

## MARKET MONITOR

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



The effects of global supply chain shortages due to the covid epidemic and the war in Ukraine continue to be felt in the European car market, with the roughly 2,300,000 total new car registrations in the first quarter of 2022 equating to a 12% drop compared to the same time period in 2021. While some individual manufacturers (pools) achieved increased vehicle registrations, such as the Tesla-Honda-JRL pool and Kia with respective 20% and 27% increases, most experienced a double-digit drop compared to 2021. Car registrations from market giant Stellantis dropped by a staggering 25% and Volvo registrations dropped by 23%, followed by the market-leading VW Group (-14%), Ford (-14%), Mercedes Benz (-13%) and the BMW Group (-12%). The average share of battery electric (BEVs) and plug-in hybrid vehicles (PHEVs) increased only marginally in the first quarter (+1% from 2021 for BEVs, no change for PHEVs), making up an average of 20% of total registered. The largest advances compared to 2021 were made by the Tesla-Honda-JRL pool (+10 percentage points) followed by Volvo (+9 percentage points), reaching shares of battery electric vehicles of 67% and 20%, respectively. At the bottom of the list remains the Mazda-Subaru-Suzuki-Toyota pool (1%), while the VW Group (9%) and Ford (4%) even exhibited decreasing shares during this time. The majority of manufacturers are on track to reach their specific 2022 CO<sub>2</sub> targets after the first quarter, with over-compliance averaging at least 6 g/km. The VW Group is the farthest from reaching its CO<sub>2</sub> target for 2022, with a gap of 7 g/km, followed by Ford (2 g/km).

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

New car registrations				
	Q1/2022	vs. Q1/2021	2022	vs. 2021
VW Group	566,460	-14%	566,460	-14%
Stellantis	463,448	-25%	463,448	-25%
Renault-Nissan-Mitsubishi	279,766	-10%	279,766	-10%
Mazda-Subaru-Suzuki-Toyota	224,745	-7%	224,745	-7%
BMW Group	156,530	-12%	156,530	-12%
Mercedes-Benz	133,871	-13%	133,871	-13%
Ford	110,728	-14%	110,728	-14%
Kia	105,433	20%	105,433	20%
Hyundai	101,379	11%	101,379	11%
Tesla-Honda-JLR	63,844	27%	63,844	27%
Volvo	57,660	-23%	57,660	-23%
Other	20,878	90%	20,878	90%
<b>ALL</b>	<b>2,284,742</b>	<b>-12%</b>	<b>2,284,742</b>	<b>-12%</b>

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

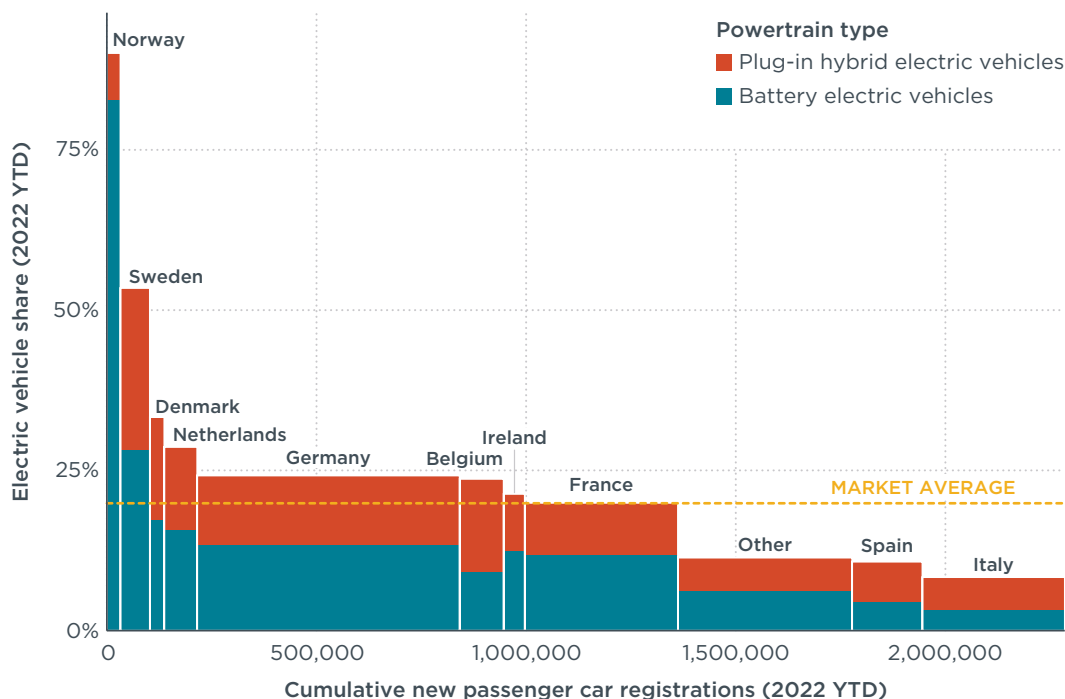
Share of plug-in hybrid and battery electric cars						
	Q1/2022		2022		2021	
	BEV	PHEV	BEV	PHEV	BEV	PHEV
Tesla-Honda-JLR	67%	6%	67%	6%	57%	6%
Volvo	20%	38%	20%	38%	11%	38%
Hyundai	17%	7%	17%	7%	14%	6%
Kia	16%	9%	16%	9%	12%	12%
BMW Group	13%	19%	13%	19%	9%	19%
Mercedes-Benz	12%	23%	12%	23%	12%	24%
<b>AVERAGE</b>	<b>11%</b>	<b>9%</b>	<b>11%</b>	<b>9%</b>	<b>10%</b>	<b>9%</b>
Renault-Nissan-Mitsubishi	11%	3%	11%	3%	11%	4%
Other	11%	15%	11%	15%	7%	13%
VW Group	9%	7%	9%	7%	11%	9%
Stellantis	8%	7%	8%	7%	7%	5%
Ford	4%	9%	4%	9%	5%	10%
Mazda-Subaru-Suzuki-Toyota	1%	3%	1%	3%	1%	2%

**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)						
		Q1/2022	2022	Compliance credits		Status 2022	Target 2022	Target gap
		WLTP	WLTP	eco-innovations	super-credits	WLTP	WLTP	WLTP
Tesla-Honda-JLR	-68%	45	45	0.0	0.0	45	143	-98
Volvo	-37%	83	83	0.0	0.0	83	132	-49
BMW Group	-12%	109	109	0.2	0.0	109	124	-15
Kia	-8%	101	101	0.0	0.0	101	110	-9
Hyundai	-8%	101	101	0.0	0.0	101	110	-9
Mercedes-Benz	-6%	115	115	0.0	0.0	115	122	-7
Stellantis	-5%	112	112	0.0	0.0	112	118	-6
<b>AVERAGE</b>	<b>-5%</b>	<b>113</b>	<b>113</b>	<b>0.0</b>	<b>0.1</b>	<b>113</b>	<b>119</b>	<b>-6</b>
Mazda-Subaru-Suzuki-Toyota	-2%	115	115	0.0	1.1	113	116	-3
Renault-Nissan-Mitsubishi	0%	110	110	0.0	0.0	110	111	-1
Ford	2%	123	123	0.2	0.0	122	120	2
VW Group	6%	127	127	0.0	0.0	127	120	7

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 quarter of 2022 were the highest in Norway (90%). Iceland (68%), Sweden (53%), Finland (34%), Denmark (33%), the Netherlands (29%), Germany (24%), Belgium (24%), Luxembourg (24%), Portugal (22%) and Ireland (21%) also had BEV and PHEV registration shares above the European average of 20%. Only marginal differences compared to 2021 can be observed.



**Figure 1.** Share of electric vehicles, by country, including information on market size (cumulative car registrations).

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

New car registrations				
	Q1/2022	vs. Q1/2021	2022	vs. 2021
Germany	625,954	-5%	625,954	-5%
France	365,360	-17%	365,360	-17%
Italy	339,644	-24%	339,644	-24%
Spain	167,506	-13%	167,506	-13%
Belgium	104,924	-14%	104,924	-14%
Poland	102,050	-13%	102,050	-13%
Netherlands	78,539	-3%	78,539	-3%
Sweden	70,128	-24%	70,128	-24%
Austria	53,688	-17%	53,688	-17%
Czechia	47,391	-4%	47,391	-4%
Other	329,558	-2%	329,558	-2%
<b>ALL</b>	<b>2,284,742</b>	<b>-12%</b>	<b>2,284,742</b>	<b>-12%</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						
	Q1/2022		2022		2021	
	BEV	PHEV	BEV	PHEV	BEV	PHEV
Sweden	28%	25%	28%	25%	19%	26%
Other	17%	8%	17%	8%	15%	11%
Netherlands	16%	13%	16%	13%	20%	10%
Germany	13%	11%	13%	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	9%	14%	9%	14%	6%	12%
Spain	4%	6%	4%	6%	3%	5%
Italy	3%	5%	3%	5%	5%	5%
Poland	2%	2%	2%	2%	2%	2%
Czechia	2%	2%	2%	2%	1%	2%

New registrations of light commercial vehicles (vans) dropped an average of 21% in the first quarter of 2022 compared to the same period in the previous year. The share of battery electric vans increased 1 percentage point on average during this time. Manufacturing pool Stellantis had the highest share of electric vans (5%), with Germany on track to being the country with the highest share (5%) in 2022. While manufacturers are, on average, expected to meet their 2022 CO<sub>2</sub> targets, Stellantis stands out in its overcompliance, surpassing its 2022 CO<sub>2</sub> targets by 18 g/km. In stark contrast, the Renault-Nissan-Mitsubishi pool is falling substantially short of its target (24 g/km gap).

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

New vans registrations				
	Q1/2022	vs. Q1/2021	2022	2021
Stellantis	114,466	-22%	114,466	-22%
Volkswagen-Ford-SAIC	78,466	-27%	78,466	-27%
Renault-Nissan-Mitsubishi	57,259	-34%	57,259	-34%
Mercedes-Benz	33,793	-9%	33,793	-9%
Other	45,380	18%	45,380	18%
<b>ALL</b>	<b>329,364</b>	<b>-21%</b>	<b>329,364</b>	<b>-21%</b>

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

Share of plug-in hybrid and battery electric vans						
	Q1/2022		2022		2021	
	BEV	PHEV	BEV	PHEV	BEV	PHEV
Other	5%	0%	5%	0%	4%	0%
Stellantis	5%	0%	5%	0%	2%	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	4%	0%	4%	0%	5%	0%
Mercedes-Benz	3%	0%	3%	0%	4%	0%
Volkswagen-Ford-SAIC	2%	0%	2%	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)					
		Q1/2022	2022	Credits	Status 2022	Target 2022	Target gap
		WLTP	WLTP	eco-innovations	WLTP	WLTP	WLTP
Stellantis	-10%	164	164	0.0	164	182	-18
<b>AVERAGE</b>	<b>0%</b>	<b>186</b>	<b>188</b>	<b>0.0</b>	<b>188</b>	<b>188</b>	<b>0</b>
Volkswagen-Ford-SAIC	1%	194	194	0.0	194	193	1
Mercedes-Benz	3%	222	222	0.0	222	215	7
Renault-Nissan-Mitsubishi	13%	203	203	0.0	203	179	24

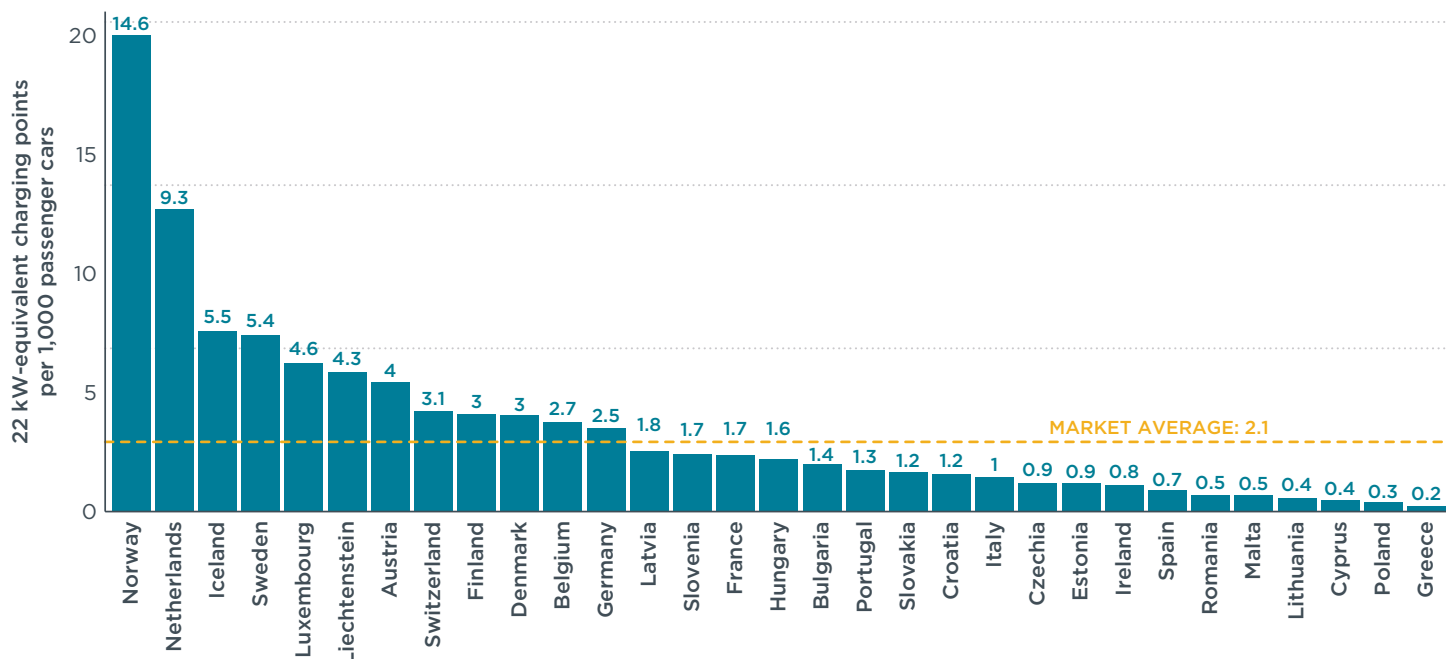
**Table 9.** New van registrations, by country (EU only).

New vans registrations				
	Q1/2022	vs. Q1/2021	2022	2021
France	90,367	-24%	90,367	-24%
Germany	57,582	-14%	57,582	-14%
Italy	40,753	-6%	40,753	-6%
Spain	23,178	-32%	23,178	-32%
Other	117,484	-23%	117,484	-23%
<b>ALL</b>	<b>329,364</b>	<b>-21%</b>	<b>329,364</b>	<b>-21%</b>

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

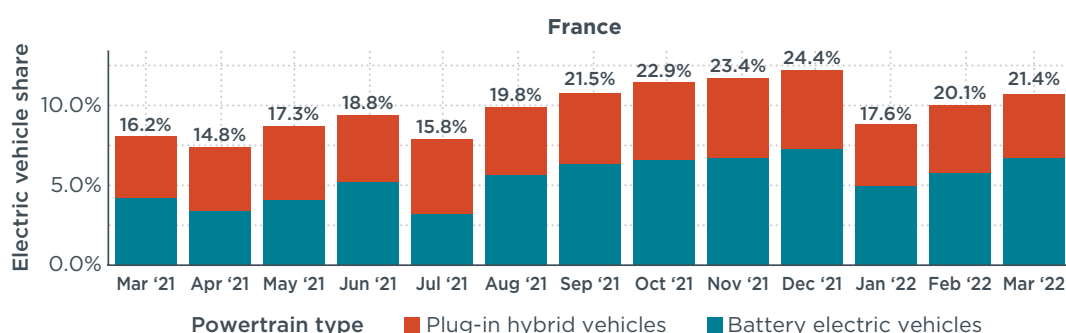
Share of plug-in hybrid and battery electric vans						
	Q1/2022		2022		2021	
	BEV	PHEV	BEV	PHEV	BEV	PHEV
Germany	5%	0%	5%	0%	5%	0%
Other	4%	0%	4%	0%	3%	0%
<b>AVERAGE</b>	<b>4%</b>	<b>0%</b>	<b>4%</b>	<b>0%</b>	<b>3%</b>	<b>0%</b>
France	4%	0%	4%	0%	3%	0%
Spain	3%	0%	3%	0%	2%	0%
Italy	1%	0%	1%	0%	2%	0%

By the end of March 2022, there were close to 380,000 publicly accessible electric vehicle charging points in Europe. This represents a 5.5% increase over December 2021. Europe-wide there were, on average, about 2.1 “normal”, or 22 kW-equivalent, publicly accessible charging points installed per thousand passenger cars on the road at the end of the first quarter in 2022, up from 1.9 at the end of 2021. Norway (14.6) and the Netherlands (9.3) continue to lead, while 19 of 31 countries fell below the market average. Poland (0.3) and Greece (0.2) again exhibited the fewest number of charging points per thousand passenger cars.



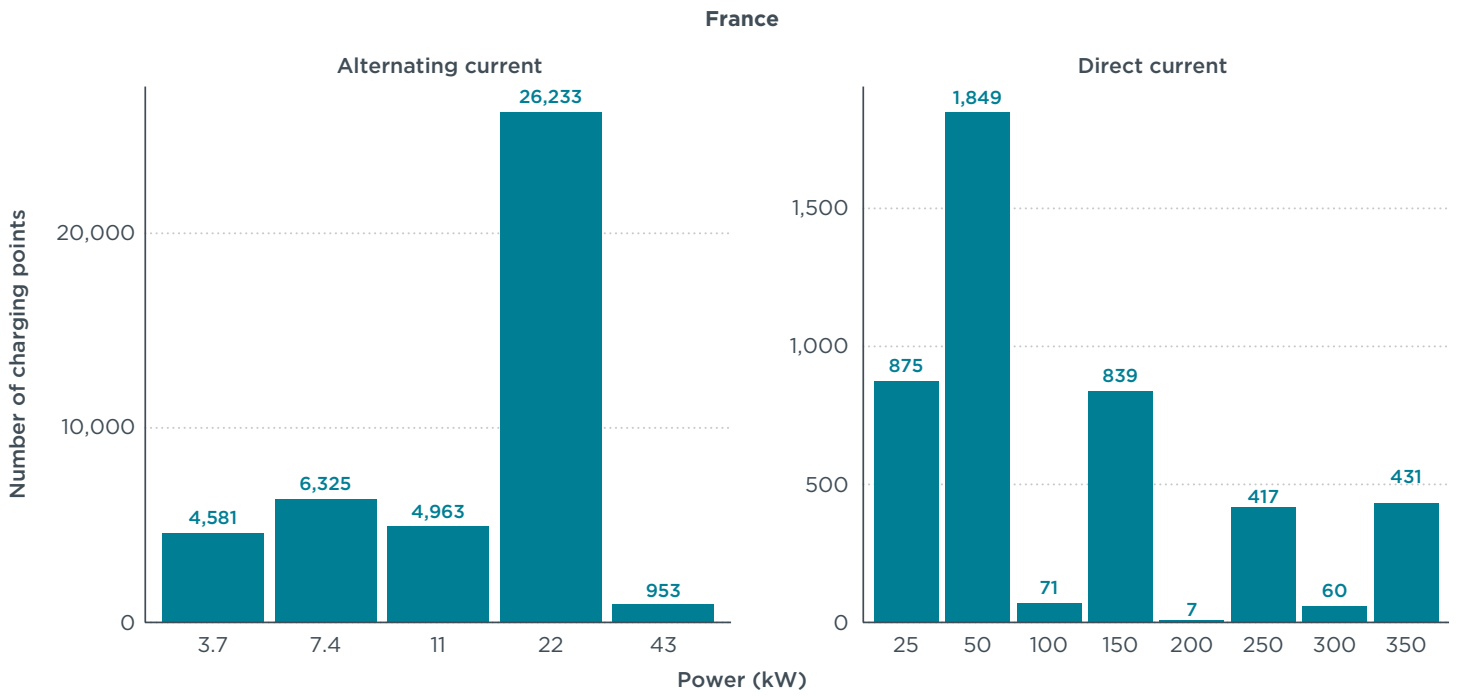
**Figure 2.** 22 kW-equivalent publicly accessible charging points installed per thousand passenger cars on the road for every EU and EFTA country by the end of the first quarter 2022.

As the second largest car market in Europe, France’s share of new battery electric and plug-in hybrid vehicles is slightly above the European average, rising to 21.4% in March 2022, a roughly 5 percentage point increase over the same month last year. While significant gains could be observed in the second half of 2021, shares were again slightly lower in the first quarter of this year. France’s President Emmanuel Macron announced last year a domestic production target of 2 million electric vehicles by 2030 and the CEO of French car manufacturer Renault committed in January to 100% electric vehicle production by 2030, up from the 90% target mentioned in 2021. The country’s generous subsidies for electric vehicles were extended to 1 July of this year, offering purchase incentives of a maximum of €6,000 for BEVs and €1,000 for PHEVs. Additional financial incentives include a scrapping premium for old vehicles based on income and age of the vehicle and tax credits for private charging station installations.



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

At the end of Q1 2022, around 90% of France’s roughly 48,000 public charging points offered alternating current (AC) charging, 61% of which was 22 kW. It is estimated that 430,000 public charging points will be needed by 2030 to support full vehicle electrification in France by 2035. With 1.7 normal (22 kW) charging points per thousand passenger cars, France is slightly below the European average but lagging well behind neighboring countries such as the Netherlands (9.3), Luxembourg (4.6) and Switzerland (3.1).



**Figure 4.** Number of publicly accessible alternating current normal (left) and direct current fast (right) charging points in France 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 31 March 2022 applies (main brands listed here): BMW Group (BMW, Mini), Ford (Ford), Hyundai (Hyundai), Kia (Kia), Mazda-Subaru-Suzuki-Toyota (Lexus, Mazda, Subaru, Suzuki, Toyota), Mercedes-Benz (Mercedes-Benz, Smart), Renault-Nissan-Mitsubishi (Dacia, Mitsubishi, Nissan, Renault), Stellantis (Alfa Romeo, Citroën, Fiat, Jeep, Lancia, Opel, Peugeot), Tesla-Honda-JLR (Honda, Jaguar Land Rover, Tesla), Volvo (Volvo) and VW Group (Audi, Porsche, SEAT, Škoda, VW). For light commercial vehicles, the “N1 pooling list”, version 20 December 2021, applies: Mercedes-Benz (Mercedes-Benz), Renault-Nissan-Mitsubishi (Dacia, Mitsubishi, Nissan, Renault), Stellantis (Alfa Romeo, Citroën, Fiat, Opel, Peugeot), Volkswagen-Ford-SAIC (BYD, Ford, MAN, SAIC, Polaris, Streetscooter, 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 2020 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 2020.<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.” Note: due to the availability of more accurate and recent data for the total number of passenger cars, numbers of charging points will differ from past publications, with some values lower than previously reported. Data provider Eco-Movement also recently adapted their processing method for allocating chargers to countries, particularly impacting the number of charge points in Slovenia, which formerly was surprisingly high.

- 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, Peter Mock, Sonsoles Díaz, and Jan Dornoff, *CO<sub>2</sub> emissions from new passenger cars in Europe: Car manufacturers' performance in 2020*, (ICCT: Washington, DC, 2021), <https://theicct.org/publications/eu-co2-pvs-performance-2020-aug21>

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