From Export Risk to Future Competitiveness

Accelerating ASEAN's Domestic Transition as a Strategic Lever

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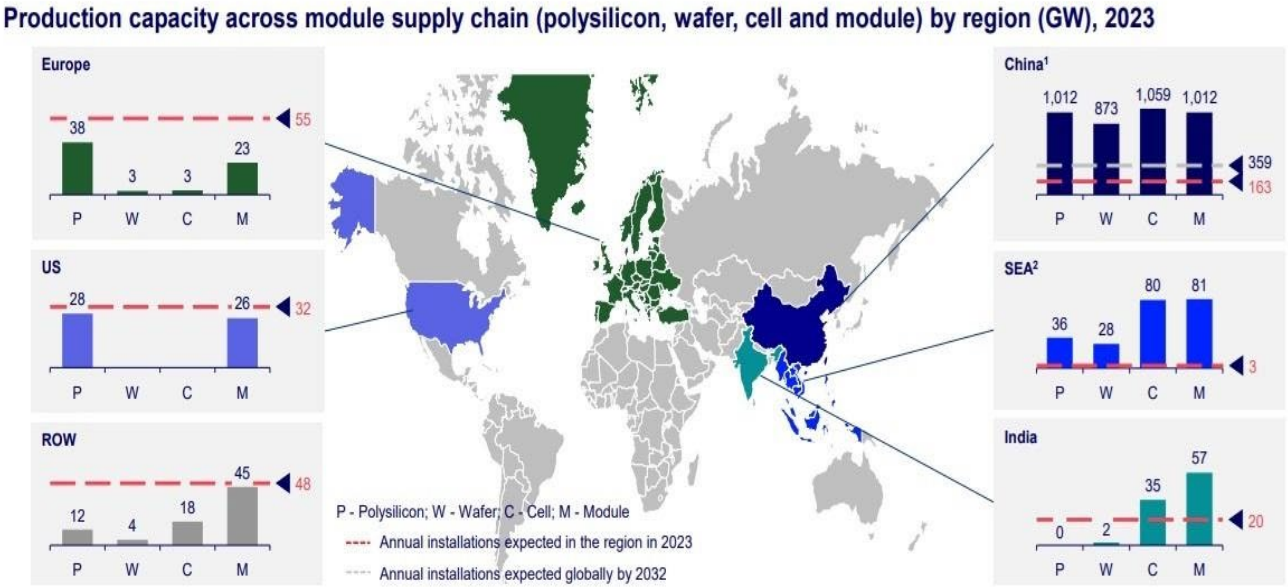
Part 1

Context

A booming solar industry under stress

The solar boom



Source: Wood Mackenzie (2023)

- **ASEAN's solar manufacturing is expanding fast**
- **The region now a global player in module assembly and cell production**
- **Yet growth remains highly export-dependent**

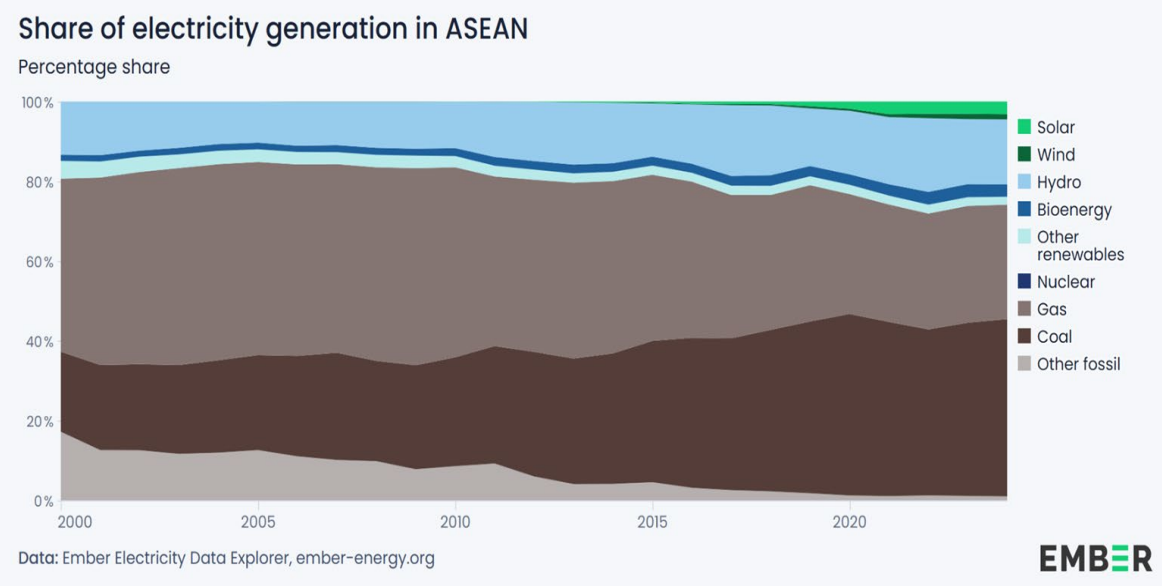
Emerging volatility

External headwinds: trade protectionism and tariffs are intensifying amid global overcapacity and price volatilities.

Export markets are being reshaped: demand is becoming harder to reach and increasingly unpredictable.

Rising business uncertainty: revenue swings, under-utilised factories, and growing investment hesitation.

Untapped domestic potential



Rapid demand growth

- 2024 growth >7% (≈2× global average)
- Total demand is set to double by 2050

Vast but underused resource

- ≈20 TW of solar and wind potential (~55× today's supply capacity)
- Yet deployment lags

So the question is: how can ASEAN unlock its own demand?

Part 2

Unlocking domestic demand

Reforming the system

Why reforms matter

- **Existing power systems built for fossil fuels**

- To scale renewables, ASEAN must **reconfigure its legacy power systems**:
  - Upgrade grids & interconnections
  - Modernise market rules
  - Reform subsidies and tariff structures
  - Electrify transport, industry, and households

Rising headwinds

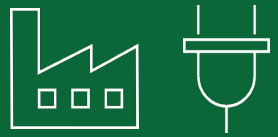
- **Global complexity:** major-power rivalry, trade protectionism, fading cooperation.
- **Domestic pressures**: elevated debt, cost-of-living strains, and intermittent political distractions crowd out long-horizon planning.
- **Policy bandwidth shrinking**: risk of “transition delayism”; caution becomes default; near-term firefighting overtakes structural reform.
- **Likely outcome:** addition, not transition — renewables pile onto an unchanged fossil system instead of replacing it.

Part 3

ASEAN’s energy transition at a crossroads

Immediate growth vs. long-term competitiveness

Two diverging paths ahead



Green Opportunism that leans on domestic advantages (e.g., resources, labour, land) for quick wins, but leaves the structure of the legacy power system and its fossil reliance mostly unchanged

Green Developmentalism that treats the transition as a lever for building future-oriented competitiveness

Signs of a turning point

Carbon neutrality commitments

Nearly all major ASEAN economies have set net-zero targets, anchoring long-term policy direction.

Multi-stakeholder momentum

Think tanks, donors & agencies are building roadmaps, data platforms, and capacity, and convening public-private collaboration.

Industry pilots

Renewable integration & hybrid systems are proving technical and commercial viability

Market signals

Early momentum towards a premium for “green products.”

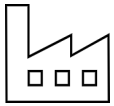
From momentum to progress

Challenge

Momentum alone is not enough — implementation is not straightforward.

Substantial complexity

RE at scale (weak grids, tough geography); balance near-term economic growth vs. long-term transition goals; entrenched fossil interests; gaps in governing capacity; cross-agency coordination.



Need

Technical solutions and policy recommendations already exist, but what is often missing is the political will to pursue them consistently; only a strong, sustained commitment can translate pilots into progress at scale.

Part 4

Regional mirror

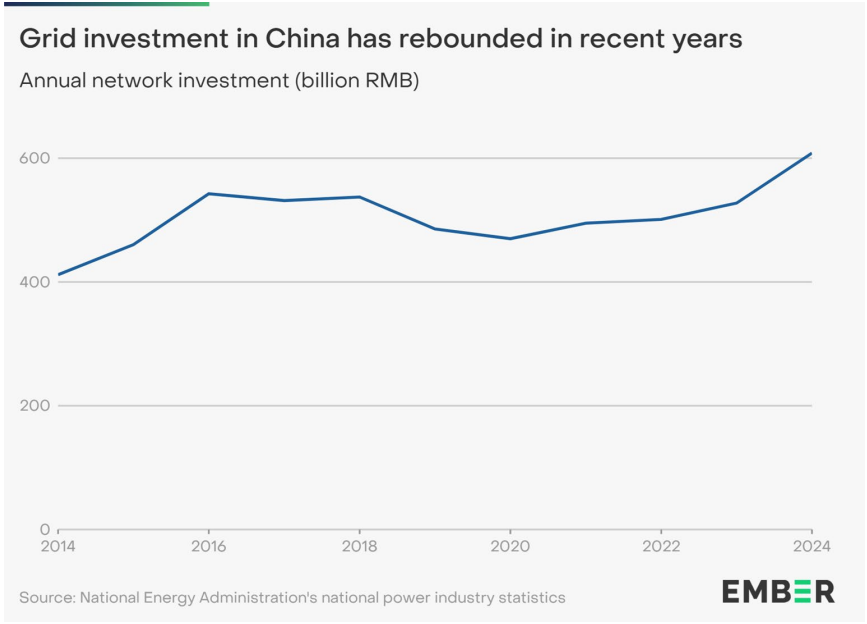
Lessons from China’s system pivot

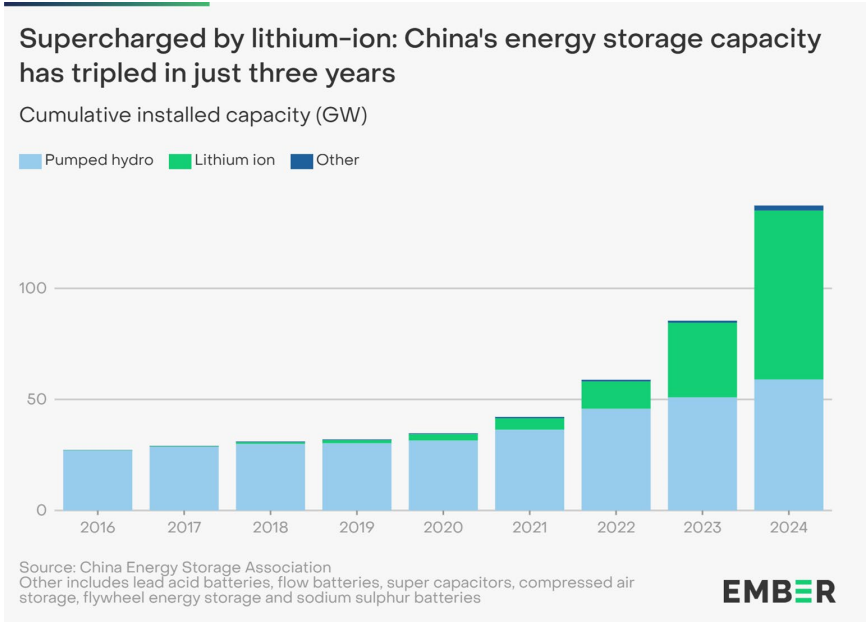
The scale of change

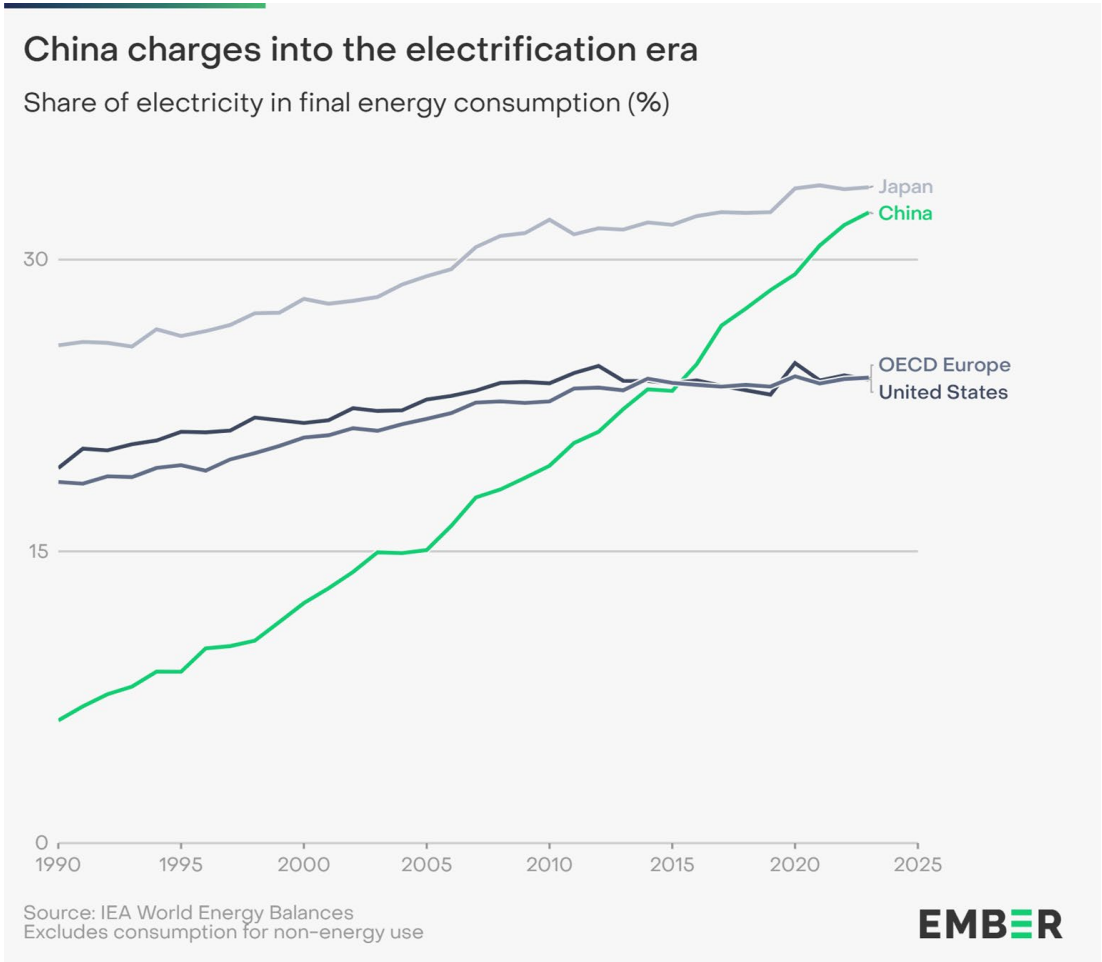
China is moving beyond merely adding wind and solar capacity…

…to building the full system that can integrate, balance, and sustain clean electricity at scale.

Stronger grids, bigger batteries





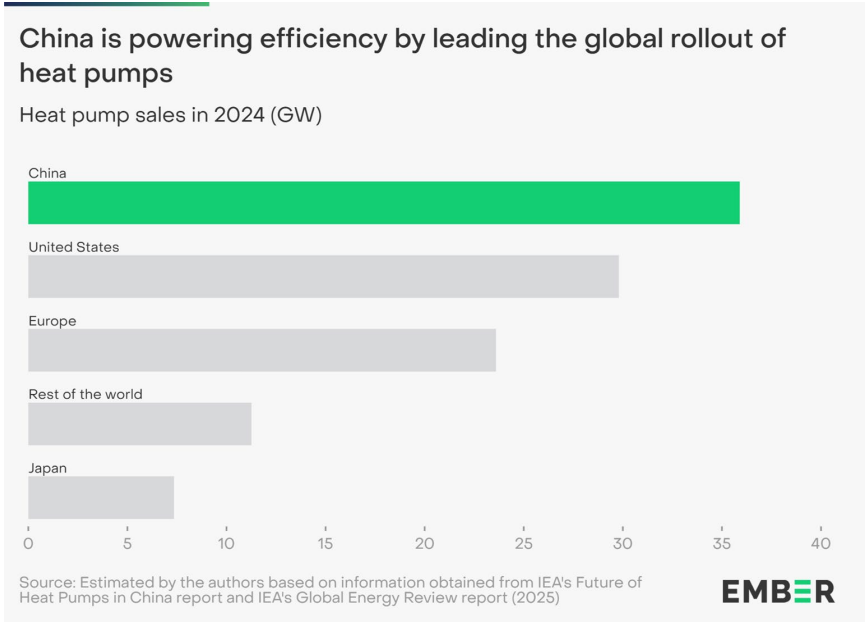


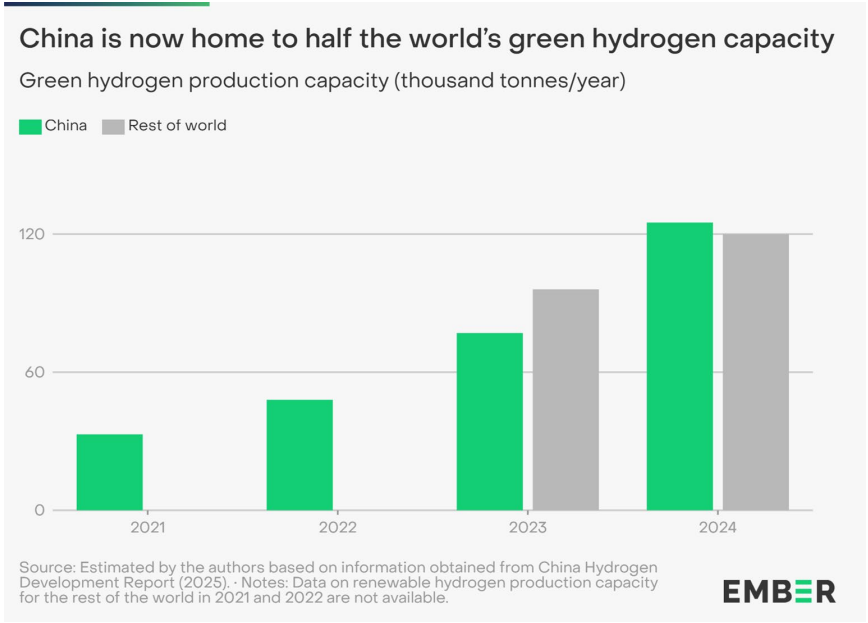
Nationwide growth
Electricity 32% of final energy in 2023, up from 25% in 2015

Global standing
Overtaking US and major European countries

Main drivers
Industrial sparks, EV boom, clean heating

Beyond the low-hanging fruit: Tackling more complex end uses

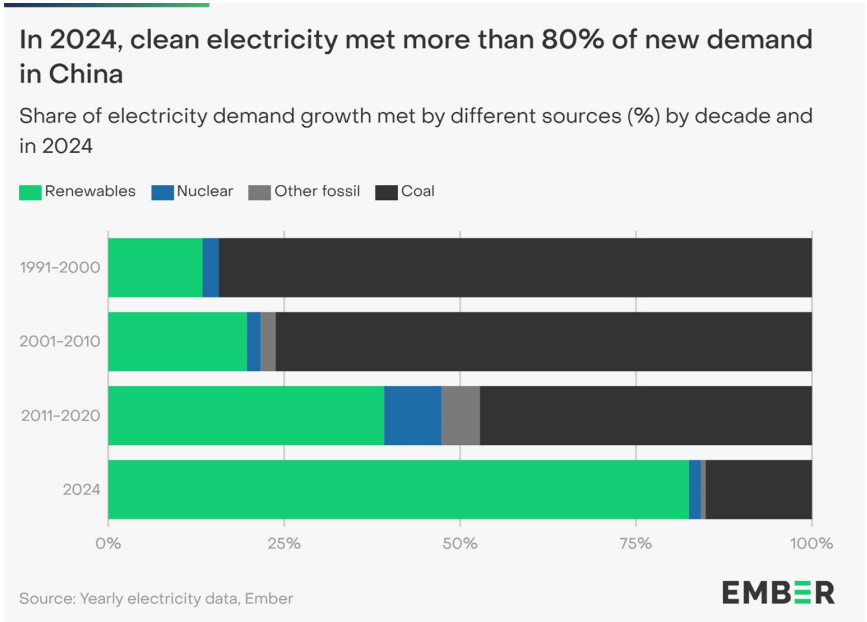


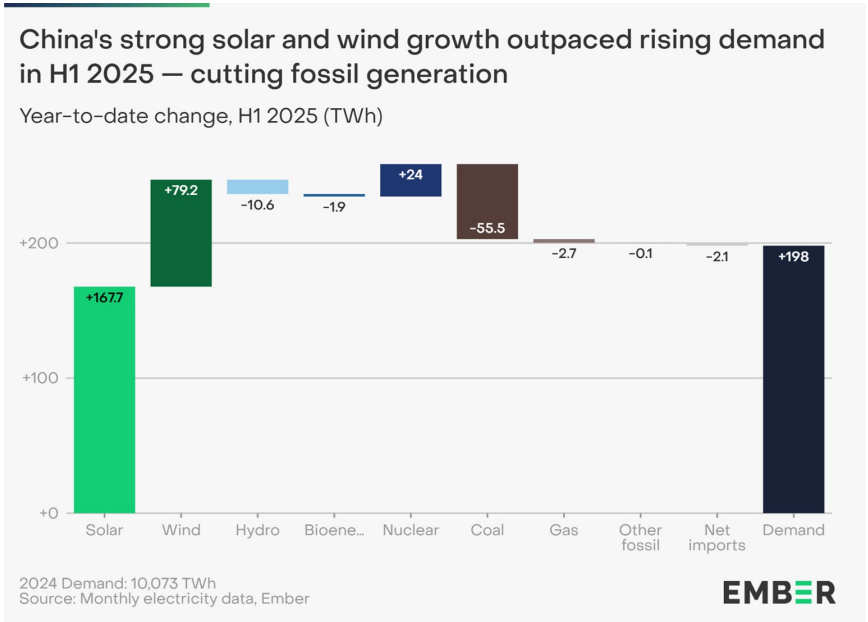


Faster transition

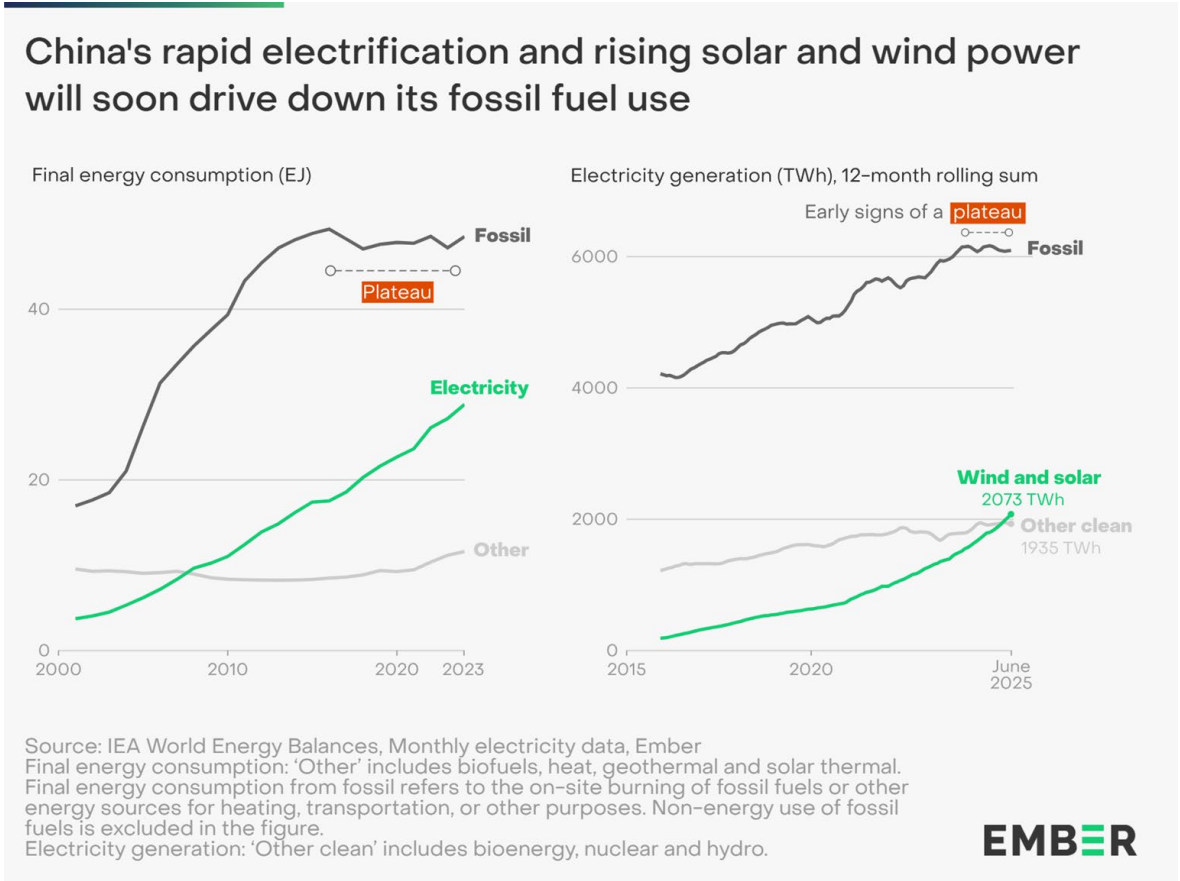
Multiple trends point to an accelerating transition - from routinely overachieving targets to clean power taking an ever-larger share of new demand.

Clean electricity rising, faster each decade





Beyond addition: Fossil peaking is in sight



Powering prosperity: China’s transition logic

Strategic rethink: Fossil-fuelled growth, once powering China’s rise, is becoming increasingly unsustainable; perceived clean opportunities; decarbonisation was reframed not as a constraint, but as a driver of competitiveness, innovation, and resilience.

Implications for ASEAN: The fossil-based growth model has run its course; and the “polluting first, clean up later” pathway is not inevitable.

- Fossil path = volatility, subsidy burdens, rising debt & climate losses
- Clean path = home-grown energy, new industries, stronger resilience

The transition is demanding — but the cost of delay will hit Southeast Asia’s economy hardest.

Thank you!
谢谢聆听!

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