



Volatility and geopolitical risk fuel new approaches to energy trading and risk management

Energy market participants seek new tools and signals to navigate near-term volatility and long-term uncertainty

With tariffs still causing turmoil in oil markets, and power markets more impacted by weather and geopolitics than ever before, energy traders and risk managers face huge challenges in the coming months. To discuss this, and suggest tools and strategies for coping with short-term volatility and longer-term uncertainty, a panel convened at *Energy Risk USA* in May 2025.

"We face a lot of risk and price uncertainty now," said Paul Cusenza, chairman and chief executive of Nodal Exchange, noting that, since the onset of the Russia/Ukraine conflict in 2022, geopolitical risk has been a far greater influence on US power prices than had been the case before. Other new influences include rising demand for electricity from data centres due to the growth in artificial intelligence and the increase in the use of electric vehicles. "There are a number of factors causing demand to rise, and the question is whether or not we have enough supply."

The steady decline of coal in the generation mix in the US over the past 15 years, and the rise in renewables, particularly wind power, has led to some specific challenges in recent months, with weather events often causing more extreme volatility than in the past, Cusenza said.

He drew several examples using data from Nodal Exchange, where 57% of all volumes in US power futures are traded. In Massachusetts, for example, the day-ahead peak power price in February 2025 was \$131 per megawatt hour (MWh), up 235% from the previous year when it was \$39/MWh. In February 2023 it had been \$65/MWh.

Prices in the Electric Reliability Council of Texas – known as Ercot – hub for Houston hit \$1,808/MWh in February 2021 when Storm Uri hit Texas, but were down to \$18/MWh by February 2024, and were \$35/MWh by February this year. In August 2023, prices rose to \$324/MWh on the back of almost three months of sweltering weather whereas, in August 2024, prices were \$50/MWh. August 2025 can now be locked in at \$160/MWh. "It's only been higher than that twice before since 2016," Cusenza said.

He also highlighted prices in California, where solar plays a greater role in the generation mix. In Los Angeles, the April 2025 day-ahead peak contract averaged \$10/MWh, but in April 2024 it slumped to -\$0.08. April 2026 is now locking in at \$18/MWh.

"This is interesting because it reflects the large amount of rooftop solar," Cusenza said. "Temperatures weren't extreme – they were moderate – not much air conditioning was required, and prices went negative for the whole month."

THE PANEL

Gary Compean, Fuel compliance trader, Par Pacific Holdings
 Christian De Santis, Head of trading operations, Eni Trading & Shipping
 Vincent Kaminski, Professor in the practice of energy management, Rice University, Houston
 Scott Shelton, Energy specialist, ICAP
 Moderator: Paul Cusenza, Chairman and chief executive, Nodal Exchange

Environmental markets have also been volatile, with sell-offs across the board following President Donald Trump's April 9 executive order targeting state environmental programmes. However, data from Nodal Exchange, which lists 25% of all US environmental contracts, shows markets such as the Regional Greenhouse Gas Initiative and PJM Renewable Energy Credits recovering from initial losses soon after.

"The market is expressing its belief that state programmes have a legal right to operate and probably can't be shut down," Cusenza said.

Faced with this level of volatility, new tools and incisive analysis of market signals are required. Vincent Kaminski, professor in the practice of energy management at Rice University, noted the important contribution of AI in improving the precision and quality of weather forecasts. He also pointed to options markets for the signals they send on volatility and price direction. Such signals include the tendency for stock prices to cluster around the strike prices of options with the largest open interest, as well as the gamma positions of option market-makers, he said.

"There is evidence that, if the gamma position of the option market-makers is positive, it tends to suppress volatility," Kaminski noted. "If the gamma position of option market-makers is negative, it may amplify volatility and it might impact the direction of intraday market prices."

Geopolitical challenges

Kaminski noted that one of the biggest geopolitical challenges today is the proliferation of sanctions, citing estimates that some 40% of global GDP is currently under sanctions. "This creates a nightmare for any manager, having to make sure that anything you buy, especially crude oil, is not contaminated with sanctioned products."

Christian De Santis, head of trading operations at Eni Trading & Shipping, noted that it is not only the commodity, but the seller of commodities that counterparties need to vet. He noted the peculiarity of the uncertainty from a trading company point of view, which is leaving traders with difficult decisions around managing their portfolios. Multinational firms able to tap into integrated assets had more opportunities to overcome difficulties, he added.

Scott Shelton, energy specialist at ICAP, argued that, although sanctions caused a huge shift in trade flows, the market quickly adjusted to that. However, tariffs have had a much greater impact. "After the first set of tariffs, we saw a complete freeze of people willing to do deals," he said. "Oil and products markets are not high-margin businesses when it comes to import/export, so when you add a tariff risk, it basically freezes the market." The only deals taking place were those between the same company, he added.

While things have started moving again now, everyone is aware that things could change, he said. "Who knows what things are going to look like for prices in 45–90 days?"

De Santis agreed, noting that transactions were being pushed back due to the uncertainty over tariffs. Firms need their wider business to step in in these cases, he said. "Before taking that decision, you need to have a management understanding and accepting of the risks."

When faced with this level of volatility, it's important that firms are clear on their underlying objectives before planning their risk management approach, stressed Gary Compean, fuel compliance trader at specialist refiner Par Pacific Holdings.

"It goes back to understanding what your tolerance is: are you hedging, are you investing or are you trying to create profit and drive alpha?" Defining a clear objective and target before looking at options and futures, or other actions, is key, he said.

Regarding pricing, Compean uses tools such as Autoregressive Integrated Moving Average models and would also look at historical pricing. However, he warns that these may not necessarily be reflective of future prices in the long term, given today's growing electric vehicle penetration and renewable production. "You need some tweaks and adjustments as to the weight you assign to certain signals, but understanding these options and features can certainly be useful."

Traders are not only having to be more adept with technical skills, but they also must understand many different sectors, Compean said. "There are a lot more things that affect energy markets nowadays."

This means traders taking into account new sets of data. "The tools have completely changed in the past six months," Shelton said, adding that he is just as likely to be looking at 10-year bonds these days as running safety and security declarations on US exports or looking at arbitrage. "With all this volatility, the markets are not moving on supply and demand numbers. Everyone is concentrating on geopolitical risks," he said.

This makes it more important for people to be aware of such signals as market consensus ahead of events, said Shelton. He gave the example of the most recent Organization of the Petroleum Exporting Countries meeting where consensus beforehand was bearish and, once the announcement had been made, crude rallied by \$5. "If you understood the consensus, when the announcement came, you would have expected some upside reaction and probably seen it as a good opportunity to cover shorts."

Longer-term uncertainty

Compean noted how challenging it has become to look forward five, 10 or 15 years, given the current uncertainty and volatility. "Right now, we're seeing that capital efficiency and cashflow are a bigger priority than being precise on specific



Paul Cusenza, Nodal Exchange

price signals," he said. "Because of the uncertainty, people are liquidating their positions, not willing to guess, and that's affecting capital investment."

The US administration's reversal of previous policies that incentivised decarbonisation and environmental markets has added to the confusion around long-term investments in clean energy. However, Compean said that, while governments need to strike the right balance between overstepping and not doing enough, it's also important for companies and individuals to have a clear vision of what they want to achieve. "There has to be a way we can all collaborate and build a strategic vision where there are partnerships to take action," he said.

De Santis spoke of the need for better continuity across countries and US states when it comes to the transition, as it's very difficult to, for example, roll out renewables in multiple jurisdictions.

In the meantime, the spread of renewables is causing immediate challenges around grid operation, noted Kaminski. "The energy transition and the growing penetration of renewables are probably not only a great promise, but also a source of growing risks to energy professionals," he said. "The growing importance of renewables calls for rethinking the entire market design for electricity, especially in Europe."

He noted that some experts are advocating bifurcating power markets, effectively creating a separate market for electrons produced from renewables and those produced from conventional electricity sources. "I don't know if we are going to go that far, but there will definitely be changes in the design of the systems."

He also noted that, in the US, this would happen state by state – a highly complicated process. "There will be trials and errors and experiments, and this will be both an opportunity and a nightmare for energy professionals, depending on how agile firms are and how fast they can react."

The panellists agreed that communication is a vital method of gathering insight and reading signals into managing today's risk and volatility. "It's the conversations we have and the people and connections we make that are ultimately going to influence our decisions," said Compean.

Shelton concluded: "People that have conversations and spend time tracking consensus instead of only tracking data are at a distinct advantage." ■

>> The panellists were speaking in a personal capacity. The views expressed by the panel do not necessarily reflect or represent the views of their respective institutions.