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Awards 2021

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**Commodity exchange
of the year**

> nodal

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Nodal Exchange

In a turbulent year for commodities markets, Nodal Exchange maintained its strong growth trajectory, posting a significant increase in open interest and winning *Energy Risk's* commodity exchange of the year award.

Open interest on the exchange broke one billion megawatt hours (MWh) at the end of 2020, representing a notional value of \$55 billion and an 11% increase on the prior year's position. Nodal currently holds more than 50% of the market share of US power futures open interest, according to figures from Nodal Exchange based on regulatory data.

This growth happened despite the impact of Covid restrictions on power markets last year. Depressed demand led to lower power volumes during the summer months and less price difference between the locations – or nodes – on which Nodal Exchange's power contracts are based. However, volatility returned with a vengeance in February 2021, testing the risk management models of the exchange and its clearing house, Nodal Clear.

Winter storm Uri brought freezing temperatures to much of the continental US in mid-February 2021, affecting both the supply of and demand for energy. Texas was particularly badly affected due to an ageing grid and poorly weatherised infrastructure. While residents were trying to turn up the heat, much of the state's infrastructure simply froze, leading to many fatalities as at least 4.5 million residents lost power.

The Nodal team watched power prices on the Electric Reliability Council of Texas (Ercot) grid jump 70-fold over the month of February 2021 as the market reacted to the impact of the storm, which made supply more difficult and costly to provide. At the height of the crisis, power prices hit the Texas regulator's systemwide circuit-breaker of \$9,000 per MWh.

On Nodal Exchange, which offers monthly term futures, Ercot North Hub peak real-time power prices were averaging \$33/MWh for the month before the situation deteriorated, on Monday February 8, 2021. By the following Friday (12 February), this price was \$420/MWh as traders anticipated the severe cold weather.

As these events unfolded, however, Nodal was able to keep pace with demand and ensure participants remained protected. "Our risk models did what they were supposed to do," says Paul Cusenza, chief executive officer of Nodal Exchange. "Standard clearing with a clearing member can handle massive events like this without issue if the right risk models are in place, and we have that with our portfolio margining model."

Nodal Clear, a wholly owned subsidiary of Nodal Exchange, uses an expected shortfall methodology for initial margin calculations. This takes both recent portfolio returns and potential returns during historical stress periods to calculate initial margin tailored to the risk in a participant's portfolio. The model uses more than 1,000 return observations to calculate each portfolio and is calibrated to cover a two-day loss to a 99.7% confidence level.

"The beauty of a market like this is that twice a day we mark to market,



Paul Cusenza

so that [as] our participants are anticipating rising prices, we are providing protection with the variation margin calls twice a day," Cusenza continues.

By Tuesday February 15, Ercot prices had reached \$1,522/MWh. "On that Tuesday we were moving a lot of money back and forth [to satisfy margin calls], but the protection was there in

our system and so the clearing house was never at risk," he says. Prices peaked at more than \$2,000/MWh the next day, settling at \$1,817/MWh by the end of the month.

This kind of event "reinforces why Nodal Exchange exists", says Cusenza, as hedging protects participants from price risk and clearing helps them to manage credit risk.

In addition to providing protection during crisis events, Cusenza is also proud of the role the exchange is playing in the energy transition. Nodal first introduced environmental products in 2018, partnering with Incubex to develop emissions and environmental contracts for the state-based North American markets.

Nodal added futures and options contracts for the Oregon Clean Fuels programme and for three new renewable energy certificates in June 2020. In November, the exchange launched eight physically settled renewable identification number (Rin) futures and options contracts.

"These are the first physically settled Rin contracts," Cusenza says, adding that Nodal's experience creating a highly granular offering in the power space has helped its efforts to develop the large suite of environmental contracts needed to serve the many different North American markets.

"I'm really pleased with our position in the environmental markets. It feels good to be part of the solution," Cusenza says. He also points out that Nodal is supporting the power markets as they transition to support greater demand for electricity generated from renewables in a future low-carbon world. "If you go forward 50 years, we will likely be consuming a lot more electricity, although usage will hopefully be more efficient," he says. "This business will still be thriving then." ■