



CLIMATE ENERGY FINANCE

# Australia-China green economy cooperation for a resilient, net zero future

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Tuesday 29 April 2025: ACBC VIC | Business Frontiers – Energy & Resources

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*“It is impossible to engage with any peer nation, regardless of whether you see them as a collaborator, adversary, or a mix of the two, when your decision-making is predicated on incomplete views of your counterparty’s actions, efforts, intentions and capabilities” -*

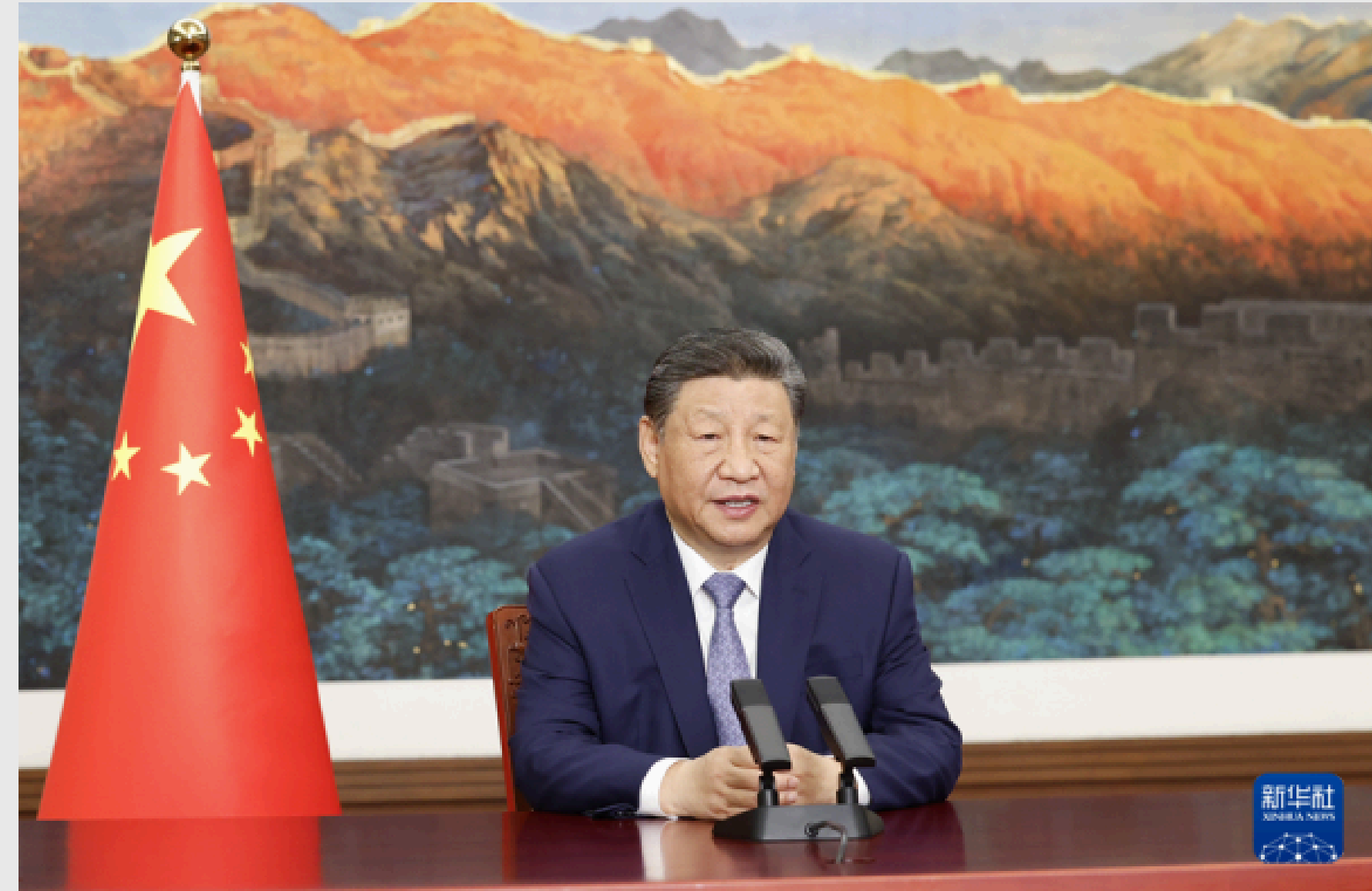
David Fishman, Principal, The Lantau Group

@ the public hearing on "China's Domestic Energy Challenges and Its Growing Influence over International Energy Markets" of the U.S.-China Economic and Security Review Commission

Thursday, April 24, 2025

# China is by far the world's largest producer of clean energy and manufacturer of clean tech

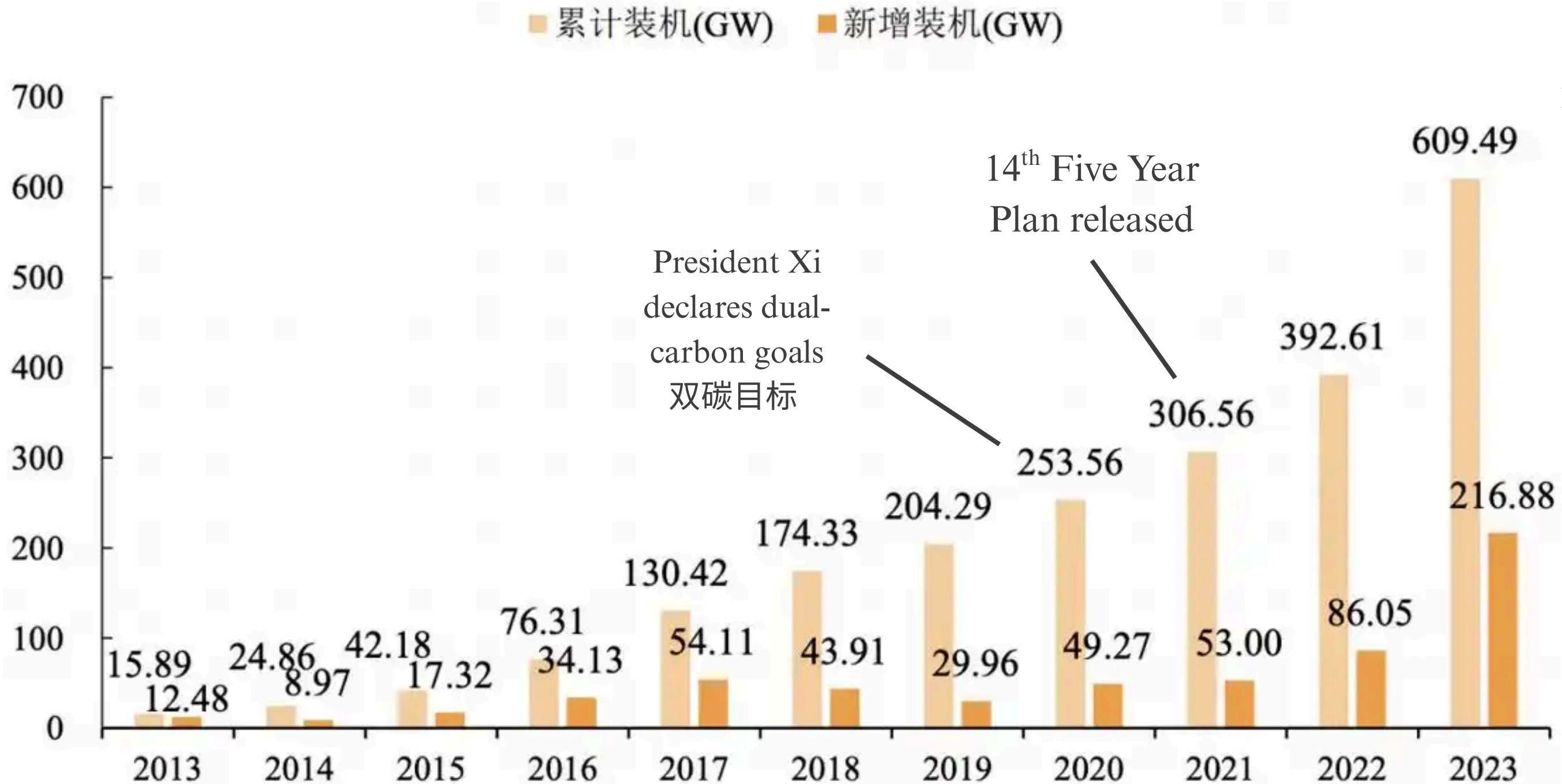
- China's shift to renewables is pivotal for global energy dynamics
- China's energy transition is happening at scale
  - ☁️☀️+371GW in 2024 and 40% world's solar
- Clean energy is no longer just climate policy — it's economic strategy to meet demand growth
  - China dominates 🔋🚗📡
- **Why?** Energy security, technological self-reliance, economic supremacy
- **How?** Government support, economies of scale and constant innovation



Last week, President Xi Jinping committed China to producing a **comprehensive emissions reduction plan**, covering for the first time all economic sectors and greenhouse gases

# China's solar power capacity installations - 2013-2023

## 2013-2023年中国太阳能发电装机规模



数据来源：中电联



# China installed record solar and wind power capacity in 2024

## New Capacity Installed in China in Jan-Dec 2024

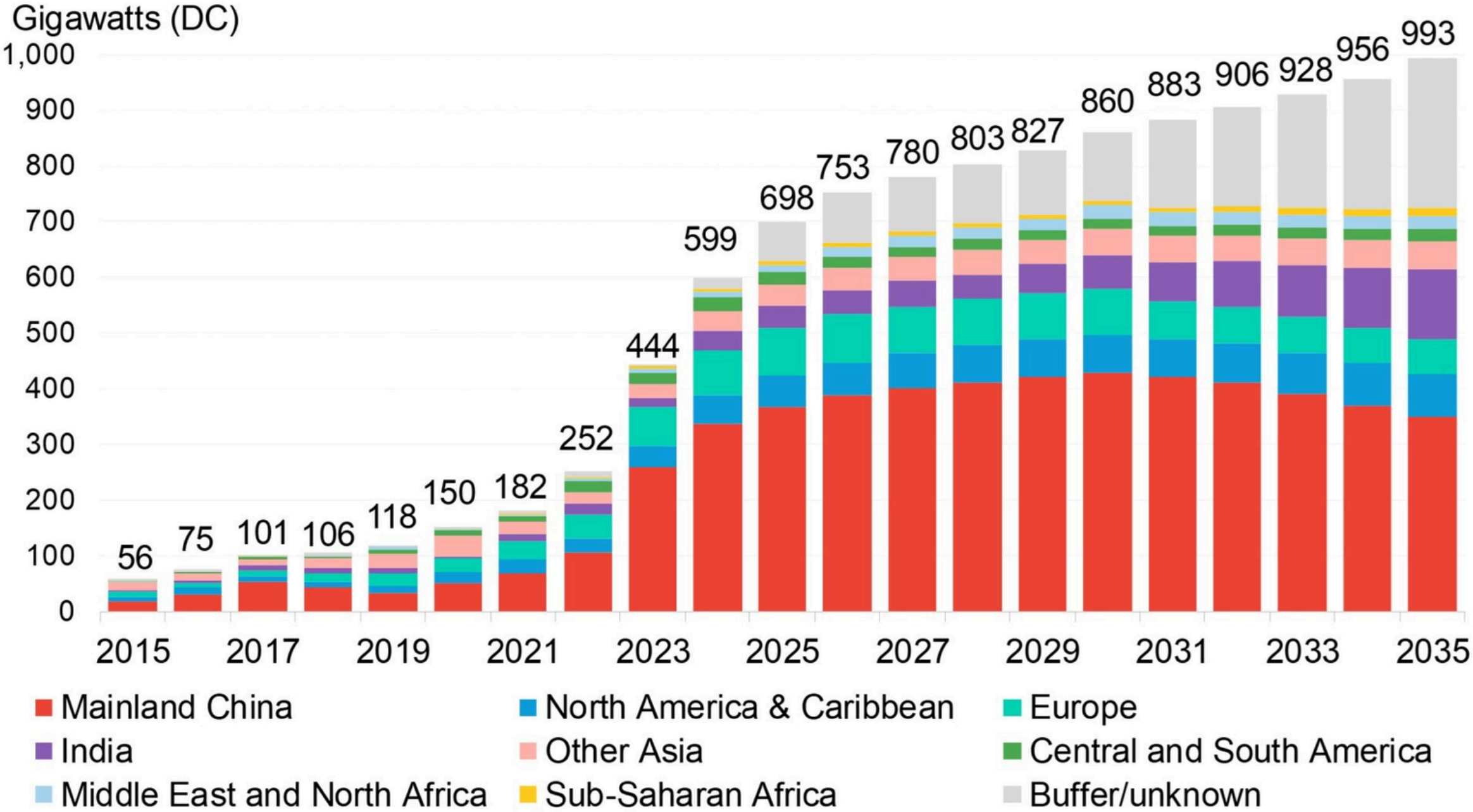
		Jan-Dec 24	% Share of total new adds	% yoy change	Dec-24	% Share of new adds
Thermal Power	GW	54.1	13%	-7%	10.2	9%
Hydropower	GW	14.4	3%	79%	3.9	3%
Nuclear Power	GW	3.9	1%	184%	2.8	2%
Wind Power	GW	79.3	18%	5%	28.5	25%
Solar Power	GW	277.2	65%	28%	68.3	61%
<b>Total capacity added</b>	<b>GW</b>	<b>429.0</b>	<b>100%</b>	<b>21%</b>	<b>113.6</b>	<b>100%</b>
Renewable Energy adds	GW	370.9	86%	25%	100.7	89%
Zero Emissions Capacity Adds	GW	374.8	87%	26%	103.4	91%
Total new spent on power grid investment	US\$bn	84.7		15%		

Source: NEA, CEF Estimates



# Ongoing deflation & technology improvements in solar + BESS

## PV installations, historical and forecast



Source: BloombergNEF. Note: Full data in BNEF's Capacity tool ([web](#) | [terminal](#)).

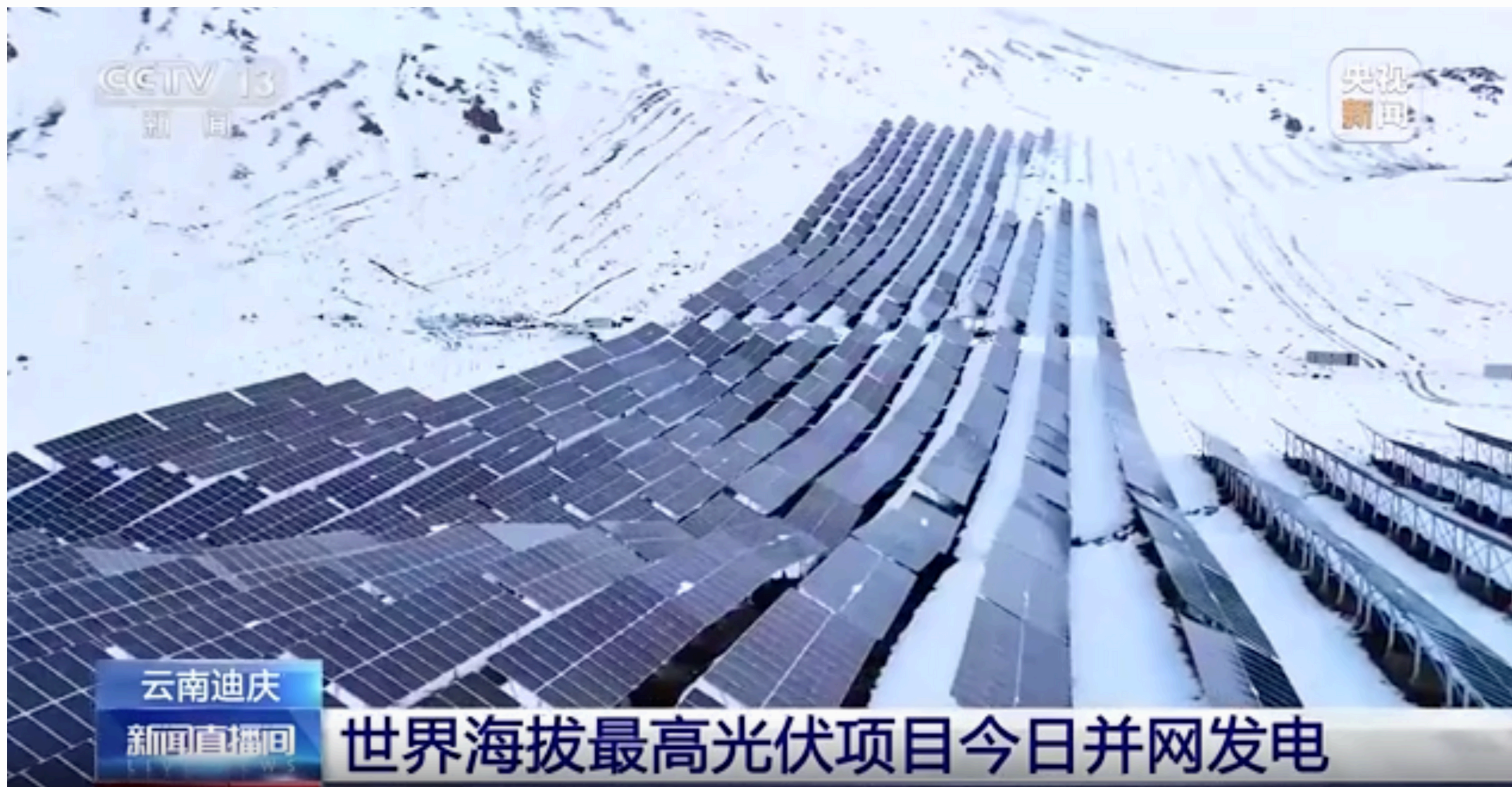




Aerial view of the Shandong Weiqiao Pioneering 2 GW PV – aquaculture project in the northern coastal area of Binzhou, Shandong Province



# World's highest-altitude solar photovoltaic project, Yunnan Province





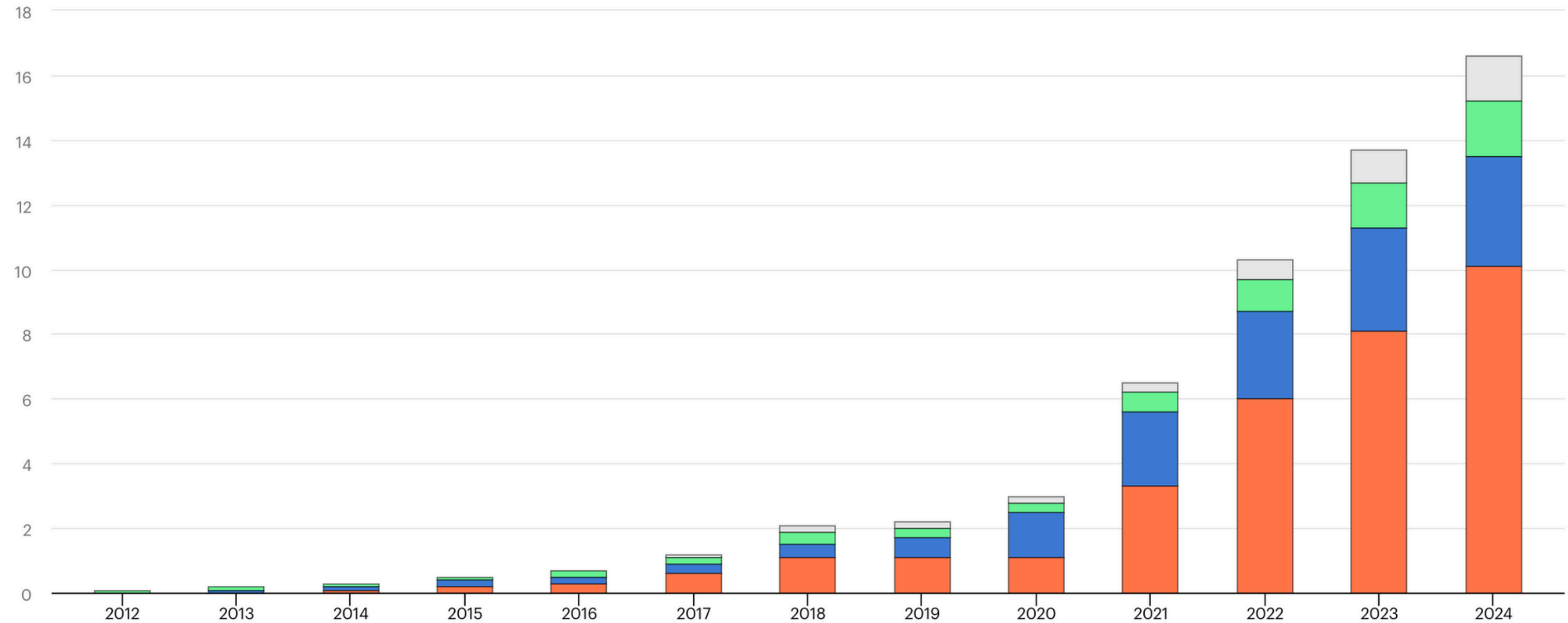
# Kubuqi Desert Photovoltaic "Junma" Power Station





# Global EV sales 2012-2024

million



IEA. Licence

● China ● Europe ● United States ● Rest of the world

Source: IEA, Global EV Outlook 2024: Trends in electric cars



# China's dominates EV sales and production - Q12025

## ELECTRIC VEHICLE SALES IN Q1 2025 VS Q1 2024, YTD %

Global **4,1** million **+29%**

China **2,4** million **+36%**

Europe **0,9** million **+22%**

North America **0,5** mill **+16%**

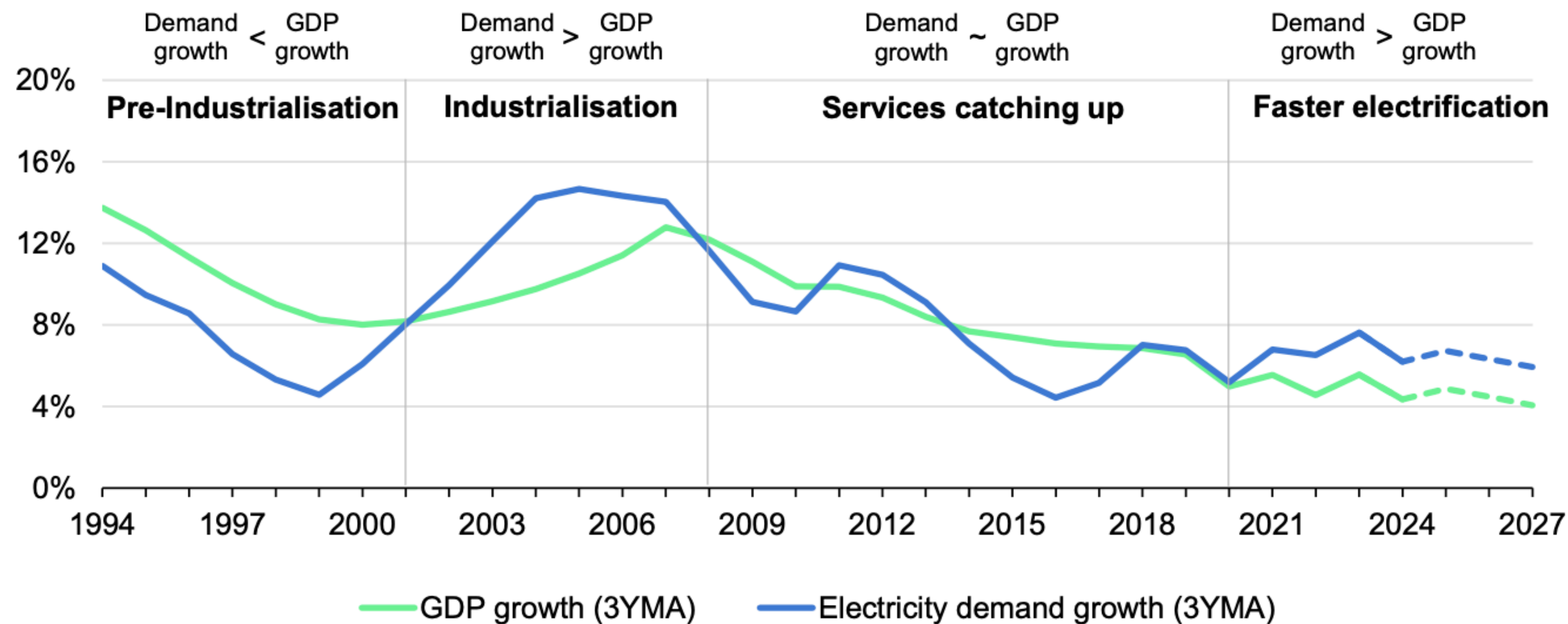
Rest of World **0,3** **+27%**

Source: Rhomotion, Global EV Sales Up 29% In 2025 From Previous Year, 15 April 2025



# Electricity demand in China has been growing faster than GDP since 2020

Growth rates of electricity demand and GDP in China, 1994-2027

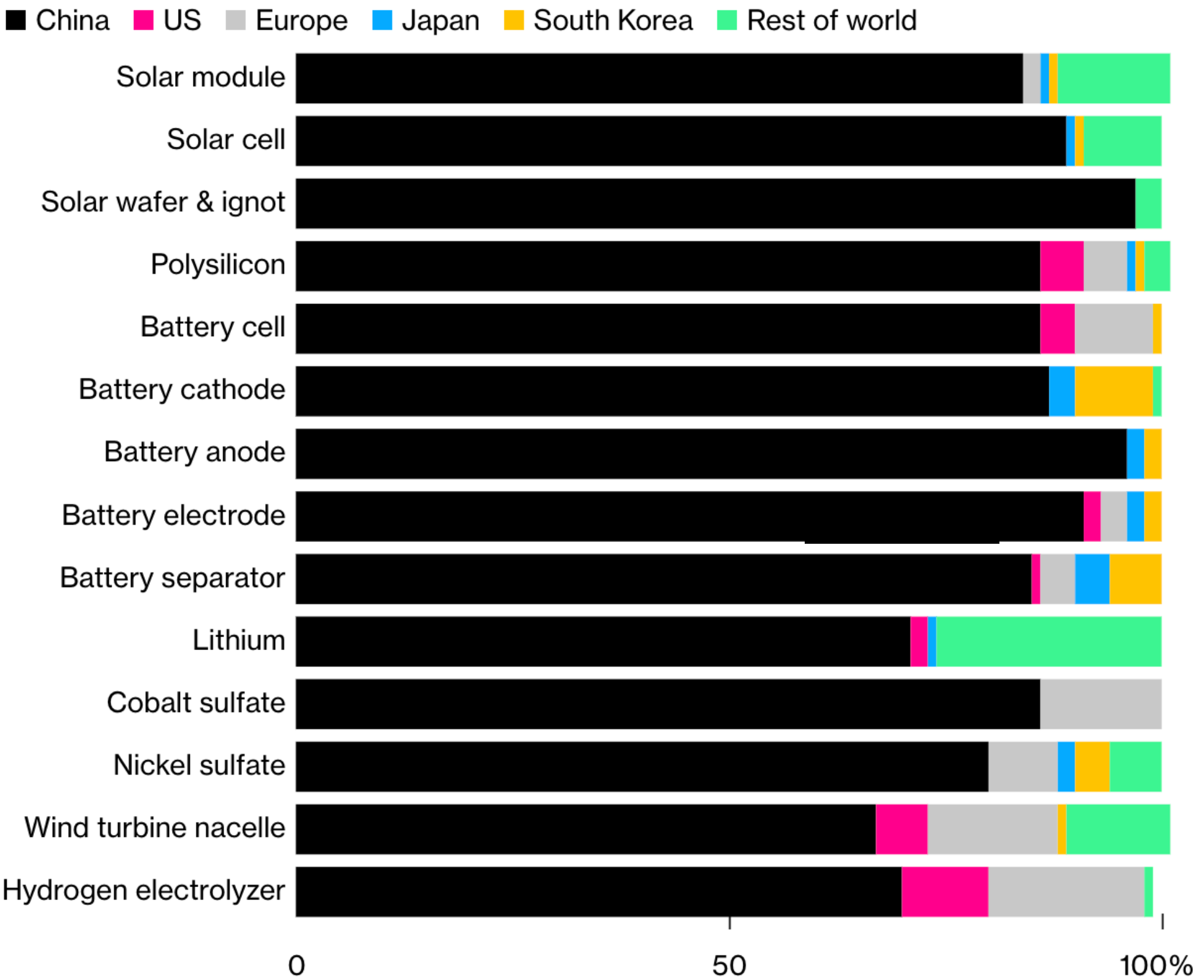


Source: [Electricity 2025, IEA](#)



# China Dominates Clean-Technology Supply Chains

Asian nation's share of global manufacturing capacity is above 80% in 11 segments



Source: BloombergNEF

Source: Bloomberg, [China Extends Clean-Tech Dominance Over US Despite Biden’s IRA](#), July 2024



## Rest of world ramps up trade defence

**The Inflation Reduction Act is reducing  
U.S. reliance on China**

EU imposes duties on unfairly subsidised electric vehicles from China while discussions on price undertakings continue

Brazil increases import tariffs on solar modules to 25%

**South Africa imposes 10% import tariff  
on solar panels**

A Clean Industrial Deal for competitiveness and decarbonisation in the EU

India mandates use of locally-made solar cells in clean energy projects from June 2026



## **Chinese companies ‘going global’ trend: Diversification and localisation**

“Chinese multinational companies are diversifying supply chains and deepening integration into host economies that offer strategic advantages, such as advanced manufacturing and innovation in Europe or access to regional markets in Southeast Asia” -

*Demystifying Chinese Investment in Australia, KPMG and University of Sydney*



# China's response to the growing US and EU protectionism: >US\$150bn of Outbound Foreign Direct Investment in clean tech sectors

## China's great green march across the globe

The Middle Kingdom wants to control the global clean-tech sector. Can it save the planet, too?

BY [TAN DAWN WEI](#), [DAVID FOGARTY](#) AND [WAHYUDI SOERIAATMADJA](#) | PUBLISHED: MAR 22, 2025

BEIJING/SINGAPORE/JAKARTA – On the outskirts of the Indonesian city of Semarang in Central Java, a new factory is cranking out solar cells and assembling solar panels with the help of robots, while autonomous carts whizz around ferrying parts and components.

The Trina Mas Agra Indonesia solar panel plant, operational since October 2024, is a US\$100 million joint venture between China's Trina Solar, Indonesian conglomerate Sinar Mas and Indonesian state utility PLN.

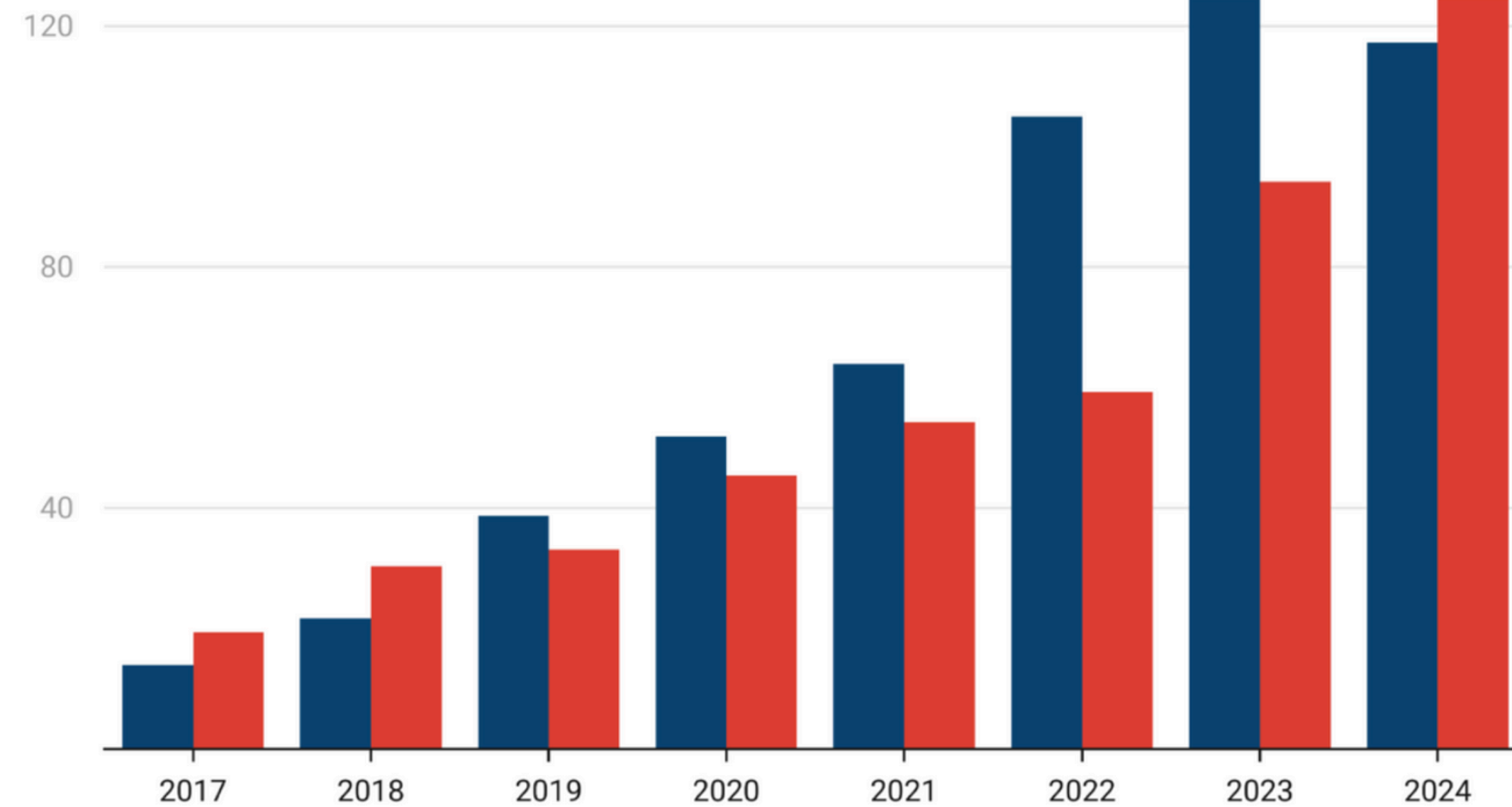
**Source:** The Straits Times, [China's great green march across the globe](#), 22 March 2025



## China's solar panel exports to global south have overtaken global north after more than doubling in two years

Annual exports, gigawatts

■ Global north ■ Global south



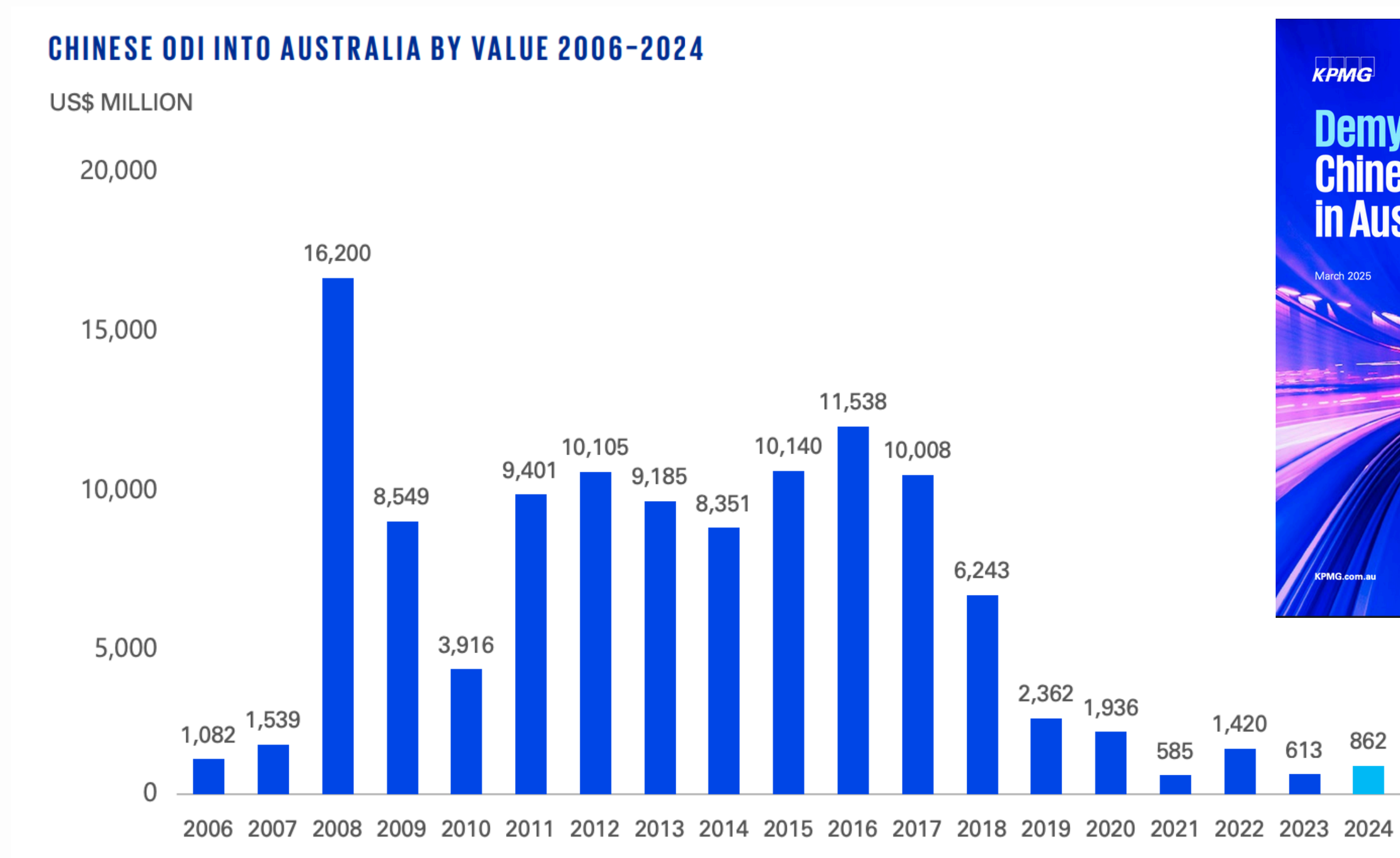
Source: Ember

**CarbonBrief**  
CLEAR ON CLIMATE

Source: CarbonBrief, [China Briefing 3 April 2025](#)



# Chinese FDI in Australia: 2024 saw the third-lowest investment in 18 years (all sectors)



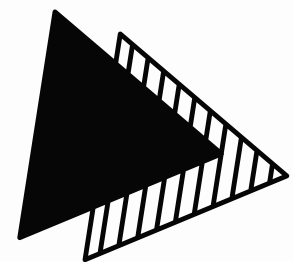
Source: Demystifying Chinese Investment in Australia 2025, KPMG & University of Sydney, March 2025



# **If Australia is serious about becoming a renewable energy superpower, China must be part of the answer**

- Decarbonisation, competitiveness and energy security imperatives
- Why China?
  - China is Australia's #1 trade partner with strong foundation and complementarities for deepening cooperation
  - China has world-leading clean tech manufacturing, renewable energy, and technology expertise; at the lowest cost
- **Now** is perfect timing
  - stabilisation + FMIA + US retreat + China stepping up globally
- If we don't engage, we will lose out. Chinese capital will go - is going - elsewhere





# *Opportunities*

- Critical minerals processing
- Clean energy manufacturing, (e.g. battery recycling and solar panel supply chains)
- Decarbonising electricity
- Energy storage and grids
- Training and workforce development

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**Fortescue inks green iron partnership with China Baowu**

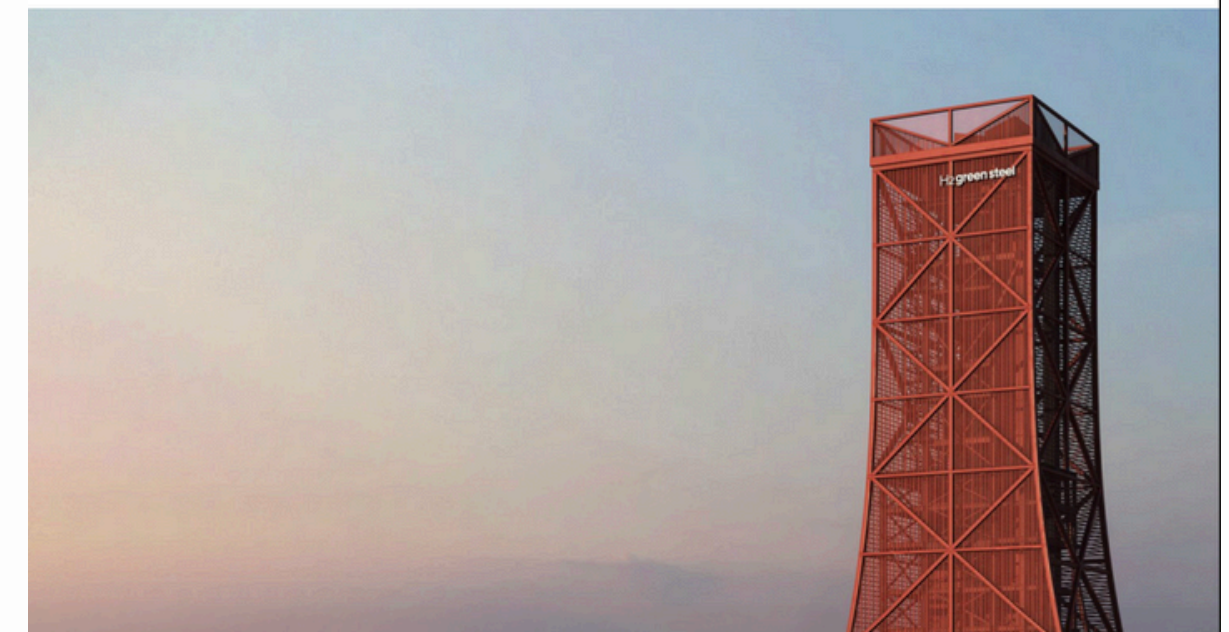
**CATL calls for Australia to build out lithium processing capacity to meet US battery needs**

Climate Energy Finance  
15 November 2024



**Green Metal Statecraft:  
Forging Australia's Green Iron Industry**

Matt Pollard, Net Zero Transformation Analyst, CEF  
Tim Buckley, Director, CEF





# Foreign Investment rules concerned with control and ownership, SOEs

## **BJEI Australia's planned 1 GW solar acquisition in doubt**

Chinese state-owned company Beijing Energy International has reportedly abandoned its bid to acquire a more than 1 GW package of Australian solar farms after failing to secure approval from the Foreign Investment Review Board.

Local content is essential, e.g. joint ventures or partnership-based M&As

SunDrive Solar and Trinasolar to manufacture solar panels in Australia

**IGO'S INVESTMENT IN A GLOBAL LITHIUM JOINT VENTURE WITH TIANQI LITHIUM CORPORATION**

**ZEN Energy, HDRE joint venture targets 1.4 GW of solar and storage**

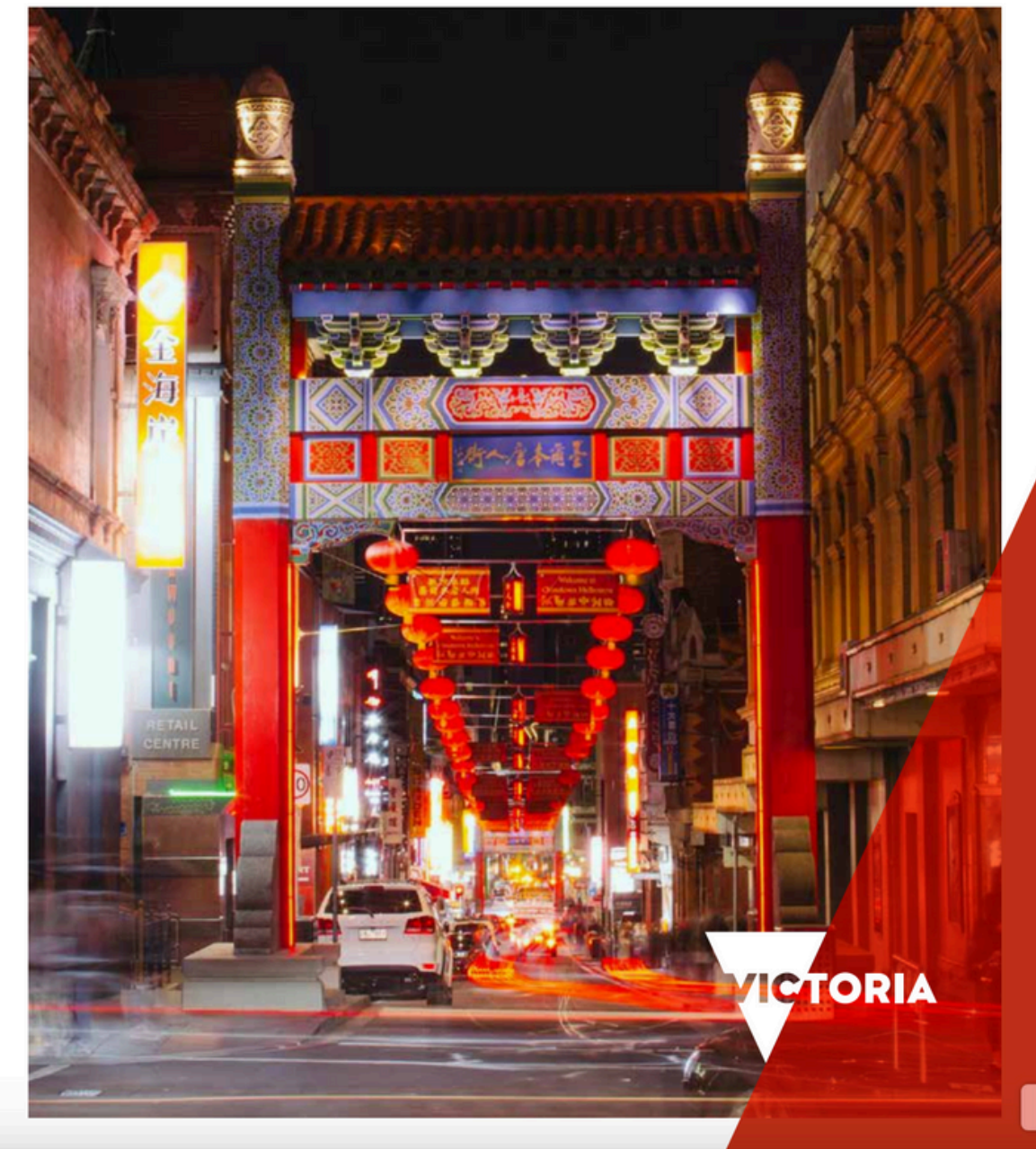


# The challenge: Building an enabling environment to unlock investment

- Government should **step up** to deliver:
  - National, comprehensive, **future-oriented** China strategy focussed on areas of mutually beneficial cooperation, including green economy
  - Policy stability and certainty for net zero transition
  - Negotiate a **bilateral decarbonisation agreements** with trading partners, incl China, for essential technologies through collaboration across R&D, industry and business
  - Clarify foreign investment requirements
  - Facilitate fast-tracked approvals for green tech collaborations.
  - Support for tech missions to China
  - COP31

Victoria's new China Strategy  
**Partnerships  
for prosperity**

深入了解  
Deeper understanding  
诚挚合作  
Genuine connections  
共同繁荣  
Mutual prosperity



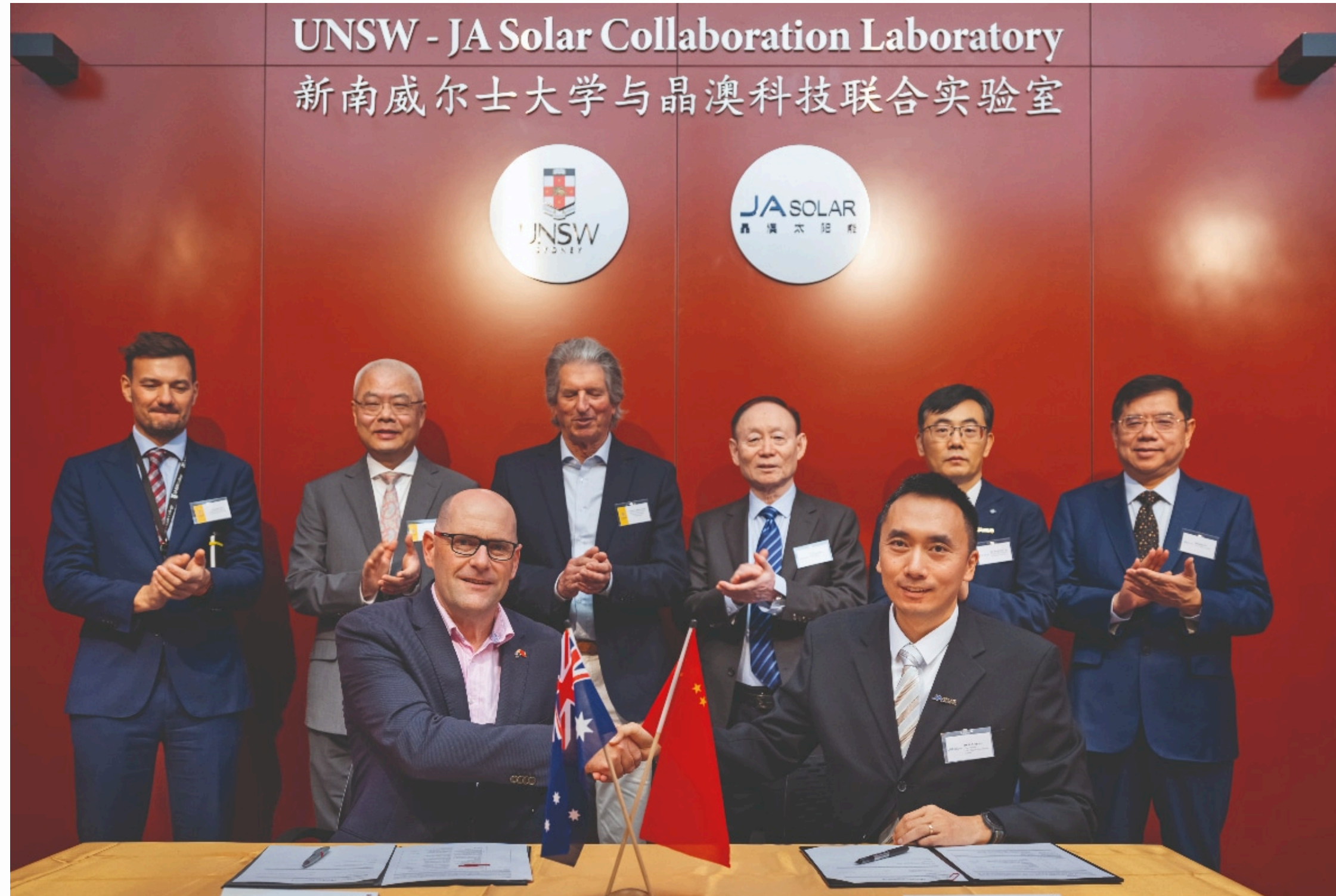


# Towards future-focussed collaboration - The need for vision, strategy and relationships

“We need to embrace a long-term vision. Reactive policies are unsustainable in a volatile global environment. To thrive, we must prioritise strategies that are resilient, future focused and aligned with our long-term national interests.”

- *David Ollson, President, ACBC*

# Success story: UNSW / JA Solar research-industry partnership

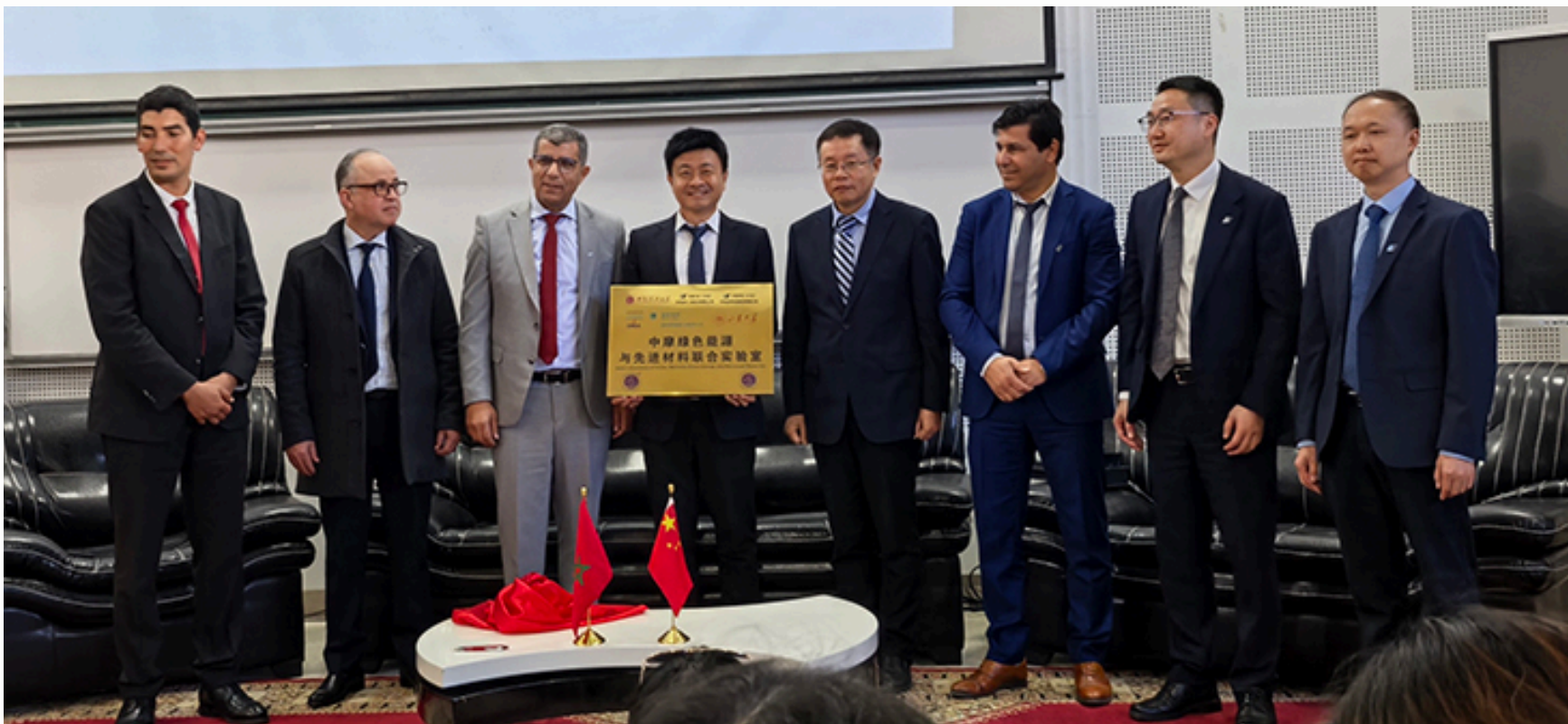


UNSW has also applied for ARC funding to develop an Industrial Transformation Training Centre in Solar PV Manufacturing

Source: <https://www.ecogeneration.com.au/ja-forging-solar-success/>



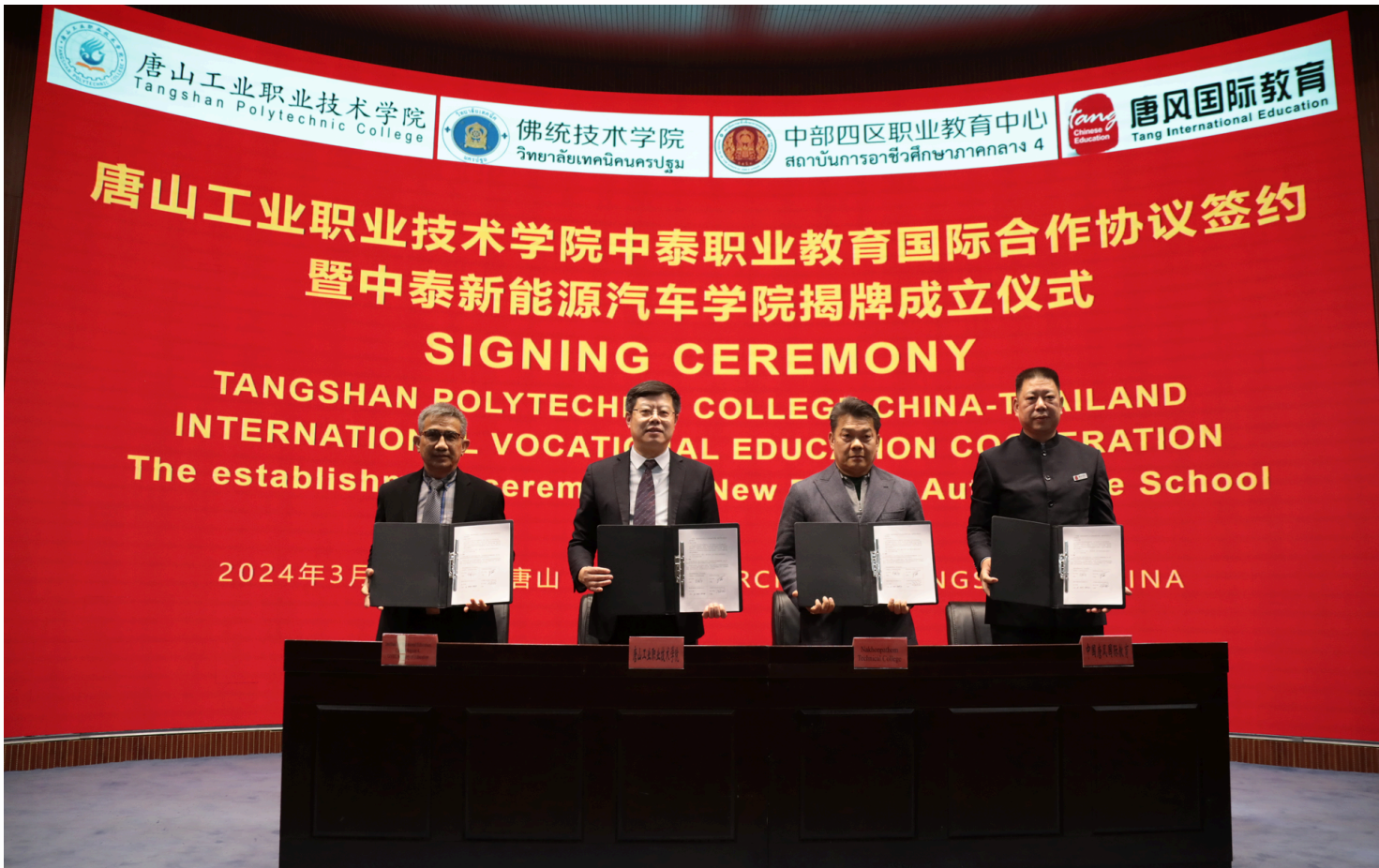
# On joint labs and training centres...



14/02/25 - China-Morocco Joint Laboratory for Green Energy and Advanced Materials



03/04/2024 - Trinasolar and Spain's Universidad Politécnica de Madrid



06/03/2024 - China-Thailand Vocational Education International Cooperation Agreement and the China-Thailand New Energy Vehicle College

10/03/25 - Saudi utility giant ACWA Power and Shanghai Jiao Tong University inaugurated an Innovation Centre in Shanghai to advance research in renewables, energy storage, and desalination





*“Nothing in life is to be feared, it is only to be understood. Now is the time to understand more, so that we may fear less.” - Marie Curie*

Thank You