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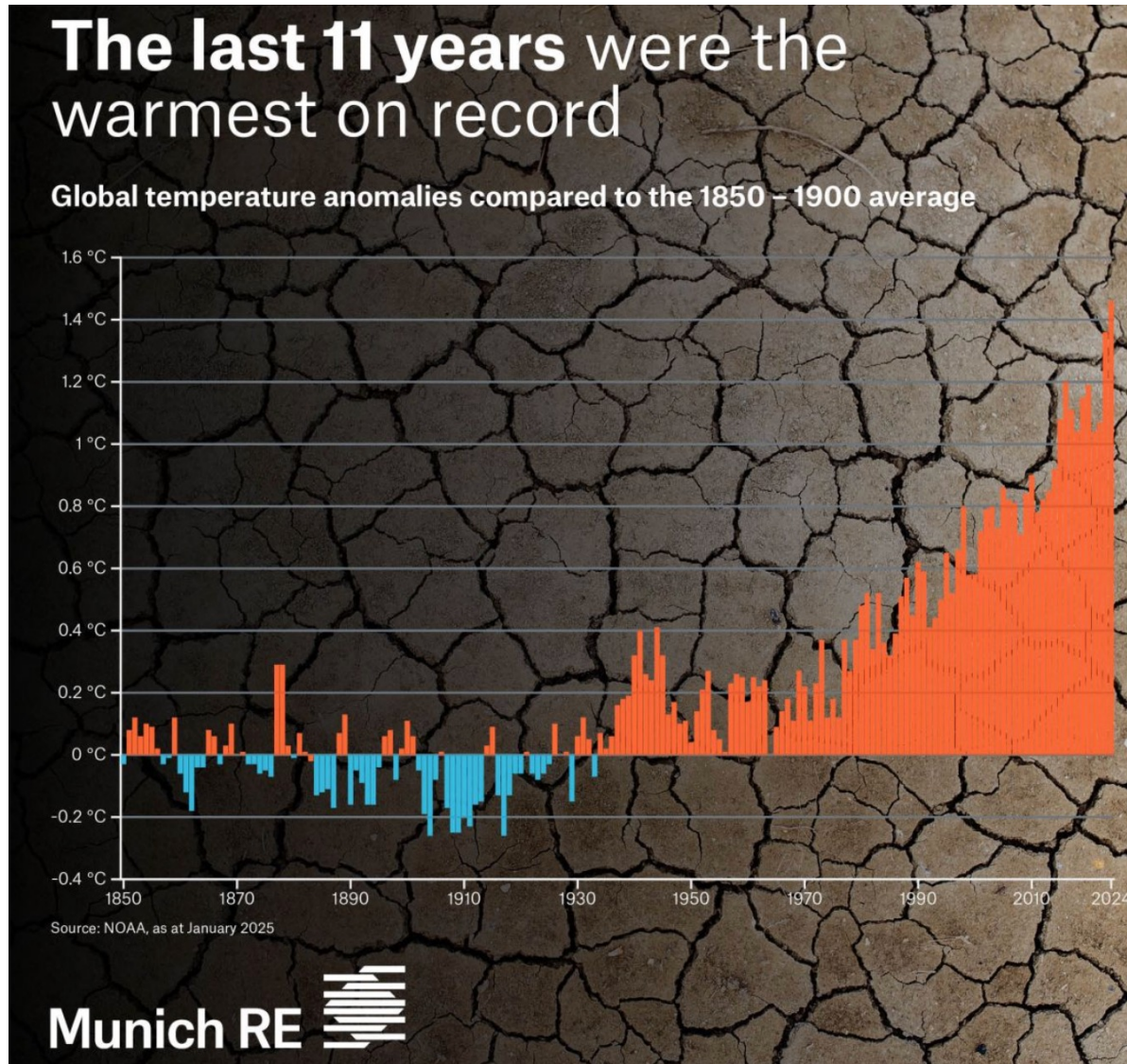
Climate Leaders Coalition

**The state of China's push
into clean technology and
the implications for
businesses operating in
Australia**

22 May 2025

CEF accepts the climate science

CEF is a public interest thinktank with no government or corporate funding

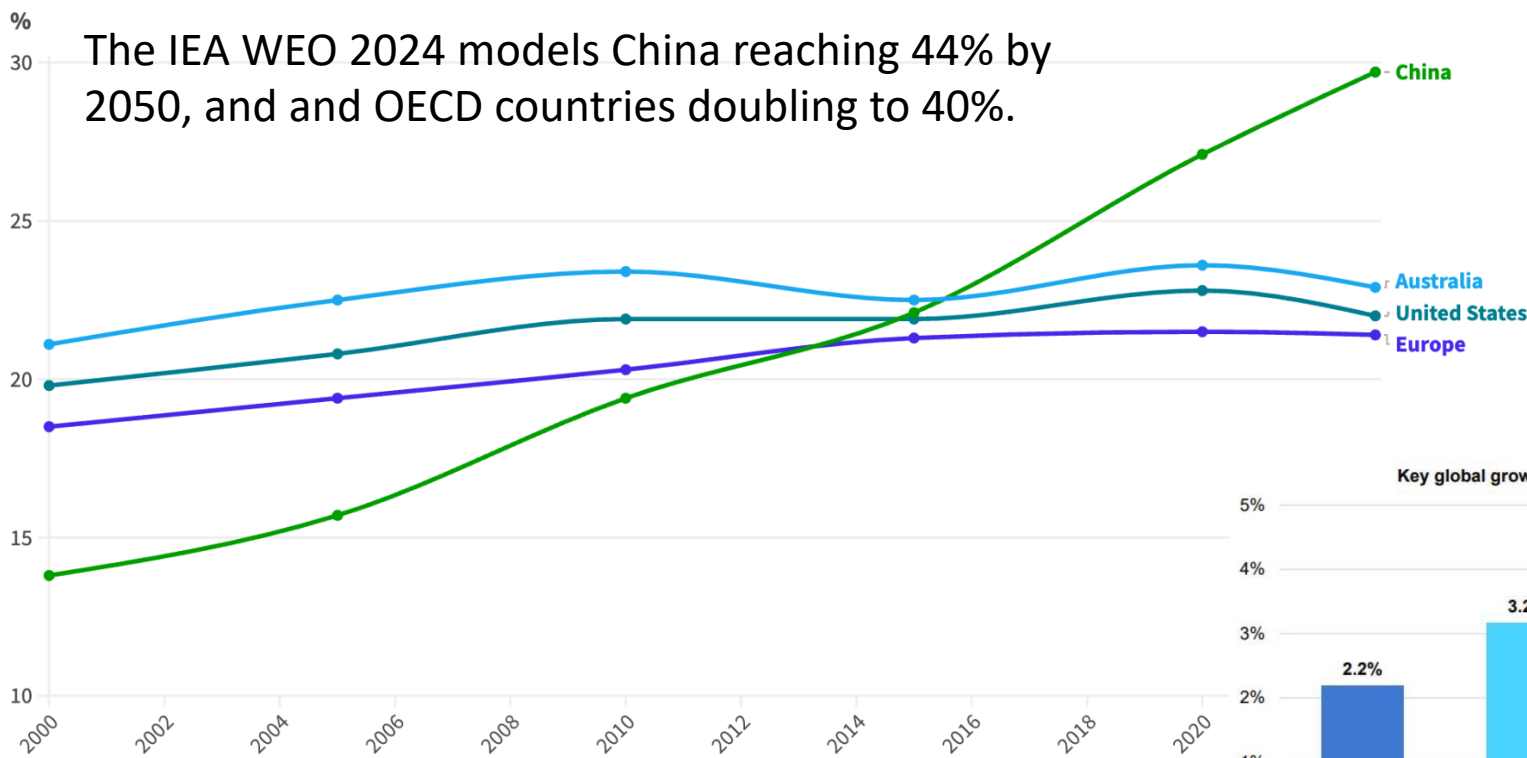


China's Electrification of Everything

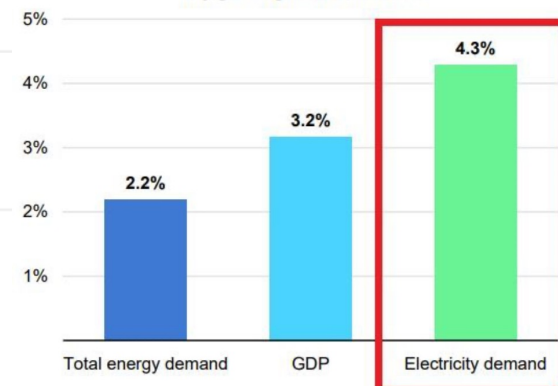
China Leads the world on Progressive Electrification of Everything

Share of final energy from electricity

China has leapfrogged United States, Europe and Australia in electrification



Key global growth rates, 2024



Source: CEF calculations, [Enerdata](#)

China is Moving in Decarbonisation, Rapidly

China is still adding flexible coal power plants, with utilization rates are down to average just 47% in 1QCY2025, balancing ever more VRE!

China deployed 76GW of renewable energy capacity in 1QCY2025.

China's Electricity Generation Mix in Jan-March 2025

		Jan-Mar 25	% Change yoy	Share of generation	Mar-25	% Change yoy
Thermal Power	TWh	1,494	-4.1%	61%	497	-1.7%
<i>Coal</i>	TWh	1,421	-4.1%	58%	473	-1.7%
<i>Gas</i>	TWh	69	-4.1%	3%	23	-1.7%
<i>Other Thermal</i>	TWh	4	-4.2%	0%	1	-1.4%
Bioenergy	TWh	47	-4.1%	2%	16	-1.8%
Hydropower	TWh	226	7.2%	9%	79	10.5%
Nuclear Power	TWh	117	12.8%	5%	43	23.0%
Wind Power	TWh	307	14.8%	13%	114	14.1%
Solar Power	TWh	254	44.7%	10%	93	31.1%
TOTAL POWER GENERATION	TWh	2,445	3.4%	100%	841	5.3%
Variable Renewable Generation	TWh	561	26.7%	23%	207	21.2%
Zero Emissions Power Generation	TWh	951	17.9%	39%	344	17.5%

Source: National Bureau of Statistics, Ember, CEF Estimates

China's electrification leadership drives decarbonisation

Fossil generation has decoupled from electricity demand growth in China (since 2014) & India (2024/25) due to accelerated pace of clean deployments

China's CO2 emissions drop due to clean energy for first time

Emissions from fossil fuels and cement, MtCO₂, rolling 12-month totals

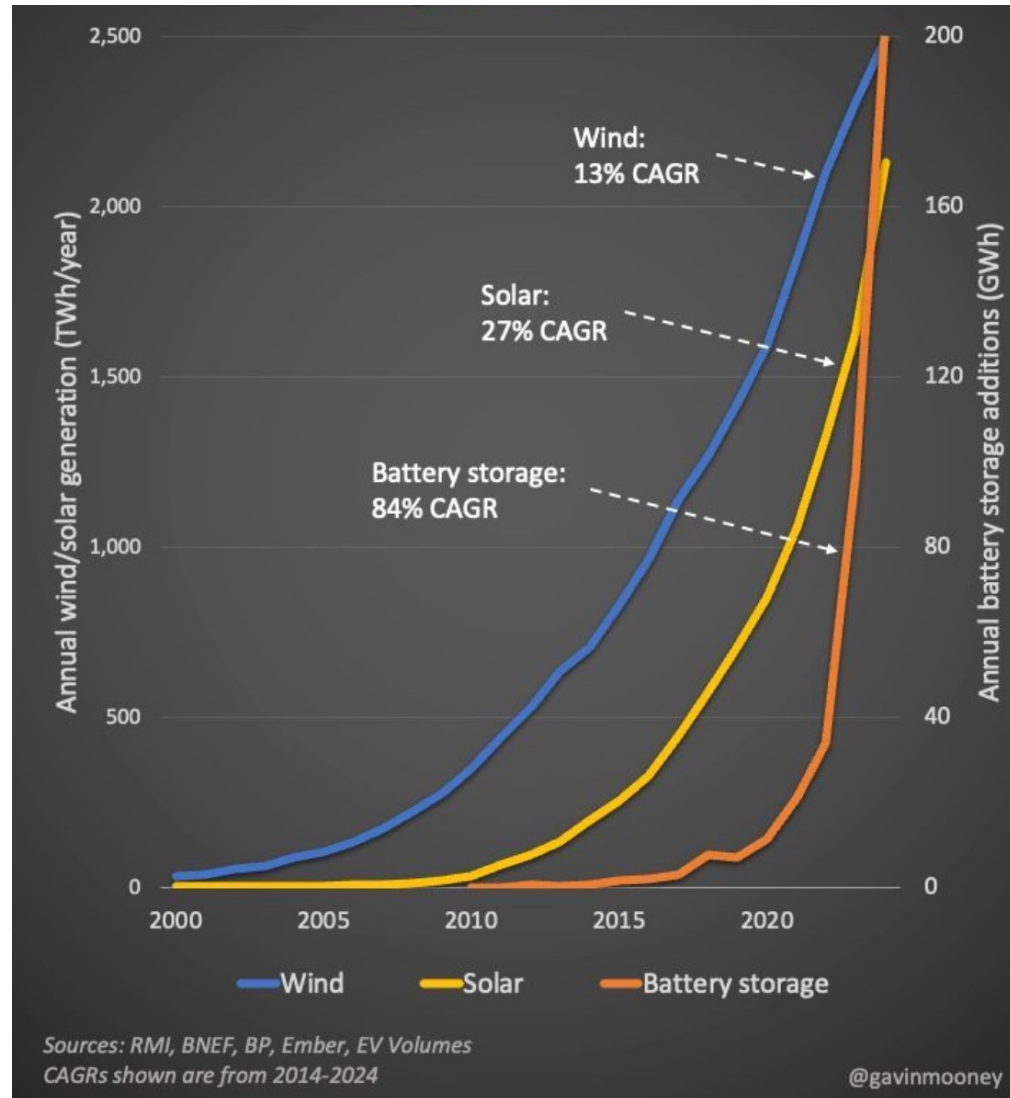


Source: Analysis by Lauri Myllyvirta for Carbon Brief

CarbonBrief
CLEAR ON CLIMATE

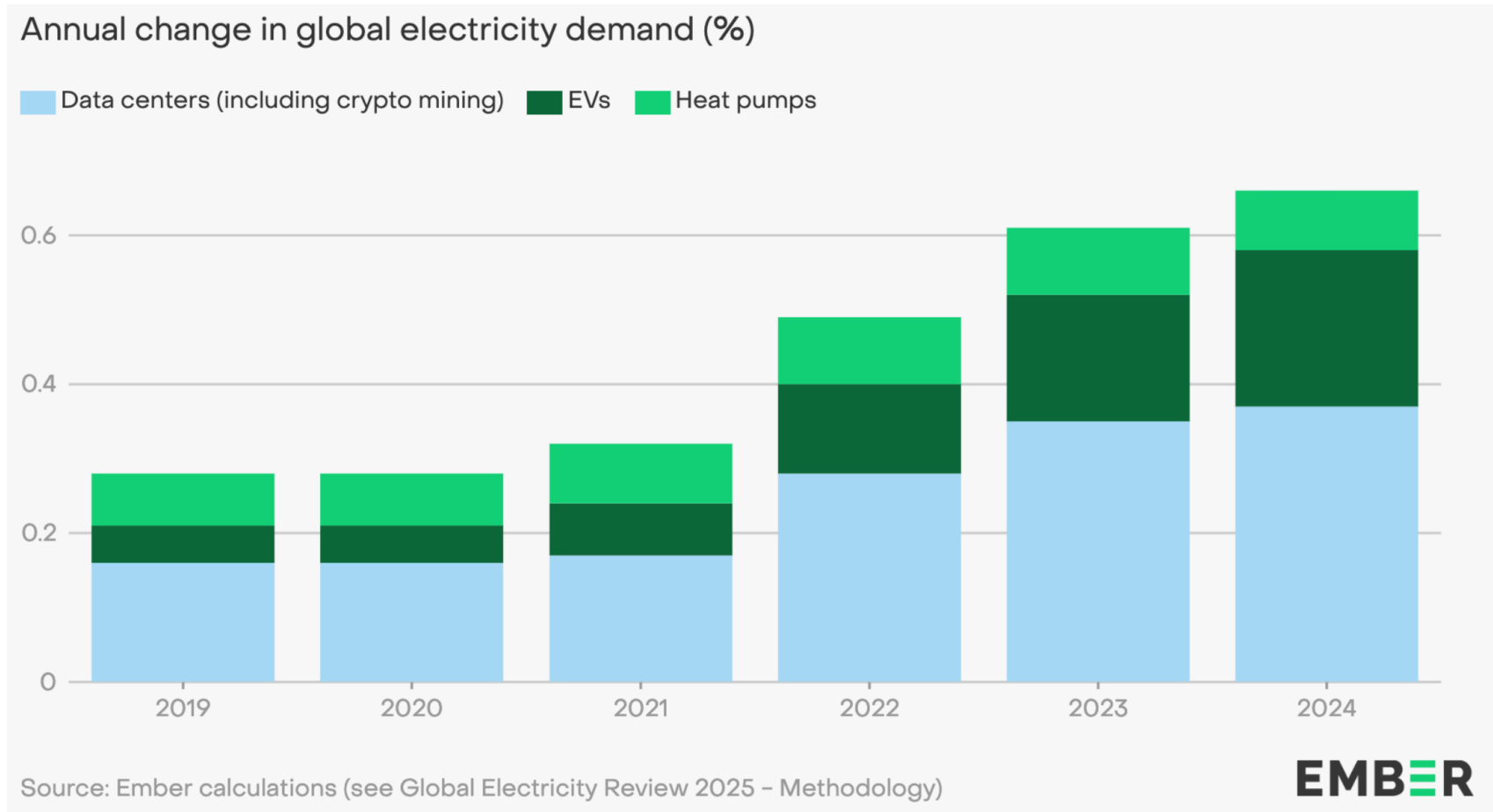
Global Cleantech Investment

As Battery Prices have Fallen, global Installations have Taken Off
Solar + BESS + V2G => Accelerated Energy System Transformation






Cleantech Investment Dominance

Electrification of everything is a major driver of global electricity demand, replacing oil & gas demand (e.g. cars). Data centres, EV and heat pumps are contributing twice as much demand growth as they were 5 years ago.





New Energy Vehicles & BESS

NEV & BESS momentum has accelerated to-date in 2025

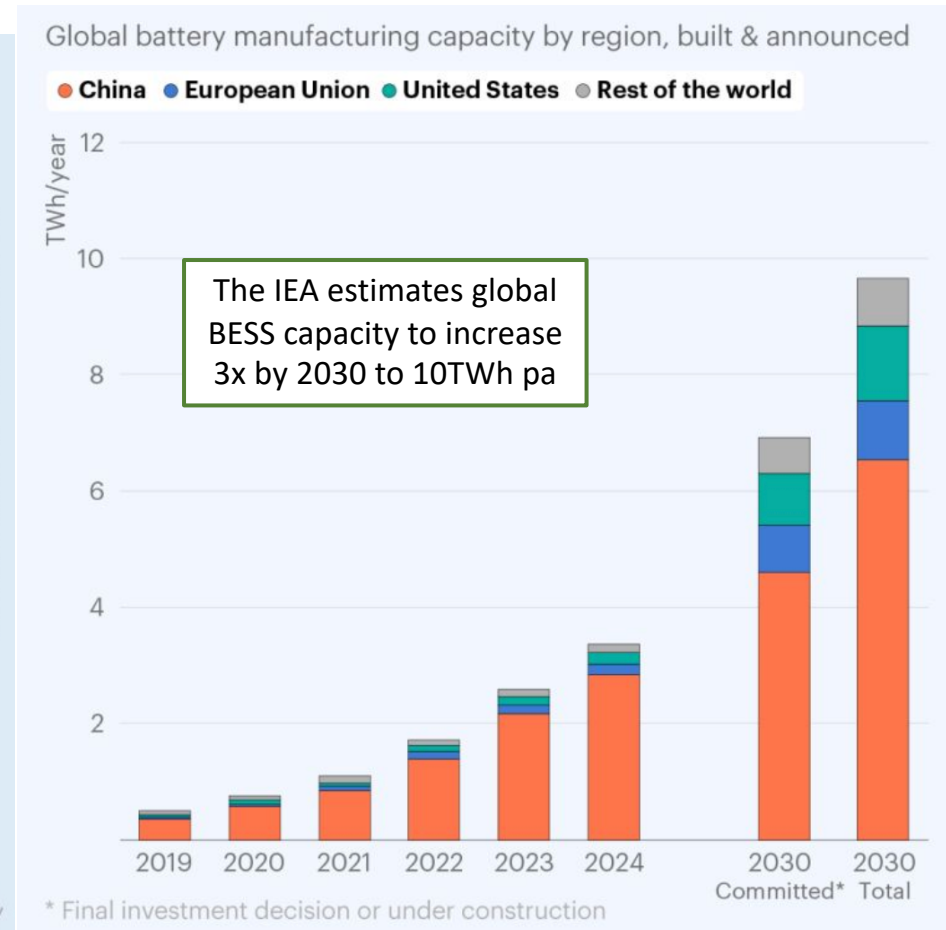
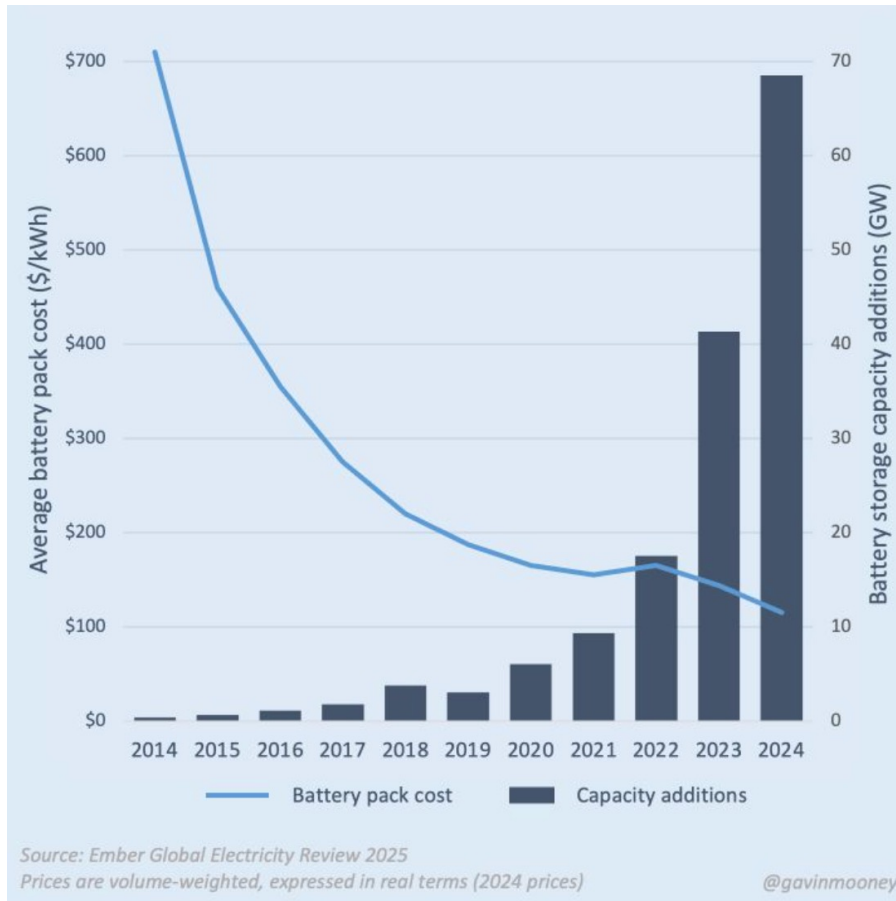
- Global EV sales were  29% yoy in 4M CY2025
- EU EV sales were  25% yoy in 4M CY2025
- China EV sales were  35% yoy in 4M CY2025
- North American EV sales were +5% yoy in 4M CY2025

- BYD global NEV sales in 1QCY2025 were 1,000,804 vehicles, +60% yoy.
- Tesla's global sales were -13% yoy 1QCY2025, delivering 336,000 vehicles

- BYD global BESS sales in 1QCY2025 were a record 52.6GWh, up  77% yoy.
- Tesla 1QCY2025 deployed 10.4 GWh of energy storage products,  157% yoy

Global Cleantech Investment

As Battery Prices have Fallen, global Installations have Taken Off
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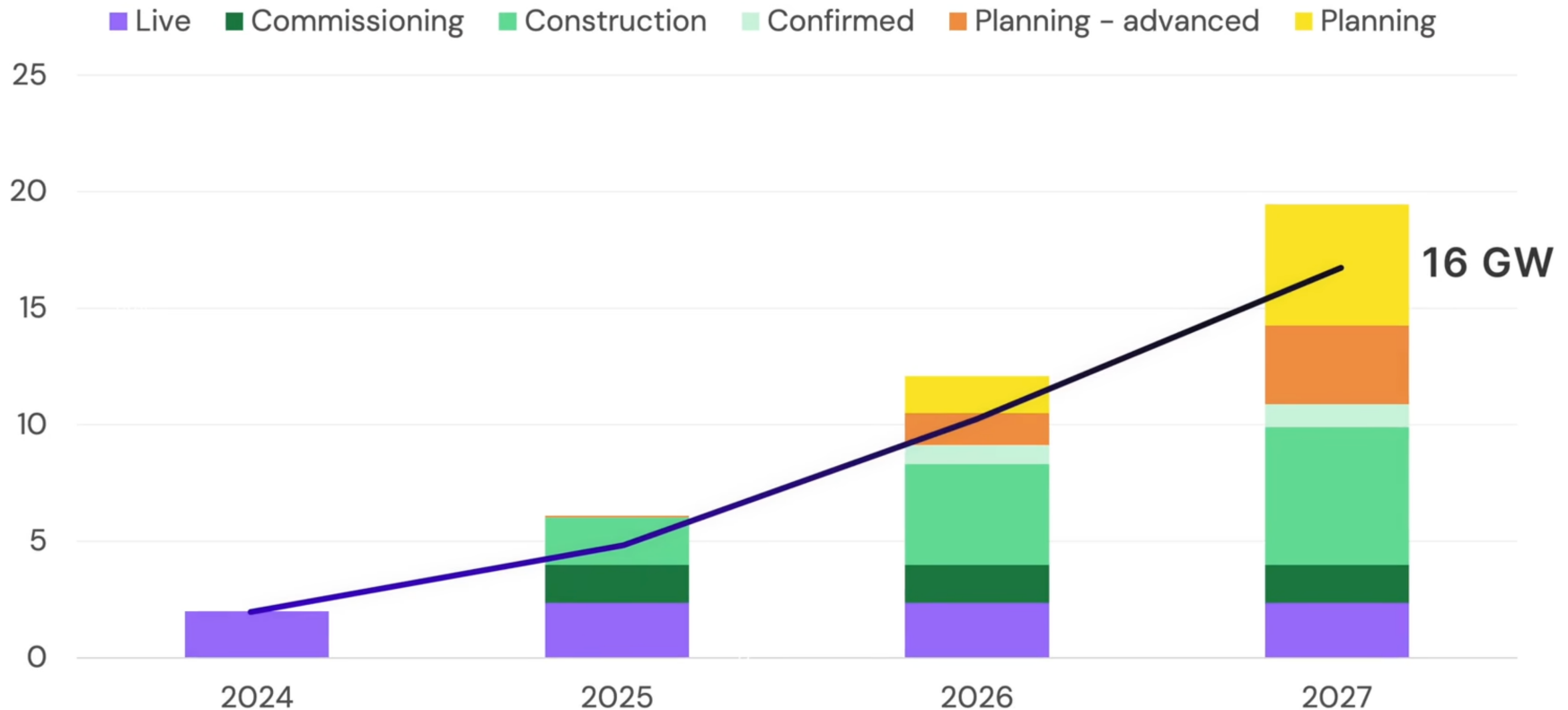
Source: Gavin Mooney

https://www.linkedin.com/posts/gavinmooney_batteries-energy-sustainability-activity-7322389965185712129-ssdP?utm_source=share&utm_medium=member_desktop&rcm=ACoAAAK_xL4BN5TFix7F-X4g0YfwtHJ1QLTvZoQ

Global Cleantech Investment

Australian BESS uptake is at record levels, soon to be boosted again by the Federal government's \$2.3bn 30% battery rebate

Cumulative operational and pipeline battery energy storage capacity by current status (GW)



MODOENERGY

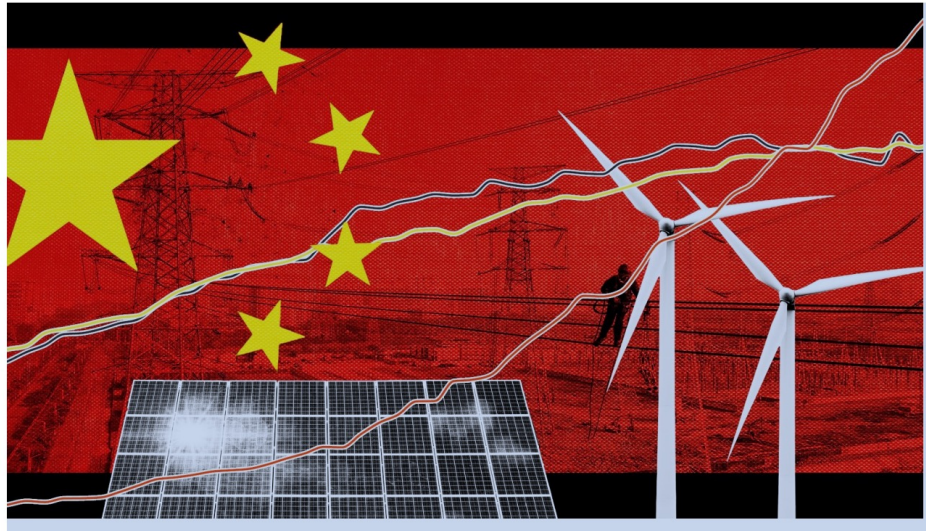
Source: Wendel Hortop, Modo Energy 8 May 2025

https://www.linkedin.com/posts/wendel-rhys-hortop_355-mw-of-new-bess-capacity-coming-online-activity-7325278123048984577-91bO?utm_source=share&utm_medium=member_desktop&rcm=ACoAAAK_xL4BN5TFIx7F-X4g0YfwtHJ1QLTvZoQ

China is Ready for the US Trade War

How Xi sparked China's electricity revolution

Beijing's aggressive pursuit of energy self-sufficiency could give it the upper hand in the trade war with the US



Nassos Stylianou & Jana Tauschinski in UK and Edward White in Shanghai FT 12 May 2025

Today, as the world is rocked by Donald Trump's trade war, the view from the CCP's leadership compound in Beijing's Zhongnanhai is starkly different. **China is on its way to becoming the world's first "electrostate"**, with a growing share of its energy coming from electricity and an economy increasingly driven by clean technologies. It offers China a strategic buffer from trade decoupling and rising geopolitical tensions with the US.

The country is not only rapidly advancing towards self-sufficiency in energy from secure domestic sources, but also wields vast power over the markets for the resources and materials that underpin technologies of the future.

China is Responding to US Isolationism

As the US self-isolates and embraces climate science denialism, this opens new options for strategic alliances

China, Japan, S. Korea Renew Free-Trade Call, Vow to Build Ties

By [Yoshiaki Nohara](#) and [Soo-Hyang Choi](#) 30 March 2025 Bloomberg

Trade chiefs from China, Japan and South Korea renewed their call for an open, fair flow of goods and pledged to deepen economic ties, a few days before the Trump administration is set to unleash fresh tariffs on nations around the world.

South Korea's Industry Minister Ahn Duk-geun and his counterparts, Yoji Muto of Japan and China's Wang Wentao, discussed a free trade agreement in Seoul. While they didn't signal significant progress toward a pact, the gathering demonstrated increasing willingness among the three countries to strengthen ties as they face the impact of US tariffs.

"We especially recognized the need for ongoing trilateral economic and trade cooperation to effectively address emerging challenges and achieve tangible outcomes in key areas," the ministers said in a joint statement.

UK and China restart meaningful climate change dialogue

Energy Secretary calls for action and cooperation from China to tackle the climate emergency.



From: [Department for Energy Security and Net Zero](#) and [The Rt Hon Ed Miliband MP](#)

Published 14 March 2025

Joint statement between the people's Republic of China and the French Republic on climate change on the occasion of the tenth anniversary of the Paris Agreement

27 March 2025 The People's Republic of China and the French Republic:

Considering the urgency of responding to the climate crisis and its impact on ecosystem, civil society and global economy, and recognizing the indispensable role of international cooperation in implementing the three Rio Conventions, the Kyoto Protocol, the Paris Agreement, the Kunming-Montreal Global Biodiversity Framework and the United Nations Sustainable Development Goals.

Reiterating the strong commitments to enhance international cooperation on climate change and uphold multilateralism, and the firm support for the Paris Agreement and its temperature goal of holding the increase in the global average temperature well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels.



Source: CEF Oped: [Caroline Wang, April 2025 "If Australia is serious about becoming a renewable energy superpower, China must be part of the answer"](#)

<https://www.lowyinstitute.org/the-interpreter/if-australia-serious-about-becoming-renewable-energy-superpower-china-must-be-part>

Australia is Responding to China's Challenge

Strategic public capital is a key facilitator, in the absence of a CO₂ price signal

FMIA, CIS, RTN, NRF, Future Fund, CEFC, ARENA, EFA, NAIF

Capacity Investment Scheme

The Capacity Investment Scheme (CIS) is an Australian Government revenue underwriting scheme to accelerate investment in:

- 23 GW of renewable capacity representing \$52 billion in investment
- 9 GW of clean dispatchable capacity representing \$15 billion in investment.

South Australia

Australian
Associated Press

20 Feb 2025

Troubled Whyalla steelworks gets \$2.4bn government bailout as hunt for new owner begins

“Crucial support:” Federal Labor launches \$2bn green aluminium production credit scheme



RENEW ECONOMY

Andrew Brown

Jan 20, 2025

Rio Tinto says aluminium could run on renewables and batteries

FINANCIAL REVIEW

Feb 6, 2025

\$19bn Rewiring the Nation Fund

The \$19 billion Rewiring the Nation (RTN) Fund is a significant expansion of CEFC investment capacity, with a particular focus on facilitating the timely delivery of grid and transmission projects, using CEFC capital to accelerate the benefits of grid transformation to consumers, including helping to lower consumer energy costs.

\$200 million investment in critical minerals to build Australia's future

15 January 2025

The Hon Ed Husic MP

Minister for Industry and Science

The Albanese Government's National Reconstruction Fund Corporation (NRFC) will invest \$200 million in Arafura Rare Earths to help build Australia's Future.