

EUROPEAN EV CHARGING: STATE OF THE MARKET AND FUTURE TRENDS

A DELTA-EE WEBINAR



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Housekeeping



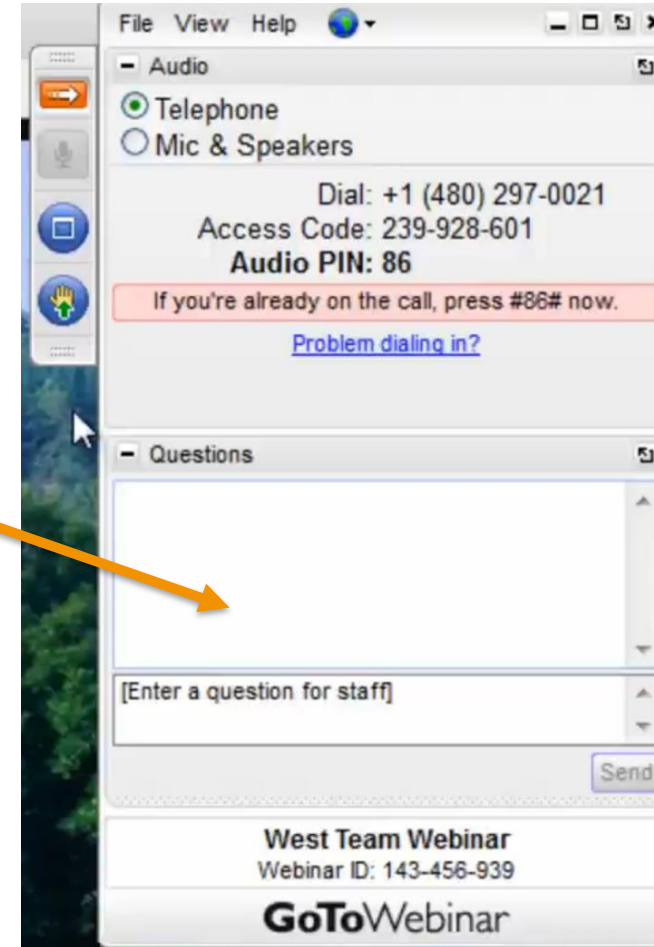
45 minutes
+ **5-10 mins Q&A**



You can write down a question which we will come to at the end of the webinar



Webinar is being recorded & slides will be sent out afterwards!


















Agenda

- > **Introduction to Delta-EE & EV Charging Research Service**
- > **European EV Uptake Rates**
- > **European Chargepoint Forecasts**
- > **EV Owner Survey**
- > **Key Trends in 2022**
- > **Q&A**

How we work with you

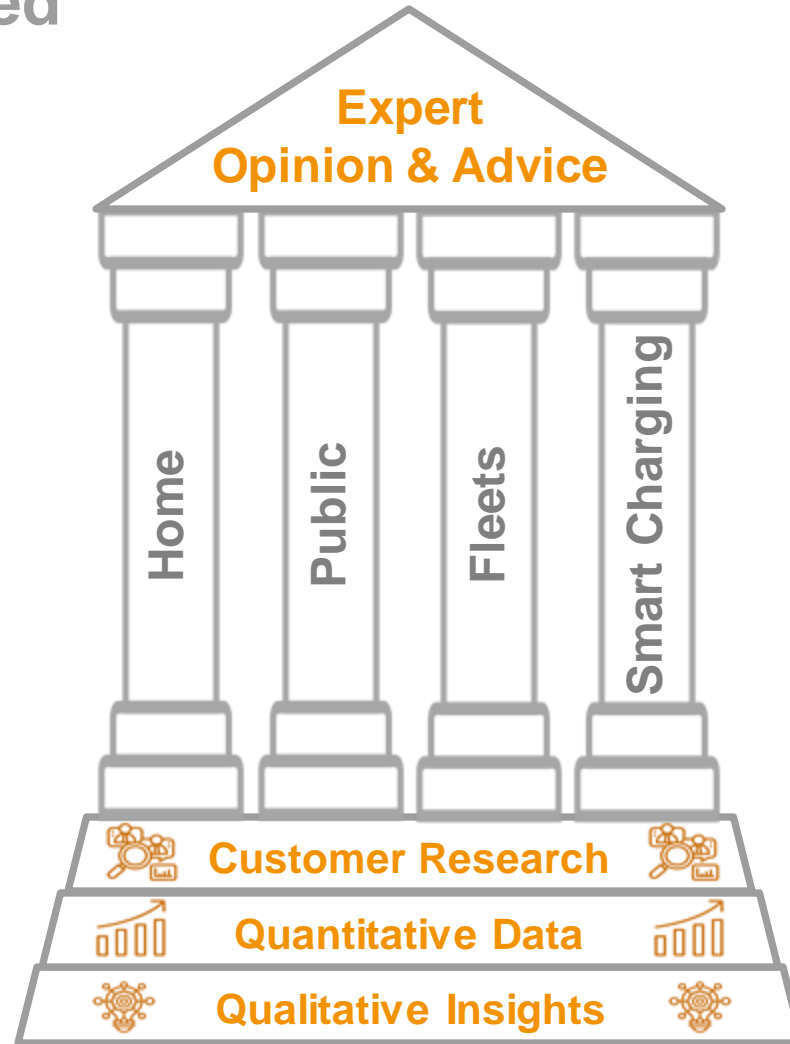
Choose the research you need for your new energy success

<p>Connected Home Service The opportunities in the growing connected home market and how to capture them</p> 	<p>Consultancy Bespoke information, insight and support from energy experts</p> 	<p>Distributed Power Service How to succeed in the global distributed power market</p> 	<p>Electrification of Heat Service Identify and capture the increasing range of opportunities from growing electrification of heat</p> 
<p>Energy Insights + How can we best use energy insights to enhance residential customer engagement and create value for us and our customers?</p> 	<p>Energy Storage Research Service Capturing the best opportunities for distributed energy storage</p> 	<p>EV Charging Service How to best develop position and activities to succeed in the rapidly growing eMobility market</p> 	<p>Flexibility Research Service Capturing opportunities in the growing demand and side flexibility market</p> 
<p>Gas Heating Service What is the future of gas in buildings and how can you best capture the opportunities and respond to the threats?</p> 	<p>Global Hydrogen Intelligence Service How the global hydrogen sector is developing</p> 	<p>Heating Business Service How to evolve from selling individual products and commodities to become a successful home energy solution provider</p> 	<p>Local Energy Systems Research Service Understand and respond to the challenges and opportunities from the growth in energy communities, microgrids and local energy markets</p> 
<p>New Energy Business Model Service Understand, identify and implement the most promising commercial opportunities from the increasing disruption in the energy sector</p> 	<p>New Energy France Research Service The trends and opportunities in France across the whole energy transition market</p> 	<p>Distribution Network Service Enabling distribution network companies, regulators and electricity OEMs to make better decisions at the network level in the context of the energy transition</p> 	<p><i>Use a combination of our subscription research services and bespoke consultancy projects to gather the information you need to ensure your business's success in the energy transition.</i></p>

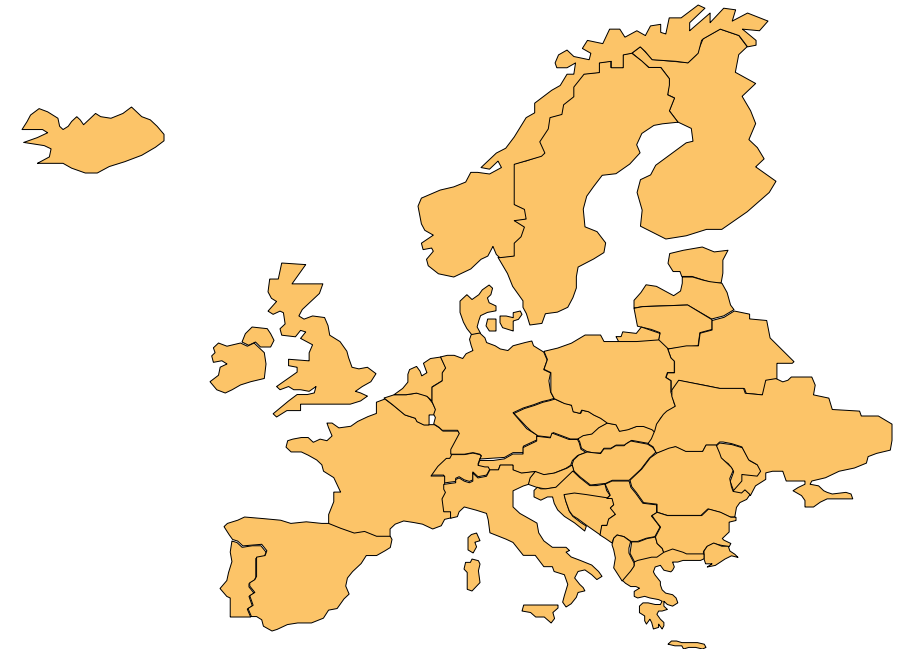
EV Charging Research Service

Supporting companies develop the strategies, products and propositions to succeed

Delta-EE's EV Charging Research Service is providing market-leading insights, data and market intelligence on the European EV charging sector.



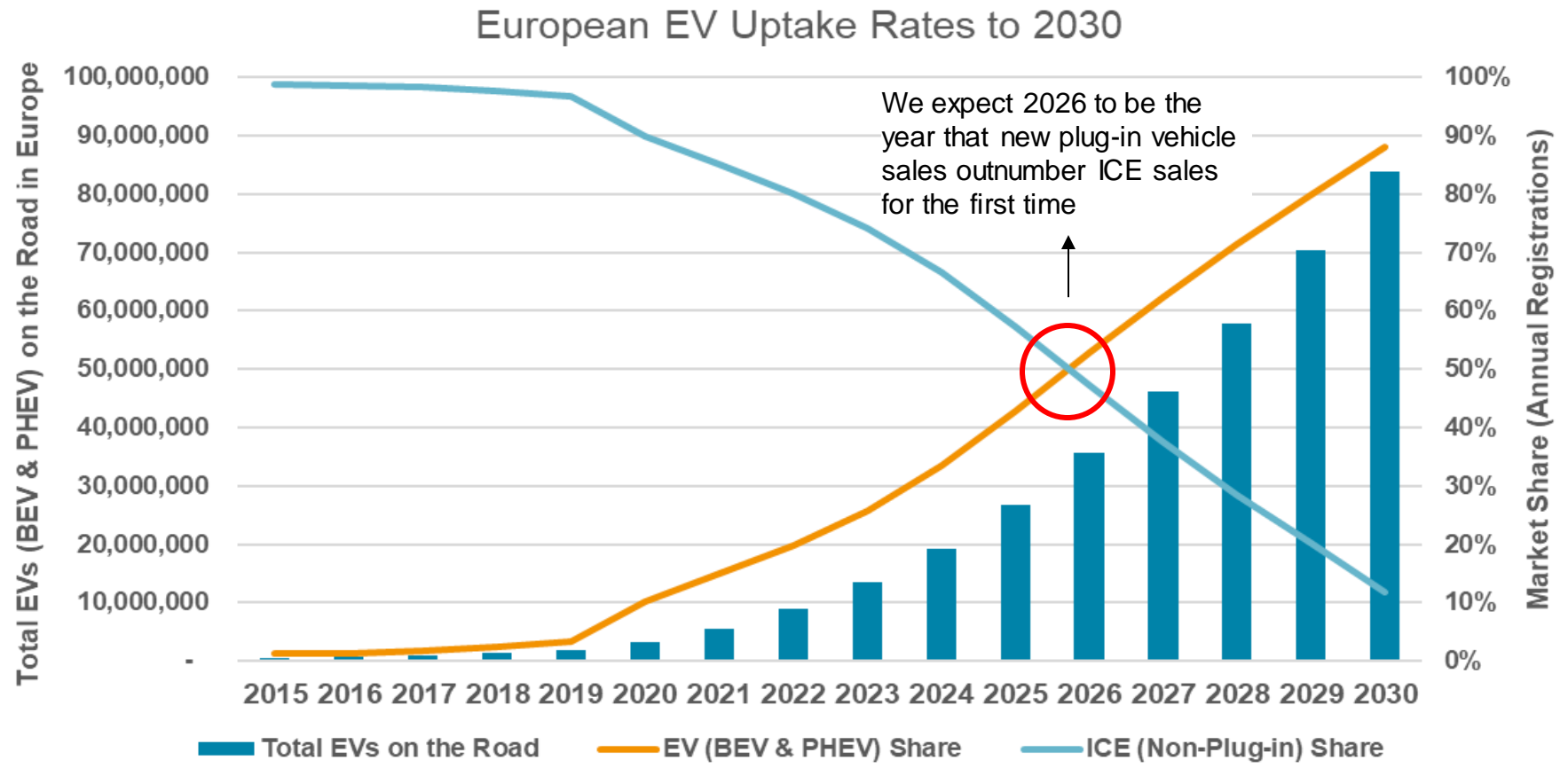
Our coverage is Europe-wide



European EV Uptake

84 million EVs on European roads by 2030

By the end of the decade, EV sales will be approaching a 90% annual market share.

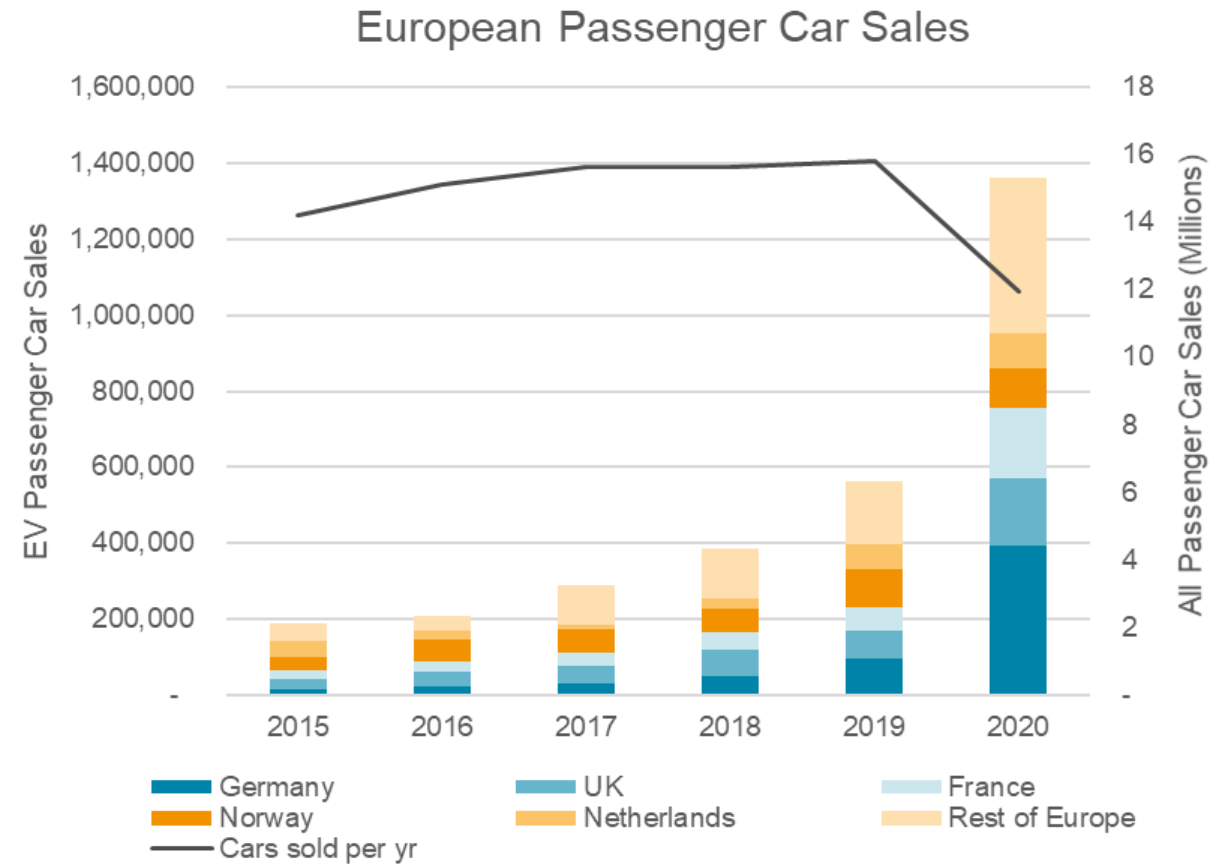


Source: Delta-EE & ACEA | Europe: EU + EFTA + UK | EVs: BEVs, PHEVs & eLCVs | Actual data: 2015-2020. Forecast data from 2021.

The step-change in EV sales in 2020 is a catalyst for strong growth to 2030

There were more than twice as many EVs sold across Europe in 2020 compared to 2019.

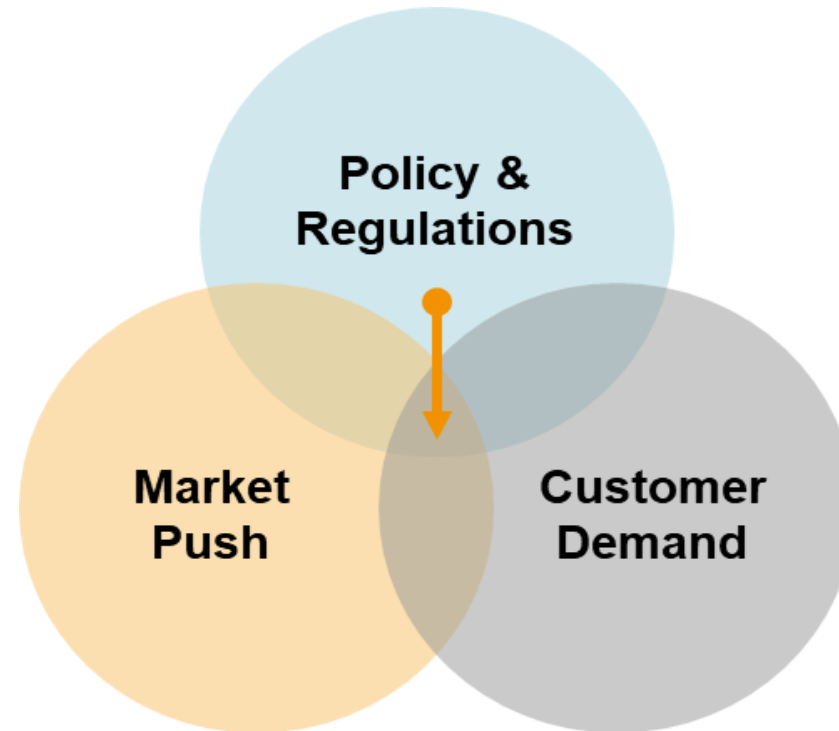
In 2020, the UK achieved over 10% EV car sales. In Germany it was 13%. In the Netherlands, 25%.



Source: ACEA | Rest of Europe: EU + EFTA | EVs: BEVs & PHEVs

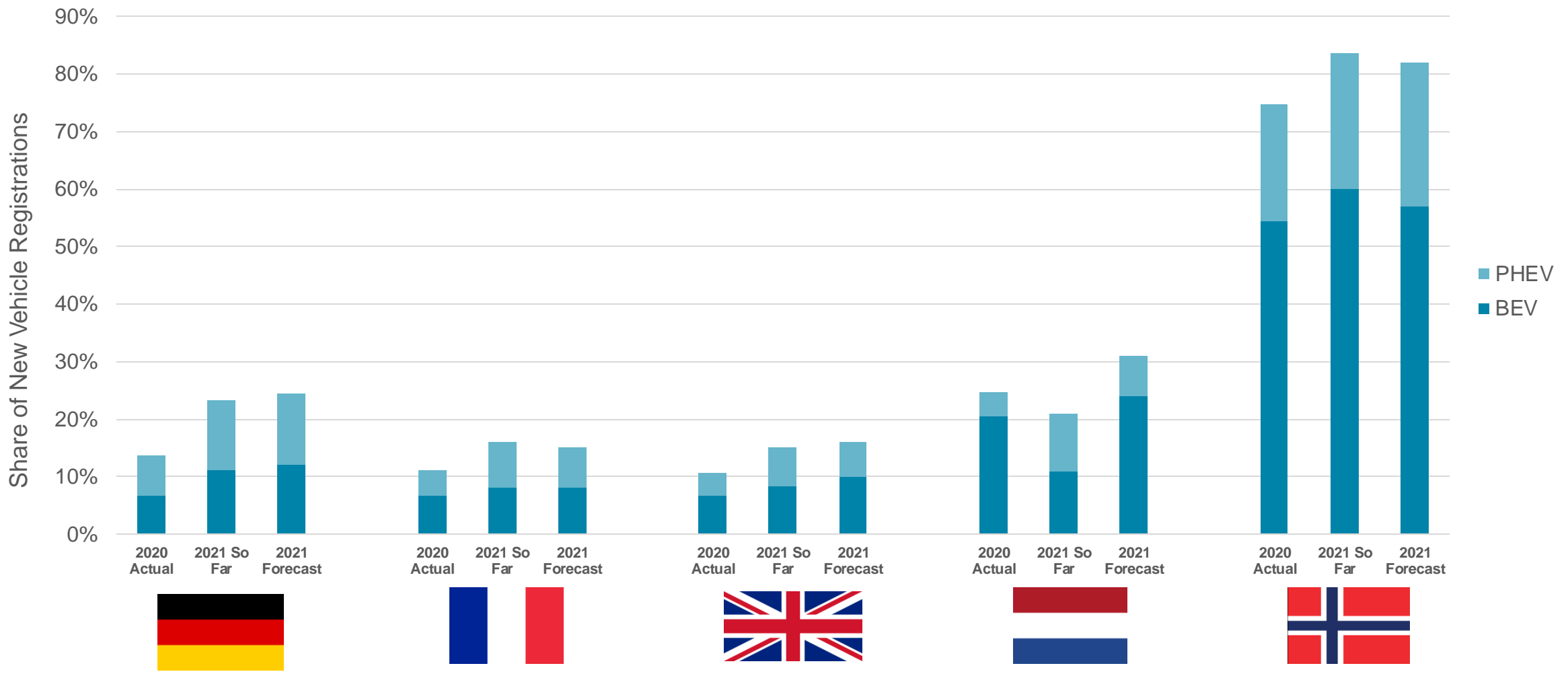
Three market drivers dictate how quickly the transition to EVs will happen

Vehicle manufacturers and their collective ambitions to phase-out internal combustion engine (ICE) vehicles and focus on developing new electrified vehicles for the customers.



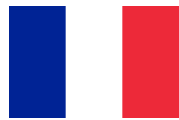
Customer demand for EVs is likely to continue outstripping supply in the years ahead

EV Forecasts: 2021 – The Tale So Far...



Delta-EE European Chargepoint Forecasts

Chargepoint forecasts for 4 key EV markets across the three key locations :



1

Home



2

Workplace



3

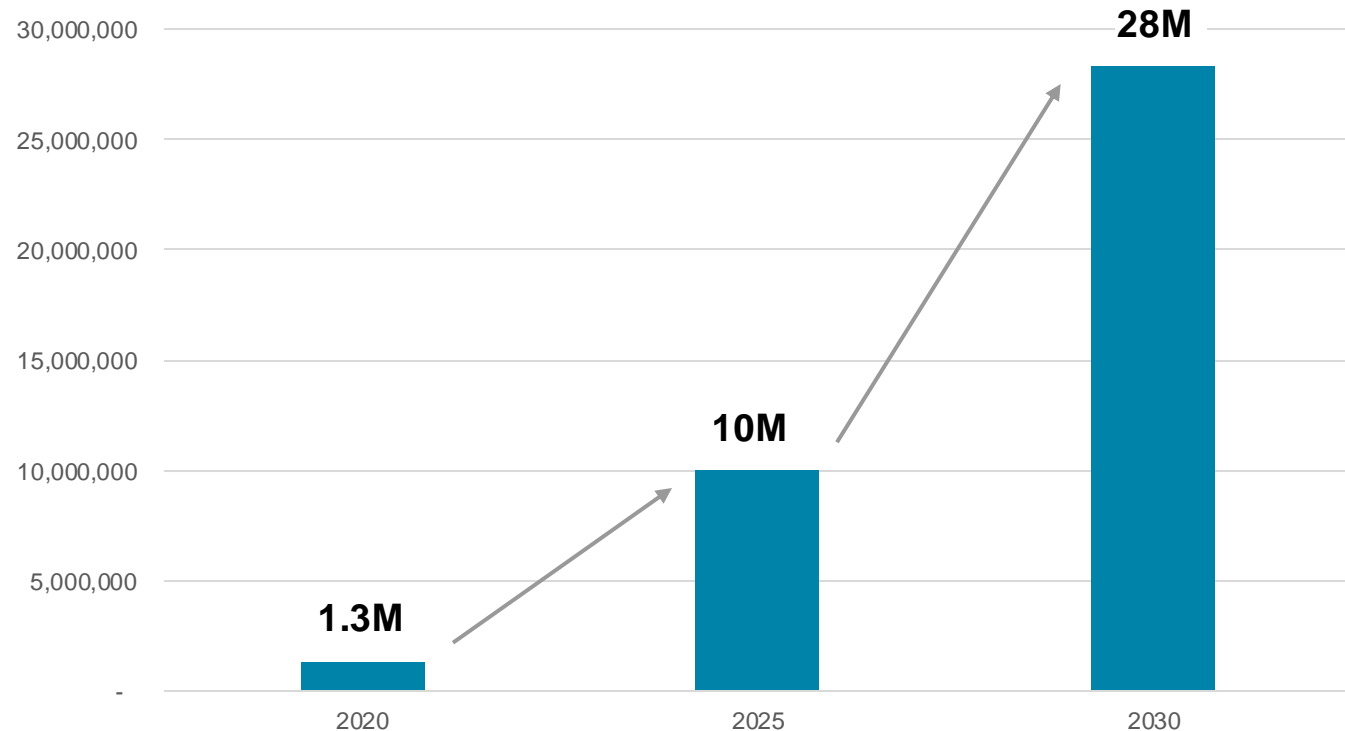
Public



Total number of installed CPs are expected to grow by more than 20x over the decade

This includes home, workplace and public CPs

Total installed base of CPs in the UK, France, Netherlands and Germany reaches nearly 30M by 2030

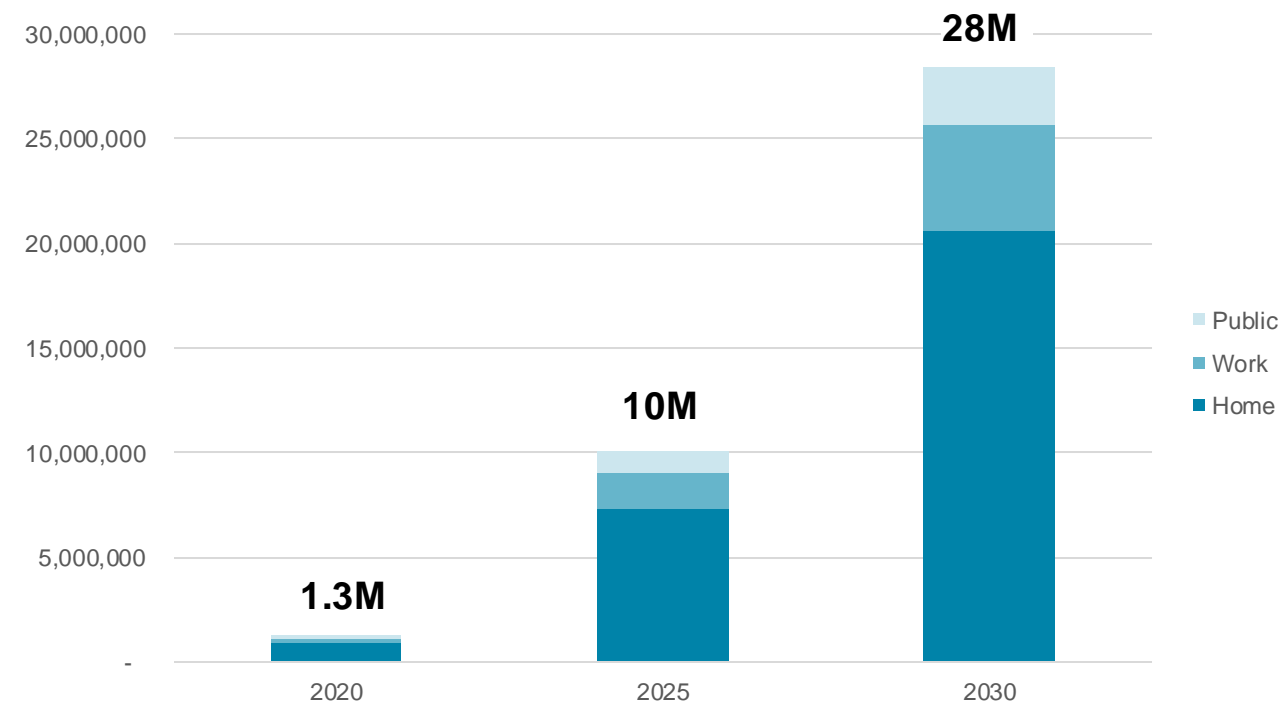


EV:CP ratio

2020	1.46
2025	1.64
2030	1.80

Home charging dominates the total number of installed CPs over the decade

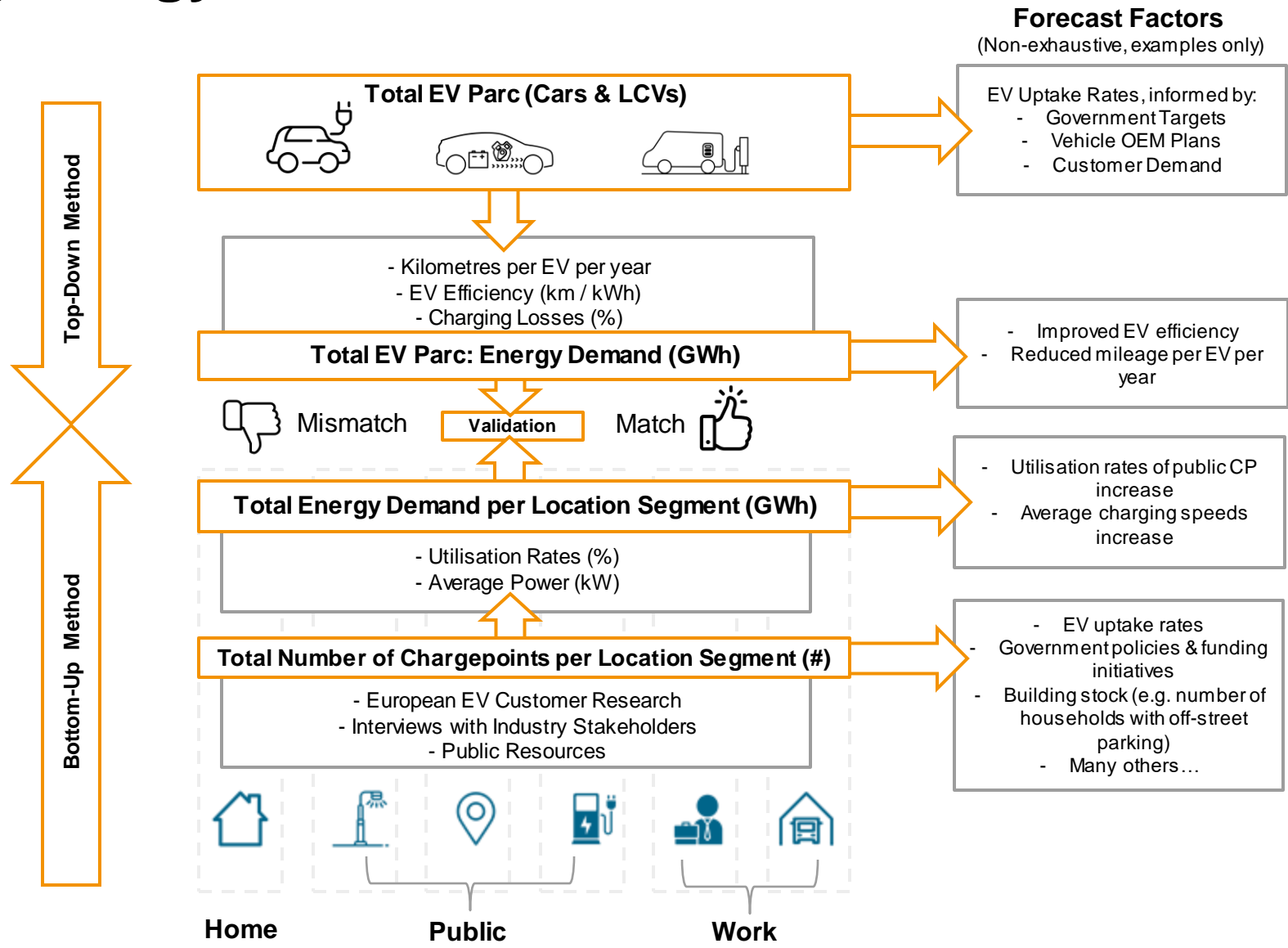
Total installed base of CPs in the UK, France, Netherlands and Germany segmented by location



Charging location market share

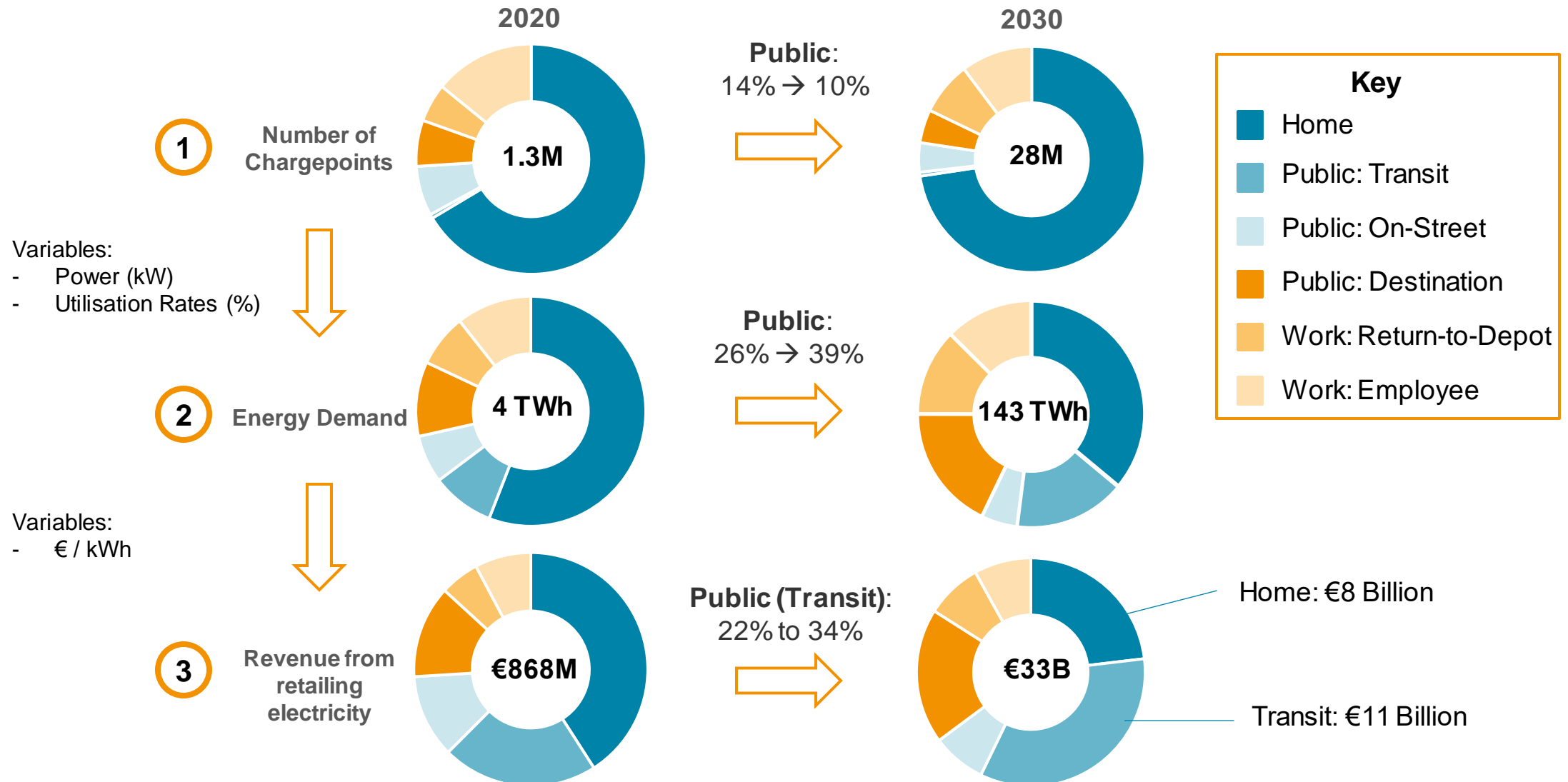
	2020	2030
Home	67%	73%
Workplace	18%	18%
Public	14%	10%

EV Charging Energy Demand Model



EV Charging mix through 3 lenses

DE, UK, FR, NL: 2020 vs 2030



Key industry takeaways

EV sales are dominated by company cars across Europe

Key industry takeaways - Workplace charging

Company car penetration is higher for EVs than ICE vehicles

	Company car penetration – all vehicle types	Company car penetration – BEVs and PHEVs
UK (2020)	~57%	~65%
France (2019)	~52%	~65%
Germany (2020)		~51%
Netherlands (overall)		~75-80%

Two knock-effects from this:

1

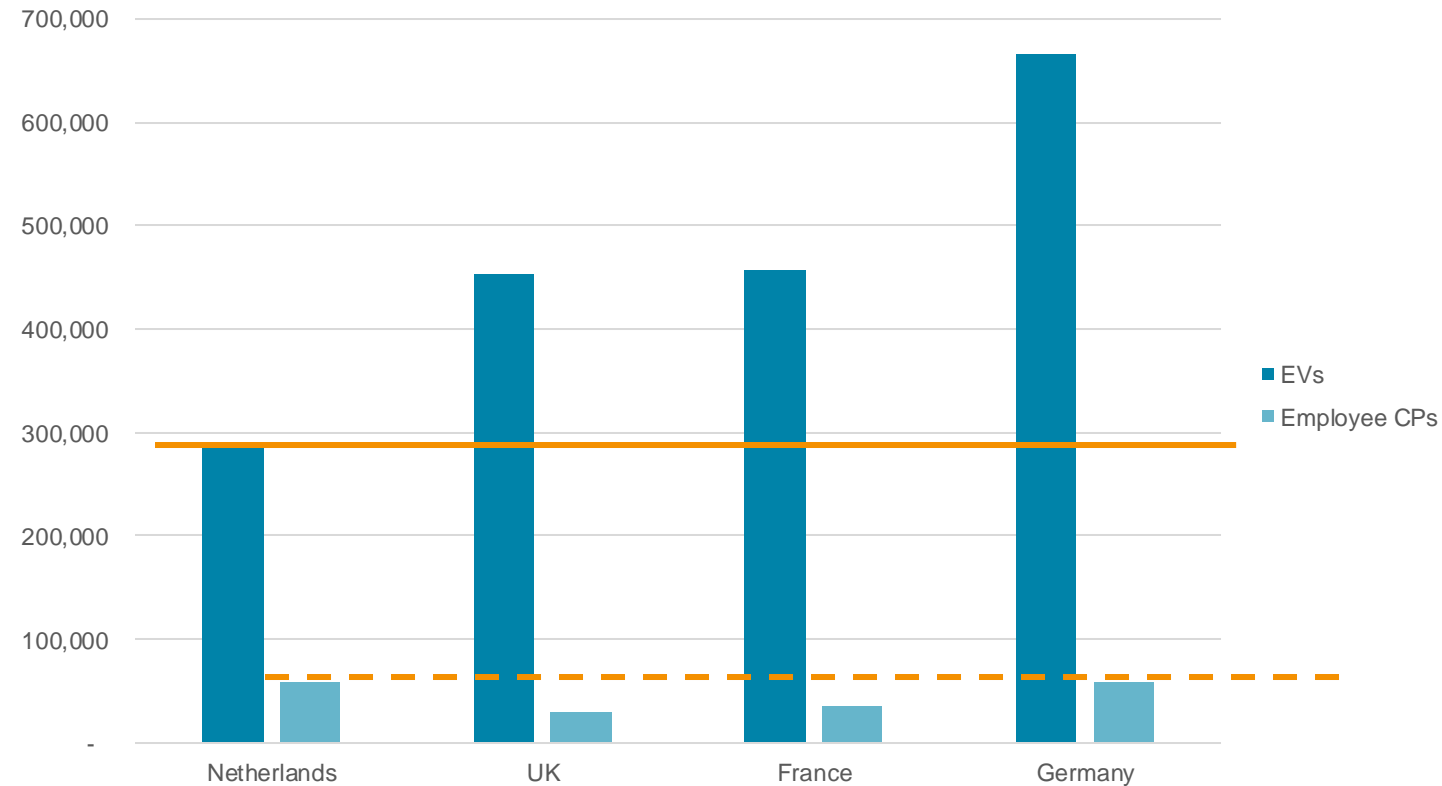
The high churn rate of company cars (3-4 years on average) means that the increasing penetration of electric company cars will stimulate the second hand market for EVs in the short term

2

The increasing penetration of electric company cars will result in employers having to provide charging options for their employees

EV uptake vs employee CPs

Netherlands has the lowest number of EVs on the road but the highest number of employee CPs. This is partly due to the high penetration of electric company cars (75-80%)



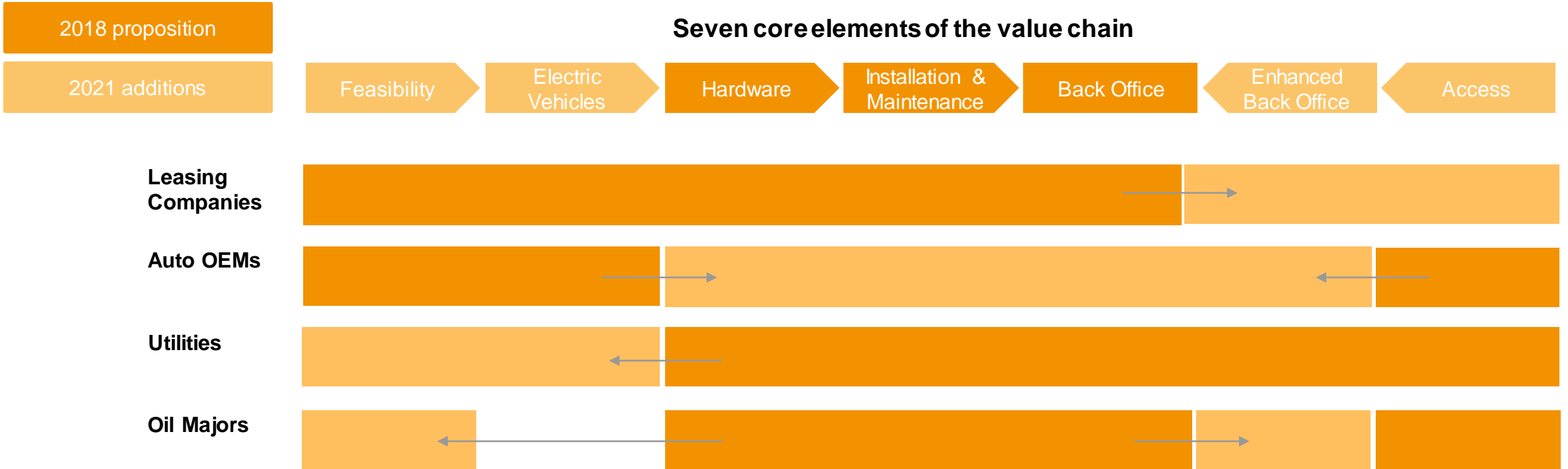
The big players have targeted the One Stop Shop approach

Since 2018 they have filled most of the gaps in the value chain

In line with the growth of EV sales, LeaseCo, Auto OEMs, Utilities and Oil Majors have all expanded their fleet propositions making differentiation between sectors difficult.

Key:

Seven core elements of the value chain



The seven core elements of the value chain have remained unchanged. LeaseCo, OEMs, Utilities and Oil Majors have all invested in partnerships or acquisitions in order to increase their presence in the market. The LeaseCo and OEMs have expanded into charging management and access solutions. Utilities and Oil Majors have moved up the value chain.

Public Charging

Over €3bn funding pledged for transit charging up to 2025

2030

With the exception of NL, charging speeds increase to meet the demands of the growing EV parc.

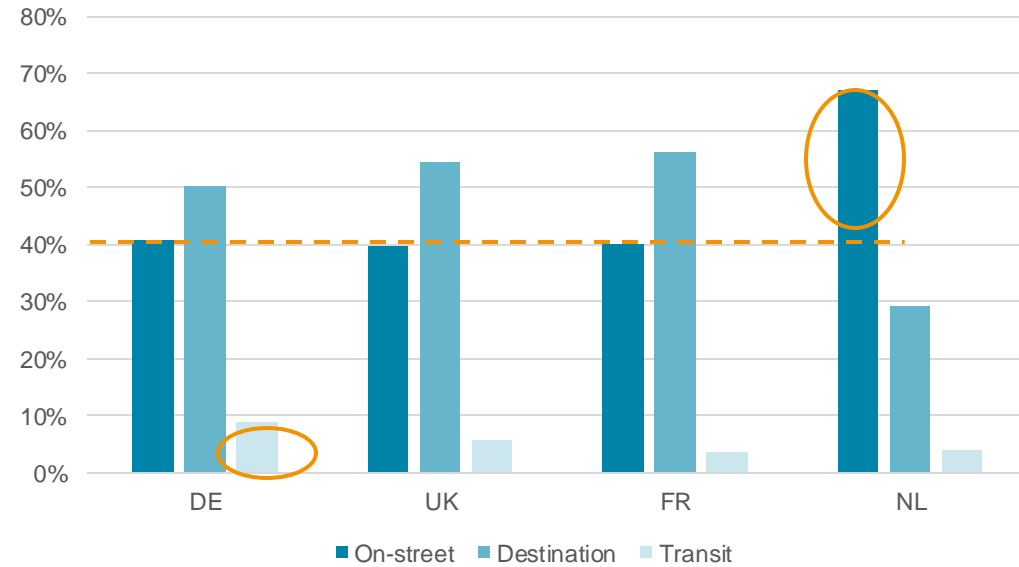
This is reflected in an increase in the overall EV:CP ratio.

% Public charging varies by country by between 8%-19% of all EV Charging. Availability of home charging correlates to the dependency on public charging.

Germany has the largest % of Transit charging in 2030. Key factors include; ambitious transit charging programme including (€2.3bn funding to 2025) and OEM strategy.

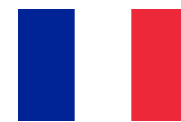
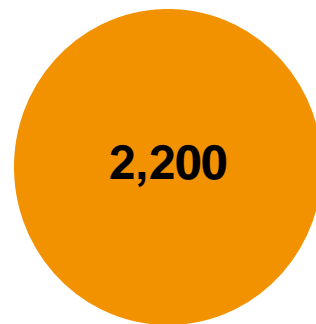
On-street charging will continue to dominate in the NL thanks to a mature on-street charging strategy, low availability of off-street parking and private investment from mobility operators such as Total Energies, Engie, Vattenfall and Ecotap.

Split by segment



Delta-EE European EV Customer Survey

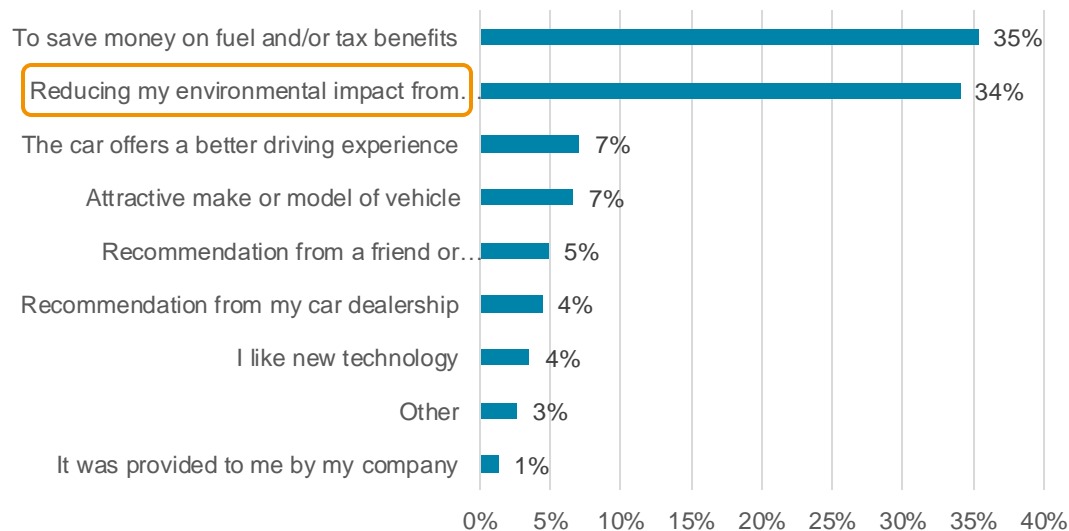
Cumulatively surveying over 2200 EV owners from 7 EV markets:



The rise of customer's environmental concerns as the key driver for EV uptake

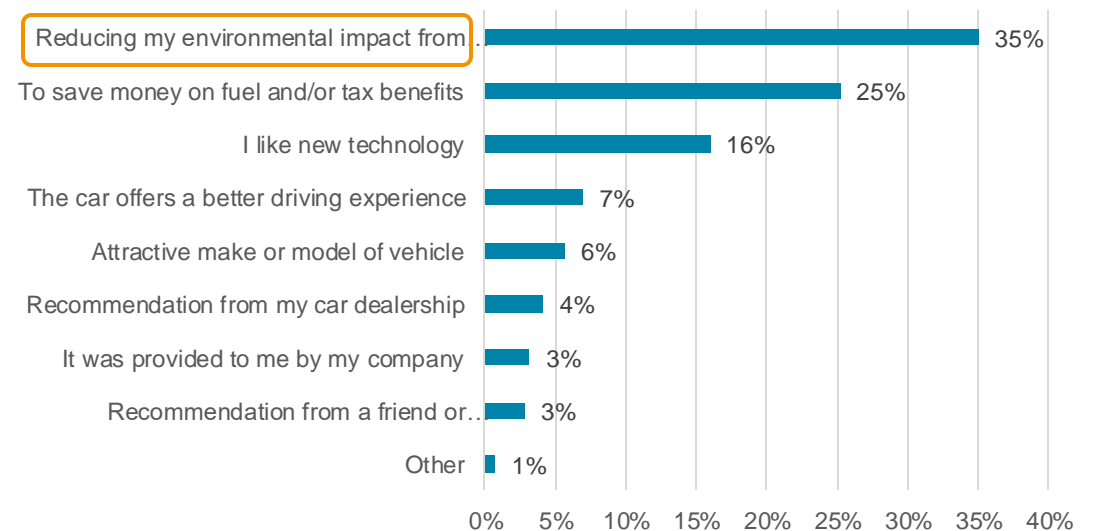
EV purchase year: 2017

What was your primary motivation for acquiring an electric vehicle over a petrol/diesel car?



EV purchase year: 2020

What was your primary motivation for acquiring an electric vehicle over a petrol/diesel car?

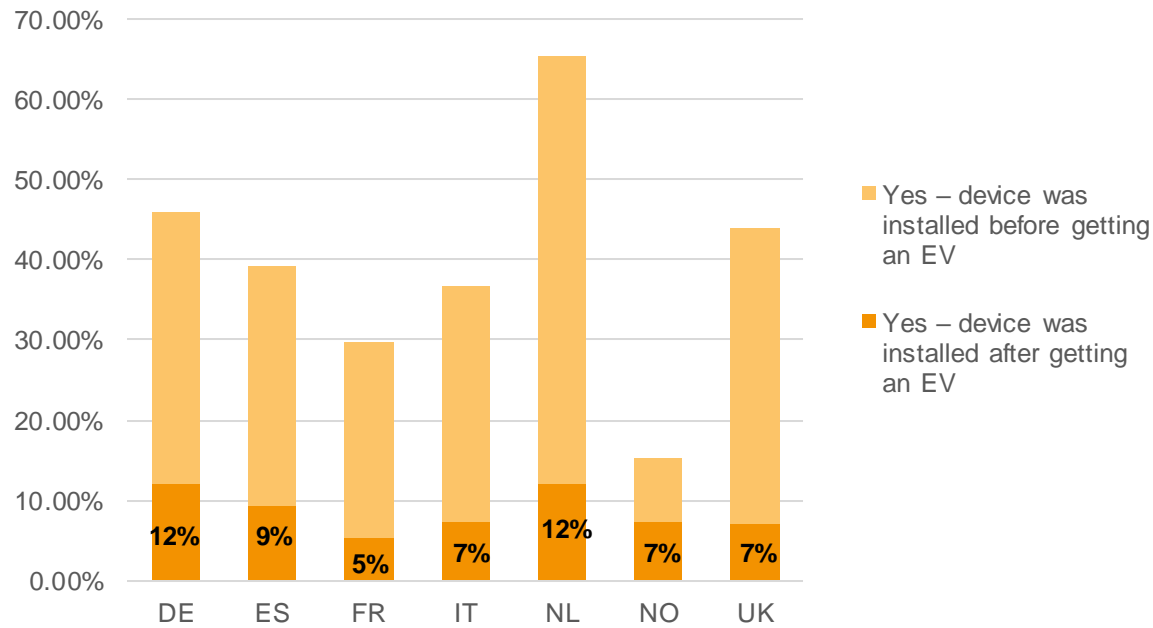


The electrification of transport is blurring the line between the energy and automotive sectors

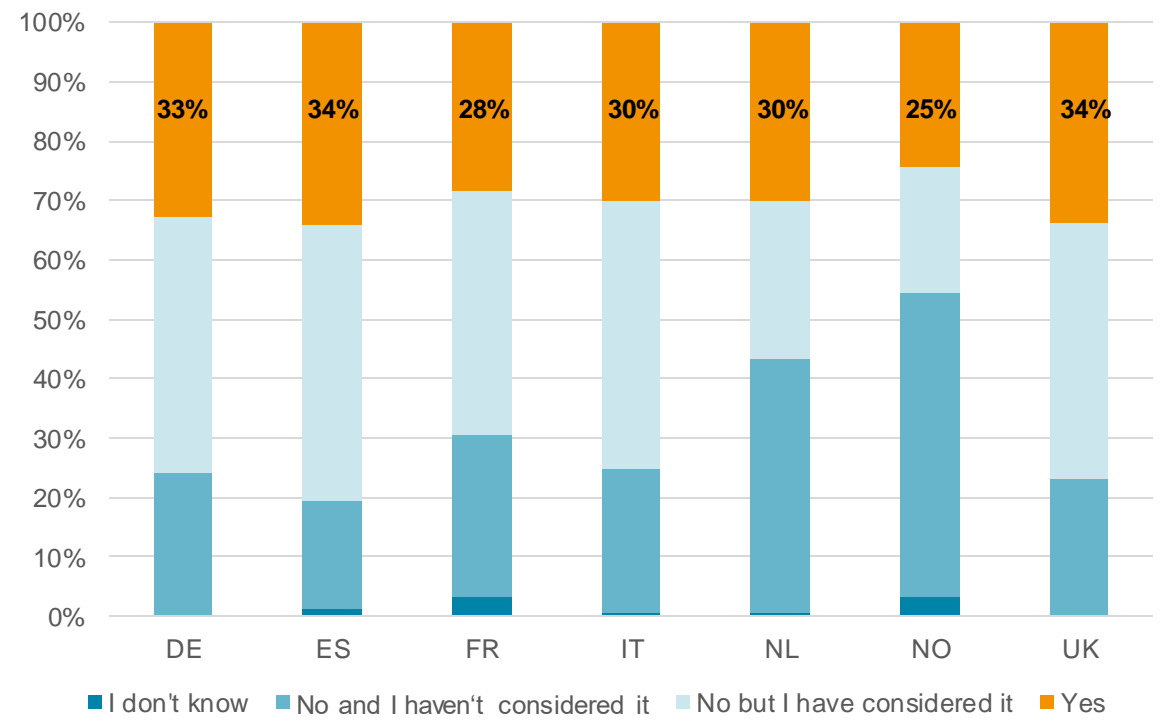
~10% of EV drivers purchased solar PV after switching to an EV

~30% of EV drivers switch their electricity tariff after switch to an EV

Do you have Solar PV installed at home?



Have you changed your electricity contract as a result of getting your electric vehicle?

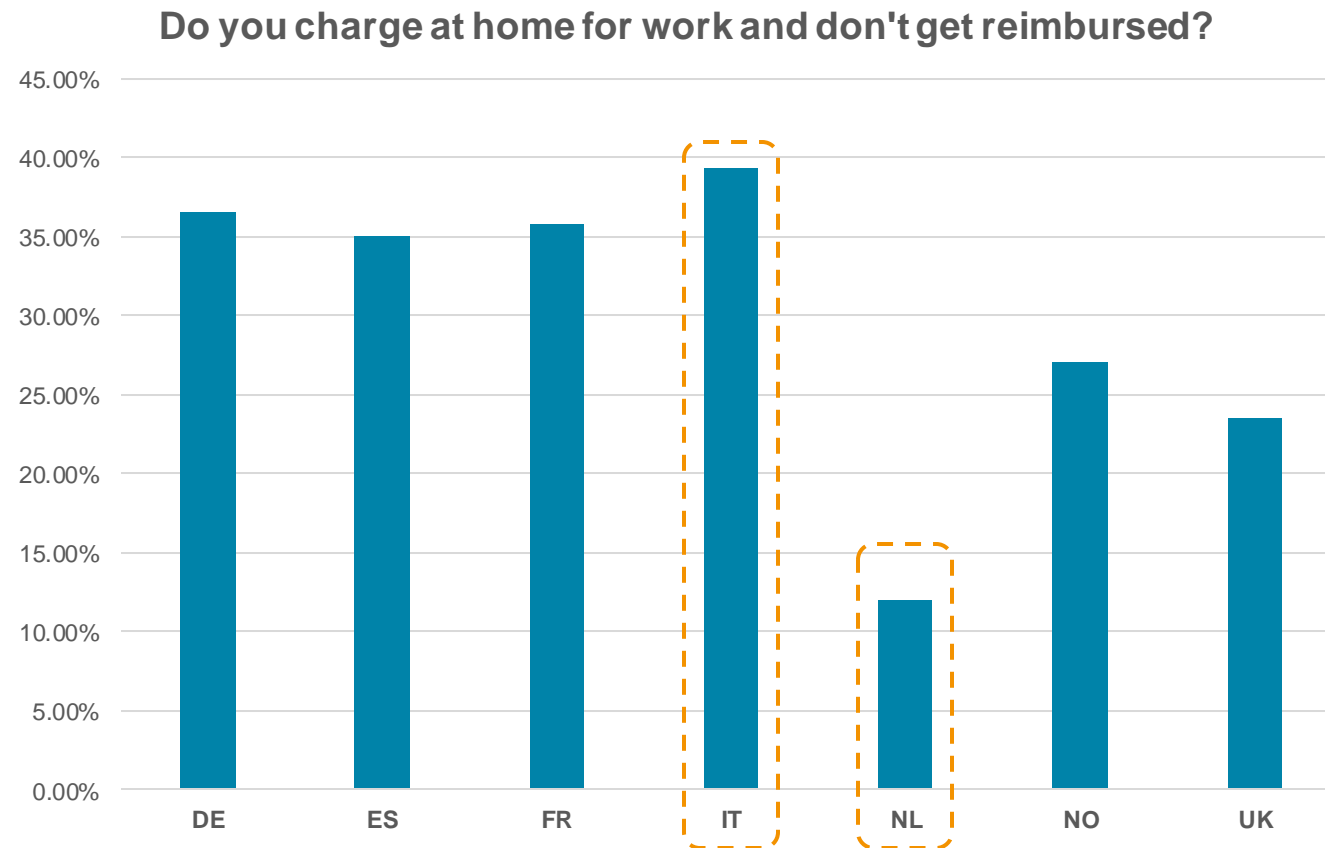


Annual switching rates in 2019:

UK: 19% NL: 21% DE: 10% FR: 9%

Reimbursing employees charging at home for work purposes

~30% of EV drivers charge at home for work but do not get reimbursed



3 key trends to watch out for in the next 12 months

New regulations announced by national governments

- 1 UK government planning wallboxes for all new build houses from next year

The growth/development of home charging solutions for fleets:

- 1 Growth in the overall market size
- 2 Development in the proposition itself

50kW DC Charging hardware coming under pressure from lower and higher speed charging:

- 1 Bigger batteries and higher charging speeds will see a trend towards 100 kW+ HPC.
- 2 More affordable 25kW DC charging meeting the requirements for many destination locations.

Thank you for your attention

**Please do get in touch if you would like to learn more about how
our EV Charging Service can help you**

For more information visit www.delta-ee.com