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The Stella Group, Ltd.

The Stella Group, Ltd.. is a strategic technology optimization and policy owner's rep firm for clean distributed energy users and companies which include advanced batteries and controls, energy efficiency, fuel cells, geoexchange, heat engines, microhydropower (including tidal and wave), modular biomass, photovoltaics, small wind, and solar thermal (including CSP, daylighting, water heating, industrial preheat, building air-conditioning, and electric power generation). Scott Sklar serves on the national Boars of Directors of the non-profit Business Council for Sustainable Energy (BCSE). He teaches three unique interdisciplinary sustainable energy courses at The George Washington University (GWU) and serves as Sustainable Energy Director of GWU's Environment & Energy Study Institute (EEMI). Scott Sklar was awarded the prestigious The Charles Greely Abbot Award by the American Solar Energy Society (ASES) and on April 26, 2014 was awarded the Green Patriot Award by George Mason University in Virginia.

Sklar has two self-power buildings in Arlington, VA – Residence with solar water heating, ductless geothermal heat pump, mixed PV module system tied to a lithium ion phosphate 300 amp hour battery system which also 100% charges 2023 Nissan Leaf SL – Office Building – solar PV roofing shingles, small 2 kW wind turbine, and a PEM hydrogen fuel cell all tied to the web-enabled battery bank, ductless heat pump, and solar daylighting.

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European Natural Gas Prices Surge as Winter Cold and Geopolitics Collide

By [Tsvetana Paraskova](#) - Jan 30, 2026, 8:00 AM CST

Europe's benchmark natural gas prices were headed on Friday for their largest monthly gain since 2023 as cold snaps in January boosted heating and power demand and fast-draining storage sites fueled a market rally.

The front-month [Dutch TTF](#) Natural Gas Futures, the benchmark for Europe's gas trading, were on track for a 38% monthly gain on Friday, the biggest advance in one month since the summer of 2023, when a supply crunch sent prices skyrocketing.

SEMAFOR 1/26/2026. Global impact of US Freeze: Natural Gas up 120% During January-February Freeze

Bing Guan/File Photo/Reuters **A brutal cold snap in the US drove natural gas prices higher globally, showcasing the world's growing dependence on American fossil fuels.** The Trump administration has, largely successfully, prioritized the export of liquefied natural gas, with Europe particularly dependent on US supplies after slashing its reliance on Russia: Around two-thirds of exported American LNG heads across the Atlantic. But [the winter storm](#) — which has left 10 people dead and a million without power — has led to surging gas prices in the US, up around 120% in the past week, as suppliers have had to shut drilling sites because of the cold and prioritize domestic demand. As one Reuters columnist put it, “When the US freezes, [the global LNG market catches a cold](#).”

The worst may be over. Despite the mass power outages, the US grid itself held up remarkably well, while additional wind and solar capacity helped bridge gaps. (It helped that the storm struck over the weekend, when loads are typically lower.) Early signs also indicate that LNG production is recovering, and “[prices have likely peaked](#),” ING commodities analysts forecast. The cold weather is expected to continue for several more days, however, so any progress could be fitful.

— *Prashant Rao*

THE DEVICE THROTTLING THE WORLD'S ELECTRIFIED FUTURE

A shortage of transformers is causing delays to power projects everywhere, holding trillion-dollar industries hostage—and that was before tariffs. March 25, 2025 at 1:00 AM EDT

By Akshat Rathi, Naureen Malik and Tiffany Tsoi. Photography and video by Tom Skipp

A bottleneck around the global supply of transformers spells trouble for sustaining infrastructure we have, from airports to homes, and for expanding emerging technologies we want such as AI as we enter the “[age of electricity](#)” as the International Energy Agency calls it.

But the constraint is most ominous for what it will do to slow the necessary transition to clean energy, the best solution to rising temperatures.

Electrification is also critical for economic growth. To a distressing extent, it's not just [widely discussed](#) political issues but also hidden bottlenecks such as a scarcity of transformers that are holding back the energy transition more than a lack of money or the wait for breakthrough technologies that haven't been developed yet.

- ① **Copper windings for high-voltage and low-voltage lines**
- ② **Ceramic bushings to move electricity in and out safely**
- ③ **Storage for oil used in heat management**
- ④ **Protective external case**
- ⑤ **Steel core that helps concentrate magnetic fields**

Illustration by Brown Bird Design

<https://www.bloomberg.com/features/2025-bottlenecks-transformers/>

Transformer shortage an increasing concern in the US

Smart Energy International August 17, 2025

Pressure on power infrastructure in the US is intensifying, with a supply shortage for power and distribution transformers to hit 30% and 10%, respectively, in 2025, according to a recent report from Wood Mackenzie, an energy research and consultancy firm.

According to the report '[Untangling the US transformer supply chain crisis](#)', since 2019, Wood Mackenzie estimates that US power and distribution transformers have seen demand surge by 116% and 41%, respectively. This has been due to a confluence of new demand drivers, including a rise in electricity consumption, which has increased 7% since 2020, reversing a 1% decline from 2010 to 2020, the growing pipeline for clean energy projects, and aging infrastructure, Wood Mackenzie notes.

"This surging transformer demand has created a significant supply deficit, with domestic manufacturing capacity unable to keep pace," observed Ben Boucher, senior analyst of supply chain data and analytics at Wood Mackenzie.

"Utilities are routinely turning to the import market to meet project timelines. In 2025, imports will account for an estimated 80% of US power transformer supply and 50% of the distribution transformer supply. This market imbalance is escalating costs and lead times and is delaying our ability to bring generating plants online in pace with the surging energy demand."

Supply has not kept pace with demand, resulting in a growing market deficit across all transformer specifications and escalating lead times and prices, the report found.



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- NextEra CEO John Ketchum says renewables are becoming a more attractive option to meet growing
- demand from data centers as the cost of building gas-fired generation triples due to a shortage of
- turbines. ([Politico Pro](#))

John Ketchum's comments came after Energy Secretary Chris Wright downplayed the role renewable energy would have in new power generation.

BY: **BEN LEFEBVRE** | 03/10/2025 11:55 AM EDT

U.S. electricity demand is climbing as more data centers are built to power artificial intelligence and buildings and vehicles increasingly electrify. **“To get your hands on a gas turbine right now and to actually get it to the market,**

you’re looking at 2030 or later,” Ketchum said on the CERAWeek stage. “The cost of gas-fired generation has gone

up more than threefold.” Factors for the cost increase include higher demand for turbines, which leads to higher labor costs as more workers in the gas turbine construction industry retire or leave for other careers, Ketchum said. Slow government permitting was also making natural gas projects more difficult.

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https://subscriber.politicopro.com/article/2025/03/gas-turbine-shortage-boosts-renewable-energy-nextera-ceo-says-00220475?utm_campaign=Newsletter&utm_medium=email&hsenc=p2ANqtz-C0CfyKPlapndYHa8taltL0idePzjibbtys

SEMAFOR 1/27/2026. Global impact of US Freeze

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INSIDE CLIMATE NEWS. Gas Exports Are Driving Up Americans' Energy Bills, Report Says

Higher exports of liquefied natural gas in 2025 played a significant role in rising utility bills, an analysis of federal

data found. by [Kiley Bense](#). December 17, 2025

During the 2024 campaign, President Donald Trump promised voters that his policies would lower their energy prices by 50 percent, repeating this pledge in speeches in New York, Pennsylvania and North Carolina. “We will cut energy and electricity prices in half within 12 months—not just for businesses but for all Americans and their families,” he wrote in a [Newsweek](#) op-ed.

That hasn’t happened. Nationwide, electricity bills are [up 13 percent](#) compared to last year, with some states facing steeper jumps than others. One of the reasons for those increases is the growing export of liquefied natural gas and a corresponding spike in gas prices, argues [a new report from Public Citizen](#), a nonprofit consumer advocacy organization.

The analysis, based on data from the U.S. Energy Information Administration, found that Americans paid \$12 billion more for natural gas between January and September 2025 than they did over the same period last year. Because natural gas is used to heat homes directly and to power the electric grid, its price has an outsized impact on Americans’ utility bills. Higher exports leave Americans more exposed to swings in the global market.

LNG exports were up 22 percent this year, according to the report. While the U.S. is already the [world’s largest exporter](#) of the fuel, the second Trump administration has made [increasing LNG exports a priority](#).

Inside Climate News reporter Dan Gearino contributed to this article.

LINK: <https://insideclimatenews.org/news/17122025/liquefied-natural-gas-exports-driving-up-energy-bills/>

FINANCIAL TIMES. Royce small modular nuclear reactor in Wales © Reuters

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Published DEC 29 2025

As a fledgling technology, SMRs still have a lot to prove. One issue is that, while smaller nukes require smaller cheque books, their cost per unit of capacity is higher than those of their massive conventional cousins. A single standard has yet to emerge: the Nuclear Energy Agency **counts** nearly 130 SMR technologies globally.

On top of that, they share many of the same challenges as their larger peers. Three-quarters of the world's uranium hails from a small handful of countries, and enrichment is dominated by Russia and China. Several studies suggest SMRs will produce higher levels of nuclear waste than traditional plants. One 2022 **survey** found the volume of waste could be double or as much as 30 times bigger, due in part to the use of chemically reactive fuels and coolants. Security, too, remains paramount.

<https://www.ft.com/content/567a1cbc-5030-4e7f-854f-b7eb9ca6b762>

US Heating Costs Expected to Rise 9.2% This Winter

Colder weather and rising electricity and fuel costs will lead to a big jump in costs for individuals, according to estimates from a group representing state energy officials.

By [Ivan Penn](#)

Dec. 17, 2025

Consumers already tapped out from rising home energy costs face yet another strain on their pocketbooks — surging heating costs. Higher electricity and natural gas prices coupled with forecasts for unusually cold temperatures across parts of the country are expected to drive up bills as winter takes hold. The average U.S. household is projected to spend nearly \$1,000 this winter to heat its home, up 9.2 percent from a year earlier, according to the National Energy Assistance Directors Association, which represents state governments in securing federal money.

Even as costs rise, the federal government is offering states less money to help low-income residents pay for heating. The budget for a critical federal program has been cut by about a third this year compared with two years ago. “These increases may not sound dramatic to higher-income households, but for families already struggling, they are devastating,” said Mark Wolfe, executive director of the energy assistance association. “Millions of households are being pushed deeper into utility debt and closer to shut-offs simply because they cannot afford to keep their homes warm.”

<https://www.nytimes.com/2025/12/17/business/energy-environment/winter-heating-costs-increase.html?smid=nytcore-ios-share>

U.N. leader calls on tech industry to run data centers on 100% renewable energy by 2030

<https://www.latimes.com/environment/story/2025-07-30/ai-should-run-on-100-renewable-energy-by-2030-un-chief-says>

By Laura Millan. July 30, 2025 3 AM PT

- A typical AI data center consumes as much power as 100,000 homes, according to the U.N.
- Big tech also must be responsible in its use of water for cooling, the U.N. secretary general said this week.

Major tech firms should commit to fully powering data centers with renewable energy by 2030, said United Nations Secretary-General António Guterres. Big tech also must be responsible in its use of water for cooling, Guterres said in New York City this week as he presented the U.N.'s new report on the energy transition, *Seizing the Moment of Opportunity*, together with the International Renewable Energy Agency.

“AI can boost efficiency, innovation and resilience in energy systems, but it is also energy hungry,” Guterres said. “This is not sustainable — unless we make it so.”

A typical AI data center consumes as much power as 100,000 homes, according to the U.N., and the largest centers now being built will use 20 times that. By 2030, data centers could consume as much electricity as all of Japan today, the report finds.

Although renewable energy is advancing exponentially across the world as costs fall, the transition away from fossil fuels is highly concentrated in advanced economies like the U.S. and Europe, as well as China, the U.N. says. Much of the developing world is falling behind. That means clean energy is not replacing fossil energy at the pace and scale needed.

Natural Disasters Have Caused \$131 Billion in Global Losses So Far in 2025

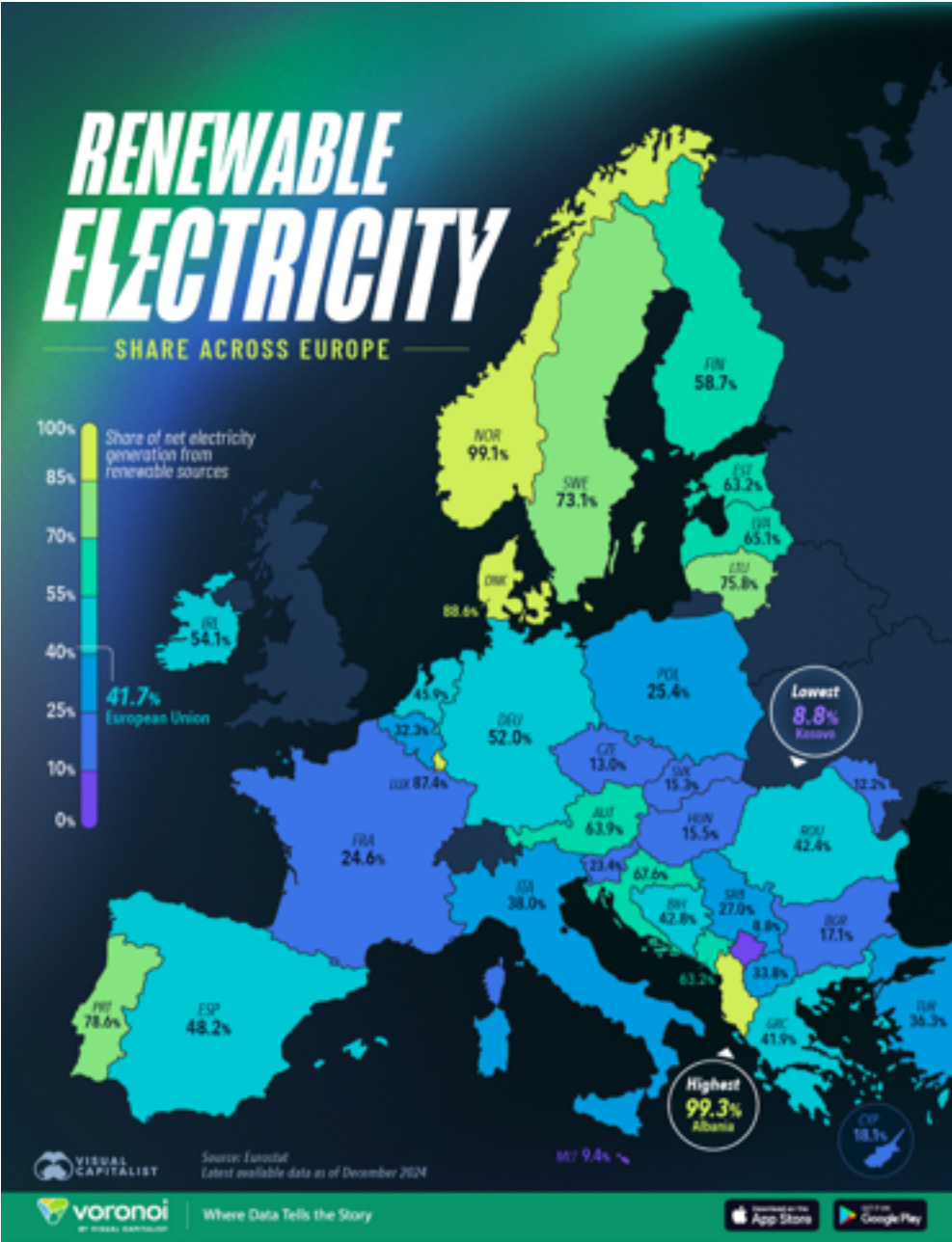
CBS News, by Tracy J. Wholf, July 29, 2025

<https://www.msn.com/en-us/news/us/natural-disasters-have-caused-131-billion-in-losses-so-far-in-2025/ar-AA1JuC>

According to a new report from the insurance company Munich Re, natural disasters that have contributed to more than \$131 billion in global losses for the first half of 2025. The Los Angeles wildfires and severe spring thunderstorms are just a few examples. Overall losses so far in 2025 were slightly lower than the same time period in 2024, but still above long-term averages.

2025 Renewable Energy Across
The EU

Published August 17, 2025
by [Niccolo Conte](#)



Change in electricity generation (2025 vs. 2024)

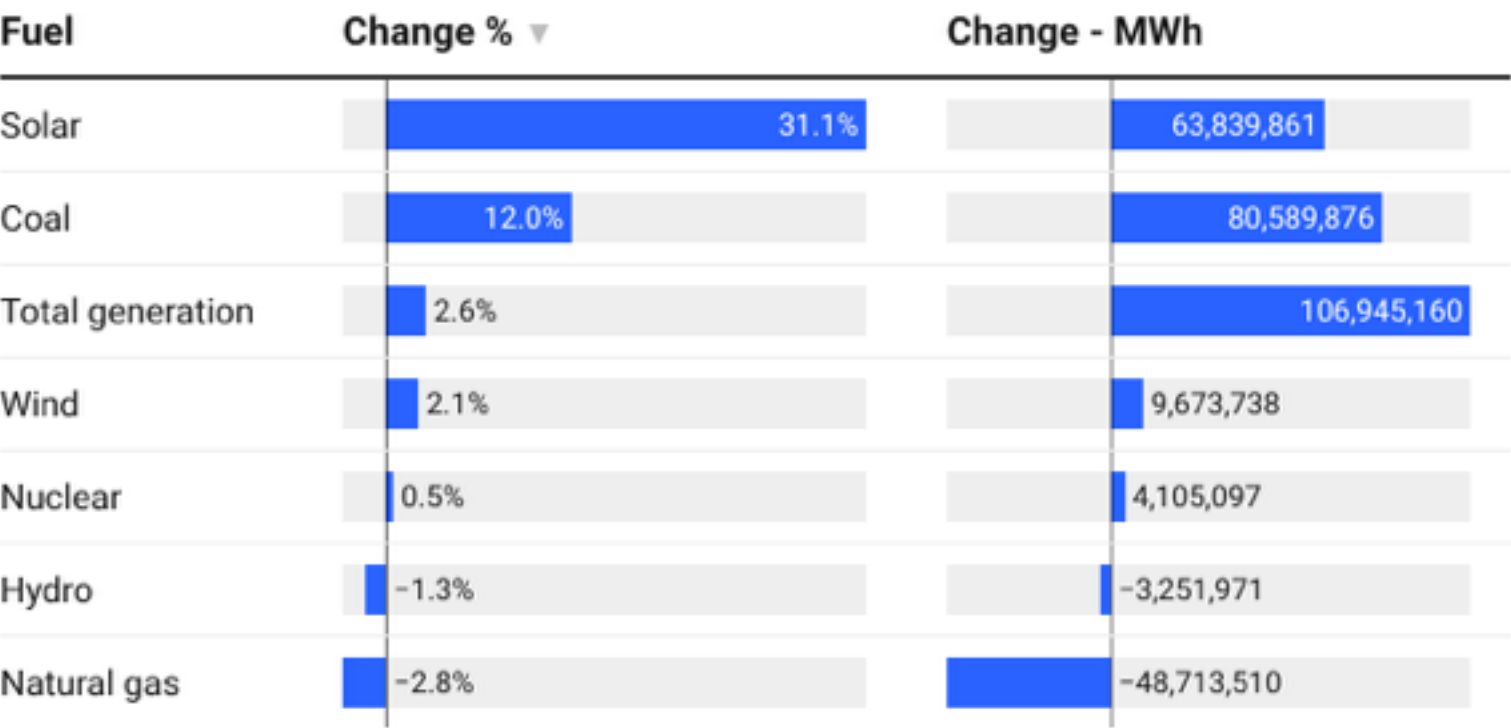
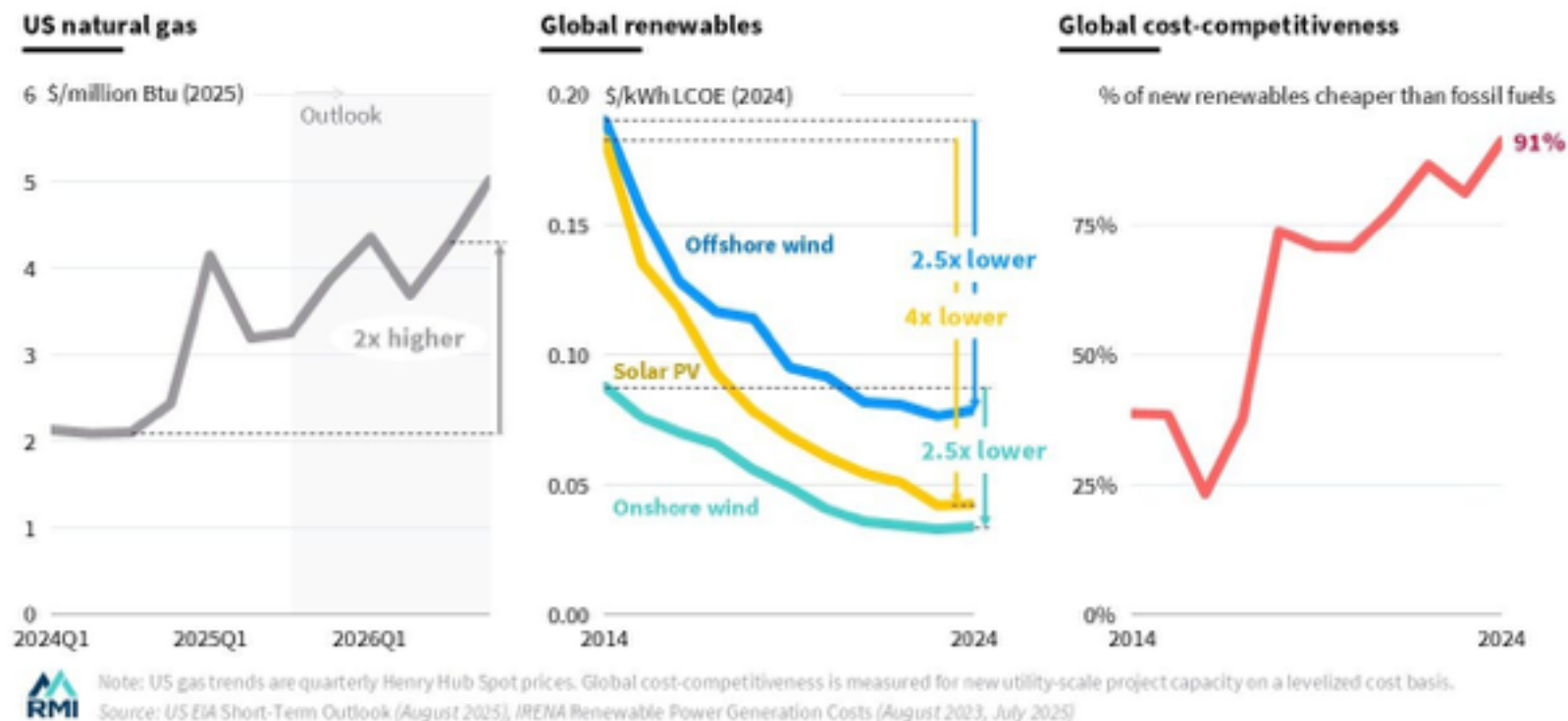


Table: Michael Thomas • Source: EIA-930 • Created with Datawrapper

Affordability, Not Volatility: Renewables' Cost Advantage Grows

Renewables' edge over fossil fuel electricity is growing, recent reports show. In 2024, more than 90 percent of new global renewable energy capacity was cheaper. (RMI)

August 13, 2025. by [Will Atkinson](#)



QUESTIONS OR RESOURCES -

CONTACT ME at SOLARSKLAR @AOL.COM