



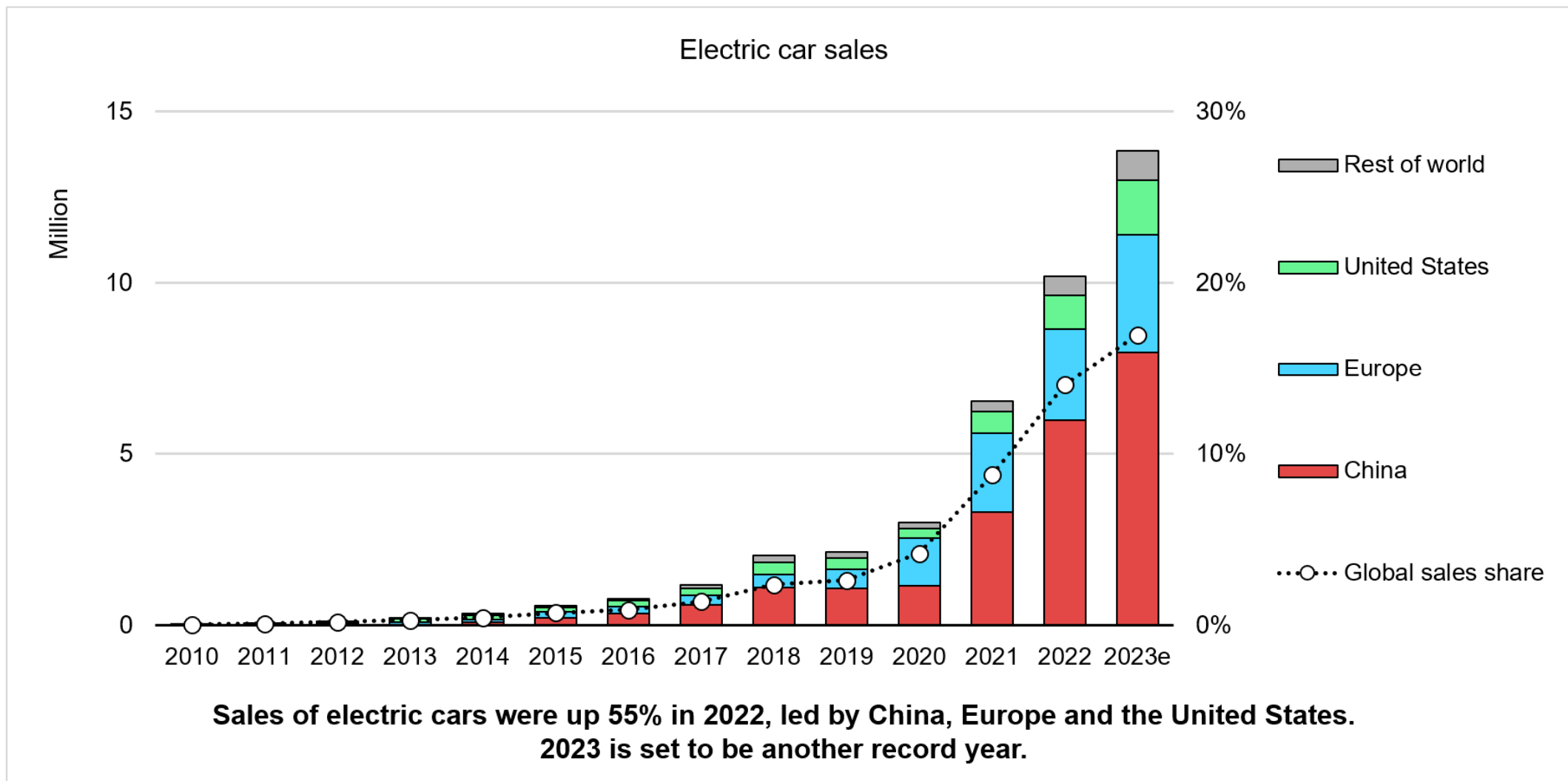
# Global EV Outlook 2023

30<sup>th</sup> IEEJ Global Energy Webinar, 30 May 2023

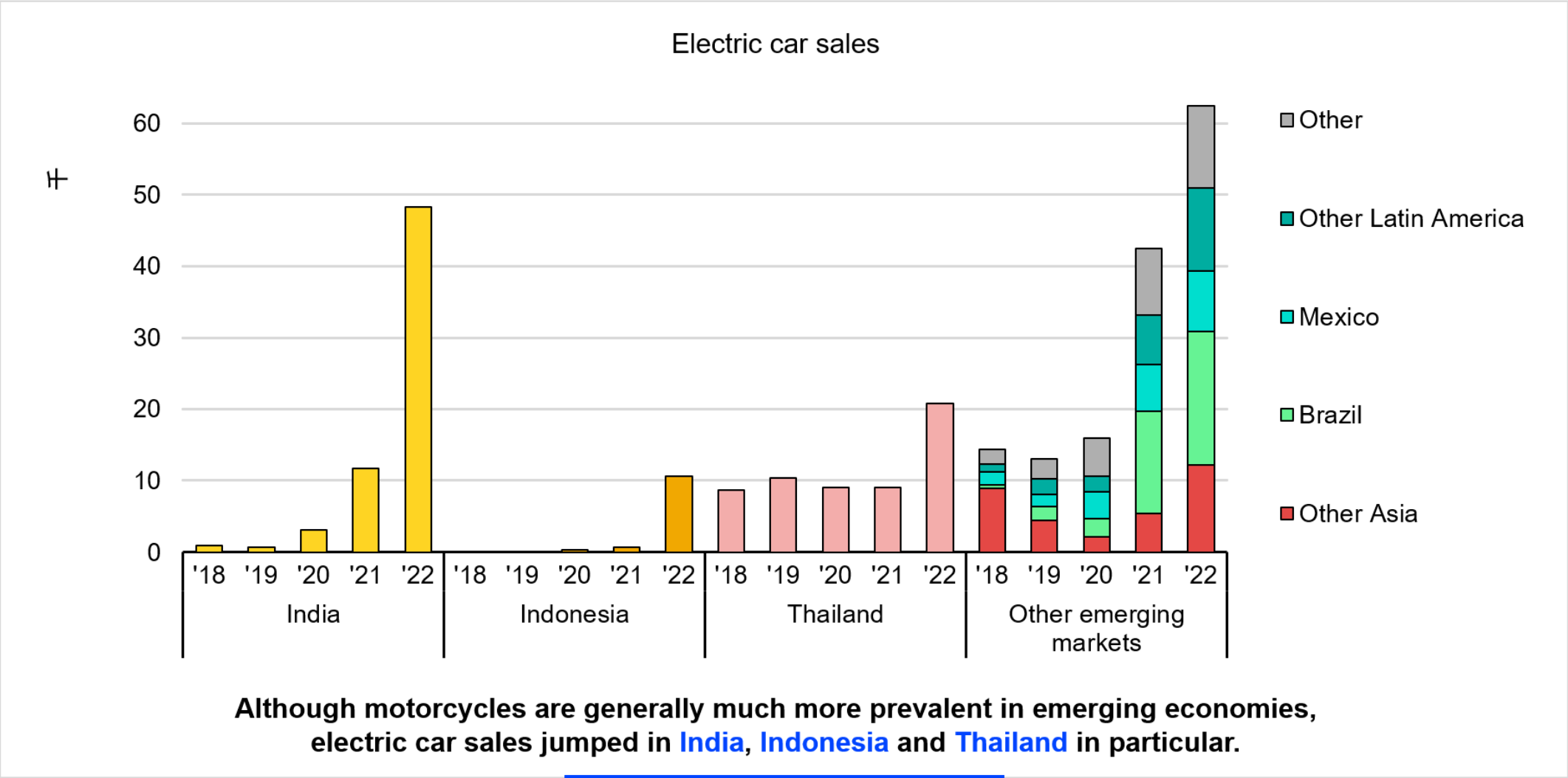
Dr. Elizabeth Connelly

# Recent trends in electric cars

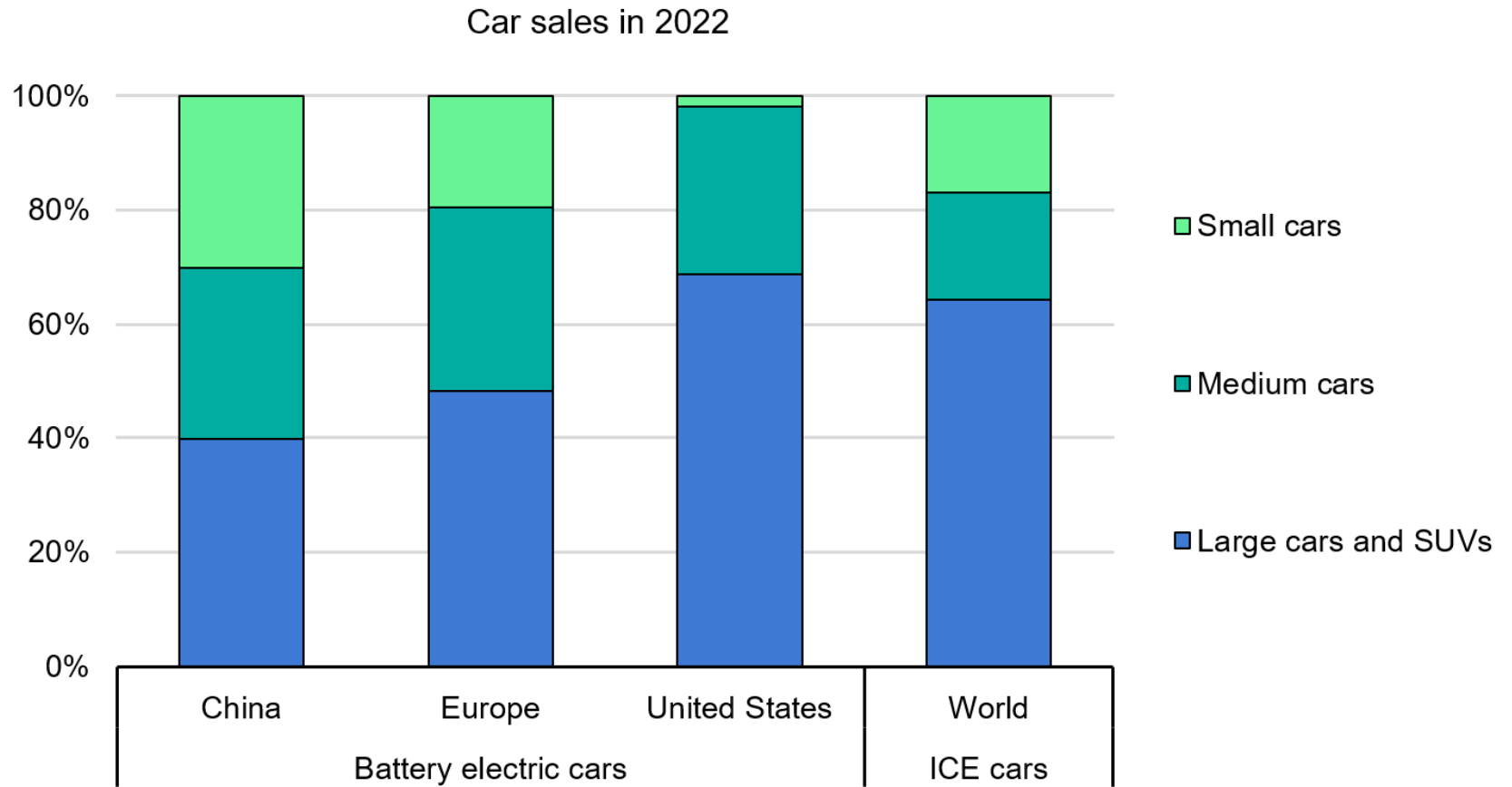
# Electric car sales exceeded 10 million in 2022



# Electric cars are beginning to sell in emerging economies

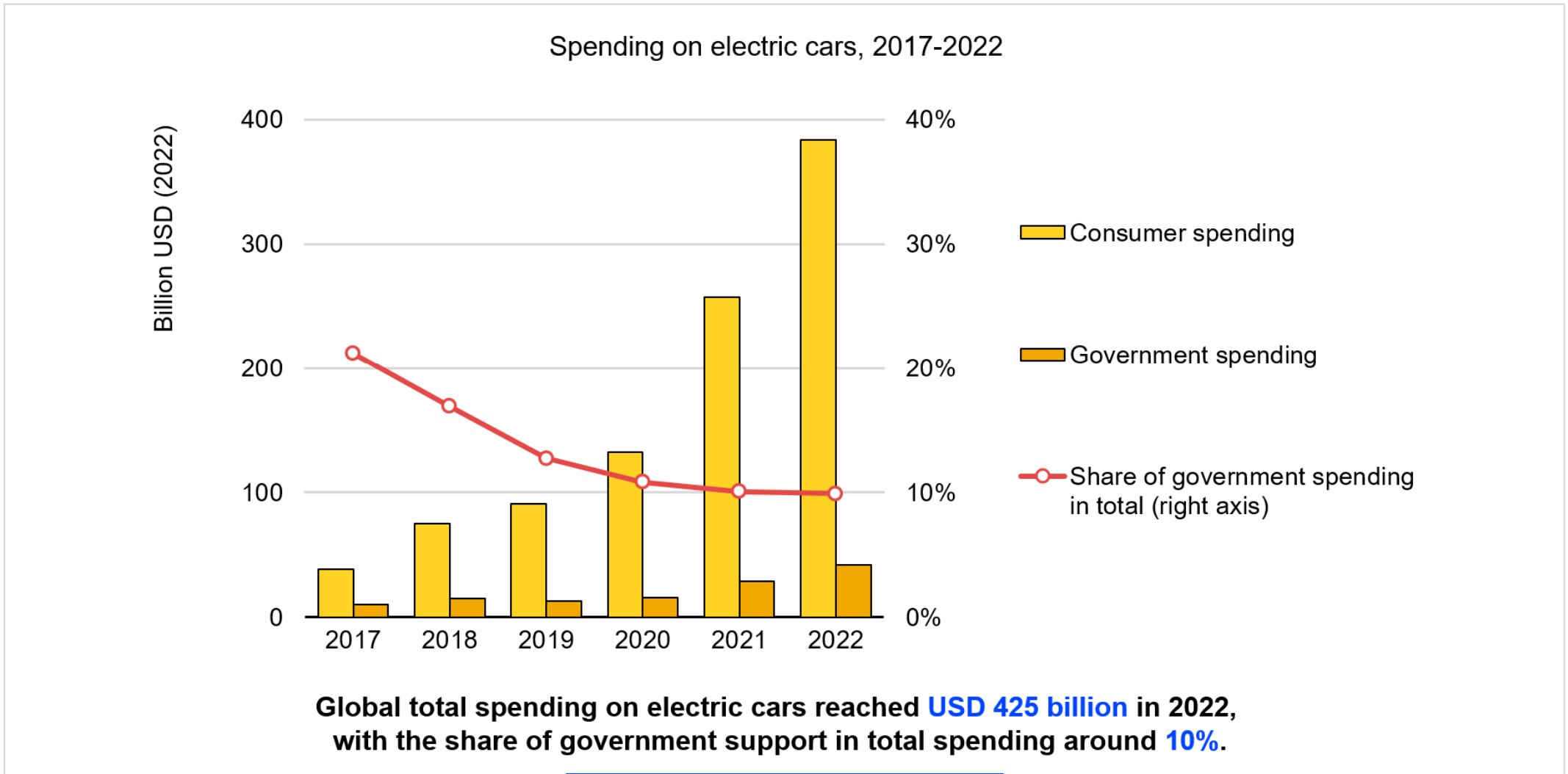


# Large models and SUVs dominate car sales



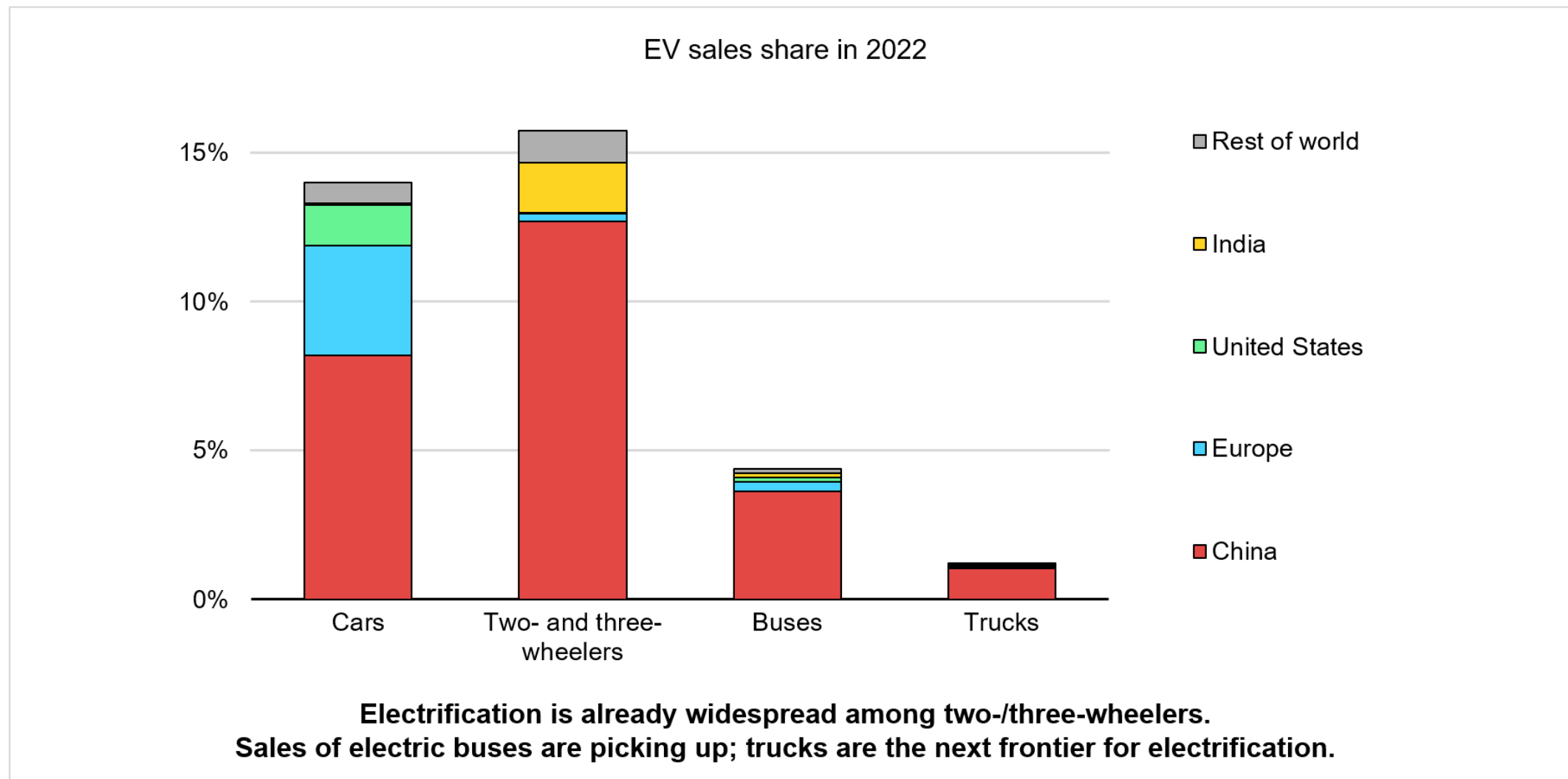
**Large cars and SUVs made up over 45% of electric car sales in 2022. This has important implications for critical minerals demand.**

# Sustained policy support underpins EV growth



# Recent trends in other vehicle segments

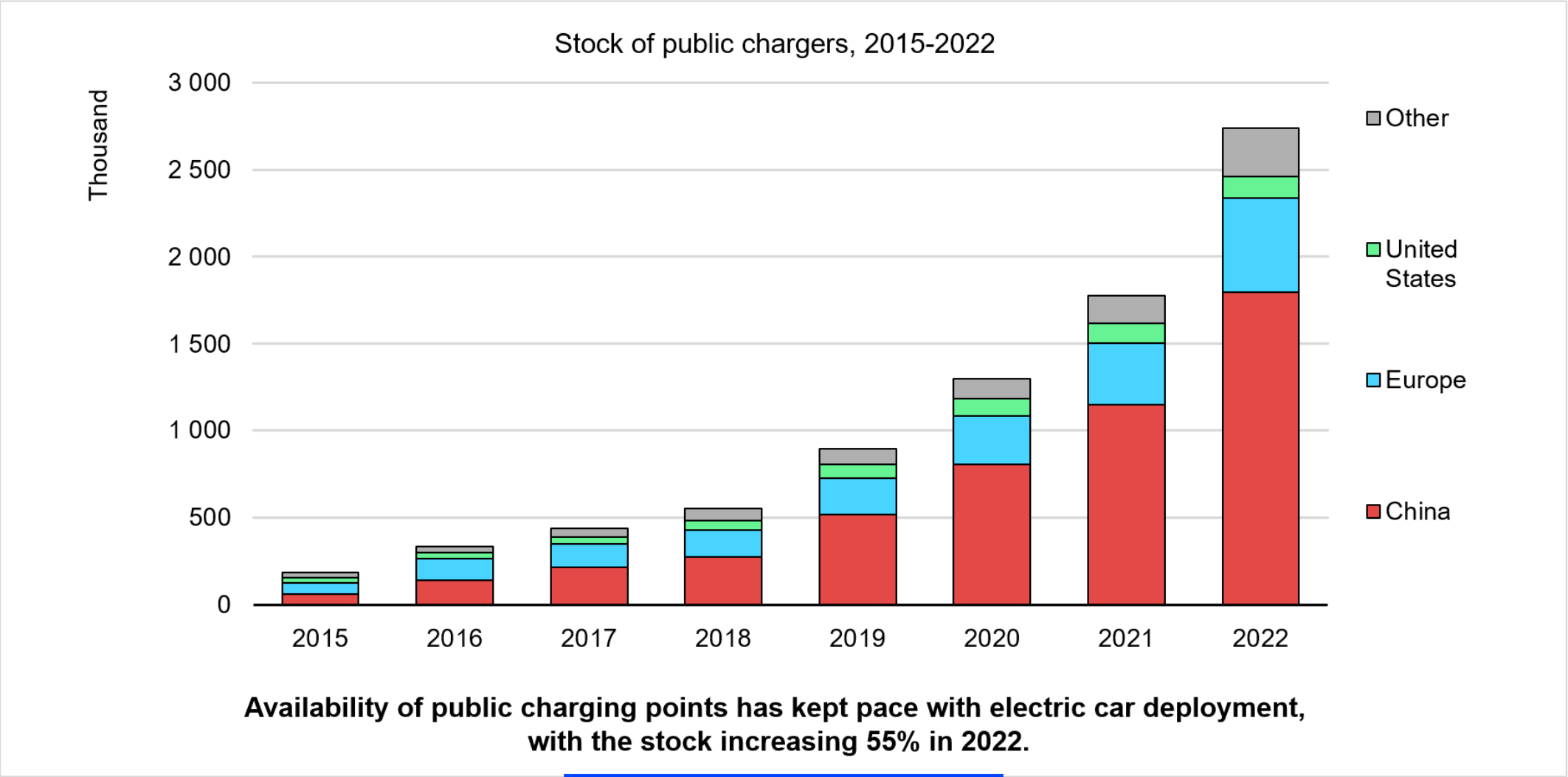
# Transport electrification is not only about cars



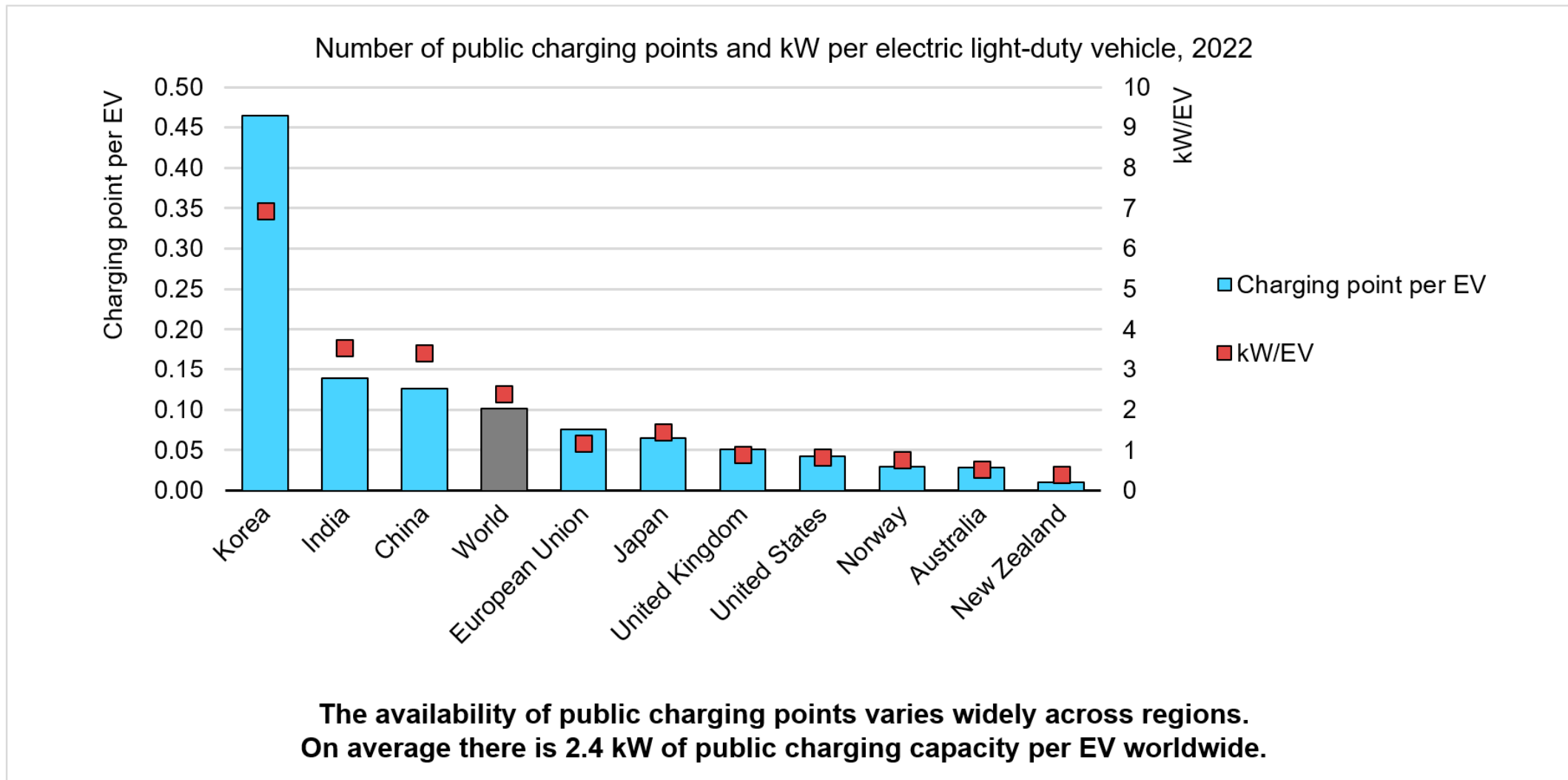


# Trends in charging infrastructure

# The global stock of public chargers has reached 2.7 million

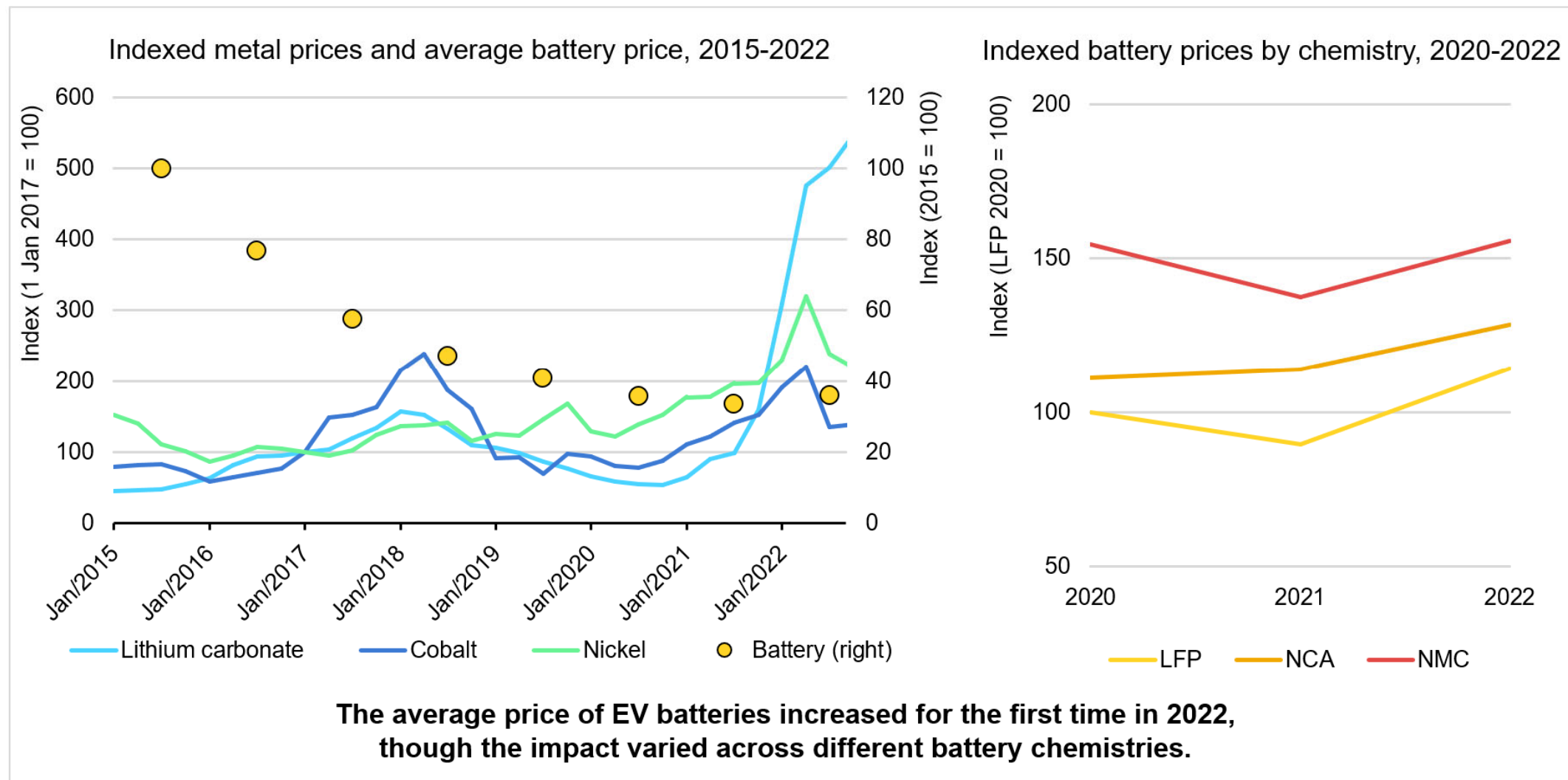


# Globally, there is a ratio of 10 EVs per public charging point



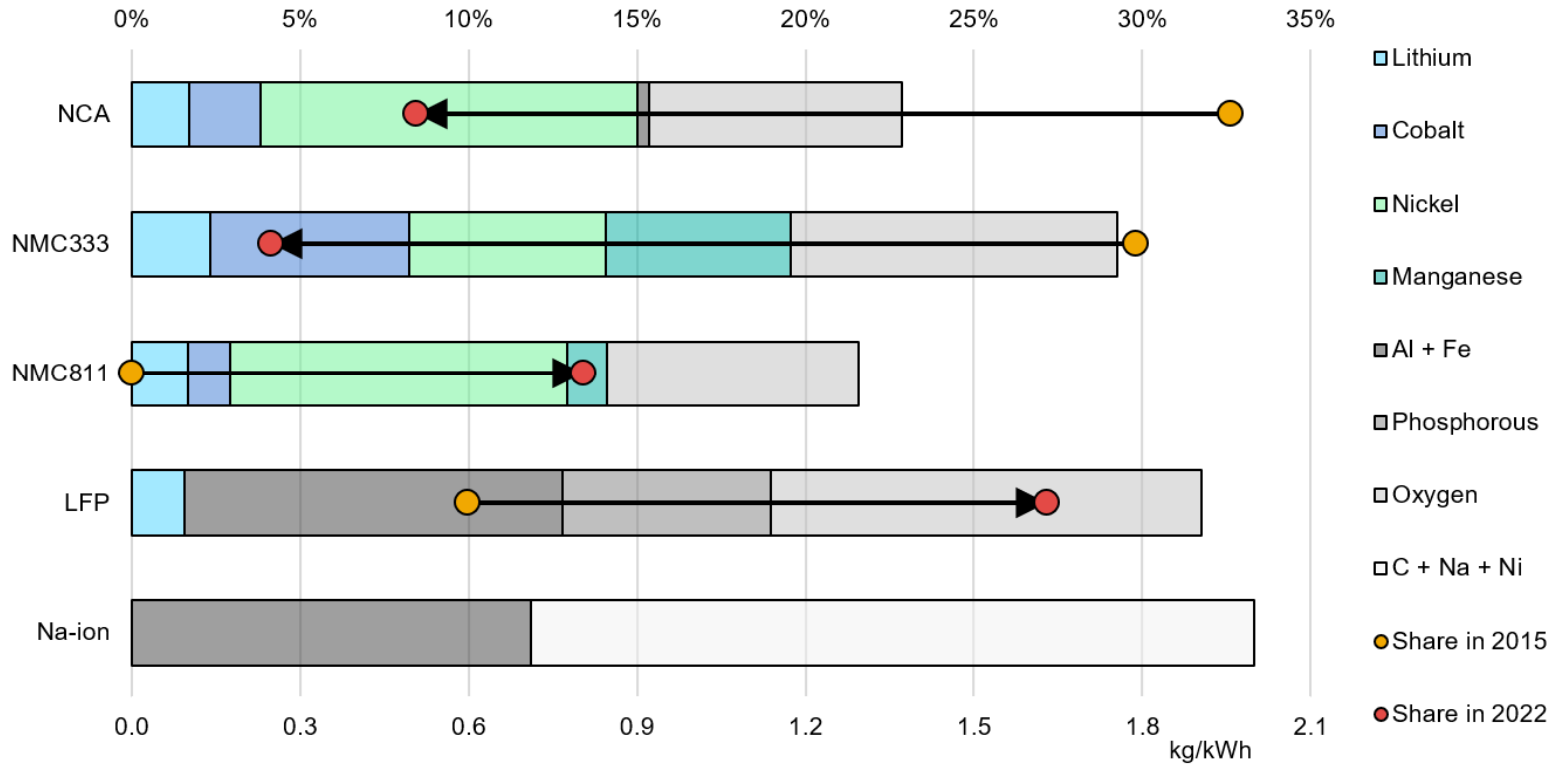
# Trends in EV batteries

# Battery material prices increase in 2022



# Alternative battery chemistries on the rise

Material content and market share for different cathodes



**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.**

# Policies to promote EV deployment

# Suites of policies were released in major markets

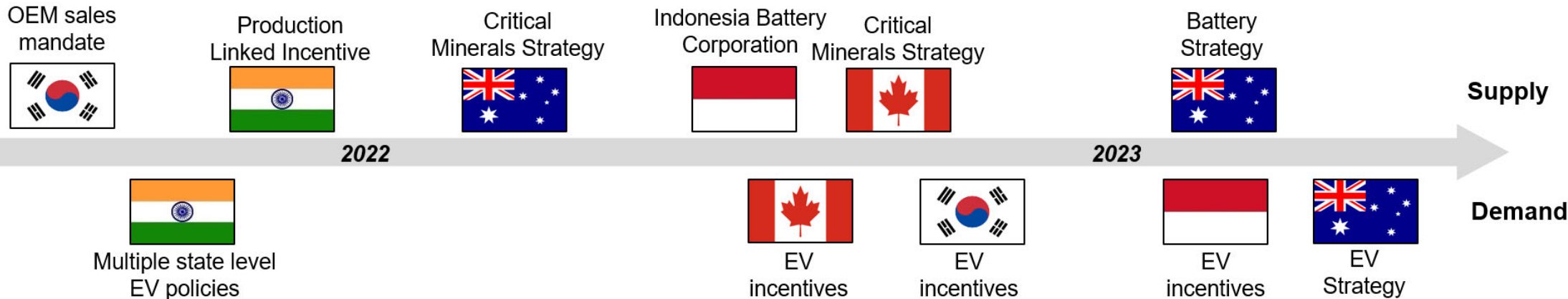


- Inflation Reduction Act**
- Clean Vehicle Tax Credit
  - Clean Heavy-Duty Vehicle Program
  - Commercial Clean Vehicle Credit
  - And others..



- Green Deal Industrial Plan**
- Net Zero Industry Act
  - Critical Mineral Act
  - EU Battery Directive
- Plus revised CO<sub>2</sub> standards, Euro 7 regulations, and the Alternative Fuel Infrastructure Directive

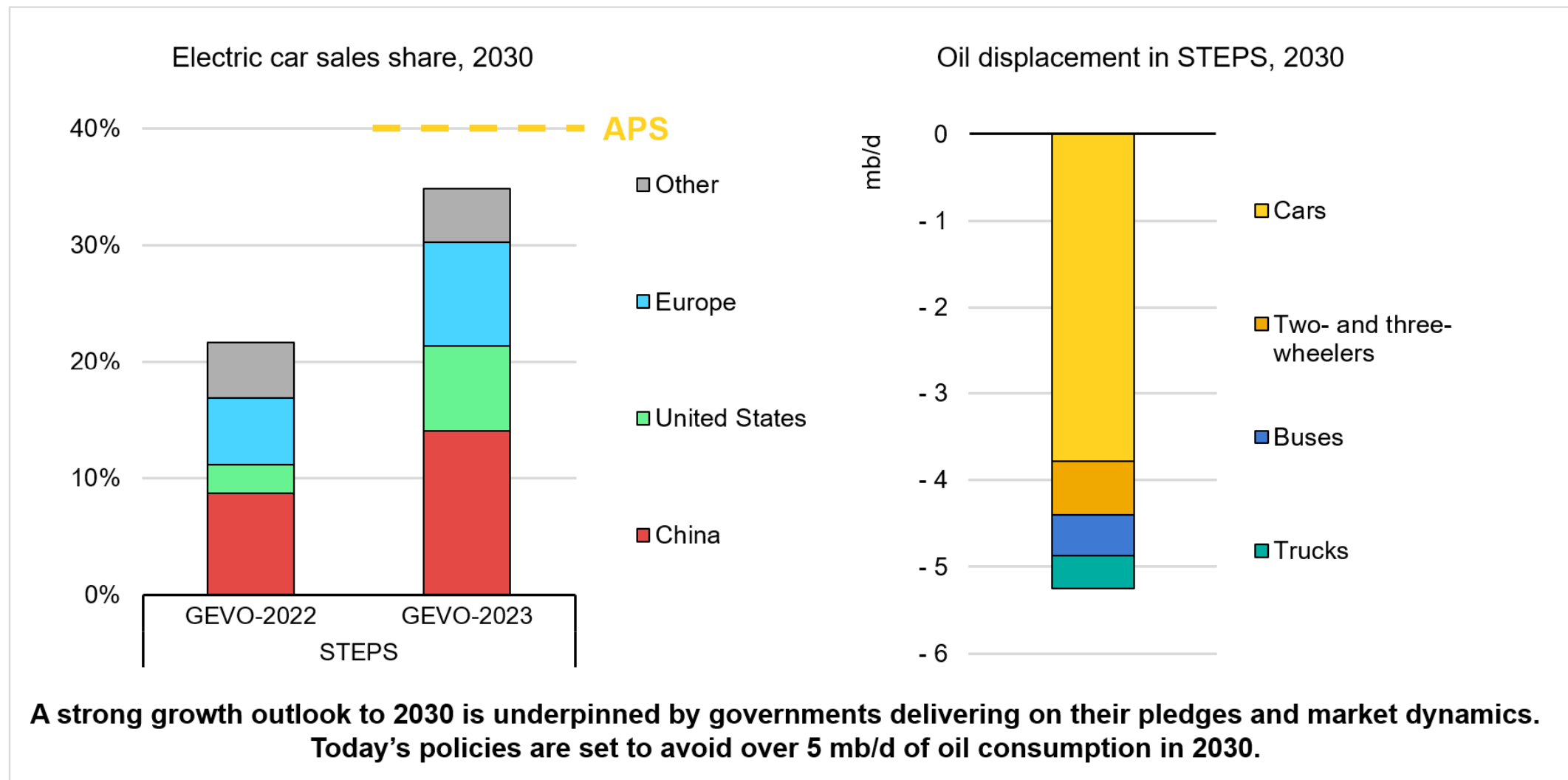
## Examples of key EV related policies





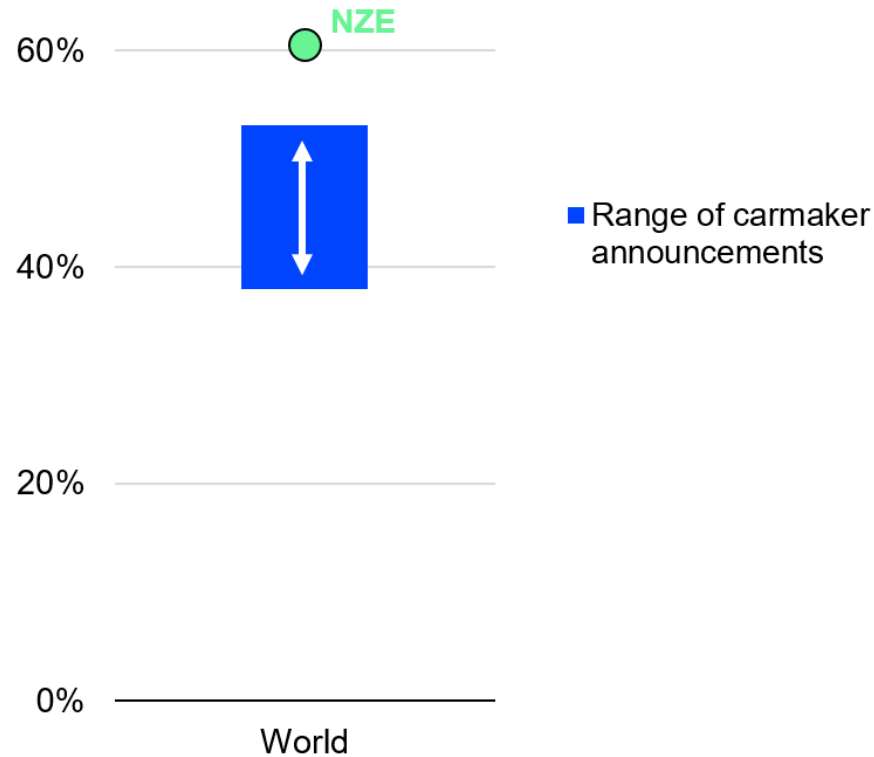
# Outlook for electromobility

# Policy implementation is catching up with targets

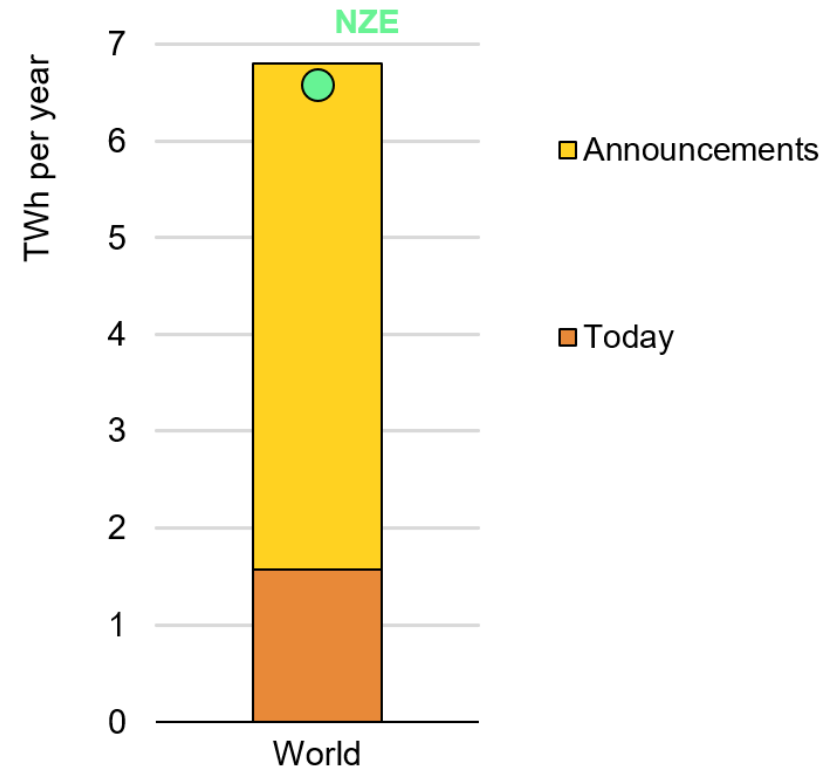


# Industry announcements suggest that more ambition is possible

Electric car sales share, 2030



Battery manufacturing capacity, 2030



**The automotive industry and its supply chains are transforming.  
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

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