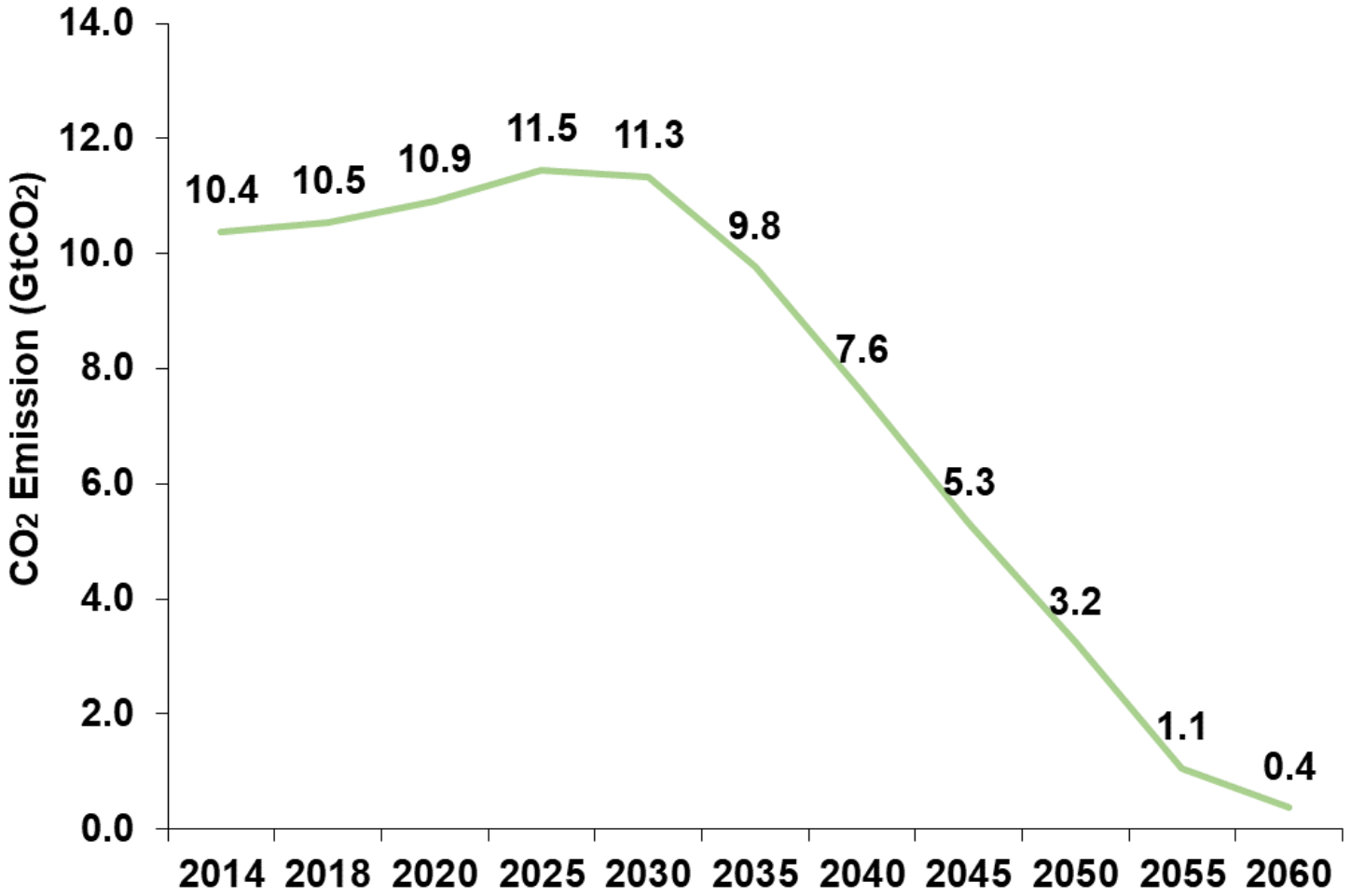
IEA-IETA-EPRI GHG Trading workshop, October 22, 2020

An Update on China's National Carbon Market Development

Zhang Xiliang
Institute of Energy, Environment and Economy
Tsinghua University

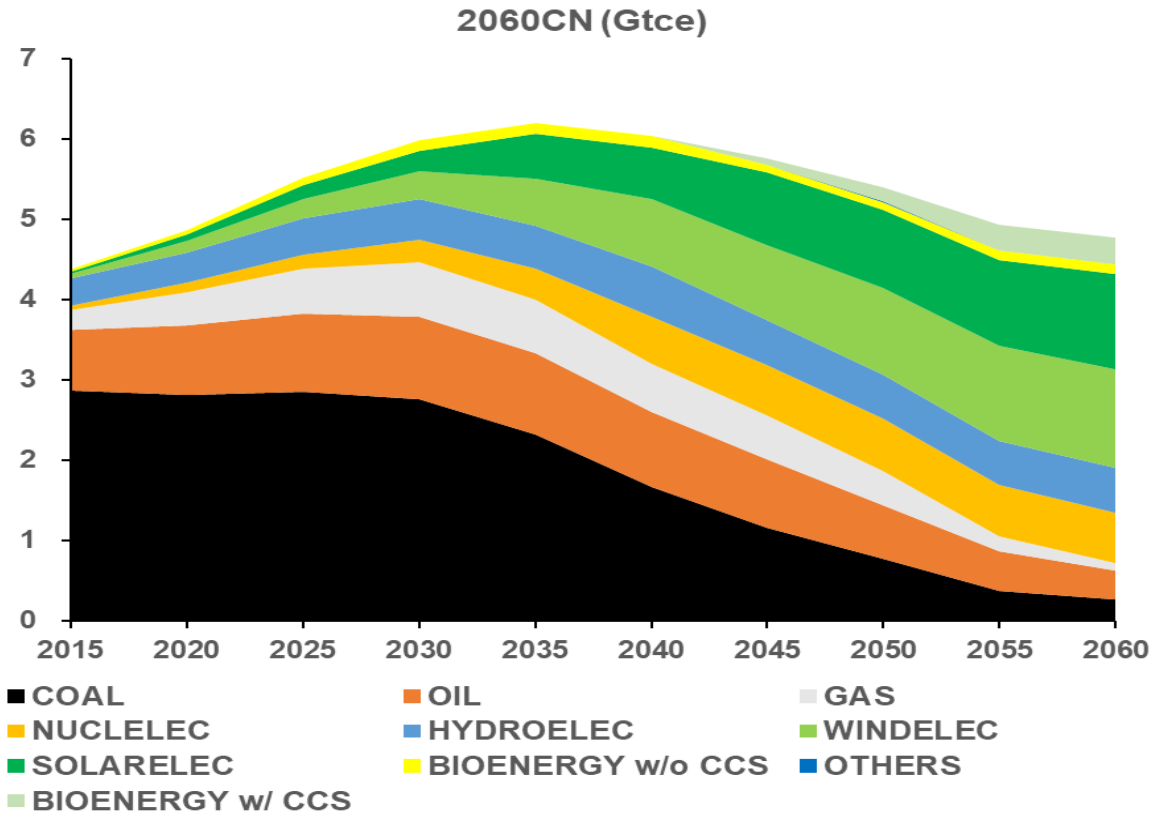
清华大学能源环境经济研究所
INSTITUTE of ENERGY, ENVIRONMENT and ECONOMY
TSINGHUA UNIVERSITY

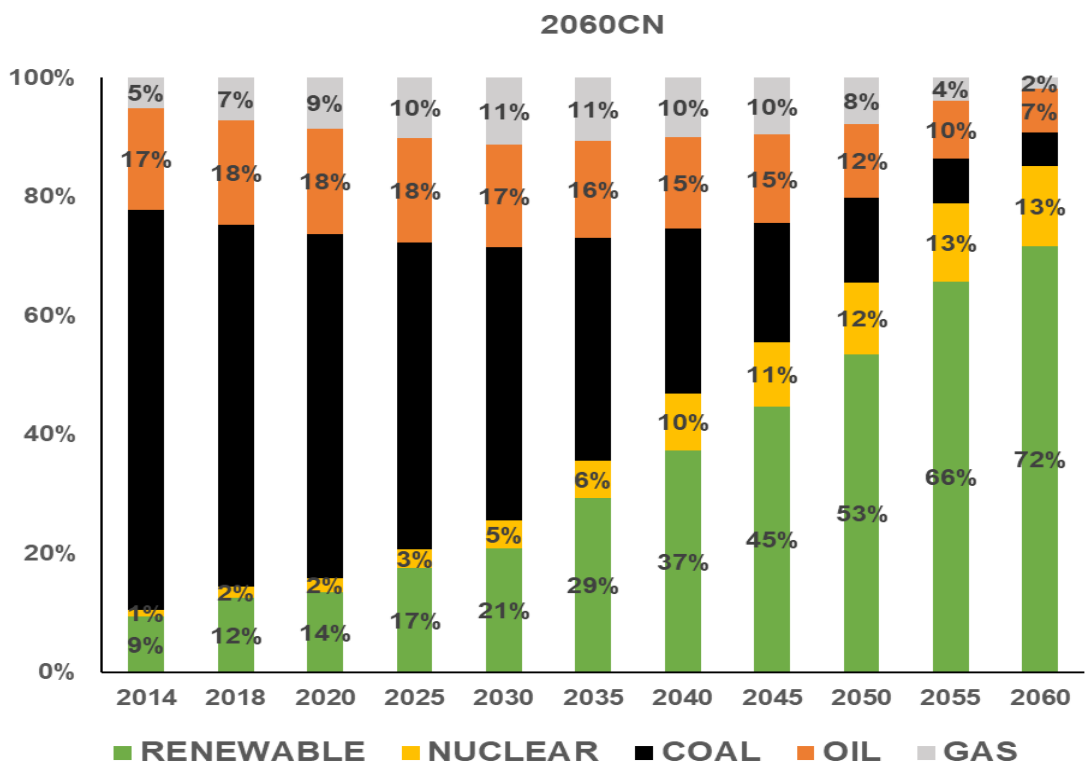
A trajectory of energy and industry process related CO_2 emissions to achieve 2060 carbon neutrality goal from CGEM



- **New CO2 emissions peaking goal**: Peaking CO2 emissions before 2030
- **A version for carbon neutrality**: reaching carbon neutrality before 2060

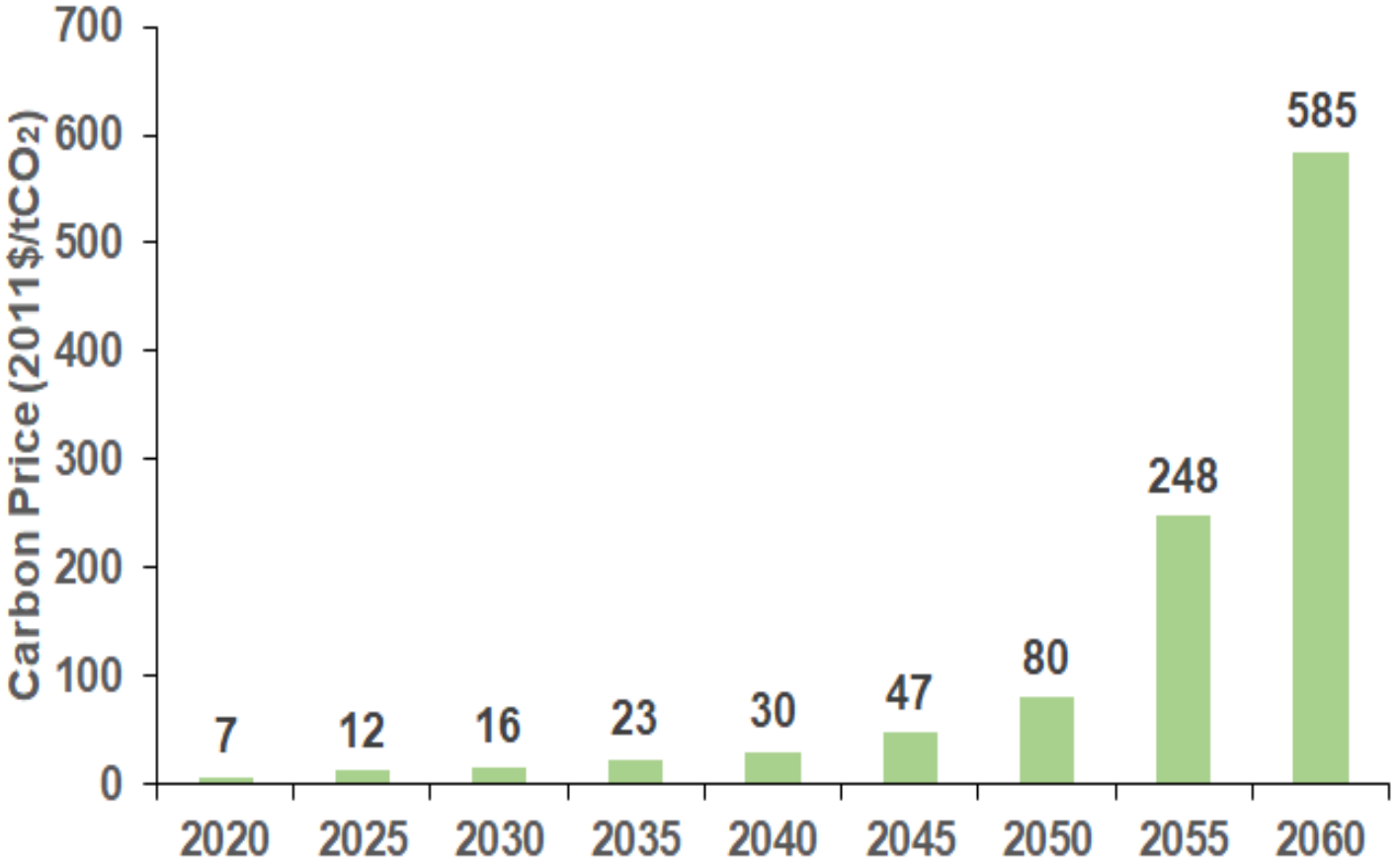
Primary Energy Supply





Note: It is largely a renewable -nuclear-CCS dominated transformation pathway without considering DAC .

Carbon Price for achieving carbon neutrality in 2060



Implication of the carbon price:

- The cross-economy marginal abatement cost
- A reference for setting the floor price of national carbon market

Highlights of National ETS Construction Work in 2020

- Directive on cap-setting and allowance allocation
- Emissions data reporting and verification
- Construction of registration system and trading system
- Legislation - State council's regulation on national ETS

"***Accelerate the construction of national ETS***. " Vice Premier Han Zheng said during his visit to MEE on October 13 .

Estimation of emissions covered by ETS

Sectors	Sub-sectorss	Total emissions	Emissions covered by China ETS	Share
Power generation	fossil fuel power generation	3642.64	3642.64	100.00%
Industry	pulp and paper making	31.09	26.43	85.00%
	oil refinery	533.70	533.70	100.00%
	chemical	1190.98	1071.88	90.00%
	mineral product manufacutre	585.31	292.66	50.00%
	iron & steel	1486.38	1159.37	78.00%
	non-ferrous metal	76.87	7.69	10.00%
	Sum of 6 industries	3904.33	3091.73	79.00%
Total China		9410.58	6734.37	72.00%

Coverage extension during the 14th Five-Year-Plan

Criteria for sectoral coverage extension:

- Emission scale
- Data quality and accuracy
- Emission reduction potential
- Cost effectiveness

3 batches of sectoral coverage during 2020-2025:

- 1st:
  Power generation
- 2nd:
  ① Manufacture of cement clinker
  ② Manufacture of electrolytic aluminum
- 3rd:
  Other sub-sectors, eg. steel smelting

Sectoral categories	Sub-categories
Electric power supply	**Power generation**
	Grid companies
Petroleum processing	Crude oil refinery
Chemical raw materials and chemical products manufacturing	Ethylene manufacture
	Synthetic ammonia manufacture
	Calcium carbide manufacture
	Methanol manufacture
	Other chemical products
Non-metallic mineral products manufacturing	**Manufacture of cement clinker**
	Flat glass manufacture
Ferrous metal smelting and rolling processing	Steel smelting
	Steel rolling processing
Non-ferrous metal smelting and rolling processing	**Manufacture of electrolytic aluminum**
	Copper smelting
Paper and paper products manufacturing	Pulp making, paper and board manufacturing
Aviation transport	Air passenger transport & air cargo transport
	Airports

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Thank you for your attention.

zhang_xl@tsinghua.edu.cn

清华大学能源环境经济研究所
INSTITUTE of ENERGY, ENVIRONMENT and ECONOMY
TSINGHUA UNIVERSITY