European Commission

Consumer Monitor 2022

EUROPEAN ALTERNATIVE FUELS OBSERVATORY

COUNTRY REPORT: DENMARK

Mobility and Transport

European Commission | European Alternative Fuels Observatory

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1. The EAFO EU consumer monitor: key findings & conclusions

Through different European policies, the energy and transportation sectors are compelled to intensify the adoption of renewable energy sources and hasten the electrification of various transport modes. In particular, the recently approved Alternative Fuels Infrastructure Regulation (AFIR), sets a framework for an EU-wide approach for the deployment of refuelling and recharging infrastructure, including road transport electrification[1].

The European Alternative Fuels Observatory (EAFO) supports the EU transport electrification policies by providing information on the evolution of alternative fuel vehicles and recharging/refuelling infrastructure at the EU level and per country. The EAFO also includes a dedicated section for policy makers and consumers, addressing a wide range of stakeholders including different government levels, vehicle manufacturers and other e-mobility industry companies, automobile organisations, etc.

As part of the EAFO consumer section[2], a survey was launched in September 2022 in ten EU countries[*] to better understand consumers' intentions to adopt battery electric vehicles (BEVs), their e-mobility and recharging behaviour, and the challenges they perceive or encounter in this sense. Detailed information on the survey methodology is available in annex I. Please note that the 2022 '*elektrisch rijden monitor*'[3] (Electric driving monitor) of the Dutch partner ANWB was used as an example. Moreover, there were two channels used to distribute the EAFO Consumer Monitor survey:

a. A panel to have a representation of the general population including non-BEV and BEV drivers.

a. The EAFO partner AVERE reached BEV drivers with a broad dissemination of the survey.

This report highlights the main findings of the 2022 EAFO Consumer Monitor survey focusing on passenger BEV cars, and presents the results for **Denmark** in two main parts:

Part 1 presents the surveyed Danish's attitude, interest, and the information that could support BEV (potential) drivers. It is based on the results of the Danish general population surveyed through the panel, which include 1,529 valid responses from BEV (63) and non-BEV drivers (1,466).

Part 2 focuses only on BEV drivers in this case from the panel (63). This gives an insight into the Danish BEV driver e-mobility and recharging behaviour.

The report is complemented with a comparison of the results using key indicators for the ten countries surveyed and the EU aggregated results. Finally, this report includes an overview of the 2022 situation in Denmark in terms of passenger BEVs and recharging infrastructure using the EAFO's latest numbers.

For more than a decade, three main barriers have been identified regarding to the mass up-take of passenger battery electric vehicles (BEVs): **purchase price, driving range and availability of recharging infrastructure**. There have been significant advances in this sense: battery costs have dropped by 90%, vehicles range has increased from 100-150 km up to 400+ km, there is an important growth in new BEVs registrations, and the recharging infrastructure network is expanding. Nevertheless, BEVs represent only 1.23% of the total passenger cars fleet in the EU, and the recharging infrastructure coverage is still limited in some countries and urban areas[4][5].

1 https://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX%3A52021PC0559

2 https://alternative-fuels-observatory.ec.europa.eu/consumer-portal

3 ANWB Elektrisch Rijden Monitor 2022. Rapportage consumenten perspectief elektrisch rijden

4 Van Mierlo, J., Berecibar, M., El Baghdadi, M., De Cauwer, C., Messagie, M., Coosemans, T., Jacobs, V. A., & Hegazy, O. (2021). Beyond the State of the Art of Electric Vehicles: A Fact-Based Paper of the Current and Prospective Electric Vehicle Technologies. World Electric Vehicle Journal, 12(1), 1-26. [20].

5 https://alternative-fuels-observatory.ec.europa.eu/

* The ten countries surveyed were: Austria, Belgium, Denmark, France, Germany, Hungary, Italy, Netherlands, Slovenia, and Spain

Taking these barriers and developments into account, the **key findings of the 2022 EAFO consumer monitor are:**

- **a.** Focusing only on BEV driver respondents (part 2), the Danish BEV driver is represented by a -35-year-old male, living in a detached house and with a quite high income who has a university and higher education diploma.
- **b.** 45% of Danish participants are interested in BEVs, 20% are (very) familiar with these, and 28% consider buying a BEV in a time frame of 0-5 years. 51% have a positive attitude towards BEVs, and as in the other EU surveyed countries, the most important BEVs advantage is that these are better for the climate. Danish also consider that BEVs are economical to use and identified this as an advantage.
- **c.** In the ten surveyed countries the number one BEVs disadvantage is their price. The Danish participants are willing to pay 33,602 € for a BEV and 61% of the BEV drivers paid a purchase price between 40,000 € and 75.000 €. Only 13% paid between 20,000 € and 40,000 €.
- **d.** BEVs insufficient range is also considered a limitation. A minimum desired range between 300 km and 500 km was the choice of 37% of all Danish drivers surveyed. 500 km and more would be the preference of 40%.
- **e.** 49% of the surveyed Danish indicated that they are not aware of any subsidies for electric vehicle driving despite the financial support measures applied by the Danish government. Information on batteries and/or driving range was considered the most relevant to support electric driving.
- **f.** 90% of Danish BEV drivers use their vehicles daily or several times a week. Their BEV is mostly new (50%) and privately owned (94%).
- **g.** As in the other nine countries surveyed the most important characteristic of a public recharging session is the recharging speed. For the BEV Danish drivers, payments through a charging card or app are also important. The latter is the number one payment option in the ten EU countries. On the other hand, 34% of BEV respondents do not always take the battery level into account when recharging.
- **h.** Limited recharging private or public options are also considered a disadvantage. The Danish BEV drivers' frequency of use of public slow recharging points is among the highest of the EU countries surveyed (47%), while the use of public fast recharging points is the highest (28%). Moreover, 59% of Danish BEV drivers recharge often at home.

Thanks to these results, the following **conclusions could be made about the three main barriers identified:**

1. **BEV costs and desired range:** In March 2023 there were only twelve BEVs models available with a purchase price between 20,000 and €35,000 €. These twelve models represent 5% of the total BEVs models in the market. The driving range barrier could be linked to a lack of affordable new BEVs with a range of 300 km or more[6].
2. **BEV costs:** Information beyond the BEV purchase price, including the existing models' km range, the Total Cost of Ownership[7], and the available financial support could help potential BEV drivers to have a clearer opinion on electric driving.
3. **BEV costs:** the second-hand and leasing options at an affordable price need to be further considered. 50% of the Danish BEV drivers bought a second-hand BEV, while only 3% indicated that they lease a car for which the majority (73%) pay less than 500 € per month.
4. **BEV range insufficiency:** The BEV factory range was enough for 87% of the Danish BEV drivers. 40% indicated a factory range of 200-400 km. Range satisfaction can be related to the km driven per day (160 km), and the main activity for which the BEV is used (activities like doctor's appointments). Moreover, for holidays or trips beyond 500 km, the Danish BEV drivers considered problems related to '*charge anxiety*' more relevant than *'BEVs' range anxiety'*.
5. **Public recharging network:** Danish BEV drivers do not consider that there are sufficient facilities at highway recharging stations, neither they usually know in advance if a recharging point will be available or not. In this sense, information on the recharging network was also one of the support measures that (potential) Danish BEV drivers would welcome.

Finally, the EAFO 2022 Consumer Monitor survey results also show the need to address those groups less represented among BEV drivers in Denmark (and in other EU countries) such as females, households having a lower income, or lower education level.

6 https://alternative-fuels-observatory.ec.europa.eu/consumer-portal/available-electric-vehicle-models

7 https://alternative-fuels-observatory.ec.europa.eu/consumer-portal/calculator

2. Consumer monitoring results: general population views on driving battery electric vehicles in Denmark

This section presents the **results of the Danish general population surveyed through the panel: 1,529 valid responses from BEV (63) and non-BEV drivers (1,466).** It focuses on their attitude, interest and information that could support them to further drive BEV cars.

Socio-demographics general population

Based on the survey results, the **Danish BEV driver** is represented as a -35-year-old-male, living in a detached house, and with a monthly income of ≥ 6.000 € who has a university or higher education diploma. The main differences when compared to Danish non-BEV drivers are the percentage of female drivers and that non-BEV drivers are represented by an older age group, with a lower income, and with a secondary education diploma.

Although most BEV drivers surveyed live in a detached house, 20% live in an apartment or studio, which could influence their recharging location options if they do not have access to a parking spot with a charging station/wallbox.

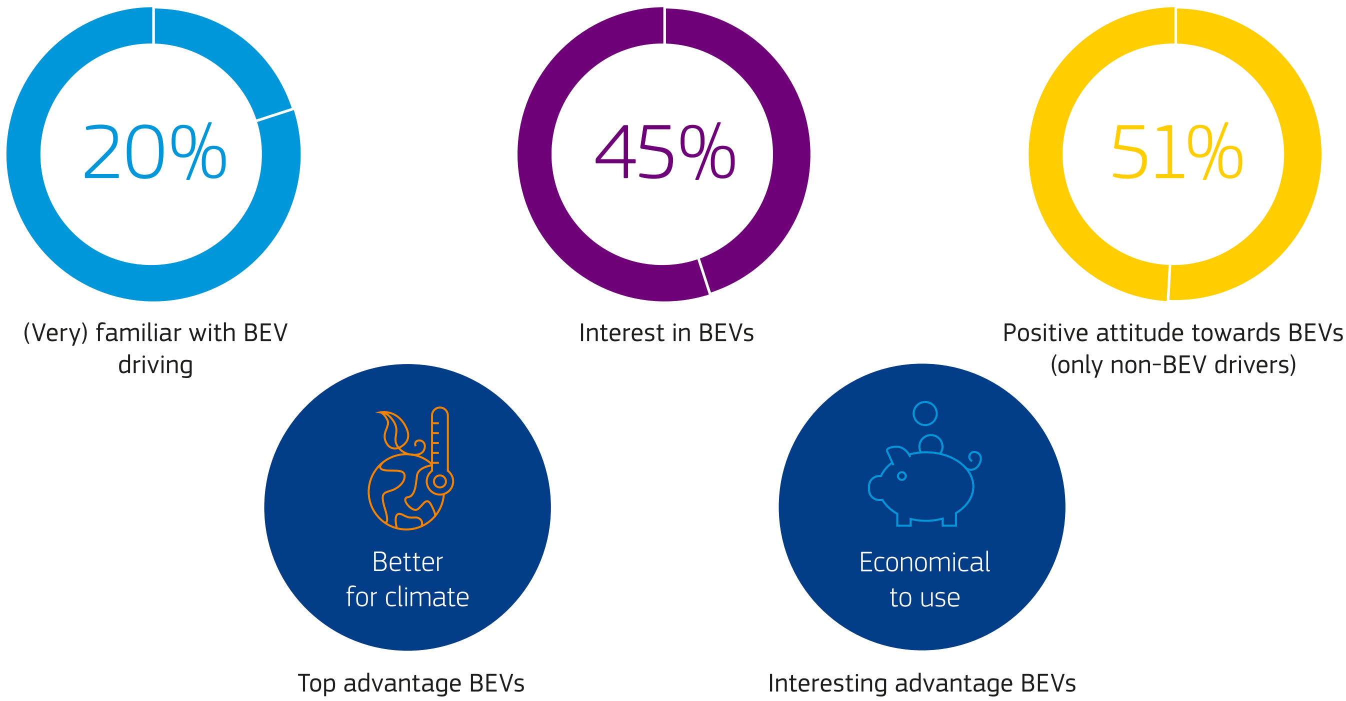
Table 1: Socio-demographic results from the survey for the general population

	BEV driver	Non-BEV driver
Gender		
Female	30%	51%
Male	70%	49%
Age group		
-35	39%	26%
35-55	29%	32%
55+	32%	42%
Net income		
< 800 €	0%	2%
800-1999 €	9%	8%
2000-3999 €	18%	34%
4000-5999 €	21%	28%
≥ 6000 €	52%	28%
Education		
Early childhood-primary education	12%	22%
Secondary education	35%	44%
University or other higher education (e.g., college, polytechnic, academy)	54%	34%
Accommodation		
Apartment/studio	20%	28%
Semi-detached house	1%	4%
Attached house	9%	15%
Detached house	68%	48%
Other	2%	5%

Attitude and motivation towards battery electric vehicles in Denmark

One-fifth of respondents in **Denmark** indicated that they are (very) familiar with battery electric driving, 45% are interested in these and 51% have a positive attitude towards BEVs. As in the case of the other nine countries surveyed, the main advantage of BEVs is that these are better for the climate (no -tailpipe emissions). Moreover, Danish drivers also consider that BEVs are economical to use and identified this as an advantage.

Table 2: General population opinion and views on battery electric vehicles

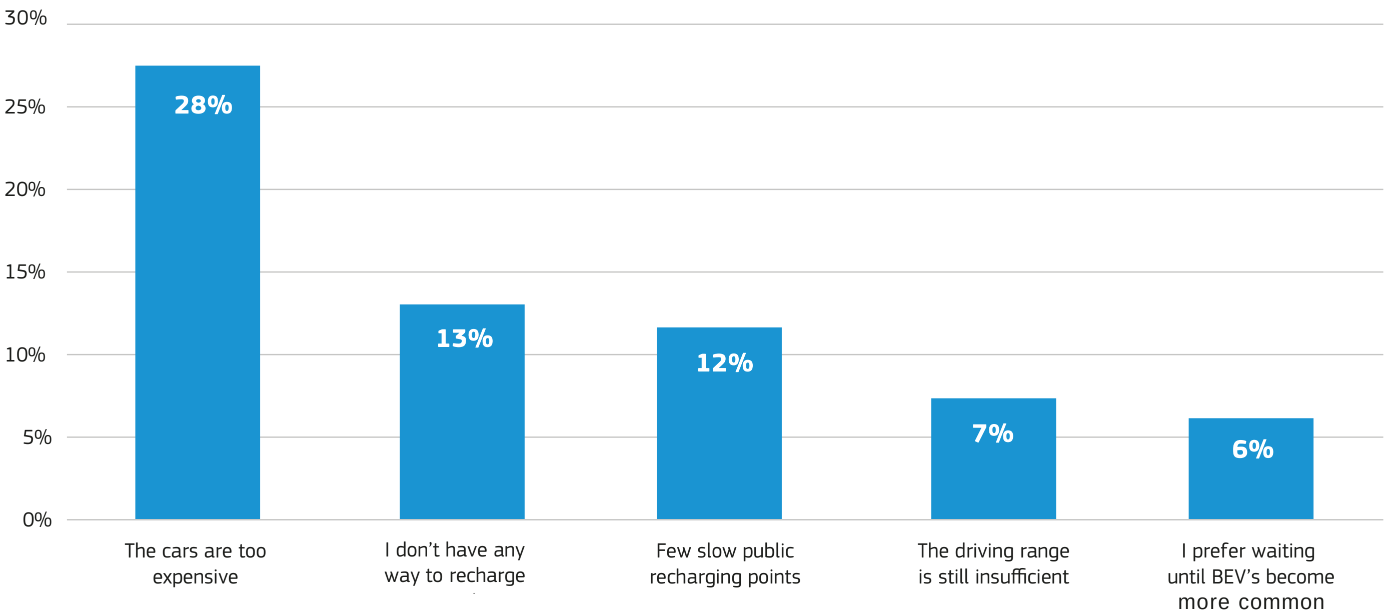


Main barriers and opportunities to adopt battery electric vehicles

Disadvantages of driving battery electric vehicles in **Denmark**

Danish survey participants were asked to choose the most relevant disadvantages of driving battery electric vehicles. As previously reported, these include the price of BEVs, limited recharging options (either private or public), and BEVs' range.

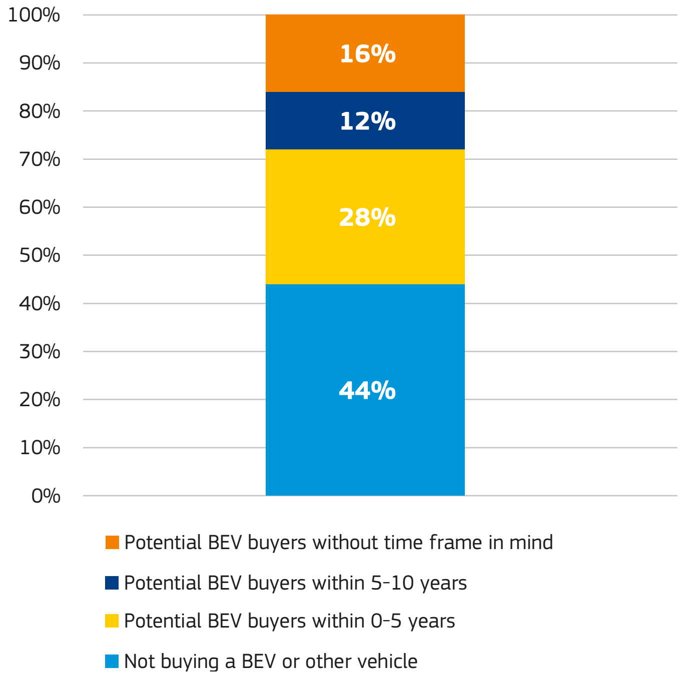
Figure 1: Danish drivers' top five identified disadvantages of battery electric vehicles



Time frame to buy a battery electric vehicle in **Denmark**

44% of the **Danish** respondents do not consider buying a battery electric vehicle. 28% would do so in a time frame of 0-5 years.

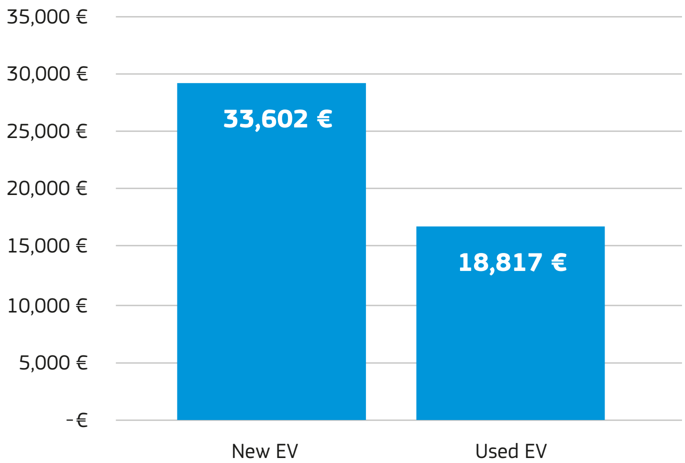
Figure 2: Danish drivers' time frame to buy a battery electric vehicle



Willingness to pay and desired range of a battery electric vehicle in **Denmark**

The median price that all **Danish** respondents are willing to pay for a used BEV is 56% of the price of a new car. When looking at only the BEV drivers for 61% of them the purchase price paid is between 40,000 € and 75,000 €. Only 13% paid a between 20,000 € and 40,000 €.

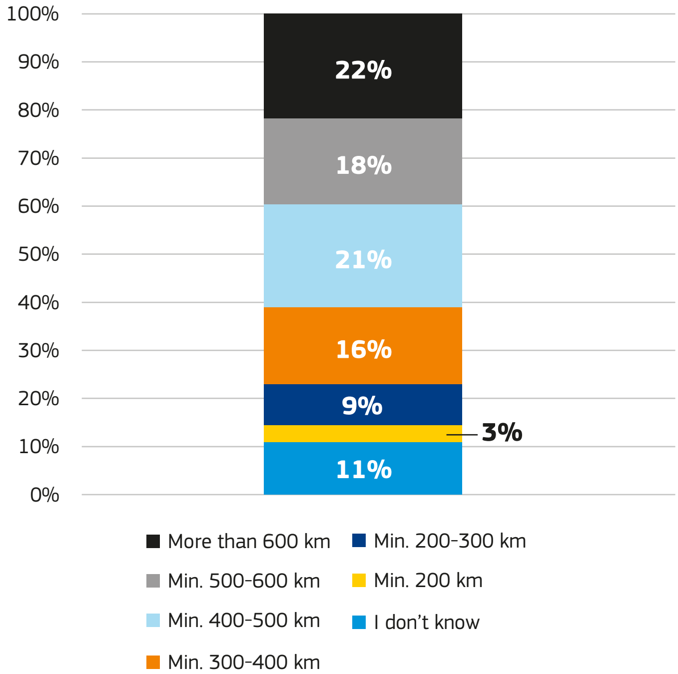
Figure 3: Danish drivers' willingness to pay for a new & used battery electric vehicle



Desired range battery electric vehicle in **Denmark**

In the 2022 survey desired range was described as the number of km that can be driven with a full battery without recharging. A minimum desired range between 300 km to 500 km was the choice of 37% of all **Danish** drivers surveyed. 40% would prefer a range of 500 km and more.

Figure 4: Danish drivers desired range in of a battery electric vehicle



The current BEV market consists of a considerable amount and variety of models (178) with a range between 300 and +600 km (models' variance in March 2023 according to the EAFO). On the other hand, there are only twelve BEVs models available with a purchase price between 20,000 €-35,000 € (representing 5% of the total BEVs models in the market). These have an average range of 193 km (min 95 km, max 300 km), and include mostly cars in the A and B segments (supermini, e.g., city cars), with a couple of models in the C segment (compact, e.g., small family cars)[8].

The Danish government offers registration and tax reductions and company cars tax deduction. Taxes on ownership are based on CO_2 emissions[9].

Interestingly, 49% of the surveyed Danish indicated that they are not aware of any subsidies for electric driving, and that they still will value more information on batteries and/or driving range.

8 https://alternative-fuels-observatory.ec.europa.eu/consumer-portal/available-electric-vehicle-models
9 https://alternative-fuels-observatory.ec.europa.eu/transport-mode/road/Denmark/incentives-legislations

3. Consumer monitoring results: Mobility and recharging behaviour of battery electric drivers in Denmark

This section focuses on **BEV Danish drivers** (only) from the panel, with 63 valid responses in total. The results of the EAFO 2022 survey give an insight into who the Danish BEV driver is, the mobility behaviour, purchase cost and range expectation towards BEVs. Results on recharging behaviour are also presented.

Socio-demographic indicators for the BEV driver in Denmark

The table below shows the main socio-demographic indicators of the BEV respondents. Based on the survey results and when looking at a bigger sample of Danish BEV drivers (only), they are represented as a -35-year-old-male, living in a detached house, and with a monthly income of more than ≥ 6.000 € who has a university or higher education diploma.

Table 3: Socio-demographic results from the survey for the BEV Danish driver

Gender	
Female	30%
Male	70%
Other	0%
Age groups	
-35	39%
35-55	29%
55+	31%
Net income	
< 800 €	0%
800-1999 €	9%
2000-3999 €	18%
4000-5999 €	21%
≥ 6000 €	52%
Education	
Early childhood-primary education	12%
Secondary education	35%
University or other higher education (e.g., college, polytechnic, academy)	54%
Accommodation	
Apartment/studio	20%
Semi-detached house	1%
Detached house	9%
Attached house	68%
Other	2%

Mobility behaviour and vehicle ownership of battery electric drivers in Denmark

Most **Danish BEV drivers** surveyed use their vehicle several times a week or daily. Half of the BEVs are new privately owned cars, driven by 'recent' BEV drivers.

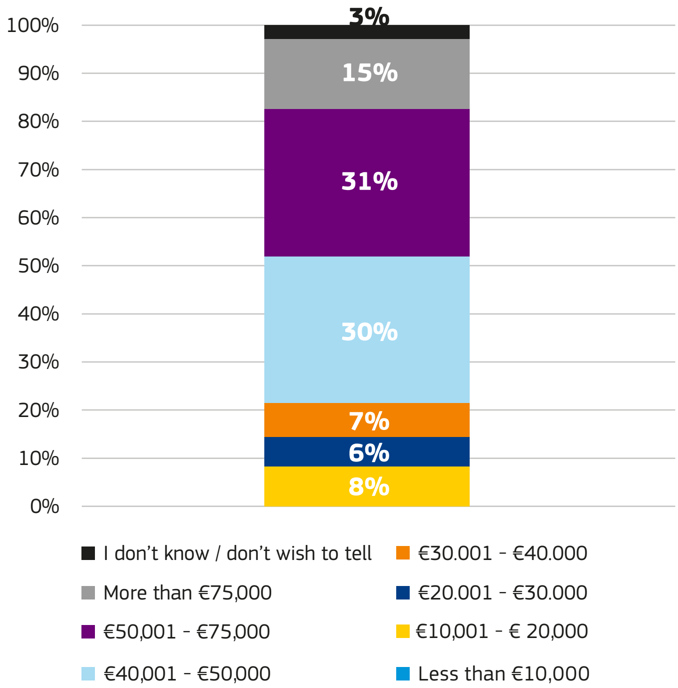
Table 4: BEV driver behaviour and vehicle ownership

<1 year to 3 years as BEV driver	85%
3 years to 5 years or longer as a BEV driver	15%
Average km driven a year	26,062
Average km driven a day	160
BEV drivers using their vehicle daily to several times a week	90%
Main activity when driving their BEV	Other e.g., doctors' appointments
BEV ownership	
Leased BEV	3%
BEV company car (if employee)	3%
Privately owned BEV	94%
New vs., second-hand BEVs	
New BEV	50%
Second-hand BEV	50%

Purchase and lease price paid by BEV drivers in Denmark

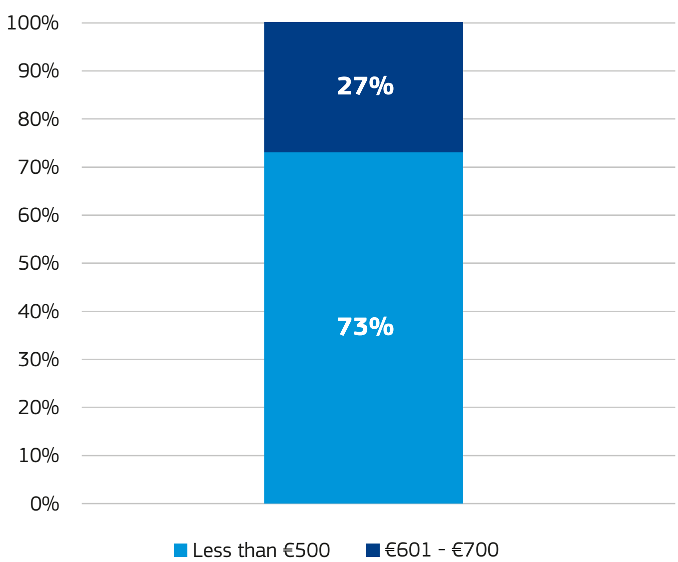
Only 13% of the **BEV Danish drivers** surveyed indicated that the purchase price paid for a BEV is between 20,000 € and 40,000 €. Most of them (61%) paid between 40,000 € and 75,000 €. 8% paid between 10,000 € and 20,000 €.

Figure 5: Danish BEV drivers purchase price for their battery electric vehicle



On the other hand, most of the **Danish BEV driver participants** that responded that their first car is leased (privately or for business purposes) pay less than 500 € per month. This could be an interesting alternative to purchasing a vehicle, although this applies to only 3% of the Danish full electric car drivers surveyed.

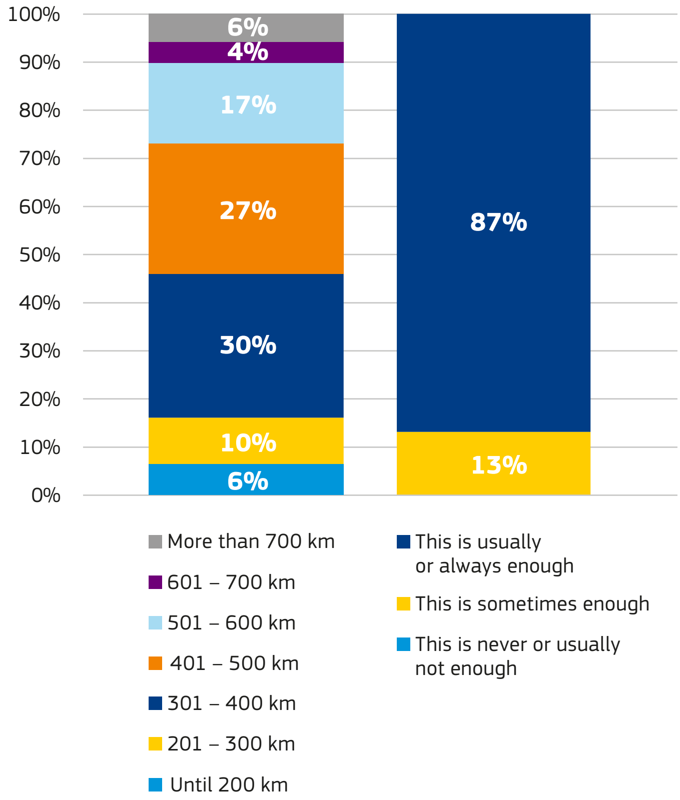
Figure 6: Danish BEV drivers lease price for their battery electric vehicle



Factory range and range satisfaction of fully electric cars used by BEV drivers in **Denmark**

Factory range refers to the km a new BEV can drive with the available vehicle battery after running a World Harmonised Light Vehicle Test Procedure (WLTP) test cycle. 40% of the **Danish BEV drivers** indicated a factory range of 200-400 km.

Figure 7: Factory range and range satisfaction according to Danish BEV drivers



It is noteworthy that a majority of Danish drivers who drive battery electric vehicles reported that the original range of their vehicles was sufficient when asked about it.

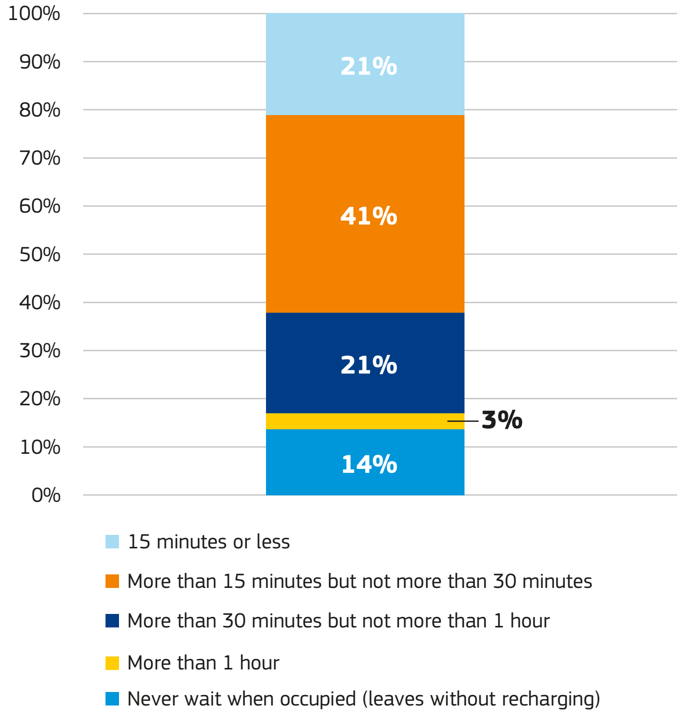
In addition, range satisfaction can be related to the km driven per day (160 km), and the main activity for which the BEV is used (other activities e.g., doctor appointments).

Recharging behaviour of battery electric drivers in Denmark

Recharging according to battery level and waiting time at public recharging points of **Danish BEV drivers**

Surveyed BEV Danish drivers were asked what the longest waiting time was to use a public recharging point. 14% never wait when this is occupied (they leave without recharging), while 21% waited for 15 minutes or less. Still, 62% waited between 15 minutes to 1 hour. Furthermore, 34% of respondents do not always take the battery level into account when recharging.

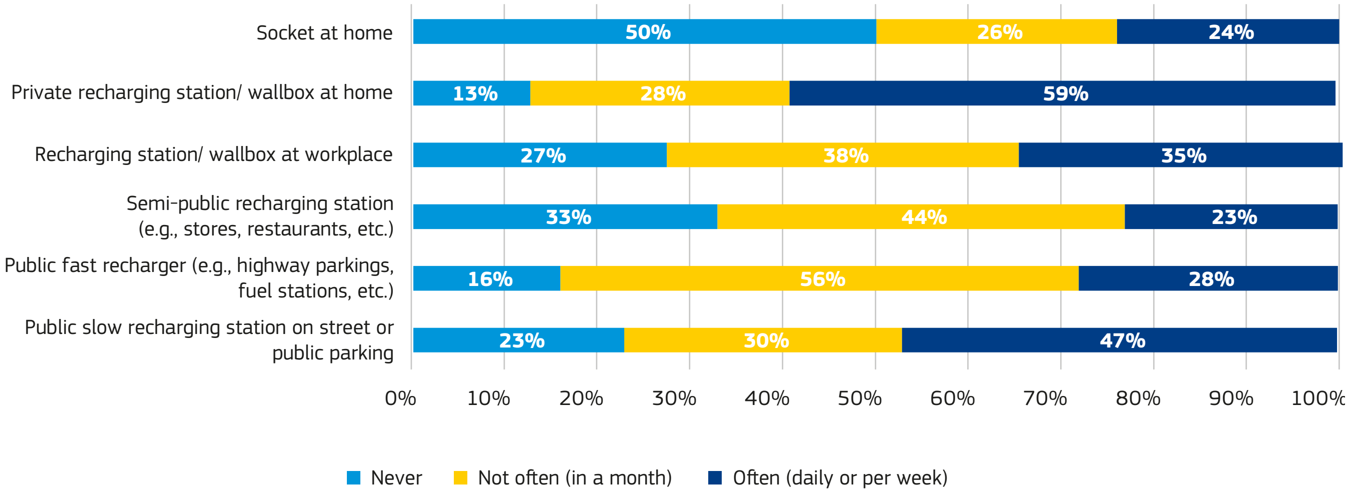
Figure 8: Danish drivers waiting times when using a public recharging point



Recharging location and frequency of use by BEV **Danish drivers**

For **BEV Danish drivers** a private recharging station or wallbox at home is the most frequently used location. Public slow recharging stations on the street or public parking and public fast recharging stations are also often used (47% and 28% respectively).

Figure 9: Recharging location and frequency of use by Danish BEV drivers



Important characteristics of a public recharging session for BEV **Danish drivers**

Danish BEV driver respondents were asked to indicate the most important characteristics of a public recharging session. The recharging speed for a quick session was the most important. Next to this, characteristics related to payment options were considered relevant, with having a subscription pass/app being chosen above an on-the-spot payment option. Moreover, the possibility to pay per kWh was also considered a convenient option.

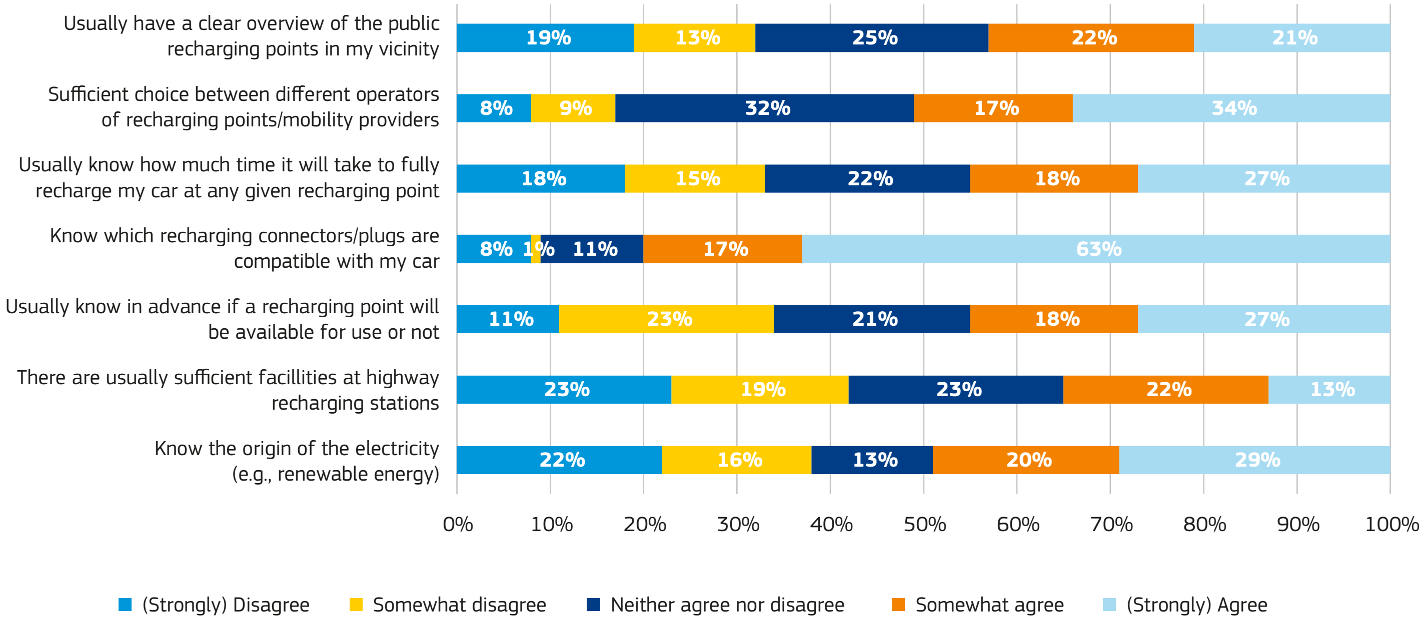
Table 5: Important characteristics of a public recharging session

Recharging speed/power output of the recharging point, so I can get the quickest possible recharge	**1**
Easy access and payment via my recharging subscription (pass/app)	**2**
Possibility to pay per kWh only (instead of per minute or per session)	**3**
Short/no waiting time to access the recharging point, to avoid queuing	4
Convenient on the-spot payment options (e.g., debit/ credit card)	5
Clear and transparent price information, so I know how much I will be charged for my recharging session	6
Integrated cable, so there is no need to get the cable out of the trunk	7
Possibility to do something else while your car recharges/amenities on site (food, coffee, toilets, etc)	8

BEV Danish drivers' opinion and payment options at public recharging points

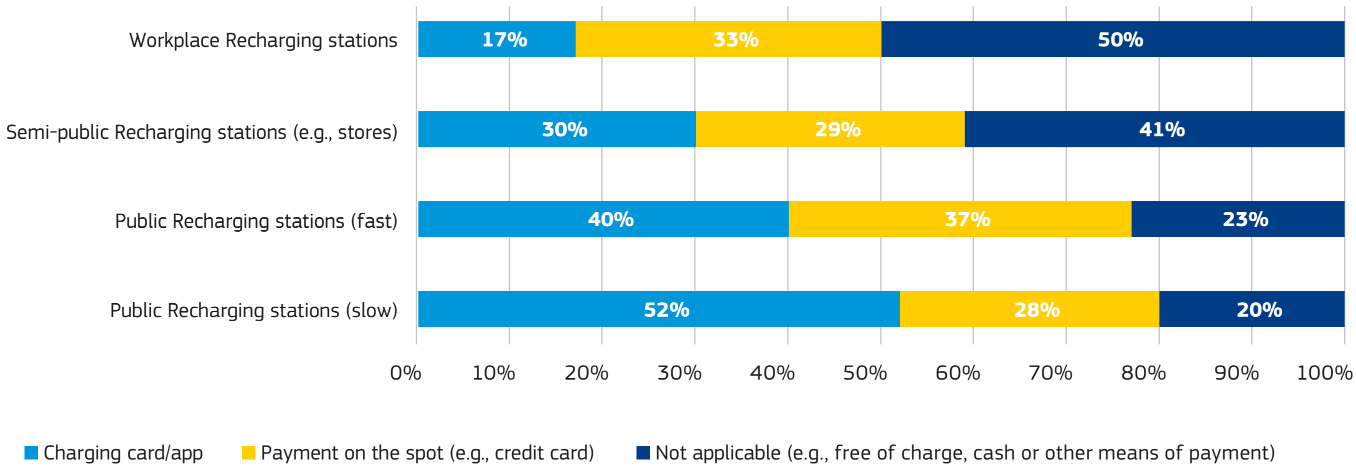
Most **Danish BEV drivers** know which recharging connector is compatible with their car, think there is sufficient choice between different operators of recharging points/mobility providers, and know the origin of the electricity at the public recharging point. On the other hand, they do not consider that there are sufficient facilities at highway recharging stations, neither they usually know in advance if a recharging point will be available or not. In this sense, information on the recharging network was also one of the support measures that potential Danish BEV drivers would welcome.

Figure 10: Public recharging points opinions of Danish BEV drivers



In the case of public recharging stations (both slow and fast), a charging card/app is the first option used. Workplace and semi-public recharging stations mostly use other means of payment (e.g., free of charge, cash, etc.).

Figure 11: Payment options at recharging stations



Main problems encountered by **Danish** BEV drivers when traveling abroad

Holidays or other trips beyond 500 km were also an important activity for 28% of the **Danish BEV drivers.** Nevertheless, when they were asked to rank the main problems they encountered when traveling abroad, the range limitations of their BEV only came in fourth place.

Table 6: Problems encountered when traveling abroad

There are too few recharging stations along the way	**1**
I don't think I can recharge my car at my travel destination	**2**
I don't have enough information about where to recharge while on the road	**3**
Due to the limited range of my electric car, I would have to stop too often to recharge my car along the way	4
Due to the slow and therefore long recharging times, I would lose too much time for recharging my car	5
I find it overly burdensome to plan my trip in function of my recharging needs	6
I find it complicated or prohibitively expensive to pay for my recharging abroad (roaming issue)	7

4. Comparative results Denmark vs other EU countries

The number one BEV driving disadvantage identified in all cases is the purchase price of the cars. Denmark has the lowest percentage of leased and company BEV cars of the ten countries surveyed. Moreover, the most important characteristic of a public recharging session in the ten EU countries surveyed is the recharging speed, with a charging card or app being the most used payment option at public recharging points. Danish BEV drivers have the highest percentage of fast public recharging points frequency of use.

Table 7: Barriers and opportunities BEV driving (general population)

Country	Main disadvantage	% BEV potential drivers	Not aware of subsidies for electric driving	Existing financial incentive (end 2022)[10]
Austria	BEVs are too expensive	48%	34%	VAT deduction and exemption from tax for BEVs. No CO_2 tax. Purchase subsidies.
Belgium		47%	54%	Limited or exemption from registration and ownership taxes at the regional level. Federal deduction of investments for companies. Limited or exemption on road taxes.
Denmark		56%	49%	Registration tax reductions. Company car tax deduction. Taxes on ownership are based on CO2 emissions.
France		40%	35%	Registration tax exemption. BEVs, FCEVs (fuel cell electric vehicles), and PHEVs (Plug-in Hybrid Electric Vehicles -with a range of > 50km) are exempt from the mass-based malus. Purchase subsidies. Exemption from CO_2-based tax components.
Germany		53%	33%	Motor vehicles tax exemption. Company car tax deduction. Tax exemption for charging at the workplace. Exemption from the annual circulation tax for CO_2 emission. Purchase subsidies.
Hungary		66%	44%	Tax-exempt from registration, ownership, company car tax and property transfer tax.
Italy		63%	45%	Ownership tax exemption for a period of five years after registration. Afterwards reduced rate (compared to petrol cars). Company car tax discount. Purchase subsidy.
Netherlands		49%	41%	No purchase & motor vehicle taxes. Minimum rate (16%) for company car tax. Purchase subsidy.
Slovenia		39%	47%	Purchase subsidy & long-term loans at subsidised rates. The minimum additional tax rate on acquisition.
Spain		67%	44%	Ownership tax reduction of 75% for BEVs in main cities. Purchase subsidies. BEVs are fully exempt from paying the car registration tax. Exemption from 'special tax' for CO_2 emissions.
EU 10 countries		53%	42%	Financial support through grants and loans.

10 For more detailled overview, please refer to the "Incentives & legislation" page on the country report pages of EAFO

Table 8: Mobility & ownership of car BEV driver (merged datasets)

Country	3 years to 5 years or longer as BEV driver	BEV drivers using vehicle daily / several times a week	Leased BEV (business or private)	BEV company car (if employee)	Privately owned BEV	New BEV	Second-hand BEV
Austria	42%	95%	29%	11%	60%	73%	27%
Belgium	11%	90%	17%	28%	55%	60%	40%
Denmark	15%	90%	3%	3%	94%	50%	50%
France	46%	99%	20%	3%	77%	77%	23%
Germany	20%	92%	26%	9%	65%	79%	21%
Hungary	47%	99%	16%	9%	75%	49%	51%
Italy	28%	91%	16%	13%	71%	87%	13%
Netherlands	28%	97%	21%	16%	63%	70%	30%
Slovenia	45%	93%	61%	8%	31%	60%	40%
Spain	63%	97%	4%	12%	84%	77%	23%
EU 10 countries	38%	97%	22%	8%	70%	67%	33%

Table 9: Recharging behaviour BEV drivers (merged datasets)

Country	Waiting time 15 min or less at recharging point	Never waits for recharging point (leaves without recharging)	BEV drivers recharging often without/ not always considering battery level	% time using slow public recharging point daily/ per week	% time using fast public recharging point daily/ per week	Most important characteristic public recharging session	Most used payment option at slow & fast public recharging point
Austria	32%	46%	32%	9%	5%	Recharging speed to get the quickest possible recharge	Charging card or app
Belgium	25%	41%	64%	24%	9%		
Denmark	21%	14%	34%	47%	28%		
France	21%	31%	38%	18%	9%		
Germany	22%	44%	18%	14%	10%		
Hungary	22%	37%	21%	11%	8%		
Italy	17%	30%	45%	53%	22%		
Netherlands	30%	32%	31%	29%	16%		
Slovenia	20%	36%	43%	35%	13%		
Spain	21%	42%	31%	28%	14%		
EU 10 countries	25%	37%	30%	21%	10%		

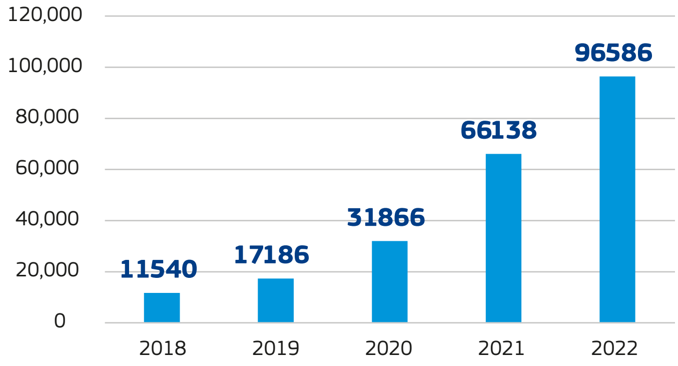
5. Denmark in the European context

Denmark has a population of 5,840,045 inhabitants[11], with 88% of them living in urban areas. The Danish government has developed policies that promote climate-friendly, sustainable, and energy-efficient mobility[12]. Different actions are taken in this sense, including road transport electrification.

The Danish government has implemented different incentives, including tax benefits, VAT exemptions and subsidies to support the uptake of electric vehicles and recharging infrastructure (an overview of these can be found in EAFO incentives & legislation, Denmark).

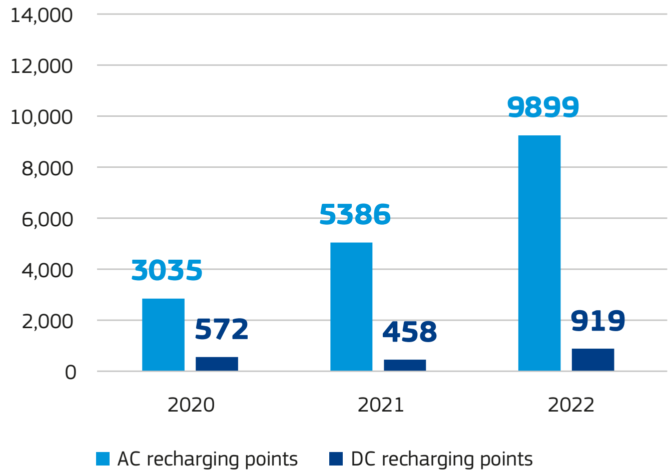
The EAFO portal shows that at the end of 2022 there were 96,586 battery electric vehicles cars in the country, with 30,781 of them being registered that year. This means that 3.56% of the total passenger vehicles is now fully electric.

Figure 12: Evolution of BEV cars in Denmark (EAFO portal)



Moreover, the public recharging infrastructure network has grown in the last couple of years. According to the EAFO portal, by the end of 2022, there were 9,899 (AC) slow public charging points, and 919 (DC) fast public ones[13].

Figure 13: Evolution of recharging points in Denmark (EAFO portal)



11 https://alternative-fuels-observatory.ec.europa.eu/transport-mode/road/Denmark

12 https://www.trm.dk/media/skjfz3fc/english-summary.pdf

13 The EAFO and the 2022 consumer monitor use the AFIR definition of recharging points. More information can be found at Recharging systems | European Alternative Fuels Observatory (europa.eu)

AI Annex I: Consumer monitoring methodology & approach

For the 2022 launch of the EAFO consumer monitor survey, ten countries* were selected as a representative first scope and to further promote the EAFO consumer monitor towards all EU-27 countries. Furthermore, the results of the ten countries surveyed are the basis for a EU aggregated report.

The survey was conducted using a panel on the general population of each of the selected countries. In parallel, the same survey was addressed to BEV drivers of each country via the EAFO partner AVERE. Both surveys were launched at the beginning of September 2022.

For the panel the aim was to reach 2,000 responses per country.

The survey was open for 1 month. For the survey launched through AVERE, the threshold was to reach 100 respondents per country. To achieve this, the survey was closed at the beginning of December 2022.

The datasets were subjected to validation tests, including:

- Respondents should have completed the survey until the end and should have agreed to the terms and conditions of the survey.
- Respondents who filled out the survey in less than three minutes are excluded from the survey, as it was deemed impossible to fill out the survey thoroughly and in its entirety in under three minutes.
- Respondents who indicated unusually high values to open questions with continuous variables (kilometres driven in a day, kilometres driven in a year, purchase price of a BEV and purchase price of an Internal Combustion Engine Vehicle -ICEV) were excluded from the results.
- Respondents who indicated not being in possession of a drivers' licence were excluded.
- Respondents who came up in nonsensical patterns of answers to open questions were excluded.

The validation of the datasets was finalised mid-October. For the AVERE dataset the validation was carried out in early January 2023. A total of 1,529 responses were considered as valid for the general population. Out of these, there were 1,466 non-BEV and 63 BEV drivers (4.1% of the total responses). There were no BEV-drivers reached through AVERE.

To compare and later weigh the results in accordance with education levels, the respondent's answers were standardised and converted to the International Standard Classification of Education (ISCED) notation[14]. Moreover, respondents were considered BEV drivers when their first, second or third car is a BEV. The results of the survey were weighted according to education levels, age group and gender of the population, respective to each country. The survey weights were computed using the post-stratification and conditional variance estimation technique. The resulting weights were trimmed between 0.3 and 3. The weighting process allows to make claims about the target population, instead of the survey sample alone. Because of the weighting process, all results are presented as a percentage of the total.

To improve the relevance of the analysis of the BEV drivers alone, the survey conducted on BEV drivers (from AVERE) was combined with the survey conducted on the general population. As a result of the choice to combine the datasets, the proportion of BEV drivers in the analysis is not representative of the population proportion. However, claims can be made about the BEV driving population. Nevertheless, and as previously mentioned, in the case of Denmark there were no BEV-drivers reached through AVERE.

14 https://ec.europa.eu/eurostat/statistics-explained/index.php?title=International_Standard_Classification_of_Education_(ISCED)

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