Global EV Outlook 2023

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Global EV Outlook 2023
Catching up with climate ambitions
Recent trends in electric cars
Sales of electric cars were up 55% in 2022, led by China, Europe and the United States. 2023 is set to be another record year.
Electric cars are reaching mass-market adoption in many cases.

Electric cars account for more than 20% of total sales in China and more than 10 European countries. This share is expected to climb much higher by 2030 with current policies.
Electric cars are beginning to sell in emerging economies

Although motorcycles are generally much more prevalent in emerging economies, electric car sales jumped in **India**, **Indonesia** and **Thailand** in particular.
Large models and SUVs dominate car sales

Large cars and SUVs made up over 45% of electric car sales in 2022. This has important implications for critical minerals demand.
Sustained policy support underpins EV growth

Global total spending on electric cars reached USD 425 billion in 2022, with the share of government support in total spending around 10%.
Recent trends in other vehicle segments
Transport electrification is not only about cars

Electrification is already widespread among two-/three-wheelers. Sales of electric buses are picking up; trucks are the next frontier for electrification.
Model availability widens for electric medium and heavy-duty trucks

China accounts for the vast majority (with 54,000 bus sales and 52,000 medium- and heavy-duty truck sales), but sales in the United States and Europe are rising, with more available models and more viable use cases.
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Trends in charging infrastructure
The global stock of public chargers has reached 2.7 million

Availability of public charging points has kept pace with electric car deployment, with the stock increasing 55% in 2022.
Globally, there is a ratio of 10 EVs per public charging point.

The availability of public charging points varies widely across regions. On average there is 2.4 kW of public charging capacity per EV worldwide.
Trends in EV batteries
Battery material prices increase in 2022

The average price of EV batteries increased for the first time in 2022, though the impact varied across different battery chemistries.

Indexed metal prices and average battery price, 2015-2022

Indexed battery prices by chemistry, 2020-2022

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Alternative battery chemistries on the rise

LFP batteries rely less on expensive metals like cobalt and nickel, leading to their recent increase in market share. Sodium-ion batteries which avoid lithium altogether are only now beginning to enter the market, mainly in China.
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Finance and trade
Carmakers are facing tough competition, especially from China.

**Tesla** and **BYD** dominate global electric car markets, together accounting for over 30% of sales. Major incumbents and Chinese carmakers are racing to capture global market share.
International trade of electric vehicles is increasing

Between 2019 and 2022, the share of traded EV went from quarter to just a sixth of global sales. Since 2021, China has become the largest exporter of electric vehicles, overtaking the US.
Policies to promote EV deployment
Policy expanding to buses, trucks, and charging

Global EV Policy Explorer

Key policies and measures that support the deployment of electric and zero-emission vehicles

Easily search of filter by region, category, and others
Policy expanding to buses, trucks, and charging

Global EV Policy Explorer
Key policies and measures that support the deployment of electric and zero-emission vehicles

LDVs remain the primary focus with over 90% of global sales covered…

A key barrier for many, EVSE policy coverage continues to increase…

Adoption of bus targets in particular sees coverage of HDVs rise…
Suites of policies were released in major markets

Inflation Reduction Act
- Clean Vehicle Tax Credit
- Clean Heavy-Duty Vehicle Program
- Commercial Clean Vehicle Credit
- And others..

Green Deal Industrial Plan
- Net Zero Industry Act
- Critical Mineral Act
- EU Battery Directive
- Plus revised CO₂ standards, Euro 7 regulations, and the Alternative Fuel Infrastructure Directive

Examples of key EV related policies

OEM sales mandate

Production Linked Incentive

Critical Minerals Strategy

Indonesia Battery Corporation

Critical Minerals Strategy

Battery Strategy

Supply

Demand

Multiple state level EV policies

EV incentives

EV incentives

EV incentives

EV Strategy
Outlook for electromobility
Policy implementation is catching up with targets

A strong growth outlook to 2030 is underpinned by governments delivering on their pledges and market dynamics. Today’s policies are set to avoid over 5 mb/d of oil consumption in 2030.
Major carmakers anticipate higher policy ambitions

Voluntary announcements by carmakers are increasingly common in major markets. These are higher than policy targets in some cases.
Battery supply chains are essential to the transition

Battery manufacturing capacity needs to grow two- to fourfold by 2030.
Policy must ensure that investment flows effectively to all steps of the supply chain.
Policy recommendations
Five recommendations to governments

1. Adapt support for electric cars
2. Expand EV infrastructure
3. Kickstart the heavy-duty market
4. Promote adoption in emerging and developing economies
5. Ensure secure, resilient and sustainable EV supply chains