BEVs accounted for nearly 15% of all new car sales, and PHEVs were about 8% of the market.

In 2023, BEVs were the most popular in Sweden, where they were nearly 39% of new car sales; Sweden was followed by Denmark (36%, up from 21% in 2022) and the Netherlands (31%, up from 24% in 2022). For PHEVs, the market shares in 2023 were the highest in Sweden, Finland, and Belgium, where they made up over 21% of new sales.

Of the largest brands, Volvo (34%) continued to have the highest market share of PHEVs in 2023 and was followed by Mercedes-Benz (21%) and BMW (17%). Volvo also once again led in BEV market share – 26% of its sales in 2023 – and was followed by BMW (19%) and Fiat (18%).

The average mass of new cars in the European Union increased slightly in 2023 to 1,540 kg, 21% above the 2001 level. The average mass of the Swedish new car fleet was 1,836 kg, well above the EU average and above other relatively large EU fleets, such as Belgium, where the average was 1,651 kg. On the other hand, new cars in Italy and France were significantly lighter, with an average mass of 1,408 kg and 1,449 kg, respectively. The average engine power in the European Union was 115 kW in 2023, which is about 56% more than in 2001.

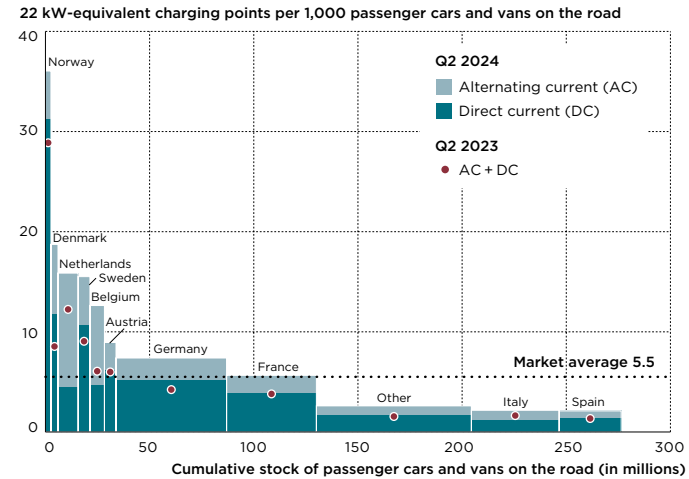


Fig. 1-3

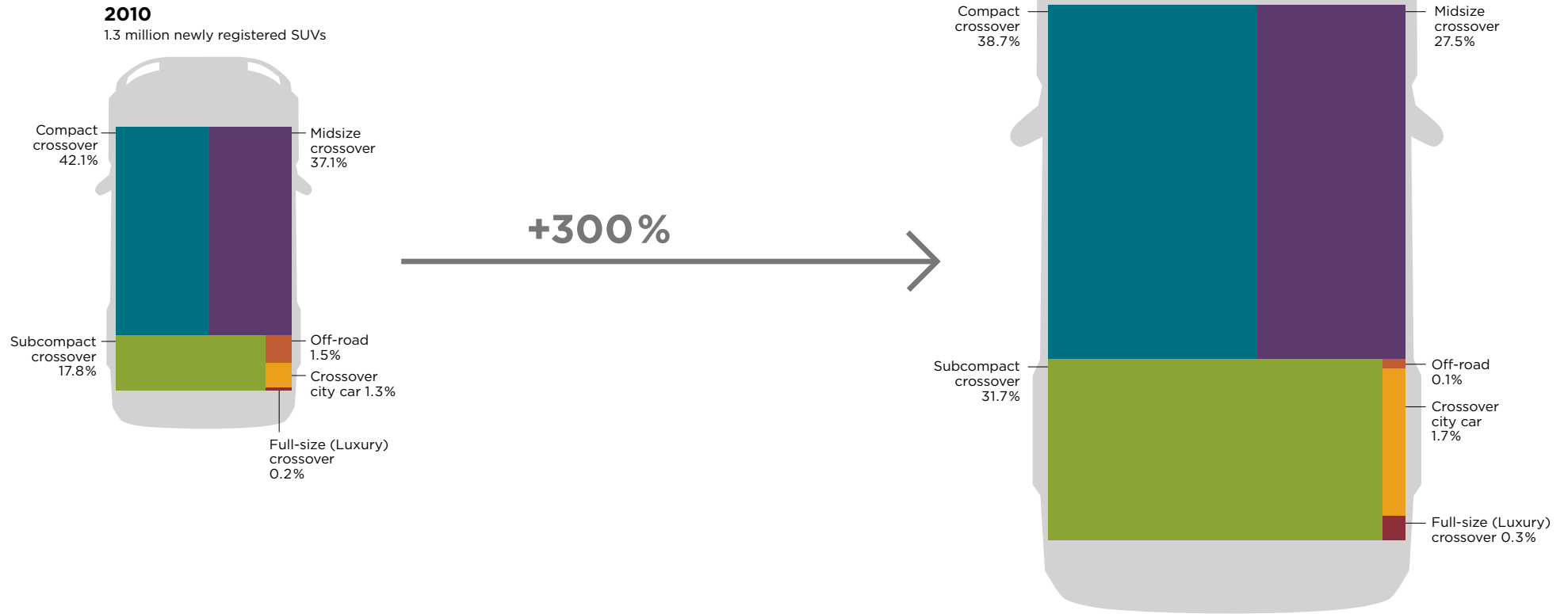
22 kW-equivalent publicly accessible charging points installed per thousand passenger cars and vans in EU and EFTA countries, by type of power output and country, by the end of the second quarter of 2024.

Note: The width of the bars provides information on 2023 passenger car and van stock size estimates. The unit 22 kW-equivalent is used to account for different power outputs while allowing for comparison among countries.

Charging infrastructure capacity is expanding rapidly, and in EU and European Free Trade Association (EFTA) countries it reached an average of 5.5 22-kW-equivalent publicly accessible charging points per thousand passenger cars by the middle of 2024; this was up from just 3.5 by the end of the second quarter of 2023, a 57% increase (**Fig. 1-3**). Large advances were made in Denmark (+119%), Belgium (+108%), Germany (+75%), and Sweden (+71%). From mid-2023 to mid-2024, the share of direct current (DC) charging also increased in each of the top 10 countries in terms of installed capacity, with the greatest change observed in Denmark (+31%).

2 NUMBER OF VEHICLES

Development of the SUV segment, from 2010 to 2023



Subsegment	Model (examples)
Crossover city car	Fiat Panda, Renault Kwid
Subcompact crossover	Renault Captur, Mini Countryman, Volvo XC40
Compact crossover	Toyota RAV4, Ford Mustang Mach-E, VW ID.4
Midsize crossover	VW Tiguan, BMW X5
Full-size (Luxury) crossover	Range Rover, Mercedes-Benz GLS
Off-road	Jeep Wrangler

Data source: European Environmental Agency (EEA)

The market share of SUVs has increased dramatically in the past few years. Every tenth new vehicle in 2010 was an SUV compared to nearly every second new vehicle in 2023. However, all SUVs are not created equal. Small crossover (city and subcompact) vehicles are making up an increasing share of newly registered SUVs, accounting for 33% in 2023. Although these models may be relatively small, their increased size and weight compared to standard models in their class lead not only to more CO₂ emissions and fuel and energy consumption, but also cause greater damage to road infrastructure and can be deadly for pedestrians in the case of a collision.

With almost 10.6 million registrations, the 2023 new vehicle market in the European Union appears to have rebounded from 2022, when it hit a 20-year low with 9.3 million new registrations. The markets in Belgium (+30% compared with 2022) and the Netherlands and Italy (both +19%) showed the greatest upward trends (**Fig. 2-1**).

Germany continues to be the largest vehicle market in the European Union and had a 26% share of the total market in 2023. Since reaching a peak of around 3.6 million vehicles in 2019, registrations in Germany fell sharply after the outbreak of COVID-19 to an all-time low of 2.5 million in 2021. Registrations then increased marginally in 2023 to just under 2.8 million. Sweden continues to be the only EU country with new registrations well above 2001 levels, and registrations in 2023 were 19% higher than in 2001 (**Fig. 2-2**).

When looking at segments, SUV/off-road vehicle registrations increased 18% in 2023 compared with the previous year and were followed by the Medium and Lower medium segments, which were both 16% higher than 2022. The SUV/off-road segment's market share was 48%, and the Mini segment continued to shrink, dropping to just 5% of the total market in 2023 from its high of almost 13% in 2009. In 2023, 5 million new SUV/off-road vehicles were registered, more than 11 times as many as in 2001 (**Fig. 2-3, Fig. 2-4**).

The Toyota Yaris continues to be the most popular car model in the European Union and was about 2.7% of all new vehicle registrations in 2023. Meanwhile, a BEV – the Tesla Model Y – made the Top 10 list for the first time in 2023 and was nearly 1.8% of total new registrations (**Fig. 2-10**). Among the largest manufacturers, Audi, Renault, and BMW saw the biggest increases in new registrations (up 20%, 18%, and 17% from 2022, respectively), while Ford (-4%), Fiat (-3%), and Citroen (-2%) saw slight decreases (**Fig. 2-5, Fig. 2-6**).

Truck and bus registrations increased 14% in 2023 compared with the previous year. Germany continues to be the largest market with nearly 27% of all EU registrations (**Fig. 2-12**). Looking at manufacturers, Volkswagen's share of unregulated trucks dropped four percentage points in 2023, and its share of regulated trucks rose five percentage points; its total share in 2023 was 28% in both categories. At the same time, other (non-major) manufacturers continued to increase their market share in 2023 and were 21% of new registrations of unregulated trucks, up from 16% the previous year (**Fig. 2-15**).

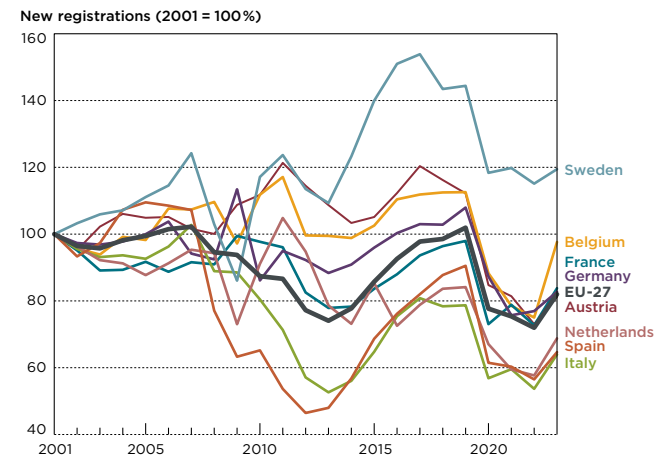
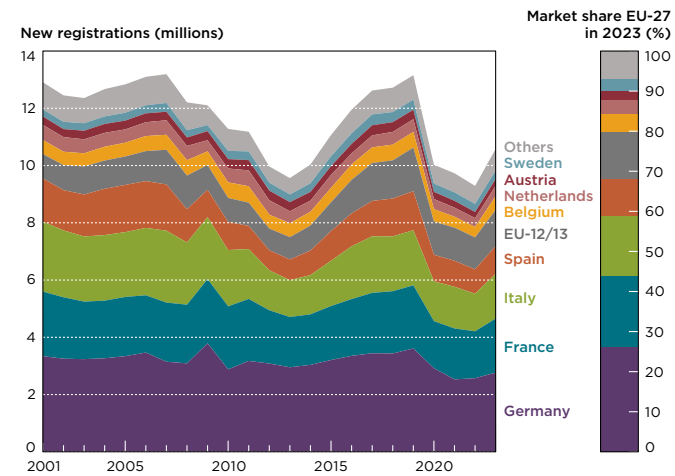


Fig. 2-3

Passenger cars:
New registrations
by vehicle segment

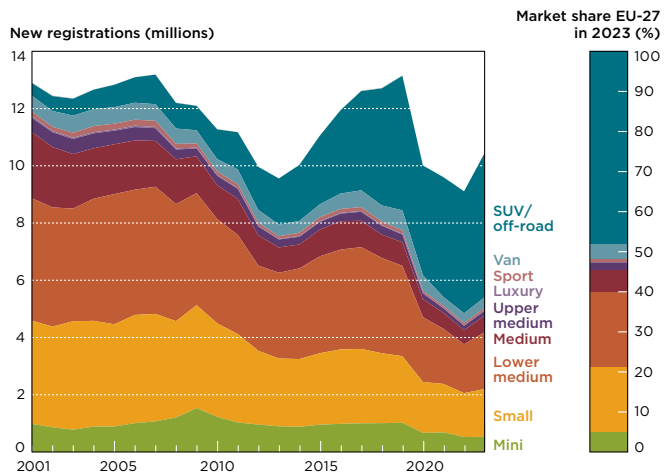
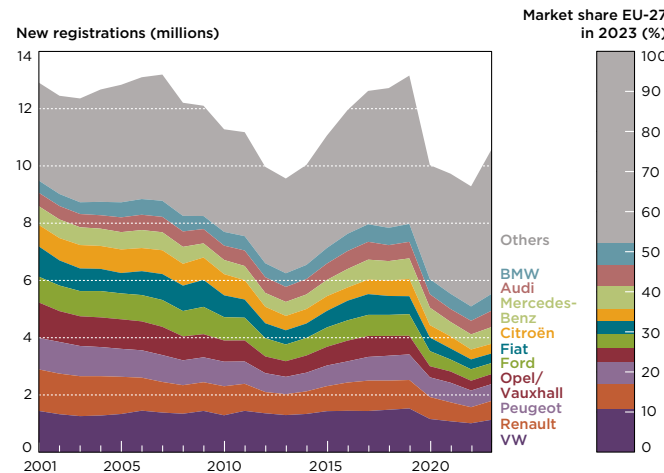


Fig. 2-5

Passenger cars:
New registrations
by brand



While in reality many brands are part of a larger group (for example VW, Audi, Škoda, Seat and others are part of the Volkswagen Group), for this report, each of the brands are shown individually. The reason for this is that brand affiliations have changed in the past (as for example in the case of Daimler and Chrysler) and may change in the future.

Fig. 2-4

Passenger cars:
New registrations
by vehicle segment

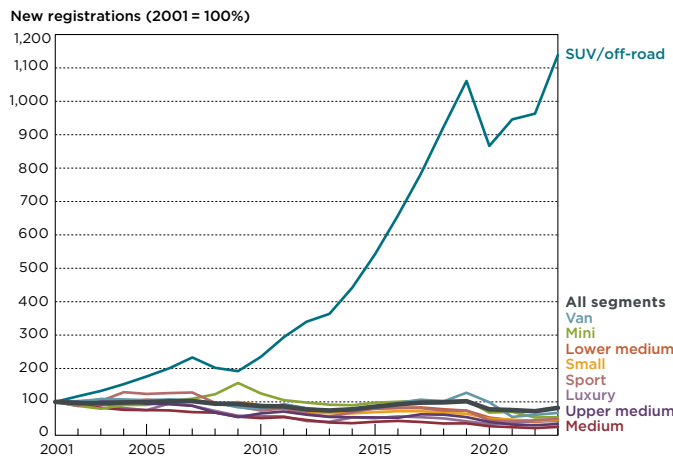
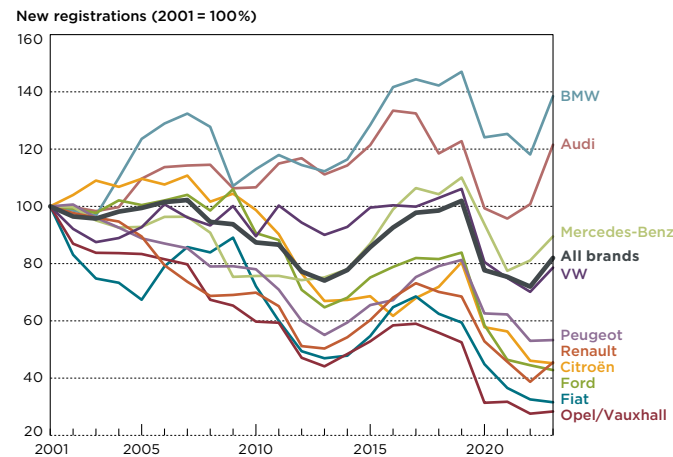


Fig. 2-6

Passenger cars:
New registrations
by brand



Tab. 2-1

Vehicle segment classification used for this report

Segment	Model
Mini	Fiat 500, Fiat Panda, Toyota Aygo
Small	Toyota Yaris, Peugeot 208, Renault Clio
Lower medium	Dacia Sandero, VW Golf, Toyota Corolla
Medium	Tesla Model 3, Mercedes-Benz C-Class, BMW 3-Series
Upper medium	BMW 5-Series, Audi A6, Mercedes-Benz E-Class
Luxury	BMW iX, Mercedes-Benz S-Class, Mercedes-Benz EQS-Class
Sport	BMW 4-Series, Porsche 911 Carrera, BMW Z4
Van	BMW 4-Series, Porsche 911 Carrera, BMW Z4
SUV/off-road	VW T-Roc, Dacia Duster, Peugeot 2008

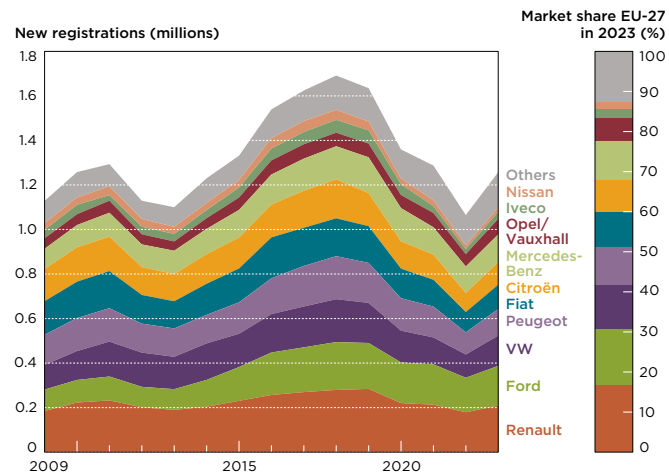


Fig. 2-8

Light commercial vehicles:
New registrations by brand

Fig. 2-7

Light commercial vehicles:
New registrations by country

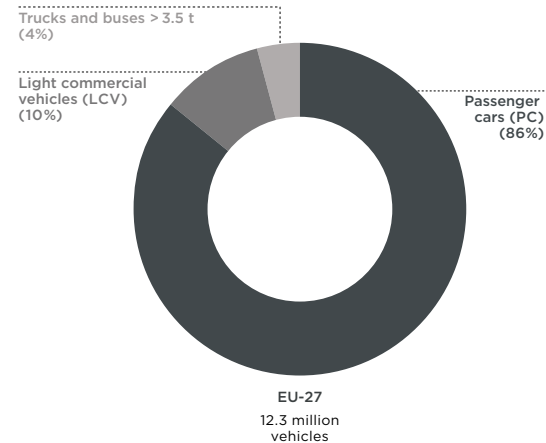
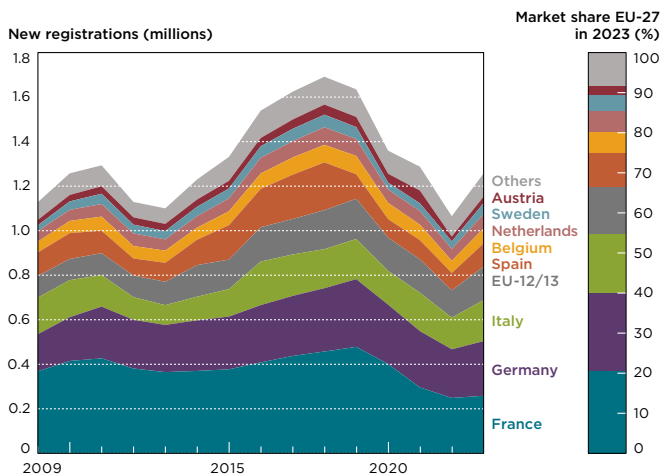


Fig. 2-9

Market shares of passenger cars, light commercial vehicles, and trucks and buses, 2023

Fig. 2-10

Top-selling passenger car models in EU-27, 2023

Model / New registrations numbers and market share, EU-27



Variants of the same model have been grouped together

Fig. 2-11

Top-selling light commercial vehicle models in EU-27, 2023

Model / New registrations numbers and market share, EU-27

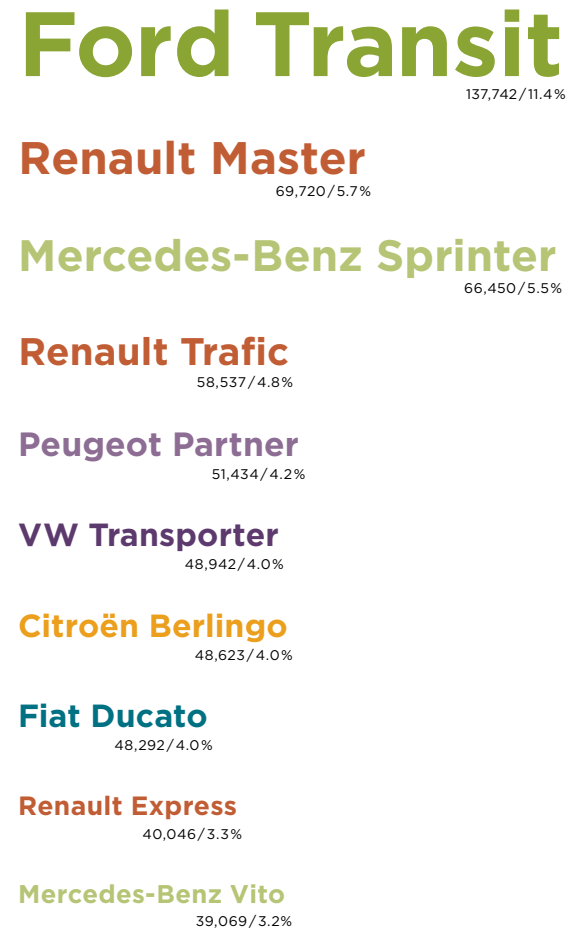
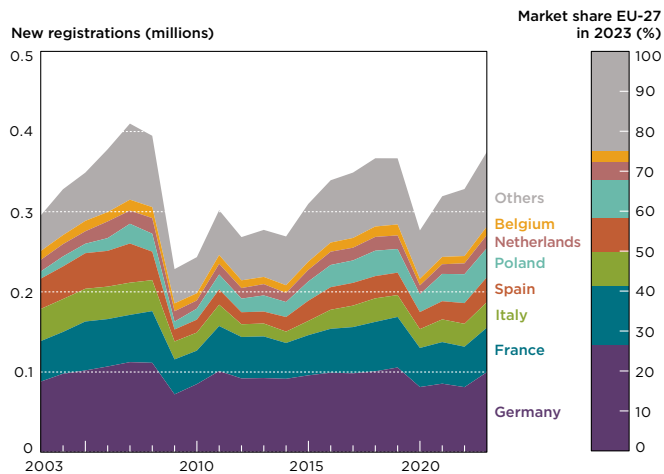


Fig. 2-12

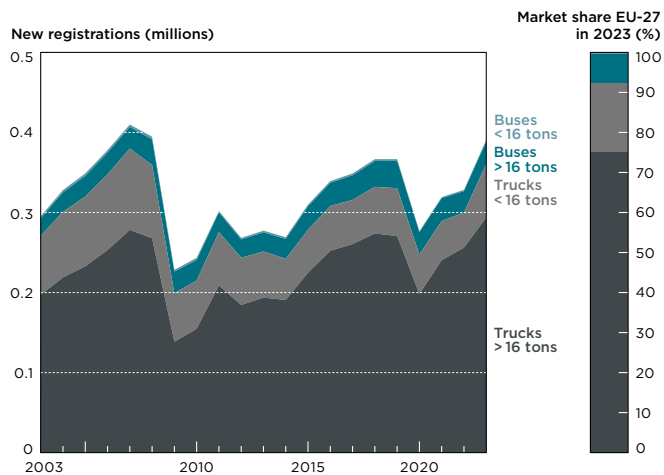
Trucks and buses over 3.5 tons:
New registrations
by country



Data source: ACEA; data until 2007 is for EU-25 only

Fig. 2-13

Trucks and buses over 3.5 tons:
New registrations
by vehicle type



Data source: ACEA; data until 2007 is for EU-25 only, distribution of buses below and above 16 tonnes for 2018 is estimated

Fig. 2-14

Trucks over 7.5 tons: Categories covered and not covered by adopted CO₂ standards, 2023

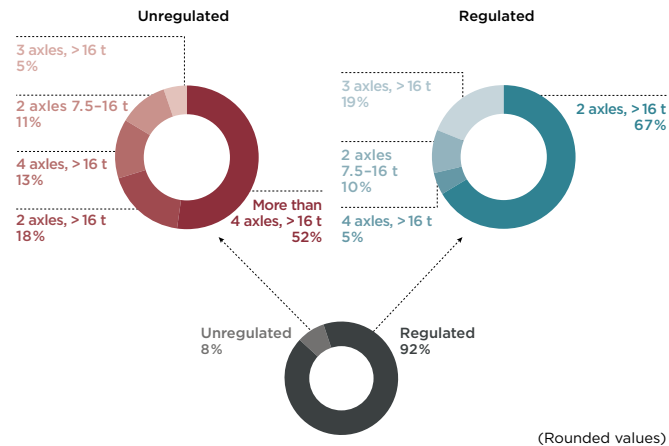
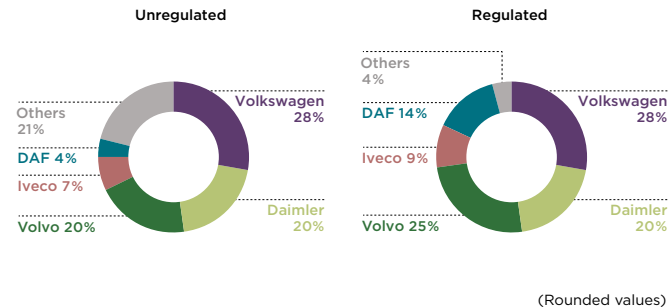


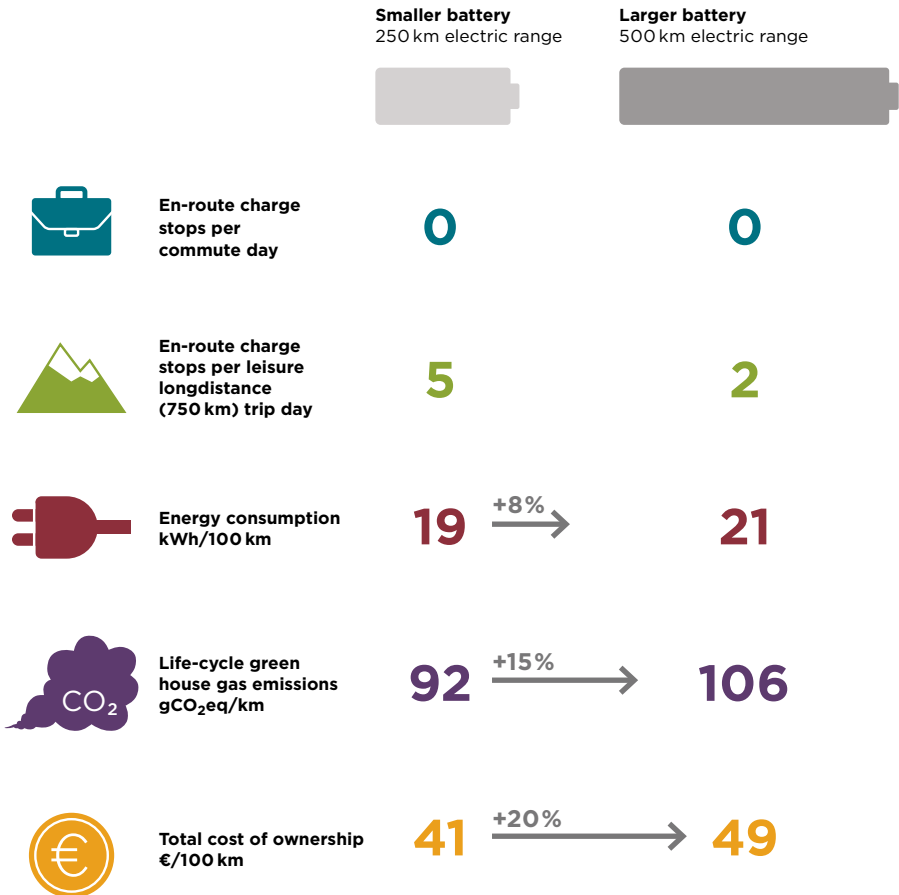
Fig. 2-15

Trucks over 7.5 tons: New registrations by manufacturer in the segments covered and not covered by adopted CO₂ standards, 2023



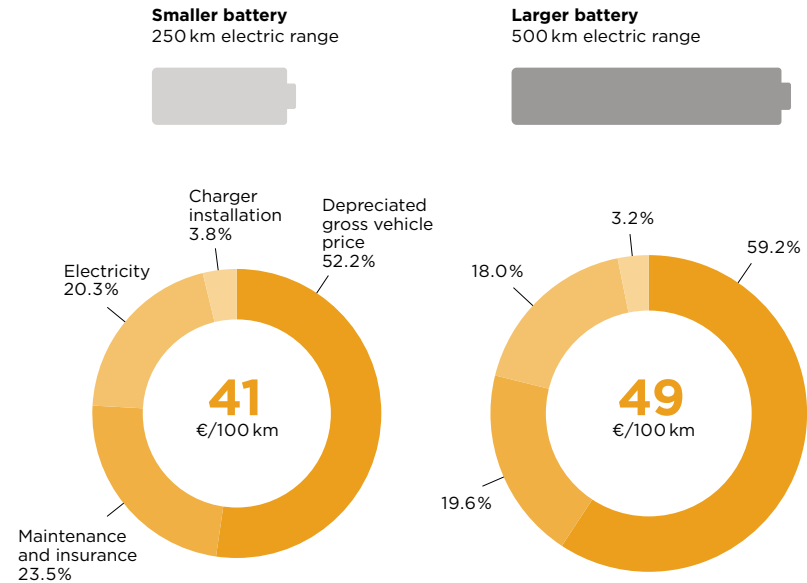
3 FUEL CONSUMPTION & TAILPIPE EMISSIONS

Costs and benefits of doubling driving range for a battery electric vehicle, estimated for an average rural commuter*



* Generic rural user type driving 16,000 km/year, 34km round trip commuting distance 5 days per week, and 7 leisure long-distance trip days per year
 Values shown are rounded
 Data source: <https://t1p.de/htlkh>

Total cost of ownership for a battery electric vehicle, estimated for an average rural commuter*



For most electric vehicle drivers, a smaller battery, with an electric range of around 250 km is fully sufficient. A rural commuter for example, can easily fulfill their daily commute without any charging stops, with a battery of this size. For the occasional leisure long-distance trip, a larger battery (500 km range) can reduce the average number of stops from 5 to 2. However, at the same time, energy consumption increases by 8%, CO₂ by 15% and costs by 20%. This equates to increased costs of over 1300 € per year for the driver, primarily due to the increased gross price of the vehicle.

The fleet-average CO₂ emissions of newly registered cars in the European Union was roughly 108 g/km in 2023, down from 110 g/km in 2022 (**Fig. 3-1**). Emission levels varied widely among Member States, with Spain at a fleet-wide average of 117 g/km and Sweden at 62 g/km in 2023 (**Fig. 3-3**). Italy was the only major market to exceed the 2023 average WLTP CO₂ emissions target of 119 g/km. Meanwhile, average CO₂ emissions in Finland, Sweden, the Netherlands, and Denmark have already fallen well below the WLTP fleet-wide target for 2025.

In 2023, manufacturers were required to meet an average CO₂ target of 119 g/km, with the individual targets dependent on the average vehicle weight of a manufacturer's fleet. Tesla (0 g/km) had the lowest fleet-average CO₂ emissions level of any brand sold in the European Union in 2023. On the other end of the spectrum, Audi (125 g/km) continued to have one of the highest emission levels (**Fig. 3-4**).

While the average CO₂ emission levels for new cars in the European Union, as assessed by the official test procedure, have decreased by about 47% since 2001, vehicle weight has increased by 21% and engine power has increased by 56% (**Fig. 3-6**). These trends can be largely attributed to increasing shares of electric vehicles.

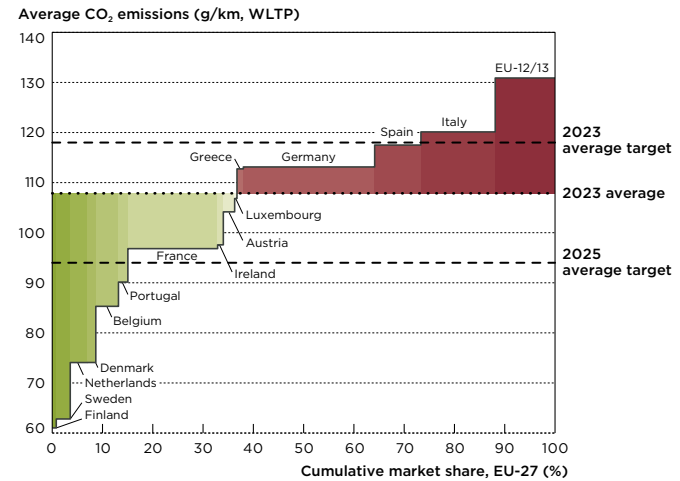


Fig. 3-1

Passenger cars: CO₂ emissions and market share by country, 2023

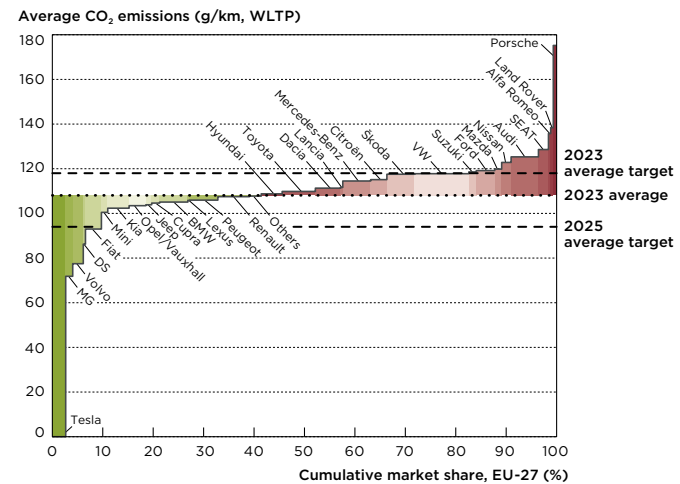
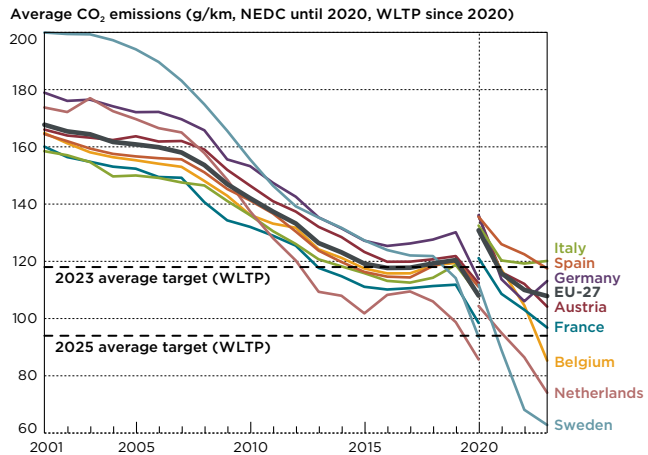


Fig. 3-2

Passenger cars: CO₂ emissions and market share by brand, 2023

Fig. 3-3

Passenger cars:
CO₂ emissions
by country



Average CO₂ emissions (g/km, NEDC until 2020, WLTP since 2020)

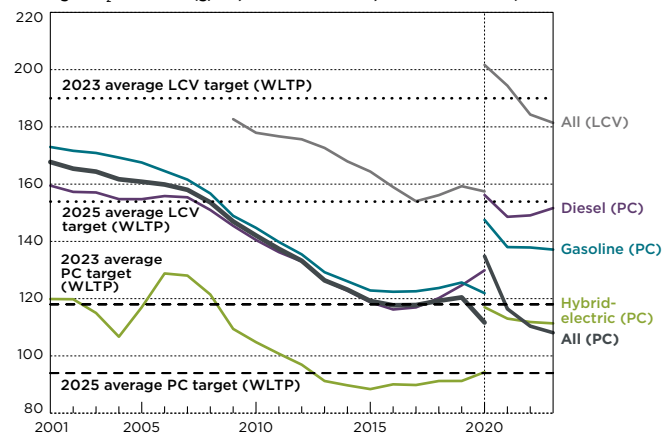
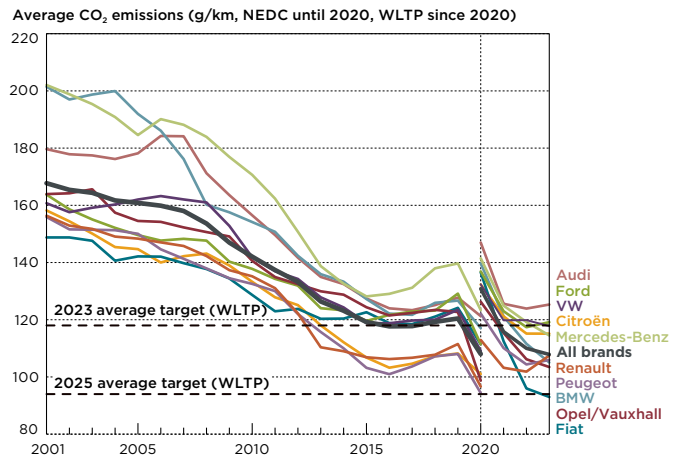


Fig. 3-5

Passenger cars
and light commercial
vehicles:
CO₂ emissions by
engine technology

Fig. 3-4

Passenger cars:
CO₂ emissions
by brand



All passenger cars (2001 = 100%)

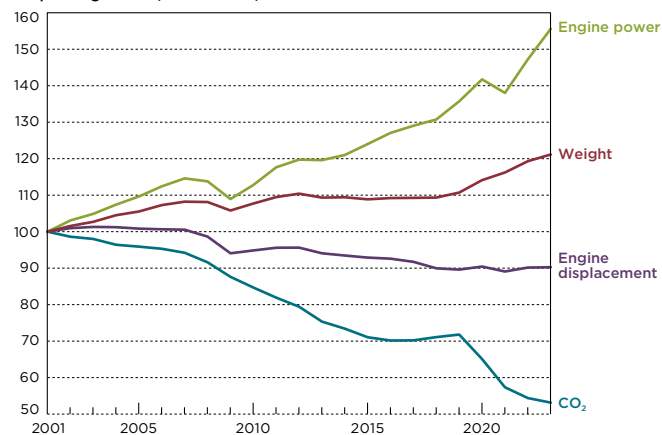


Fig. 3-6

Passenger cars:
CO₂ emissions and
technical
parameters

Fig. 3-7

Light commercial vehicles:
CO₂ emissions
by country

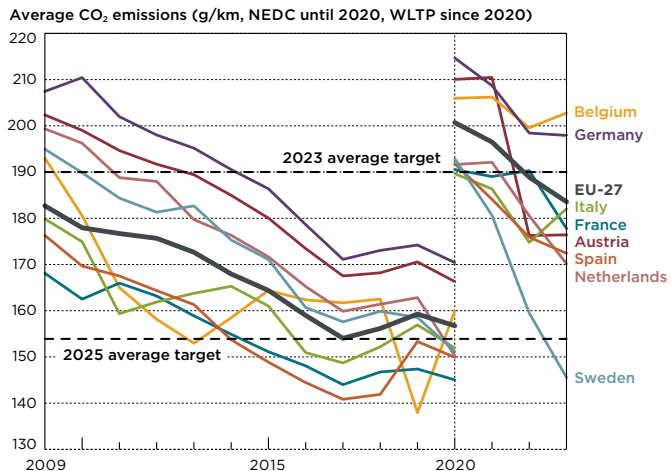


Fig. 3-8

Light commercial vehicles:
CO₂ emissions
by brand

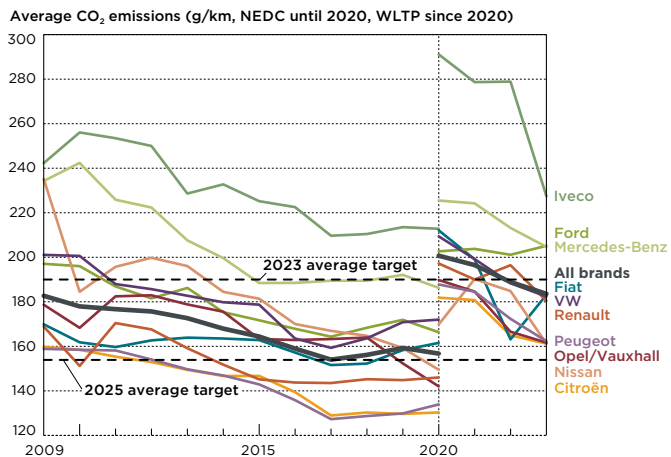


Fig. 3-9

Passenger cars:
CO₂ emissions
versus vehicle mass

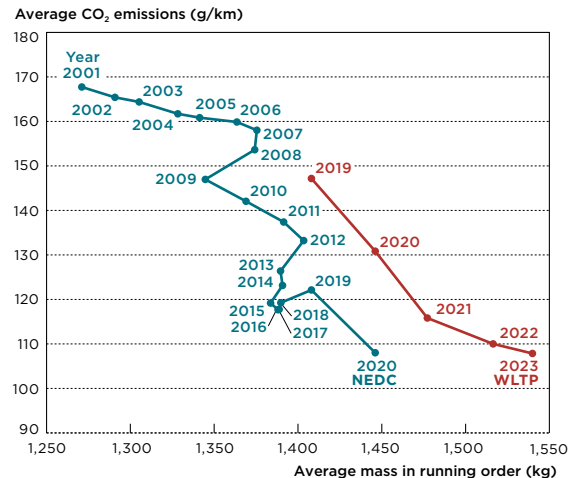
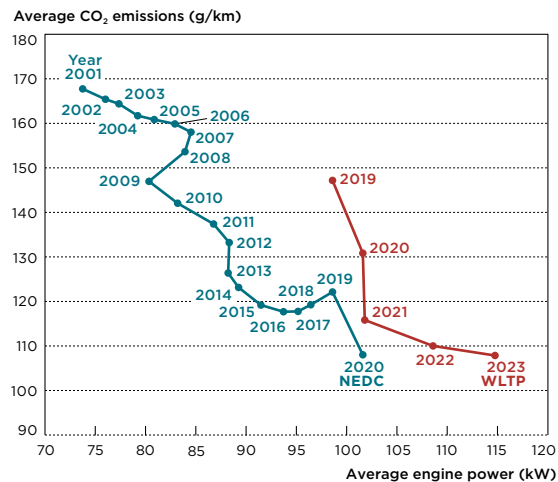


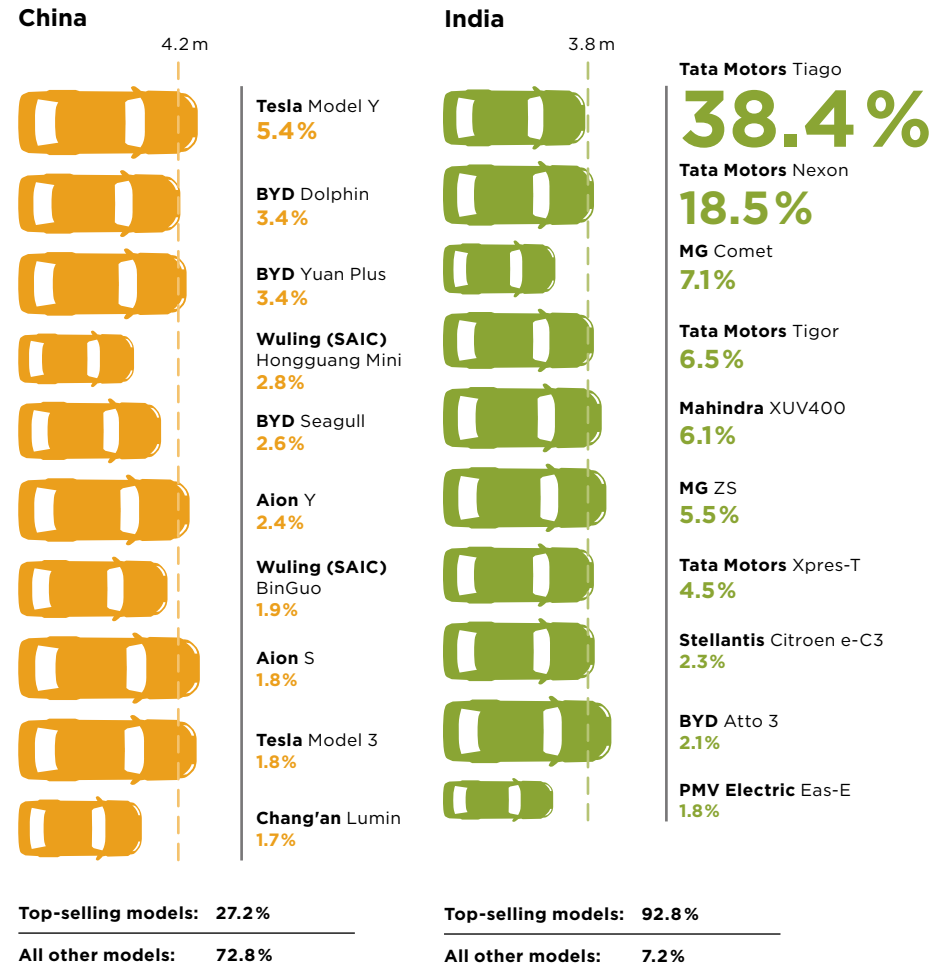
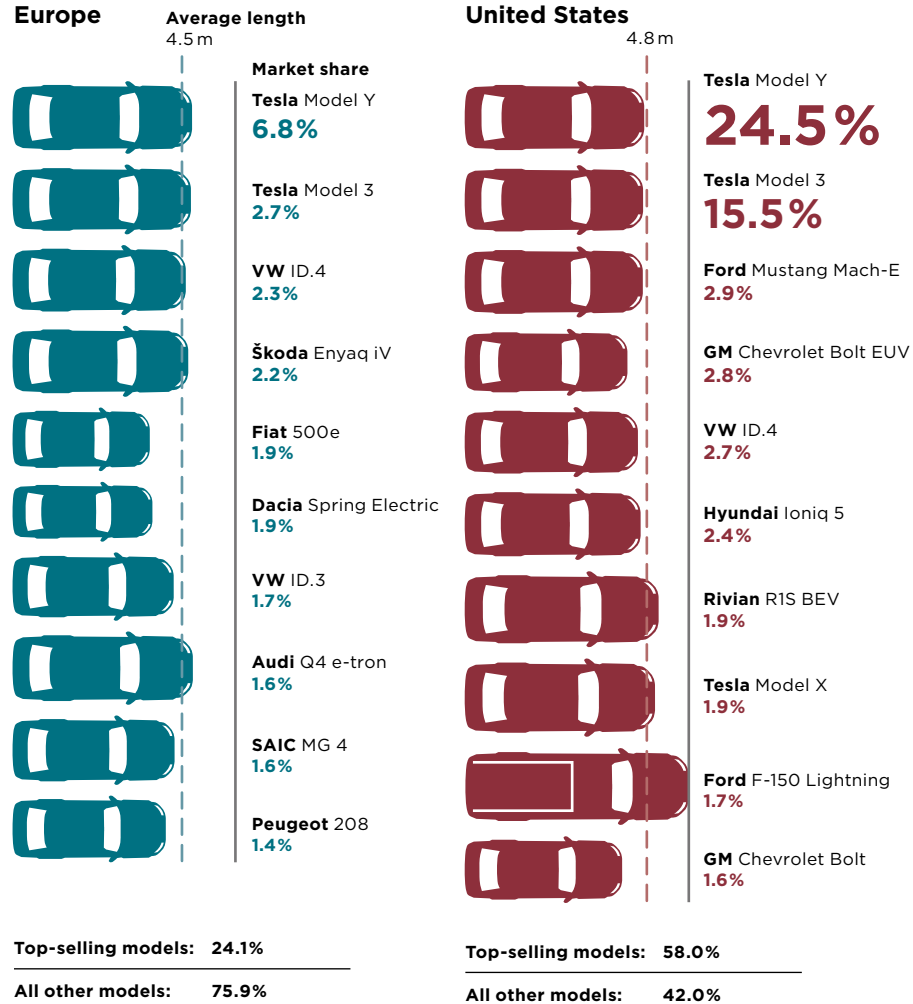
Fig. 3-10

Passenger cars:
CO₂ emissions
versus engine power



4 TECHNOLOGIES & KEY PARAMETERS

Top-selling battery electric passenger car models sold in Europe, China, the United States and India in 2023



While sales of the top selling models for all drive trains made up only 18% of the European market, the top 10 EV models made up 24% of all EV sales in Europe in 2023, 27% in China, 58% in the United States and even 93% in India. Looking at individual models, sales of the Tata Tiago made up over 38% of the EV sales in India, while the Tesla Model Y made up nearly 25% of EV sales in the United States in 2023. For comparison, the most popular vehicle in Europe in 2023, the Toyota Yaris, made up just 3% of total sales. Electric vehicle size also varied by global region. For example, 9 out of 10 of the top EVs in India were smaller than the European average.

Data sources: China: China EV100, ZEDATA; Europe: Dataforce, MarkLines, United States: Atlas Public Policy; India: Segment Y

The decline of diesel technology in the European Union continued in 2023, when its market share of new vehicles fell to 18%, down from 53% in 2014. **(Fig. 4-1)**. This trend is consistent for all brands **(Fig. 4-6)**. Meanwhile, hybrid electric vehicles (HEVs) continued a steady ascent in most countries in 2023, climbing to over 9% of new vehicles sold in the EU-27. Sales of HEVs were particularly strong in Ireland, where they reached a 17% share in 2023 **(Fig. 4-2)**. The market continues to be dominated by Toyota, which produced 75% of the HEVs in 2023 **(Fig. 4-7)**.

In 2023, BEVs were nearly 15% (+3 percentage points from 2022) of all new car sales in the European Union, and PHEVs made up another 8%. Uptake of PHEVs varied strongly by country, and while they were particularly popular in Sweden, Finland, and Belgium, shares in Sweden once again fell compared with the previous year, dropping roughly 2 percentage points. The Volvo brand continued to have the highest share of PHEVs in 2023, 35% **(Fig. 4-3, Fig. 4-8)**. Sales of BEVs continued to climb in Sweden, Denmark, and the Netherlands, jumping to 39%, 36%, and 31% market shares, respectively. With respect to manufacturers of BEVs, Fiat and BMW both sold the highest shares of BEVs in 2023, 18% for each **(Fig. 4-4, Fig. 4-9)**. For light commercial vehicles, the EU market share of BEVs increased to nearly 7% while the share of diesel dropped 3 percentage points **(Fig. 4-12)**.

The average engine power of new passenger cars in the European Union also increased in 2023, to 115 kW, and that is 56% more than in 2001. Vehicles in Sweden, with an average engine power value of 166 kW, were also the heaviest, averaging 1,836 kg. In contrast, Italy's vehicles had an average engine power of 93 kW and weight of 1,408 kg **(Fig. 4-13, Fig. 4-16)**.

Since September 2014, pre Real Driving Emissions (RDE)-Euro 6 emission limits applied to new vehicle type-approvals, and since September 2015, they have been mandatory for all new vehicle sales **(Tab. 4-1)**. The RDE on-road test procedure, introduced in two steps over a multi-year period beginning in September 2017, applies not-to-exceed (NTE) emission limits for nitrogen oxides (NO_x) and particulates **(Tab. 4-2)**. The Euro 6e regulation took effect in September 2023. **(Tab. 4-3)**.

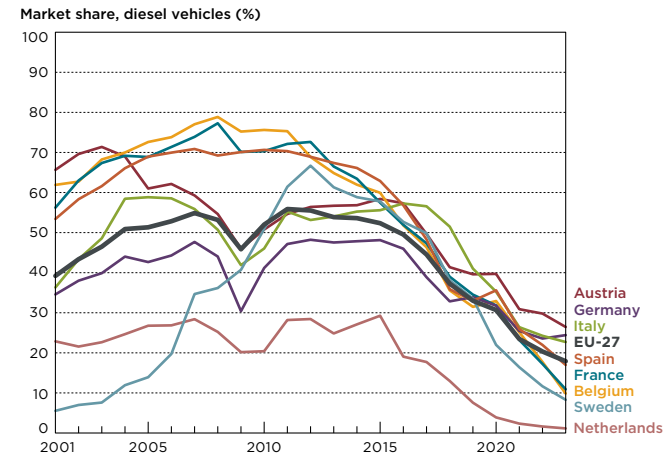


Fig. 4-1

Passenger cars:
Market share
of diesel vehicles
by country

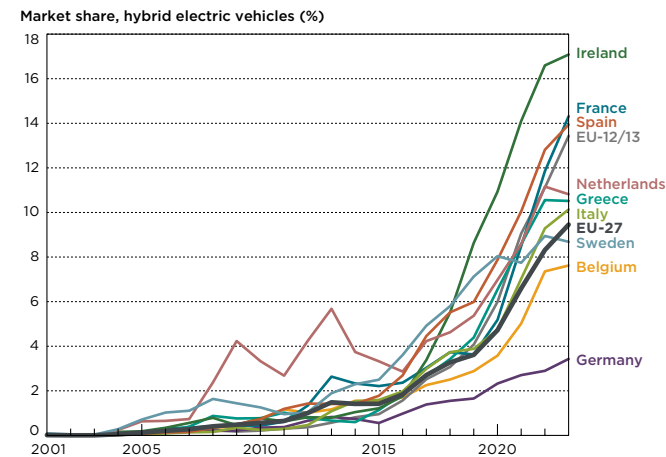


Fig. 4-2

Passenger cars:
Market share
of hybrid electric
vehicles (excl.
plug-in hybrid)
by country

Fig. 4-3

Passenger cars:
Market share
of plug-in hybrid
electric vehicles
by country

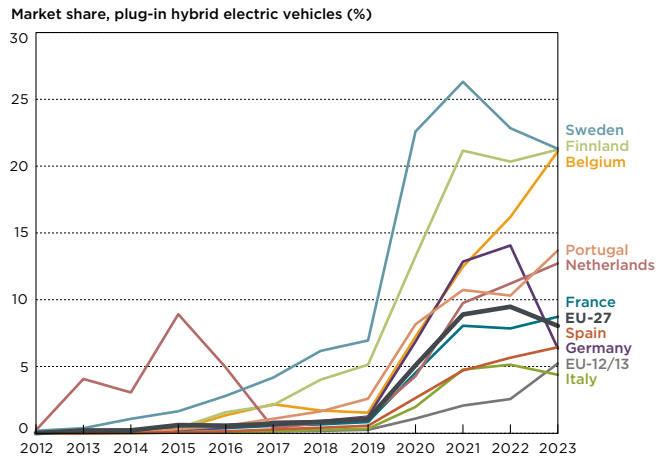


Fig. 4-5

Passenger cars:
Market share
of natural gas and
petroleum gas
vehicles (mono-
and bivalent)
by country

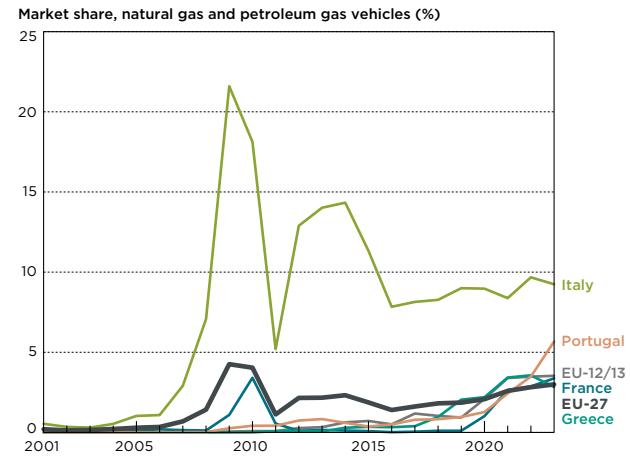


Fig. 4-4

Passenger cars:
Market share
of battery electric
vehicles
by country

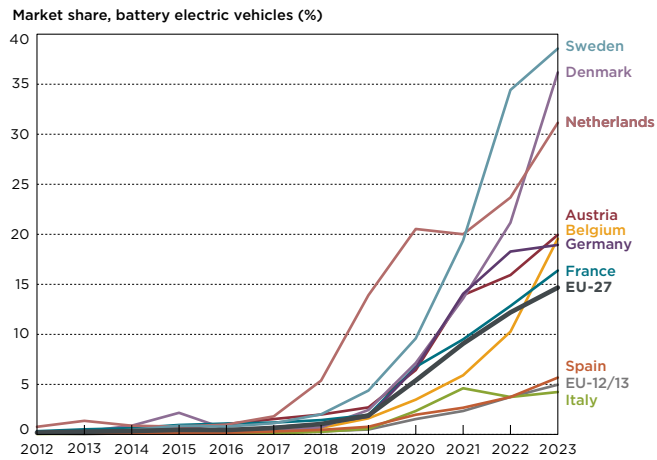


Fig. 4-6

Passenger cars:
Market share
of diesel vehicles
by brand

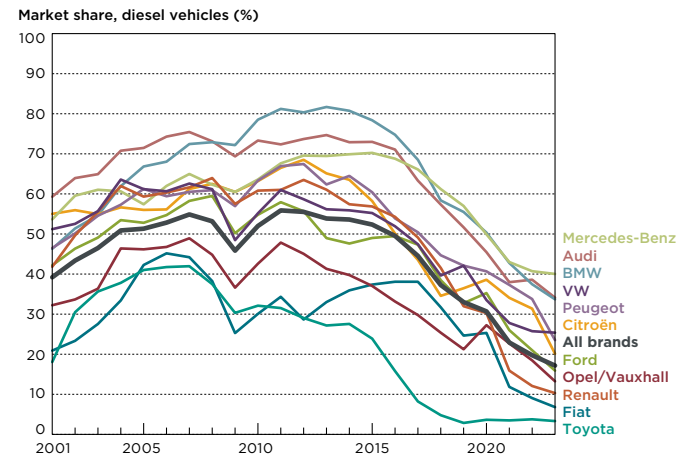


Fig. 4-7

Passenger cars:
Market share
of hybrid electric
vehicles (excl.
plug-in hybrid)
by brand

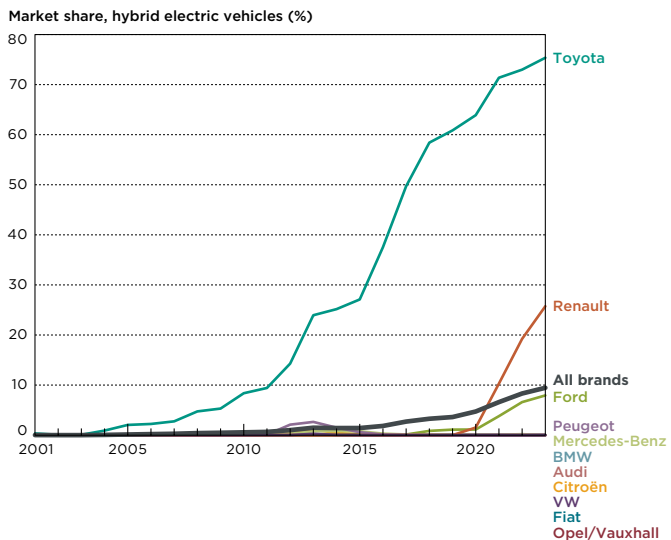


Fig. 4-9

Passenger cars:
Market share
of battery electric
vehicles by brand

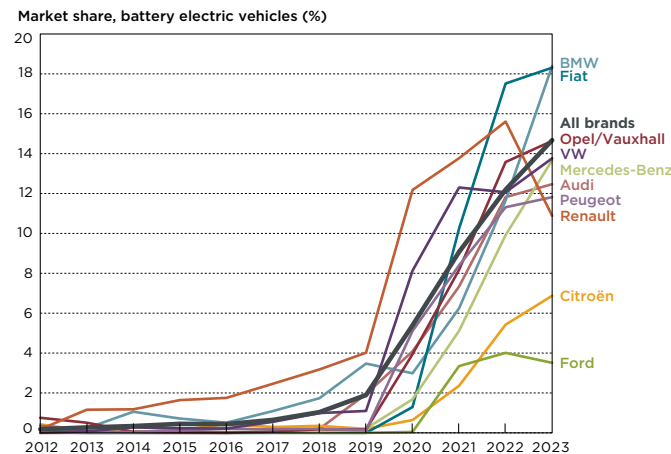


Fig. 4-8

Passenger cars:
Market share
of plug-in hybrid
electric vehicles
by brand

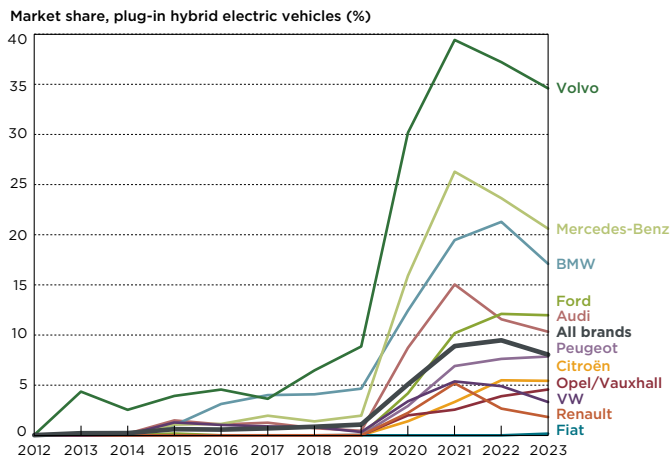


Fig. 4-10

Passenger cars:
Market share
of natural gas and
petroleum gas
vehicles (mono-
and bivalent)
by brand

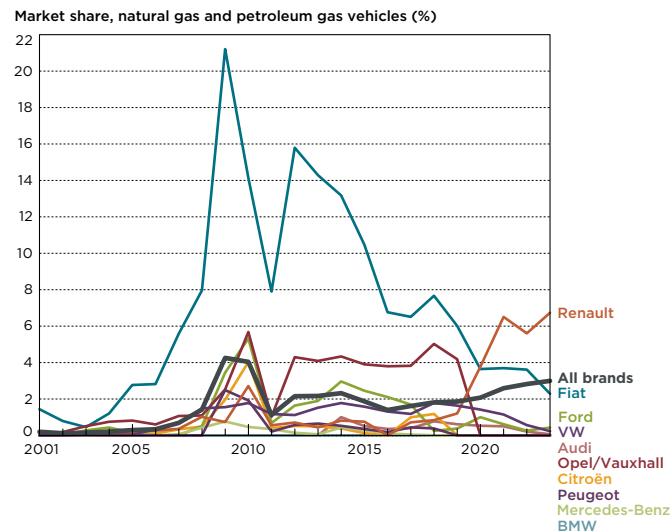


Fig. 4-11

Passenger cars:
Market share
of diesel vehicles
by segment

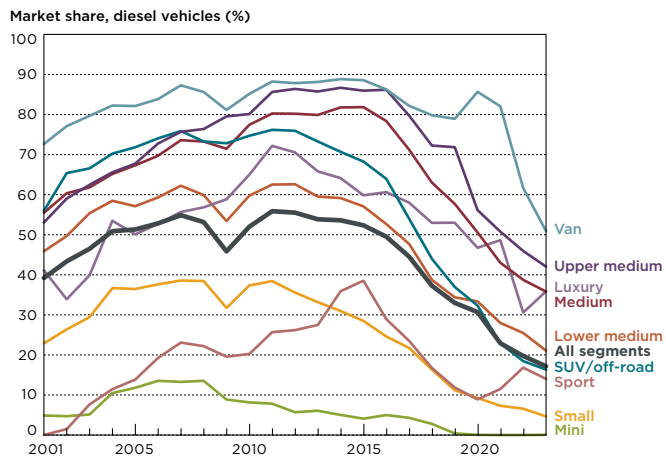


Fig. 4-13

Passenger cars:
Engine power
by country

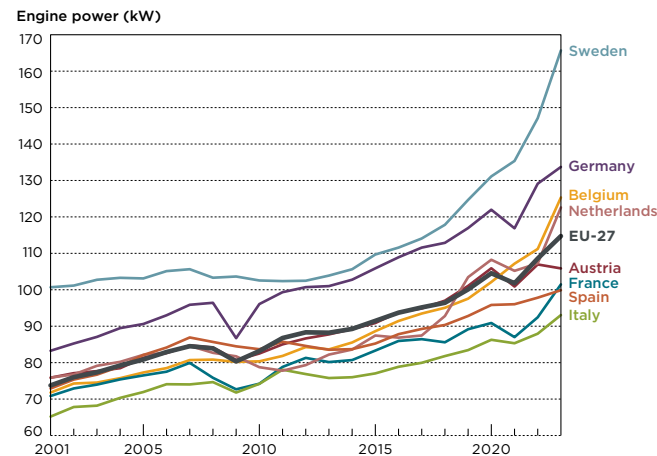
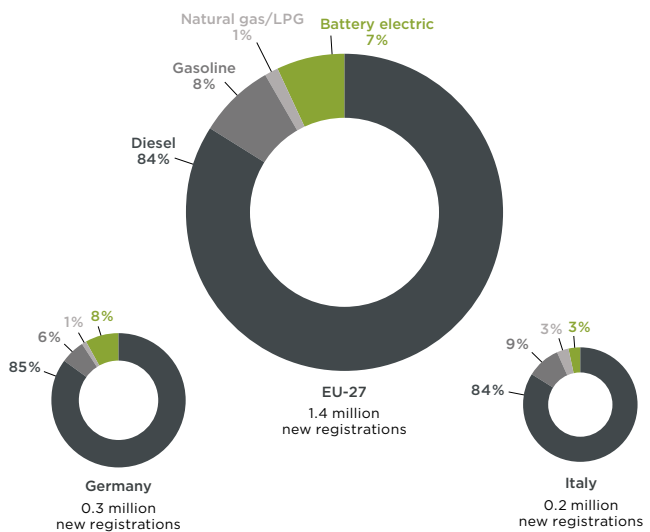


Fig. 4-12

Light commercial
vehicles: Market
share of fuels
by country, 2023



(Rounded values)

Fig. 4-14

Passenger cars:
Engine power
by brand

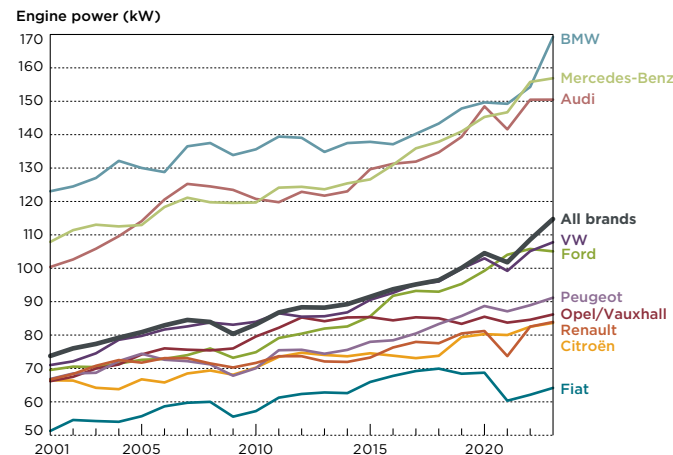


Fig. 4-15

Passenger cars:
Engine power
by segment

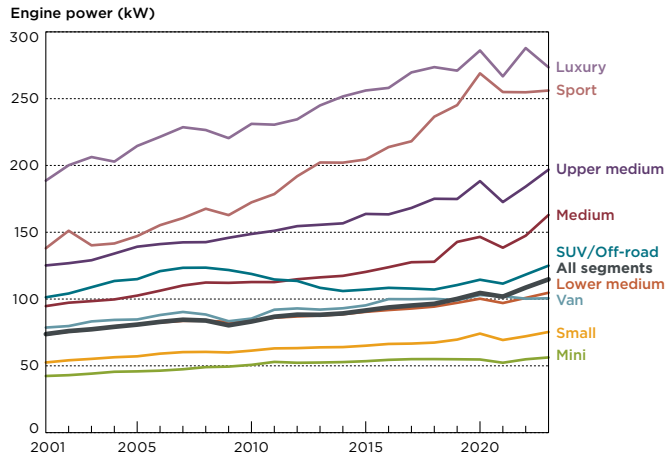


Fig. 4-17

Passenger cars:
Vehicle mass
in running order
by brand

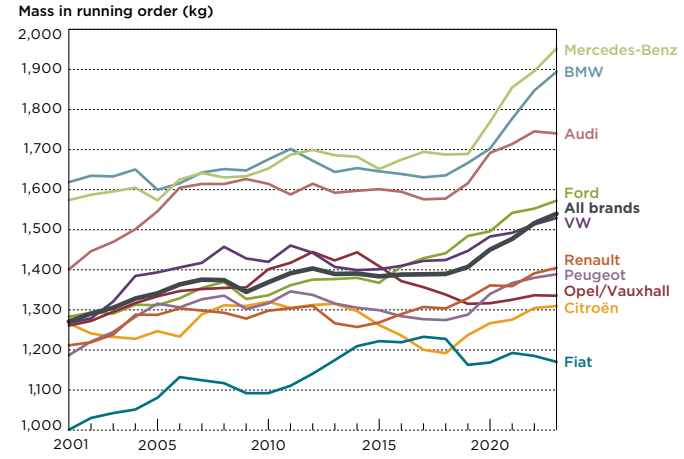


Fig. 4-16

Passenger cars:
Vehicle mass
in running order
by country

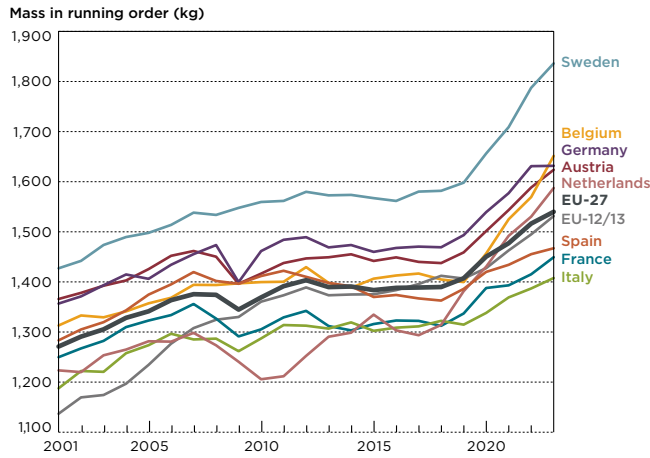
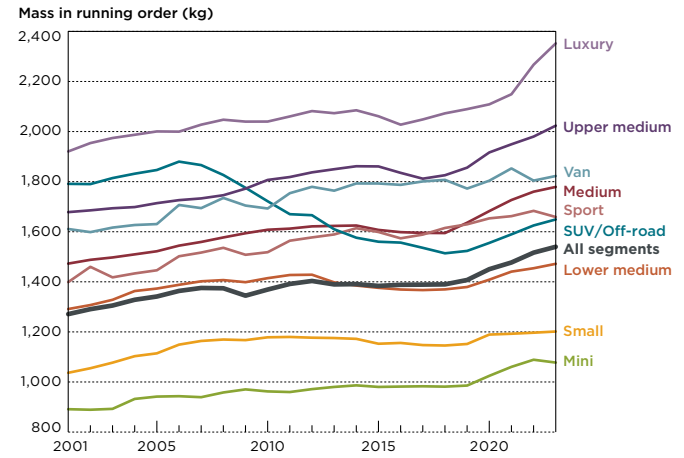


Fig. 4-18

Passenger cars:
Vehicle mass
in running order
by segment



Tab. 4-1

EU emission limits for gasoline and diesel passenger cars

<https://transportpolicy.net>

EU emission limits for gasoline passenger cars (in g/km)

	Effective date*	CO	HC	NMHC	NO _x	HC+NO _x	PM	PN
Euro 3	Jan 2000	2.30	0.20	-	0.15	-	-	-
Euro 4	Jan 2005	1.00	0.10	-	0.08	-	-	-
Euro 5	Sep 2009	1.00	0.10	0.068	0.06	-	0.0050	-
Euro 6	Sep 2014	1.00	0.10	0.068	0.06	-	0.0050	6.0x10 ^{11**}

EU emission limits for diesel passenger cars (in g/km)

	Effective date*	CO	HC	NMHC	NO _x	HC+NO _x	PM	PN
Euro 3	Jan 2000	0.64	-	-	0.50	0.56	0.0500	-
Euro 4	Jan 2005	0.50	-	-	0.25	0.30	0.0250	-
Euro 5	Sep 2009	0.50	-	-	0.18	0.23	0.0050	-
Euro 6	Sep 2014	0.50	-	-	0.08	0.17	0.0050	6.0x10 ^{11**}

* For new vehicle types

** 6.0x10¹² within first three years from Euro 6 effective dates.

Applies only to diesel and direct-injection gasoline cars.

Emission limits for light commercial (N1) vehicles class I are identical to passenger car limits listed in Tab. 5-1. N1 class II and N1 class III emission limits are not listed here.

All emission levels as tested in the New European Drive Cycle (NEDC). Emissions levels in real-world driving may differ from the test cycle values. **CO**: Carbon monoxide; **HC**: Hydrocarbon; **NMHC**: Nonmethane hydrocarbon; **NO_x**: Nitrogen oxides; **HC+NO_x**: Hydrocarbon and nitrogen oxides; **PM**: Particulate matter; **PN**: Particulate number

Tab. 4-2

RDE timeline and conformity factors

Implementation of the Real Driving Emissions (RDE) on-road test procedure

Vehicle class		Euro 6d-TEMP	Euro 6d
Passenger cars (M1) and small light commercial vehicles (N1 CL 1)	New types	Sep 1 st 2017	Jan 1 st 2020
	All vehicles	Sep 1 st 2019	Jan 1 st 2021
Other light commercial vehicles (N1 CL 2, 3 and N2)	New types	Sep 1 st 2018	Jan 1 st 2021
	All vehicles	Sep 1 st 2020	Jan 1 st 2022

Not-to-exceed (NTE) emission limits of an RDE test result for the entire trip and the urban part alone

$$NTE_{\text{pollutant}} = CF_{\text{pollutant}} \times \text{EURO 6}_{\text{pollutant}} \text{ limit}$$

Conformity Factor (CF)

Pollutant	Mass of oxides of nitrogen (NO _x)	Number of particles (PN)	Mass of carbon monoxide (CO)
Temporary CF Euro 6d-TEMP	2.1	1 + margin PN, with margin = 0.5	no on-road limit/ only measured
Final CF Euro 6d	1 + margin, with margin = 0.43	1 + margin PN, with margin = 0.5	no on-road limit/ only measured
PEMS margin Euro 6e	1.1	1.34	no on-road limit/ only measured

Implementation of the Euro 6e standard for new vehicles

		Euro 6e	Euro 6e-bis	Euro 6e-bis-FCM
Applies to all category M1, N1 and N2 vehicles covered by the light-duty vehicle regulation	New type approvals	1.9.2023	1.1.2025	1.1.2027
Applies to all category M1, N1 and N2 vehicles covered by the light-duty vehicle regulation	New vehicles	1.9.2024	1.1.2026	1.1.2028

Tab. 4-3

Timeline for introduction of Euro 6e emission standard

2023

Passenger cars

	Total new sales/registrations	Total new sales/registrations [%]	Diesel [%]	Full hybrid (excl. plug-in hybrid) [%]	Plug-in hybrid [%]	Battery electric/fuel cell [%]	Natural gas (mono-/bivalent, incl. LPG) [%]	Engine power [KW]	Engine size [ccm]	Mass in running order [kg]	CO ₂ WLTP [g/km]
EU-27	10,584,262	100	17	9.5	8.0	14.7	3.0	115	1544	1540	108
Germany	2,764,496	26	22	3.4	6.3	18.9	0.5	134	1724	1632	113
France	1,889,380	18	12	14.3	8.7	16.4	3.4	101	1395	1449	97
Italy	1,564,087	15	22	10.1	4.4	4.2	9.2	93	1416	1408	120
EU-12/13	1,258,834	12	18	13.4	5.2	5.0	3.5	113	1635	1531	131
Spain	973,888	9	18	13.9	6.4	5.7	2.7	100	1475	1467	117
Belgium	477,107	5	9	7.6	21.1	19.6	0.7	125	1523	1651	85
Netherlands	364,726	3	0	10.8	12.7	31.1	0.6	123	1420	1587	74
Sweden	294,538	3	7	8.7	21.3	38.6	0.7	166	1743	1836	63
Austria	238,491	2	25	5.7	7.1	20.0	0	106	1633	1624	104
Portugal	197,981	2	14	5.5	13.7	18.4	5.7	110	1365	1518	90
Denmark	172,781	2	8	4.7	10.0	36.2	0	150	1530	1705	74
Greece	134,034	1	14	10.5	6.6	4.7	2.8	93	1351	1360	113
Ireland	119,829	1	24	17.1	9.3	18.8	0	106	1568	1574	98
Finland	85,139	1	3	15.7	21.2	34.5	0.5	123	1634	1750	61
Luxembourg	48,951	0	20	4.4	9.8	22.8	0.1	124	1794	1667	107
Norway	126,858	-	2	6.0	8.0	82.4	0	154	1988	2019	15
Iceland	17,361	-	14	9.2	10.0	50.3	0	178	1760	1859	62
VW	1,146,205	12	25	0	3.3	14.7	0.2	108	1501	1536	116
Toyota	713,176	8	3	75.4	3.4	2.5	0.1	84	1679	1390	109
Renault	661,126	7	10	25.7	1.8	10.9	6.7	84	1287	1405	107
BMW	595,159	6	33	0	17.0	19.1	0	170	2138	1897	104
Škoda	589,972	6	31	0	2.7	11.1	0.4	107	1525	1498	116
Mercedes-Benz	589,419	6	40	0	20.5	14.3	0	157	1941	1956	114
Peugeot	588,662	6	23	0.1	7.9	12.1	0	91	1317	1390	106
Audi	576,763	6	34	0	10.3	13.2	0.1	150	1884	1745	124
Dacia	529,033	6	9	1.9	0.1	11.2	38.1	73	1092	1246	111
Kia	451,294	5	7	9.6	10.5	13.1	2.4	105	1382	1477	102
Hyundai	444,566	5	5	16.5	5.5	15.0	1.1	104	1355	1466	107
Ford	390,379	4	16	7.9	12.0	4.5	0.4	107	1503	1580	118
Opel/Vauxhall	352,884	4	13	0	4.6	15.1	0	86	1274	1337	103
Citroën	340,411	4	20	0	5.5	7.2	0	84	1290	1311	115
Fiat	333,872	4	7	0	0.2	18.4	2.3	64	1065	1171	93
Tesla	308,404	3	0	0	0	100	0	253	-	1992	0
Volvo	230,523	2	18	0	34.3	26.4	0	169	1896	1995	75
SEAT	209,350	2	15	0	2.6	0.2	0.9	90	1281	1328	129
Nissan	202,931	2	1	40.1	0.4	10.1	0.5	107	1364	1549	120

2023

Light commercial vehicles

	Total new sales/registrations	Total new sales/registrations [%]	Diesel [%]	Full hybrid (excl. plug-in hybrid)	Plug-in hybrid [%]	Battery electric/fuel cell [%]	Natural gas (mono-/bivalent, incl. LPG) [%]	Engine power [kW]	Engine size [ccm]	Mass in running order [kg]	Wheelbase [mm]	Wheeltrack [mm]	Footprint [m ²]	CO ₂ (WLTP) [g/km]
EU-27	1,257,340	100	83	0.7	0.1	6.8	1.4	100	1911	1917	3159	1622	5.1	184
France	258,533	21	78	1.7	0.1	7.3	1.0	97	1834	1814	-	-	-	178
Germany	245,337	20	85	0	0	7.8	1.2	109	2021	2038	-	-	-	198
Italy	184,275	15	80	1.7	0.5	3.2	3.4	95	1846	1860	-	-	-	182
EU-12/13	149,869	12	89	0.1	0	3.1	1.2	105	2008	2030	2819	1552	4.4	197
Spain	104,903	8	90	0.1	0.1	4.2	0.4	88	1766	1776	-	-	-	172
Belgium	67,365	5	88	0.1	0.1	4.5	0.2	109	1979	1998	-	-	-	203
Netherlands	63,997	5	81	0	0	14.4	1.5	99	1962	1936	3273	1645	5.4	170
Sweden	49,479	4	73	0	0	19.3	5.4	106	1921	1944	3208	1627	5.2	146
Austria	29,736	2	82	0	0	10.6	0.1	93	1904	1917	3223	1638	5.3	176
Ireland	26,124	2	95	0.1	0.1	3.3	0	102	1948	1909	-	-	-	189
Portugal	25,828	2	91	0	0	8.5	0.1	88	1700	1677	3030	1595	4.8	157
Denmark	25,776	2	81	1.2	1.6	11.2	0	109	1965	2066	3249	1649	5.4	176
Finland	10,915	1	83	0.2	0.1	14.4	0.1	107	1965	2011	-	-	-	176
Greece	10,030	1	80	1.0	0	9.8	0.5	103	1893	1797	-	-	-	172
Luxembourg	5,173	0	89	0	0	7.3	0.1	97	1945	1918	-	-	-	187
Norway	27,999	-	68	0	0.4	30.1	0	121	2042	1986	-	-	-	141
Iceland	1,923	-	69	0	0	17.9	0.1	103	1897	1843	-	-	-	158
Renault	208,942	18	84	2.0	0	5.6	0.4	92	1904	1845	3198	1598	5.1	180
Ford	178,526	15	83	0.1	0.1	3.1	1.6	108	1906	2070	3110	1645	5.1	205
VW	136,045	12	90	0	0.2	6.1	0.3	105	1996	1962	3171	1632	5.2	182
Mercedes-Benz	124,408	11	90	0	0	8.3	0	109	1889	2223	3393	1669	5.7	205
Peugeot	119,164	10	82	0	0.1	11.3	0	92	1721	1716	3066	1608	4.9	162
Fiat	109,166	9	92	0	0	2.7	0	91	1797	1797	3209	1644	5.3	183
Citroën	101,580	9	84	0	0	7.9	0	90	1706	1689	3061	1611	4.9	161
Opel/Vauxhall	69,854	6	82	0	0	14.7	0	93	1786	1781	3090	1609	5.0	162
Toyota	67,207	6	82	5.1	0.1	7.1	1.6	110	2132	1897	2940	1562	4.6	188
Iveco	31,869	3	98	0	0	0	1.6	114	2615	2491	3612	1682	6.1	227

2022

Light commercial vehicles

	Total new sales/registrations	Total new sales/registrations [%]	Diesel [%]	Full hybrid (excl. plug-in hybrid)	Plug-in hybrid [%]	Battery electric/fuel cell [%]	Natural gas (mono-/bivalent, incl. LPG) [%]	Engine power [kW]	Engine size [ccm]	Mass in running order [kg]	Wheelbase [mm]	Wheeltrack [mm]	Footprint [m²]	CO ₂ (WLTP) [g/km]
EU-27	1,064,669	100	86	0.5	0.2	5.0	1.2	98	1894	1910	3243	1636	5.3	188
France	248,697	23	86	1.3	0.2	4.7	0.7	95	1876	1876	3225	1636	5.3	191
Germany	218,506	21	86	0.1	0.1	7.8	1.2	107	2013	2047	3387	1666	5.6	198
Italy	142,204	13	76	0.9	0.4	2.7	4.5	89	1749	1760	2998	1590	4.8	174
EU-12/13	122,684	12	92	0	0	2.1	0.4	102	1951	1984	3426	1651	5.7	203
Spain	78,031	7	91	0.2	0.2	2.9	0.5	87	1789	1799	3116	1607	5.0	176
Belgium	54,440	5	90	0	0.2	3.2	0.2	106	1942	1966	3313	1652	5.5	199
Netherlands	53,456	5	88	0	0.1	8.0	1.5	95	1939	1926	3264	1647	5.4	181
Sweden	34,044	3	78	0	0.7	14.0	3.7	100	1873	1892	3170	1622	5.1	160
Denmark	25,350	2	84	1.0	1.4	7.1	0	103	1895	2105	3262	1658	5.4	173
Ireland	22,552	2	96	0	0	2.2	0	101	1960	1929	3228	1646	5.3	191
Austria	21,295	2	83	0	0	9.4	0.3	92	1877	1910	3195	1641	5.2	176
Portugal	20,609	2	96	0	0	3.9	0.2	88	1719	1693	3034	1595	4.8	165
Finland	9,733	1	90	0.2	0.2	6.0	0.1	102	1958	1999	3372	1667	5.6	191
Greece	9,539	1	91	0.5	0.2	1.7	0.4	95	1740	1722	2969	1562	4.6	178
Luxembourg	3,529	0	93	0	0	4.0	0.1	95	1896	1897	3292	1651	5.4	191
Norway	27,702	-	75	0	0.8	23.3	0.1	116	2002	1946	3105	1620	5.0	152
Iceland	1,564	-	78	0	0	11.1	0.2	103	1905	1856	3076	1578	4.9	174
Renault	177,780	18	87	1.6	0.1	4.7	0.2	91	1932	1871	3366	1629	5.5	196
Ford	154,978	16	88	0.1	0.4	1.2	1.1	104	1859	2067	3178	1665	5.3	200
Mercedes-Benz	118,378	12	93	0	0	5.6	0	109	1906	2227	3543	1686	6.0	212
VW	104,648	11	93	0	0.2	3.0	0.3	98	1953	1940	3298	1660	5.5	188
Peugeot	99,277	10	88	0	0.1	6.9	0	93	1786	1749	3190	1647	5.3	171
Fiat	91,304	9	86	0	0	3.2	1.2	82	1611	1644	3002	1579	4.7	162
Citroën	86,123	9	88	0	0	5.8	0	89	1733	1698	3128	1635	5.1	165
Opel/Vauxhall	55,469	6	86	0	0	11.4	0	92	1811	1789	3249	1650	5.4	164
Toyota	53,338	5	85	4.5	0.1	5.6	0	108	2084	1873	3031	1574	4.8	187
Iveco	22,930	2	98	0	0	0	1.8	113	2549	2427	3654	1691	6.2	272

2021

Light commercial vehicles

	Total new sales/registrations	Total new sales/registrations [%]	Diesel [%]	Full hybrid (excl. plug-in hybrid)	Plug-in hybrid [%]	Battery electric/fuel cell [%]	Natural gas (mono-/bivalent, incl. LPG) [%]	Engine power [kW]	Engine size [ccm]	Mass in running order [kg]	Wheelbase [mm]	Wheeltrack [mm]	Footprint [m²]	CO ₂ (WLTP) [g/km]
EU-27	1,275,832	100	90	0.3	0.1	2.9	1.4	96	1916	1907	3254	1640	5.3	196
France	296,054	23	90	0.8	0.2	2.8	0.5	92	1847	1803	3173	1629	5.2	189
Germany	252,879	20	89	0.1	0.1	4.7	1.1	104	2033	2028	3379	1664	5.6	208
Italy	161,089	13	83	0.6	0.2	2.1	5.1	89	1831	1846	3090	1617	5.0	186
EU-12/13	149,951	12	94	0	0	0.9	0.5	101	1981	1994	3433	1654	5.7	207
Spain	86,036	7	92	0	0	1.9	2.5	87	1805	1790	3134	1611	5.0	183
Belgium	69,738	5	93	0	0.1	1.0	1.0	103	1955	1955	3314	1652	5.5	206
Netherlands	60,974	5	92	0	0.1	4.6	1.5	96	1969	1927	3291	1649	5.4	192
Austria	57,151	4	93	0	0	4.0	0.2	100	2013	2040	3342	1666	5.6	210
Sweden	34,903	3	87	0	0.2	7.3	3.5	100	1903	1909	3200	1619	5.2	180
Denmark	28,092	2	89	0.6	1.0	4.6	0	100	1891	1944	3242	1651	5.4	180
Ireland	27,911	2	96	0	0.1	2.3	0	97	1938	1917	3268	1641	5.4	191
Portugal	25,379	2	99	0	0	1.1	0	86	1701	1646	3036	1589	4.8	172
Finland	11,614	1	94	0.1	0.3	2.6	0.1	101	1953	2011	3363	1669	5.6	201
Greece	10,029	1	91	0.1	0	1.0	1.6	97	1831	1774	3021	1574	4.8	189
Luxembourg	4,032	0	95	0	0.1	2.2	0.1	95	1897	1869	3275	1646	5.4	203
Norway	30,718	-	82	0	0.8	16.1	0	109	1927	1973	3117	1613	5.0	166
Iceland	1,113	-	88	0	0	5.9	0.2	105	1972	2001	3144	1598	5.0	191
Renault	212,719	18	90	1.0	0.2	4.7	0.2	87	1896	1792	3311	1618	5.4	189
Ford	177,492	15	91	0	0.5	0	0.2	104	1875	2106	3191	1672	5.3	202
Peugeot	138,949	12	94	0	0	2.6	0	91	1800	1736	3192	1654	5.3	183
Mercedes-Benz	122,333	10	96	0	0	4.2	0	108	2010	2239	3571	1688	6.0	223
VW	120,723	10	95	0	0	1.7	0.8	98	1965	1971	3296	1658	5.5	199
Fiat	120,139	10	91	0	0	0.5	4.3	90	1835	1825	3214	1639	5.3	201
Citroën	112,999	10	94	0	0	1.8	0	88	1767	1706	3161	1648	5.2	180
Opel/Vauxhall	64,191	5	93	0	0	4.0	0	91	1834	1768	3297	1633	5.4	184
Toyota	56,034	5	90	3.0	0.1	3.0	0	106	2103	1881	3038	1571	4.8	196
Iveco	30,610	3	98	0	0	0	1.6	111	2522	2532	3661	1687	6.2	279
Nissan	26,029	2	88	0	0	10.4	0.1	105	2054	1900	3201	1599	5.1	192

2023

Heavy-duty trucks

Class 5 (4x2 tractor trailer, gross vehicle weight >16 tonnes)

	Total new sales/registrations	Total registrations [%]	Diesel [%]	ZEV [%]	Natural gas [%]	Engine size [ccm]	Power [kW]	CO ₂ long-haul [??]	CO ₂ regional delivery [??]
EU-27	175,440	100	98	0	1	12,694	358	50.71	78.15
EU-12	56,144	32	99	0	0	12,737	354	49.94	76.10
Germany	39,572	23	98	1	1	12,567	359	51.30	79.45
France	27,747	16	98	0	2	12,717	361	50.79	82.14
Spain	18,508	11	99	0	1	12,794	364	50.73	82.22
Italy	13,289	8	98	0	2	12,848	368	51.60	84.83
Netherlands	8,045	5	98	2	0	12,524	344	50.43	55.25
Belgium	5,349	3	99	0	1	-	-	51.32	76.64
Austria	3,867	2	99	0	0	12,739	371	51.87	77.58
Luxembourg	1,007	1	100	0	0	12,684	354	51.96	73.33
Denmark	967	1	94	5	1	12,411	354	50.25	72.30
Ireland	402	0	97	1	1	13,231	368	51.39	-
Sweden	246	0	70	25	5	12,641	401	48.71	50.20
Greece	221	0	100	0	0	10,225	402	-	-
Finland	75	0	88	4	8	12,677	349	50.37	-
Portugal	1	0	100	0	0	7,698	235	49.96	80.54
Switzerland	1,050	0	92	6	2	12,623	372	-	-
Turkey	700	-	100	0	0	12,435	-	-	-
United Kingdom	110	-	88	10	2	9,689	-	-	-
Iceland	25	-	92	8	0	9,598	274	-	-
Norway	16	-	88	13	0	11,921	361	-	-
Daimler Truck	33,437	19	100	0	0	12,537	344	52.17	83.27
DAF	32,452	18	100	0	0	12,752	359	49.45	77.28
Volvo Trucks	30,276	17	97	2	1	12,763	366	49.49	80.06
MAN	25,623	15	100	0	0	12,399	363	51.89	78.40
Scania	23,581	13	99	0	1	13,123	356	47.25	58.35
Renault Trucks	13,538	8	100	0	0	12,675	362	51.21	83.74
IVECO	12,381	7	90	0	10	12,661	365	55.08	81.62
Ford	3,883	2	100	0	0	12,739	366	55.10	78.47
Case New Holland	136	0	100	0	0	10,305	336	-	-
BMC	76	0	100	0	0	11,120	338	-	-
Terberg	14	0	86	14	0	6,859	171	-	-
Emoss	13	0	0	100	0	-	246	-	-
Liebherr	4	0	100	0	0	11,121	338	-	-
Tadano Faun	3	0	100	0	0	8,691	237	-	-

Heavy-duty trucks

Class 9 (6x2 rigid truck, gross vehicle weight >16 tonnes)

	Total new sales/registrations	Total registrations [%]	Diesel [%]	ZEV [%]	Natural gas [%]	Engine size [ccm]	Power [kW]	CO ₂ long-haul [??]	CO ₂ regional delivery [??]
EU-27	38,411	100	93	2	5	11,770	329	58.69	104.85
Germany	11,634	30	96	2	3	12,062	336	58.54	101.65
France	5,317	14	88	3	9	11,470	320	59.23	108.46
EU-12	5,070	13	98	0	2	11,889	327	57.80	106.74
Italy	4,939	13	99	0	1	11,710	338	59.72	113.84
Sweden	3,005	8	80	3	18	12,610	357	58.44	97.85
Spain	2,155	6	76	2	21	10,027	281	60.14	113.50
Netherlands	1,659	4	92	7	1	11,531	311	57.81	96.12
Austria	1,355	4	99	1	0	12,035	341	59.95	103.17
Belgium	1,242	3	95	1	3	-	-	61.63	102.99
Denmark	761	2	81	17	2	11,027	311	46.45	85.94
Finland	754	2	92	1	8	12,238	342	58.52	102.77
Ireland	211	1	91	3	6	9,314	264	62.22	109.71
Portugal	159	0	97	1	2	10,908	303	65.80	107.55
Luxembourg	136	0	99	1	0	12,066	332	55.89	-
Greece	14	0	100	0	0	12,260	-	-	-
United Kingdom	5,402	-	97	2	1	9,463	-	-	-
Norway	1,427	-	79	5	17	11,944	338	-	-
Switzerland	836	0	91	8	1	12,366	352	-	-
Iceland	19	-	68	5	26	11,498	332	-	-
Turkey	4	-	100	0	0	8,974	-	-	-
Daimler Truck	8,478	22	98	2	0	11,557	320	61.10	101.11
Volvo Trucks	6,500	17	92	2	5	12,149	346	58.25	107.08
Scania	6,141	16	87	2	11	12,607	334	54.96	95.36
MAN	5,569	14	100	0	0	11,973	340	59.07	99.90
IVECO	4,131	11	81	0	19	10,784	315	63.44	120.70
Renault Trucks	3,787	10	88	5	7	10,895	312	58.61	115.01
DAF	3,234	8	99	1	0	12,203	339	56.39	100.83
Ford	138	0	100	0	0	9,482	251	65.39	123.63
Astra	99	0	100	0	0	12,925	374	-	-
Hyundai	35	0	0	100	0	-	312	-	-
Dennis	28	0	93	7	0	7,698	240	-	-
Kamaz	16	0	100	0	0	6,700	211	-	-
Setra	12	0	100	0	0	-	-	-	-
VW	11	0	100	0	0	1,968	117	-	-

2022

Heavy-duty trucks

Class 5 (4x2 tractor trailer, gross vehicle weight >16 tonnes)

	Total new sales/registrations	Total registrations [%]	Diesel [%]	ZEV [%]	Natural gas [%]	Engine size [ccm]	Power [kW]	CO ₂ long-haul [??]	CO ₂ regional delivery [??]
EU-27	155,703	100	97	0	2	12,703	357	53.70	81.12
EU-12	53,705	34	99	0	1	12,750	353	53.00	78.32
Germany	30,488	20	97	0	3	12,589	356	54.21	84.31
France	24,878	16	96	0	4	12,730	361	53.96	84.01
Spain	16,627	11	97	0	3	12,771	363	53.71	84.76
Italy	12,631	8	96	0	4	12,764	364	54.69	87.48
Netherlands	7,278	5	97	0	3	12,550	340	53.55	64.27
Belgium	4,603	3	97	0	3	-	-	54.01	79.26
Austria	2,953	2	100	0	0	12,791	369	54.67	82.86
Denmark	869	1	99	0	1	12,484	341	53.19	61.63
Luxembourg	701	0	99	0	1	12,727	359	54.66	81.03
Sweden	302	0	80	14	6	12,560	349	53.62	31.51
Ireland	300	0	98	0	2	13,169	364	53.86	74.88
Greece	252	0	100	0	0	9,965	471	-	-
Finland	70	0	70	0	30	12,677	333	53.92	-
Portugal	46	0	100	0	0	12,869	356	53.86	84.72
Switzerland	834	0	98	1	1	12,624	363	-	-
United Kingdom	817	-	78	0	22	10,961	-	-	-
Turkey	199	-	100	0	0	12,529	-	-	-
Iceland	7	-	86	0	14	11,282	276	-	-
Norway	5	-	60	0	40	11,162	308	-	-
DAF	32,386	21	100	0	0	12,802	360	53.09	78.84
Daimler Truck	31,511	20	100	0	0	12,613	344	55.52	86.77
Volvo Trucks	27,301	18	98	0	2	12,734	361	52.31	83.23
MAN	19,448	12	99	0	1	12,394	359	52.81	79.98
Scania	16,423	11	96	0	4	13,148	355	50.70	63.18
Renault Trucks	13,276	9	99	0	1	12,670	365	55.43	89.38
IVECO	11,292	7	79	0	21	12,566	360	55.90	88.63
Ford	3,813	2	100	0	0	12,741	367	57.44	77.73
Case New Holland	138	0	100	0	0	10,592	345	-	-
BMC	62	0	100	0	0	11,120	338	-	-
Terberg	28	0	93	7	0	6,847	169	-	-
Emoss	10	0	0	100	0	-	250	-	-

Heavy-duty trucks

Class 9 (6x2 rigid truck, gross vehicle weight >16 tonnes)

	Total new sales/registrations	Total registrations [%]	Diesel [%]	ZEV [%]	Natural gas [%]	Engine size [ccm]	Power [kW]	CO ₂ long-haul [??]	CO ₂ regional delivery [??]
EU-27	32,765	100	94	1	5	11,811	328	61.74	109.42
Germany	9,184	28	96	1	3	12,067	334	62.20	105.52
France	5,272	16	91	1	8	11,494	321	62.10	113.78
EU-12	4,653	14	96	0	4	11,904	325	60.94	108.55
Italy	4,561	14	99	0	1	11,830	338	62.60	117.66
Sweden	2,529	8	83	3	14	12,590	352	59.09	104.20
Spain	1367	4	83	4	13	10,095	286	61.13	120.16
Netherlands	1,300	4	94	4	2	11,582	312	60.28	102.60
Belgium	1,152	4	99	1	0	-	-	63.86	106.60
Austria	1,018	3	99	1	0	11,996	334	63.66	105.18
Denmark	648	2	93	6	1	11,020	301	58.75	101.40
Finland	612	2	92	0	8	12,245	343	61.62	106.26
Ireland	187	1	87	2	11	9,160	258	64.08	116.21
Portugal	140	0	99	1	0	11,491	317	62.98	111.04
Luxembourg	118	0	100	0	0	12,233	340	62.41	108.90
Greece	24	0	100	0	0	12,296	295	-	-
United Kingdom	4,189	-	99	1	0	9,293	-	-	-
Norway	1,218	-	79	10	11	12,051	338	-	-
Switzerland	538	0	91	6	3	12,250	346	-	-
Iceland	11	-	100	0	0	12,209	333	-	-
Turkey	7	-	100	0	0	8,975	-	-	-
Daimler Truck	7,734	24	99	0	1	11,606	319	64.52	107.92
Volvo Trucks	6,040	18	94	1	5	12,233	345	60.22	110.27
Scania	5,340	16	86	2	12	12,644	333	59.68	100.45
MAN	4,256	13	100	0	0	11,916	336	60.45	101.12
Renault Trucks	3,593	11	90	3	7	10,900	312	60.76	117.87
IVECO	2,803	9	87	0	13	10,794	320	66.00	130.36
DAF	2,540	8	99	1	0	12,268	339	60.57	103.62
Ford	134	0	100	0	0	9,704	255	67.96	125.72
Astra	87	0	100	0	0	12,882	370	-	-
Kamaz	21	0	100	0	0	6,694	215	-	-
Dennis	20	0	45	55	0	7,698	149	-	-
Emoss	16	0	0	100	0	-	250	-	-
Liebherr	12	0	100	0	0	6,690	194	-	-
Setra	12	0	100	0	0	-	-	-	-

2021

Heavy-duty trucks

Class 5 (4x2 tractor trailer, gross vehicle weight >16 tonnes)

	Total new sales/registrations	Total registrations [%]	Diesel [%]	ZEV [%]	Natural gas [%]	Engine size [ccm]	Power [kW]	CO ₂ long-haul [g/km]	CO ₂ regional delivery [g/km]
EU-27	121,135	100	95	0	5	12,684	355	55.70	84.06
EU-12	46,365	38	96	0	4	12,729	352	55.15	82.57
France	22,219	18	96	0	4	12,724	361	56.36	85.87
Spain	14,195	12	96	0	4	12,720	360	55.65	83.66
Italy	13,190	11	93	0	7	12,720	363	56.21	89.19
Germany	10,982	9	93	0	7	12,449	349	56.04	84.42
Netherlands	5827	5	93	0	7	12,513	338	55.21	78.05
Belgium	3,630	3	94	0	6	-	-	56.33	81.06
Austria	2,586	2	99	0	1	12,694	364	56.25	89.79
Denmark	676	1	90	0	10	12,464	337	54.63	77.99
Luxembourg	606	1	98	0	2	12,549	353	57.29	84.65
Ireland	354	0	95	0	5	13,239	354	54.63	-
Sweden	168	0	88	6	6	12,733	348	54.61	76.44
Portugal	139	0	100	0	0	12,809	357	55.38	78.36
Greece	130	0	100	0	0	9,886	504	57.16	-
Finland	68	0	79	0	21	12,492	324	57.23	-
United Kingdom	1,288	-	78	0	22	11,093	-	-	-
Switzerland	642	-	98	0	2	12,669	359	-	-
Turkey	108	-	100	0	0	12,603	-	-	-
Iceland	7	-	100	0	0	10,046	261	-	-
Norway	2	-	100	0	0	12,809	350	57.79	-
DAF	23,717	20	100	0	0	12,788	358	56.25	77.79
Daimler Truck	22,325	18	100	0	0	12,635	345	56.22	87.33
Volvo Trucks	20,994	17	97	0	3	12,752	360	55.48	85.67
Scania	16,319	13	93	0	7	13,067	349	53.15	77.74
MAN	14,646	12	100	0	0	12,375	357	55.27	80.77
Renault Trucks	10,901	9	100	0	0	12,593	364	57.32	88.09
IVECO	10,293	8	65	0	35	12,417	356	57.47	90.42
Ford	1,720	1	100	0	0	12,728	366	60.82	-
Case New Holland	133	0	100	0	0	9,958	321	-	-
Terberg	63	0	95	5	0	5,487	140	-	-
BMC	11	0	100	0	0	11,120	338	-	-
Emoss	8	0	0	100	0	-	-	-	-
Liebherr	1	0	100	0	0	6,690	194	-	-

Heavy-duty trucks

Class 9 (6x2 rigid truck, gross vehicle weight >16 tonnes)

	Total new sales/registrations	Total registrations [%]	Diesel [%]	ZEV [%]	Natural gas [%]	Engine size [ccm]	Power [kW]	CO ₂ long-haul [g/km]	CO ₂ regional delivery [g/km]
EU-27	36,267	100	95	0	5	11,771	326	63.90	111.26
Germany	11,384	31	96	0	4	11,999	331	63.28	107.22
France	6,052	17	94	0	6	11,428	319	64.84	114.46
Italy	4,996	14	96	0	4	11,690	334	64.22	118.60
EU-12	4,814	13	97	0	3	11,834	323	62.78	110.67
Sweden	2,455	7	89	1	10	12,570	351	64.82	110.80
Spain	1289	4	91	1	8	10,331	288	64.53	116.74
Austria	1,215	3	99	0	1	12,069	334	63.91	108.07
Netherlands	1,207	3	93	2	5	11,542	307	61.76	109.40
Belgium	1,122	3	96	0	4	-	-	65.86	106.91
Denmark	660	2	93	3	4	11,135	299	65.47	106.14
Finland	636	2	96	0	4	12,357	345	64.54	111.49
Ireland	184	1	98	1	1	9,338	258	65.62	114.29
Portugal	142	0	96	0	4	10,877	289	65.16	120.12
Luxembourg	93	0	100	0	0	12,127	342	68.14	103.47
Greece	18	0	100	0	0	10,684	291	67.46	119.30
United Kingdom	4,549	0	99	1	0	9,258	-	-	-
Norway	1,368	0	92	3	5	12,318	347	66.09	111.25
Switzerland	616	0	90	8	2	12,215	343	-	-
Iceland	9	0	100	0	0	13,443	409	-	-
Daimler Truck	8,267	23	98	0	2	11,561	316	65.90	110.42
Scania	6,435	18	91	0	9	12,625	331	62.26	105.26
MAN	5,626	16	100	0	0	11,885	335	62.21	102.54
Volvo Trucks	5,299	15	95	1	4	12,221	344	64.07	117.44
IVECO	3,735	10	84	0	16	10,806	319	66.94	125.67
Renault Trucks	3,478	10	94	1	5	10,717	309	63.22	117.43
DAF	2,971	8	100	0	0	12,281	339	62.41	102.22
Kamaz	122	0	100	0	0	6,694	216	-	-
Ford	96	0	100	0	0	10,877	278	76	127
Tadano Faun	18	0	38	0	62	9,476	262	-	-
Dennis	17	0	53	47	0	7,698	203	-	-
Liebherr	6	0	100	0	0	6,690	194	-	-
Tatra	6	0	100	0	0	12,214	329	-	-
Astra	4	0	100	0	0	12,882	370	-	-

2020

Heavy-duty trucks

Class 5 (4x2 tractor trailer, gross vehicle weight >16 tonnes)

	Total new sales/registrations	Total registrations [%]	Diesel [%]	ZEV [%]	Natural gas [%]	Engine size [ccm]	Power [kW]	CO ₂ long-haul [g/km]	CO ₂ regional delivery [g/km]
EU-27	106,348	100	96	0	4	12,652	354	56.26	84.76
EU-12	27,748	26	97	0	3	12,690	352	55.68	83.82
Germany	23,272	22	94	0	6	12,558	353	56.72	85.57
France	20,282	19	96	0	4	12,672	359	56.72	87.32
Spain	12,512	12	97	0	3	12,703	359	55.85	83.43
Italy	9,075	9	93	0	7	12,736	359	56.60	88.12
Netherlands	4,713	4	95	0	5	12,460	336	55.74	78.20
Belgium	2,837	3	93	0	7	-	-	56.90	82.83
Portugal	2,367	2	99	0	1	12,688	355	55.37	79.18
Austria	1,882	2	99	0	1	12,699	359	56.64	81.21
Denmark	532	1	100	0	0	12,392	336	56.09	80.61
Luxembourg	514	0	100	0	0	12,666	354	57.23	84.12
Ireland	432	0	98	0	2	13,153	341	55.67	-
Sweden	134	0	96	1	3	12,699	343	57.33	83.05
Finland	45	0	93	0	7	12,556	333	56.67	-
Greece	3	0	100	0	0	11,593	390	57.93	-
United Kingdom	1,449	-	85	0	15	11,232	-	56.24	85.23
Turkey	717	-	100	0	0	12,532	-	-	-
Switzerland	674	-	97	0	3	12,678	359	-	-
Norway	2	-	100	0	0	6,871	184	54.45	-
DAF	21,619	20	100	0	0	12,768	359	56.31	80.07
Volvo Trucks	17,667	17	97	0	3	12,735	361	56.15	89.17
Daimler Truck	17,604	17	100	0	0	12,510	342	56.90	88.86
Scania	16,126	15	95	0	5	13,013	345	53.45	77.23
MAN	14,979	14	100	0	0	12,435	358	56.56	81.23
Renault Trucks	8,884	8	100	0	0	12,522	364	57.66	87.97
IVECO	8,819	8	65	0	35	12,327	355	57.81	88.49
Ford	641	1	100	0	0	12,728	365	59.47	-
Dongfeng	5	0	100	0	0	13,480	381	-	-
Emiss	1	0	0	100	0	-	-	-	-

Heavy-duty trucks

Class 9 (6x2 rigid truck, gross vehicle weight >16 tonnes)

	Total new sales/registrations	Total registrations [%]	Diesel [%]	ZEV [%]	Natural gas [%]	Engine size [ccm]	Power [kW]	CO ₂ long-haul [g/km]	CO ₂ regional delivery [g/km]
EU-27	33,256	100	97	0	3	11,660	321	64.56	111.12
Germany	10,892	33	99	0	1	11,783	324	64.01	108.06
France	5,722	17	95	0	5	11,455	317	65.17	113.94
Italy	3,759	11	97	0	3	11,539	328	64.81	116.41
EU-12	3,602	11	98	0	2	11,755	316	63.52	110.97
Sweden	2,456	7	92	0	8	12,560	344	65.82	111.83
Belgium	1,304	4	97	0	3	-	-	64.92	108.16
Netherlands	1,238	4	96	1	3	11,362	300	63.24	110.37
Austria	1,212	4	99	0	1	12,010	330	64.94	106.88
Spain	1,201	4	94	0	6	10,328	286	64.29	114.78
Denmark	714	2	93	2	5	10,738	292	65.40	107.43
Finland	679	2	96	0	4	12,254	337	65.91	111.63
Ireland	183	1	92	0	8	9,556	258	66.18	117.21
Portugal	148	0	91	0	9	10,678	291	66.23	119.64
Luxembourg	107	0	99	1	0	12,106	339	76.10	125.46
Greece	39	0	100	0	0	12,488	355	67.47	110.84
United Kingdom	4,207	-	100	0	0	9,248	-	65.27	107.48
Norway	1,324	-	95	1	4	12,478	347	67.65	110.67
Switzerland	606	-	98	1	1	12,362	342	-	-
Turkey	25	-	100	0	0	9,040	-	-	-
Daimler Truck	7,668	23	99	0	1	11,168	307	66.96	111.41
Scania	5,859	18	93	0	7	12,554	325	63.39	105.92
MAN	5,495	17	100	0	0	11,781	328	62.84	104.35
Volvo Trucks	5,257	16	98	0	2	12,233	340	64.93	115.78
Renault Trucks	2,956	9	95	0	5	10,786	307	65.01	117.38
IVECO	2,852	9	89	0	11	10,611	312	67.54	120.54
DAF	2,805	8	100	0	0	12,116	334	62.62	103.39
Ford	87	0	100	0	0	10,446	262	74.61	126.81
Kamaz	53	0	100	0	0	6,738	221	-	-
Tadano Faun	25	0	100	0	0	9,626	259	-	-
Case New Holland	23	0	100	0	0	10,959	373	-	-
Dennis	15	0	40	60	0	7,698	118	-	-
Liebherr	10	0	100	0	0	7,362	205	-	-
Ginaf	7	0	86	14	0	6,728	235	-	-

2019

Heavy-duty trucks

Class 5 (4x2 tractor trailer, gross vehicle weight >16 tonnes)

	Total new sales/registrations	Total registrations [%]	Diesel [%]	ZEV [%]	Natural gas [%]	Engine size [ccm]	Power [kW]	CO ₂ long-haul [g/km]	CO ₂ regional delivery [g/km]
EU-27	155,446	100	98	0	2	12,620	352	56.94	85.13
EU-12	43,619	28	99	0	1	12,669	349	56.37	84.99
Germany	34,574	22	98	0	2	12,532	350	57.30	86.57
France	29,916	19	98	0	2	12,620	356	57.58	87.38
Spain	15,422	10	97	0	3	12,693	358	56.54	83.30
Italy	10,858	7	93	0	7	12,711	359	56.97	86.89
Netherlands	7,279	5	98	0	2	12,419	336	56.33	77.92
Belgium	5,218	3	98	0	2	-	-	57.63	82.72
Portugal	3,156	2	99	0	1	12,683	350	55.44	79.94
Austria	2,967	2	99	0	1	12,695	358	58.25	81.32
Denmark	893	1	99	0	1	12,590	341	56.23	78.69
Luxembourg	829	1	100	0	0	12,487	346	58.08	83.36
Sweden	320	0	97	0	3	12,487	333	57.19	81.54
Ireland	310	0	97	0	3	12,825	343	56.39	-
Finland	80	0	95	0	5	12,126	320	56.23	-
Greece	5	0	100	0	0	11,703	390	58.26	-
United Kingdom	2,810	-	100	0	0	11,472	-	57.53	77.06
Switzerland	915	-	97	0	3	12,545	351	-	-
Turkey	184	-	100	0	0	12,682	-	-	-
Norway	6	-	100	0	0	13,903	391	59.12	-
DAF	30,649	20	100	0	0	12,733	358	56.53	78.71
Daimler Truck	28,475	18	100	0	0	12,460	337	57.31	87.67
Scania	28,243	18	97	0	3	12,966	343	53.71	77.46
MAN	24,317	16	100	0	0	12,460	354	58.42	82.59
Volvo Trucks	23,486	15	99	0	1	12,724	366	58.14	87.32
Renault Trucks	13,172	8	100	0	0	12,340	361	58.60	88.67
IVECO	6,735	4	66	0	34	12,105	350	58.09	86.11
Ford	360	0	100	0	0	12,730	363	60.38	-

Heavy-duty trucks

Class 9 (6x2 rigid truck, gross vehicle weight >16 tonnes)

	Total new sales/registrations	Total registrations [%]	Diesel [%]	ZEV [%]	Natural gas [%]	Engine size [ccm]	Power [kW]	CO ₂ long-haul [g/km]	CO ₂ regional delivery [g/km]
EU-27	41,556	100	97	0	3	11,735	321	65.36	111.40
Germany	13,844	33	99	0	1	11,833	322	65.11	107.64
France	6,722	16	95	0	5	11,381	315	65.75	115.91
EU-12	5,046	12	99	0	1	11,964	322	64.15	109.90
Italy	4,346	10	96	0	4	11,680	332	65.74	115.66
Sweden	2,903	7	95	0	4	12,603	348	66.33	114.14
Netherlands	1,803	4	96	0	3	11,600	305	64.88	113.17
Spain	1,721	4	90	0	10	10,177	282	65.71	117.01
Belgium	1,596	4	97	0	3	-	-	65.34	108.93
Austria	1,476	4	99	0	1	12,106	330	65.99	109.07
Denmark	842	2	98	0	2	11,728	304	65.52	101.76
Finland	742	2	98	0	2	12,442	345	65.82	112.56
Ireland	195	0	100	0	0	9,773	267	67.48	130.96
Portugal	179	0	93	0	7	10,626	284	66.64	115.45
Luxembourg	104	0	100	0	0	12,120	332	73.10	-
Greece	37	0	100	0	0	11,327	313	67.98	-
United Kingdom	5,870	-	100	0	0	9,422	-	65.85	110.53
Norway	1,637	-	94	0	6	12,348	343	68.38	109.46
Switzerland	676	-	99	1	0	12,284	342	-	-
Turkey	6	-	100	0	0	9,613	-	-	-
Daimler Truck	9,624	23	99	0	1	11,264	308	67.57	110.44
Scania	7,823	19	94	0	6	12,632	326	63.28	104.60
MAN	7,191	17	100	0	0	11,989	325	65.11	107.55
Volvo Trucks	6,280	15	99	0	1	12,288	343	66.30	114.84
Renault Trucks	3,634	9	97	0	3	10,665	307	65.83	118.27
IVECO	3,391	8	89	0	11	10,473	309	68.85	118.88
DAF	3,298	8	100	0	0	12,104	334	63.81	104.49
Ford	33	0	100	0	0	10,572	270	75.85	128.23
Dennis	30	0	100	0	0	7,698	240	-	-
Tadano Faun	25	0	100	0	0	8,496	253	-	-
Case New Holland	17	0	100	0	0	11,638	368	-	-
Kamaz	13	0	100	0	0	6,868	226	-	-
Raba	13	0	100	0	0	6,871	240	-	-
Liebherr	8	0	100	0	0	7,698	210	-	-

2023

Buses Interurban/coach

	Total new sales/registrations	Total registrations [%]	Diesel [%]	ZEV [%]	Hybrid [%]	Natural gas [%]	Length [mm]	Gross vehicle weight [kg]	Seats
EU-27	13,581	100	84	0	8	8	12,168	19,095	68
France	3,211	24	76	0	11	14	12,401	18,332	68
Italy	2,751	20	75	0	7	18	11,927	19,156	-
Spain	1,859	14	81	0	18	0	12,447	19,142	71
EU-12	1,710	13	97	0	3	0	11,070	17,842	71
Germany	1,688	12	91	0	8	0	-	20,457	-
Austria	708	5	100	0	0	0	13,005	19,667	66
Sweden	435	3	79	0	0	21	13,830	23,454	-
Portugal	343	3	93	7	0	0	12,225	18,438	41
Ireland	271	2	100	0	0	0	10,851	16,375	-
Belgium	195	1	96	4	0	0	-	17,905	-
Netherlands	182	1	100	0	0	0	13,240	21,622	-
Bulgaria	99	0	100	0	0	0	7,811	10,569	-
Luxembourg	90	1	94	0	6	0	13,302	21,367	92
Denmark	66	0	91	9	0	0	-	22,939	65
Greece	58	0	100	0	0	0	-	-	-
Finland	14	0	100	0	0	0	-	19,877	79
United Kingdom	799	-	97	3	0	0	11,072	20,205	-
Norway	428	-	49	30	0	21	13,130	21,638	70
Switzerland	99	-	99	0	1	0	-	20,559	-
Iceland	15	-	93	7	0	0	-	10,000	51
IVECO	5,157	38	79	0	5	16	12,149	18,460	64
Mercedes-Benz	2,577	19	74	0	26	0	12,802	20,332	77
MAN	1,192	9	88	0	11	0	12,508	20,579	82
Setra	679	5	100	0	0	0	12,899	21,887	75
Volvo	604	4	100	0	0	0	12,377	21,203	77
Otokar	568	4	100	0	0	0	8,837	13,003	53
Evobus Setra	557	4	100	0	0	0	-	20,652	-
Scania	517	4	76	0	4	20	11,752	21,718	78
Temsa	385	3	100	0	0	0	8,829	11,869	43
Irizar	326	2	75	0	0	25	12,566	21,033	81
Isuzu	235	2	100	0	0	0	7,958	10,742	44
Sor	163	1	100	0	0	0	11,661	16,500	-
Van Hool	163	1	100	0	0	0	13,762	24,920	81
Neoplan	125	1	100	0	0	0	12,545	22,758	69
VDL	70	1	100	0	0	0	12,684	22,464	65

Buses City buses

	Total new sales/registrations	Total registrations [%]	Diesel [%]	ZEV [%]	Hybrid [%]	Natural gas [%]	Length [mm]	Gross vehicle weight [kg]	Seats
EU-27	11,405	100	25	36	27	12	12,699	21,547	46
Germany	3,125	27	29	26	43	1	-	23,133	-
EU-12	1,999	18	40	43	9	8	12,535	21,241	39
France	1,751	15	18	19	26	37	12,769	20,512	56
Italy	1,233	11	17	27	34	23	12,654	20,426	-
Spain	1,205	11	7	38	42	13	12,157	20,489	46
Sweden	412	4	27	60	0	12	15,000	24,626	-
Portugal	367	3	16	78	0	7	11,657	19,339	42
Austria	365	3	78	15	7	0	14,057	22,222	49
Belgium	317	3	2	50	47	0	-	21,898	-
Denmark	195	2	1	99	0	0	12,000	20,341	25
Netherlands	177	2	1	99	0	0	12,038	19,316	-
Finland	107	1	2	97	0	1	-	21,829	52
Luxembourg	93	1	0	48	38	14	13,810	21,740	53
Bulgaria	77	0	1	99	0	0	12,027	18,649	-
Ireland	42	0	5	95	0	0	-	18,924	-
Greece	17	0	29	71	0	0	-	-	-
United Kingdom	1,704	-	30	70	0	0	11,879	18,521	-
Switzerland	380	-	8	45	45	2	-	23,405	-
Norway	364	-	0	100	0	0	17,269	12,333	47
Iceland	1	-	100	0	0	0	11,250	18,000	58
Mercedes-Benz	2,873	27	42	13	45	0	12,721	21,484	50
MAN	2,600	24	21	26	39	14	13,231	23,091	63
Solaris	1,032	10	10	59	19	11	12,000	20,701	37
IVECO	790	7	12	2	17	68	13,429	21,847	45
Scania	698	6	30	3	34	33	13,653	21,344	62
Volvo	411	4	3	56	41	0	12,001	20,449	39
BYD	296	3	0	100	0	0	13,140	20,167	52
Krattex	247	2	100	0	0	0	13,174	-	-
Heuliez	244	2	0	100	0	0	12,159	19,336	58
Yutong	217	2	0	100	0	0	11,816	20,391	49
Zhong Tong	192	2	0	100	0	0	11,372	18,302	39
Irizar	158	1	0	94	6	0	11,863	21,199	32
VDL	101	1	0	56	44	0	12,071	23,660	44
Caetano	90	1	0	100	0	0	11,995	19,517	41
Van Hool	80	1	0	100	0	0	-	19,825	42

2022

Buses
Interurban/coach

	Total new sales/registrations	Total registrations [%]	Diesel [%]	ZEV [%]	Hybrid [%]	Natural gas [%]	Length [mm]	Gross vehicle weight [kg]	Seats
EU-27	10,534	100	91	0	0	9	12,794	19,824	51
France	2,635	25	77	0	0	23	12,718	18,867	55
EU-12	1,700	16	95	0	0	4	12,179	18,989	47
Italy	1,582	15	93	0	0	7	12,100	19,329	-
Germany	1,516	14	99	0	0	0	-	20,187	-
Spain	830	8	97	0	1	2	14,000	21,159	59
Sweden	603	6	87	0	0	13	13,850	24,415	44
Portugal	529	5	97	0	0	3	12,764	18,851	50
Austria	446	4	100	0	0	0	14,264	19,936	37
Belgium	132	1	91	0	0	9	-	20,898	-
Ireland	130	1	100	0	0	0	12,200	22,118	-
Luxembourg	124	1	100	0	0	0	13,218	20,531	-
Netherlands	107	1	100	0	0	0	13,429	22,073	-
Denmark	104	1	90	4	0	6	13,000	19,510	55
Greece	79	1	100	0	0	0	-	-	49
Finland	17	0	94	0	0	6	-	21,271	56
Bulgaria	5	0	100	0	0	0	12,136	18,000	-
United Kingdom	492	-	97	3	0	0	12,695	20,291	-
Norway	205	-	60	40	0	0	12,466	21,263	37
Switzerland	45	-	100	0	0	0	-	19,733	-
Iceland	7	-	100	0	0	0	-	10,000	19
IVECO	4,257	42	82	0	0	18	12,377	18,593	49
Mercedes-Benz	1,573	15	99	0	1	0	12,965	20,452	58
MAN	826	8	100	0	0	0	12,469	20,734	55
Setra	699	7	100	0	0	0	13,111	21,094	52
Volvo	685	7	100	0	0	0	12,498	21,793	45
Evobus Setra	611	6	100	0	0	0	-	20,340	-
Scania	561	5	73	0	0	27	12,257	22,456	54
Irizar	203	2	96	0	0	4	12,882	20,847	58
Van Hool	166	2	100	0	0	0	13,819	23,695	66
Otokar	162	2	100	0	0	0	10,816	16,463	59
Kravtex	100	1	100	0	0	0	-	16,850	-
Solaris	100	1	100	0	0	0	11,995	18,000	-
VDL	78	1	100	0	0	0	13,254	22,649	57
Neoplan	67	1	100	0	0	0	13,486	23,510	52
Temsa	36	0	100	0	0	0	12,719	17,072	61

Buses
City buses

	Total new sales/registrations	Total registrations [%]	Diesel [%]	ZEV [%]	Hybrid [%]	Natural gas [%]	Length [mm]	Gross vehicle weight [kg]	Seats
EU-27	11,113	100	39	25	17	19	12,923	21,514	44
Germany	2,819	25	42	22	35	1	-	22,577	-
EU-12	2,184	20	55	15	5	25	12,523	21,275	40
France	1,905	17	25	22	8	45	12,728	20,329	45
Spain	863	8	12	16	23	49	-	20,647	33
Italy	681	6	42	11	17	30	12,679	20,264	-
Portugal	607	5	93	2	0	5	12,097	18,985	58
Sweden	467	4	42	54	2	2	15,000	26,761	44
Austria	401	4	77	5	18	0	13,688	21,568	50
Denmark	378	3	0	100	0	0	12,578	21,278	45
Belgium	307	3	0	14	86	0	-	23,092	-
Finland	292	3	0	96	0	4	15,000	22,206	48
Netherlands	112	1	3	97	0	0	13,929	21,329	-
Ireland	50	0	0	24	76	0	-	18,154	-
Luxembourg	40	0	0	60	25	15	14,091	22,288	38
Greece	7	0	86	14	0	0	-	-	36
Bulgaria	75	0	0	100	0	0	13,783	22,347	-
United Kingdom	1,073	-	39	61	0	0	11,785	18,549	-
Switzerland	251	-	68	32	0	0	-	23,037	-
Norway	147	-	10	90	0	0	17,089	26,815	23
Iceland	1	-	100	0	0	0	11,250	18,000	14
Mercedes-Benz	3,151	29	59	12	24	5	13,110	21,437	51
MAN	2,497	23	43	8	25	24	12,442	22,219	44
Solaris	1,204	11	26	28	23	22	12,032	21,222	37
IVECO	760	7	14	1	3	82	13,134	21,274	45
Scania	415	4	30	3	11	56	11,398	21,082	41
BYD	333	3	0	100	0	0	13,569	20,466	39
Yutong	326	3	35	65	0	0	12,170	20,888	48
Heuliez	324	3	2	88	1	9	12,043	19,056	39
Volvo	302	3	3	70	27	0	12,000	23,047	53
Sor	180	2	68	7	0	25	12,000	21,222	-
King Long	177	2	97	3	0	0	11,980	18,367	51
VDL	174	2	0	60	40	0	13,793	24,537	-
BredaMenarinibus	170	2	49	0	0	51	11,940	19,041	-
VDL Bus & Coach	117	1	9	91	0	0	-	22,868	-
Van Hool	97	1	0	100	0	0	13,155	26,283	62

2021

Buses
Interurban/coach

	Total new sales/registrations	Total registrations [%]	Diesel [%]	ZEV [%]	Hybrid [%]	Natural gas [%]	Length [mm]	Gross vehicle weight [kg]	Seats
EU-27	10,739	100	92	0	0	7	12,538	19,038	53
France	3,181	30	80	0	1	19	12,729	18,279	55
EU-12	1,812	17	97	0	0	3	12,053	18,168	57
Germany	1,723	16	99	0	0	0	-	19,823	-
Italy	1,270	12	100	0	0	0	12,000	19,193	-
Spain	614	6	90	0	2	8	13,825	19,521	54
Sweden	285	3	74	0	0	26	13,850	22,770	35
Greece	258	2	100	0	0	0	-	-	52
Belgium	214	2	97	0	0	3	-	19,903	-
Ireland	185	2	100	0	0	0	9,616	20,204	-
Denmark	175	2	100	0	0	0	-	19,260	-
Portugal	172	2	100	0	0	0	12,913	19,000	38
Netherlands	140	1	100	0	0	0	13,052	20,101	-
Luxembourg	93	1	98	2	0	0	13,096	19,781	58
Finland	49	0	100	0	0	0	-	21,976	50
Bulgaria	29	0	100	0	0	0	8,146	11,145	-
United Kingdom	421	-	100	0	0	0	12,200	19,781	-
Norway	412	-	97	3	0	0	12,128	19,900	49
Switzerland	77	-	92	0	0	0	-	19,432	-
Iceland	14	-	86	0	0	14	14,845	25,250	56
IVECO	4,440	41	87	0	0	13	12,583	18,526	52
Mercedes-Benz	1,493	14	99	0	0	0	12,764	19,426	60
Setra	1,233	11	100	0	0	0	13,415	20,772	51
MAN	766	7	100	0	0	0	12,526	19,969	56
Scania	501	5	56	0	3	41	12,826	21,124	58
Volvo	428	4	100	0	0	0	13,747	21,729	55
Sor	366	3	100	0	0	0	-	16,318	-
VDL Bus & Coach	280	3	100	0	0	0	12,904	21,511	56
Otokar	261	2	98	0	0	2	9,737	13,841	48
Irizar	202	2	89	0	8	3	12,538	21,478	57
Isuzu	195	2	100	0	0	0	7,888	10,876	35
Neoplan	127	1	100	0	0	0	13,513	24,171	59
Tamsa	125	1	100	0	0	0	9,202	11,769	35
Van Hool	93	1	100	0	0	0	13,535	23,848	67
Solaris	79	1	100	0	0	0	11,995	18,000	-

Buses
City buses

	Total new sales/registrations	Total registrations [%]	Diesel [%]	ZEV [%]	Hybrid [%]	Natural gas [%]	Length [mm]	Gross vehicle weight [kg]	Seats
EU-27	13,261	100	44	19	22	14	12,298	21,361	39
Germany	3,933	30	47	15	37	1	-	22,985	-
France	2,623	20	35	20	7	38	12,678	20,497	44
EU-12	2,210	17	64	16	7	13	11,817	20,489	38
Italy	1,166	9	100	0	0	0	11,817	19,263	-
Spain	908	7	14	14	39	33	12,275	20,334	33
Belgium	515	4	4	4	92	0	-	24,117	-
Portugal	356	3	47	9	0	43	11,922	19,016	41
Sweden	314	2	10	61	0	29	13,196	24,765	-
Denmark	299	2	27	73	0	0	12,450	19,889	-
Ireland	254	2	1	2	97	0	8,522	17,897	26
Austria	216	2	70	1	29	0	12,957	22,771	36
Finland	197	1	2	96	0	2	17,659	23,213	42
Netherlands	189	1	0	100	0	0	13,570	23,297	-
Luxembourg	65	0	2	41	51	6	11,954	18,566	39
Greece	16	0	100	0	0	0	-	-	22
Bulgaria	109	0	100	0	0	0	11,201	17,624	-
United Kingdom	1,222	-	49	50	1	0	11,654	17,845	-
Switzerland	436	-	41	9	50	0	-	22,011	-
Norway	93	-	22	78	0	0	14,056	21,713	42
Iceland	1	-	0	0	0	100	-	-	-
Mercedes-Benz	3,362	25	51	10	32	7	12,719	22,318	38
MAN	2,976	22	49	5	33	11	12,417	22,189	49
Solaris	1,122	8	37	27	8	28	12,742	21,624	30
IVECO	791	6	30	0	7	63	13,470	22,386	45
Scania	732	6	48	2	8	42	13,606	22,564	50
Heuliez	584	4	21	47	12	20	11,826	19,862	35
Volvo	385	3	0	43	57	0	12,003	23,078	37
BredaMenarinibus	381	3	100	0	0	0	11,357	18,562	-
Krattex	366	3	100	0	0	0	11,990	16,500	-
VDL Bus & Coach	336	3	20	51	29	0	16,515	24,324	40
Alexander Dennis	251	2	2	0	98	0	-	17,991	-
BYD	247	2	17	83	0	0	15,731	22,209	33
Isuzu	240	2	100	0	0	0	8,652	16,363	28
Sor	222	2	83	17	0	0	10,994	20,867	-
Irizar	187	1	1	97	2	0	12,139	20,690	27

Remarks on data sources

The basis for the statistics shown in this report is a database compiled by the ICCT. It includes technical information, emission levels, and registration volumes at a vehicle variant level. Sources of information include data obtained by the European Environment Agency (EEA) on behalf of the European Commission, the European Automobile Manufacturers' Association (ACEA), the German Kraftfahrtbundesamt (KBA), the Netherlands Vehicle Authority (RDW), the United Kingdom Vehicle Certification Agency (VCA), Allgemeiner Deutscher Automobil-Club (ADAC), Automobile Revue, Dataforce, MarkLines, S&P Global, km77.com, China EV100 and ZEDATA (China), Atlas Public Policy (U.S.), Segment Y (India), vehicle manufacturers and importers associations, and information provided directly by manufacturers and suppliers. Data included in this publication are aggregated to a great extent and are only intended to illustrate high-level trends. It is not to be considered official data. Due to the introduction of the WLTP test procedure, NEDC CO₂ values are not available for all 2020 new passenger car registrations in the European Union. Figures shown make use of available NEDC and WLTP-based NEDC CO₂ values and may deviate from other publications.

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References

Dornoff, J. (2023). *CO₂ emission standards for new passenger cars and vans in the European Union*. International Council on Clean Transportation. <https://theicct.org/publication/eu-co2-standards-cars-vans-may23>

Mock, P. (2019). *CO₂ emission standards for passenger cars and light-commercial vehicles in the European Union*. International Council on Clean Transportation. <https://theicct.org/publication/co2-emission-standards-for-passenger-cars-and-light-commercial-vehicles-in-the-european-union>

Poupinha, C., & Dornoff, J. (2024). *The bigger the better? How battery size affects real-world energy consumption, cost of ownership, and life-cycle emissions of electric vehicles*. International Council on Clean Transportation. <https://theicct.org/publication/bev-battery-size-energy-consumption-cost-ownership-lca-ev-apr24>

Regulation (EU) 2019/1242 of the European Parliament and of the Council of 20 June 2019 setting CO₂ emission performance standards for new heavy-duty vehicles and amending Regulations (EC) No 595/2009 and (EU) 2018/956 of the European Parliament and of the Council and Council Directive 96/53/EC (Text with EEA relevance). <http://data.europa.eu/eli/reg/2019/1242/oj/eng>

Tietge, U., Dornoff, J., & Mock, P. (2024). *CO₂ emissions from new passenger cars in Europe: Car manufacturers' performance in 2023*. International Council on Clean Transportation. <https://theicct.org/publication/co2-emissions-new-pv-europe-car-manufacturers-performance-2023-sept24>

Abbreviations

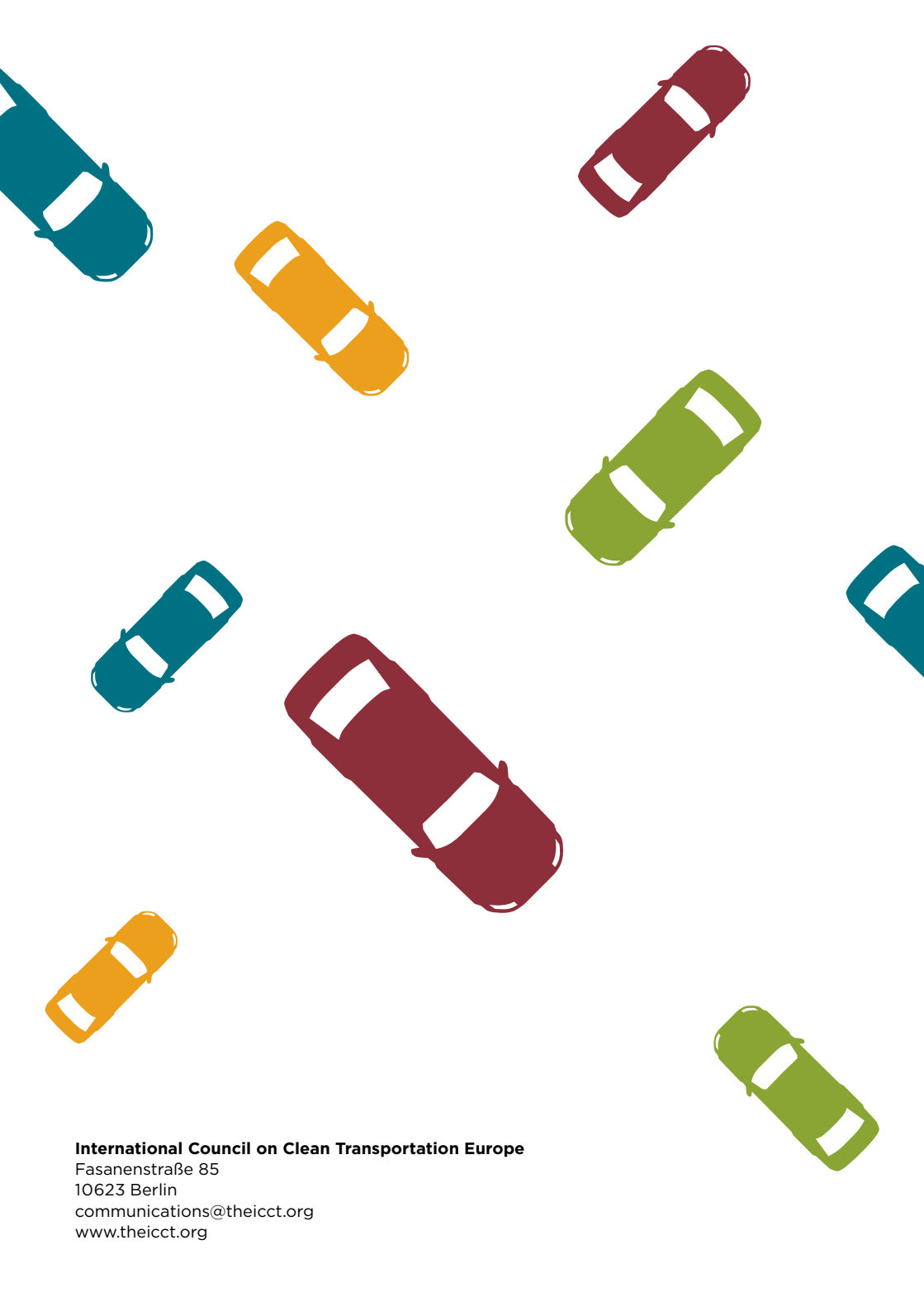
ACEA	Association des Constructeurs Européens d'Automobiles (European Automobile Manufacturers' Association)
ADAC	Allgemeiner Deutscher Automobil-Club
BEV	Battery electric vehicles
CF	Conformity factor
CO	Carbon monoxide
CO₂	Carbon dioxide
EEA	European Environment Agency
EU	European Union
EU-12/13	All 12/13 EU member states having joined the EU between 1995 and 2014
EU-27	All 27 EU member states
HC	Hydrocarbon
HEV	Hybrid electric vehicles
HDV	Heavy-duty vehicles
KBA	Kraftfahrtbundesamt
LCV	Light commercial vehicles
LDV	Light-duty vehicles
LPG	Liquefied petroleum gas
PC	Passenger cars
PHEV	Plug-in hybrid electric vehicles
NEDC	New European Driving Cycle
NMHC	Nonmethane hydrocarbon
NO_x	Nitrogen oxides
NTE	Not-to-exceed
OBFCM	On-board fuel consumption meter
PEMS	Portable emission measurement system
PM	Particulate matter
PN	Particulate number
RDE	Real driving emissions
RDW	Rijksdienst voor het Wegverkeer (Netherlands Vehicle Authority)
SUV	Sport utility vehicle
UK	United Kingdom
VCA	Vehicle Certification Agency
WLTP	Worldwide Harmonized Light Vehicles Test Procedure

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