

# DETROIT ELECTRIC

Pushing The Strategic Green Mobility



*November 3rd*



PRIVATE & CONFIDENTIAL

***Pushing the Strategic Green Mobility***

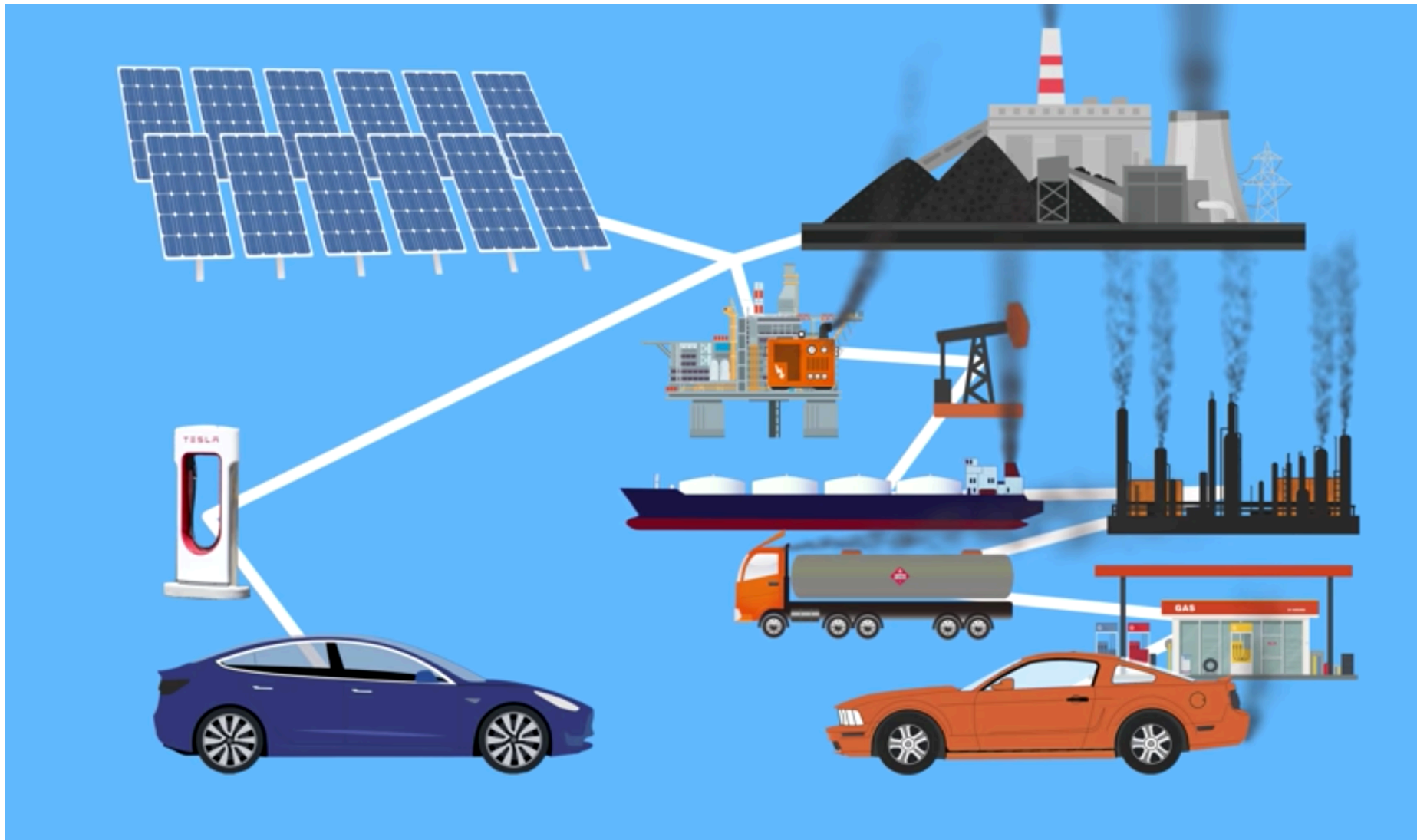
**An Inconvenient Truth**

***“Can’t talk about EV, without talking about electric energy generation and consumption”***



# EV vs Gas Power Vehicle

## An Inconvenient Truth



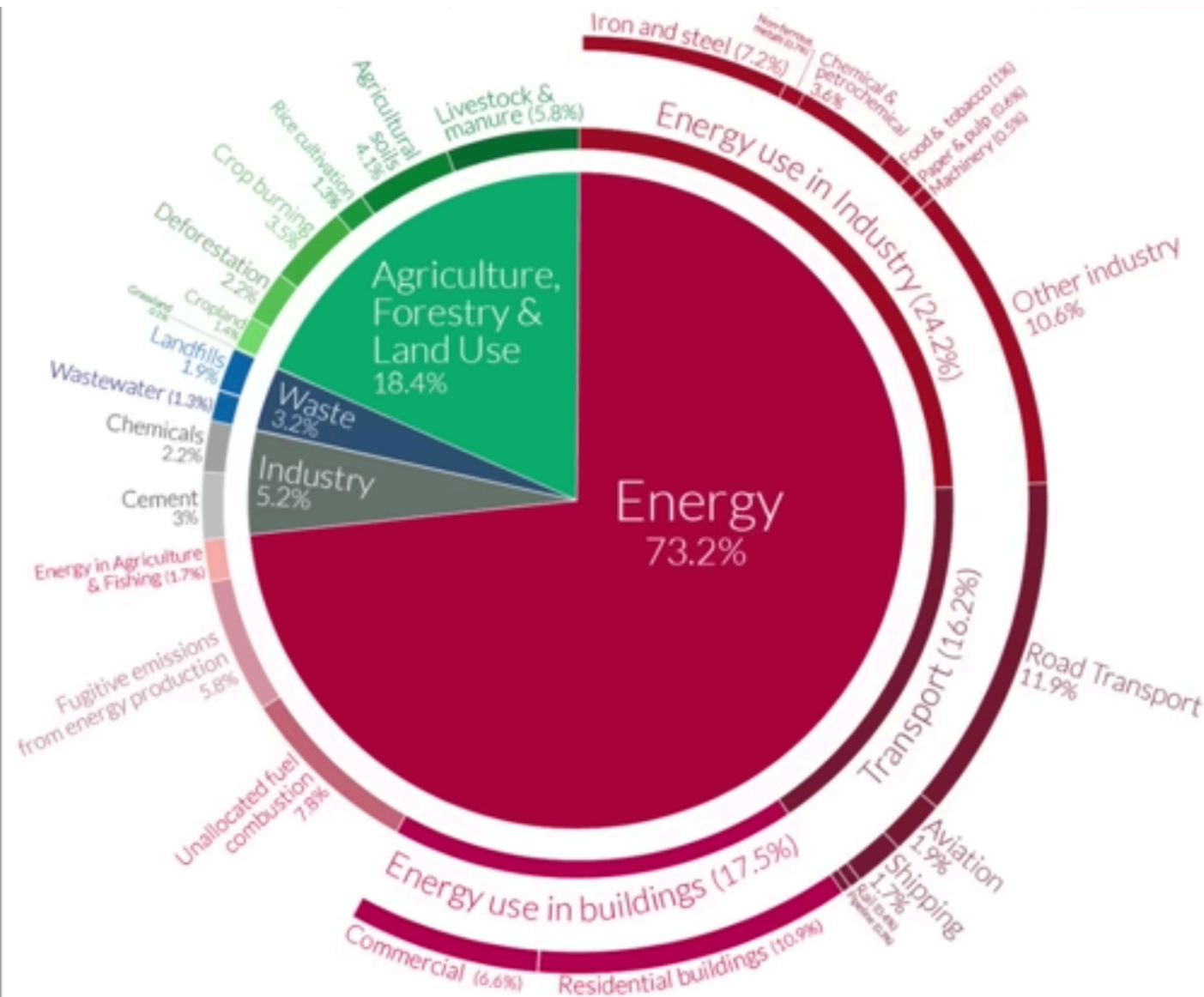
## An Inconvenient Truth

***“...But EV is **not** the Silver Bullet to address the Greenhouse Gases Emission”***



# Global Greenhouse Gas Emissions By Sector

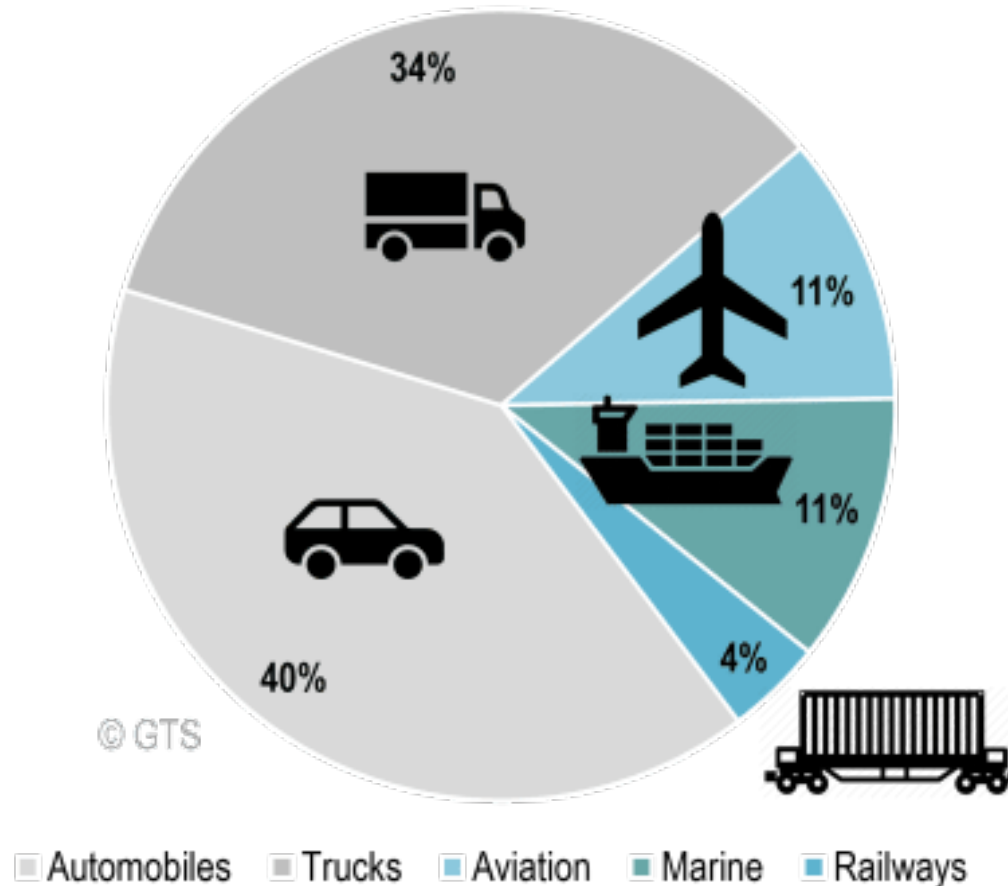
## An Inconvenient Truth



***“ONLY 16% OF GLOBAL GREENHOUSE GAS EMISSION IS ATTRIBUTED BY TRANSPORTATION”***

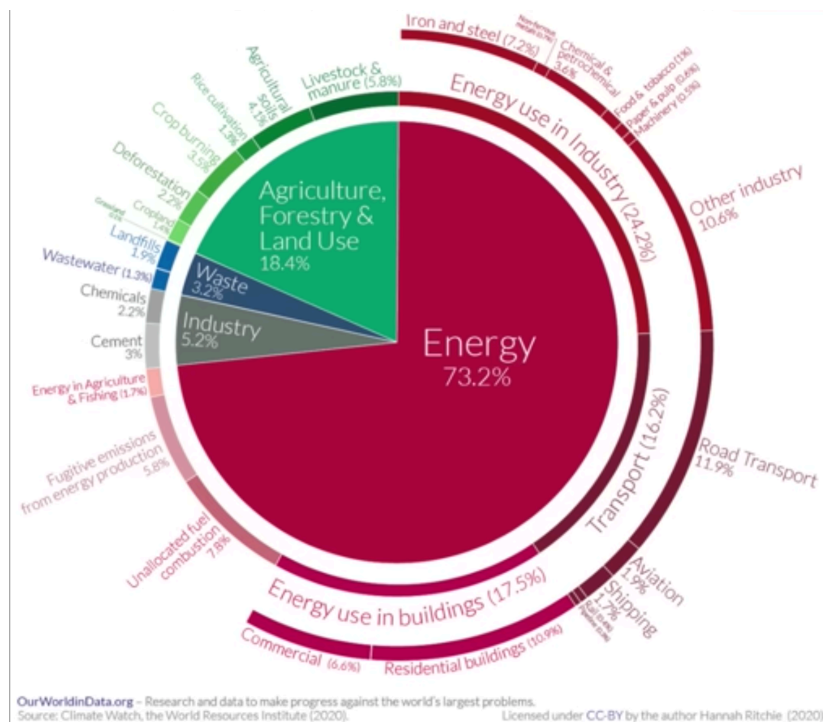
***“PASSENGER CARS 6.4% AND TRUCKS IS 5.5%”***

**CO2 Emissions by the Transport Sector**



# ELUSION & CONSUMERISM

## An Inconvenient Truth



Why so much investment and news about EV?

- Elusion of Control and Contribution
- Feel Good factor (like Consumerism)
- Some countries see this as a strategic technological race
- New technology can help to level the playing field.

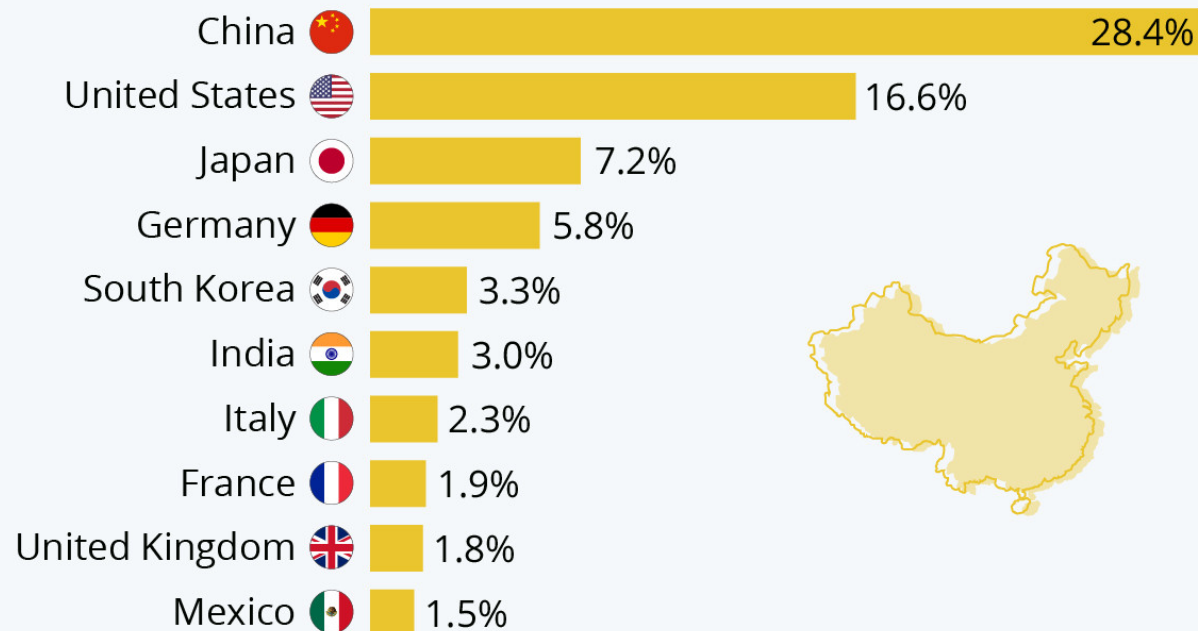




# CHINA'S LONG GAME (CARBON NEUTRALITY BY 2060)

### China Is the World's Manufacturing Superpower

Top 10 countries by share of global manufacturing output in 2018\*



\* output measured on a value-added basis in current U.S. dollars  
Source: United Nations Statistics Division



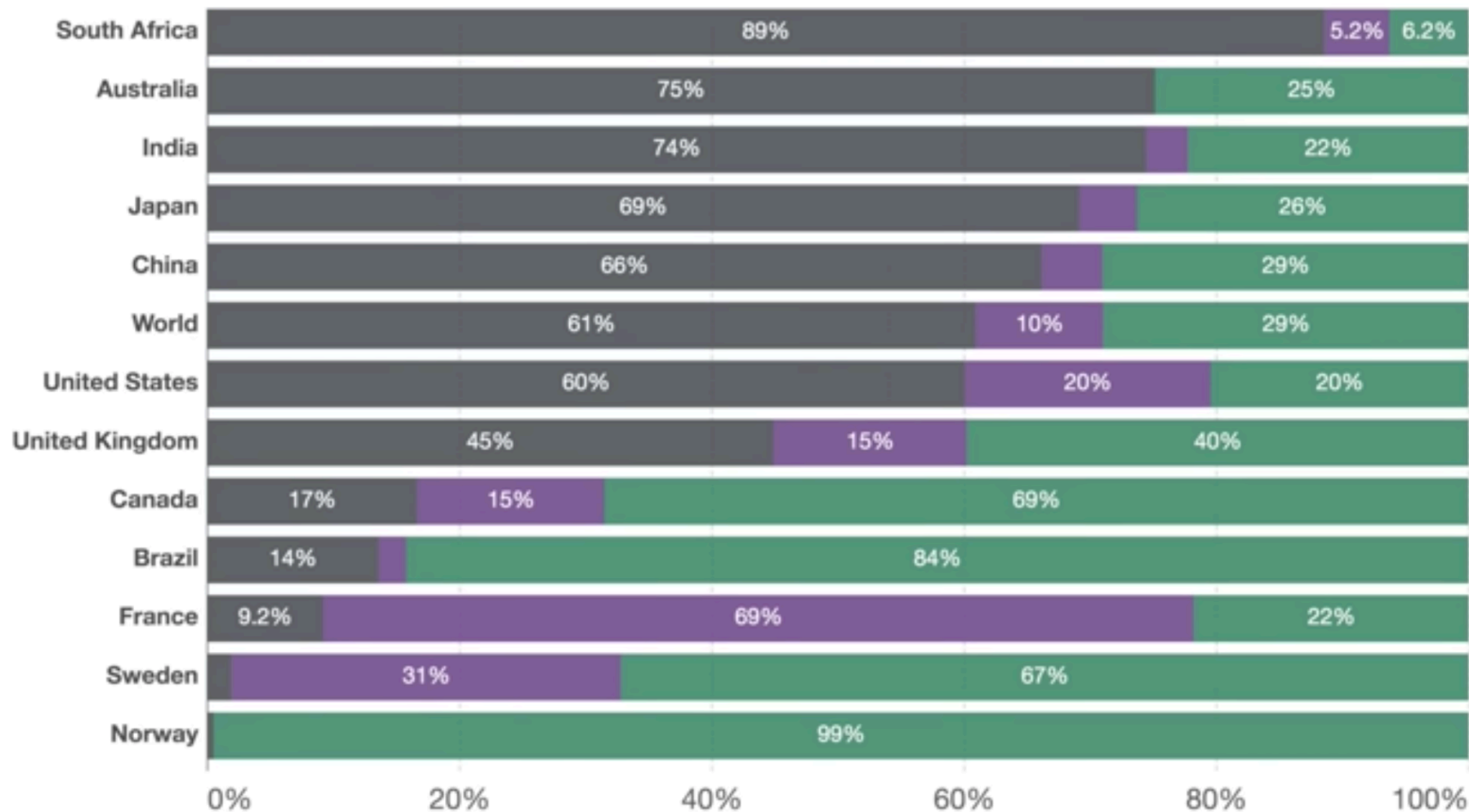
# ENERGY MIX BY COUNTRY

## CHINA'S LONG GAME

Electricity consumption from fossil fuels, nuclear and renewables, 2021

Our World  
in Data

■ Fossil fuels ■ Nuclear ■ Renewables



Source: Our World in Data based on BP Statistical Review of World Energy & Ember (2022)

OurWorldInData.org/energy • CC BY



# CHINA'S GREEN ENERGY PLAN

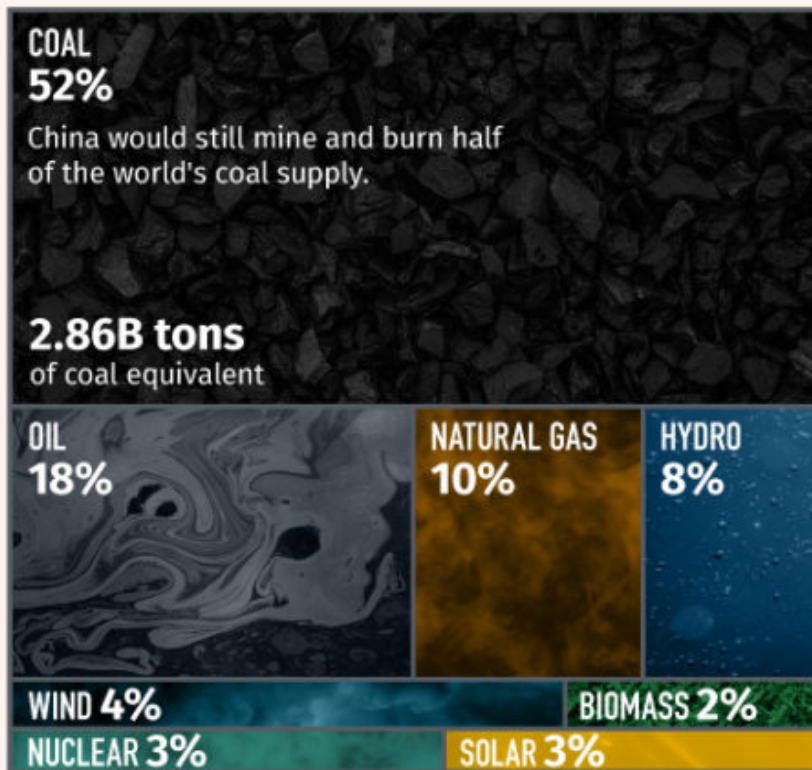
## CHINA'S LONG GAME

ELEMENTS 

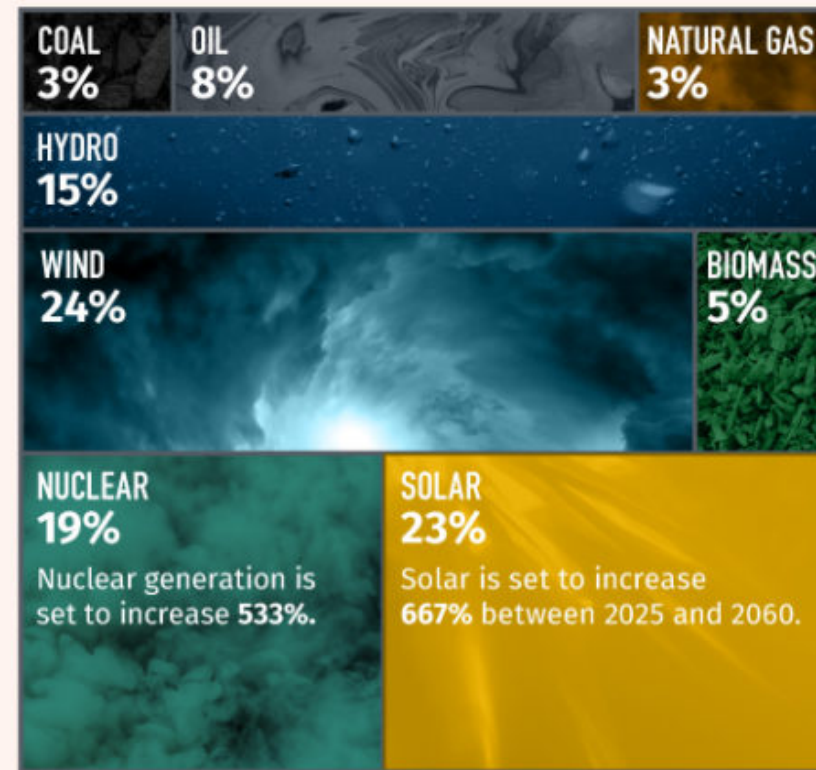


CHINA'S EVOLVING ENERGY MIX

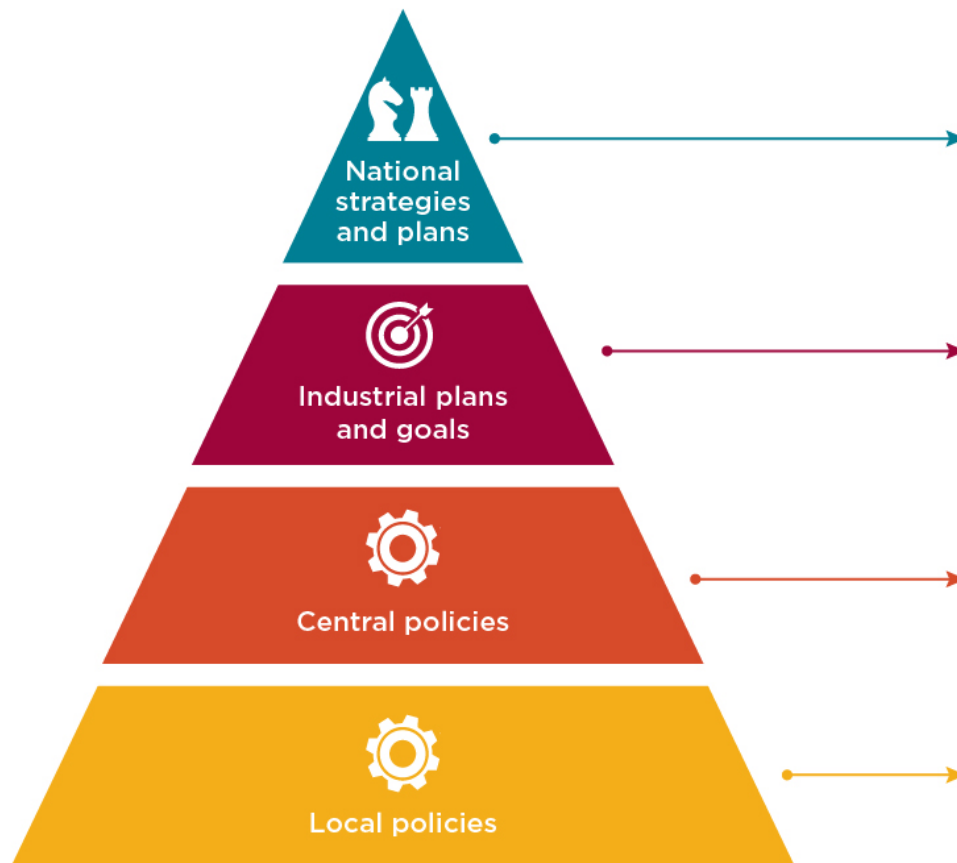
### 2025



### 2060



# NATIONAL STRATEGIES AND PLAN



## CHINA'S LONG GAME

### National strategies and plans

Birthered from early strategy under the “863” Project during the 10th Five-Year-Plan, developing EVs became a national strategy to **revitalize China’s auto industry.**

### Industrial plans and goals

There were four important plans: Auto Industry Adjustment and Revitalization Plan, 2012-2020; **Energy-Saving and NEV Development Plan; Made in China 2025; and the NEV Industrial Plan 2021-2035.** These set incremental EV development goals.

### Central policies

After the “Ten Cities, Thousand Vehicles” pilot in 2009, China adopted EV purchase subsidies, tax breaks, a sales mandate, government procurement requirement, and infrastructure subsidies.

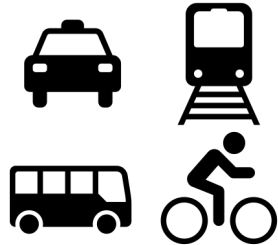
### Local policies

Provinces and cities developed a range of policies tailored to their local conditions, including license plate incentives, road access privileges, parking incentives, and more.



# LONG TERM STRATEGIC PLAN – COMPREHENSIVE TRANSPORTATION INFRASTRUCTURE

## CHINA'S LONG GAME



Within City - Intermediate Range



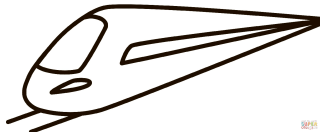
1 – 50 Km (Within 1 hour journey)



Inter - City - Short Range



1 – 500 Km (Within 3 hours journey)



Inter - City - Mid Range (Covering 81 major cities with 40,000 km)



300km – 1500 Km (Within 1 - 6 hours journey)



Inter - City - Long Range



1000+ Km (1.5 + hours journey)



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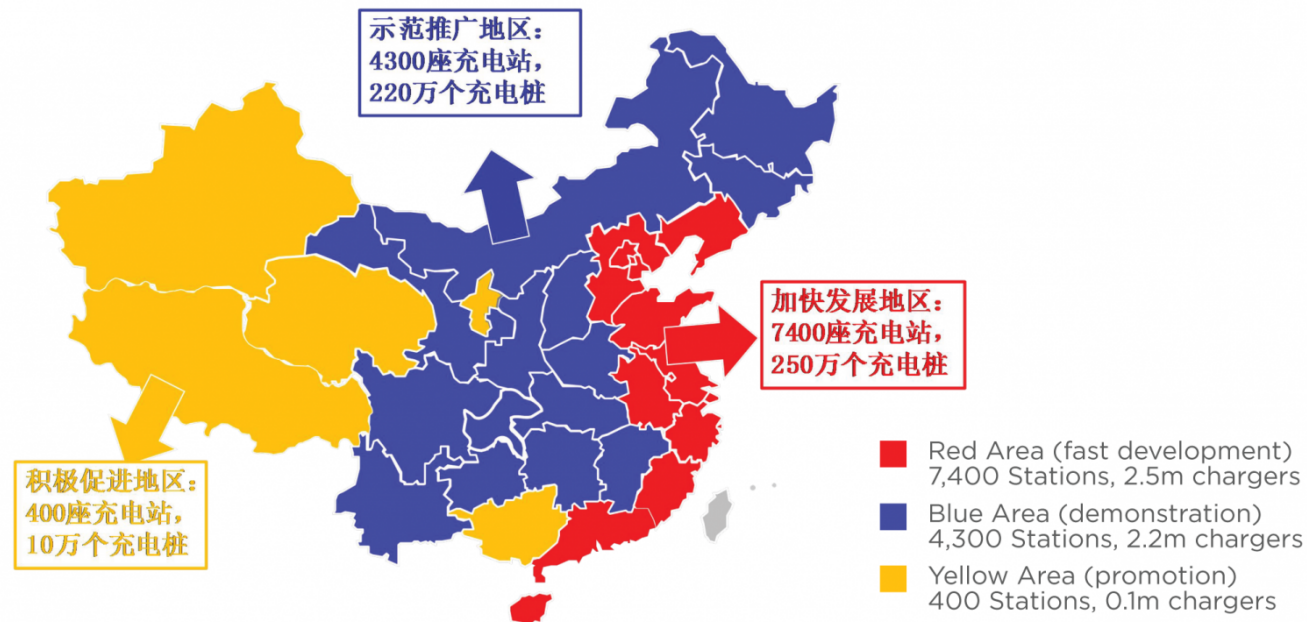
Inter - City - Mid Range



1000+ Km (1.5 + hours journey)



Figure 13-3: Electric Vehicle Charging Infrastructure

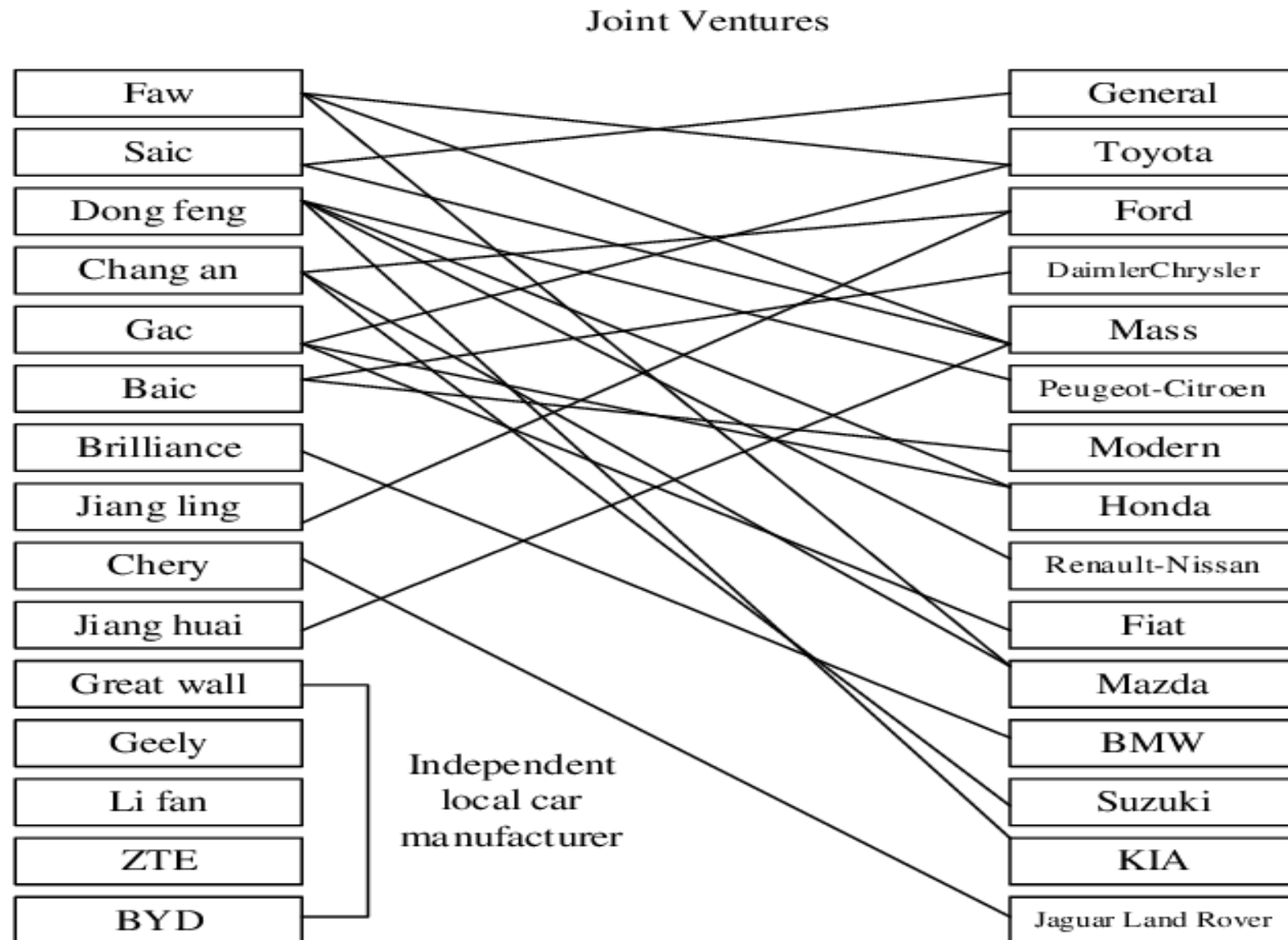


Source: NEA, "Guidelines for the Development of Electric Vehicle Charging Infrastructure (2015-2020)"<sup>36</sup>



## JV – BUILDING THE FOUNDATION AND KNOWLEDGE TRANSFER

## CHINA'S LONG GAME



**Desperate Chinese EV drivers queue from 8pm to 5am - chargers and battery swap stations suspended amidst heat wave**

**Power Rationing in Sichuan, Chongqing Upends EV Charging, Battery Swapping**

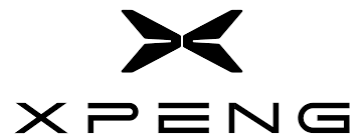
XIAO YISI 

Technology | Hyperdrive

**Tesla, Nio Suspend EV Charging Services as China Power Cuts Bite**



# COMPUTER WITH 4 WHEELS



## THE NEXT SPACE RACE?

# LONG TERM STRATEGIC PLANNING

## CHINA'S LONG GAME

History will repeat its like the Japanese and Korea, eventually (within the next 2-3 years) Chinese auto maker will get a foot hold in Europe and the rest of the world, not because they are cheap, because they are good.

With EV, it has provided a perfect platform to shift the competitive landscape, legacy and existing brand presence doesn't matter.



EV – is not the silver bullet.

Government have to lead with a long-term committed comprehensive plan.

Address Consumerism – The culture of endless consumptions

Commitment to long term dependable clean energy source “Nuclear” and “Hydrogen”

