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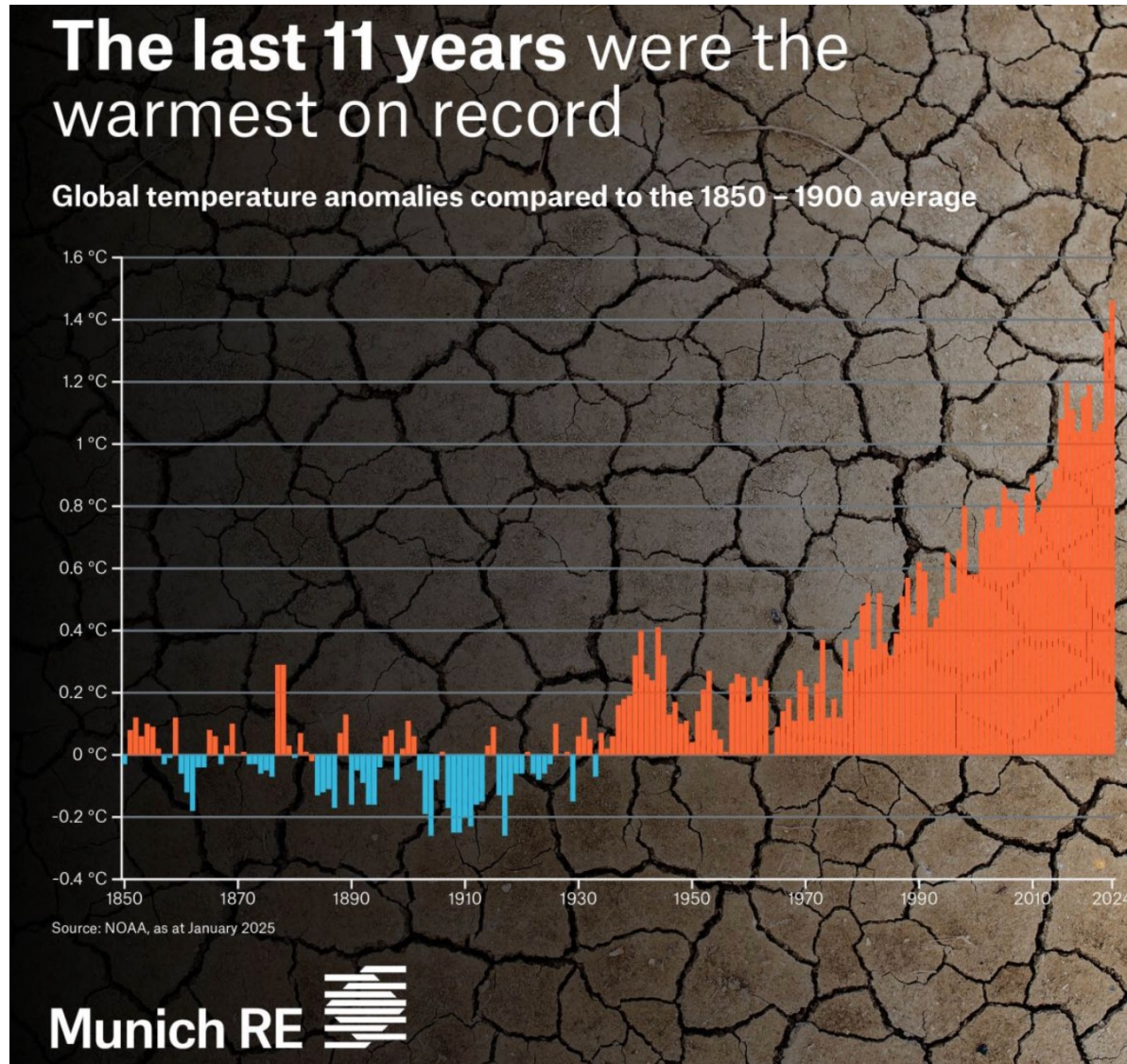
Asia Pacific Women of Faith Network (APWoFN) Climate Flagship Project 2025

The Global Energy System Transformation

30 July 2025

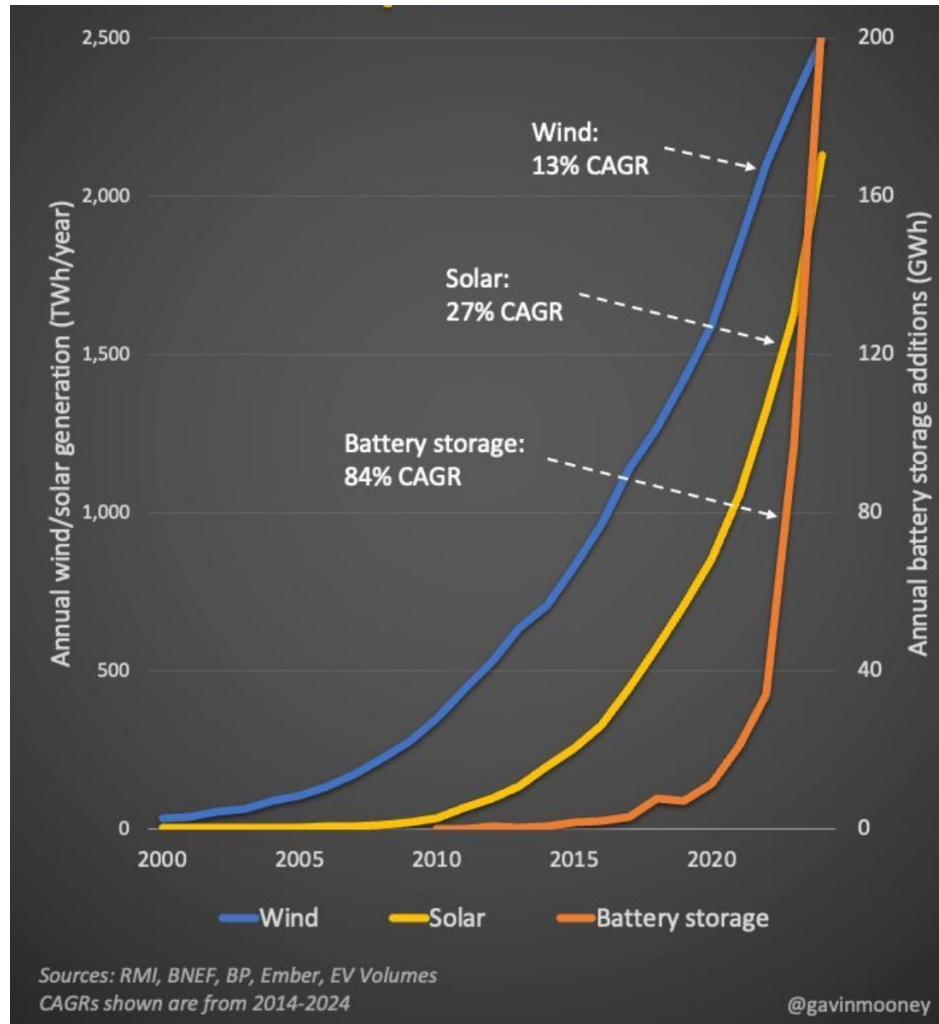
CEF accepts the climate science

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



Global Cleantech Investment is Accelerating

**As Battery Prices fell 50% in 2 years, global Installations have Taken Off
Solar + BESS + V2G => Accelerated Energy System Transformation**



IRENA 22 July 2025: In 2024, solar PV was, on average, 41% cheaper than the lowest-cost fossil fuel alternatives, while onshore wind projects was 53% cheaper. Onshore wind remained the most affordable source of new RE electricity at US\$34/MWh, followed by solar PV at US\$43/MWh.

China is Moving in Decarbonisation, Rapidly

China is still adding flexible coal power plants (too much!), but utilization rates are down to average just 46% in 1H CY2025, balancing ever more VRE! China deployed 268GW of renewable energy capacity in 6M to-date CY2025.

China deploys as much wind 4 days as Australia does each year.

New Electricity Capacity Installed in China in Jan-Jun 2025

		Jan-Jun 25	% Share of new adds	% yoy change	Jun-25	% Share of new adds
Thermal Power	GW	26	9%	41%	8.2	29%
Hydropower	GW	4	1%	-21%	0.7	2%
Nuclear Power	GW	-	0%	0%	-	0%
Wind Power	GW	51	18%	99%	5.1	18%
Solar Power	GW	212	72%	107%	14.4	51%
Total capacity added	GW	293	100%	92%	28.4	100%
Renewable Energy adds	GW	268	91%	101%	20.2	71%
Zero Emissions Capacity Adds	GW	268	91%	99%	20.2	71%
YTD power grid investment	US\$bn	41		15%		

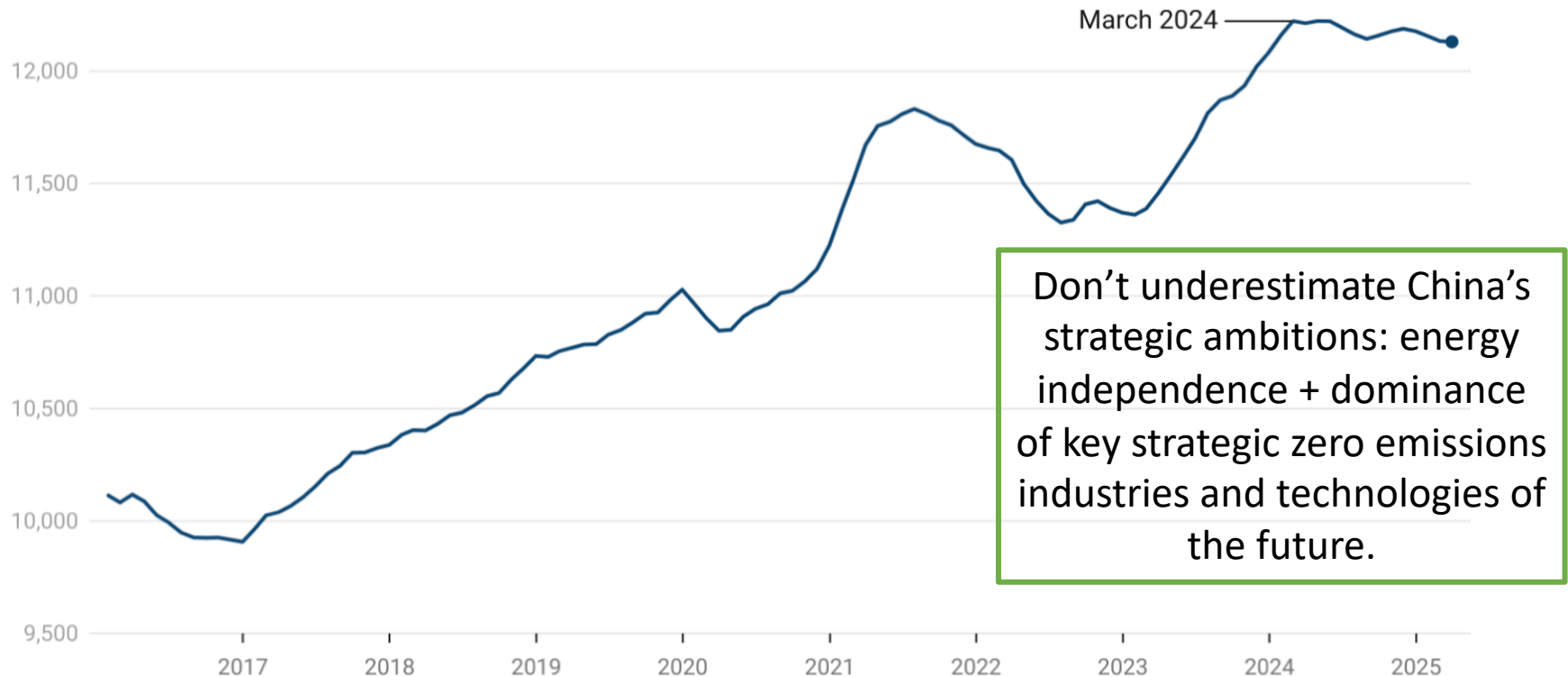
Source: National Energy Administration, CEF calculations

China's electrification leadership drives decarbonisation

China's electrification is about energy security i.e. permanently reducing reliance on imported fossil fuels. Combined with lower steel and cement production => national emissions in China have plateaued.

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

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

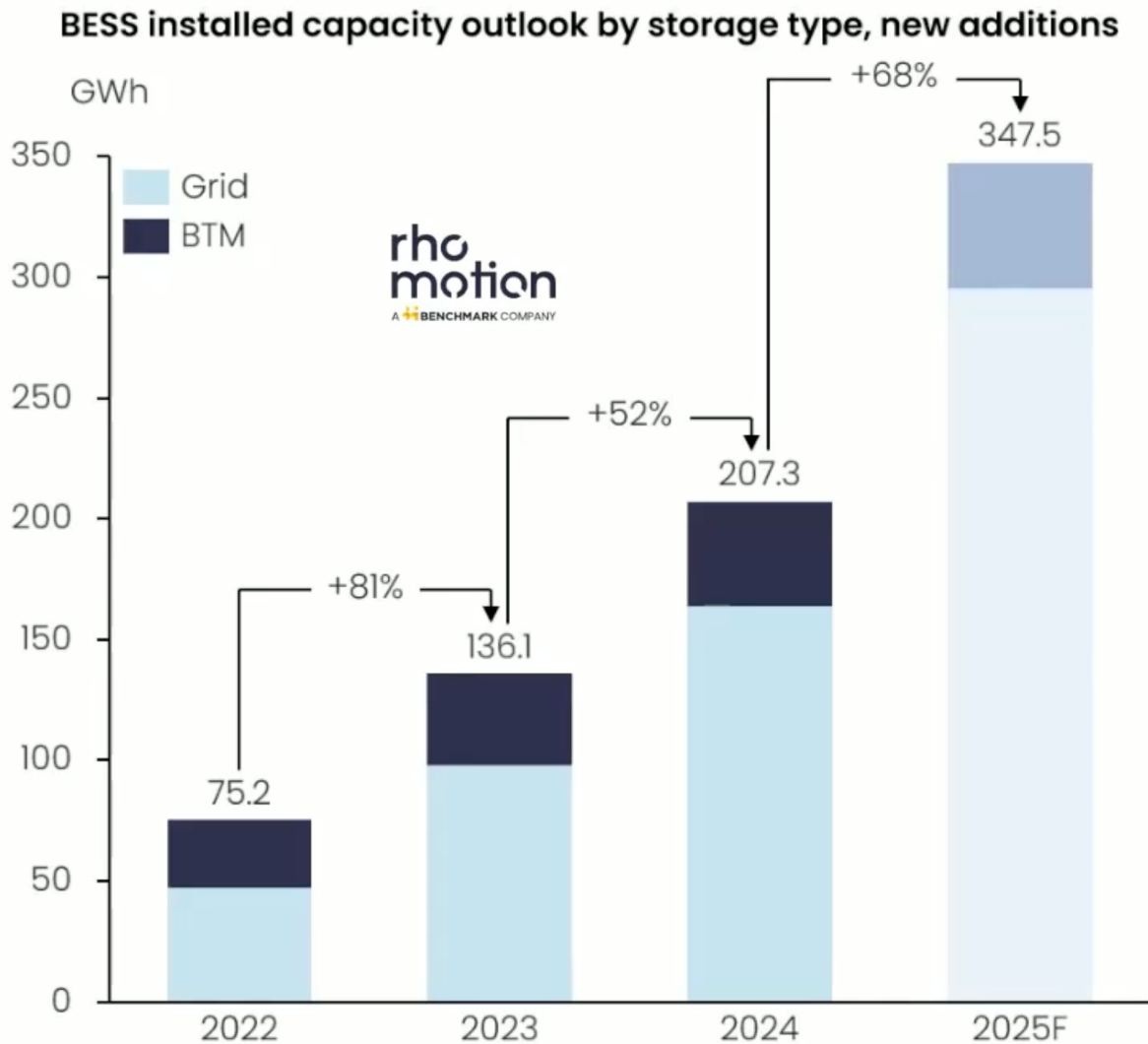


Source: Analysis by Lauri Myllyvirta for Carbon Brief

CarbonBrief
CLEAR ON CLIMATE

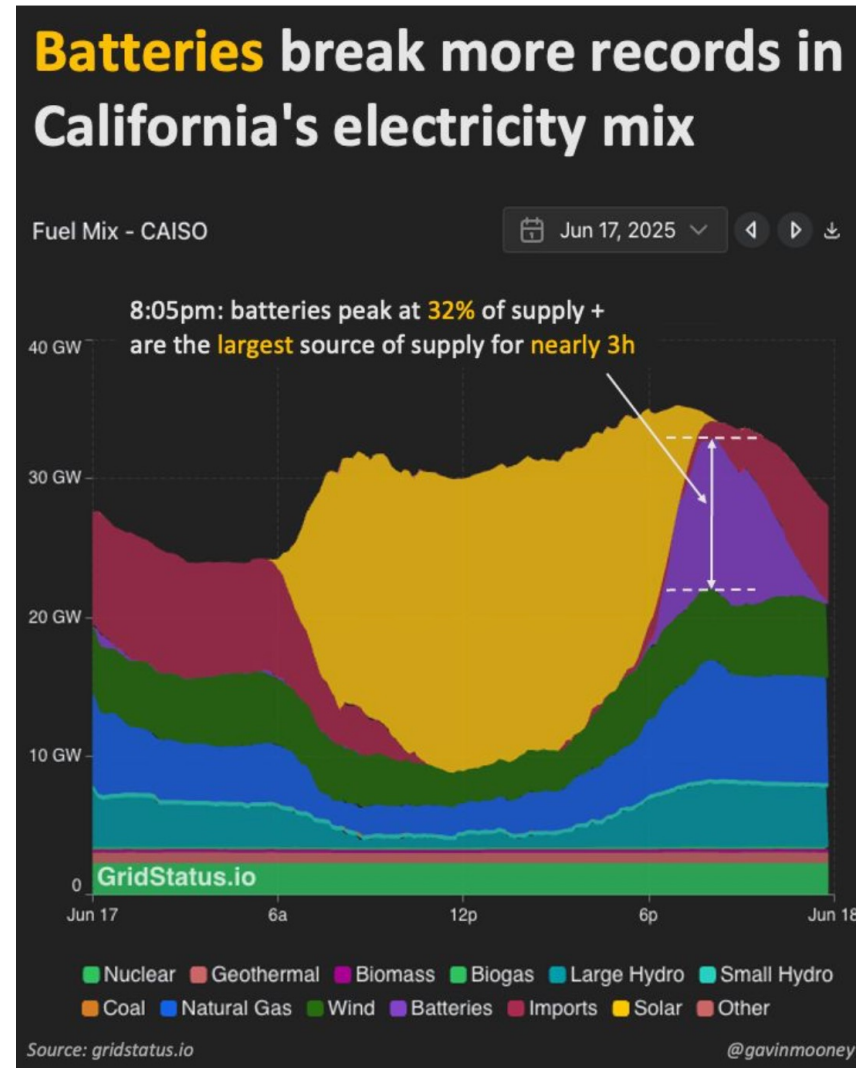
Source: CarbonBrief; <https://www.carbonbrief.org/analysis-clean-energy-just-put-chinas-co2-emissions-into-reverse-for-first-time/>

BESS + Solar + EV => Accelerating Transformation



Global Cleantech Investment is Accelerating

Solar + BESS + V2G => Accelerated Energy System Transformation

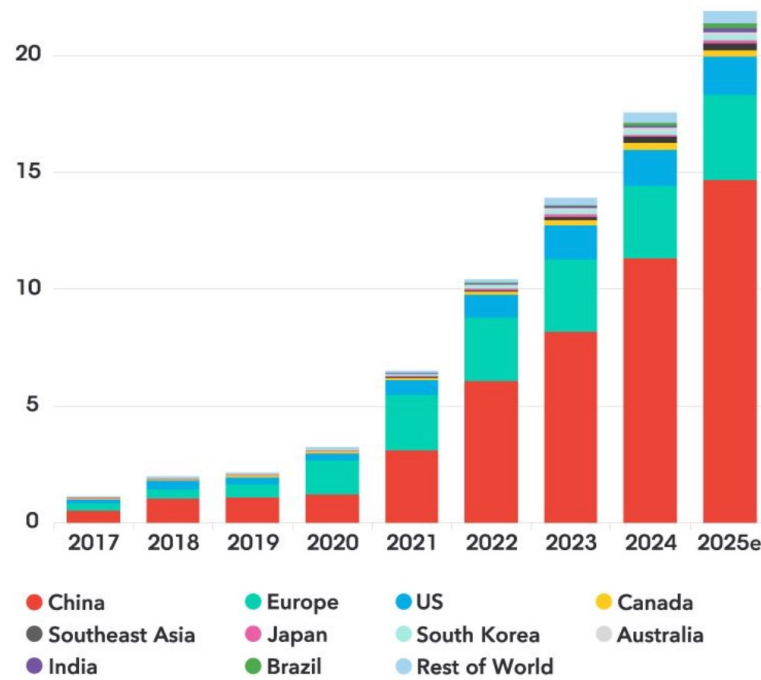


China's Global Cleantech Investment Dominance

Global EV Sales By Region

Global EV sales are on track for another record-breaking year, but some markets are experiencing a significant slowdown. 🚗📉

- ⚡ Electric vehicles are set to make up one in four cars sold globally in 2025.
- ⚡ China leads, with nearly two-thirds of all EVs sold.
- ⚡ The US market is slowing sharply amid policy uncertainty.
- ⚡ Emerging markets like Brazil and Thailand are seeing record adoption, driven by affordable Chinese models.

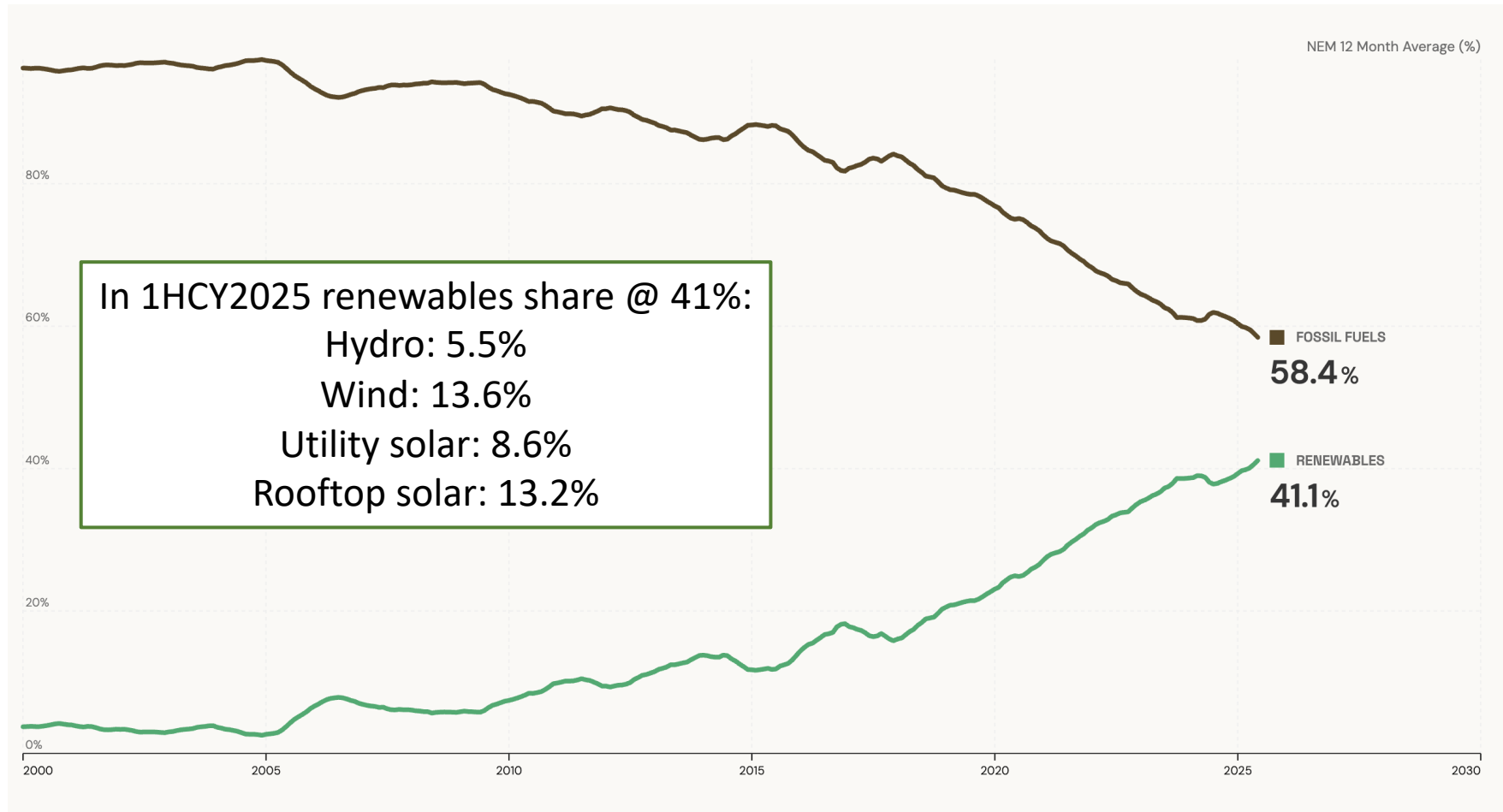


Source: BloombergNEF, MarkLines, Jato Dynamics
Note: Includes battery electric and plug-in hybrid passenger vehicles. 2025 is BNEF's forecast for the year.

BloombergNEF

Australia is Half-way to 82% Renewables by 2030

Australia has reached 41% renewable share in FY2025;
Halfway to 82% by 2030



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.

CEF's Report Advocating for Carbon Pricing

Climate Energy Finance

05 June 2025



A Price on Carbon: Building Towards an Asian CBAM

A focus on the harmonisation and integration of carbon pricing mechanisms in Asia-Pacific for the steel, aluminium and cement value chains.

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Source: Climate Energy Finance,

https://climateenergyfinance.org/wp-content/uploads/2025/06/CEF_A-Price-on-Carbon-Building-Towards-an-Asian-CBAM-Report_05June2025.pdf