

ENERGY MATTERS

Soundbite summaries of the energy news you need to know

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AMERICAN ENERGY SOCIETY

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- The Power Read -

- **Fossil fuels:** The story is that there is no story.
- **Renewables:** 5 trends to know.
- **Policy:** Congress is still reviewing enormous spending bills (Farm, Defense...).
- **Climate:** There is a new Tornado Alley.

- Fossil Fuels -



Editor's note: In this age of 24/7 news cycles where almost every story is an AI-generated headline, it is easy to forget that "no story" can also be important and valuable....

- Oil -

- Usually, geopolitical conflict in the Middle East or Russia will destabilize global oil markets; however, **the sector has been unusually stable** this year. Perhaps this is a holding pattern before a tumultuous election? Or, perhaps it is a healthy response to five years of seemingly never-ending disruptions?

- The total number of active drilling rigs for oil and gas in the US is 600, which is essentially the same total for every month for all of 2024.
- US crude oil production stayed the same for the eleventh week in a row at an average of 13.1 million barrels per day (bpd).
- Crude prices seem to volley within a narrow range between \$78 - \$82.
- The Frac Spread Count in 2024 (new wells that have finished construction) has remained essentially unchanged m/m.

- Gas -

- In 2024, **US natural gas supply, demand, and prices have been noticeably [steady](#)**.

- Coal and mining -

- This year, total **coal production and revenues in the US have been [steady](#)** (*note*: metallurgical coal for steelmaking is up, but thermal coal for electricity generation is down, which balances out).

- Carbon capture and removal -

- **CO2 emissions in the atmosphere are increasing**. Average CO2 emissions in May were [426.7 ppm](#), an increase of 2.92 ppm over May 2023's measurement of 423.78 ppm. The accumulation of CO2 in the atmosphere is increasing at the fastest rate ever, far above any experienced during human existence.

- *Editor's note*: in consideration of the four entries above, the rise of CO2 emissions has as much to do with the [chemistry](#) of the CO2 molecule as it has with emissions from non-fossil sector sources.

- No- / Low-Carbon and Renewable Energy -

- **Special renewables top 5 trendspotting survey:**

1. **Solar**: Most new capacity additions to the grid are from solar (it is the fastest clean energy technology to install). However, adding solar has increased grid congestion, curtailments, and permitting constraints.
2. **Storage**: There is intense demand to increase utility-scale storage capacity. *Note*: oversupply is driving solar and storage manufacturers into a price war.
3. **Manufacturing**: In spite of the Key Bridge [collapse](#), the Panama Canal drought, geopolitical conflict around and near the [Strait of Hormuz](#), trade-war threats with China, and high freight rates, material and supply chain limitations and shortages are not as significant as they were one year ago, and international trade is steady.
4. **CDR**: Technology-based carbon dioxide removal is surging, led by rapid development of methodologies to verify carbon crediting and CDR certification. Although most of these methodologies are being revised, the field has been reduced to the final seven, all of which are considered reliable: two are private, while five are part of independent standards endorsed by the International Carbon Reduction and Offset Alliance (ICROA). *Editor's note*: the field of verification will be pared down even more.
5. **Hydrogen**: Demand for low-carbon (green and blue) hydrogen as feedstock for ammonia, synthetic methane, and synthetic liquids is led by Denmark and the Middle East, with funds from the IRA supporting growth of the industry in the US.



Editor's note: Globally, nearly [\\$800 billion](#) will be invested in clean energy technologies in 2024, which is 10%-20% higher than 2023.

- Energy Policy & Geopolitics -



- **Beltway buzz:** This is a slightly slower legislative week in DC due to the traditional [Congressional baseball game](#). Members of Congress have been playing this game annually since 1909 — all proceeds go to charity. Make no mistake, the bipartisan ballgame is highly competitive.

- **The status of the \$1.5T Farm Bill is still unclear.** The biggest disagreement is whether to add (Senate), subtract (House), or reallocate (moderates) climate-related conservation program funds. In general, Democrats favor the [Senate](#) version and Republicans favor the [House](#) version. Congressional Democrats also want [stronger restrictions](#) on PFAS ("forever" chemicals) than the Republicans on the House side.

- Meanwhile, **the House and Senate are looking at their respective versions of the 2025 Defense Policy bill.** Most of the amendments being considered try to limit, restrict or prevent the Pentagon from including "climate" as a strategic or operational consideration. Indeed, there are more than 1,300 amendments to the Defense Policy bill that have been submitted, mostly in the [House version](#). In general, Democrats want to protect the military's ability to include climate and clean energy while Republicans want to cut funding designated to climate-related issues.

- **The Senate might (finally) confirm three new nominees to FERC** (the agency that oversees the interstate gas network and the wholesale power system) who will immediately have to enforce new transmission rules for grid operators and utilities.

- Global Energy -



- **Asia:** On May 21, China [signed](#) a 30-year, \$400 billion gas supply deal with Russia; however, negotiations [stalled](#) because China added a last-minute provision that caps their purchase price at equal to Russia's heavily subsidized domestic level.

- **Africa:** Nigeria's grid crashed again because of unreliable technology and labor strikes; however, the government just passed a new [Electricity Act](#), which [allows for](#) cross-border interconnections to the OMVG and CLSG independent system operators in neighboring Liberia, Guinea, Sierra Leone, Guinea Bissau, Gambia and Senegal.

- **Europe:** It appears that Vladimir Putin's war in Ukraine was a [strategic blunder](#). Among other unintended consequences:

- Russia's net economy is smaller than that of Texas.
- China does not appear as interested in connecting to Russia's natural gas pipelines.
- Gazprom, Russia's largest nationalized oil company, had been profitable every year for more than 20 consecutive years, until the war in Ukraine.

- **C/S America:** China is [outsourcing](#) manufacturing of its new EV models to Brazil.

- Climate, Sustainability, and Resiliency -



- Fifty years ago, "Tornado Alley" in the United States was Oklahoma, Kansas, Nebraska, Iowa and parts of Texas. **The new modern-day Tornado Alley is the Deep South and Tennessee Valley.**

- **The US Federal Emergency Management Agency's 2024 disaster relief fund is running low.** FEMA has committed \$25B with a projected shortfall of \$1.3B. (So far in 2024, there have been 11 extreme weather disasters in the US.)

- **Nitrous oxide, a greenhouse gas more potent than CO2 or methane, is increasing.** Most NO2 comes from use of nitrogen enhanced fertilizer and manure in agriculture. At least HCFC levels are declining.

- **"Heat Katrina": an extreme heat event that cannot be offset by air conditioning.** For instance, Phoenix will likely experience two "heat Katrina" days this summer.

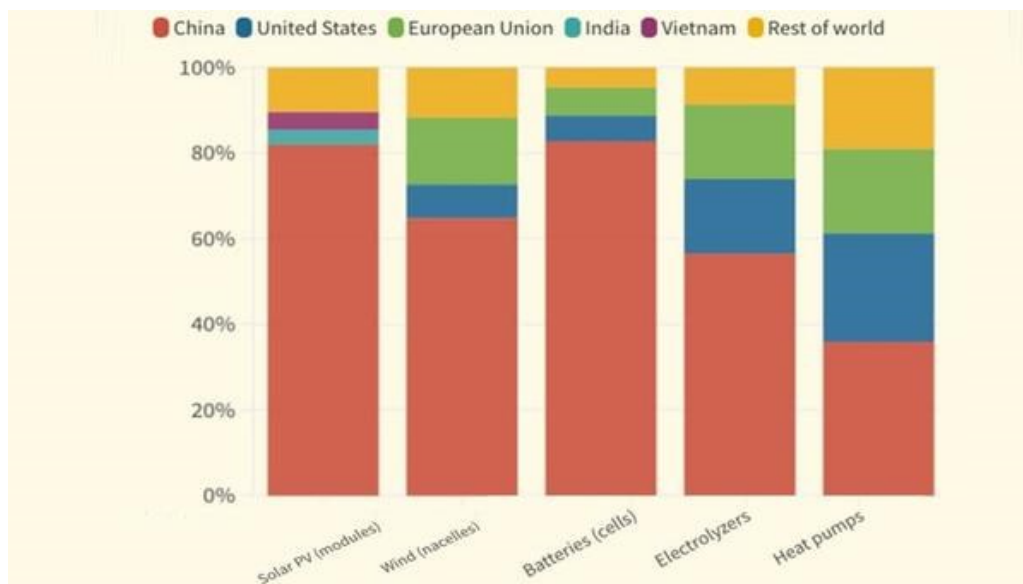
- Related, this is **India's longest-lasting heatwave** — 100+ degrees (reaching 113) for 24 consecutive days, and counting.

- Populated and heavily trafficked parts of **Miami recently flooded ... without a major or extreme storm.**

- *Replay: June 26, Mexico City is projected to run out of water.*

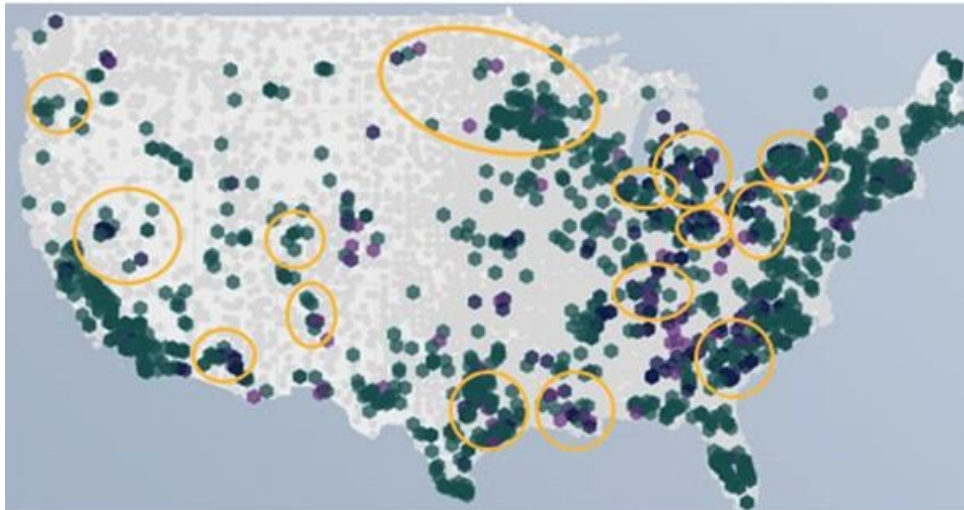
- Research and Markets -

- **A comparison of global cleantech manufacturing, by a sample of sectors:**



- For the first time, **the US has surpassed Russia in sales of natural gas to the EU.**
- While US and European automakers struggle with weaker demand for electric vehicles, **China is manufacturing small and cheap EVs** that are taking over the domestic car market and other markets in Asia. The EU may impose a 20% tariff; China is threatening a 23% retaliatory tariff on related products imported from Europe and the US. (*Note*: right now there are about 55,000 EVs in Europe that were manufactured in China.)
- **The Environmental Defense Fund (EDF) plans to support research into [geoengineering](#)** (aka reduce the severity of climate change by artificially altering weather).
- **In August, the DoE will launch Community Workforce Readiness Accelerator for Major Projects.** [RAMP](#) has ten regional targets (below, circled in **yellow**) and 3 goals:
 - Build local workforce capacity
 - Connect workers to jobs and remove barriers to opportunities
 - Provide skills training for in-demand jobs (apprenticeship programs, etc.)

AES will support [Members](#) who are interested in applying for funding in advance of the formal announcement.



- **Wilson Sonsini has updated its federal funding [database](#)** including but not limited to a FOA that supports development of CO2 transport.

- **Spotlight on [ResTech](#)** -

- **2024 WCS Resiliency Pitch Competition**
 - Winner: [Blip Energy](#)
 - Runner Up: [ThermoShade](#)
 - People's Choice Award (tie): [Stars Edge](#) and [Heat Inverse](#).

- Electricity & Power -



- Regions at greatest [risk](#) of electricity supply shortfall this summer (*insert left*). **YELLOW** is an elevated risk during above-normal summer (heat) conditions; **GREY** is low risk with sufficient operating reserves.

- Vermont Gas Systems is [testing](#) to see if its **natural gas pipelines can be converted to support demand for heating and cooling with geothermal** as a source of power.

- **Natural gas consumed for electricity generation this summer in the US will [not change](#) from the record-setting total consumption reached last year.**

- "[rebuttable presumption](#)" (*noun*), def: a review strategy that accepts a given fact as true until it is disproved; "rebuttal presumption" has been adopted by many utilities as a review strategy in order to ensure that alternative transmission technologies are prioritized and fast-tracked rather than immediately rejected during the evaluation phase of a system's needs.

- Universities in the Spotlight -

- The [Energy Research Program](#) at the **University of Alabama, Tuscaloosa** conducts fundamental research about the intersection of hydrocarbons and water sources, from source and reservoir to structure and seal.

- Researchers in the [Energy & Power Systems](#) group at **University of Alabama, Huntsville**, conduct advanced research on supersonic flows, heat transfer within air breathing engine components and augmentation technologies, and micro-scale and millimeter-scale flows.

- Quotes -

[On the Russia/Ukraine conflict...](#)

"Russia: a gas station masquerading as a country."

- The late Senator John McCain (R-Ariz.)

"\$104 for groceries sounds like a bargain ... until you realize Russians earn less than \$200 a week."

- John Stewart of the *Daily Show*, on the state of the Russian economy

A popular joke in Ukraine:

A Russian муж (husband) catches a hare.

He brings it to his wife: "Roast it!"

She: "No gas!"

He: "Then use the microwave."

She: "No electricity!"

He: "Well, chop some wood, light the stove."

She: "No wood!"

The муж then throws the hare out the window in a fit of anger. The hare gets up, shakes himself, and shouts, "Long live Ukraine!"

- Bulletin Board -

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- **Orrick** published [2024 Offshore Wind Report](#). The report is an update on the current OSW market and trends in 20+ key jurisdictions with some forward looking analysis. AES Members have access to [Winds of Change](#).

- **ClearPath** has [primer resources](#) on Ag-Tech, CCUS, Water-Tech, Industrial Fuel.

- **Title Leader** launched a Title Commitments [platform](#) to support title searches by parcel.


- Gratitude -

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