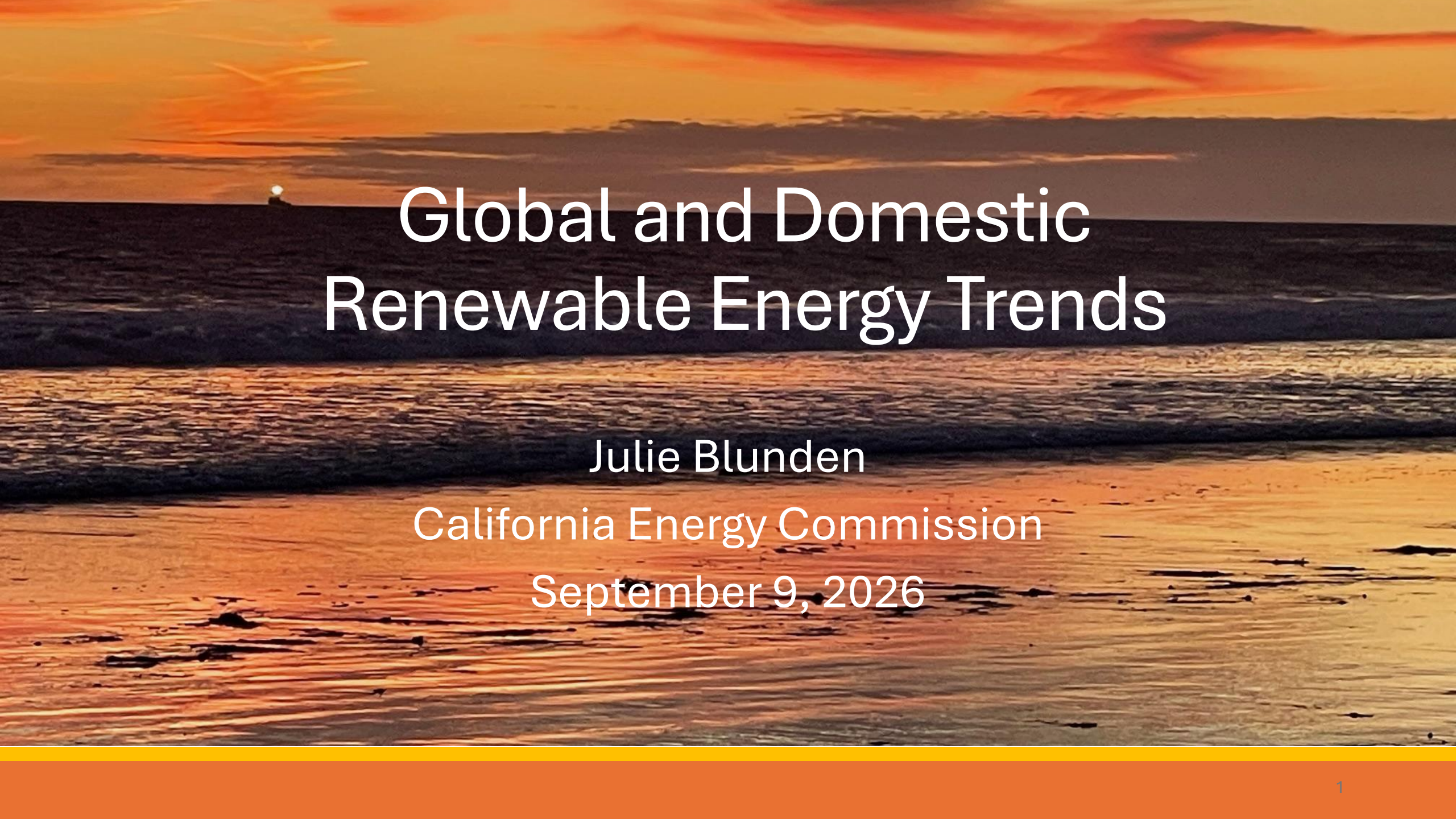


A sunset over the ocean with a lighthouse beam visible on the horizon. The sky is a mix of orange, yellow, and red, with some clouds. The ocean is dark, and the beach in the foreground is wet and reflective.

Global and Domestic Renewable Energy Trends

Julie Blunden

California Energy Commission

September 9, 2026

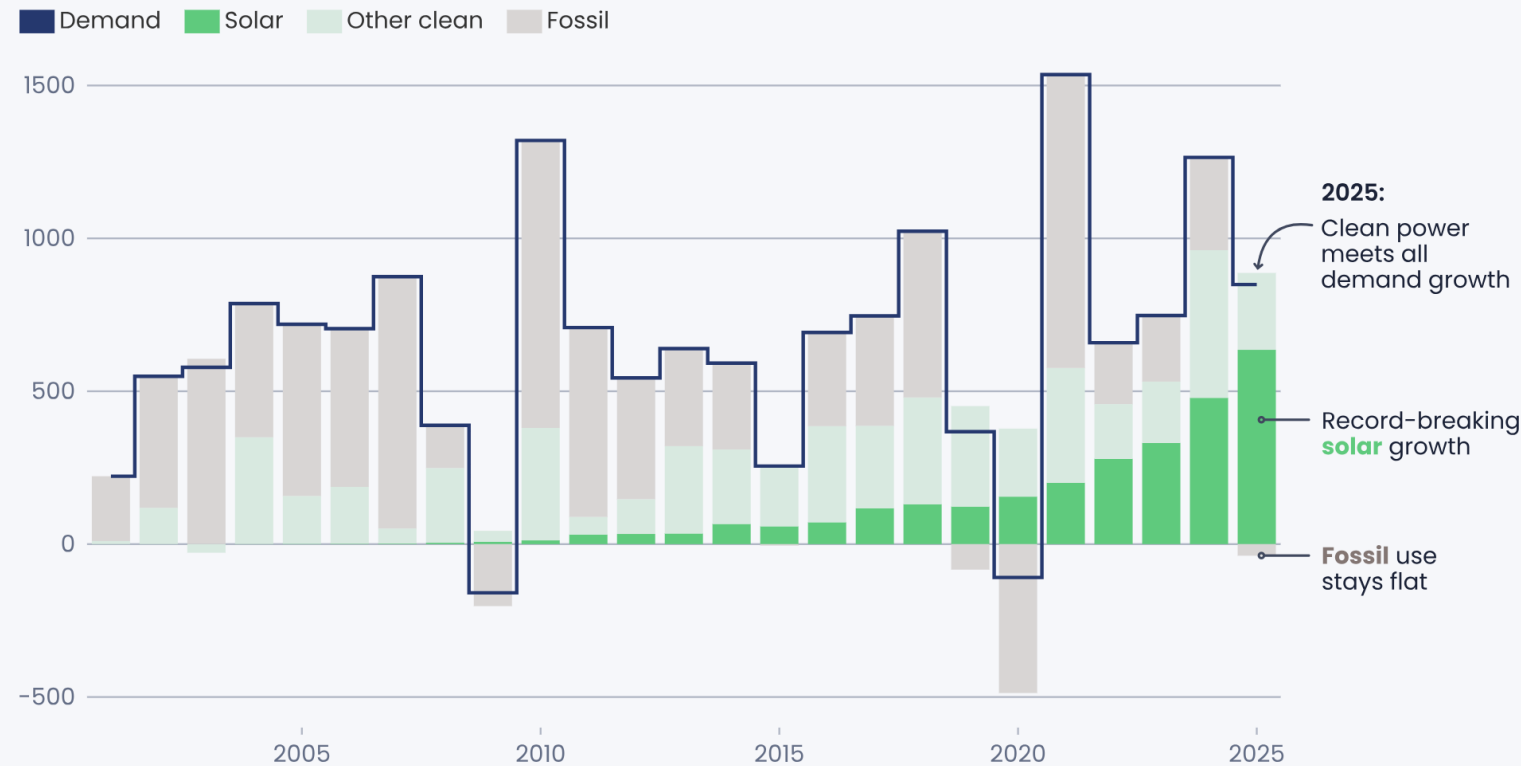
Thank you: CA Catalyzed Global PV/BESS/EV

- Global renewable TWh growth greater than demand growth
 - *CA 2008 RPS directly catalyzed global utility-scale PV (with CSI assist)*
- US PV/BESS dominates grid expansion to meet load
 - *CA 2013 Duck Curve & CPUC ES launch + SONGS ES built US Queues*
- Oil price / scarcity concern accelerating global EV substitution
 - *CARB's 1990 ZEV regulation readied global auto to pivot post-Model S*

2025: Global Clean TWh Grew > Demand

Clean power growth exceeded the rise in global electricity demand in 2025, keeping fossil generation flat

Annual change in electricity generation (TWh)



Source: Yearly electricity data, Ember • 'Other clean' includes nuclear, wind, hydro, bioenergy and other renewables such as geothermal

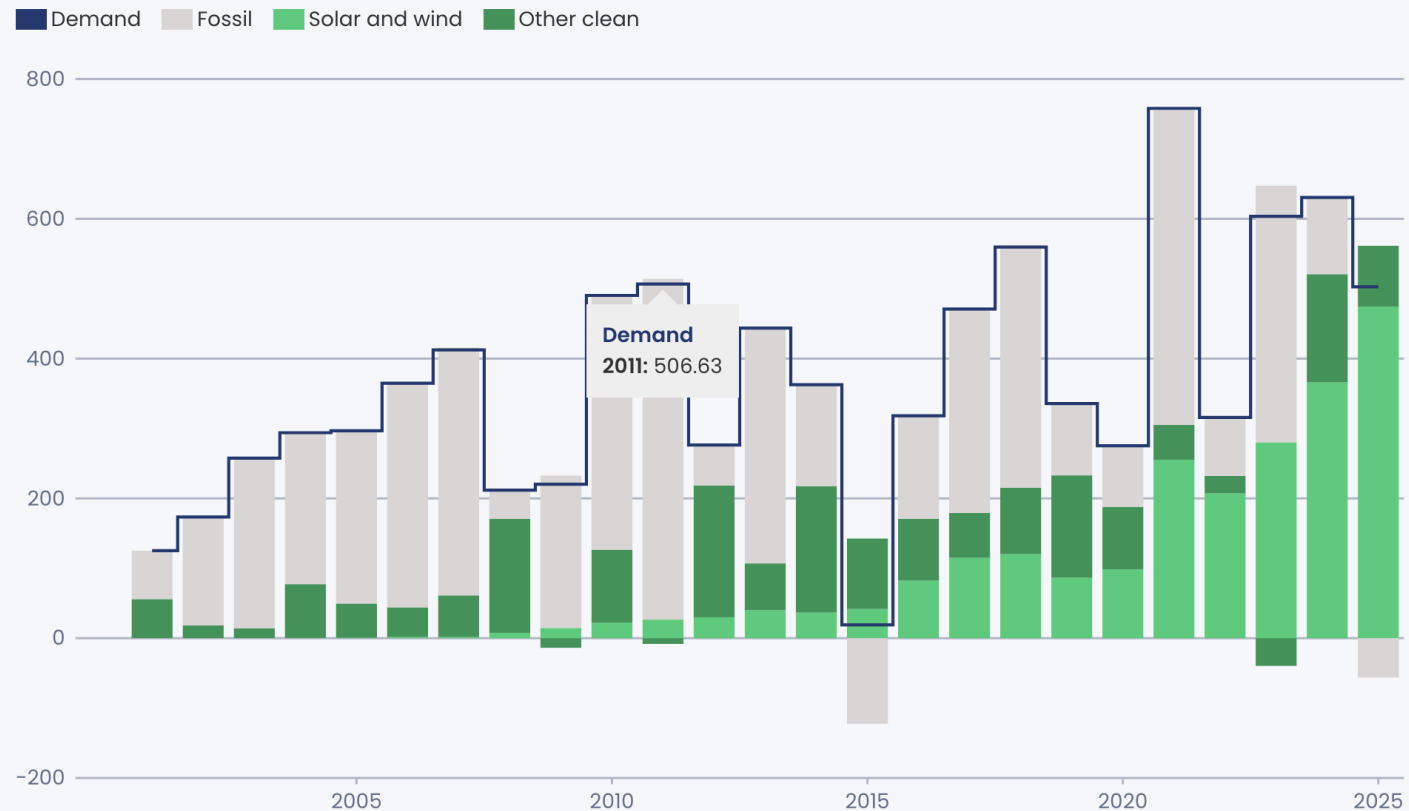
EMBER

32,000 TWh 2025
Global Electricity Demand
(That's 32 Petawatt-hours)

2025: China Clean TWh Grew > Demand

China's fossil generation fell in 2025 for the first time in more than a decade as clean power met all new demand

Annual change in electricity generation (TWh)



Source: Yearly electricity data, Ember

'Other clean' includes hydro, nuclear, bioenergy, geothermal and other renewables

EMBER

2025 Solar TWh up 40% YOY

- 378 GW PV added
- 119 GW Wind added

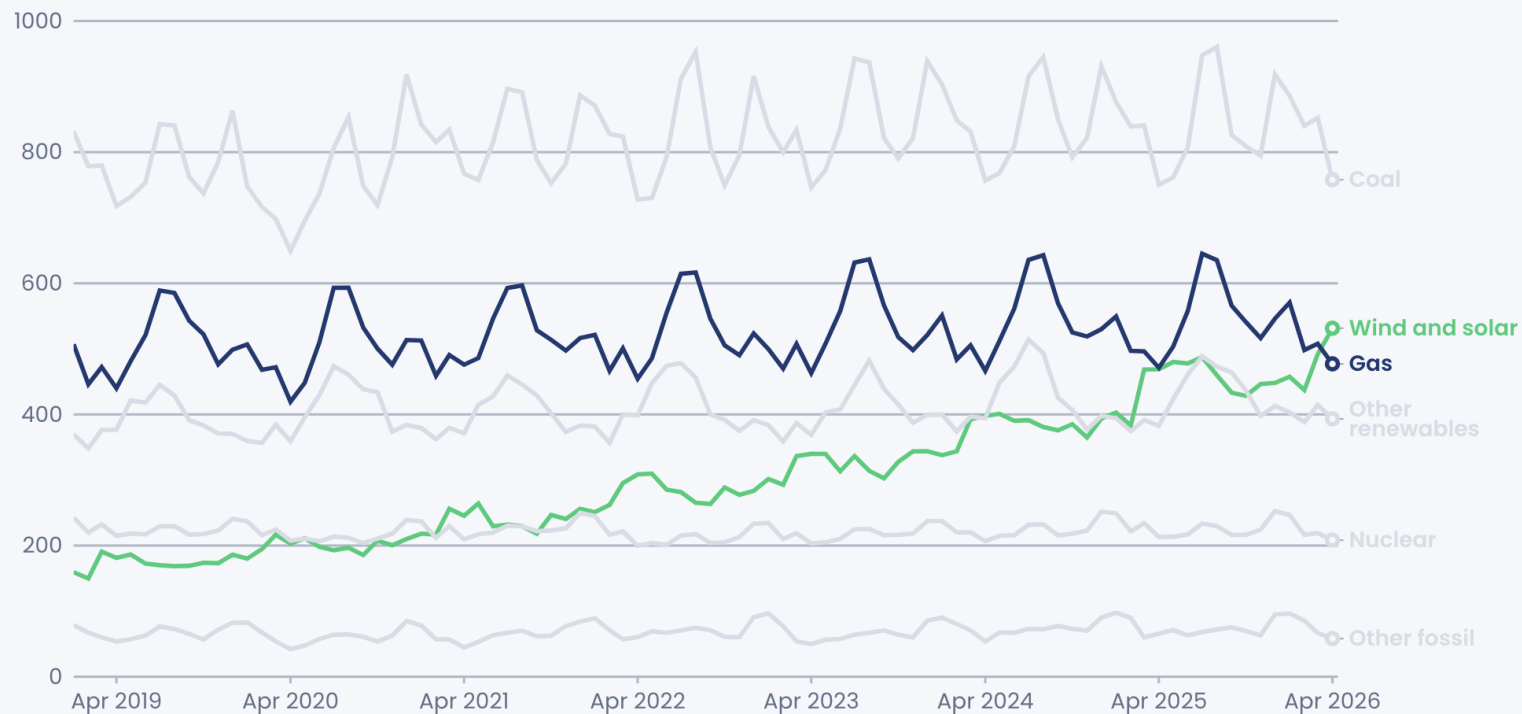
2026 June Cumulative Capacity:

- 1.98 TW of solar and wind
- 48.4% of total installed capacity
- 168 GW New Energy Storage (BESS)

2026 April: Global Wind/Solar TWh > Gas

In April 2026, wind and solar generated more electricity than gas globally for the first time

Global electricity generation by source (TWh)



Source: Monthly electricity data, Ember

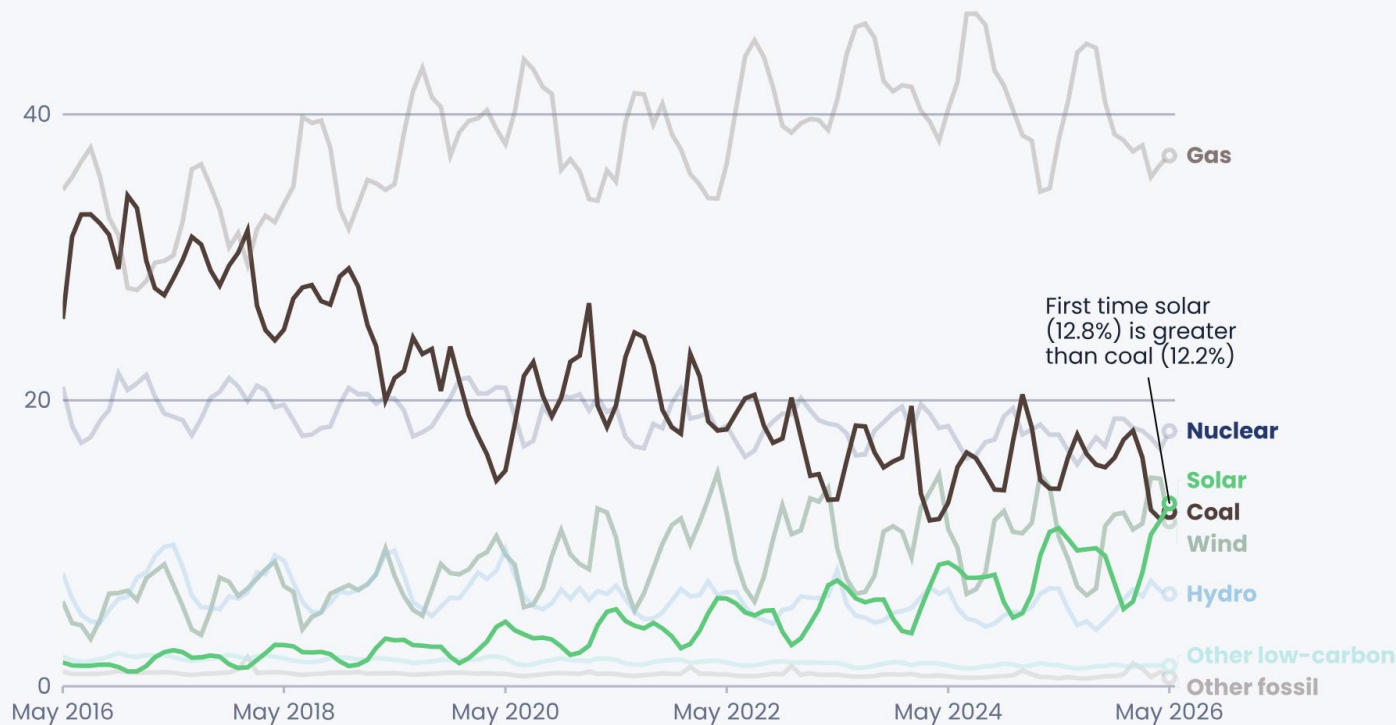
Other renewables includes hydro, bioenergy and smaller generators such as geothermal; Other fossil includes oil and other fossil generators

EMBER

2026 May: US Solar TWh > Coal

in May 2026

Share of electricity generation (%)



Source: Monthly electricity data, Ember, [Electricity Data Explorer](#)

'Other low-carbon' includes bioenergy and geothermal; 'Other fossil' includes oil, other petroleum products and fossil waste

EMBER

Feb – Jul 2026:
US Solar + Wind TWh > Nuclear

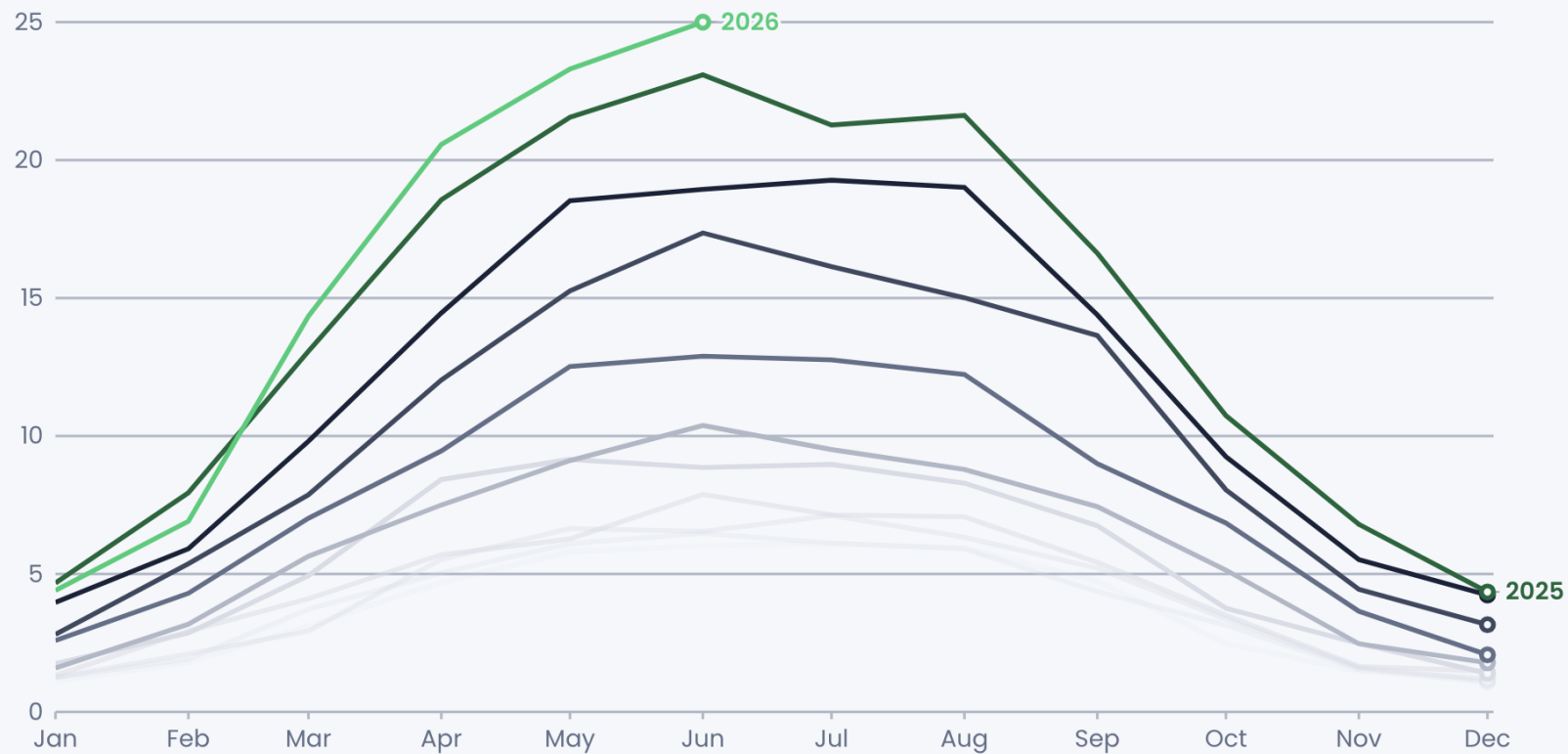
May 2026:
Solar + Wind TWh ~ 2x Coal

2026 June: EU Solar Hits 25% of TWh

A quarter of EU power came from solar for the first time in June 2026

Share of electricity generation (%), by month

Grey lines show previous years



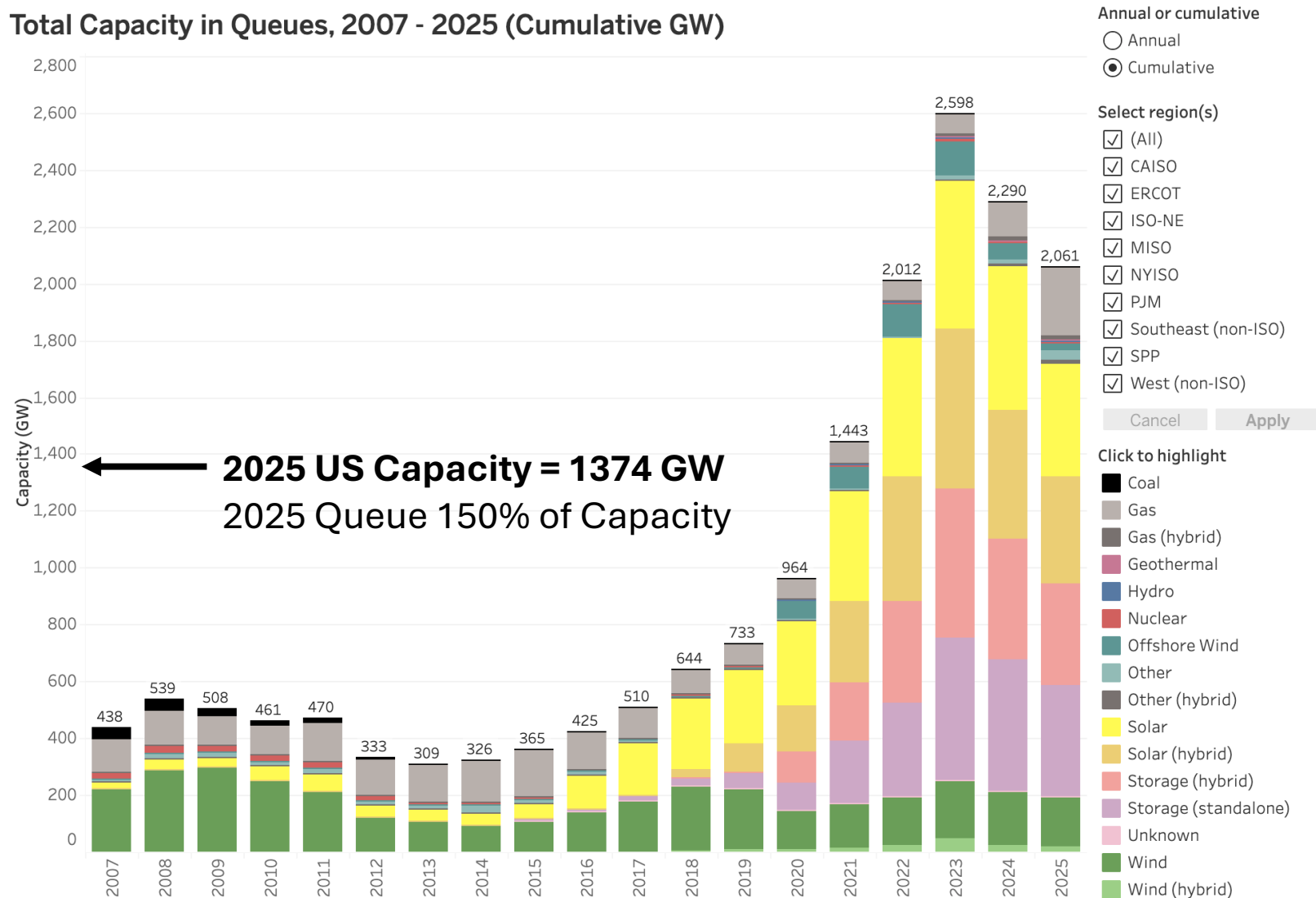
A 5 years from 10% to 25%

Source: Monthly electricity data, Ember, [Electricity Data Explorer](https://ember-energy.org/latest-insights/a-quarter-of-eu-power-came-from-solar-for-the-first-time-in-june/)

EMBER

US EIA: Solar, Wind & Storage = 88% Queues

Total Capacity in Queues, 2007 - 2025 (Cumulative GW)

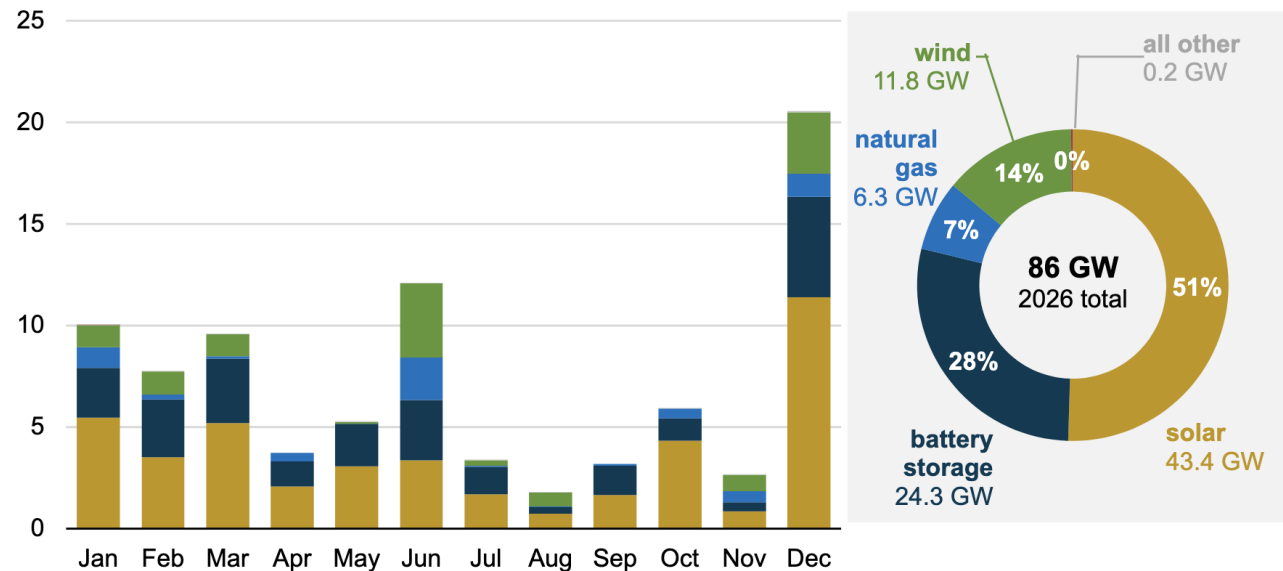


US PV+ES+Wind Dominant: Gas < 7% in 2026

FEBRUARY 20, 2026

New U.S. electric generating capacity expected to reach a record high in 2026

U.S. planned utility-scale electric generating capacity additions (2026)
gigawatts (GW)



Data source: U.S. Energy Information Administration, [Preliminary Monthly Electric Generator Inventory](#), December 2025

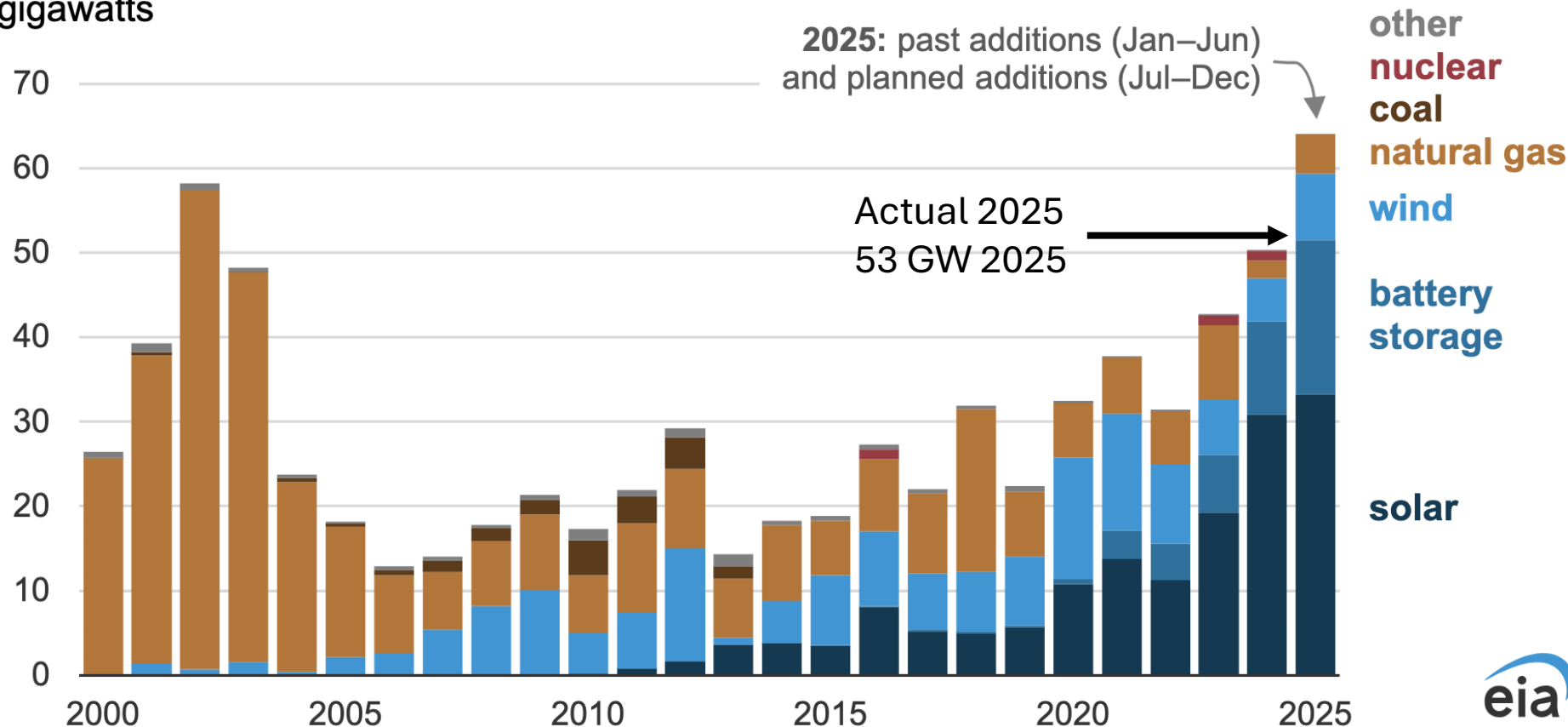
U.S. power plant developers and operators plan to add 86 gigawatts (GW) of new utility-scale electric generating capacity to the U.S. power grid in 2026 in our latest [Preliminary Monthly Electric Generator Inventory](#) report, a record if realized. Solar power makes up 51% of the planned 2026 capacity additions, followed by battery storage at 28% and wind at 14%.

GW Added Per EIA	2026 Forecast	2025 Actual
Total (No DG) + 62%	86	53
Solar + 60%	43.4	27.2
Battery + 60%	24	15
Wind + 50%	11.8	7.8
Gas + 110%	6.3	3
DG Solar	6	6

US 2024+ GW Adds > 50 GW/yr >2x Ave 2005-20

U.S. utility-scale electric generating capacity additions (2000–2025)

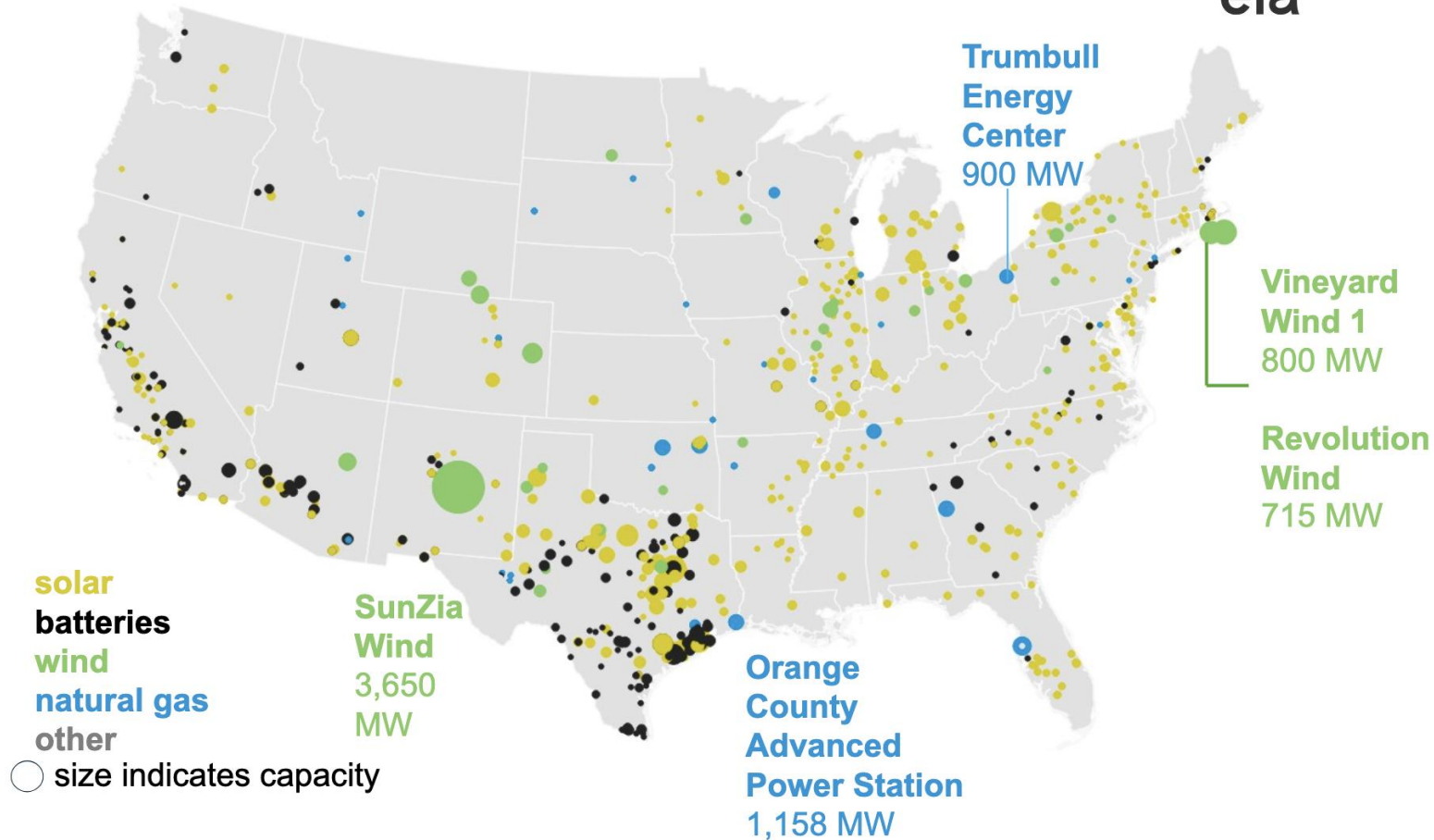
gigawatts



Data source: U.S. Energy Information Administration, *Preliminary Monthly Electric Generator Inventory*, June 2025

Broad Based Solar Additions, BESS Expanding

Planned 2026 U.S. utility-scale electric generating capacity additions



Data source: U.S. Energy Information Administration, *Preliminary Monthly Electric Generator Inventory*, December 2025
Note: MW=megawatts

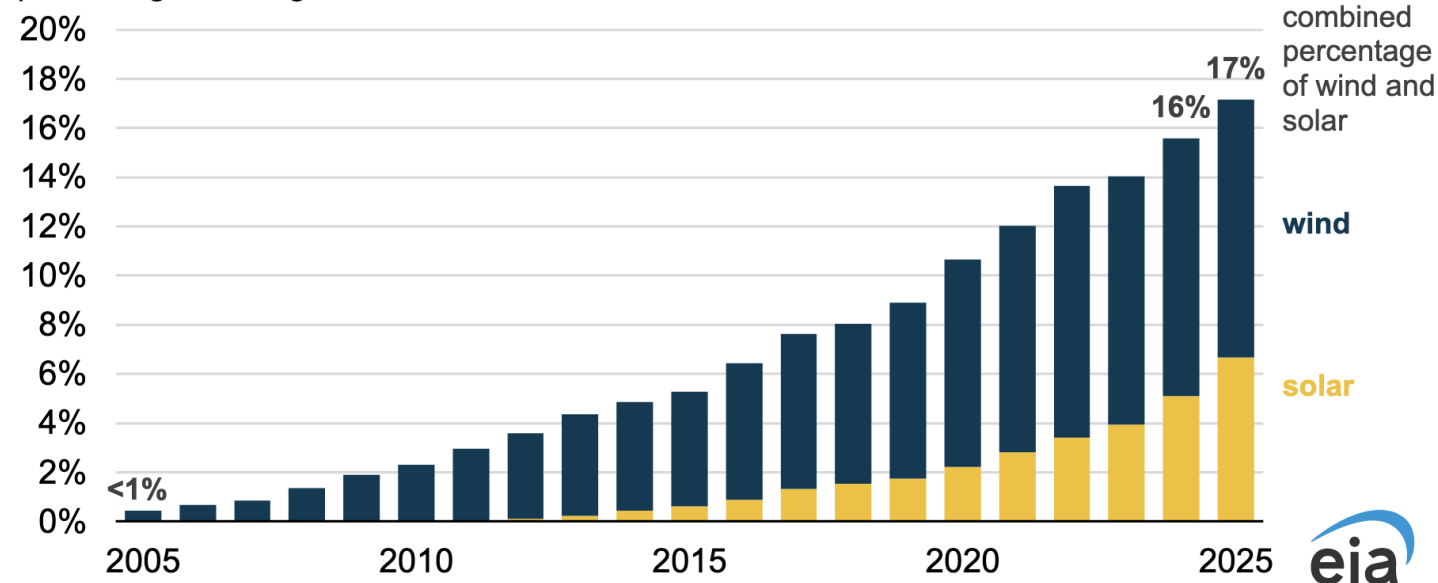
US Delivered TWh: 760 PV+Wind - 853 w/ DG

MARCH 20, 2026

Wind and solar generated a record 17% of U.S. electricity in 2025

Annual percentage of U.S. utility-scale electricity net generation from wind and solar (2005–2025)

percentage of net generation



19% If Add DG PV
853 TWh Delivered

DG PV = 93 TWh
US PV = 296 TWh
Wind = 464 TWh

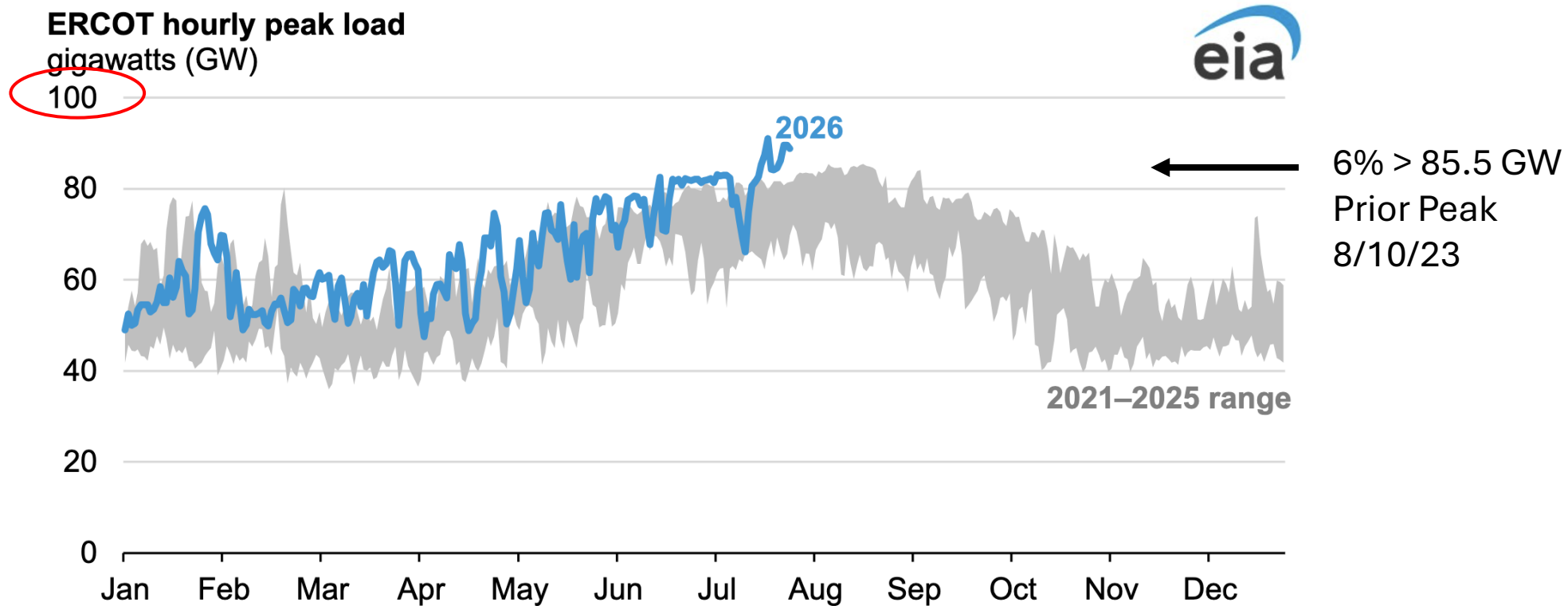
Total 2025 Net Gen: 4471 TWh

Data source: U.S. Energy Information Administration, *Electric Power Monthly*, February 2026

TX Data Centers Driving ERCOT Peak Spike

AUGUST 3, 2026

Hourly peak load in ERCOT set a new record, exceeding 91 GW on July 22



Data source: U.S. Energy Information Administration, EIA-930, Hourly Electric Grid Monitor

Note: ERCOT=Electric Reliability Council of Texas

<https://www.eia.gov/todayinenergy/detail.php?id=67906>

<https://www.ercot.com/static-assets/data/news/content/a-peak-demand/records-yearly-archive.htm>

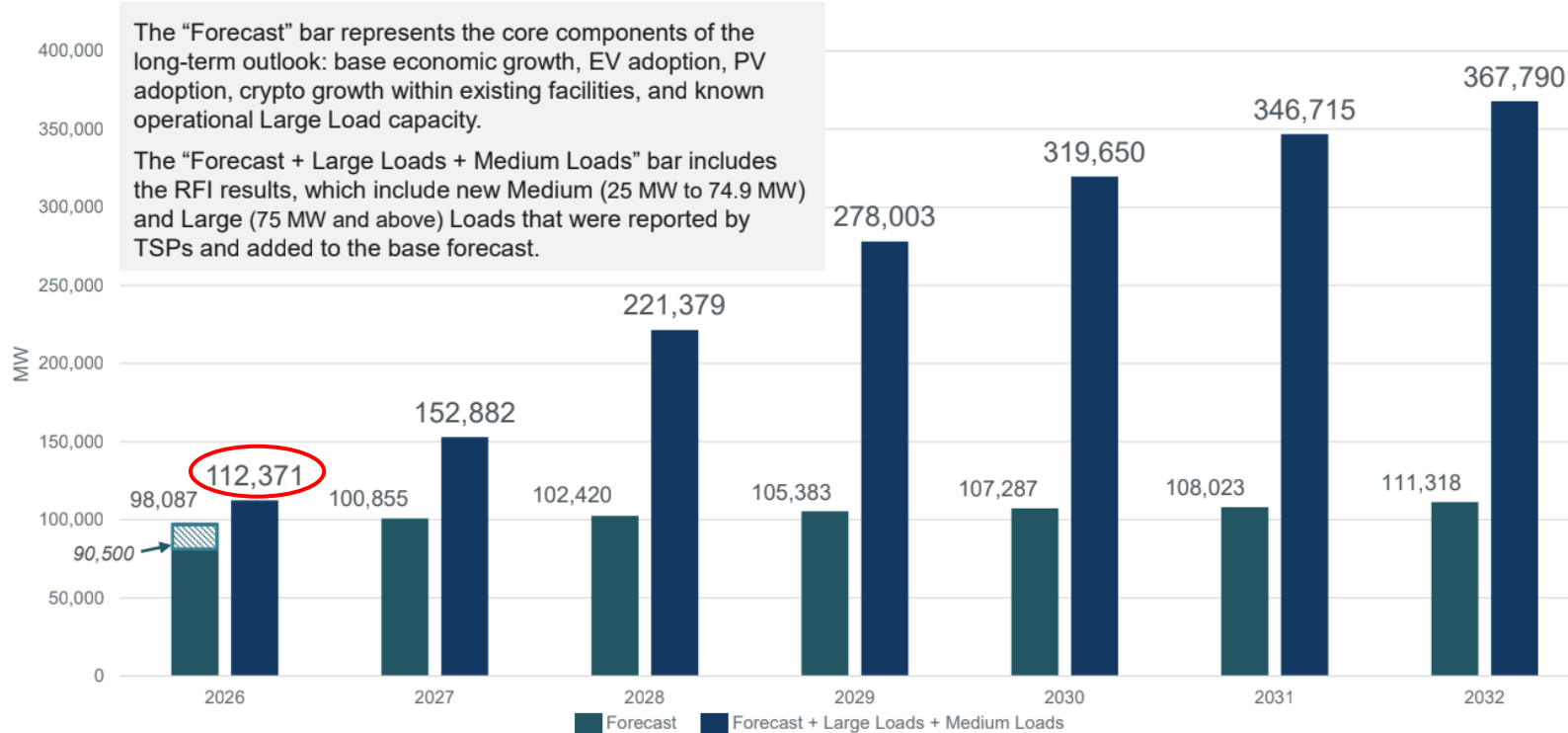
TX Data Center RFI Drove Abbott Audit Delay



Item 12

PUBLIC

Preliminary Long-Term Load Forecast Peak Demand plus Transmission Service Providers (TSPs) Request for Information (RFI) Submissions



Key Takeaway: This forecast should be considered preliminary, and adjustments are expected as the information is further studied, reviewed, and finalized to support its use in planning.

Item 12: CEO Update

Pablo Vegas
ERCOT President and CEO

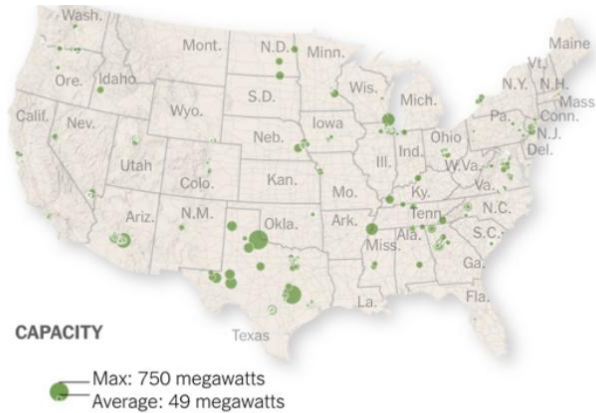
Board of Directors Meeting

April 21, 2026

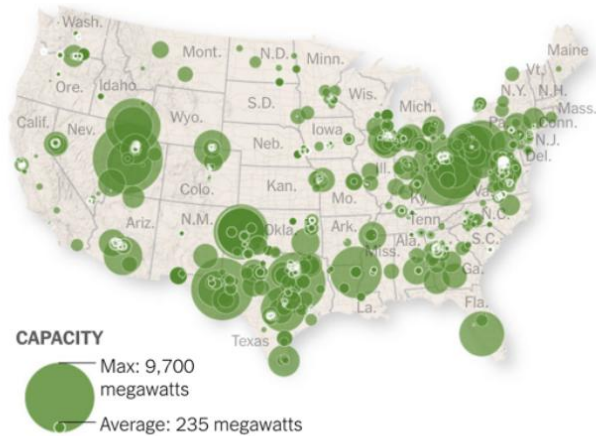
2

Data Center Queue Clearing: Texas & Utah +

1301 Operating DC / 61 GW



2059 Planned DC / 378 GW



Source: Cleanview

Announced behind-the-meter capacity by state / 87 GW

Power capacity (MW)

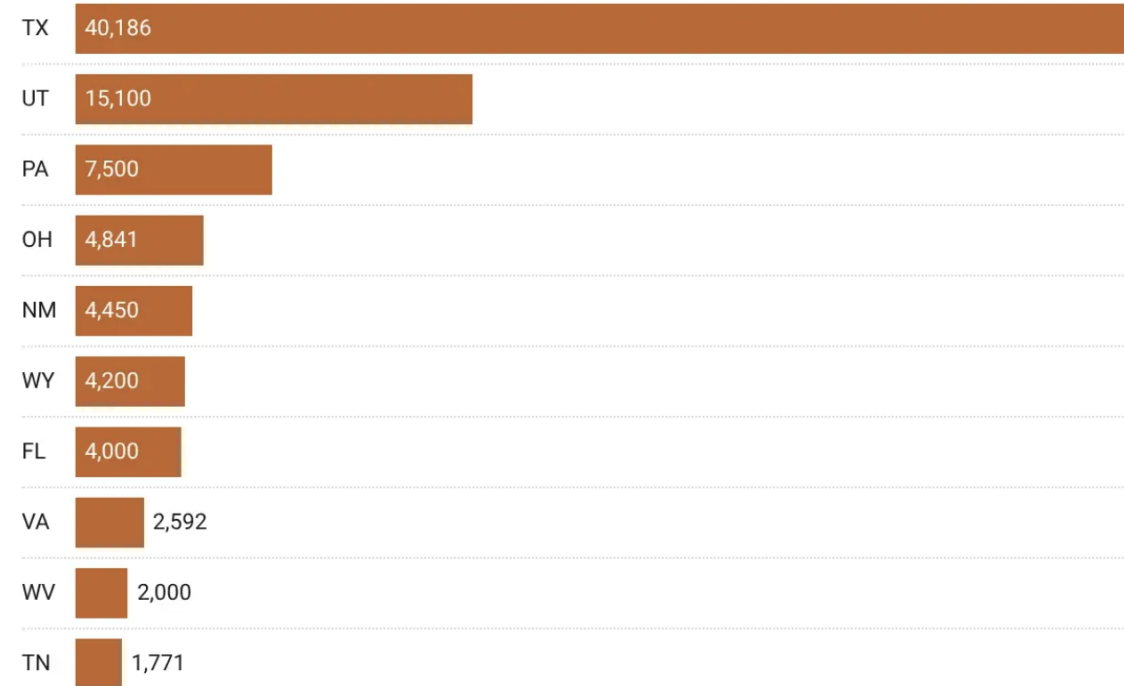
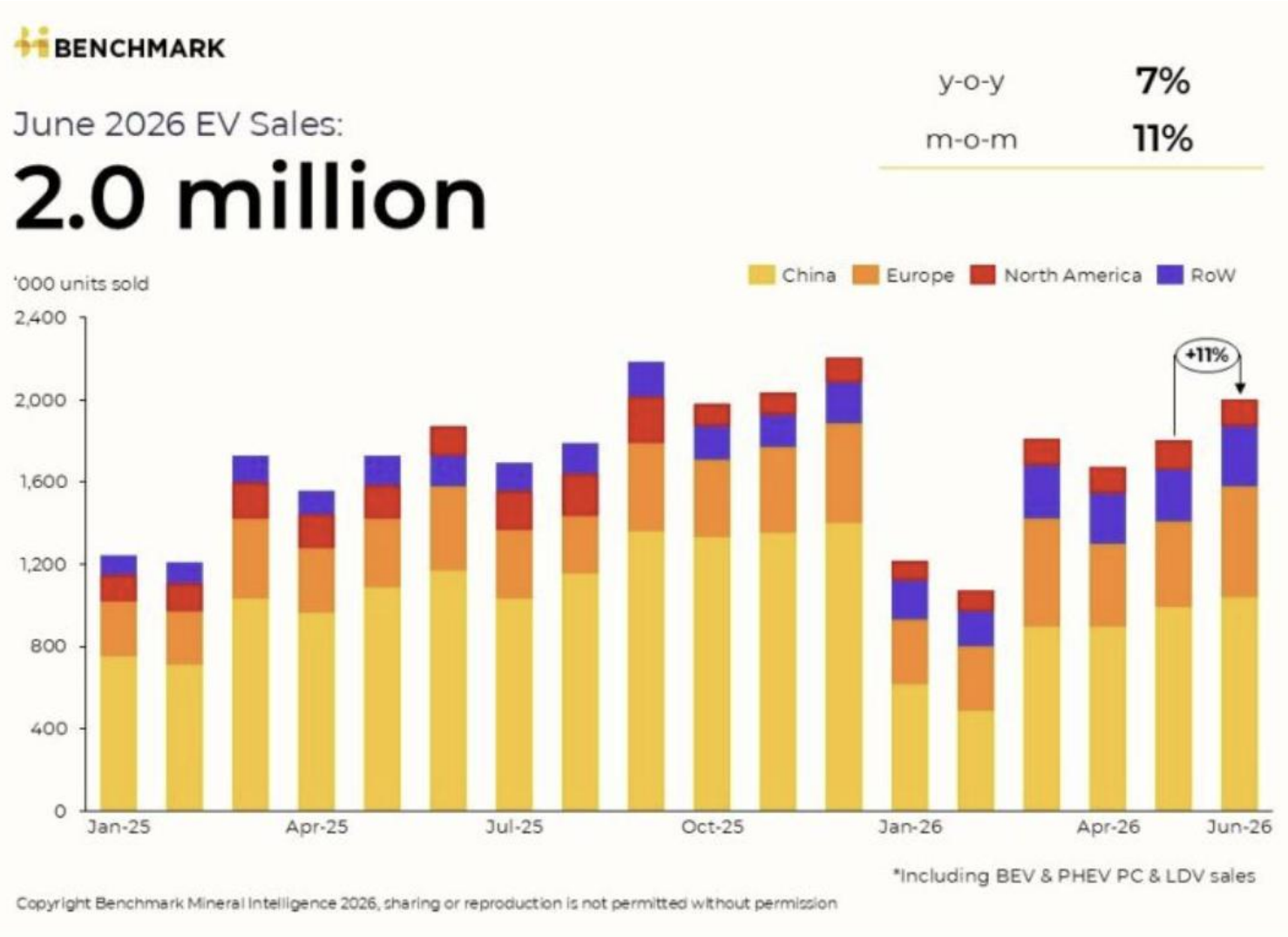


Chart: Michael Thomas • Source: Cleanview data center tracker • Created with Datawrapper

2026: Global EV Sales > 23 million: 27% LDV

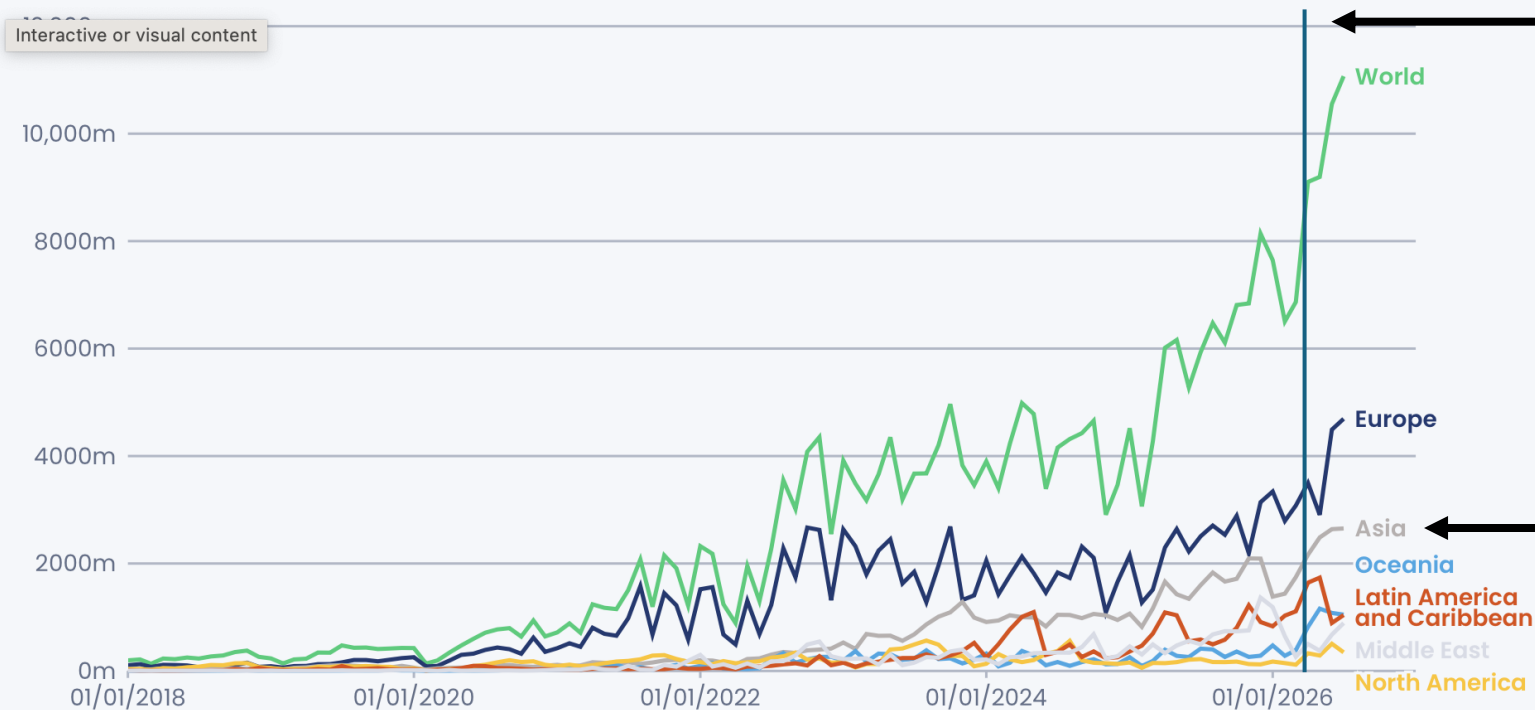


← 1.4 MM US New LDV June
US 2026 forecast: 16 MM

Oil Scarcity Drives Chinese EV Export Surge

China's cleantech exports by technology and destination

Monthly export value (USD millions)



April 2026 >\$11 Billion
New EV Export Record

Asia Exports Summer 2026
= Europe Q2 2025

Source: [General Administration of Customs of the People's Republic of China \(GACC\)](#).

Batteries includes power storage systems, EV batteries, and consumer batteries. EVs includes battery electric vehicles (BEVs) and plug-in hybrid electric vehicles (PHEVs). Export value is displayed in nominal terms, as published. [Full methodology](#).

EMBER