How Green Will China's Future Be?
Implications for International Companies

Global Sustainability Center

Our panelists today

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Leader, Global Sustainability Center
The Conference Board

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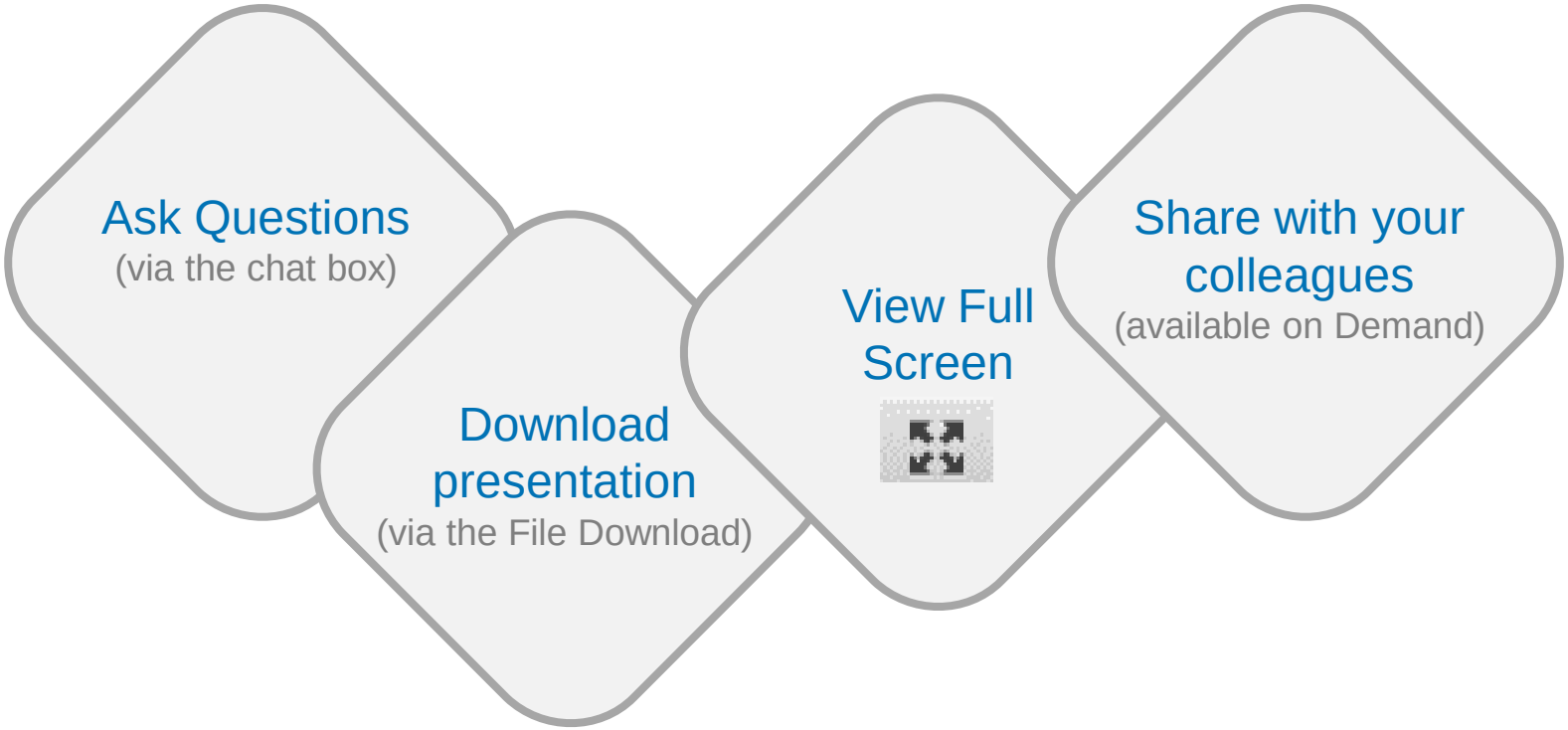

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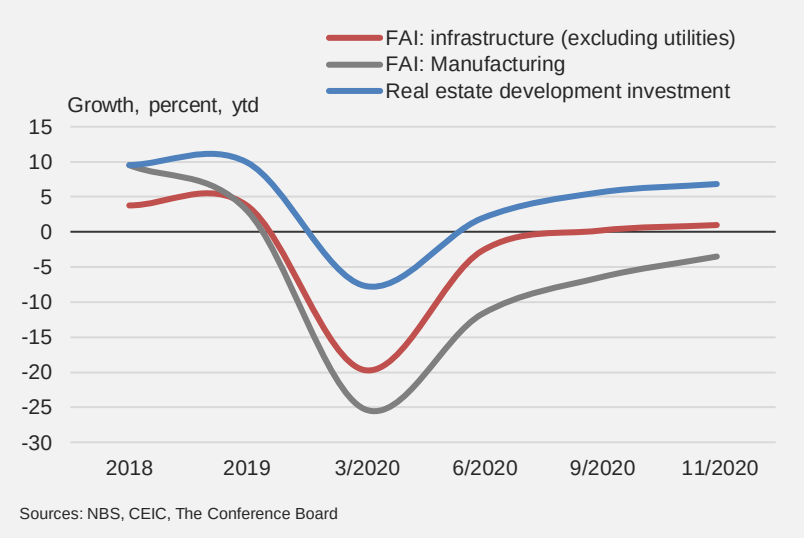
China’s Current Economic Recovery Spending - How Green Is It?

China's 2060 carbon neutrality goal requires a significant shift from its current trajectory

Current reality ----------→ Future



Sources: NBS, CEIC, The Conference Board

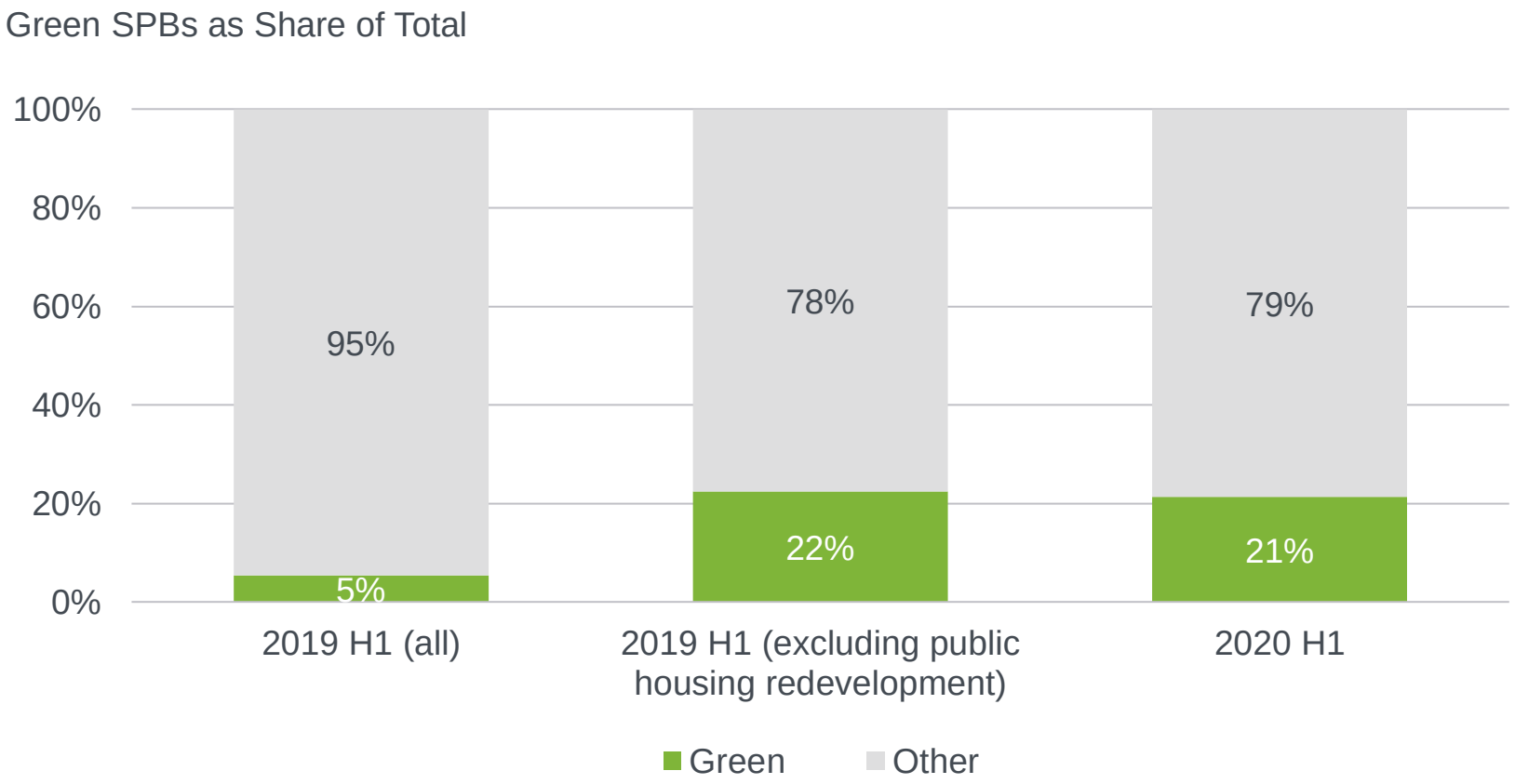
Image source: UN Photo/Eskinder Debebe

Measuring the “greenness” of China’s COVID-19 recovery stimulus

1,345 local government special-purpose bonds (SPBs) issued in 1H 2019 and 1H 2020 were reviewed

Green projects were identified

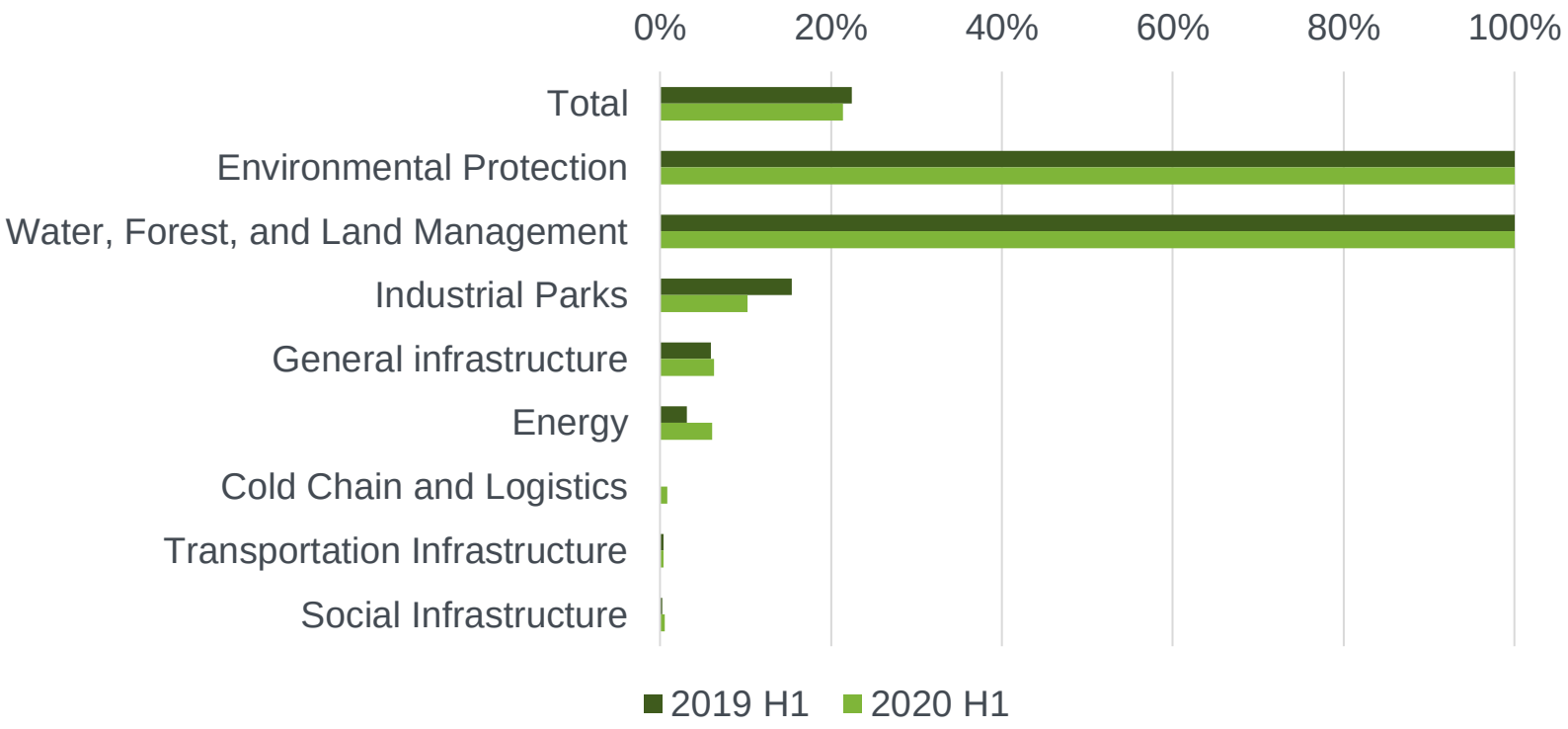
Excluding public housing redevelopment, the share of green investments remained constant from last year



Source: Wind Economic Database, The Conference Board

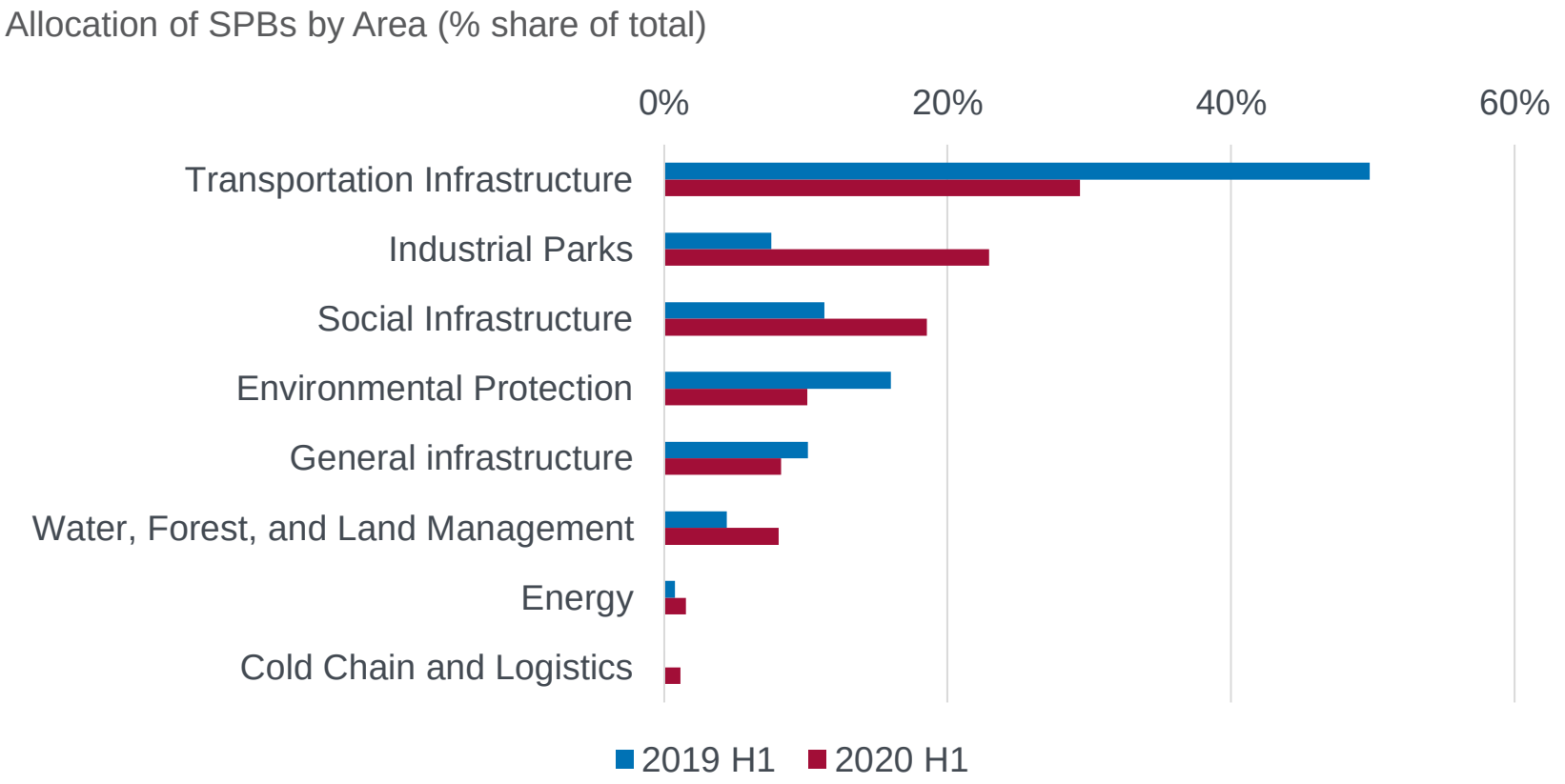
Except for projects in environmental protection and natural resource management, very few investments can be definitively categorized as green

SPBs Allocated to Green Projects (% share within each category)



Source: Wind Economic Database, The Conference Board

In total, the share of funding allocated to environmental protection has decreased



Source: Wind Economic Database, The Conference Board

Beijing’s COVID-19 infrastructure stimulus allocation to date is not aligned yet with its public carbon neutrality pledge.

The crucial question is not “if” but rather “when and how” China will adjust to the long-term carbon neutrality goal.

The next 5 years will be crucial to align business strategy and operations…

Near-term…

- Initially, China's economic recovery will not be from "green" infrastructure, but over time, there will be an acceleration of investment into green projects.
- The 14th FYP will set some important markers, but will probably not contain dramatic turnarounds.
- The trend towards stricter pollution control and prevention will continue. Companies should proactively prepare for tightening oversight of emissions.

Medium- and longer-term…

- Major opportunities for companies who contribute positively to China's carbon reduction target.
- A strategic opportunity for companies to steward green growth as a core value proposition element.

Poll

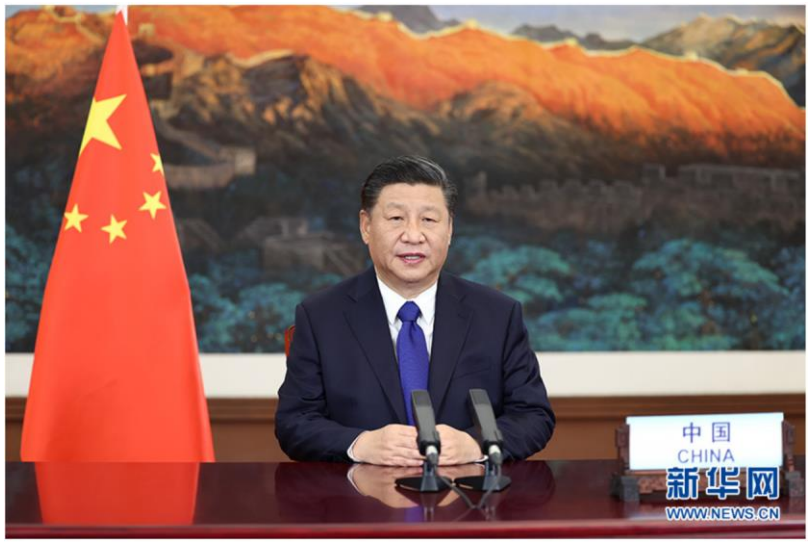
When do you think China will realistically be able to peak carbon emissions?

a. Before 2025
b. By 2025
c. Before 2030
d. After 2030

Implications of China’s New Climate Targets

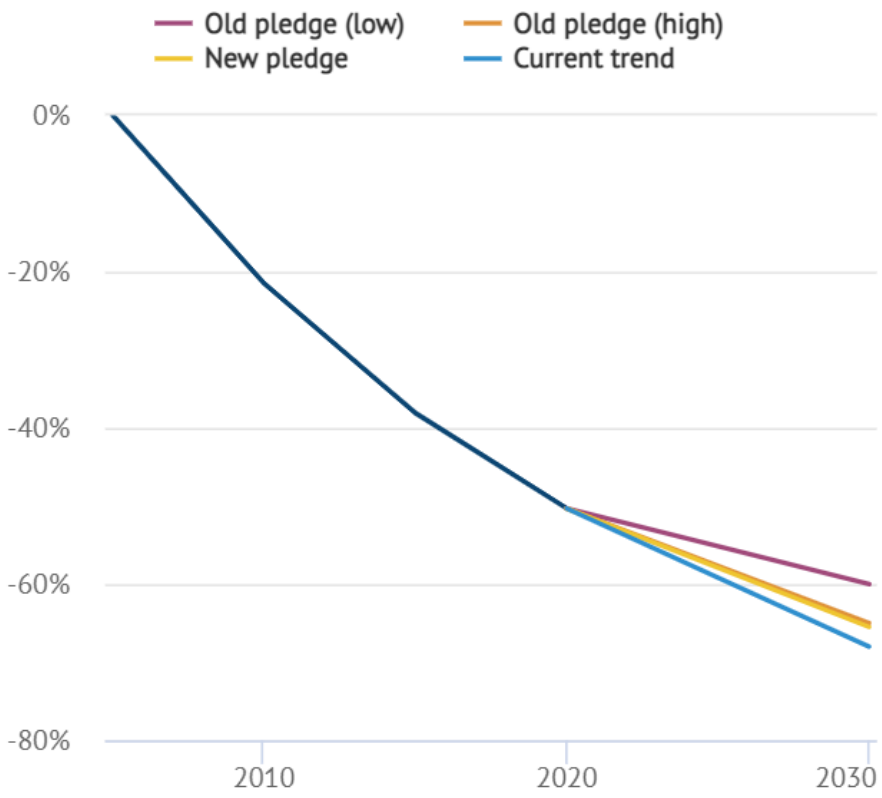
New targets

- **Carbon neutrality before 2060**
- **CO2 emissions peak before 2030 (earlier target: “around 2030”)**
- **By 2030:**
  - Cut CO2 intensity by >65% from 2005 levels (earlier target: 60-65%)
  - Non-fossil fuel share of around 25% of all energy (earlier target: 20%)
  - Increase forest stock by 6 bln m2 from 2005 (earlier target: 4.5 bln m3)
  - Wind and solar power capacity >1,200GW (current: 500GW)

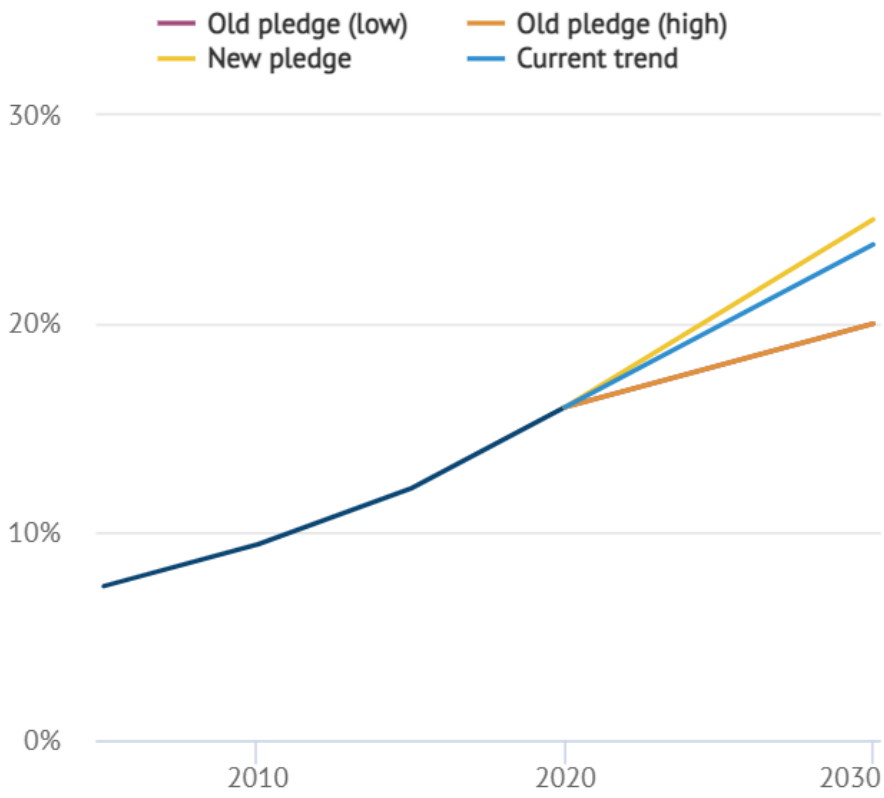


New targets vs current trends

CO2 intensity reduction from 2005 level



Non-fossil energy share



Comparison of China's existing pledges under the Paris agreement and the newly announced 2030 targets and current trends extrapolated from the trend since 2015. "Projected" wind and solar capacity refers to the amount of capacity estimated to be needed to meet the 25% non-fossil energy target. Source: Author calculations based on China's official energy data. Chart by Carbon Brief using Highcharts.

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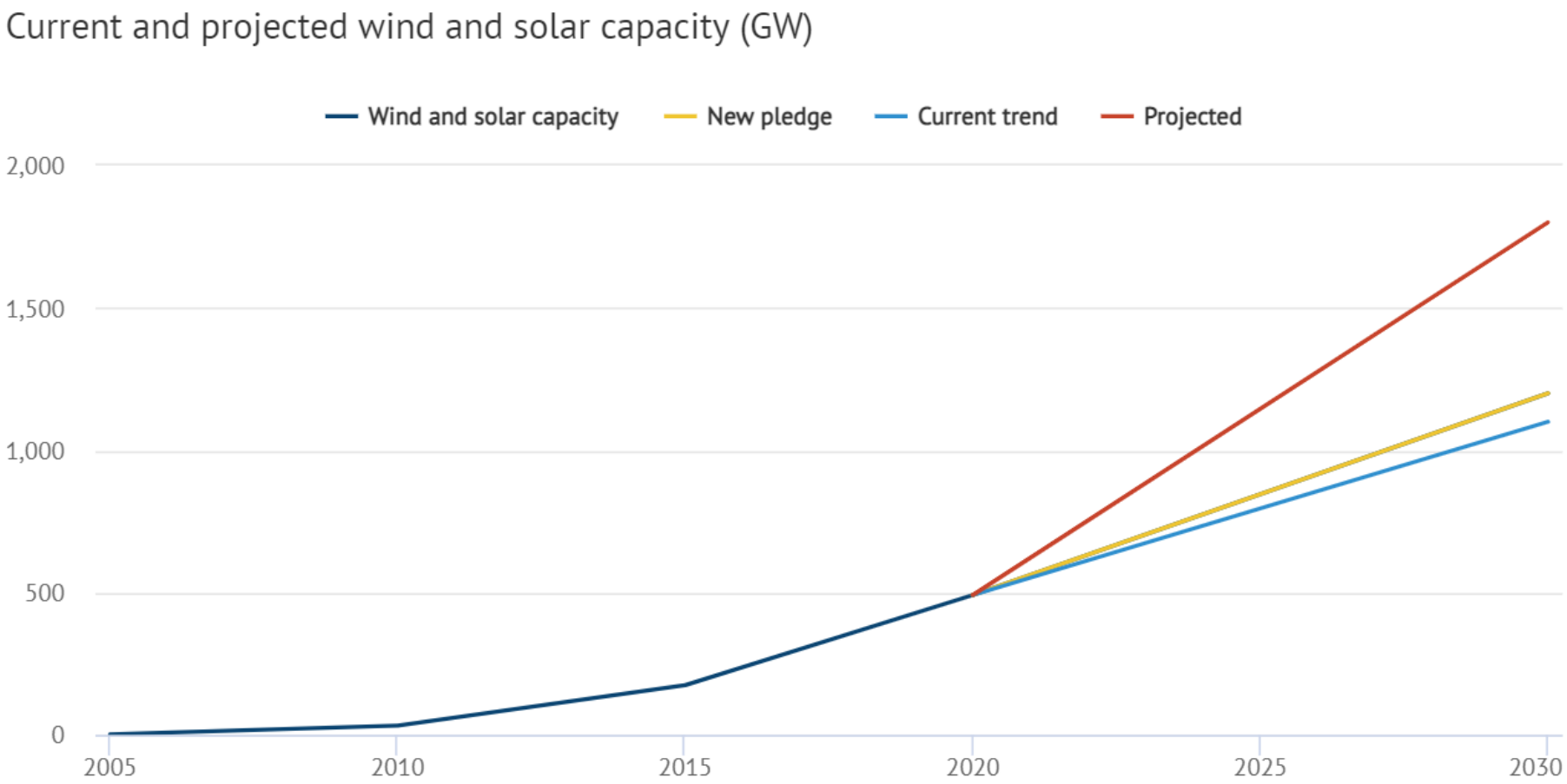

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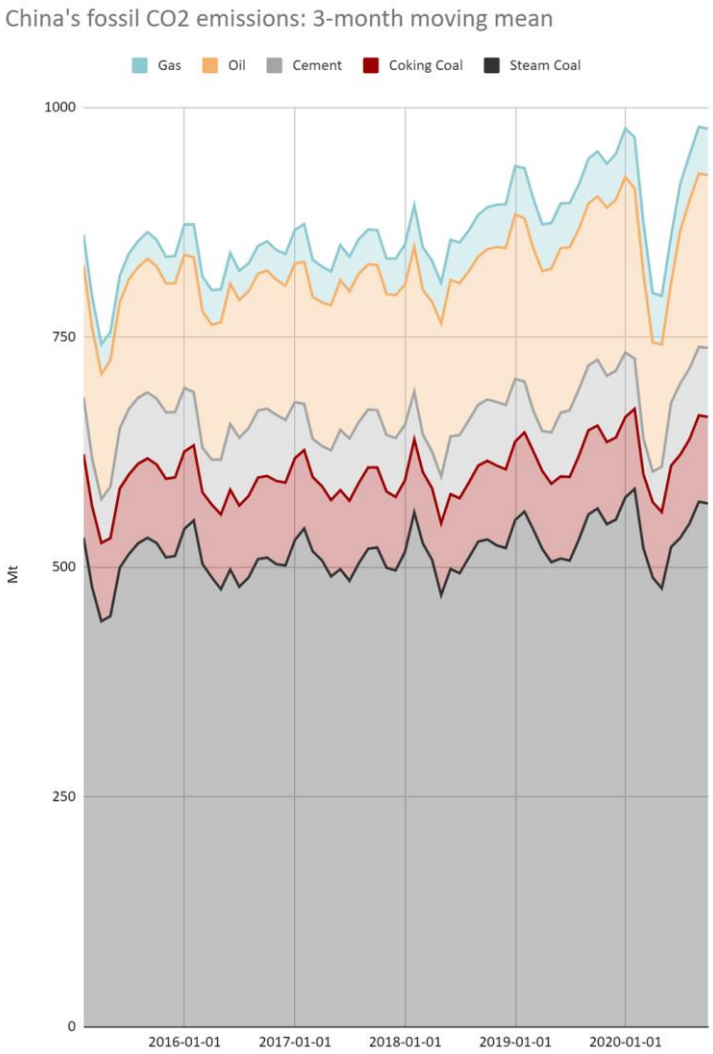
Emission-intensive growth in recent years and after the COVID-19 lockdown



- Rebound in coal and smokestack industries since 2017
- Ongoing investment in coal power plants and fossil infrastructure - stimulus still flows to old industries
- Post-COVID economic recovery driven by infrastructure, steel and cement
- Resurgence in coal power permitting and construction

➔ **This is the background against which Xi made the pledge**

https://www.carbonbrief.org/analysis-surge-in-chinas-steel-production-helps-to-fuel-record-high-co2-emissions

How the 2060 announcement changed the outlook

Before	Now
Long plateau of coal use & CO2 after 2030	Rapid emission cuts after CO2 peak - rapid downsizing of the coal industry
Keep wind&solar market “stable”	Wind&solar market will need to grow fast in 2020s to deliver rapid decarbonization
Potential for gas to help in long-term decarbonization	Gas will need to be phased out too
200-300 new coal power plants by 2030	Almost complete coal power phase-out by 2050 - limited space for new capacity

Implementation: Tsinghua take

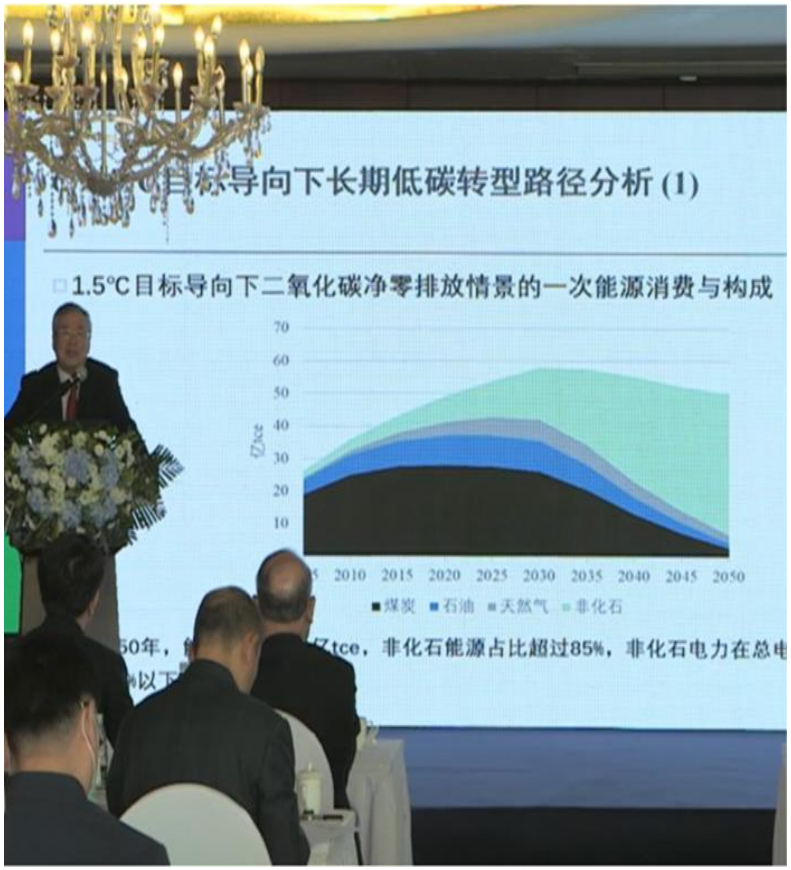
Zero carbon power sector by 2050; negative emissions thereafter

“Electrify everything”: transport, heating, industry

Peak energy demand in early 2030s - economic transformation

Investment: $17,000 bln in electricity; $3,000 bln in carbon capture / negative emissions technology

Expecting a “National carbon peaking and neutrality action plan” similar to the air, water and soil action plans (published 2013-2015), with key cities moving first



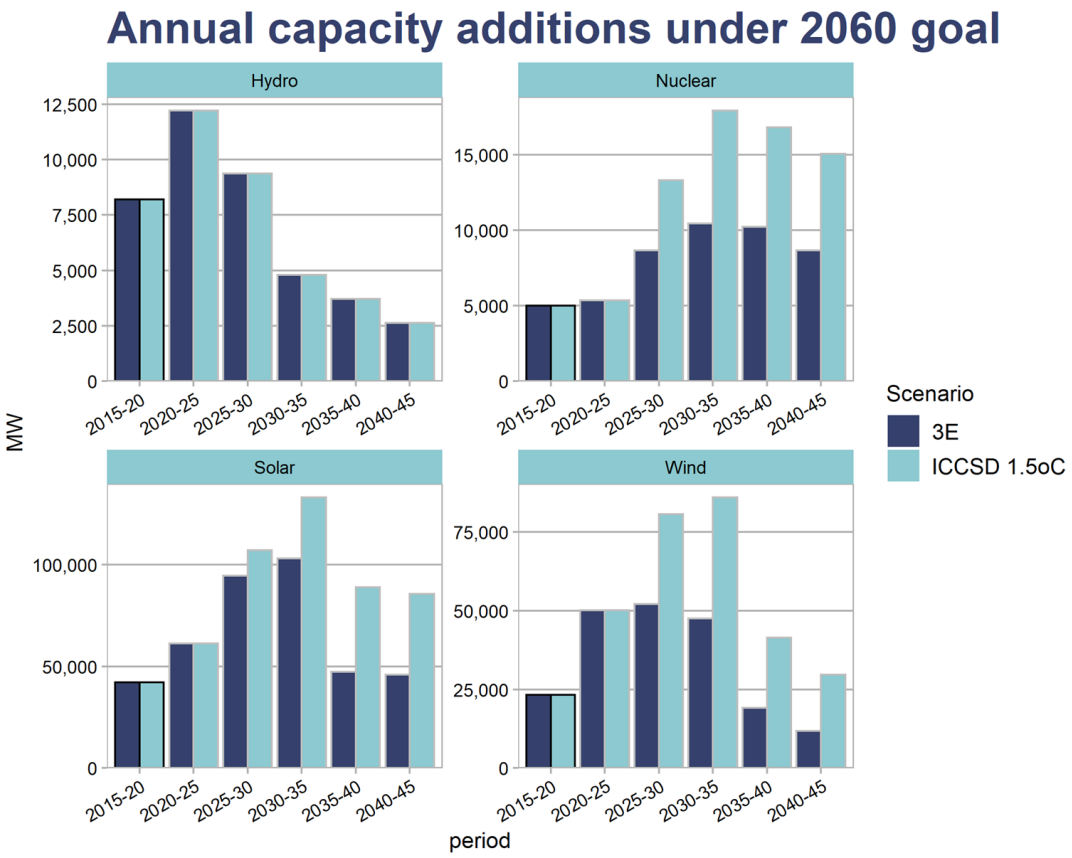
Outlook for power sector investment: Two illustrative scenarios from Tsinghua

Combined wind, solar and nuclear capacity will need to increase 10-fold or more

- If nuclear under-delivers, wind, solar & storage will need to deliver more

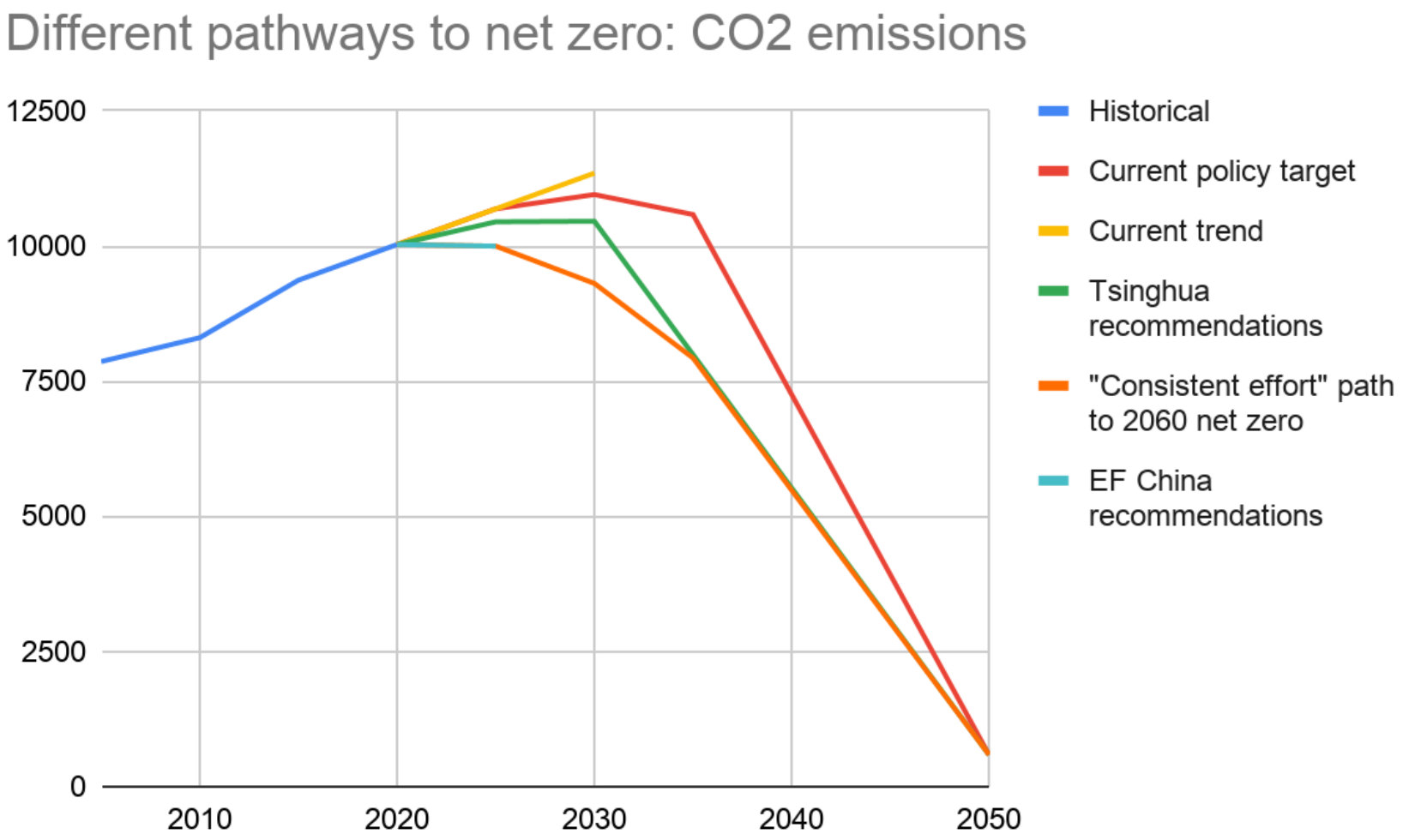
Annual installations need to increase 2-3 fold

Limited potential to scale up hydro



https://www.carbonbrief.org/influential-academics-reveal-how-china-can-achieve-its-carbon-neutrality-goal

Leaving the heavy lifting after 2030?



Where rubber meets the road: upcoming 14th five-year plan

- **Will set targets for 2025**
- **Top-level plan published in March 2021, sectoral plans around Dec 2021**
  - Energy planning likely delayed from original schedule to accommodate new goal
- **Key targets: CO2 intensity reduction, non-fossil energy share, coal share, non-fossil electricity targets, capacity targets for coal, wind, solar, nuclear, hydro**
  - possibility of an absolute CO2 cap
- **Key instrument: CO2 peaking action plan under environmental ministry**
  - Inclusion of climate action into the system of environmental disciplinary inspections (Nov 2020)
- **Central Committee hinted at 2035 emission milestones**

Poll

What is your company's decarbonization strategy?

a. We have already set and publicly announced a zero-carbon target
b. We are working on a zero-carbon target, but have not announced it yet
c. We are thinking about a zero-carbon target, but are still in the early stages
d. We are not currently considering a zero-carbon target

Discussion

Upcoming webcasts

Sustainability Reporting Trends Amid A Pandemic

Thursday, January 14
03:00 PM CET (Brussels) | 9:00 AM ET (New York)

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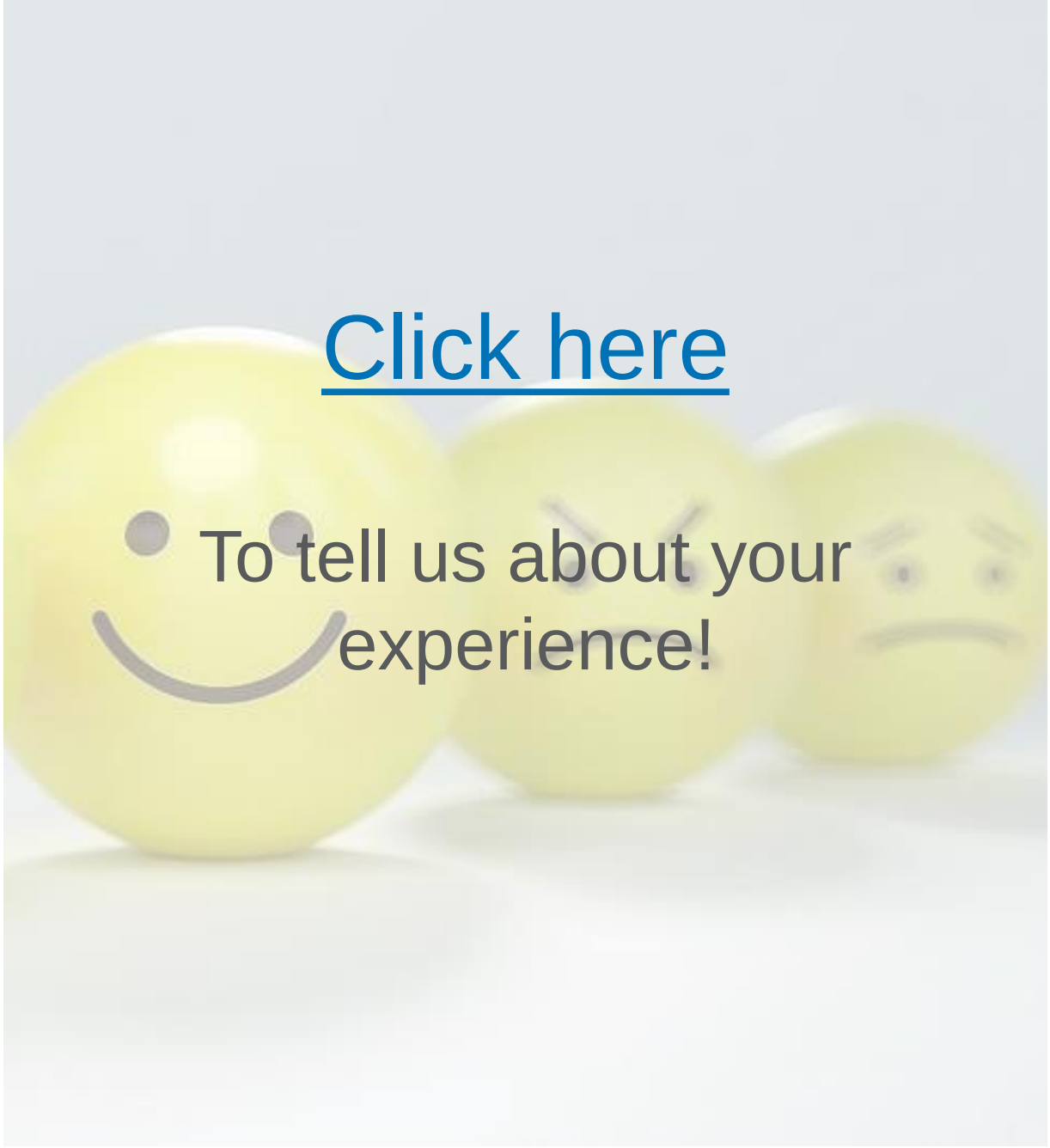

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Appendix slides

Telling a weak five-year plan from a strong one

Indicator	Linear path to 2030 policy target	Current trend	Tsinghua recommendations	EF China recommendations	Linear path to 2060 net zero
Non-fossil energy share, 2025	18%	19%	20%	20%	25%
Non-fossil electricity share, 2025	42%	39%	48%	NA	44%
Coal share, 2025	NA	51%	51%	50%	48%
Absolute CO2 cap, Gt	None	10.7	10.5	10.0	8.75
CO2 intensity reduction, 2020-25	-17.2%	-21.4%	-19%	-23.3%	-30%
Wind power capacity, GW, 2025	NA	360	500	NA	500
Solar power capacity, GW, 2025	NA	460	550	NA	600
Coal power capacity, GW, 2025	NA	1185	NA	1100	900

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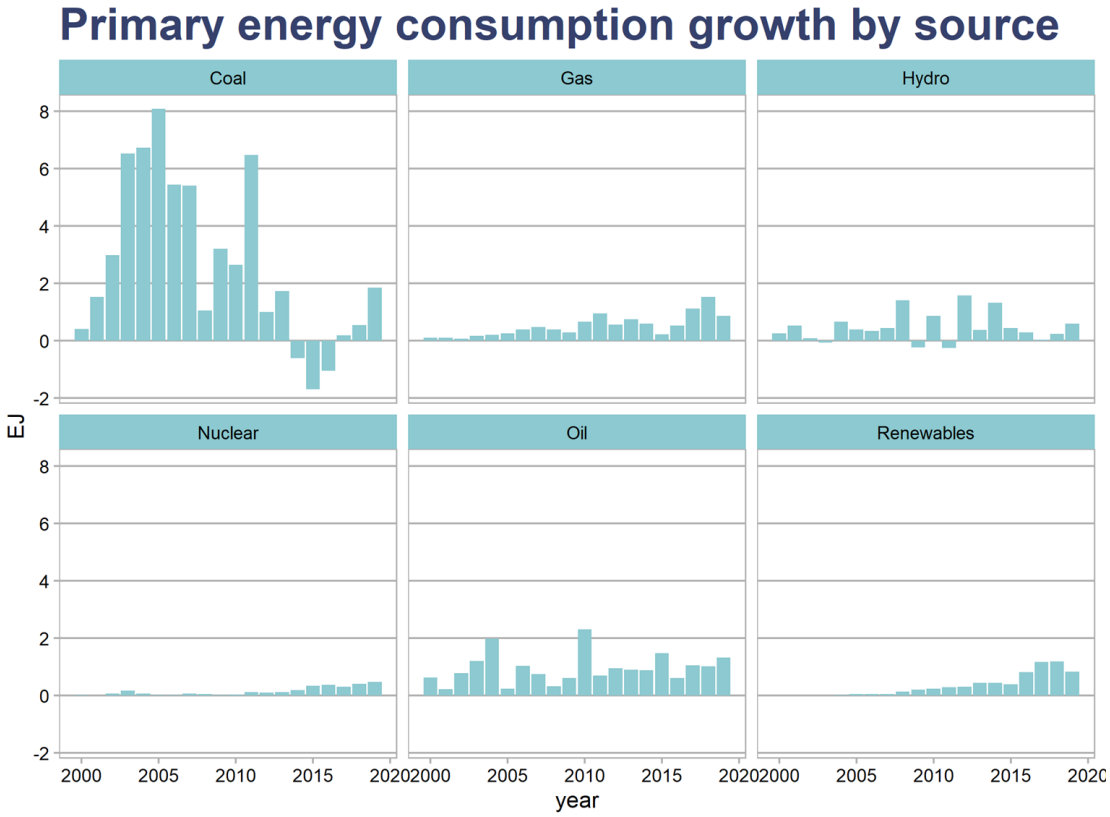
Ups and downs of China's coal use and emissions

- 2003-07: WTO accession boom
- 2008-12: Infrastructure stimulus
- 2013-16: CO2 peaking announcement, economic "New Normal", war on air pollution, clampdown on new coal power plants...
- 2017-19: "Old Normal strikes back": coal, oil, steel consumption rebound,
- 2020: Resumption of new coal power permits, industry&construction driven recovery, fossil fuels dominate energy sector investment plans...



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“We aim to have CO2 emissions peak before 2030 and achieve carbon neutrality before 2060.“

- Key things to note about the announcement:
  - proactive
  - unilateral
  - surprising even to most domestic observers and stakeholders
  - timed ahead of the US elections
  - terse - just one sentence: major debate on the implementation just starting!

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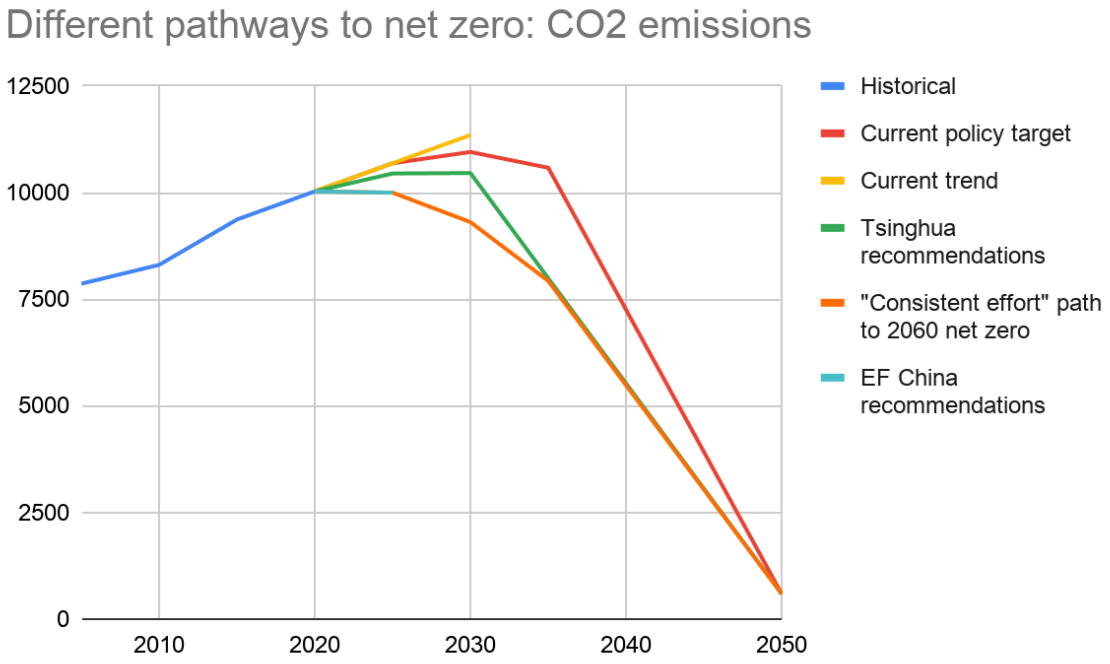
“Ambition gap”

- Current 2030 targets and even current proposals from researchers envision very gradual progress until 2030 and rapid acceleration after
  - risk of requiring infeasible rates of transition in 2030s..2040s
  - excessive reliance on negative emission technologies
  - building up fossil fuel infrastructure, jobs and economic reliance - political opposition to transition
- Likely holding onto stronger 2030 targets as a negotiating chip



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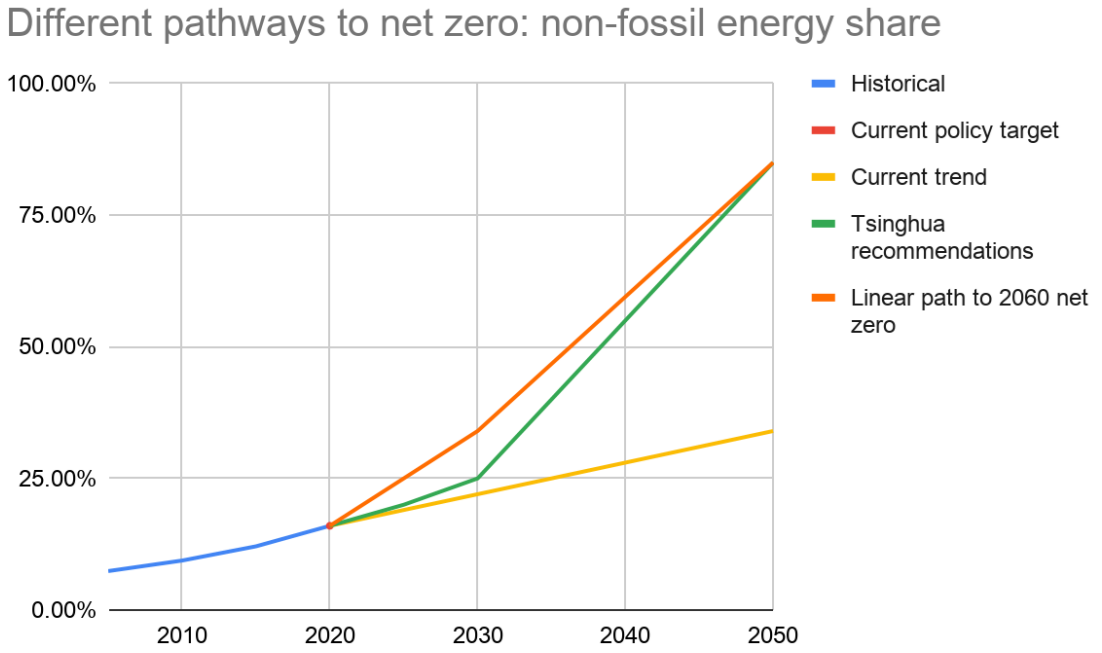

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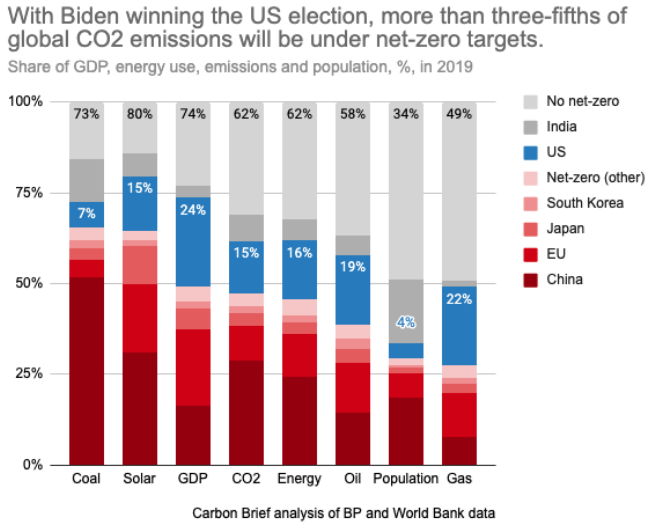
Dramatic movements in past 1-2 months

- Japan: net zero by 2050
- Philippines: moratorium on new coal plant permits
- Korea: net zero by 2050
- Vietnam&Bangladesh: considering no new coal power projects
- China: net zero by 2060
- EU: net zero by 2050
- US: Biden platform includes net zero by 2050
- South Africa: Main emitter Eskom aiming for net zero by 2050

Pretty much ALL of these overtures are aspirational - solidifying them into measurable commitments and using the dynamic to move other major emitters is crucial.

(Some of the) developing countries will need finance for clean energy to avoid going back to coal after moratoriums



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