

Exchanges' data renders size of financial trading: analysis

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Data supplied to Platts by the three exchanges where all North American electric financial futures and options are either traded or cleared, show a total market in terms of megawatt hours of 7.430 billion MWh in 2012, which decreased in size by 11.9% compared to the prior year.

The IntercontinentalExchange, the CME Group's New York Mercantile Exchange, and the comparatively new Nodal Exchange, each has provided their trading data to Platts Megawatt Daily as part of an effort to clarify the size of the cleared, financially-settled power contract market.

According to the data, cleared financial power volumes of futures and options dropped from a level of 8.441 billion MWh in 2011.

Sources contend that trading in 2012 on the exchanges suffered from what the power industry in general suffered from: low power prices.

Over the last year and into the early goings of 2013 there had been "considerably less volatility," as one market observer pointed out, "less volatility of natural gas prices, and thus less reason to hedge against natural gas risk and power price risk."

The market contraction was one thing, but there was also mounting confusion throughout the year at the exchanges, and among trading entities, caused by regulatory changes that were due to take effect in 2012.

One example was the uncertainty over how the Commodity Futures Trading Commission might count trading in swaps. ICE decided to recast its swaps as futures, thereby making them exempt from CFTC rules on swaps that were due to come into effect on October 12. CME's financial electricity products were already categorized as futures.

Trading on the three exchanges in the first two months of 2013 looked to be continuing the negative trend set in 2012. However, the data provided by the exchanges showed that trading in March, and particularly in April, has perked up, leading some to hope that a near-term rebound is underway.

Nevertheless, getting a clear read on the size of the electricity financial trading market has never been easy, despite the fact that the two biggest exchanges, ICE and NYMEX,

now report daily on their websites prices, contract volumes, and open interest, which is the number of new contracts opened that day that will be settled financially at some later date. LCH.Clearnet also posts daily volume and open interest for products cleared for the Nodal Exchange. Many say they find the public data hard to decipher.

One of the impediments in determining the size of the market has been the different, and changing, lot sizes of the different contracts offered. Thus, converting all the contracts to megawatt hours seems to be the key in reaching an apples-to-apples comparison, even as the exchanges each have differing numbers of power futures, and Nodal Exchange does not offer options.

The exchanges themselves acknowledge that converting their volume data to megawatt hours can be both complicated and time consuming.

NYMEX, of course, is the oldest and more traditional exchange. It was founded in 1882 and bought by CME Group in 2008. It uses ClearPort to clear its trades. NYMEX offers 226 US electricity futures contracts and 22 options contracts.

ICE, which traded its first electricity contract in October 2000, has emerged as the dominant exchange, and got clearing when it bought the New York Board of Trade in 2007. ICE offers 193 US futures contracts and 25 options contracts.

Like NYMEX, ICE is a designated contract market, or DCM, as defined by the CFTC. Having DCM status imposes certain reporting requirements on the two exchanges.

Nodal Exchange is an exempt commercial market, or ECM. The Vienna, Virginia-based exchange was started in 2009 to run auctions of nodal and zonal niche products, and eventually partnered with LCH.Clearnet. The exchange trades futures at hundreds of node, zone and hub locations in the ISO/RTO markets. It says it today has 1,214 active futures contracts.

On November 15 Nodal said it applied with the CFTC for DCM status. On March 26 the CFTC put the application on hold and asked Nodal for more information. On June 6 Nodal said it is “working with CFTC staff, providing materials that are under review for the Nodal Exchange DCM application.”

FERC has stepped up oversight of the financial trading markets, a fact that traders are most likely aware of.

In March 9, 2012, Constellation Energy Commodities Group reached a settlement with FERC that led to the firm paying what was at that time a record \$245 million in fines and profit disgorgements for employing what FERC said was a “scheme of trading” in the NYISO and ISO-New England virtual markets to move day-ahead prices in a direction that would benefit Constellation’s financial contract for differences positions.

On October 31, 2012, FERC issued an order to show cause and a notice of proposed penalty to Barclays Bank for alleged manipulation of energy markets in the western US. FERC said it would seek \$435 million in civil penalties and \$34.9 million, plus interest, in ill-gotten gains.

The commission has alleged that Barclays and four of its former traders “engaged in a coordinated scheme to manipulate trading” of day-ahead electricity at four Western trading hubs to benefit the bank’s IntercontinentalExchange financial swap positions in those markets over a number of months from November 2006 through 2008.

There has been no resolution of the Barclays case.

In April, FERC said that Barclays must continue to provide enforcement staff of FERC with data on the bank's transactions even though the agency had already proposed to make Barclays pay a substantial civil penalty regarding market manipulation allegations.

Commissioner Cheryl LaFleur dissented from the majority decision. She contended that FERC was blocked from gathering more data because Barclays had selected a procedural route that calls for the agency to quickly issue a penalty decision.

How the analysis came about

For this analysis, Platts contacted ICE, CME and Nodal Exchange, and asked if they would each provide numbers on the financial electricity trading done on or cleared by their respective exchanges. It was eventually agreed that the focus would be specifically on financial trading volumes as measured in megawatt hours.

The genesis of this review was the State of the Market 2012 report released May 16 by the Federal Energy Regulatory Commission, which said that both physical and financial electricity trading markets had experienced down years last year.

FERC’s SOM report said that physical transactions as reported by entities in their Electronic Quarterly Reports, “has been in decline since 2008.”

To be sure, Platts Megawatt Daily, which compiles the EQR data and publishes quarterly rankings based on that data, reported earlier this year that 2012 saw physical wholesale power sales decline 3.4% compared to 2011.

The fact that generators and trading firms are not required to report to FERC their sales in the Electric Reliability Council of Texas market is a complicating factor in compiling totals. FERC, of course, has no jurisdiction over ERCOT, and thus does not require the reporting of ERCOT data. Platts, however, receives what it estimates to be about 65% of all ERCOT wholesale power sales volumes directly from the companies themselves, and then adds those numbers to the non-ERCOT total.

Annual wholesale power sales statistics compiled by Platts showed sales in 2007 of 5.396 billion MWh. Totals for each subsequent year declined.

Meanwhile, there is another declining number, the Energy Information Administration's annual total of megawatt hours generated by all fuel types. In 2011 the total generated was 4.101 billion MWh. It fell 1.1% in 2012 to 4.054 billion MWh.

Although FERC's EQR data and EIA's generation data are useful for getting a sense of the scale of the physical market, the data is not directly analogous to the financial trading data Platts has collected from the exchanges. The financial trading volumes represent contract volumes actually transacted during the trading period.

The physical data in the case of EQR tells the volume of electricity deals which went to delivery during the year. But there is no way of knowing how much of that power was actually traded during the year. These megawatt hours often represent power traded in years preceding delivery through forward transactions or long-term power purchase agreements.

The generation data tells the story of the final supply and demand during the year, but also does not tell when the power was traded. Also, with the generation data it is possible that the power was not traded at all, but rather self-supplied.

The volume of physical power actually traded during the year may be smaller than the EQR or generation volume numbers.

Analysts have argued that the cause of the decline in some wholesale power markets is the drop in volatility and the loss of counterparties. Trading shops such as Deutsche Bank's DB Energy Trading and Barclays Bank have shuttered their West trading desks, for example.

FERC's SOM report went on to say about financial trading, "The volume of electricity trading on the IntercontinentalExchange in 2012 decreased 19% compared to 2011, as part of a longer-term trend."

"Toward the end of 2012, financial trading of both natural gas and electricity shifted as trading platforms offered revised products in response to regulatory changes under the Dodd-Frank Act. In particular, the markets transitioned by converting certain traditional swaps products into futures to facilitate increased transparency in the markets," the SOM report said.

FERC further noted that in 2012, "Open interest in the markets remained high particularly in the NYMEX futures and swaps markets as producer and merchant participation held steady and managed money trading increased to replace declines by banking institutions."

FERC, though, was unwilling to release the data it used to conclude that ICE's volume of electricity trading had fallen 19%.

Craig Cano, FERC spokesman, told Platts that the 19% decline figure "was derived using data provided by ICE." He said that the "calculation took into account the volume of reported/cleared deals, including block trades, for the US power market," and, he said, the volume trading data FERC looked at had in fact been converted into megawatt hours.

But Cano added that FERC's calculation "does not include the volume of deals associated to any ERCOT product. Also the calculation does not include the deals which are not released by ICE named 'private and confidential'."

ICE would not comment on FERC's numbers. However, of the 218 electricity futures and options the exchange offers, 51 are ERCOT futures and 2 are ERCOT North options.

A view of the financial trading market

According to the data provided to Platts, financial power volumes in megawatt hours traded on ICE in 2012 totaled 5.93 billion MWh, compared to 6.16 billion MWh in 2011, a decline of 3.8%.

ICE said it traded 1.85 billion in the first four months of 2013.

The numbers provided to Platts by NYMEX show that the volume of trading of that exchange's power complex was 2.08 billion MWh in 2011, versus 1.12 billion MWh in 2012, a 46.08% decline.

NYMEX saw 198 million MWh traded in the first four months of 2013, compared with 446.9 million MWh in the first four months of 2012, and 635.8 million MWh in the first four months of 2011.

Nodal Exchange said it saw 187 million MWh of financially-settled electricity futures contracts traded on its exchange in 2011. It said that trading then doubled in 2012 to 377 million MWh.

Nodal's numbers provided to Platts show trade volumes of 246 million MWh in the first four months of 2013, compared to 118 million MWh in the first four months of 2012.

When all the numbers are combined, the size of the financial electricity market in 2012 was 7.430 billion MWh, down 11.9% compared to the 8.441 billion MWh traded in 2011.

Based on the numbers provided, 73.09% of the MWh volumes traded in 2011 were done on ICE's exchange, 24.69% on NYMEX, and 2.22% done on Nodal.

In 2012 that profile changed, with ICE's share rising to 79.81%, NYMEX's sliding to 15.11%, and Nodal's increasing to 5.08%.

For the first four months of 2013, ICE's share of the trading has been 80.7%, NYMEX's 8.61% and Nodal's has moved up to 10.69%.

Nodal's interest in open interest

While determining the overall size of the financial power trading market required converting volumes to megawatt hours, there are other measures of market activity.

Nodal, specifically, said it has spent time estimating the open interest on the three exchanges "based on publicly available information." Nodal contends that a large open interest indicates a greater level of market activity and liquidity for a given contract.

Nodal calculated that total electricity futures contract open interest on all three exchanges on January 31, 2012, was 1.26 billion MWh. On December 31, 2012 Nodal says it was 7.8% higher at 1.360 billion MWh. On April 30, 2013 open interest was calculated to be 1.485 billion MWh, 17.2% higher than on January 31, 2012, and 8.6% higher than on the last day of 2012.

Nodal says it has calculated the open interest of electricity futures contracts on the respective exchanges on April 30, 2013, and says it found there was 929 million MWh of futures contract open interest on ICE, 222 million MWh on NYMEX, and 334 million MWh on Nodal.

Nodal estimated that its own share of open interest jumped from 11.1% on January 31, 2012 to 22.5%, on April 30, 2013, while NYMEX's share fell from 25% to 14.9%. ICE's share went from 63.9%, according to the Nodal estimate, to 62.6%.

Nodal, which does not offer options trading, also calculated options open interest in millions of MWh on ICE and NYMEX, and provided those numbers to Platts.

Nodal said there was 171 million MWh of options open interest on ICE on January 31, 2012, while there was 555 million MWh options open interest on that same date on NYMEX.

Nodal calculated that on April 30, 2013, there was 191 million MWh of options open interest on ICE, and 275 million MWh on NYMEX.

Options open interest on the two exchanges on January 31, 2012 totaled 726 million MWh, according to Nodal's data, and 466 million MWh on April 30, 2013. That represented a 38% decline in options open interest between those two dates.