

PRESTON TO CUSENZA



What have power trading and personal genetics got in common, and what are the advantages of a clearing house using VAR to calculate margin? Ben Preston, head of power trading at Macquarie Energy, puts his questions to Paul Cusenza, CEO of Nodal Exchange

Q1. Before taking up your role as CEO of Nodal Exchange, you spent 25 years building businesses, including being co-founder and co-president of 23andMe, a personal genetics company. Are there parallels between both businesses?

Any business is about building alliances and it is my experience of building alliances in complex businesses that has enabled me to take the helm at organisations in very different sectors. There are many surprising parallels between businesses that seem to be unrelated. The worlds of personalised healthcare and genetics and commodity and power trading are both highly analytical fields with the need for strong consideration of the perspectives of many diverse stakeholders – customers, suppliers, government, population at large, etc. We have many PhDs at Nodal Exchange and we had many at 23andMe – brilliant people who are seeking to be innovative and to create value. It all starts with listening to the market-place and providing the right product to best meet needs.

Also, in developing and growing

Ben Preston

Interviewer:
Ben Preston,
head of power
trading at
Macquarie
Energy

Interviewee:
Paul Cusenza,
CEO of Nodal
Exchange

businesses, there are similarities across industries. As well as the need to listen to the market-place, it is necessary to raise funds, establish appropriate controls, and build and motivate a strong team. Getting an excellent team is critical. A team needs the right skills for the business you are developing and the right can-do attitude to make it happen while remaining realistically optimistic, team-orientated and flexible. It is also exciting to be building new businesses and I have had the pleasure to have been involved in building multiple companies including Capital One Financial in the 1990s, 23andMe (which was named the invention of the year by *Time Magazine* in 2008) and now Nodal Exchange.

Q2. Over the past three years, we have seen significant trading volumes migrate from the bilateral over-the-counter market to exchange-cleared volumes. Do you anticipate that this trend will continue? What could accelerate/impede such a change?

Yes, I believe this trend will continue. There are of course legislative

initiatives to try to partially mandate this move. However, I believe it will happen with or without government mandates because it is the right thing to do. Clearing provides benefits in that it: 1) significantly limits default risk and there is no need to monitor counterparty risk; 2) provides access to a wider set of trading counterparties, thereby providing a better price and greater liquidity (half of the top 50 fixed transmissions rights (FTR) traders are not investment-grade rated); 3) permits netting of positions reducing margin requirements; and 4) reduces overall transaction costs when default risk is properly accounted for.

I think that if we have any more defaults like Lehman Brothers it would greatly accelerate this change. Conversely, I think that if the economy picks up very quickly and the perception of counterparty risk is diminished, it may lull entities into discounting the probability of default risk, until another crisis happens.

Q3. From your vantage point, what do you see as the biggest challenge facing the US power market over the next three to five years?

Pass the microphone

I think that we have many issues to manage in terms of providing low cost and appropriately 'clean' power. Demand response, alternative energy and the smart grid will remain key topics of discussion.

Q4. What advice would you give to a potential CEO presented with the challenge of launching an exchange like Nodal?

Like any start-up it is important to build the right internal team and to develop the right external relationships. An offering like Nodal Exchange, which is really a system comprised of the exchange, the central counterparty clearer, general clearing members, participants, brokers, and various software, data and analysis providers, and which must work in concert with the independent system operators (ISOs) and under the oversight of the government is complex and much more than the company 'Nodal Exchange' itself. Understanding this is critical.

I also believe that empathy and flexible perseverance are important characteristics to maintain. Empathy will help in ensuring the right offering is created and that it will work for the entire system. Perseverance, provided the offering is right, is also needed in any complex start-up as it will take time to build the strong foundation for the future and there will be challenges such as our recent economy. However, it should be 'flexible perseverance' as, although the goal and concept may remain unchanged, some degree of flexibility may be required to meet challenges, overcome hurdles and respond to ever-changing environments and needs.

Q5. What do you think is Nodal

Paul Cusenza

Exchange's 'killer app'? How easy is it to replicate?

Nodal Exchange offers industry participants the ability to clear highly granular power contracts via central counterparties. Part of what makes this possible is Nodal Exchange's patented auction approach, which is critical to price discovery given the many contracts Nodal Exchange offers. We offer contracts on about 1,800 locations for monthly terms that can

be peak or offpeak and with expiries going out from one to four years. That is more than 50,000 unique contracts that can be traded. Because electric power cannot be stored and its price is therefore directly tied to the physical realities of a varied transmission grid, its price is very sensitive to location and therefore industry participants need to hedge their risk at the local level. The daily auctions aid price discovery as participants can enter in



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many diverse orders, which can be matched many to many.

These orders, whether volume clears or not, are informative to pricing. Most orders are structured as spreads and this helps with matching and determining relative price levels at the local level. I should note that the broker channel is also very important to us, but it is made possible by the price discovery from our patented auction approach.

In addition, being able to offer central counterparty clearing on all these contracts is of great value to the market-place and consistent with current legislative desires to reduce systemic risk through clearing. We are the only market-place to be able to clear so many locations for electric power via central counterparties. LCH.Clearnet, which is the central counterparty for all trades cleared on Nodal Exchange, uses a value-at-risk approach for initial margining, which



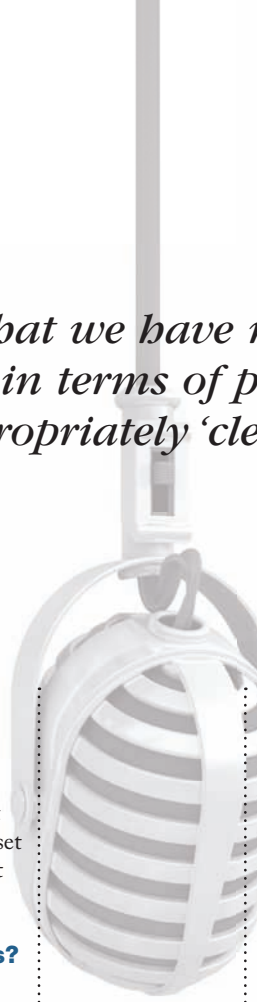
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is also very efficient at offsetting many positions and is another innovation that helps make this offering attractive.

Given our auction approach is patented and given the complexity of the system we have built, with our various business 'partners', to support trading on such a granular and deep set of contracts, it would be very difficult to try to replicate.

Q6. Who are your competitors? The OTC market, ISOs, other exchanges? Where do you see Nodal Exchange's rightful place?

Nodal Exchange was formed based on feedback from participants to fill an unmet industry need. The other exchanges provide trading on a few locations, which can only address the energy risk – not the risk of congestion or loss, which is responsible for about half the variance in the locational marginal price of electricity. The ISOs offer the ability to trade congestion through FTRs, but these auctions are conducted just once a year for the year ahead and then once a month for the prompt month. PJM has introduced the ability to trade the remainder of the planning year to its monthly auctions, but participants still wanted a way to trade more frequently. By offering daily auctions on hubs and zones and weekly auctions on hubs, zones and nodes, Nodal Exchange met the market need for more frequent ability to trade granular contracts. The Nodal Exchange offering complements the FTR markets very well. We complement the Regional Transmission Organisations who release capacity as part of their option by creating an after-market in trading those positions at those precise levels.



By being a cleared market through LCH.Clearnet, Nodal Exchange also met participants' need to be able to trade with a wider set of customers and to essentially avoid credit risk. OTC transactions that could not be cleared before now can be. Some participants do state a preference to trade bilaterally when possible, but even these entities note they still often want to trade on a cleared exchange as they won't trade directly with half or more of the parties they want to trade with. I think if the full cost of credit and consideration for the benefits of netting are taken into account, the benefits of putting OTC transactions on a cleared exchange are significant. Over time, I think we'll see more movement to put OTC transactions on exchange.

Although Nodal Exchange was formed to meet the unmet need of being able to trade granular contracts, frequently and with central counterparty clearing, the company's offering also meets the needs of those who just want to trade hubs and zones extremely well.

Q7. Nodal Exchange, in conjunction with the LCH.Clearnet, levies initial margin on a portfolio VAR basis. This is a significant departure from the methods used by most clearing houses. Has this been embraced? What has been done to ensure the robustness of the measure?

The VAR methodology for initial margining has been very well received. It is the most accurate way to margin for such diverse portfolios as Nodal Exchange and results in appropriate risk management coupled with reduced initial margins from appropriate netting and cross

correlation. Given spread trading is such an important part of trading power, this approach is highly effective. LCH.Clearnet has done extensive risk analysis to ensure the measure is robust and in fact we have not yet introduced Californian ISO (CAISO) nodal contracts because LCH.Clearnet wants about a year of price history before launching these products. Given CAISO went nodal in April 2009, we should be able to introduce CAISO nodal contracts this spring. I should note that LCH.Clearnet was able to handle the Lehman Brothers default, a \$10 trillion portfolio, by only using about 35% of the initial margin. They are very effective at risk management and extremely well structured to provide outstanding risk management.

Q8. Hypothetically, should one of Nodal Exchange's contracts become so actively traded that it be deemed to be a significant price discovery contract (SPDC) by the Commodity Futures Trading Commission (CFTC), how would that affect/change day-to-day operations at Nodal Exchange?

Nodal Exchange already largely operates according to the nine core principles defined by the CFTC (such as contracts can't be easily manipulated and need to have an audit trail), so the actual changes would be minimal. However, if we had an SPDC we would need to publicly report trading information daily and would need to enforce position limits as appropriate. We would be delighted if one of our contracts were deemed an SPDC as it would mean we had achieved very significant volumes for that contract. ■