

MAJOR ELECTRICITY USERS' GROUP

19 December 2014

John Hancock
Chair, Wholesale Advisory Group
C/- Electricity Authority
By email to wag@ea.govt.nz

Dear John

Submission on Wholesale Advisory Group Hedge Market Development discussion paper

1. This is a submission by the Major Electricity Users' Group (MEUG) on the Wholesale Advisory Group (WAG) discussion paper¹ "Hedge Market Development" dated 11th November 2014. The industry briefing held on 10th December by WAG at the Electricity Authority was very helpful.
2. Members of MEUG have been consulted in the preparation of this submission. This submission is not confidential. Individual MEUG members will also be making submissions.
3. MEUG members manage their wholesale electricity purchase costs using all of the possible strategies listed in appendix I of the paper, except FTR and other exchange traded derivatives (other than indirectly), plus other physical market responses such as onsite industrial generation and actively managing demand in response to spot price signals². Progress has been made over the last decade and in particular since 2010-11 on these alternatives including using financial derivatives to hedge. However no MEUG member has indicated they believe the market has reached a level of maturity where they are satisfied with their ability to hedge or use alternative physical market initiatives. There is a very strong perception the market is predominately a seller's market whereas a mature market would over time have an unbiased probability of being either a seller's or a buyer's market³.
4. The analysis by WAG has some new evidence and analysis not seen before on the state of the competitiveness of the financial derivatives and FPVV markets. Some of this analysis is insightful, other evidence contradictory and parts of interest but tangential to uncovering underlying issues. This is not unexpected given the complexity of the issue and the small historic datasets available. No definitive conclusion can be reached that there is a fundamental problem with the market. Equally it cannot be ruled out that there may be underlying systemic or structural problems to be addressed. Going forward MEUG support an incremental approach as described in the Executive Summary of the paper (p2):

¹ Document URL <http://www.ea.govt.nz/dmsdocument/16319> found at <http://www.ea.govt.nz/our-work/consultations/psocg/efficient-procurement-of-extended-reserves-second-consultation/>

² This can be demand response as observed in the market to date or using the new dispatchable demand regime.

³ Support for this perception of MEUG members that the market is more consistently a seller's market is noted in paragraph 3.4.6 b of the paper.

"The WAG considers that there are opportunities to add value to the market. At this point in time, the WAG is of the view that incremental change is appropriate, given the positive developments seen in the market in recent years, and the need to ensure that ongoing evolution of the market is not adversely impacted."

5. We stress though that the potential value at risk for consumers in terms of excessive power bills and for the economy as a whole with inefficient pricing signals⁴ is sufficient to justify rapid, rather than just steady, progress being made. The Electricity Authority is also working in parallel on a number of other work streams⁵ to facilitate a more competitive hedge market and we similarly support that work being a priority.
6. While the work on hedging options, both physical and financial, is important - it is a second order question as to whether the underlying physical spot price is efficient⁶. The WAG consideration of vertical integration touches on this issue and MEUG's answer to question 4 below is relevant.
7. MEUG responses to questions in the discussion paper follow:

Question	MEUG response
1. Based on your experience, are there any other challenges to managing risk through the hedge market that the WAG has not identified?	None that we are aware of.
2. Do you agree with the assessment that the status quo is insufficient, and that some improvements are appropriate at this point in time? If so, please rank your preferred initiatives and provide your rationale for them	Yes. Suggested priorities are noted in answers to questions 5 and 11 below.
3. What is your view on the ability or otherwise to manage the different facets of price risk?	The price risks in paragraph 6.1 are reasonable.
4. Do you have any comments on the Energy Link analysis and its conclusions? What should the WAG take away from the Energy Link work?	<p>The delta analysis is a top down view. It's difficult to gauge its value because we have not seen comparable analysis from other markets and neither does it have the history of measures such as the Herfindahl-Hirschman Index (HHI) that are well known and accepted approaches.</p> <p>The delta analysis and the Energy Link models are interesting for parties considering their own hedging strategies. How market participants may be reacting commercially is also interesting</p>

⁴ MEUG's view that efficiency issues are important is at variance with the opening sentence of paragraph 2.2.2 that states "Hedge market activity does not, in itself, represent a net benefit, as it largely constitutes a transfer of cost/risk from one party to another or from one point in time to another". That sentence we read as inferring hedging activity has no economic welfare benefit and is simply a wealth transfer. MEUG disagrees. To the extent parties that voluntarily enter into hedge agreements are better off by sharing or transferring risk and a new price then so too is the economy better off.

⁵ Some are mentioned in paragraph 6.5.2 following on from paragraph 6.5.1 b) to "reduce the level of risk that exists."

⁶ MEUG made the same point in submissions to WAG on pricing in pivotal supplier situations, 3rd July 2013, paragraph 4, ie pivotal pricing effects should be considered secondary to the question of whether the market as a whole is efficient, document URL <http://www.meug.co.nz/includes/download.aspx?ID=128941> found at <http://www.meug.co.nz/Site/submissions.aspx>.

Question	MEUG response
	<p>background to the WAG analysis.</p> <p>The Energy Link models, because they are not replicable and peer reviewed such as SDDP models, are not suitable to support major policy decisions on whether there are material inefficiencies or excessive and detrimental oligopolistic market power with the large vertically integrated suppliers. MEUG note that even SDDP type models have a limited ability to assist policy makers assess such issues because while helpful for estimating relative static efficiencies they are less useful for estimating changes in dynamic efficiencies. This is not a reason why no further work should be undertaken; rather an acknowledgement the work is not trivial.</p>
<p>5. What are your views on the WAG's indicative assessment of the broad initiatives that might improve the ability to manage different facets of price risk? Which, if any, of the initiatives discussed do you think would be worth pursuing?</p>	<p>Some initiatives have been under review for some time such as:</p> <ul style="list-style-type: none"> • "Improving the quality of real-time prices" in particular researching further ways to improve alignment between forecast and settlement prices (paragraph 6.5.10 b); and • "improving information transparency" in particular for outages (paragraph 6.5.12 a ii)). <p>The need to improve outage information is also noted as an issue in MEUG's answer to question 11 that follows.</p> <p>Progress has been made on the above but the work is by no means complete. MEUG urge the Electricity Authority to keep pressing the industry and to prioritise its own resources to improve those.</p> <p>Several of the parties⁷ that presented to WAG noted the relatively wide bid-sell spread and suggested a smaller spread would assist. That option should be considered further.</p>
<p>6. Are there any other specific initiatives that could improve the ability to manage the different facets of price risk that you think should be considered?</p>	<p>Yes. See suggested priorities noted in answers to question 5 above and 11 below.</p>

⁷ Refer Appendix C, Summary of presentations from stakeholders, Gary Holden - Pulse Energy (p92) "Reduced ... bid/ask spreads \$1/MWh) ...", Greg Sise – Energy Link (p93) "No silver bullet, but ... narrower spreads may help", Rebecca Osborne and Grant Smith – Pioneer Generation (p94) "Narrower bid/ask spreads (\$1/1%)", Chris Sadler – NZ Wind farms (p94) "Narrower bid/ask spreads required (<1%)."

Question	MEUG response
7. What evidence is there to support the view that vertical integration may be creating a barrier to hedging by independent generators and/or retailers?	MEUG has no new evidence. The WAG paper has partly advanced the debate on the pros and cons of vertical integration though no firm conclusions can be drawn. We support ongoing investigation on this critical issue while recognising the analysis is not straightforward (see answer to question 4 above).
8. Do you agree with the WAG's high-level assessment of options that might improve hedging opportunities available to independent generators and retailers? Which, if any, of the options discussed do you prefer or not prefer?	The bubble diagrams on pages 69 and 70 are a good start but not definitive.
9. Are there any other specific options aimed at improving the hedging opportunities available to independent generators and retailers that you think should be considered?	Not applicable for large users'.
10. What is your view on the importance of speculators and intermediaries in the hedge market? What factors do you think are limiting their involvement?	<p>Speculators and intermediaries play an important role in financial derivative markets in discovering efficient prices. There is no reason this would not also apply to the New Zealand wholesale electricity market except for the fact the market is extremely small relative to other markets. A speculator is more likely to invest his or her time into understanding much larger markets in order to find arbitrage opportunities than see such opportunities in the New Zealand wholesale electricity market.</p> <p>Speculators and intermediaries themselves should answer why they may not participate in the New Zealand wholesale electricity market but do in other overseas wholesale electricity markets. While a subjective view, MEUG agrees with the suggestion in the paper⁸ one reason may be a lack of risk management products for extreme spot price events. If that is the case then exchange traded cap or option products would help.</p>

⁸ Paragraph 6.2.1 a)

Question	MEUG response
<p>11. Do you agree with the WAG's high-level assessment of options that might improve liquidity in the hedge market by increasing engagement, and reducing barriers to participation? Which, if any, of the options discussed do you prefer or not prefer?</p>	<p>Some options are clearly important:</p> <ul style="list-style-type: none"> • "Making the process of becoming a direct market participant less involved" (paragraph 8.5.3 b)). One of the main barriers is agreeing a use of system agreement with the local network provider. WAG should recommend to the EA that work on possibly standardising Model Use of System Agreements should be accelerated. • "Futures to offset prudentials held with the clearing manager" (paragraph 8.5.4 a). MEUG support the EA monitoring the work in the Australian market by ASX on this possibility. • "Encourage lodging of hedge settlement agreements" (paragraph 8.5.4 c)). There has been a long standing question on whether suppliers use their market power to veto a purchaser's ability to lodge hedge settlement agreements. This may be an issue WAG could investigate further. • "Improved access to data/analysis" (paragraph 8.5.10 b)) in particular around outages as the paper suggests. Information ahead of time on planned outages and during and after both planned and unplanned outages has improved but is still a problem for many MEUG members. Poor quality outage information to meet the needs of end user's is also noted as an area for improvement in MEUG's answer to question 5 above. <p>To address information transparency barriers the paper (paragraph 8.5.10 a) lists "a review of hedge disclosure" with the purpose of determining "if they are still required ...". Some MEUG members find the hedge disclosure information⁹ very helpful and would not wish collection and publication to cease. Their concern is whether the quality of the information collected is accurate because there have been instances of significant variation in prices for apparently similar hedges.</p> <p>The option for an "Industry self-insurance scheme" (paragraph 8.5.4 e)) we suggest should be culled from further consideration because it will likely increase costs on both participants and consumers greater than any likely benefits.</p>

⁹ Refer <https://www.electricitycontract.co.nz/>

Question	MEUG response
12. Are there any other specific options aimed at increasing engagement and reducing barriers to participation that you think should be considered?	Nothing more to add to those considered by WAG.
13. Any other comments?	Another approach to measuring liquidity was considered by New Zealand Institute for the Study of Competition and Regulation in their March 2014 newsletter ¹⁰ . A copy of that article is included in the appendix. This may be a useful approach for WAG to consider.

8. We look forward to considering the submissions of other parties on this proposal and, if needed, will write to WAG if we believe aspects of those submissions need rebutting.
9. WAG has acknowledged¹¹ that they have not heard directly from either large users' or large suppliers. MEUG members would welcome an opportunity to present to WAG and answer questions on this collective MEUG submission and their own individual submissions.

Yours sincerely



Ralph Matthes
Executive Director

¹⁰ Document URL http://www.iscr.org.nz/f929,24329/CRT_march_2014_Web.pdf at <http://www.iscr.org.nz/n929,71.html#cs-2634>

¹¹ Paragraph 1.2.2

Appendix

The Quick and the ILLIQUID

Liquidity (the ability to convert an asset readily into cash) is an important property of financial securities. When we want to buy something, we need cash to buy it then and there; when we sell something, we want to be rid of it quickly. It's always possible to hold a 'fire sale' (if you offer something for free, you'll find a buyer pretty quickly) but generally that's not a path to financial success. Jamie Hatch explores how this affects the New Zealand Stock Exchange (NZX).

Quantifying liquidity is a rather difficult proposition. We can recognise its presence, or its absence, but ranking securities by liquidity can be a more challenging proposition. However, several measures developed in the academic literature offer useful yardsticks for how easily one can move money into or out of a particular stock or bond:

Bid-Ask Spread: Looking at the gap between the price one can sell a stock at versus the (higher) price one can buy a stock at gives us an idea about the cost of entering and exiting the market.

Roll's Measure: If stock prices bounce back and forth between wide bid-ask spreads, all other things being equal, we might expect to see negative correlation in stock prices when a stock is less liquid.

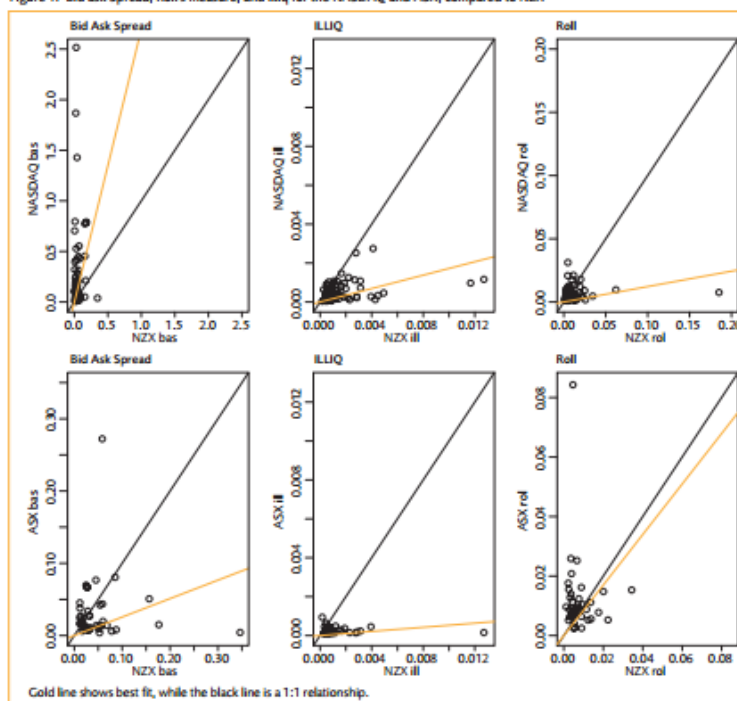
ILLIQ: By looking at the extent to which large buy (sell) orders cause positive (negative) shocks to stock prices, we can get an idea of how traders move the market as they rebalance their portfolios.

Like most markets, the NZX faces liquidity problems for its smaller companies. When the number of shareholders is small, finding a buyer or seller for a particular share can be challenging. Lack of liquidity is seen as a negative feature by investors. If investors do not like this, the shares will be worth less, and with less valuable shares it's harder for a small firm to raise capital. But are problems worse in New Zealand than overseas? And if so, what (if anything) can (or should) we do about it?

Let's compare the data for a set of small firms from the NZX with a matching set from the ASX and from the NASDAQ markets (in Australia and the US, respectively). Sorting the firms by capitalisation and then plotting the bid-ask spreads for these two comparisons reveals a mixed picture (Figure 1).

New Zealand shares have a lower bid-ask spread when compared to the shares on the NASDAQ, yet have a larger bid-ask spread when compared to shares on the ASX. The reason behind the NASDAQ's larger spread is likely due to the use of market makers who make their profit from the size of the spread on shares. It is also likely due to the NASDAQ firms having share prices in general around ten

Figure 1: Bid Ask Spread, Roll's measure, and Illiq for the NASDAQ and ASX, compared to NZX



times larger than NZX firms. The Roll and ILLIQ measures are larger on the NZX than on both the ASX and on the NASDAQ. These larger values show that liquidity is lower (worse) on the NZX than on the other international markets.

But what can be done to increase liquidity? One possible solution is improving information in the market. Since small companies do not attract as much media coverage as large firms, small investors fear that they may be taken for a ride by insiders when they trade shares in small firms. Paying analysts to provide coverage of a share may help level the playing field.

Examining a set of eight small NZ firms that recently gained analyst coverage (and carefully controlling for the fact that they were also growing in size over the period), we find that analyst coverage significantly improves the bid-ask spread and trade frequency measures at the 99% confidence level. The turnover indicator measure is also improved at the 90% confidence level. The ILLIQ and Roll measures, however, do not have a statistically significant improvement due to the introduction of analyst

coverage. Based upon the improvements, the empirical analysis has shown that the use of analyst coverage by small capped firms leads to an increase in their liquidity.

Of course, paying an analyst to cover a small firm is an expensive proposition, and one that a small firm may balk at. As with many things in economics, we face a trade-off, and sometimes the cost is worth the pay-off, and other times it is not. However, as noted by Keynes¹, "Of the maxims of orthodox finance, none, surely, is more antisocial than the fetish of liquidity, the doctrine that is a positive virtue on the part of investment institutions to concentrate their resources on the holding of 'liquid' securities."

¹ J M Keynes, *The General Theory of Employment, Interest and Money*, 1936, Palgrave Macmillan, UK.

Jamie Hatch was a Summer Scholarship student at the ISCR during the summer of 2013-2014. His scholarship was co-funded by VUW and NZX.