

ENERGY MATTERS

Soundbite summaries of the energy news you need to know

AN OFFICIAL PUBLICATION OF



AMERICAN ENERGY SOCIETY

Week of September 27, 2021

- The Power Read -

- **Natural gas:** Prices in Europe rising
- **Coal:** Prices in China surging
- **Policy:** Support for Build Back Better falling
- **Climate:** Pollution in China growing
- **Markets:** ESG proposals under SEC Rule 14a-8(i)(7) missing
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- Fossil Fuels -

- Oil -

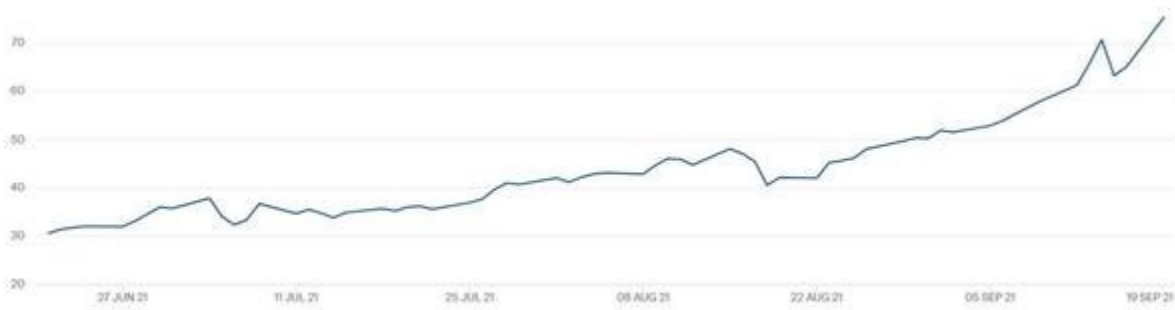
- The US exported [slightly more](#) crude oil (less than 1%) than it imported during the first half of 2021.

- Gas -

- Natural gas prices were already higher in Europe than anywhere else in the world. But **since January 2021, natural gas future prices (Dutch TTF) are [up more than 300%](#)** (but beginning to [decline](#) in the US). There are a number of supply and demand related causes:

- Demand has rebounded as Europe comes out of the COVID-19 pandemic.
- An unusually cold 2020/21 winter increased demand and reduced stockpiles.
- Low-to-no wind generation in Western Europe restricted alternative supplies.
- Weather forecasts anticipate another cold winter.
- Hurricane Ida in the Gulf of Mexico took supply off the global LNG market.

- A gas infrastructure system in Norway delayed maintenance due to COVID.
- Russia is holding back supply to show Europe it needs the Nord Stream 2 pipeline
- Demand continues to increase in China.



- Mining, Minerals and Coal -

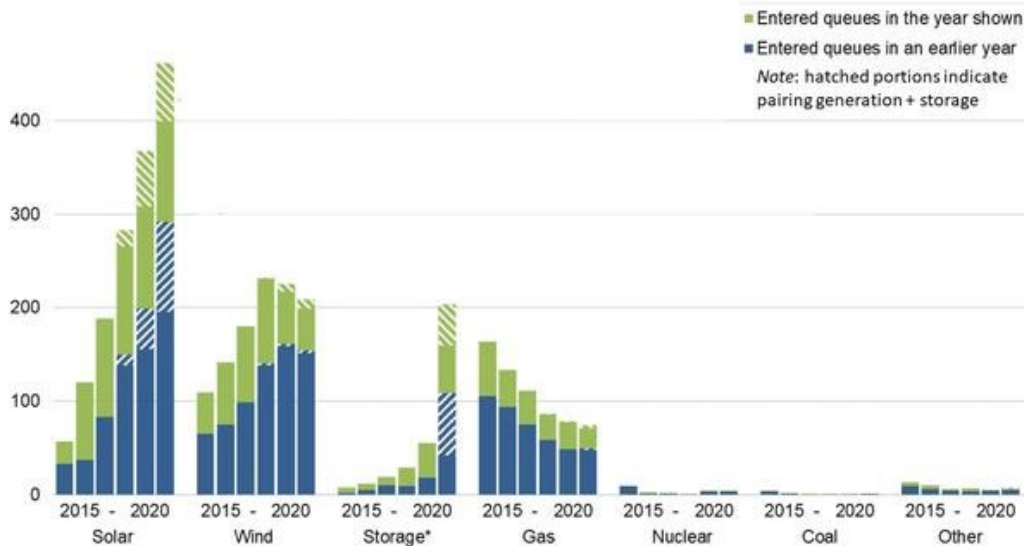
- Coal futures prices hit a record level and are almost +80% higher than a year ago, due in large part to the natural gas shortage (*above*). **No country is recommitting to coal more than China** (source is in *Mandarin*). Prices for the most-traded thermal coal reached \$150 a ton, up from \$85 a year ago.

- Carbon Capture -

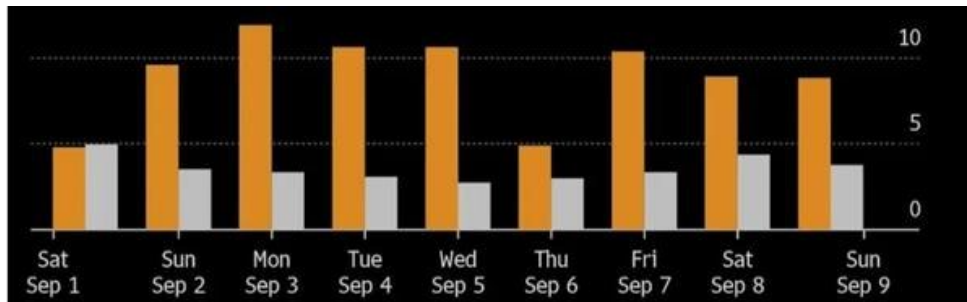
- **Orca**, the world's largest direct air capture plant, has begun operations and has the capacity to capture 4000 tons of CO₂ per year.

- Low-Carbon Energy -

- **Most proposed large-scale renewable energy projects that apply for interconnection to the grid are not built.** *Insert:* about 750 GW of generation and 200 GW of storage capacity are "in the queue" — or, about the current total amount of utility-scale electricity generating capacity in the US (1,117 GW).



- A comparison of maximum [wind-power](#) output in the UK, September Y-0-Y:

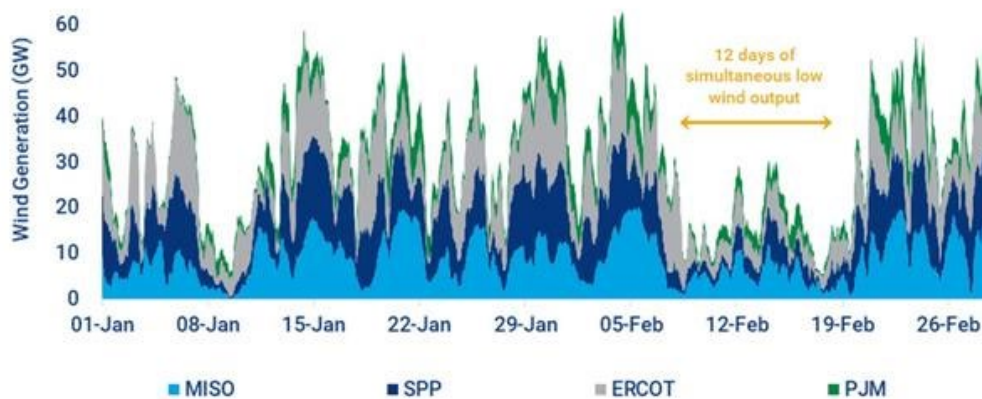


- American Energy Society completed a comprehensive [study](#) of all incubators and accelerators and has determined that **New York is the most dynamic** climate-tech state in the US. A sneak-peak of the study, [Empowering Impact](#), is available; [Members](#) of AES have access to the full study for free.



- In general, the US electricity grid was built for summer, driven by air conditioning demand during the hottest months each year. However, in recent years many utilities have become concerned about [meeting peak demand during winter](#). Put another way, **winter is the new summer**. There are a few key reasons why the grid is less reliable during winter:

- Growing solar generation has cut extreme demand during hot summer peak days;
- Electrification of heating increases grid generated net load during cloudy winter days;
- Poor winter insolation (*insert*):



- Policy -

- *Beltway Buzz*: Congress begins its very tricky "Potomac two-step" on the Infrastructure and the Budget Recon bills (known as the [Build Back Better Act](#), which is not looking like it will pass), and now add a possible government shutdown by October 1st and a desperate attempt to lift the debt ceiling. Then, of course, is a special infrastructure vote promised to hold-out moderates.

- *Beltway Buzz II* (thank you SME and AES Member [Liam Donovan](#)): The House has reached the end of the line in terms of what it can accomplish without Senate cooperation; the upper chamber seems to be operating on its own timetable, and **neither appears to be working toward the majority votes that are needed** (218 and 50, respectively). That leaves the House in the position of either waiting around for the Senate to get serious, or trying to pass the largest possible package they can get the votes for, in the hopes that it will help their negotiating posture. The primary challenge is the tension between progressive desires to go big and moderate reluctance to vote on anything that is dead on arrival in the Senate. In the meantime, all eyes are on the three most important people in this process: Senator Joe Manchin (D-WV), Senator Kyrsten Sinema (D-AZ), and Senate Parliamentarian Elizabeth MacDonough, each of whom will have a significant hand in determining the scope and scale of the eventual package in the weeks and months to come.

- *Meanwhile ...* Biden wants to show the world that the US and his administration are serious about climate change when COP26 talks begin in November in Glasgow, Scotland. But **the President will look weak if Congress fails to pass infrastructure legislation or the Democrats' \$3.5 trillion reconciliation package**. That will give his government less leverage to extract concessions and commitments, especially from other high emitters like China.

- *And this also happened ...* the EPA issued a final rule that cuts the use of ozone-depleting, planet-warming hydrofluorocarbons (HFC toxic chemicals are used for refrigeration and air conditioning) by 85% over the next 15 years through an allocation and trading program. AES Members also have access to an [HFC final rule fact-sheet](#).

- Spotlight COP26 -

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- **Hosts of the COP26 global climate talks have committed to "maximum attendance."** For instance, Britain has implemented "[Managed Quarantine](#)," a program that supports shipping COVID-19 vaccines to delegates attending the climate talks who cannot access them in their home countries.

- Climate and Sustainability -

- *Featured*: **Most Scope 3 emissions that are assigned to O&G companies are from the end use of oil products and natural gas.** (For instance, the gasoline combusted in cars is an O&G company's Scope 3.) From the sector's perspective, [Scope 3](#) emissions are effectively set by chemistry. The most direct way that the O&G industry can reduce Scope 3 emissions is to reduce consumer demand for their products ... and that won't happen. Thus, there are two other ways that an O&G company can reduce absolute Scope 3 emissions:

1. reduce overall production;
2. support the manufacture of automobile engines with better gas mileage.

- *Insert:* **per capita GHG emissions.** (Note: Measured as gross GHG emissions, 23 of the world's 25 most polluting cities — responsible for 52% of global emissions, or more than the entire developed world — are in China.)



- While sipping coffee on the beaches of Johannesburg in South Africa, Richard Hardiman sketched the inspiration for **WasteShark**, a plastic-grabbing aquadrone. It works, but the device has a long way to go — about 18 billion pounds of plastic waste drains into oceans each year.



- Las Vegas means “**the meadows**” because for thousands of years this valley was a green oasis in the midst of the Mojave Desert. But, by 1962, after decades of groundwater pumping, the Las Vegas Springs ran dry. Today, 90% of all water for Las Vegas comes from Lake Mead and the Colorado River.



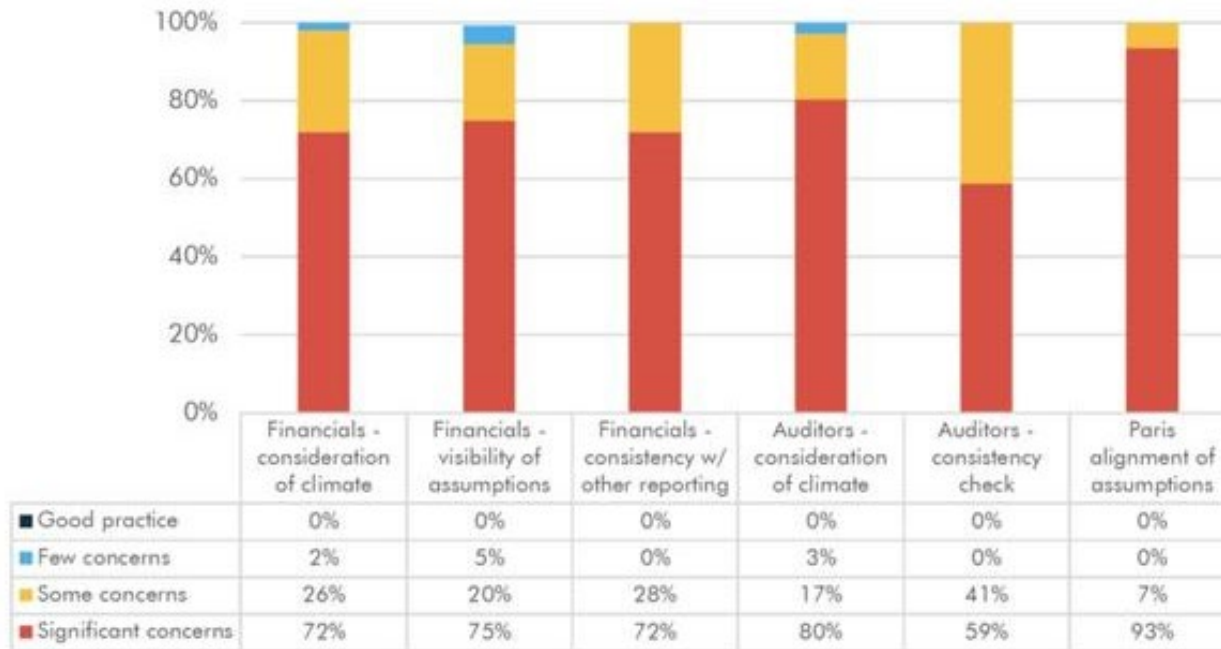
- **The northeast region of the US is heating faster than the rest of the continent and 50% faster** than the global average.

- *Recommended resource:* **Climate TRACE** has launched an interactive tool that tracks greenhouse gas emissions by region, sector, time, etc.

- Research and Markets -

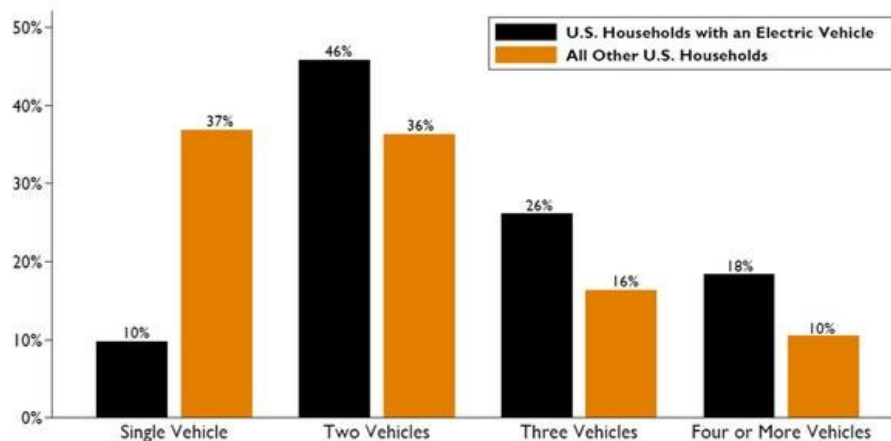
- Carbon Tracker [analyzed](#) the financial records of 107 of the 150 largest carbon-emitting companies in the world. Despite public net-zero pledges, **none of the 107 companies show evidence of assessing climate risk in financial reporting.** In addition, 80% of the auditors did not assess the effects of climate risks when auditing these companies. Also worth noting, compared with other sectors profiled, oil and gas companies provided the most evidence of climate-related matters in their financials and audit reports.

(Insert: Considerations of climate matters in financial statements and audit reports, overall results.)



- Companies can reject shareholder ESG proposals under the [SEC’s Rule 14a-8\(i\)\(7\)](#) if the SEC determines the proposal “micromanages” the company. *(Note: The SEC recently denied Conoco a Rule 14a-8(i)(7) request, stating that its shareholders had submitted a “Proposal that only asks the Company to set emission reduction targets; the Proposal does not impose a specific method for doing so.”)*

- *Insert: number of vehicles in US households, by EVs and all other fuels.*



- Electricity, Power, Efficiency, and the Grid -

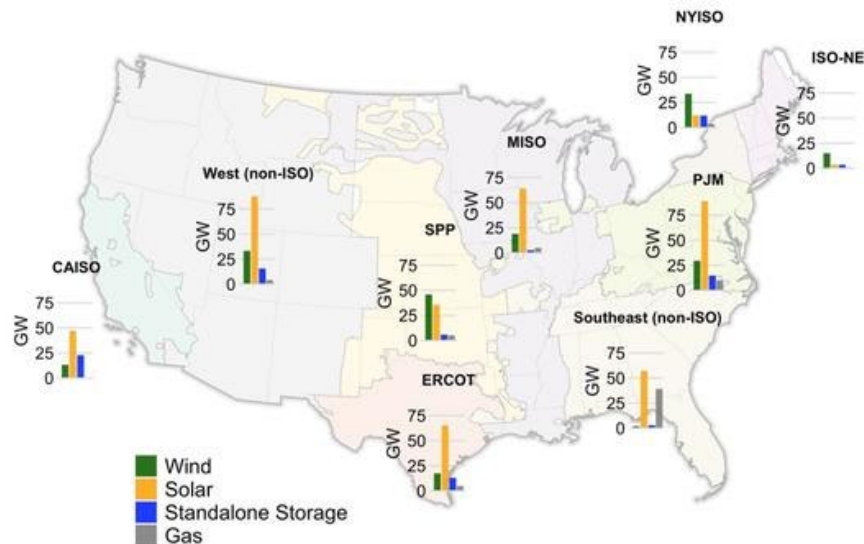
- *Featured:* Electricity prices in Europe have set [new record highs](#) due to a shortage of natural gas and much lower than expected wind power output. Some countries are restarting coal power plants to ensure enough electricity reaches consumers. (The UK has the highest electricity inflation rate. Wholesale gas prices have increased 450% in France and Germany.)

- US regional comparison of [sources of electricity production](#):

- In West Virginia, Kentucky, and Wyoming, **coal** is the most-used electricity source.
- The Pacific Northwest and New England generate the most **hydroelectricity**.
- The Great Plains are the biggest producers of **wind** energy.
- California and Nevada have the most **solar and geothermal** electricity production.



- *Insert:* [Proposed](#) wind, solar, standalone storage and gas projects, distributed across major ISOs/RTOs in the US. The total capacity proposed is about equal to the total amount of electricity consumed in one year.



- **Non-fossil fuels make up 42% electricity generation in the US** (including nuclear energy). The biggest sources of renewable (non-nuclear) electricity are wind (8.4%) and hydro (7.3%).

- Cybersecurity Spotlight -

- **Cybersecurity startups raised \$9.9 billion** in venture funding in H1 2021, about the same amount in all of 2020.

- Bulletin Board -

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- *Featured event:* Sept. 28 at 8:00 - 10:15 am PT, State of Green is hosting the Carbon Virtual Summit 2021, [The Road to Zero](#).
- *Featured event:* [Drone Deploy](#) is hosting a virtual global conference, October 19 - 20. AES has been given a few complimentary tickets - [contact us](#) if you are interested.
- Shopify is now accepting applications for its [Sustainability Fund](#).
- [Lilac](#) has developed a new ion exchange technology to increase production of lithium from brine resources; the company just closed a \$150 million Series B financing.

Quotes: COP (out)

"[COP26] runs a high risk of failure."

- UN Secretary-General António Guterres, on why the UN General Assembly called a sudden and impromptu meeting for heads of government to instill a sense of urgency about the upcoming COP26, hosted in Glasgow, Scotland at the end of October

"Climate change is realpolitik."

- UK Prime Minister Boris Johnson

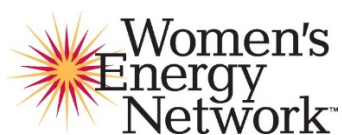
"We talk and we talk about ambition ... and things remain the same. It is absurd."

- Costa Rica President Carlos Alvarado Quesada, on how the US, Russia, China and India (the highest emitting countries) sent delegates to a meeting on climate change at UN headquarters in New York although organizers specifically asked for heads of government ... and Brazil's delegation RSVPed "yes" but didn't show up

- Gratitude -

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