

Dark Horse Contender for Decarbonization

Nuclear Power in China

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China's decarbonization pathway

Two goals

- Peak emissions before 2030
- Carbon neutral before 2060

One sprawling “1+N” climate policy system

- The snowflake method of policymaking

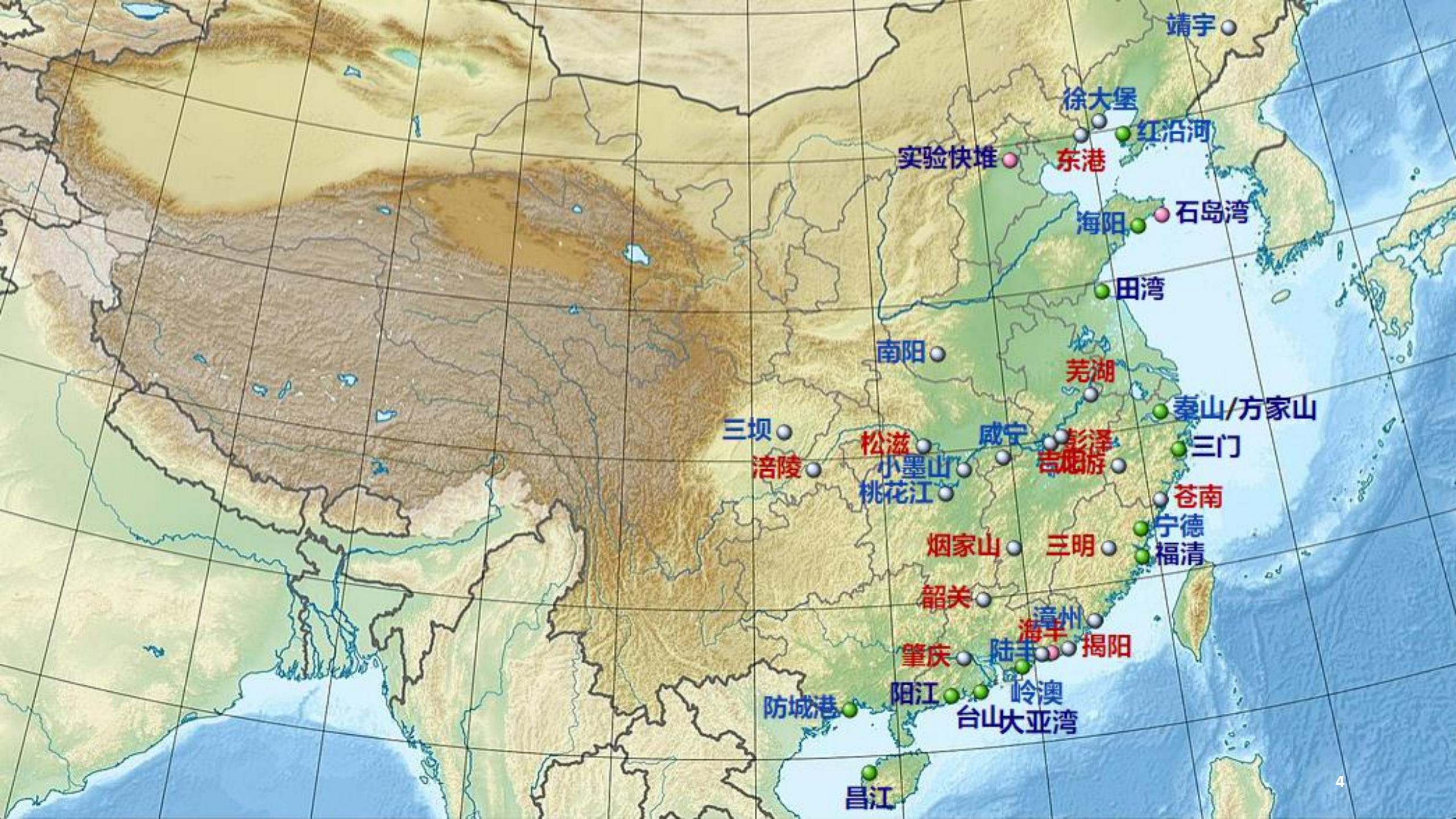


Practical challenges to net zero

- I. Geographic distribution of supply and demand hubs
- II. Market structure barriers to transmission
- III. Dependence on coal for energy security

Enter nuclear.





“Power” in myriad forms

- I. Baseload power to reduce low-carbon transition risks
- II. Top-level interests in moving economy up the value chain
- III. Strategic interest in becoming global energy tech leader



Policy efforts underway

- I. Innovation – both Gen III/III+ and Gen IV
- II. Domestic design *and* international cooperation
- III. Non water-dependent reactors for hinterland *and* exports
- IV. Broad economic reform efforts conducive to clean energy



Opportunities in sight

Technological development

- High-temp gas cooled pebble-bed reactor (HTR-PM)
- Liquid thorium-fueled molten salt reactor (TMSR-LF1)
- SMRs

Market development

- Domestic hinterland and expanded industrial end use
- Politically palatable exports and bilateral partnerships



Final word

What does China *need* vis-à-vis nuclear?

- Climate targets must survive ongoing push-pull with coal
- Target markets must face sufficient incentives to build
- Domestic talent must survive the bureaucracy

How will nuclear fit into China's energy future?

- Major role in long-term energy mix (c. 2060)
- But China's potential for global nuclear leadership depends on both success of domestic innovation and sentiment abroad



Thank you.

Want to talk energy/industry/climate?
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