

## MARKET MONITOR

# EUROPEAN PASSENGER CAR AND LIGHT COMMERCIAL VEHICLE REGISTRATIONS: JANUARY-JULY 2022



At around 2,380,000 new car registrations, the second quarter of 2022 displayed a 17% drop compared to the same time period in 2021, contributing to a 14% decrease for the year to date over 2021. Most manufacturers saw double-digit drops in registrations for the quarter, with Volvo and Stellantis exhibiting large declines in registrations for the second quarter in a row of 30% and 22%, respectively, compared to Q2 of 2021. Tesla-Honda registrations notably also dropped 26% in the second quarter compared to 2021, after a 27% increase in the first quarter. VW-SAIC (-23%), BMW (-16%) and Ford (-15%) also continued to amass losses for 2022. The average share of battery-electric vehicles (BEVs) and plug-in hybrid vehicles (PHEVs) remained steady in the second quarter (+1% from 2021 for BEVs and no change for PHEVs), making up an average of 20% of total registered. The largest year-to-date advances compared to 2021 are being made by Volvo (+9 percentage points), reaching a 20% battery-electric vehicle share. While Tesla-Honda's 73% BEV share of registrations for 2022 continues to be well above all other manufacturing groups, it is lower than the 78% it had in 2021. All other manufacturers had only marginal changes in BEV and PHEV shares, ranging from -1 to +4 percentage points, although the 2 percentage point increase for Stellantis is still quite significant as Europe's second largest manufacturing group. All manufacturers, with the exception of VW-SAIC, are now on track to reach their specific 2022 CO<sub>2</sub> targets after the second quarter, with over-compliance averaging at least 6 g/km. While VW-SAIC is not yet on track to reach its CO<sub>2</sub> target for 2022, it has narrowed its target gap to 3 g/km, down from 7g/km after the first quarter.

**Table 1.** New passenger car registrations, by manufacturer pool.

New car registrations				
	Q2/2022	vs. Q2/2021	2022 YTD	vs. 2021
VW-SAIC	598,497	-23%	1,164,961	-19%
Stellantis	502,260	-22%	965,745	-23%
Renault-Nissan-Mitsubishi	319,223	-7%	598,946	-8%
Mazda-Subaru-Toyota	196,592	-11%	391,547	-6%
BMW	159,351	-16%	315,780	-14%
Mercedes-Benz	135,732	-9%	269,613	-11%
Hyundai	114,596	1%	215,975	5%
Kia	112,191	1%	217,611	10%
Ford	100,882	-15%	211,613	-14%
Volvo	46,176	-30%	103,824	-27%
Tesla-Honda	27,838	-26%	80,659	15%
Other	65,929	-21%	127,721	-18%
<b>ALL</b>	<b>2,379,267</b>	<b>-17%</b>	<b>4,663,995</b>	<b>-14%</b>

**Table 2.** Share of plug-in hybrid and battery electric passenger cars, by manufacturer pool.

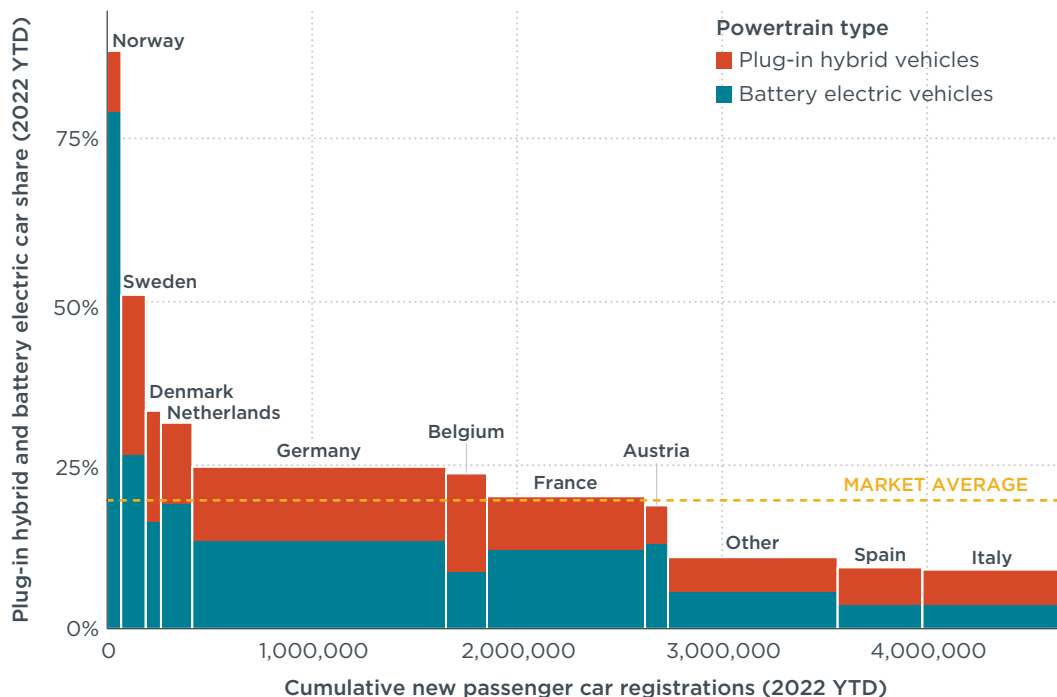
Share of plug-in hybrid and battery electric cars						
	Q2/2022		2022 YTD		2021	
	BEV	PHEV	BEV	PHEV	BEV	PHEV
Tesla-Honda	59%	0%	73%	0%	78%	0%
Volvo	21%	33%	20%	36%	11%	38%
Mercedes-Benz	13%	17%	13%	20%	12%	24%
Hyundai	13%	7%	15%	7%	14%	6%
BMW	13%	19%	13%	19%	9%	19%
Kia	12%	12%	14%	10%	12%	12%
Renault-Nissan-Mitsubishi	11%	4%	11%	4%	11%	4%
<b>AVERAGE</b>	<b>11%</b>	<b>9%</b>	<b>11%</b>	<b>9%</b>	<b>10%</b>	<b>9%</b>
VW-SAIC	10%	7%	10%	7%	11%	9%
Stellantis	10%	8%	9%	7%	7%	5%
Other	5%	16%	5%	14%	2%	8%
Ford	4%	11%	4%	10%	5%	10%
Mazda-Subaru-Toyota	1%	3%	1%	3%	2%	3%

**Table 3.** New passenger car fleet average CO<sub>2</sub> emission level, by manufacturer pool.

	Target gap	New car fleet average CO <sub>2</sub> (in g/km)						
		Q2/2022	2022 YTD	Compliance credits		Status 2022	Target 2022	Target gap
		WLTP	WLTP	eco-innovations	super-credits	WLTP	WLTP	WLTP
Tesla-Honda	-75%	50	33	0.2	0.0	33	129	-96
Volvo	-37%	87	84	0.3	0.0	84	133	-49
BMW	-14%	111	110	1.4	0.0	108	126	-18
Stellantis	-7%	109	110	1.5	0.0	109	118	-9
Kia	-7%	104	103	0.5	0.0	102	110	-8
Hyundai	-6%	107	104	0.5	0.0	104	110	-6
Mercedes-Benz	-6%	121	118	0.7	0.0	117	124	-7
<b>AVERAGE</b>	<b>-5%</b>	<b>113</b>	<b>113</b>	<b>1.1</b>	<b>0.1</b>	<b>112</b>	<b>118</b>	<b>-6</b>
Mazda-Subaru-Toyota	-3%	115	116	0.5	1.2	115	119	-4
Ford	-2%	122	122	1.7	0.0	121	123	-2
Renault-Nissan-Mitsubishi	-1%	110	110	1.2	0.0	109	110	-1
VW-SAIC	3%	123	125	1.2	0.0	123	120	3

Notes: all CO<sub>2</sub> values are estimates, see methodology section.

Registration shares of plug-in hybrid and battery electric vehicles in the first half of 2022 were the highest in Norway (88%). Iceland (55%), Sweden (51%), Finland (34%), Denmark (33%), the Netherlands (31%), Germany (25%), Belgium (24%), Luxembourg (24%), Ireland (22%), and Portugal (21%) also had BEV and PHEV registration shares above the European average of 20%.



**Figure 1.** Share of plug-in hybrid and battery-electric vehicles, by country, including information on market size (cumulative car registrations).

**Table 4.** New passenger car registrations, by country.

	New car registrations			
	Q2/2022	vs. Q2/2021	2022 YTD	vs. 2021
Germany	612,021	-17%	1,237,975	-11%
France	406,620	-15%	771,980	-16%
Italy	347,241	-21%	687,063	-23%
Spain	246,550	-11%	414,056	-12%
Poland	110,372	-11%	212,422	-12%
Belgium	94,240	-18%	199,164	-16%
Netherlands	75,355	-8%	153,708	-6%
Austria	58,034	-20%	111,722	-18%
Czechia	51,525	-19%	98,916	-12%
Sweden	48,661	-41%	118,789	-32%
Other	328,648	-13%	658,200	-8%
<b>ALL</b>	<b>2,379,267</b>	<b>-17%</b>	<b>4,663,995</b>	<b>-14%</b>

**Table 5.** Share of plug-in hybrid and battery electric passenger cars, by country (EU only).

	Share of plug-in hybrid and battery electric cars					
	Q2/2022		2022 YTD		2021	
	BEV	PHEV	BEV	PHEV	BEV	PHEV
Sweden	24%	23%	27%	24%	19%	26%
Netherlands	23%	12%	19%	12%	20%	10%
Other	16%	9%	16%	8%	15%	11%
Germany	14%	12%	14%	11%	14%	12%
Austria	13%	6%	13%	6%	14%	6%
France	12%	8%	12%	8%	10%	8%
<b>AVERAGE</b>	<b>11%</b>	<b>9%</b>	<b>11%</b>	<b>9%</b>	<b>10%</b>	<b>9%</b>
Belgium	8%	16%	9%	15%	6%	12%
Italy	4%	6%	4%	5%	5%	5%
Spain	3%	5%	4%	6%	3%	5%
Poland	2%	2%	2%	2%	2%	2%
Czechia	2%	2%	2%	2%	1%	2%

All manufacturers in the EU saw a decrease in new registrations of light commercial vehicles (vans) in the second quarter (-26% on average), with an average drop of 23% in the first half of 2022 compared to 2021. The average share of battery electric vans stayed steady in the second quarter at 4% of total van registrations. Manufacturing pool Stellantis has had the greatest increase in BEV shares of electric vans (up 3% from 2021), and Germany is still on track to being the country with the highest share (5%) in 2022. Almost all manufacturers are now on track to meet their 2022 CO<sub>2</sub> targets, while Stellantis continues to lead in overcompliance and is currently set to surpass its 2022 CO<sub>2</sub> targets by 21g/km. While still lagging behind, the Renault-Nissan-Mitsubishi is closing in on its 2022 target with a 16 g/km gap, down from 24 g/km after Q1.

**Table 6.** New van registrations, by manufacturer pool.

New vans registrations				
	Q2/2022	vs. Q2/2021	2022 YTD	vs. 2021
Stellantis	107,140	-29%	221,847	-26%
Volkswagen-Ford-SAIC	74,299	-27%	152,949	-27%
Renault-Nissan-Mitsubishi	63,200	-32%	120,642	-33%
Mercedes-Benz	32,465	-20%	66,266	-15%
Other	45,404	-7%	90,495	3%
<b>ALL</b>	<b>322,508</b>	<b>-26%</b>	<b>652,199</b>	<b>-23%</b>

**Table 7.** Share of plug-in hybrid and battery electric vans, by manufacturer pool.

Share of plug-in hybrid and battery electric vans						
	Q2/2022		2022 YTD		2021	
	BEV	PHEV	BEV	PHEV	BEV	PHEV
Stellantis	5%	0%	5%	0%	2%	0%
Other	5%	0%	5%	0%	4%	0%
Mercedes-Benz	5%	0%	4%	0%	4%	0%
<b>AVERAGE</b>	<b>4%</b>	<b>0%</b>	<b>4%</b>	<b>0%</b>	<b>3%</b>	<b>0%</b>
Renault-Nissan-Mitsubishi	3%	0%	3%	0%	5%	0%
Volkswagen-Ford-SAIC	2%	0%	3%	0%	2%	0%

**Table 8.** New vans fleet average CO<sub>2</sub> emission level, by manufacturer pool.

	Target gap	New vans fleet average CO <sub>2</sub> (in g/km)					
		Q2/2022	2022 YTD	Credits	Status 2022	Target 2022	Target gap
		WLTP	WLTP	eco-innovations	WLTP	WLTP	WLTP
Stellantis	-12%	168	166	0.0	166	187	-21
<b>AVERAGE</b>	<b>-3%</b>	<b>187</b>	<b>187</b>	<b>0.0</b>	<b>187</b>	<b>194</b>	<b>-7</b>
Volkswagen-Ford-SAIC	-2%	194	194	0.0	194	198	-4
Mercedes-Benz	-1%	214	219	0.0	219	221	-2
Renault-Nissan-Mitsubishi	9%	199	201	0.0	201	185	16

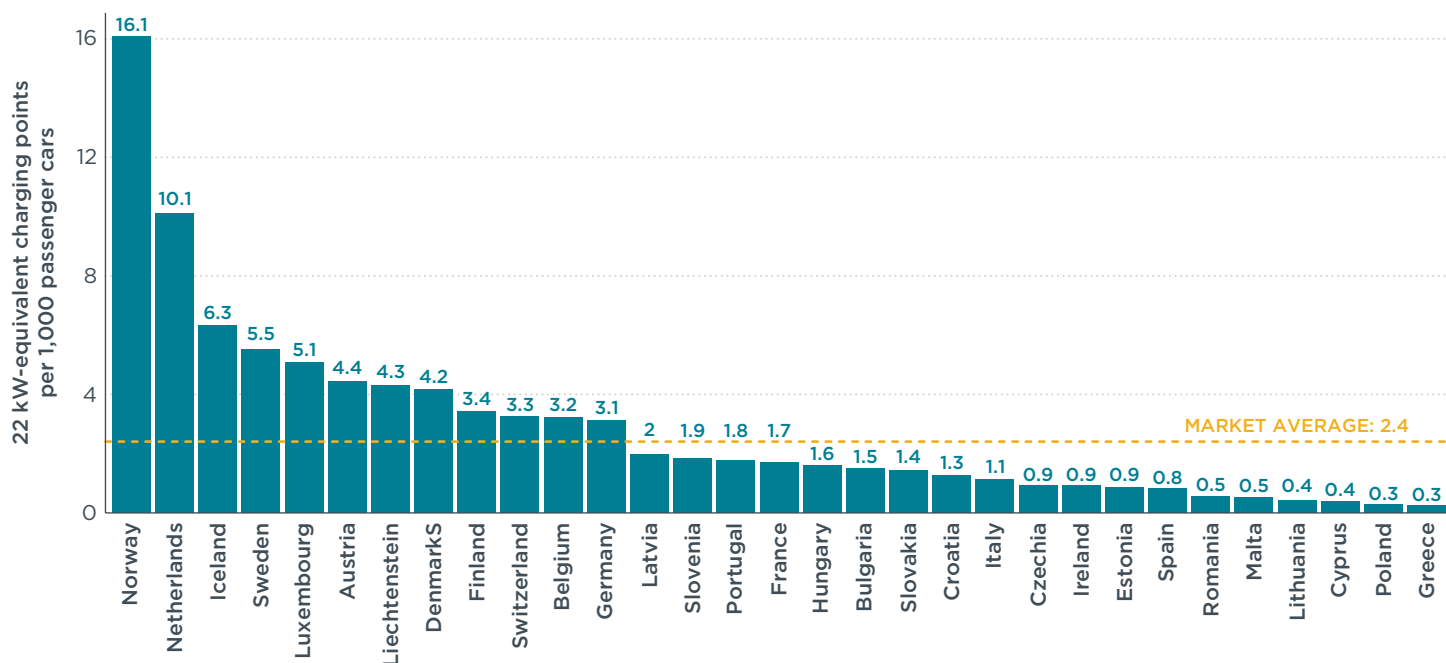
**Table 9.** New van registrations, by country (EU only).

New vans registrations				
	Q2/2022	vs. Q2/2021	2022 YTD	2021
France	92,634	-24%	183,001	-24%
Germany	51,470	-30%	109,052	-22%
Italy	40,452	-16%	81,560	-11%
Spain	27,790	-31%	50,968	-31%
Other	110,162	-27%	227,618	-25%
<b>ALL</b>	<b>322,508</b>	<b>-26%</b>	<b>652,199</b>	<b>-23%</b>

**Table 10.** Share of plug-in hybrid and battery electric vans by country.

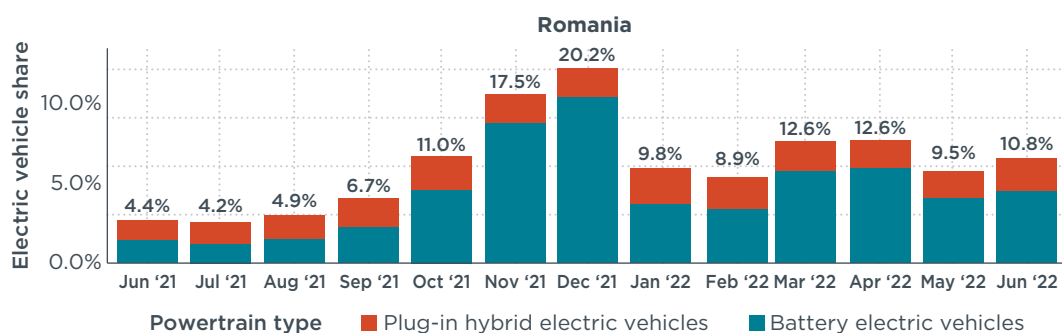
Share of plug-in hybrid and battery electric vans						
	Q2/2022		2022 YTD		2021	
	BEV	PHEV	BEV	PHEV	BEV	PHEV
Germany	5%	0%	5%	0%	5%	0%
Other	5%	0%	5%	0%	3%	0%
<b>AVERAGE</b>	<b>4%</b>	<b>0%</b>	<b>4%</b>	<b>0%</b>	<b>3%</b>	<b>0%</b>
France	3%	0%	3%	0%	3%	0%
Italy	3%	0%	2%	0%	2%	0%
Spain	2%	0%	2%	0%	2%	0%

By the end of the first half of 2022, there were close to 420,000 publicly accessible electric vehicle charging points in Europe. This represents an 18% increase over the end of 2021. Europe-wide there were, on average, about 2.4 “normal,” or 22 kW-equivalent, publicly accessible charging points installed per thousand passenger cars on the road at the end of the first half of 2022, up from 1.9 at the end of 2021. Norway (16.1) and the Netherlands (10.1) continue to lead, while 19 of 31 countries fell below the market average. Poland (0.3) and Greece (0.3) exhibited the fewest number of charging points per thousand passenger cars.



**Figure 2.** 22 kW-equivalent publicly accessible charging points installed per thousand passenger cars on the road in EU and EFTA countries by the end of the first half of 2022.

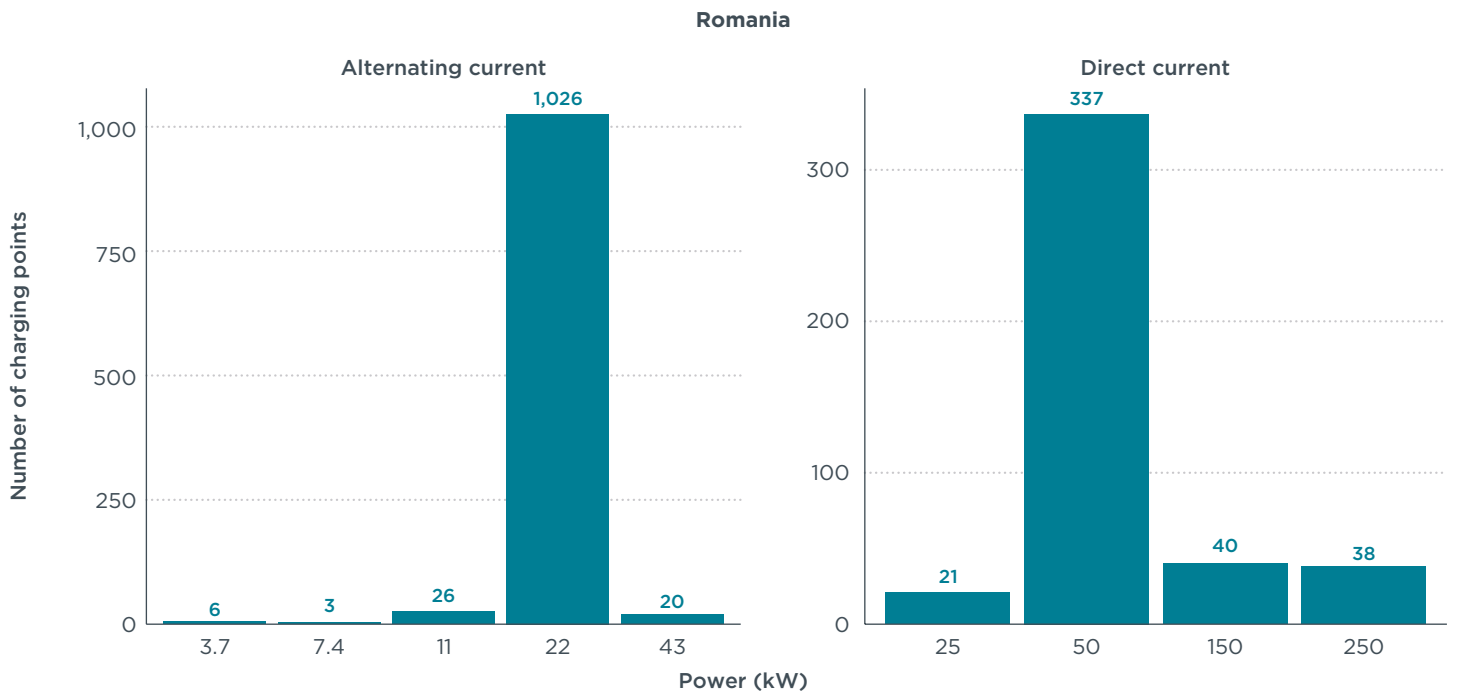
Romania saw a continuous increase in BEV and PHEV shares from July 2021, peaking in December the same year at 20.2% of newly registered passenger cars. Since January 2022, combined BEV and PHEV new car registration shares were around 10%, lower than at the end of 2021 but still higher than in all other Eastern European countries. Since September 2021, there has been a clear trend towards BEV rather than PHEV purchases, shown in the higher registration shares. Romania offers some of the highest purchase incentives for BEVs and PHEVs in Europe, which also include the mandatory scrappage of one or two used cars. The bonus amount for the purchase of a new BEV in 2022 is L51,000 (€10,400) if one used car (at least six years since the first registration in Romania) is scrapped or L54,000 (€11,000) if two used cars are scrapped. The bonus amounts for PHEVs under the same preconditions are L26,000 (€5,300) and L29,000 (€5,900), respectively. For each used vehicle older than 15 years and certified to the Euro 3 standard or less, the bonus amounts increase by RON 1,500 (€300) per vehicle.



**Figure 3.** Share of new battery-electric and plug-in hybrid passenger cars in Romania (spotlight of the month).

At the end of the first half of 2022 Romania had roughly 0.5 normal (22 kW) publicly accessible charging points installed per thousand passenger cars on the road, falling below nearby countries such as Hungary (1.6) and Bulgaria (1.5) and well below the European average of 2.4. However, during the first half of 2022, Romania grew its

public charging network by 25%, which is above the European average of 18%. During the same period, Romania's Ministry of Environment allocated L500 million (€100 million) to deploy recharging stations for electric vehicles in localities. Around 71% of Romania's roughly 1,500 public charging points offered alternating current (AC) charging at the end of 2021, 95% of which was 22 kW.



**Figure 4.** Number of publicly accessible alternating current normal (left) and direct current fast (right) charging points in Romania at the end of 2021.

## DEFINITIONS, DATA SOURCES, METHODOLOGY, AND ASSUMPTIONS

**Manufacturer pools:** Automakers are allowed to form pools to jointly comply with CO<sub>2</sub> targets. For this factsheet, the definition of pools according to the European Commission, “M1 pooling list”, version of 14 July 2022 applies (main brands listed here): BMW Group (BMW, Mini), Ford (Ford), Hyundai (Hyundai), Kia (Kia), Mazda-Subaru-Toyota (Lexus, Mazda, Subaru, Toyota), Mercedes-Benz (Mercedes-Benz, Smart), Renault-Nissan-Mitsubishi (Dacia, Mitsubishi, Nissan, Renault), Stellantis (Alfa Romeo, Citroën, Fiat, Jeep, Lancia, Opel, Peugeot), Tesla-Honda (Honda, Tesla), Volvo (Volvo) and VW-SAIC (Audi, Cupra, Porsche, SEAT, Škoda, VW). For light commercial vehicles, the “N1 pooling list”, version 20 December 2021, applies: Mercedes-Benz (Mercedes-Benz, Mitsubishi Fuso), Renault-Nissan-Mitsubishi (Mitsubishi, Nissan, Renault), Stellantis (Citroën, Fiat, Opel, Peugeot), Volkswagen-Ford-SAIC (Ford, MAN, Volkswagen).

**Abbreviations:** CO<sub>2</sub> = carbon dioxide emissions; g/km = grams per kilometer; YTD = year to date.

**Technical scope:** This factsheet focuses on new **passenger car** and **light commercial vehicle** registrations. **Electric vehicles** here include battery electric (BEV), plug-in hybrid electric (PHEV), and fuel cell vehicles.

**Geographic scope:** The European CO<sub>2</sub> regulation for vehicle manufacturers applies to all countries of the European Economic Area (EEA). This includes the 27 Member States of the European Union, plus Iceland, Liechtenstein, and Norway. Data for new car registrations and shares of electric vehicles in this factsheet cover all of these countries, with the exception of Bulgaria, Liechtenstein, and Malta. Data for CO<sub>2</sub> emission levels additionally omit Hungary, Lithuania, Poland (until April 2020), Portugal, and Romania (together less than 10% of the total market). Charging infrastructure data are presented for the 27 EU members plus the 4 EFTA countries (Iceland, Liechtenstein, Norway, Switzerland).

**Data sources:** AAA DATA (France), Dataforce (all other markets), Eco-Movement (charging points).

**Results may change over time:** Registrations and/or CO<sub>2</sub> data may be retrospectively updated by some of the national type approval authorities. Historical values are regularly updated to reflect all latest data available.

**Test procedures:** CO<sub>2</sub> values are provided according to the Worldwide harmonized Light vehicles Test Procedure (WLTP).

**Flexible compliance mechanisms:** To facilitate meeting their CO<sub>2</sub> targets, manufacturers can make use of a number of compliance mechanisms: (1) Manufacturers can reduce their CO<sub>2</sub> level by up to 7 g/km by deploying **eco-innovation** technologies. To incentivize eco-innovations, CO<sub>2</sub> savings from eco-innovations per passenger car and light commercial vehicle are amplified by multipliers in the years 2021, 2022 and 2023. For 2022, the multiplier is set to 1.7. As a conservative estimate, we apply the 2021 (cars) / 2020 (vans) level of eco-innovation CO<sub>2</sub> emission reductions per manufacturer<sup>1</sup>, (2) New passenger cars with less than 50 g/km CO<sub>2</sub>/km (NEDC) are counted 1.33 times in 2022 (**super-credit**). The impact of super-credits for complying with the CO<sub>2</sub> targets is capped at 7.5 g/km per manufacturer for the years 2020-2022 together.

**Mass-based targets:** For each manufacturer pool, a specific **2022 CO<sub>2</sub> target value** applies, depending on the average mass of the new cars registered. For this factsheet, we assume the average mass per manufacturer pool to remain constant with respect to the market situation in 2021 (cars) / 2020 (vans).<sup>2</sup>

**Charging point:** As defined in the Alternative Fuel Infrastructure regulation proposal, a charging point “means a fixed or mobile interface that allows for the transfer of electricity to an electric vehicle, which, whilst it may have one or several connectors to accommodate different connector types, is capable of recharging only one electric vehicle at a time, and excludes devices with a power output less than or equal to 3.7 kW the primary purpose of which is not recharging electric vehicles.”

- 1 Applying the methodology outlined in: Uwe Tietge, Peter Mock, and Jan Dornoff, *Overview and evaluation of eco-innovations in European passenger car CO<sub>2</sub> standards*, (ICCT: Washington, DC, 2018), <https://theicct.org/publications/eco-innovations-european-passenger-car-co2-standards>.
- 2 Uwe Tietge, Jan Dornoff, Peter Mock, and Sonsoles Díaz, *CO<sub>2</sub> emissions from new passenger cars in Europe: Car manufacturers' performance in 2021*, (ICCT: Washington, DC, 2022), <https://theicct.org/publication/co2-new-passenger-cars-europe-aug22/>

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