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Innovative Industries of the Future (IIF 2026)

Shine Bright: How Regions Can Power the World

China's Energy System Transformation, Trump's war on Iran and the Implications for Australia

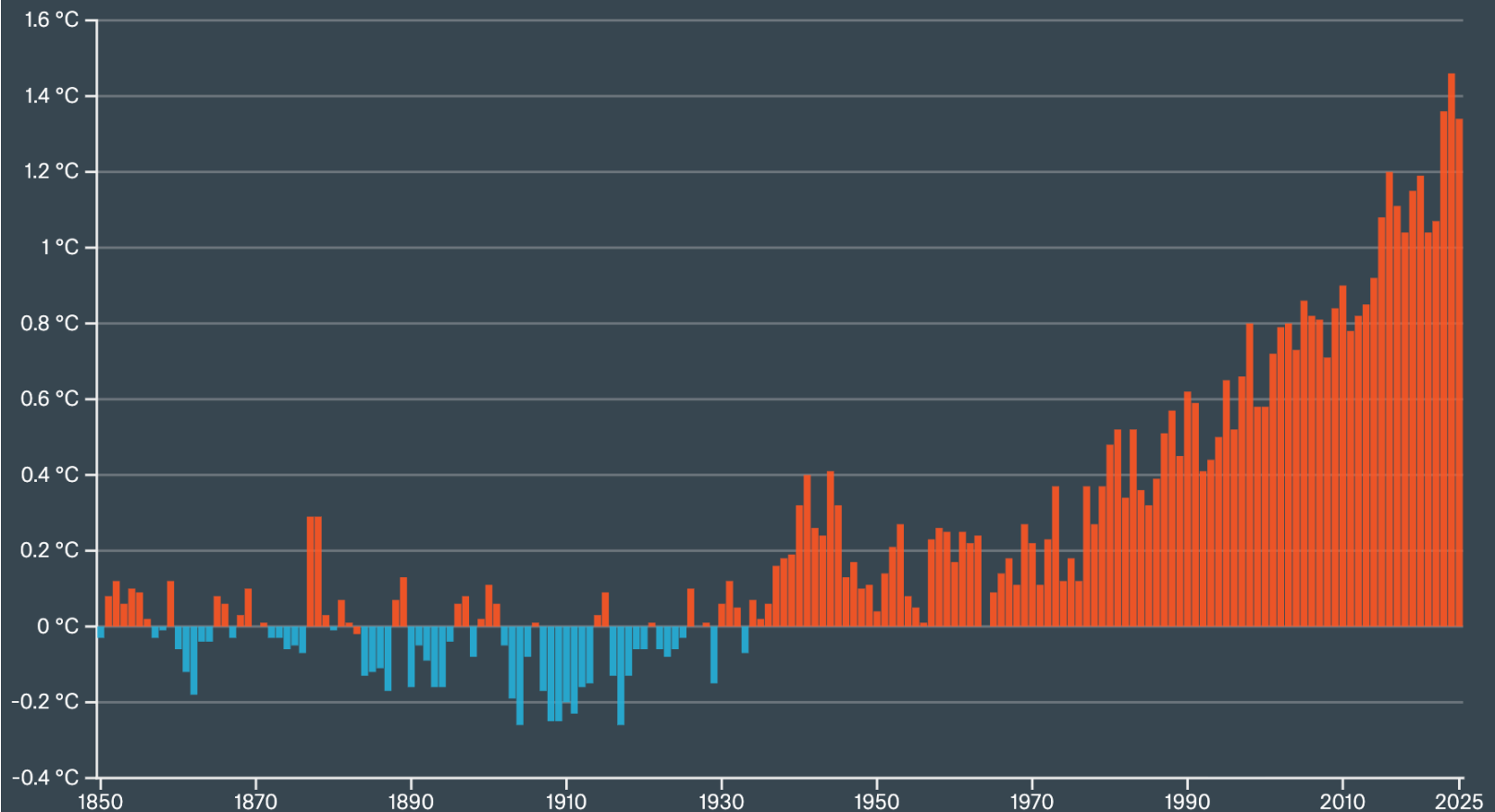
28 October 2026

CEF accepts the climate science

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

The last 12 years were the warmest on record

Global temperature anomalies compared to the 1850-1900 average



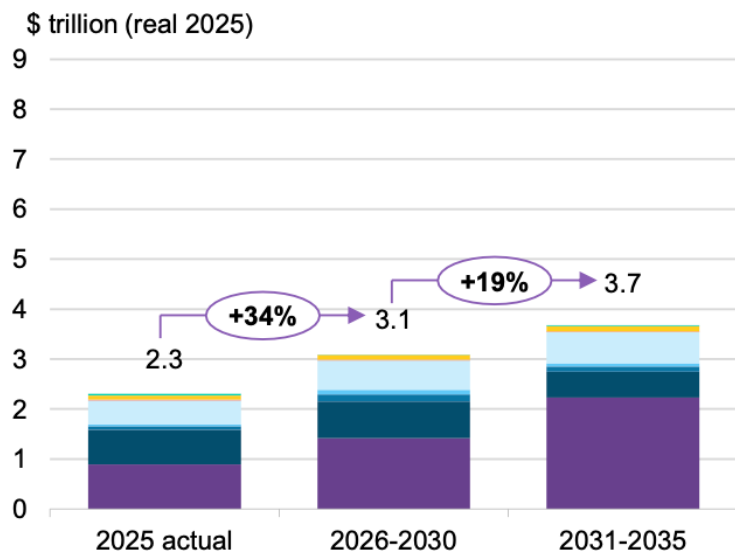
Source: Munich Re calculation, based on [NOAA data](#) (as at January 2026).

Annual Investment in Energy Transition needs to treble

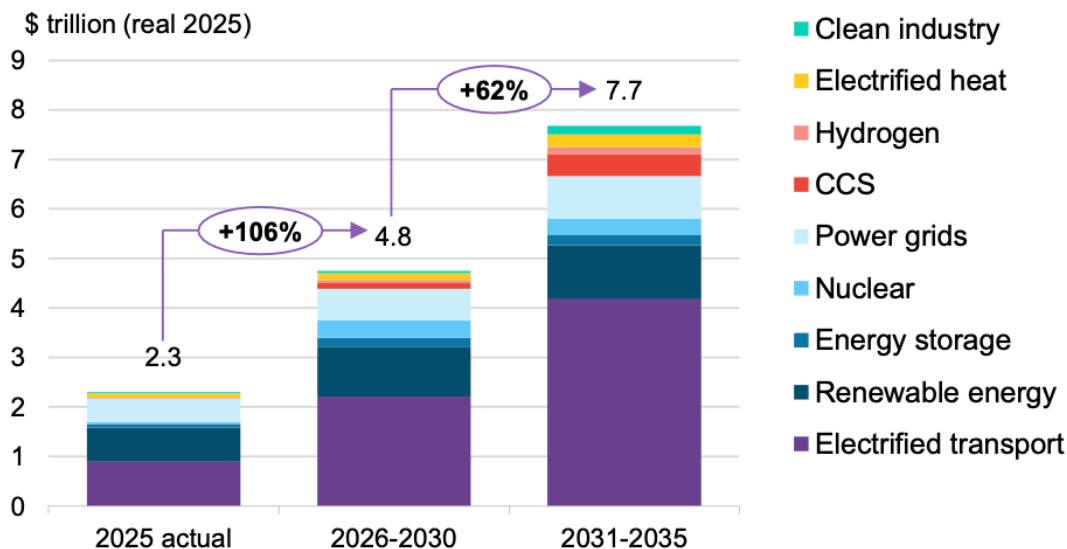
Global Energy Transition Investment, by Technology, US\$ Trillion pa

Energy transition investment, 2025 actuals versus required annualized levels in NEO scenarios

Economic Transition Scenario

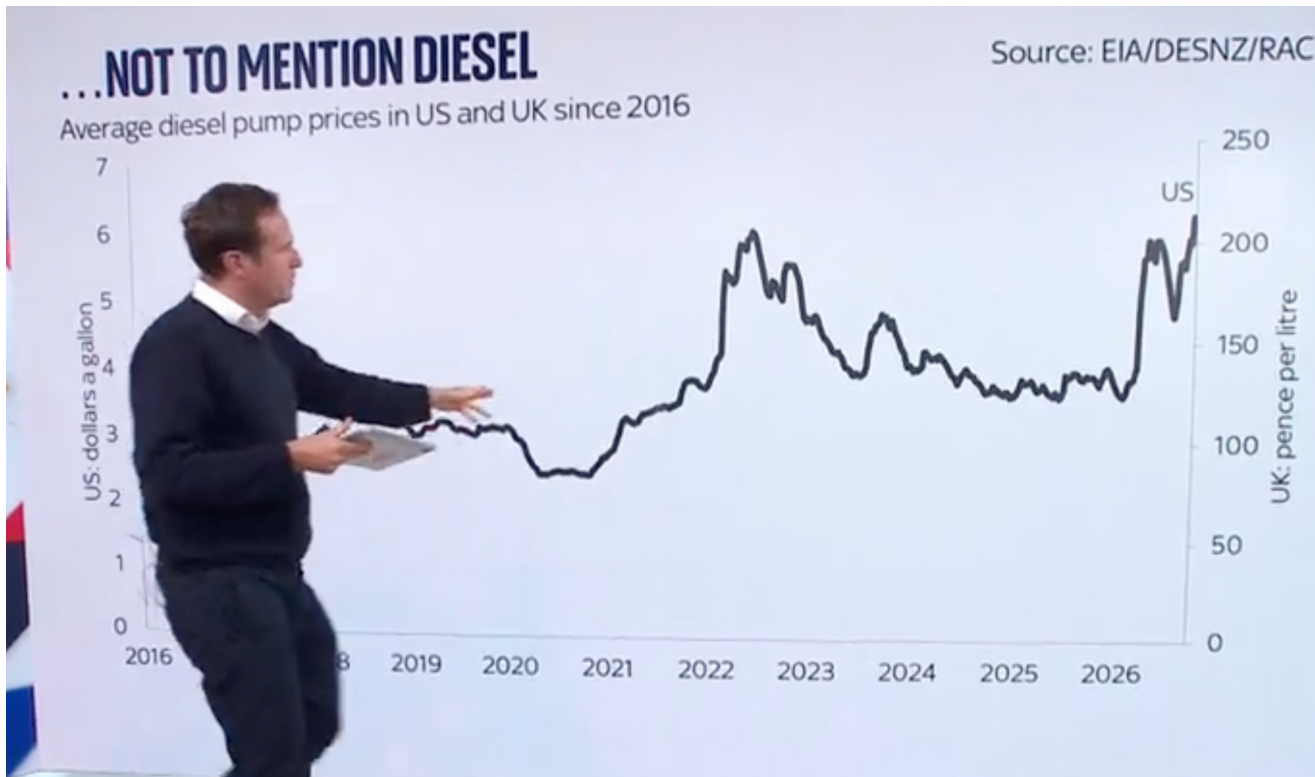


Net Zero Scenario



Global Oil and Diesel Prices Rising

**Oil now >US\$100/bbl, US diesel prices now highest price ever;
sustained damage to the 5Mbopd East-West Saudi Pipeline & Houthi rebels in Bab
el-Mandeb strait (Suez canal) & Ukraine's Russian refinery attacks last month.
But Sinopec expects Chinese oil consumption in CY2026 to be -9% yoy**



The Energy on 21 Sept'2026 reported "The shocking price to Australia of Trump's war on Iran": \$17bn in the first six months, with zero sign of any ending of high oil prices in sight.

<https://theenergy.co/articles/the-shocking-price-to-australia-of-trumps-war-on-iran>

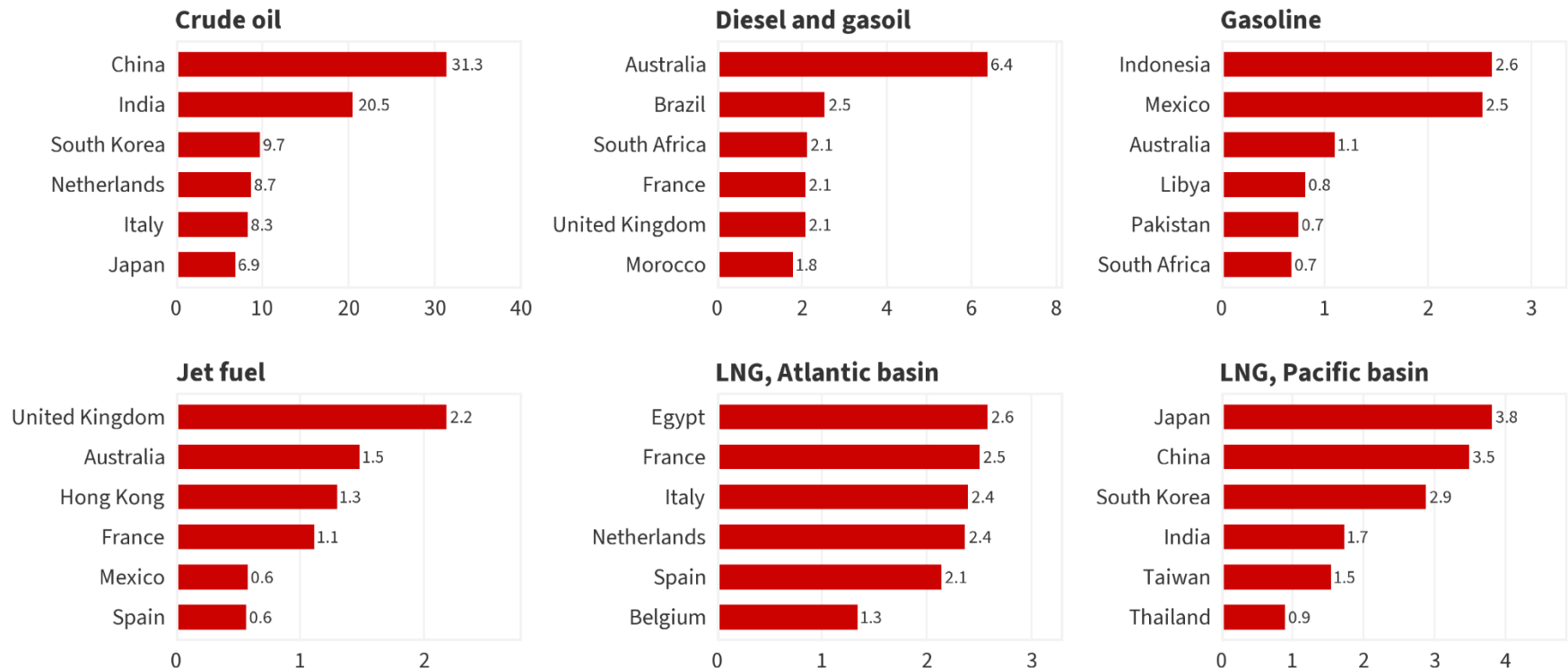
Source: Ed Conway, 15 September 2026 LinkedIn

https://www.linkedin.com/posts/ed-conway-466b172a_it-looks-as-if-the-world-is-about-to-ugcPost-7505353675691696128-hDkN/?utm_source=share&utm_medium=member_ios&rcm=ACoAAAK_xL4BN5TFIx7F-X4q0YfwthJ1QLTvZoQ

Australia has a massive fossil fuel import security risk

What the Hormuz crisis has cost fossil fuel importers — March to August 2026 Fossil fuel importers paid a gross extra cost of USD 330 bn for seaborne crude oil, oil products and LNG in the six months following the strikes

Net extra cost after netting off each country's export earnings | Mar-Aug 2026 realised | USD bn

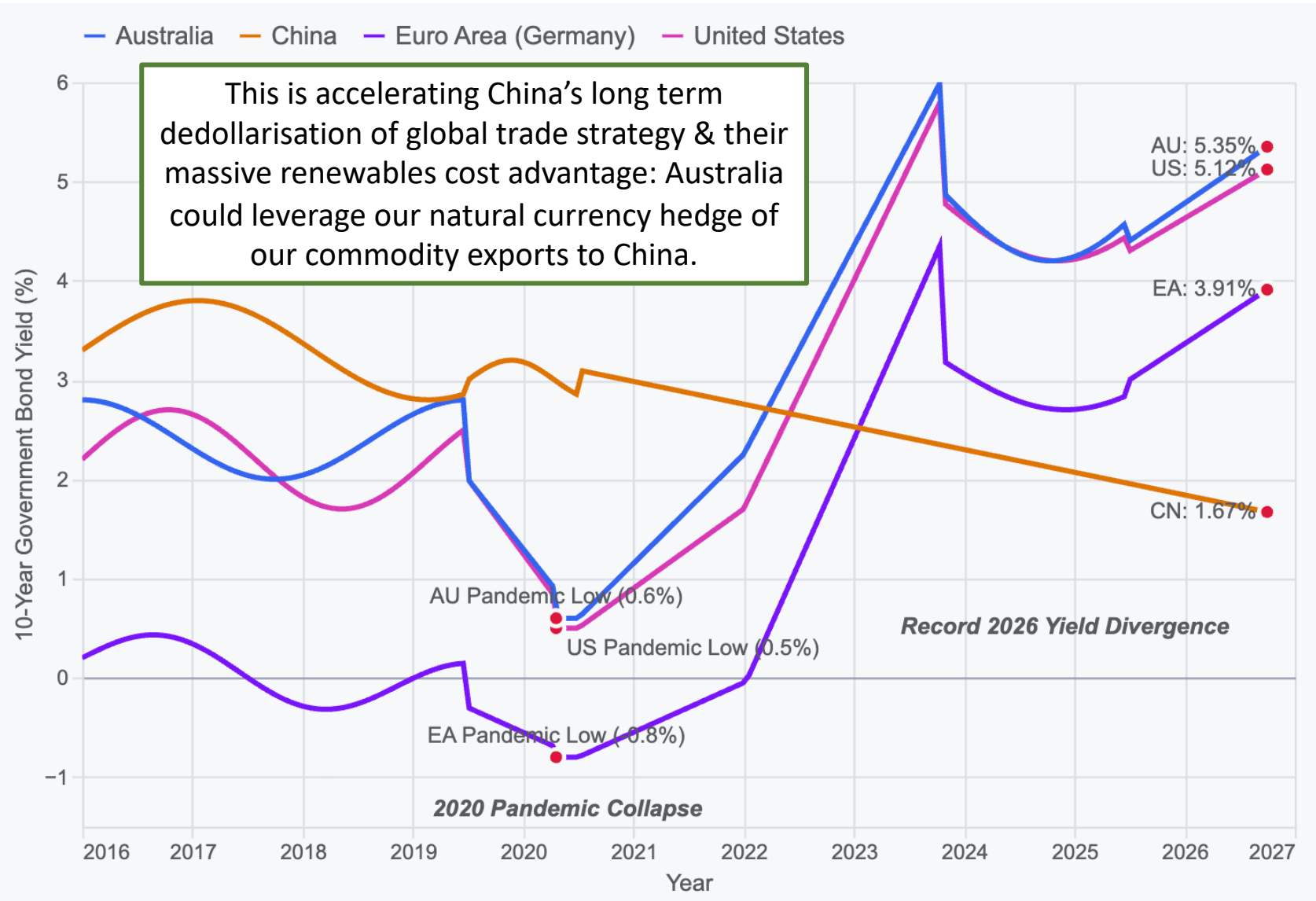


Source: CREA analysis of Kpler trade data and CME futures settlements. Six largest net payers in each market. Countries with a net gain in that market are not shown; the full two-sided table, including every exporter's gain, is in the accompanying dataset. Unresolved destinations (about 2% of cargoes) excluded.

Australia has a 'world leading' exposure to imported diesel and jet fuel.

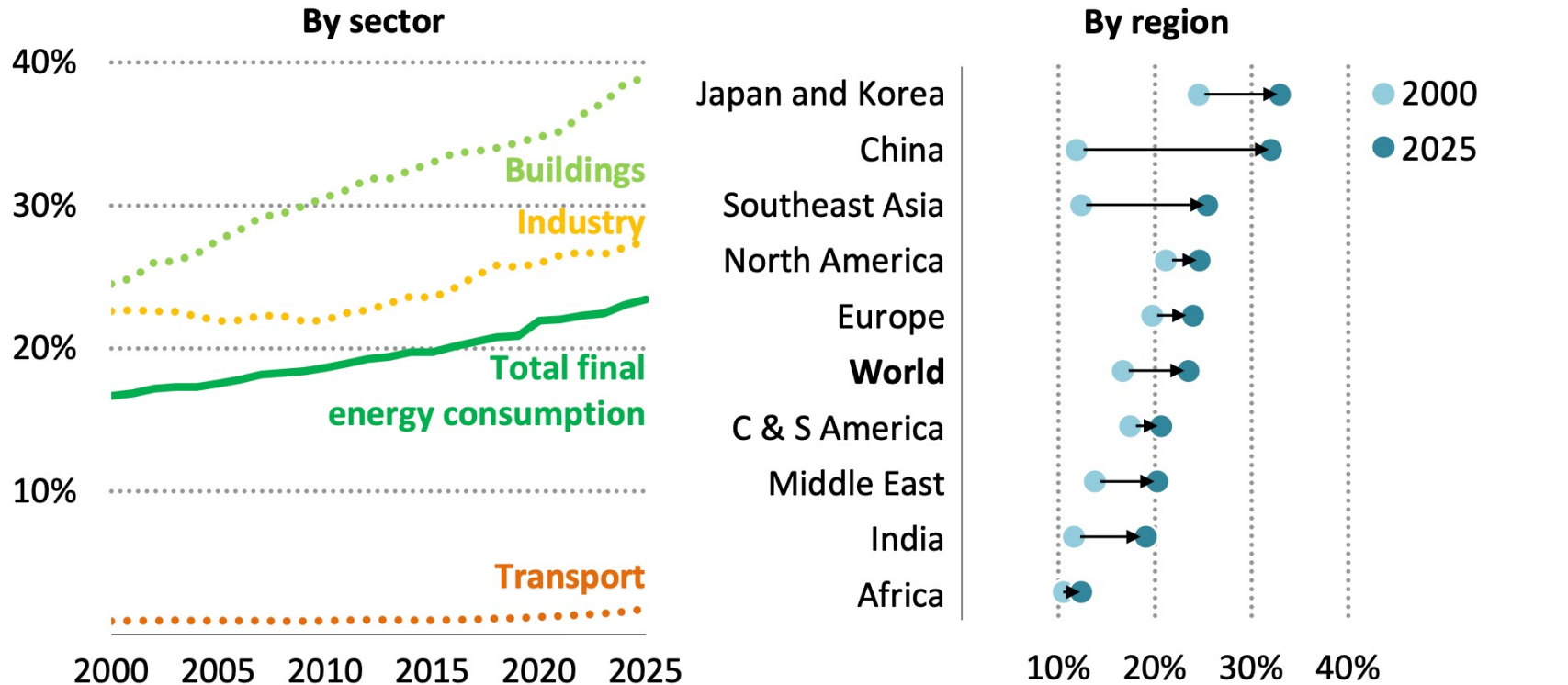
Fossilflation is Driving Up Western Borrowing Costs

10-Year Historical Time Series: Global Sovereign Bond Yield Divergence (2016 - 2026)



The Age of Electricity

Electricity consumption as a share of total final energy consumption,
by sector and by region, 2000-2025



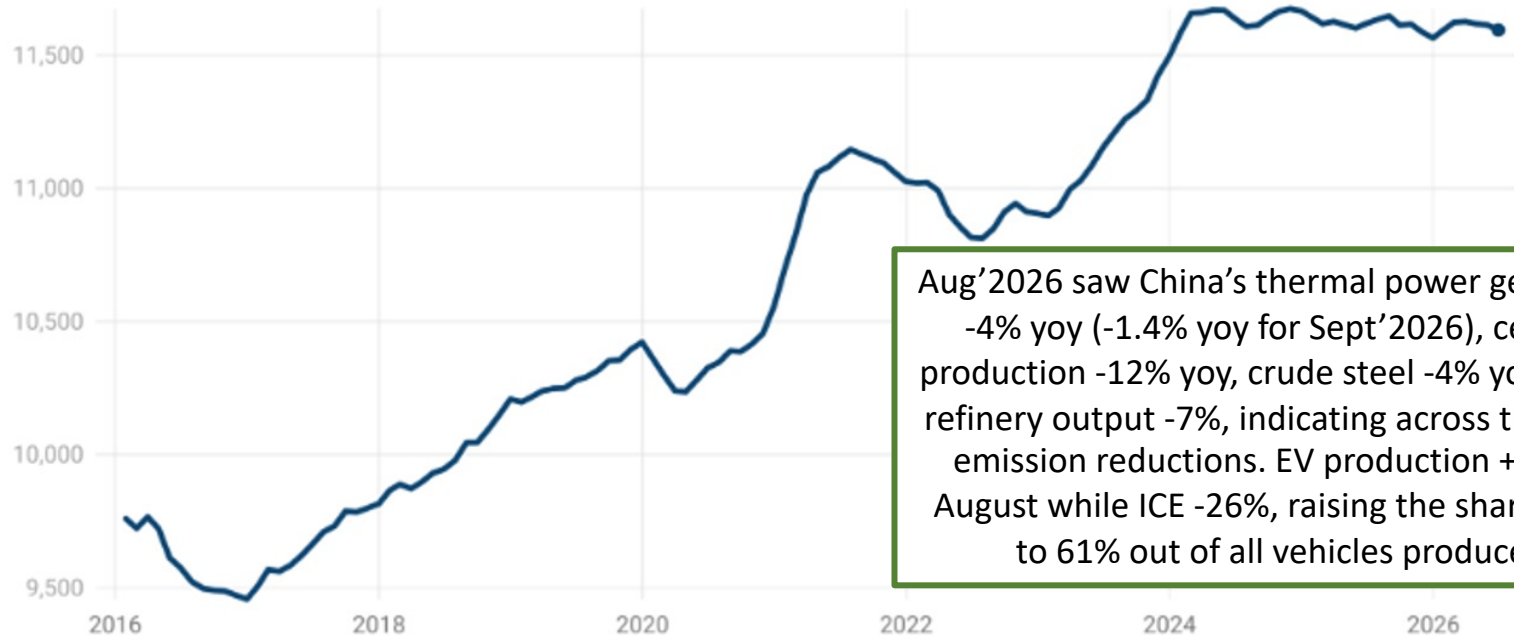
*Electricity's share of total final energy consumption rose from 17% in 2000 to 23% in 2025;
the rate of electrification varies widely by sector and by region*

China is Moving in Decarbonisation, Rapidly

The Global Energy Transition is Accelerating, led by China: manufacturing investment, R&D, domestic deployments, exports and OFDI

China's CO2 drops in spring 2026 after Hormuz puts squeeze on oil use

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



Aug'2026 saw China's thermal power generation -4% yoy (-1.4% yoy for Sept'2026), cement production -12% yoy, crude steel -4% yoy and oil refinery output -7%, indicating across the board emission reductions. EV production +22% in August while ICE -26%, raising the share of EVs to 61% out of all vehicles produced.

Source: Analysis for Carbon Brief by Lauri Myllyvirta

CarbonBrief

China leads the world in cleantech R&D, manufacturing, domestic deployments, OFDI and in exports.

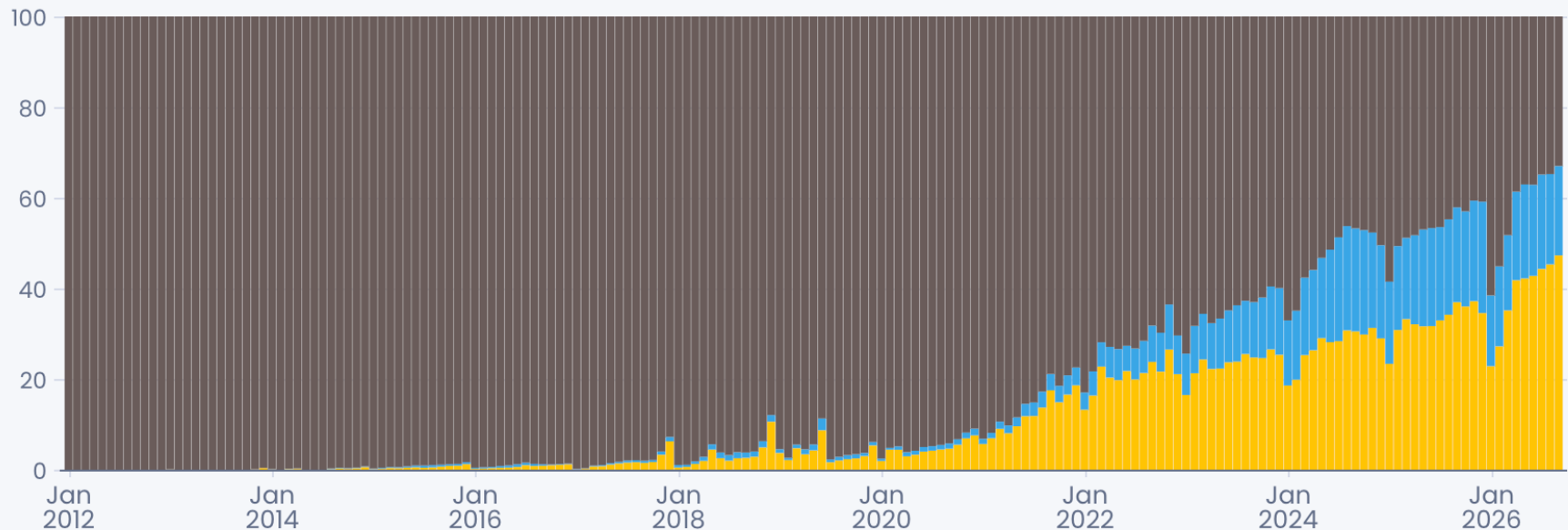
China's vehicle sales by powertrain, including EV and plug-in hybrid electric vehicles.

Vehicle sales by powertrain in China

EMBER

Monthly share of total vehicle registrations (%)

■ Battery electric ■ Plug-in hybrid ■ Combustion (unspecified)



In 2026 so far, **58.1%** of new cars registered in China have been electric (**battery** or **plug-in hybrid**).

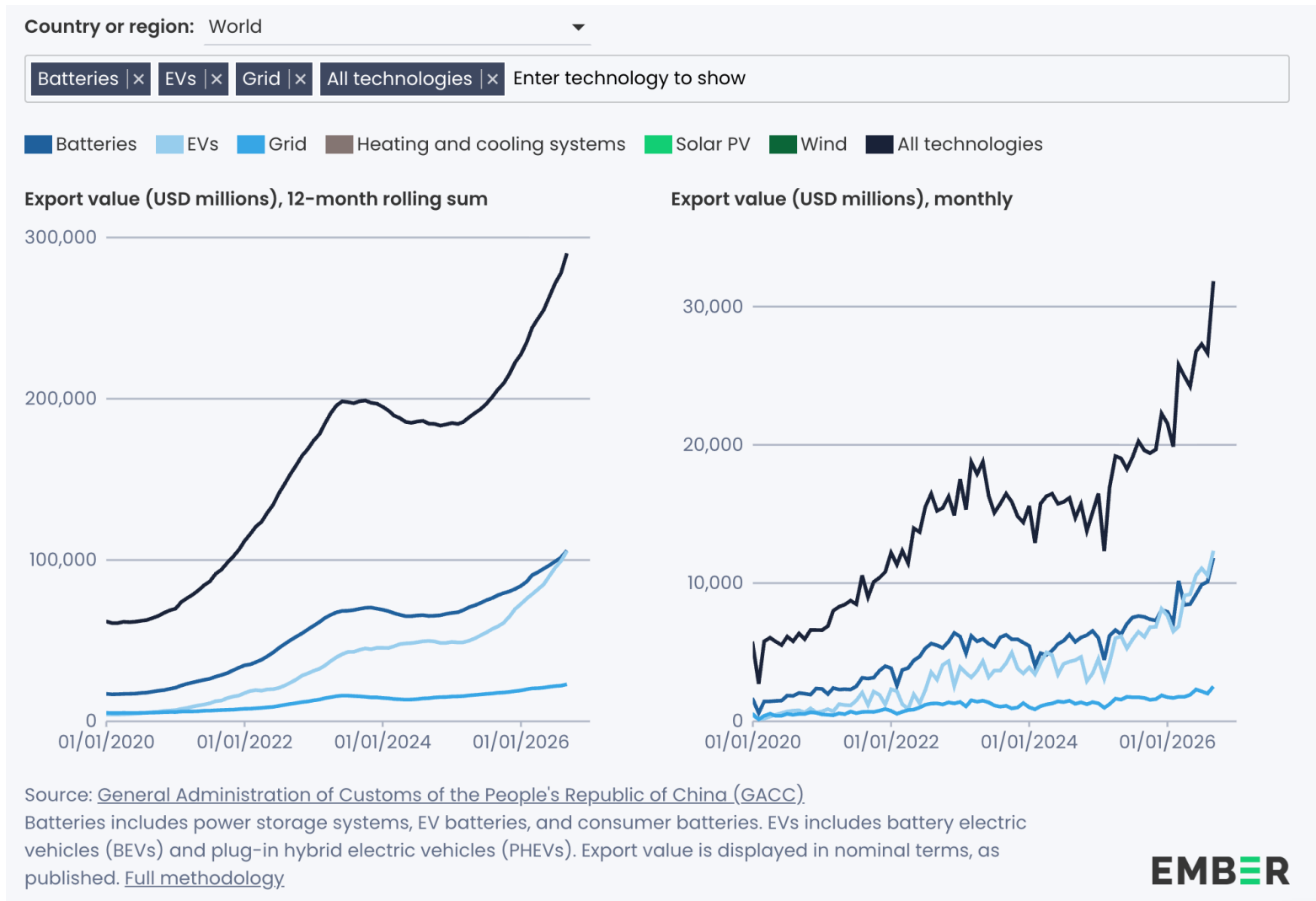
Ember EV Sales Data Tracker

<https://ember-energy.org/data/ev-sales-tracker/?entity=China>

And half the trucks sold in
Sept'2026 were NEVs in China.

China leads the world in cleantech R&D, manufacturing, domestic deployments, OFDI and in exports.

China's global cleantech exports by value, Monthly (US\$27bn per month in July & August 2026, US\$32bn in Sept'2026) – reaching a MAT of US\$290bn by Sept'2026.



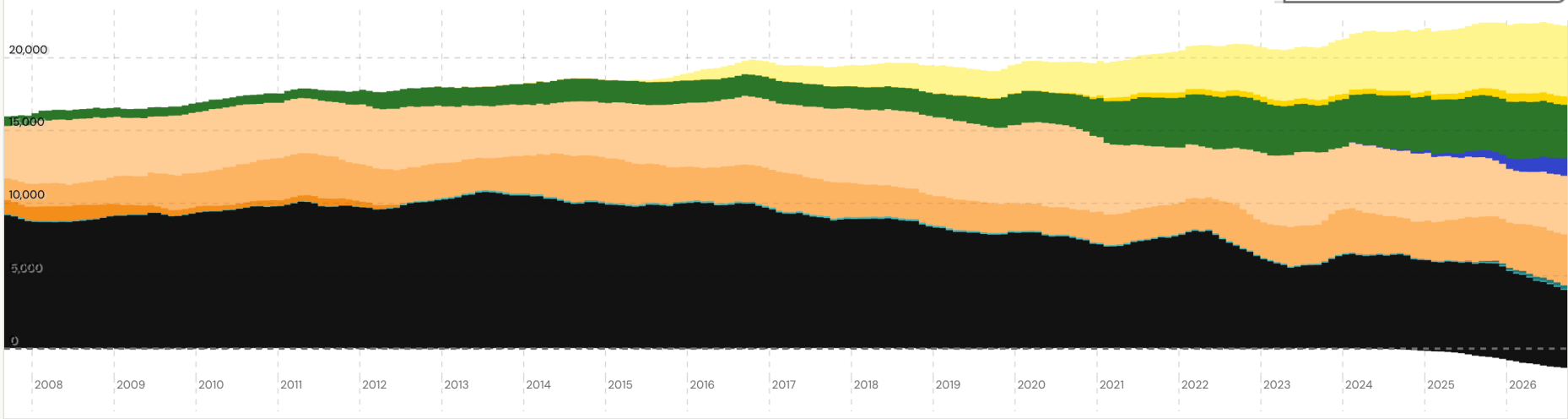
Australia's SWIS Renewables Boost

The SWIS is averaging 40.1% variable renewables 12 months to Sept'2026 (vs 38.7% pcp); progress, but we need to go faster.

And the Pilbara is just 2% renewables share, 60% imported diesel!

Western Australia (SWIS)

12 Mth Rolling ▾

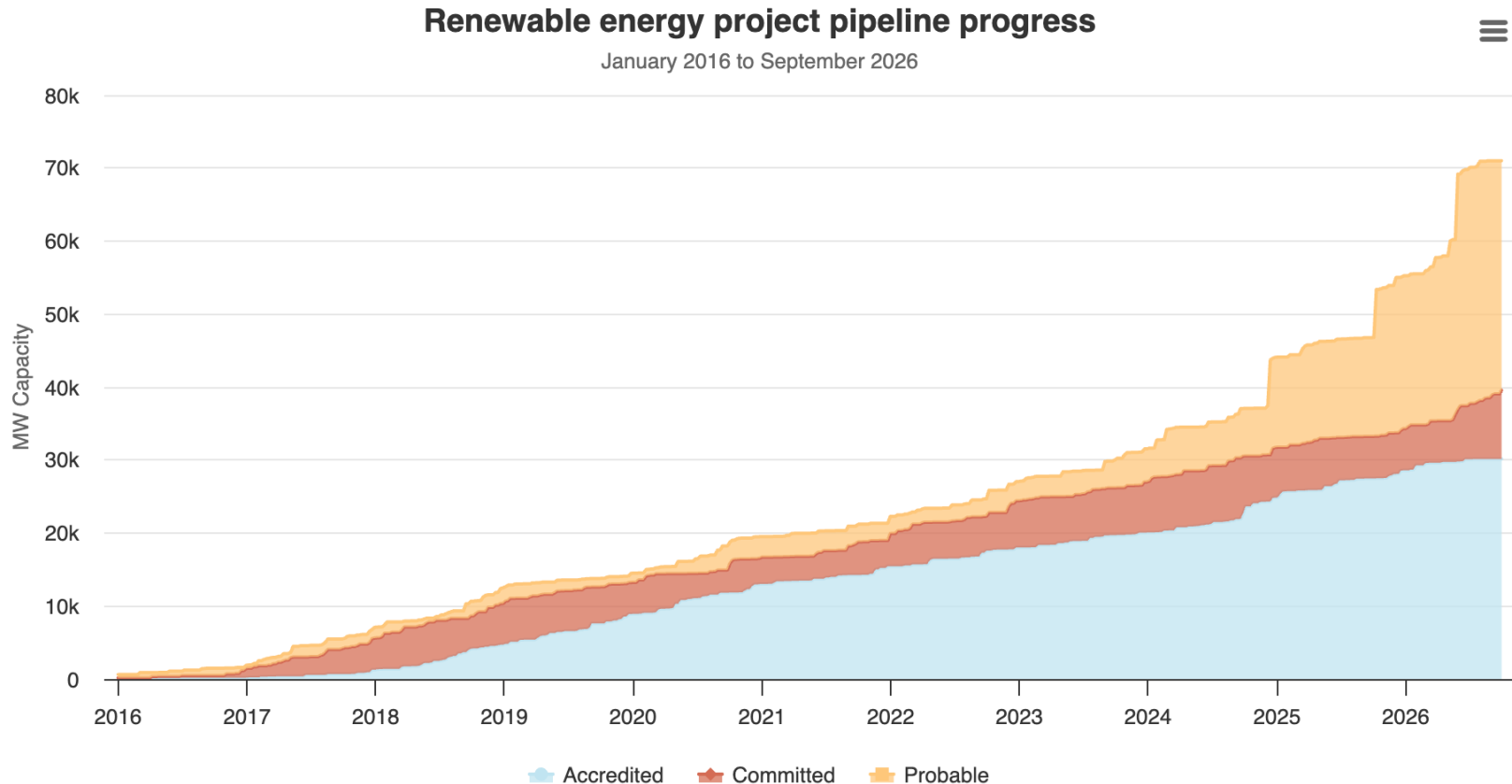


Oct'2026 saw Lacour Energy submit plans with the Shire of West Arthur for the West Arthur wind farm, a 500MW project with a 500MW/ 2,000 MWh BESS. Local investment of \$2-3bn in a single proposal.

Western Power's proposed \$650m Clean Energy Link is designed to link the West Arthur shire with Collie, opening up the area around the town of Darkan to five different wind projects. Also in the area are Green Wind Renewables' 600MW Ambrosia project, Acciona Energía's 3GW Bellwether proposal, RES Australia's 1.2GW Dardadine project & Vestas' 150MW Bowelling project. \$10-20bn on additional regional investment!

Australia's NEM / SWIS Moving Towards 82% Renewables

Moving towards 82% renewables by 2030; good progress, but we need to go a lot faster



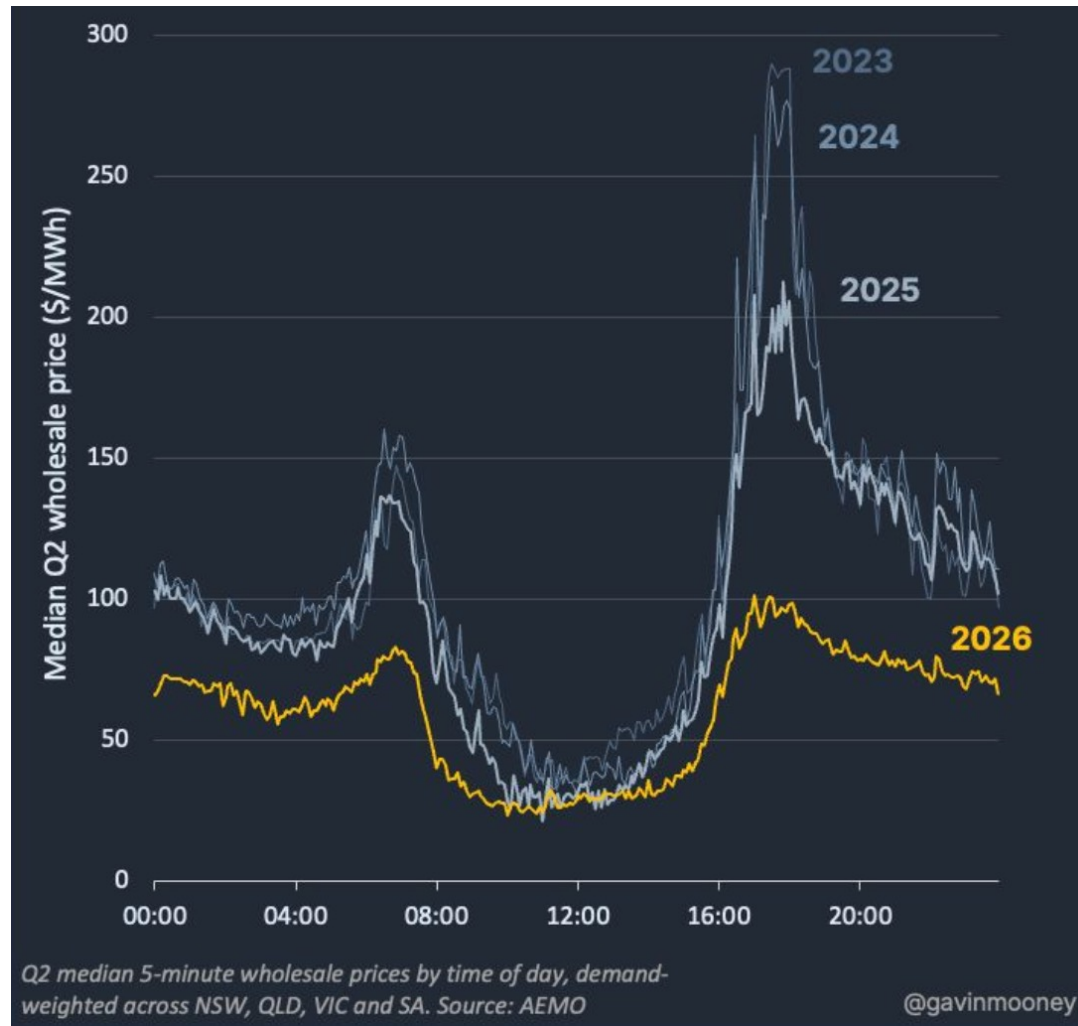
Australia's total renewable energy projects (ex-rooftop solar) as of end September 2026 that are operating (30.1GW), committed via FID (9.4GW) and probable (31.9GW, meaning having either financing, a PPA or CIS underwrite).

Source: Australian Clean Energy Regulator, September 2026

https://cer.gov.au/markets/reports-and-data/large-scale-renewable-energy-data?utm_source=Clean+Energy+Regulator+-+Update&utm_campaign=d4c1f53558-EMAIL_LRET_AUG_DATA&utm_medium=email&utm_term=0_-d4c1f53558-73688735

Australia's Energy System Transformation

Australia – Battery deployments are driving significant deflation in the NEM



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CEF Advocates for Safeguard Mechanism Enhancements

We advocate for a deepening and widening of the SGM, including into electricity, and the establishment of a floor ACCU price that progressively rises in real terms

Climate Energy Finance

18 September 2026



Submission: Safeguard Mechanism Review Consultation

Climate Energy Finance (CEF) submission to the public consultation of Department of Climate Change, Energy, the Environment, and Water (DCCEEW) on the Safeguard Mechanism Review

Authors:

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Tim Buckley, Director, CEF

Worth noting EU ETS carbon pollution pricing raised €43bn in revenues in 2025 alone. EU taxes on pollution raise revenues.

The Safeguard Mechanism was reformed in 2023. DCCEEW is doing a review 2HCY2026. CEF advocates for expansion to include the electricity sector.

Australia's #1 trade partner, China will expand its national ETS by 50% by 2027.

CATL in Ningde, China

CATL is investing massively: 22,000 RD&D staff including 5,000 Masters and 700 professors – going into fast charging and battery swapping, EV shipping and aircraft, data centres, sodium battery technologies et al.



China Hongqiao Aluminium in Yunnan, China

Green Industrial Parks are a Central Chinese Strategy

A green aluminium industrial park,
4x Tomago, and on an accelerated
path to Net Zero



XCMG Group in Xuzhou, China

Australia imports \$50bn of diesel & oil with an \$11bn pa subsidy; the mining EV technology is coming rapidly, but will require massive firm RE + grid infrastructure investment across the Pilbara, which is ~60% imported diesel vs just 2% RE powered.



BHP says its carbon emissions, diesel use will stay higher for longer

FINANCIAL REVIEW

Peter Ker Resources reporter

Updated Sep 17, 2026 - 7:31am, first published at Sep 16, 2026 - 8:00pm

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The biggest truck in the world payload of 363t (diesel, yellow). An autonomous EV mine haulage truck (white) & EV (green)

Pivoting the Australian \$11bn annual fuel tax credit is a pressing reform issue.