



# Klima og miljø i Kinas neste femårsplan: Nasjonale ambisjoner og globale konsekvenser

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Lansering av rapport:

Norske og europeiske interesser i Kina - prioriteringer i en krevende tid



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# Challenges and drivers: energy & climate



- Largest emitter 28%
  - CO2 emissions in China has increased by 3.7 times in 2018 compared to 1990, at 11.3 Gt CO2
- Climate change a concern
- Air pollution
  - Coal based economy, 57%
- Climate impact & adaptation
- Global drivers & image, responsible nation
- Paris Agreement
- Global climate governance
- Carbon neutrality by 2060



# 14th Five-year plan 2021-2025 & 2035

- Carbon neutral by 2060, peak emissions *before* 2030
  - Xi Jinping during UN GA 2020
- Gamechanger?
- Work has to begin in 14th FYP
- Signals from High Level
  - CPC Central Committee Oct
  - 14th Five-Year Plan (2021-2025) for National Economic and Social Development and the Long-Range Objectives Through the Year 2035



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# A shift in energy policies in 12th & 13th FYP



- Energy revolution 2014
  - Air pollution
- 13th FYP for Energy Dev. (2016-2020)
  - Binding goal: 58%
- Carbon market launched;
  - tool to address air pollution & emissions
  - Power sector
- Renewables
  - 2018 China: 43% of the global renewable power capacity
  - World leader in production of solar panels (66%); and 1/3 wind)
- But challenges abound:
  - Diverging intenergy security;
  - coal is abundant;
  - institutional set-up favours coal
- Coal viewed as safe fuel
- Diverging interests
  - centre versus provinces
  - Decentralisation of authority to approve new coal-fired power plants



# Energy security is key...

- Coal..
  - Coal producing provinces:
  - Socio-economic issue: coal mining accounted for around 5 million jobs in 2016, + the sector
  - In 2018 Shandong consume 382m tons and Germany 217 m tons.
- Oil & gas import
  - In 2018 dependency reached 72%; gas dependency to 43%
- Non-fossil 15% of energy mix by 2020; 25% by 2030:
  - Nuclear (part of non-fossil)
  - 47 nuclear power units in operation and 11 units under construction
  - Renewables 18%
- Tsinghua research government commissioned.
  - roadmap of pathways for China
  - caps in the 14th FYP
  - Peak emission by 2025



# The road ahead

## Policies

- Following covid 19:
- Emissions down 4% then up again...
- No economic goals for the coming year set at the annual National People's Congress=positive for climate
- Stimulus packages, almost \$430 billion:
  - the economy was up by 4.9 percent for the third quarter
- Stimulus is not a new green deal, but has some green points
- 'Made in China 2025' and core industries
- New Energy Vehicle Industry Development Plan 2021-2035

## RE in the 14th FYP period

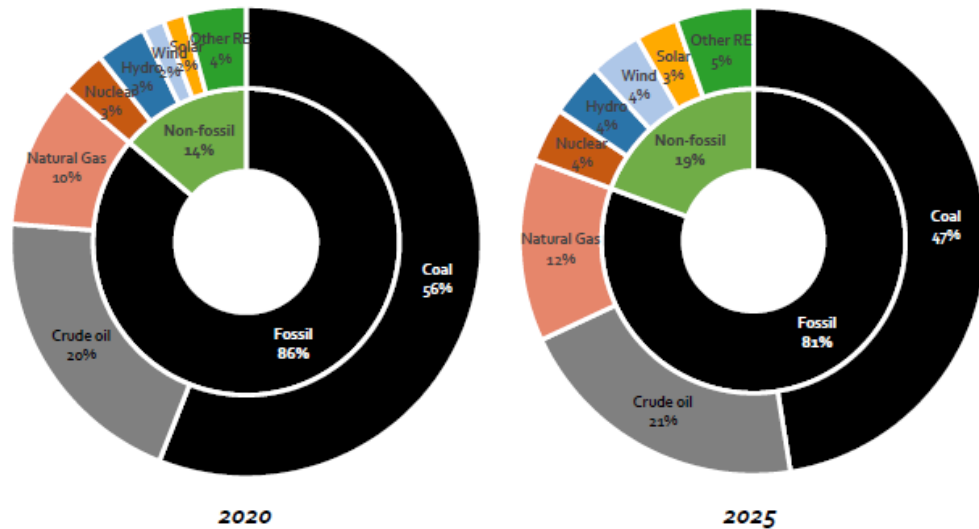
- China is a clear leader in renewable energy employment worldwide, 38% of the world's total
- Employment is picking up:
  - Renewable energy jobs amounted to appr 4.4 million
  - PV workforce amounted to 2.2 million jobs and wind employment at around 518 000 jobs
- Continued focus on Wind and solar
- PV deployment are picking up rapidly and are expected to grow by 36% and 20% respectively in 2020
- charging facilities in the next four years (battery electric, plug-in hybrid and fuel cell, large data centres, 5G infrastructure)



# Research on possible pathways

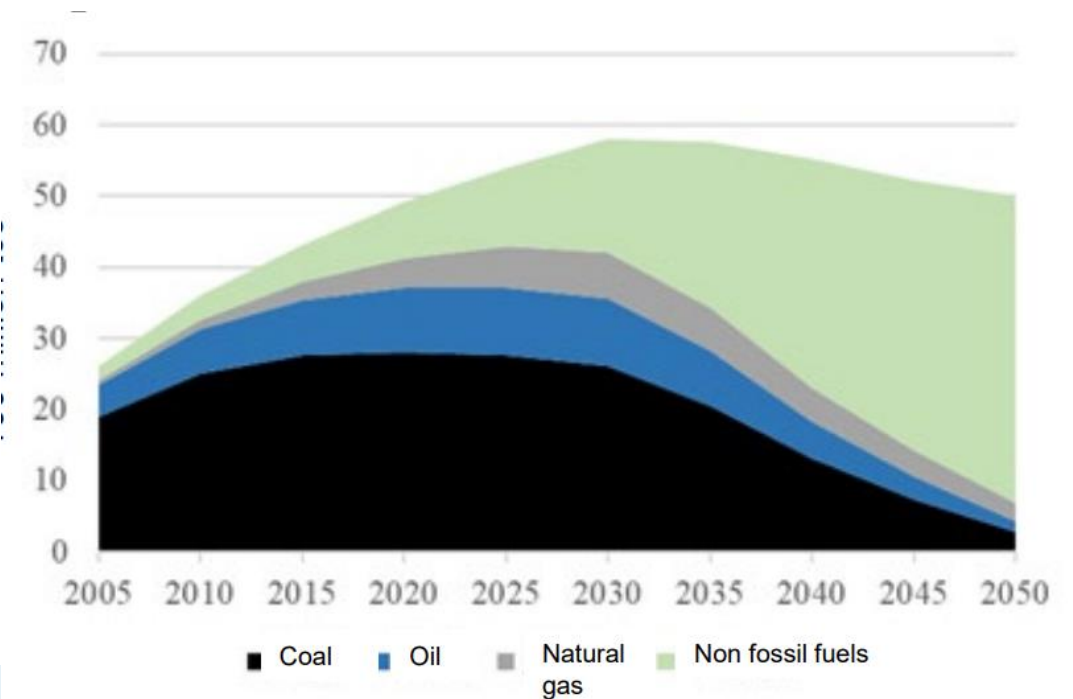
CREO 2019 projects shift in energy mix

Figure 11: Shift in primary energy consumption mix during 14<sup>th</sup> FYP (Below 2°C)



2020 Tsinghua study 1.5 °C scenario 2020

He Jiankun, Research on China's Long-term Low-carbon Development Strategy and Pathway



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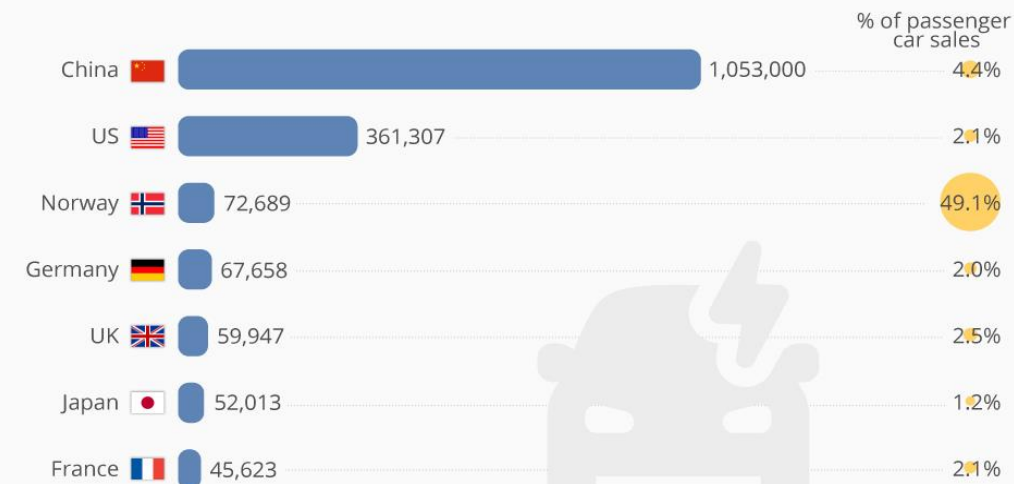
# Electric Vehicles revolution?

- 40% of global electric car fleet in China (2017)
  - 3.4 million electric cars in China in 2019, 46% increase from the previous year
  - IEA EV Outlook 2020
- Tesla production in Shanghai 2019
  - 22,292 Model 3 vehicles in the month of October
- Shenzhen (12 mill. pop.):
  - 100 % electrified bus fleet (16,000 vehicles)
  - 62 % of 12,518 taxis; goal 100% by 2020



## Who Leads the Charge Towards Electric Mobility?

Largest markets in terms of plug-in electric passenger car sales/registrations in 2018\*



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\* including plug-in hybrids and light trucks  
Sources: ACEA, CAAM, InsideEVs, BEA, JAMA



# Implications for global climate change

- Together with the US, China played a leadership role in securing the Paris Agreement (PA).
- US pullout: Leadership by China?
  - Not feasible by itself; leads in some ways: RE; South South Cooperation on CC
- EU has on one hand labelled China a systemic rival, while on the other hand still wants to work with China on climate change.
  - ETS, energy, cities
- EU-China Summit (June 2020), climate change was among several topics, with the EU 'pushing' China on climate neutrality asap
- Now- what will Biden bring? Different rhetoric, possible coop. on climate
- Norway and China cooperation on environment, climate, power market reforms
- China must be on board: national emissions cuts have global impact



# SUMMARY

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- 2060 carbon neutrality goal a game changer:
  - RE/Cleaner energy
  - EVs development
  - Natural gas
- Positive trends, but also challenges
  - Sub-national policy implementation
  - US China relations under Biden
- China global leadership?
  - Climate & PA: await updated commitments before Glasgow COP 2021
  - Climate/Bio: BIO CBD COP 15 Kunming



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