Global EV Outlook 2021

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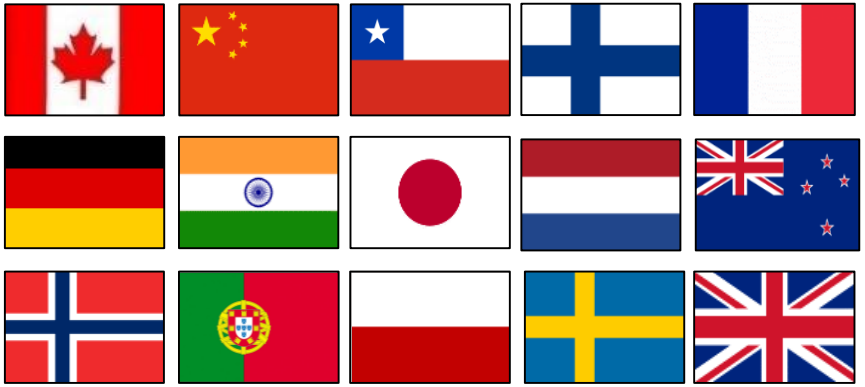
ENERCLUB, 14 May 2021

International Energy Agency

The Clean Energy Ministerial's Electric Vehicles Initiative

Members (2020-21)

(Co-lead) (Co-lead)



Coordinator

Global EV Outlook 2021

Accelerating ambitions despite the pandemic

Activities:

- **Analysis**
- **Commitments**
- **Collaborative projects**

ELECTRIC VEHICLES INITIATIVE
AN INITIATIVE OF THE CLEAN ENERGY MINISTERIAL

EV30@30 INCREASING UPTAKE OF ELECTRIC VEHICLES
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GLOBAL COMMERCIAL VEHICLE DRIVE TO ZERO™
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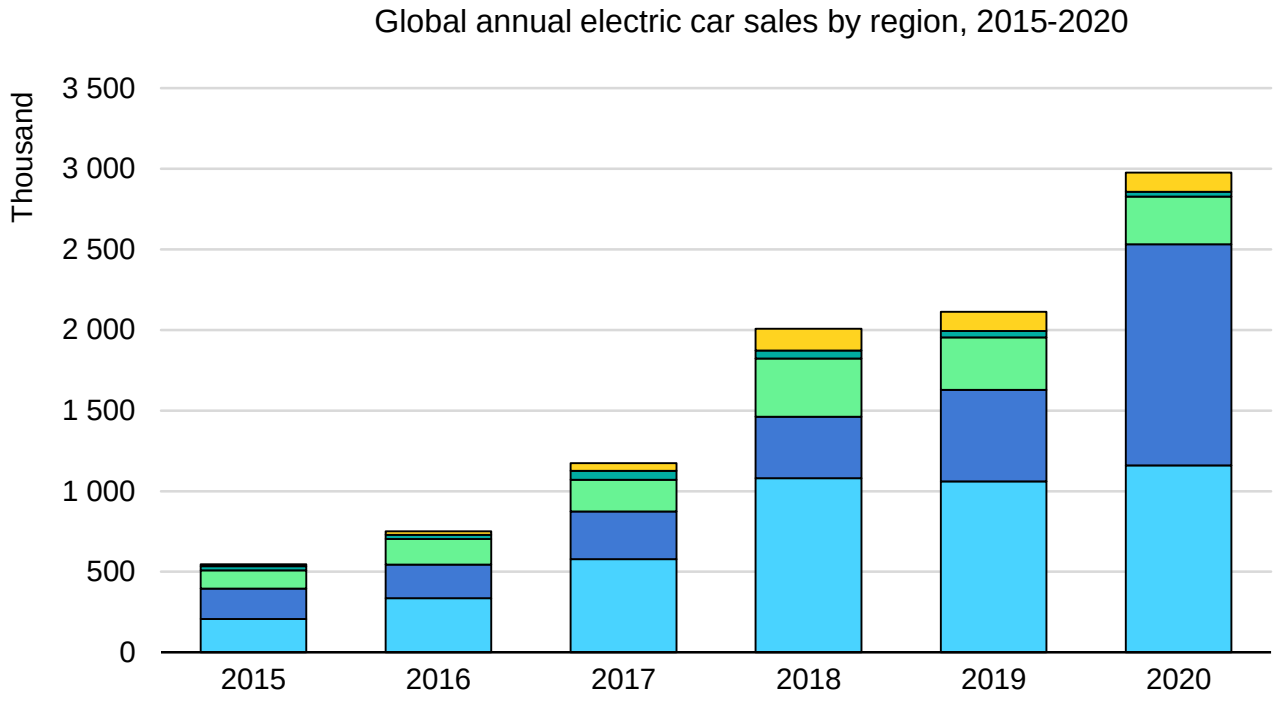
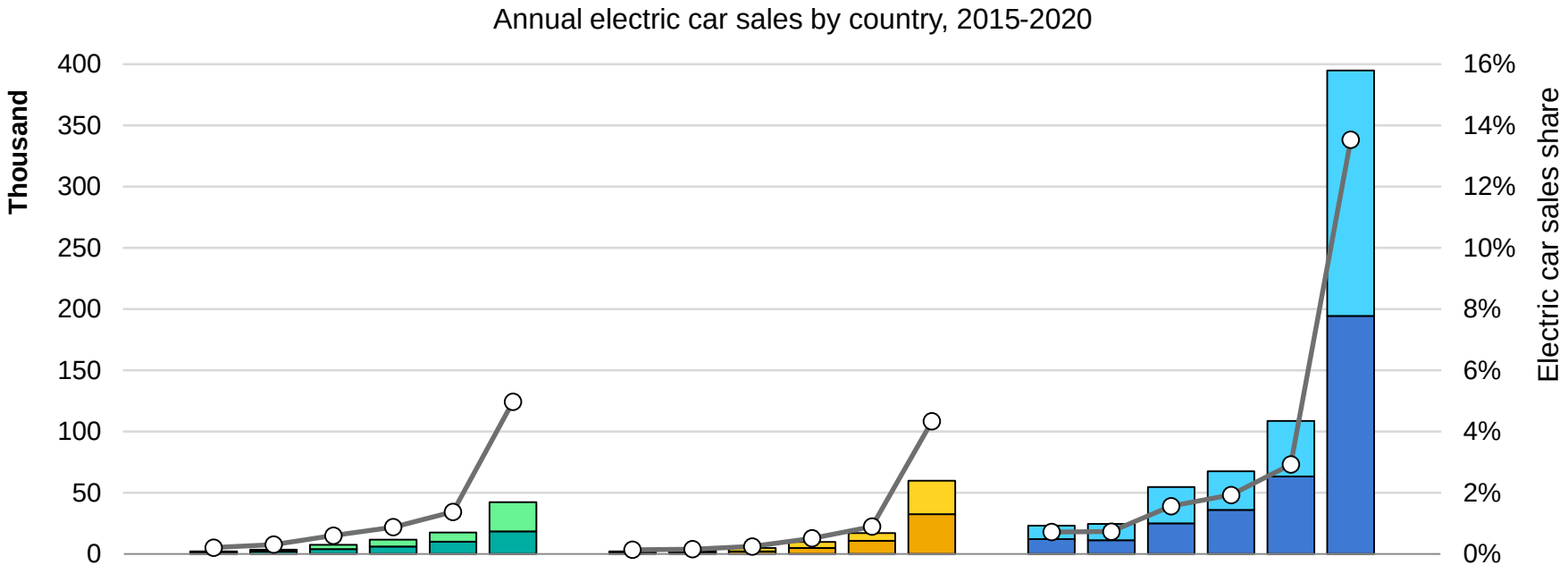
1. Trends and developments in EV markets

Electric car sales were resilient to the pandemic



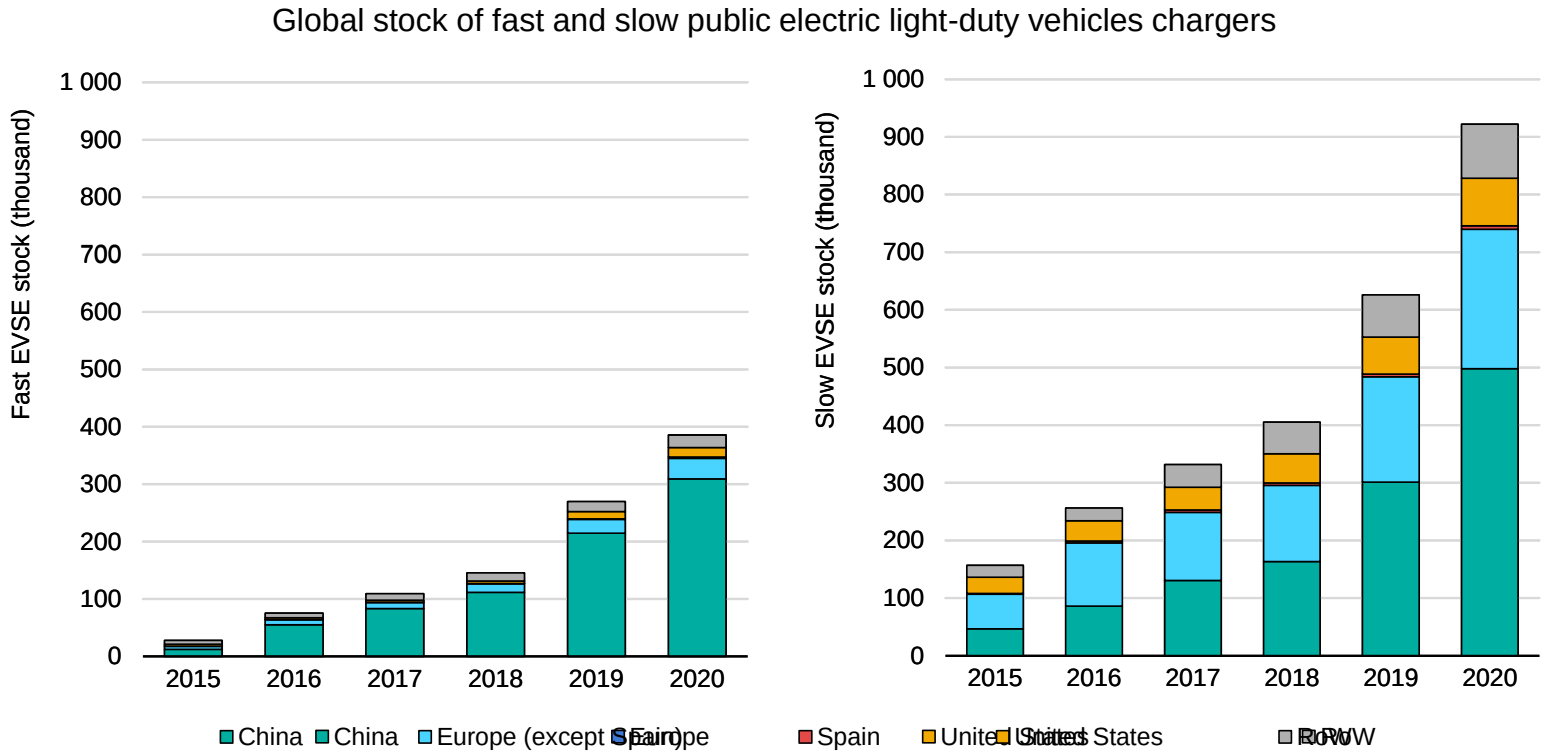
Global electric car sales rose by 41% in 2020 despite falling overall car sales. Europe became the largest electric car market for the first time, overtaking China.

Electric car sales in Spain are ramping up



Electric car sales in Spain more than doubled to 42 000 units in 2020, achieving a sales share of 5%. This is comparable to other European countries such as Italy but lags the market leaders.

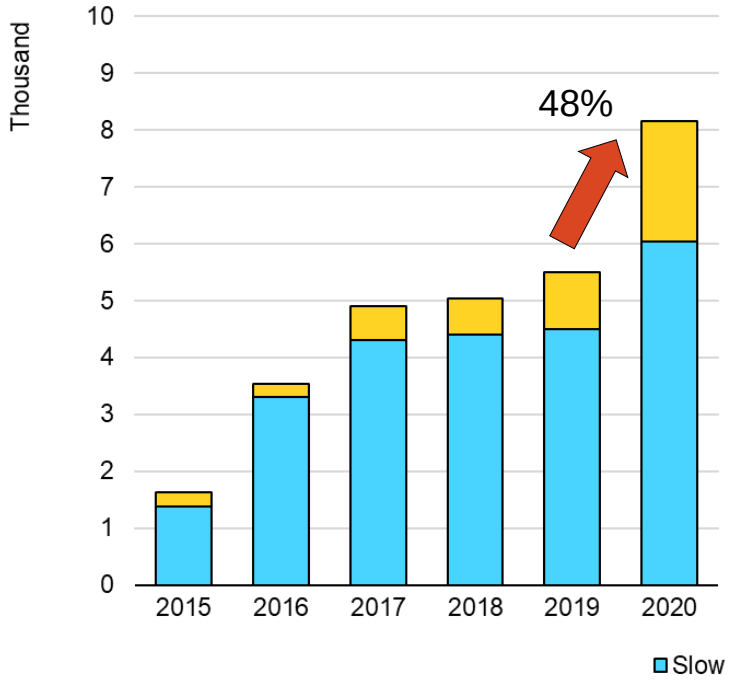
Charging infrastructure roll-out kept pace with EV growth in 2020



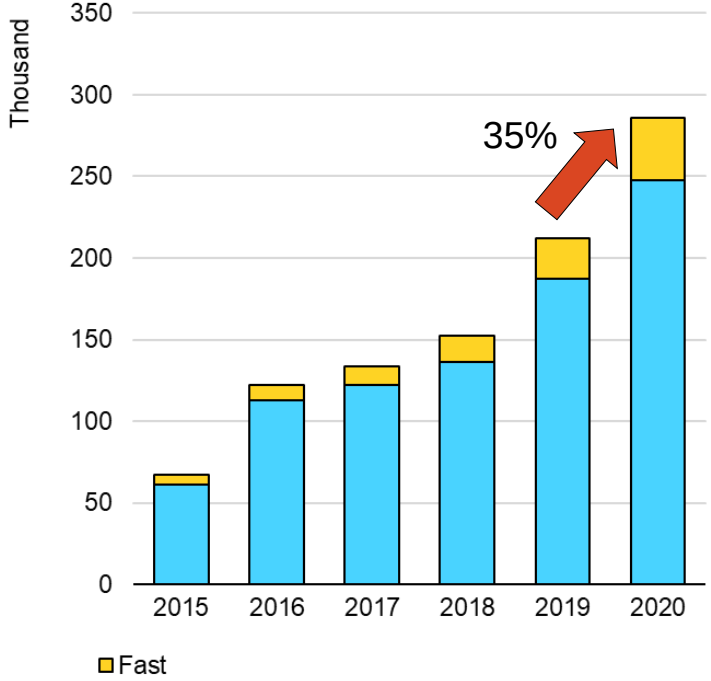
The global stock of public chargers reached 1.3 million, 30% of which are fast chargers. Spain accounts for 6% and 2% of all European fast and slow chargers installed respectively.

Charging infrastructure roll-out in Spain accelerated in 2020

Stock of electric light-duty vehicles chargers in **Spain**



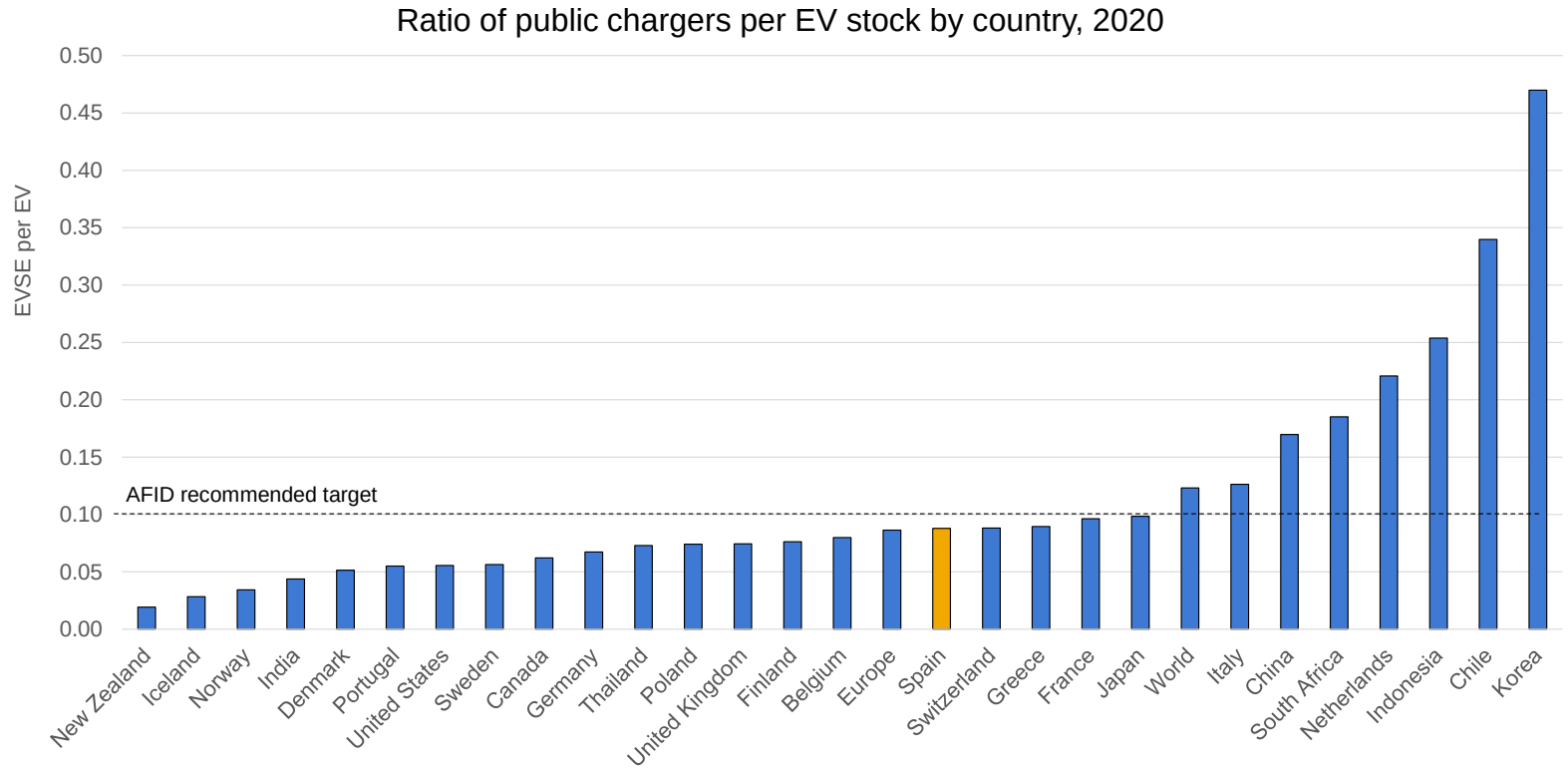
Stock of electric light-duty vehicles chargers in **Europe**



Slow Fast

The ratio of fast chargers out of total publicly accessible chargers in Spain is almost double that in Europe.

Most European countries are below the recommended 2020 AFID target



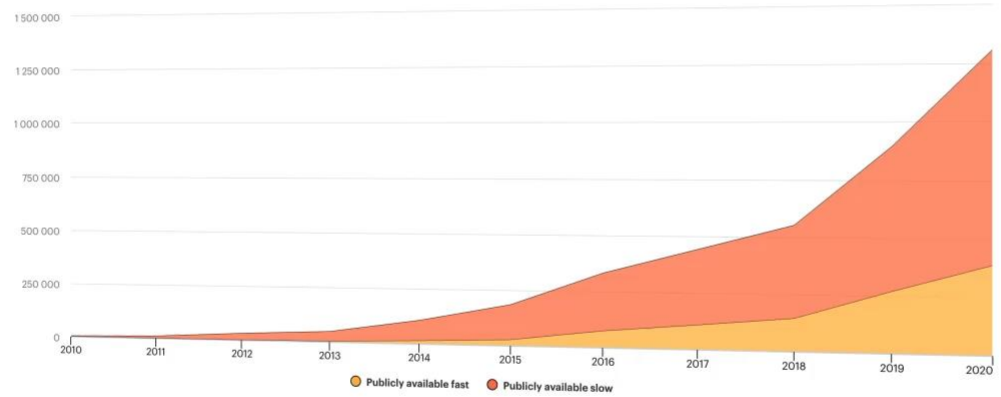
Spain hit 0.09 EVSE/EV ratio as of the end of 2020, slightly above the European average.

Historical Projections

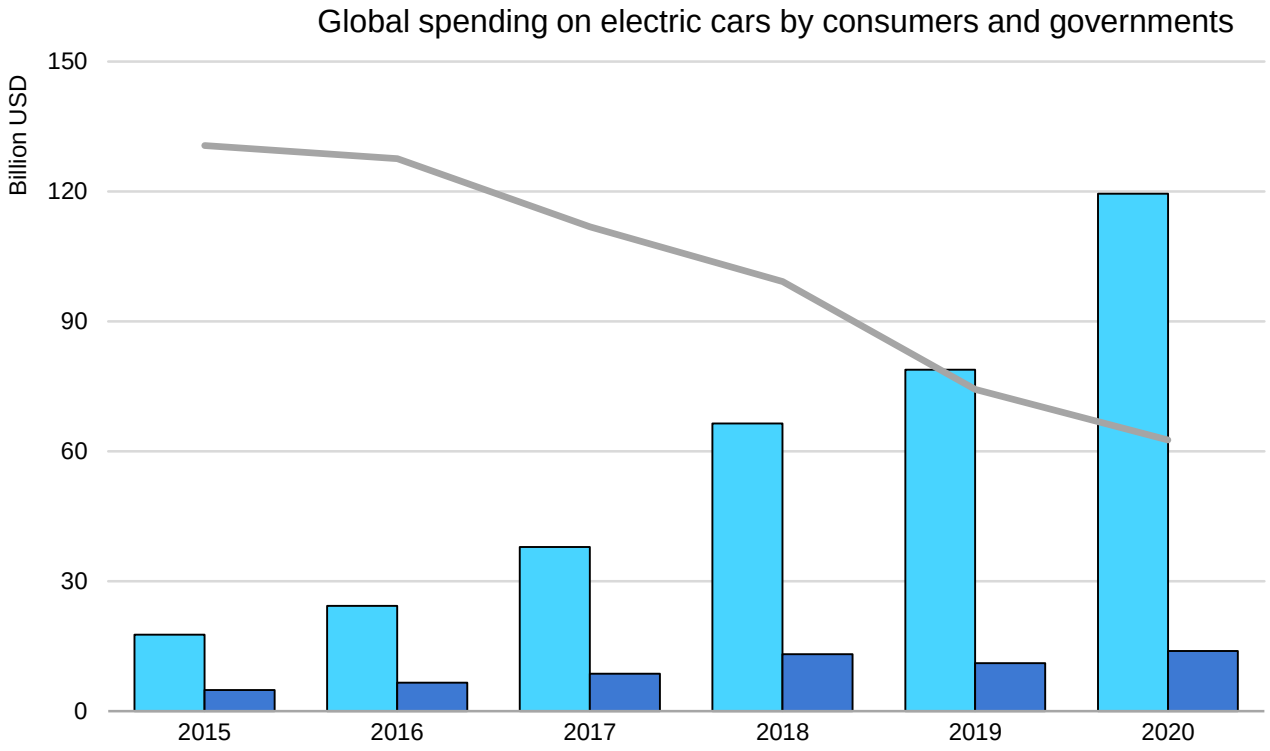
Show
EV chargers

Region
World

EV chargers, World, 2010-2020



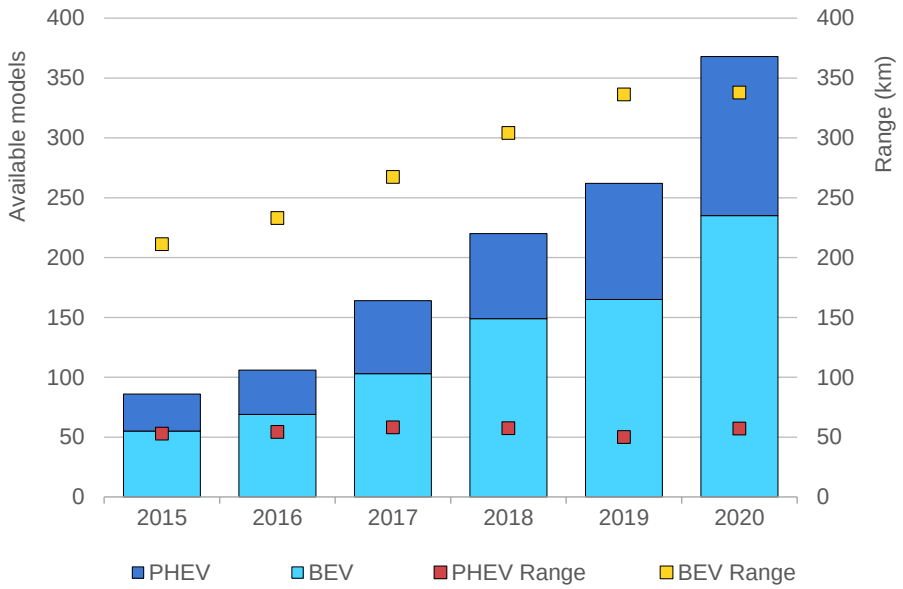
Consumer and government spending on electric cars is evolving



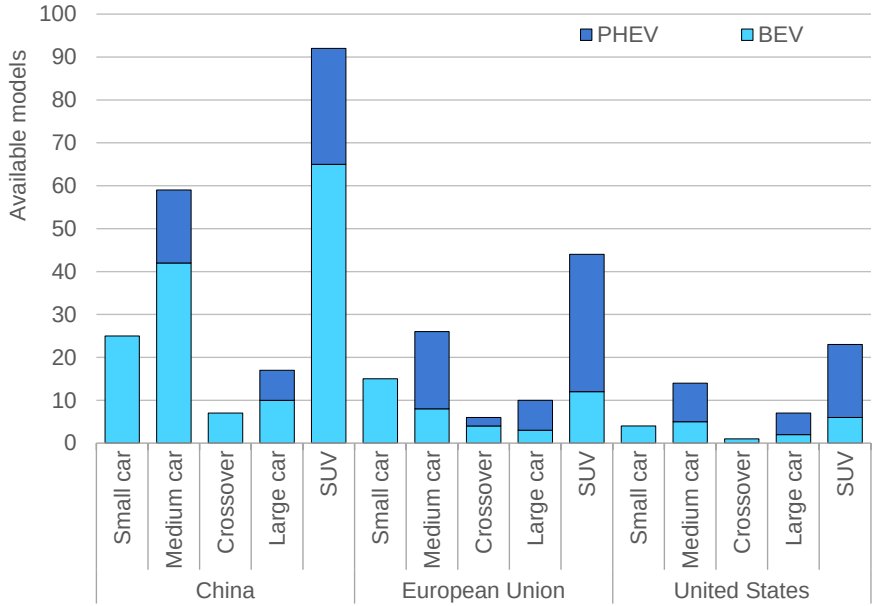
The share of government incentives in total spending on electric cars has decreased over the past five years, suggesting that EVs are becoming increasingly attractive to consumers.

The number of electric car models available continues to grow

Electric car models available globally, and their average range, 2015-20



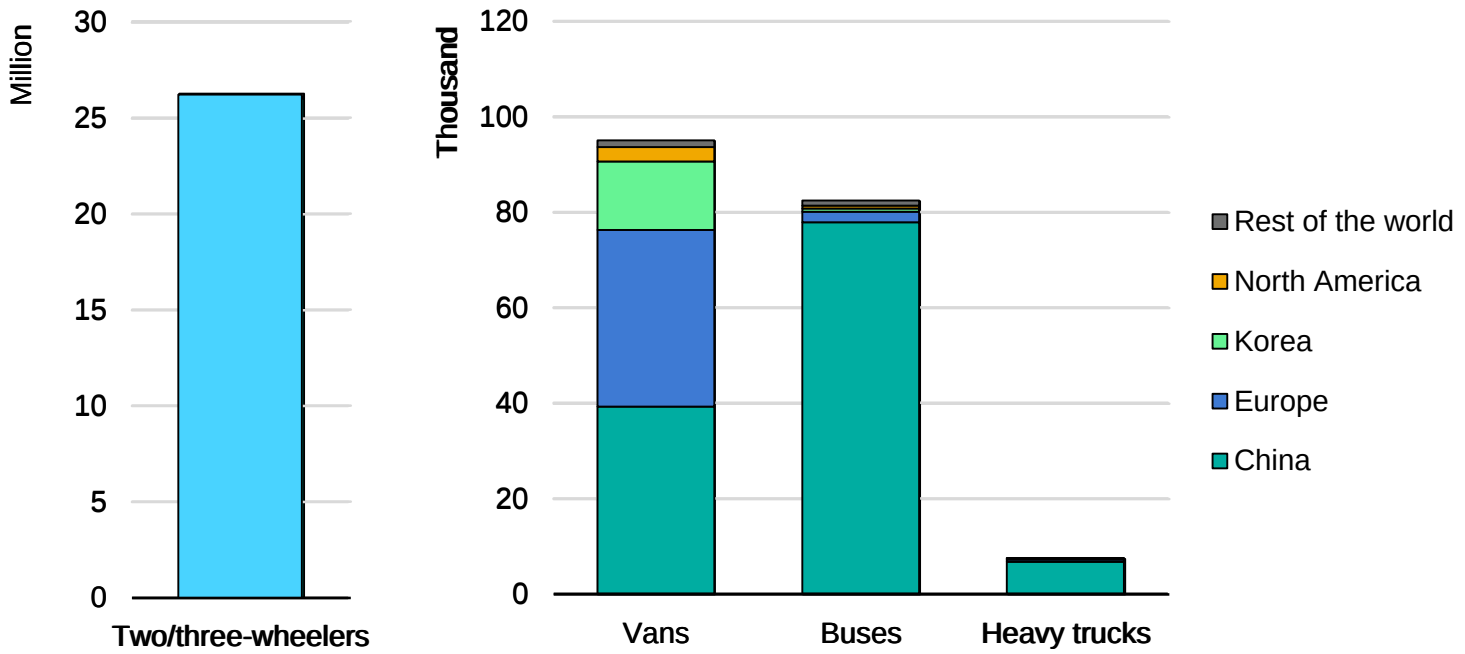
Electric car models available by region



More than 350 electric car models are now available globally, with SUVs making up more than half the models in all markets.

Road transport electrification is not just about cars

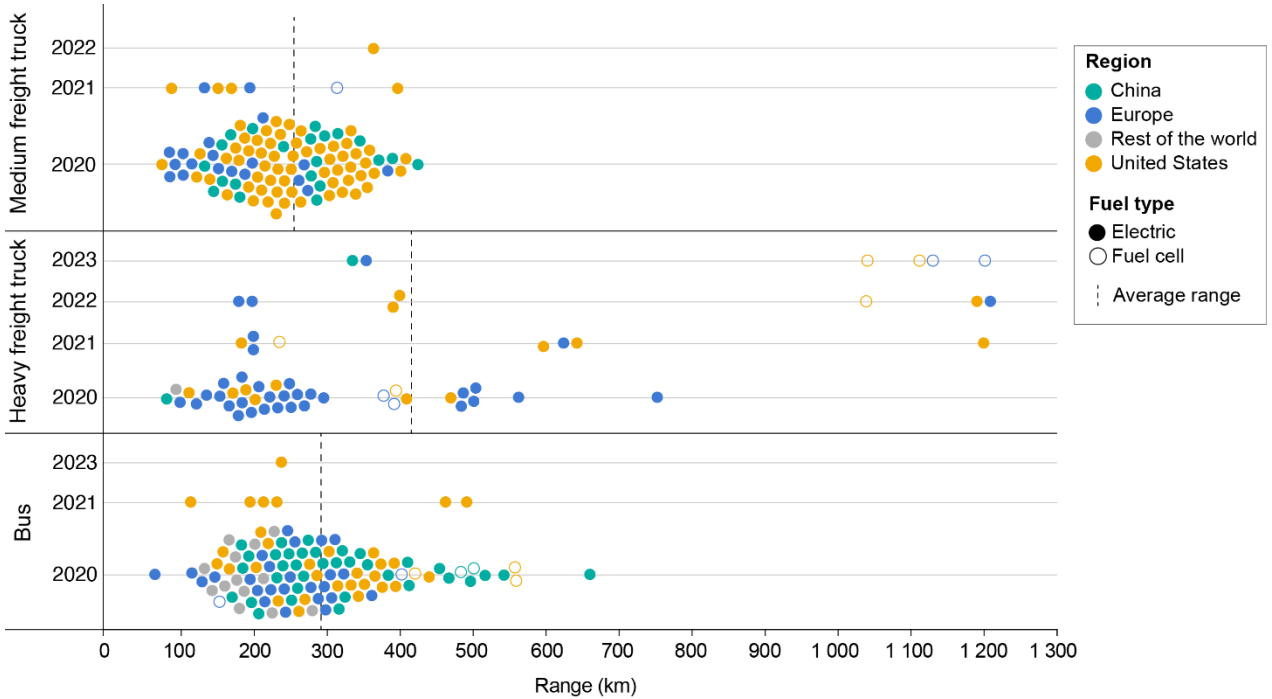
Global electric vehicles sales by transport mode and region, 2020



Sales of electric two-and three-wheelers are one order of magnitude higher than sales of electric cars. The electrification of other modes is lagging behind but is rising.

More heavy-duty vehicle models with longer ranges keep coming

Current and announced zero-emission heavy-duty vehicles by segment, release year and powertrain



Manufacturers' commitments to electrification are demonstrated through diverse offerings, increased range, and new model availability.

2. Policies to promote EV deployment

Strong policies underpin major electric car markets

Fuel consumption limits set at 4.0 L/100 km (NEDC) by 2025.

NEV credit mandate to 2023.

New Energy Automobile Industry Plan: 20% of sales = ZEVs by 2025.

Postponement of NEV subsidy phase out to 2022.

Tailpipe standards of 95 gCO_2/km or 4.1 L/100 km (2021, petrol, NEDC).

Sustainable and Smart Mobility Strategy and Action Plan.

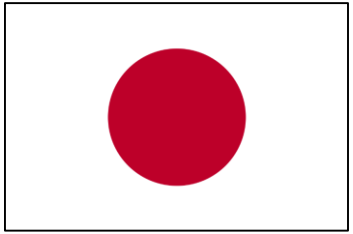
Various MS ICE car bans, and subsidy measures.

Additional purchase incentives as pandemic response in Germany, France, Italy.

Emissions standards are set at 134 gCO_2/km or 5.2 L/100 km (2022, NEDC).

City level initiatives e.g. New Delhi targets 25% electrification of vehicle sales in 2024.

FAME II allocates USD 1.4B over 3 years until 2022 for 1.6M hybrid and electric vehicles.



Emissions standards are set at 132 gCO_2/km or 5.7 L/100 km (2020, WLTP Japan).

100% electrified PLDV sales by mid-2030s.

Doubling of subsidies for ZEVs.

Tax exemptions on EVs have been extended for 2 years.

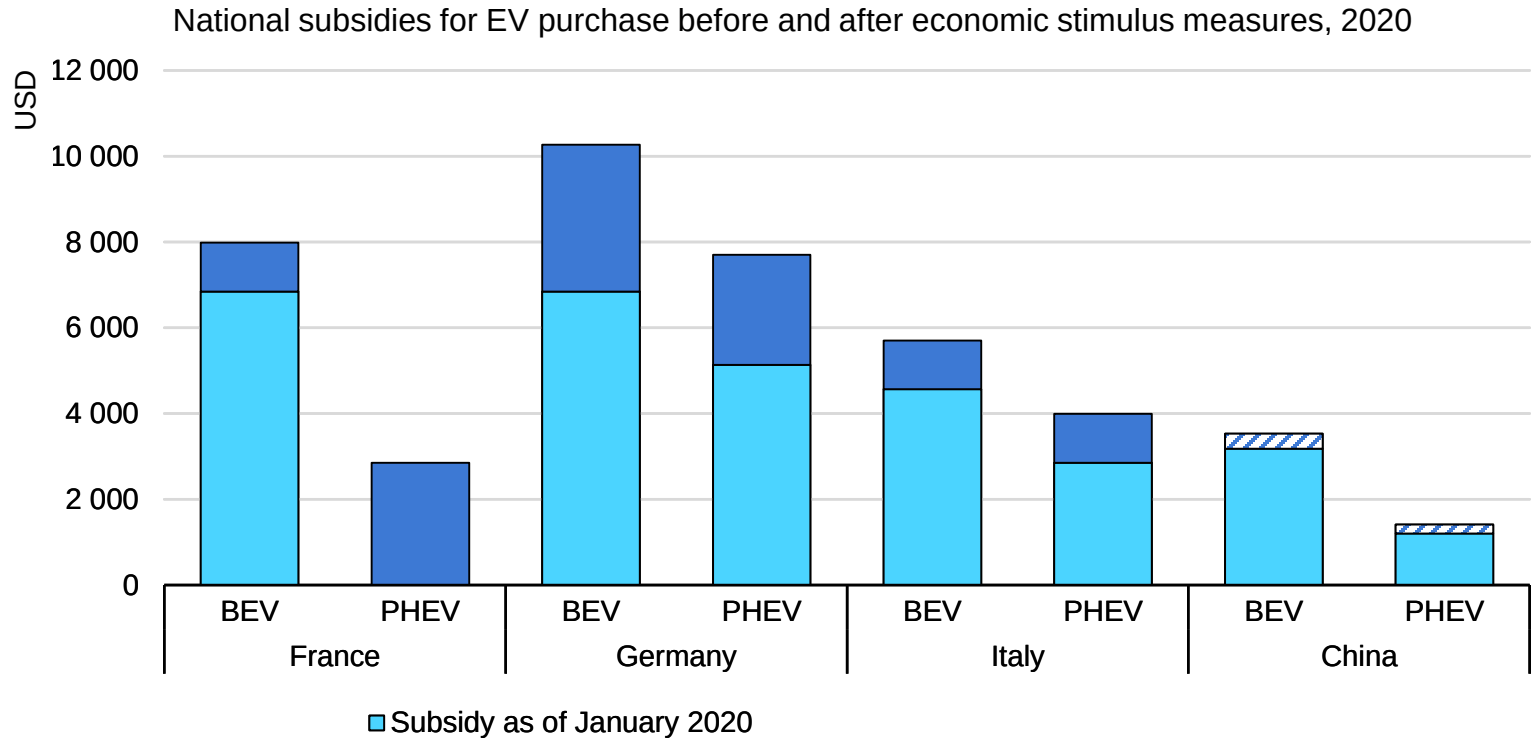
SAFE standard weakening fuel economy improvements from 4.7% per annum to 1.5%.

California ZEV mandate from 2035, with other states considering ICE bans.

Federal tax credit of up to USD 7 500.

State level policies such as LCFS, tax credits and purchase incentives.

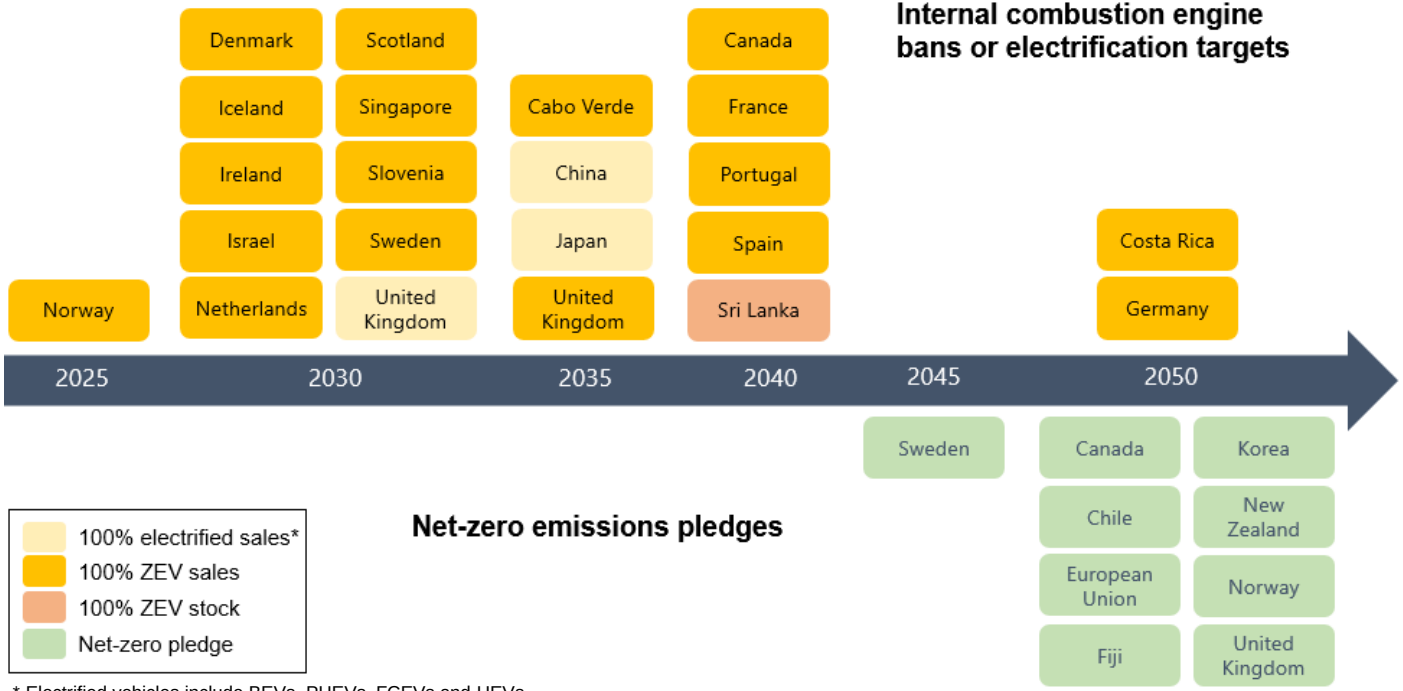
Subsidies were vital to keeping up EV sales during the pandemic



Covid-related stimulus measures including EV purchase incentives played an instrumental role in boosting electric car sales in 2020, particularly in Europe.

More than 20 countries have announced electrification targets

Internal combustion engine bans, electrification targets and net-zero emissions pledges



* Electrified vehicles include BEVs, PHEVs, FCEVs and HEVs.

Eight countries and the European Union have proposed or enacted legislation for net-zero emissions by 2050.

Global EV Policy Explorer is now available

Internal combustion engine bans, electrification targets and net zero emissions pledges

Country/region	Policy type	Vehicle type
Spain	**All**	**All**

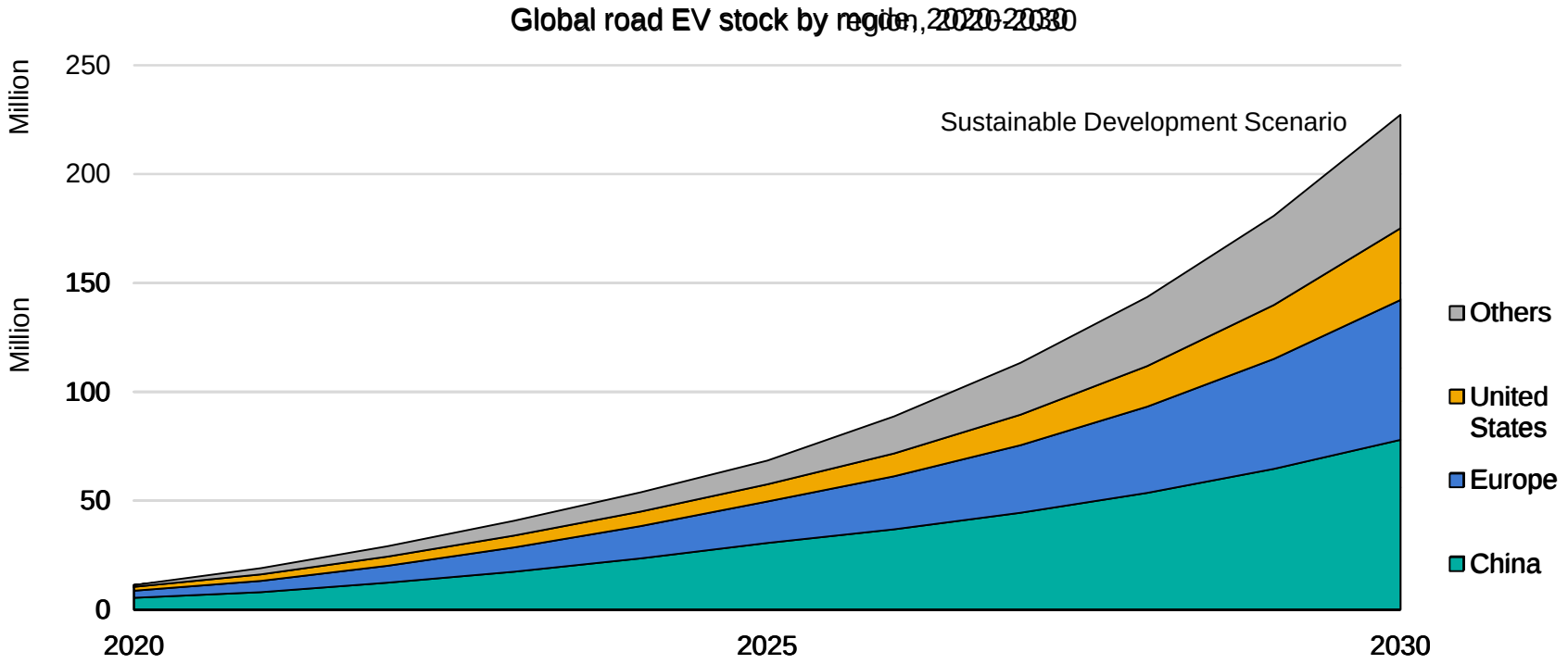
Country/region	Policy type	Key policy measures and targets	Year announced	Vehicle type	Source
Spain	Proposal	Proposal: no sales of passenger LDVs that emit CO2 at the tailpipe by 2040.	2020	Light-duty vehicles	Government of Spain (2020)
Spain	Ambition	Ambition: 150 – 200 FCEV buses on the road by 3030.	2020	Heavy-duty vehicles	Government of Spain (2020)
Spain	Ambition	Ambition: 5 000-7 000 FCEV vehicles (multiple LDV and HDV categories) on the road by 2030.	2020	Multiple	Government of Spain (2020)
Spain	Target	Target: 5 million electric LDVs, buses and two/three-wheelers in 2030.	2020	Multiple	Government of Spain (2020)

https://www.iea.org/articles/global-ev-policy-explorer

The new web platform enables to interactively explore key policies and measures for EV deployment.

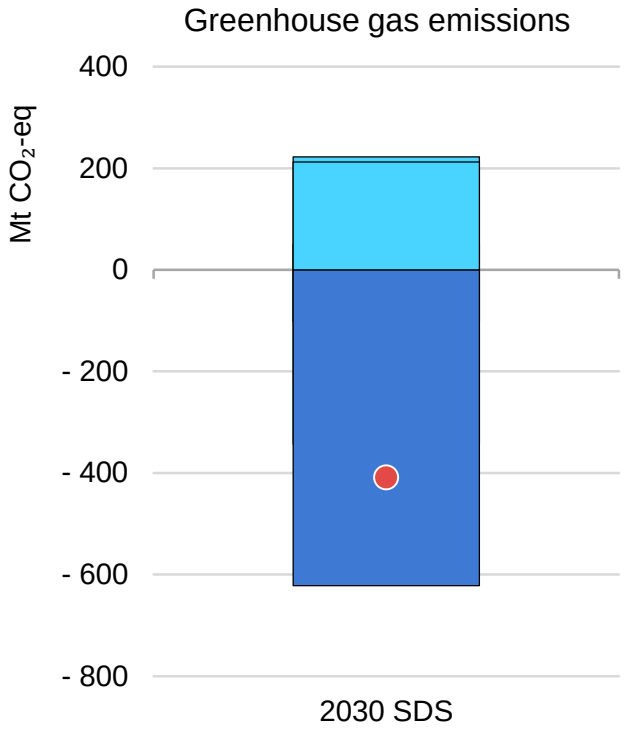
3. Prospects for EV deployment

EVs increase across all road transport modes and regions to 2030



The total EV fleet grows to 145 million in the Stated Policies Scenario, up from around 11 million today. The EV fleet could be significantly larger if governments accelerate efforts to reach climate goals.

How EVs support climate goals



EVs will continue contributing to net reductions in GHG emissions, especially as the electric grid decarbonises.

Conclusions

- Global EV sales in 2020 were resilient to the impacts of the pandemic on the back of existing regulatory frameworks and subsidies; early market signals in 2021 suggest continued momentum in key markets.

- Recovery packages are an opportunity to accelerate the transition to electric mobility across the entire supply chain; in 2020, charging infrastructure roll-out kept pace with EV growth.

- Existing policies & industry plans suggest that the next decade is set to see much more widespread adoption of EVs; but to reach ambitious climate goals, further action is required in three key areas:
  - Accelerate the transition to e-mobility such as by providing purchase incentives and/or tax vehicle purchase based on environmental performance
  - Roll-out recharging infrastructure and develop sustainability frameworks for batteries.
  - Decarbonise power generation to fully reap the environmental benefits of EVs.