



**RACE IAS**

## **GLOBAL EV OUTLOOK 2021**

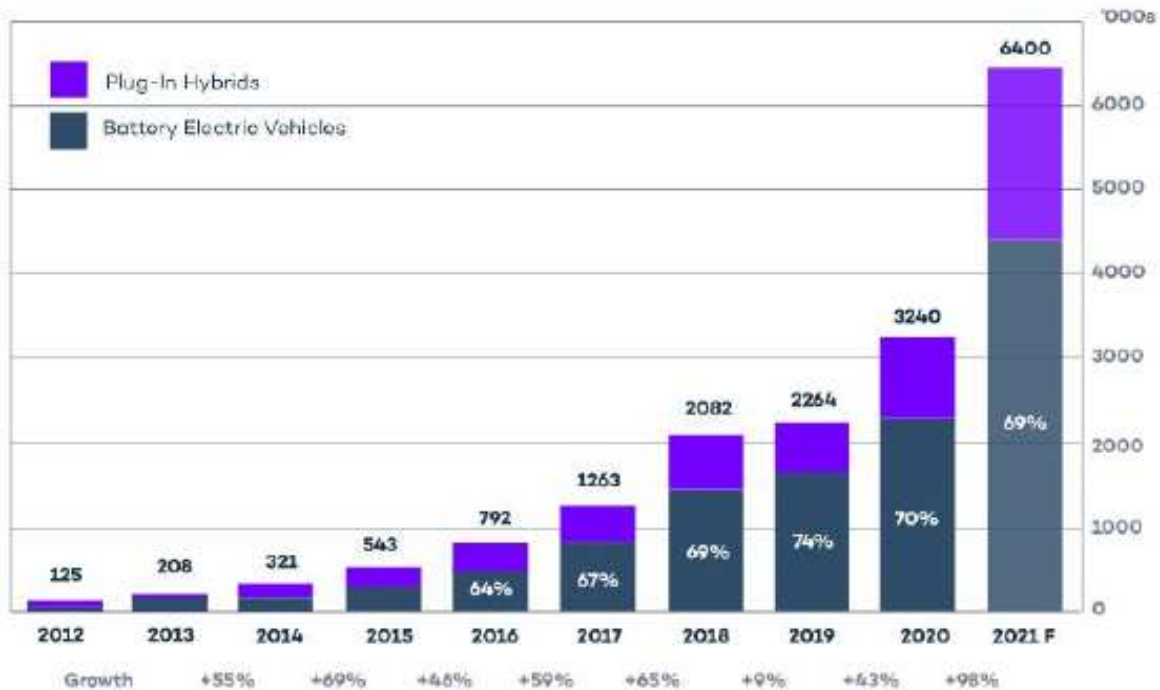
### **About:**

- The Global EV Outlook is an annual publication: that identifies and discusses recent developments in electric mobility across the globe. It is developed with the support of the members of the Electric Vehicles Initiative (EVI).
- Combining historical analysis with projections to 2030: the report examines key areas of interest such as electric vehicle (EV) and charging infrastructure deployment, energy use, CO2 emissions and battery demand.

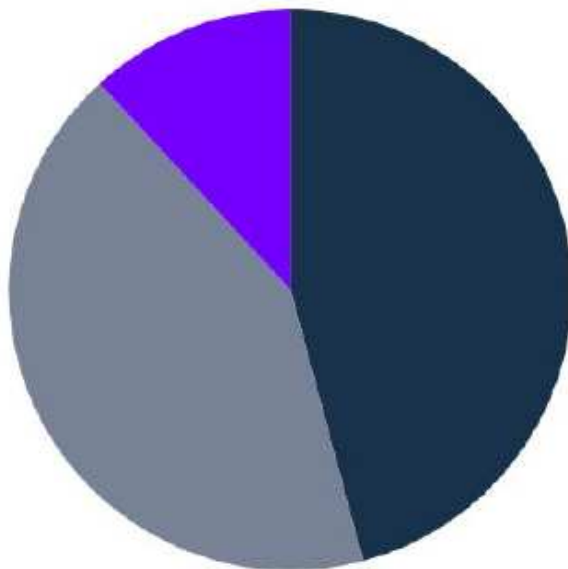
### **Tools:**

- It makes available for the first time two online tools:
  - The Global EV Data Explorer
  - Global EV Policy Explorer, which allow users to interactively explore EV statistics and projections, and policy measures worldwide.
- Legislation: Legally binding commitments such as regulations and standards.
- Targets: Announced government targets that are part of legislation, budgetary commitments, Nationally Determined Contributions to the Paris Climate Agreement or national climate plans such as those submitted by member states to the European Union.
- Ambitions: Government goals or objectives as set out in a policy document such as a deployment roadmap or strategy.
- Proposals: Government goals released in public documents or embedded into legislation designed to stimulate discussion as to their feasibility.
- Trends and developments in electric vehicle markets

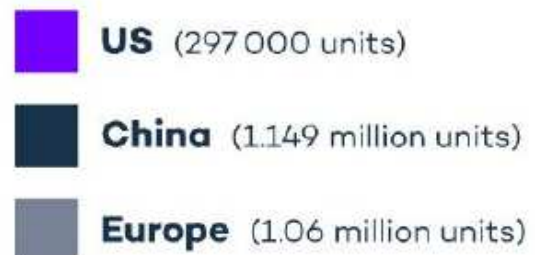
## Global plug-in vehicle sales



## Trends and developments in electric vehicle markets



## New EV registrations by area for H1 2021:



### Global:

- After a decade of rapid growth, in 2020 the global electric car stock hit the 10 million mark, a 43% increase over 2019, and representing a 1% stock share.
- Battery electric vehicles (BEVs) accounted for two-thirds of new electric car registrations and two-thirds of the stock in 2020.

- China, with 4.5 million electric cars, has the largest fleet; though in 2020 Europe had the largest annual increase to reach 3.2 million.

### Europe:

- Overall Europe's car market contracted 22% in 2020. Yet, new electric car registrations more than doubled to 1.4 million representing a sales share of 10%.
- In the large markets, Germany registered 395 000 new electric cars and France registered 185 000.
- The United Kingdom more than doubled registrations to reach 176 000.
- Electric cars in Norway reached a record high sales share of 75%, up about one-third from 2019.
- Sales shares of electric cars exceeded 50% in Iceland, 30% in Sweden and reached 25% in the Netherlands.

### China:

- The overall car market in China was impacted by the pandemic less than other regions. Total new car registrations were down about 9%.
- Registration of new electric cars was lower than the overall car market in the first-half of 2020.
- This trend reversed in the second-half as China constrained the pandemic.
- The result was a sales share of 5.7%, up from 4.8% in 2019. BEVs were about 80% of new electric cars registered.

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### United States:

- The US car market declined 23% in 2020, though electric car registrations fell less than the overall market.
- In 2020, 295 000 new electric cars were registered, of which about 78% were BEVs, down from 327 000 in 2019.

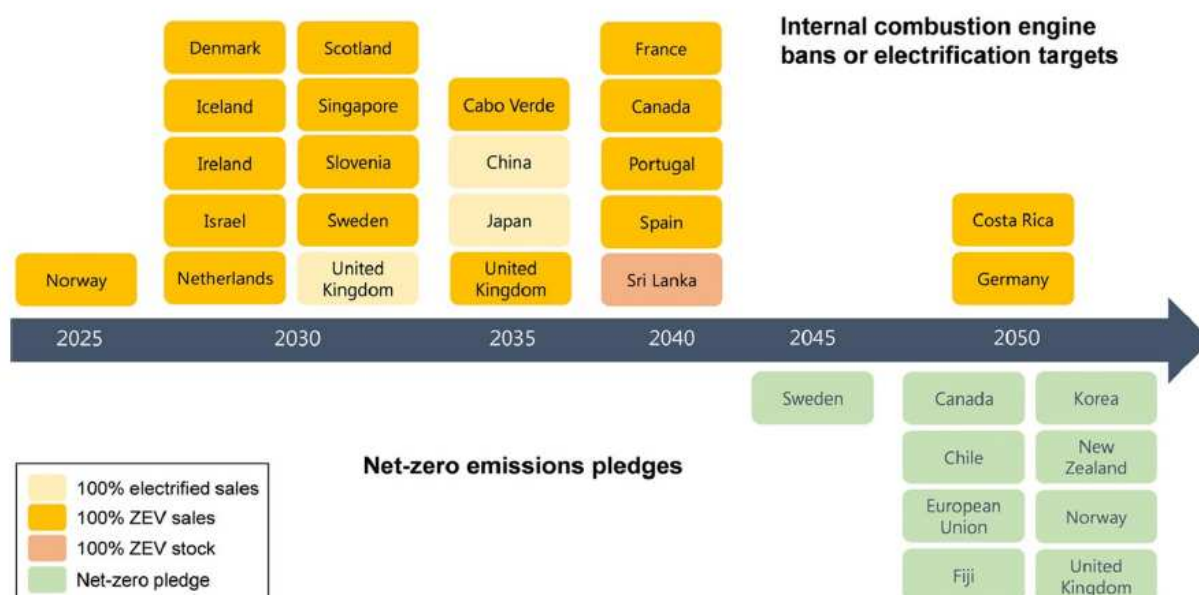
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### Other countries:

- Electric car markets in other countries were resilient in 2020.
- In Canada the new car market shrunk 21% while new electric car registrations were broadly unchanged from the previous year at 51 000.
- New Zealand is a notable exception. In spite of its strong pandemic response, it saw a decline of 22% in new electric car registrations in 2020, in line with a car market decline of 21%.

- Another exception is Japan, where the overall new car market contracted 11% from the 2019 level while electric car registrations declined 25% in 2020.

More than 20 countries have electrification targets or ICE bans for cars, and 8 countries plus the European Union have announced net-zero pledges



## Issues/ Challenges:

- **Recharge Points:** Electric fuelling stations are still in the development stages. Not a lot of places you go to on a daily basis will have electric fuelling stations for your vehicle, meaning that if you're on a long trip or decide to visit family in a rural or suburban area and run out of charge, it may be harder to find a charging station.
- **The Initial Investment is Steep:** Though technology is advancing and the price to produce electric cars continues to drop, you still have to pay a lot for them.
- **Electricity isn't Free:** Electric cars can also be a hassle on your energy bill if you're not considering the options carefully. If you haven't done your research into the electric car you want to purchase, then you may be making an unwise investment.
- **Longer Recharge Time:** While it takes a couple of minutes to fuel your gasoline-powered car, an electric car takes about 4-6 hours and sometimes even a day to get fully charged.
- **Battery Replacement:** Depending on the type and usage of battery, batteries of almost all electric cars are required to be changed every 3-10 years.

- **Lower Amount of Choices:** The market today for electric cars is expanding, with no signs of slowing down. However, the truth is that there are fewer options to customize and choose the aesthetics of your EV.

### **Significance:**

- **AFID targets:** It compares the electric vehicle supply equipment per EV with the recommended AFID targets.
- **Fuel taxation:** It also analyses the impact of EV uptake on governments' revenue from fuel taxation.
- **Vehicle manufacturers and policy makers:** are boosting their attention and actions related to electric vehicles (EVs).
- **EV technologies:** such as full battery electric and plug-in hybrid electric models are attractive options to help reach environmental, societal and health objectives.
- **More efficiency:** It is two- to four-times more efficient than conventional internal combustion engine models; EVs can reduce reliance on oil-based fuels and, if running on low-carbon power, can deliver significant reductions in greenhouse gas emissions.
- **With zero tailpipe emissions,** EVs are well suited to help solve air pollution issues.
- **EVs are driving advances in battery technology:** a key issue for industrial competitiveness in the transition to clean energy.
- **EV fleets are expanding:** at a fast pace in several of the world's largest vehicle markets. The costs of batteries and EVs are dropping.
- **Charging infrastructure is expanding:** This progress promotes electrification of transport modes such as two/three-wheelers, light-duty vehicles (LDVs) (cars and vans), taxis and shared vehicles, buses and heavy-duty vehicles with short range requirements such as urban deliveries.
- **More Convenient:** The electric vehicle is easy to recharge, and the best part is you will no longer need to run to the fuel station to recharge your car before hitting the road! Even a normal household socket could be used for charging an electric car.
- **Savings:** These cars can be fuelled for very low prices, and many new cars will offer great incentives for you to get money back from the government for going green. Electric cars can also be a great way to save money in your own life.
- **Popularity:** EV's are growing in popularity. It is nearly three times as efficient as cars with an internal combustion engine.

- **Safe to Drive:** Electric cars undergo the same fitness and testing procedures test as other fuel-powered cars. An electric car is safer to use, given their lower center of gravity, which makes them much more stable on the road in case of a collision.
- **Reduced Noise Pollution:** Electric cars put a curb on noise pollution as they are much quieter. Electric motors are capable of providing smooth drive with higher acceleration over longer distances.

### **Way forward/ Suggestions:**

- **Learning from frontrunner markets:** The report includes policy recommendations that incorporate learning from frontrunner markets to inform policy makers and stakeholders that consider policy frameworks and market systems for electric vehicle adoption.
- It also features an update of the electric heavy-duty vehicle models: coming onto commercial markets and slotted for release in the coming few years, and on the status of development of mega chargers.
- **Effective policies:** still needed to address upfront investment costs, promote EV charging infrastructure and ensure a smooth integration of charging demand in power systems.