MAJOR ELECTRICITY USERS' GROUP

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By email to submissions@electricitycommission.govt.nz

Dear Kate

Submission on Managing Locational Price Risk

1. This is a submission by the Major Electricity Users' Group (MEUG) on the Electricity Commission consultation paper "Managing Locational Price Risk: options", published 9th October 2009[1].

2. Improving the ability of market participants to manage price risk between nodes is essential for promoting energy market competition and better management of transmission constraints. Better management of locational price risk is not the sole panacea to improve competition or deciding grid upgrade priorities but it is necessary. How transmission constraints are priced is at the heart of having an efficient locational risk management approach[2].

3. The debate on the best locational risk management approach for New Zealand has been unresolved since the market started in 1996. This isn't for a lack of trying. The matter is complex with different wealth transfer and economic welfare effects varying for each option. While decisions need to be taken, they should follow the point where the best possible evaluation of at least two leading options has been made.

4. The consultation paper is a useful contribution for the market and policy makers to understand the trade-offs required between options and most importantly this is the first time a relatively detailed specification of LRA has been available so it can be tested.

5. The consultation paper concludes that the 2 zone hybrid LRA/FTR proposal is the preferred option to be developed further and implemented. MEUG note analysis by Transpower that has been widely discussed within the industry has identified problems in how the 2 zone hybrid LRA/FTR option will work. For example:

    a) It is possible that there will be insufficient HVDC loss and constraint rentals to support an inter-island FTR without significant negative LRA payments to fund it. This will lead to some consumers paying much higher prices for the shortfall during constraint events compared to the status quo. On this basis alone a pure Zonal or FTR approach is better.

[1] Refer http://www.electricitycommission.govt.nz/consultation/locational-price/view
[2] Dr Grant Read, report for the EC, Locational Hedging Options for New Zealand: Issues and Options, 29 September 2009, paragraph 22 "The primary focus, for economic efficiency is accurate price "signalling", to guide and incentivise both short term operational and long term investment decision-making, for loads, generation, and potentially transmission."

Another way of considering this is if negative LRA payments cannot be used, which is probably likely because it would be difficult to explain to consumers that they will be better off with this proposal but it cost most of them more, then the inter-island FTR will be less than a 100% hedge. If market participants cannot fully hedge price risk across the HVDC compared to options where a 100% hedge can be achieved such as an FTR[3], then that will undermine their ability to have a complete solution to managing basis risk, limit hedge offers and hedge liquidity and therefore be less effective in improving competition.

b) Transpower have also identified the problem that the 2 zone LRA/FTR hybrid still leaves parties unable to hedge basis risk between GXP and the floating Island LRA hubs. In effect this is no better than the status quo. That is it is still an incomplete solution because it does not provide both energy and locational risk management options.

c) The publication on 25th November by the Commission of an amendment to one of the technical reports on LRA highlights the risk of how novel and untested this approach is.

Problems in formulating LRA isn't surprising considering no other electricity market has considered let alone introduced LRA; whereas various forms of FTR are common in Locational Marginal Pricing (LMP) markets. The LMP approach is the fundamental foundation of New Zealand's market design.

6. Based on the work by Transpower, MEUG suggest the hybrid LRA/FTR proposal is either unworkable or sufficiently inferior to either a pure Zonal or FTR approach and therefore no further work is warranted. As an example of the relative poor ranking of the hybrid LRA/FTR, refer the discussion in paragraph 5 c) above that without negative LRA payments, the inter-island FTR will not give a 100% hedge and therefore be unable to stimulate competition relative to say an FTR approach.

7. The single nationwide LRA has the attraction of simplicity and would have the effect of creating a single national price for all retailers. But that benefit comes at a significant cost by diminishing constraint price signals for consumers and hence one of the drivers for developing a market for demand side participation and transmission alternatives to manage capacity constraints. The national LRA also has the same downsides as the hybrid 2 zone LRA/FTR proposal:

a) It does not give the ability to hedge from hub to generator and does not provide full cover to purchasers who have energy contracts between A and B where B is not the LRA zone hub/price; and

b) Is untested or used anywhere else in the world.

8. In MEUG's view the detriments of LRA compared to either Zonal or FTR are now sufficiently documented to make any further work on a pure LRA unwarranted.

9. That leaves two remaining options of Zonal pricing or FTR. Note that there are many forms of zonal pricing and FTR. As the status quo should not be considered a viable long-term approach and because finalising a preferred approach should consider a factual and at least one counterfactual, then MEUG recommends the Commission continue further work on Zonal pricing and FTR options.

10. On the evidence to date, MEUG suggest incrementally improving the status quo, which is introducing a simple FTR, has more merit than Zonal pricing. The main detriments of Zonal pricing relative to FTR are the same downsides as LRA; that is diminishing economically efficient constraint price signals and the problem of an incomplete solution for hedging. The main detriment of FTR is the risk of sustained exercise of market power though the Transpower proposals for a simple approach first rather than the full FTR proposal suggested in 2002 should markedly reduce the market power problem. Whether Zonal pricing or FTR is eventually selected as the preferred approach will need more detailed analysis. MEUG suggest that work include:

[3] Ideally an FTR across the HVDC would include the HVDC owner taking responsibility for revenue adequacy

a) Detailed modelling similar to the work by Transpower to model the 2 node hybrid LRA/FTR option. It wasn't until that model was available that problems with the hybrid option started to crystallise.

b) Untangle the incentives on parties and likely economic welfare impacts separate from the wealth transfer impacts. For example the Commission might find it useful to consider a range of parties such as existing North and South Island generation and load either in an area with many suppliers or in an often constrained area with a dominant supplier. That analysis should also consider what the impact on new entrants might be or if unexpected events such as a gas discovery on the east coast of the North Island led to changes in load or generation patterns. This bottom up approach considering the relative changes on costs and benefits with zonal pricing and FTR would be a useful complement to the top-down analysis of the Commission and Transpower to date.

c) Ensure policies for pricing and managing location risk align with changes to transmission pricing and incentives on the transmission asset owner.

   Dr Read noted[4] "Achieving such alignment will be critical".

   An important design issue for FTR is to ensure there is a path towards shifting the risks related to revenue adequacy from FTR holders to the transmission asset owner.

d) Ensure policies for pricing and managing location risk align with developments by suppliers to voluntarily improve the energy market. MEUG understands the energyhedge participants will shortly announce an extension of energyhedge to include forward prices at another North Island node (eg Otahuhu) and possible one-way trading. With energy market forward prices to be set at three nodes, the 2 node hybrid LRA/FTR option for basis risk is already obsolete. Both Zonal and FTR approaches can be designed to complement the voluntary initiatives to improve price discovery in the energy market; the devil will be in the detail and hence careful testing and analysis is needed.

e) Ensure policies for pricing and managing location risk align with policies to mitigate exercise of sustained market power. Market power risk was recognised in the draft report of the Ministerial Review. There is a risk in some circumstances of more acute exercise of market power is possible in the FTR market. Final decisions by government to reduce market power in the energy market following on from the recommendations in the draft Ministerial Review report may also assist reduce market power in FTR markets. There may also be a need to supplement market monitoring and powers to reduce market power specifically designed for the FTR market. One option might be to introduce FTR's only where market power issues are not a potential problem (this would cover a lot of the country and many of the critical links like inter-island) and focus on how to resolve the market power issues in the remaining areas. As resolutions are found and implemented FTR's could be spread to these regions too. This aligns with the latest Transpower proposal to start with a simple FTR market and expand as experience and benefits prove worth while.

f) Considering the reversibility of the policy choice and the cost if the option chosen turns out to be wrong is important. If a Zonal pricing regime is introduced there will be explicit and implicit cross-subsidies. It will be very difficult to unwind those cross-subsidies should it be realised FTR should have been adopted not Zonal pricing. On the other hand if FTR's in an area give rise to market power problems, they can be scrapped once the current short-term FTR's mature and either a revision to the FTR regime for that particular area can be made, or if a decision is made to scrap FTR's and introduce Zonal pricing, that could be put into effect after all existing FTR's expire. In short, proceeding with FTR's is a reversible approach and leaves the option of Zonal pricing. Proceeding with Zonal pricing is unlikely to be reversible.

11. Responses and comments to the consultation paper questions follow:

[4] Ibid, paragraph 12, p11

Question	Response	Comment
1. Do you agree with the LRA option providing a 100% hedge for all participating loads during constraints, noting that this involves some loads being required to make LRA payments? Please state the reasons for your position.	Agree this is a feasible option but unlikely to be "best".	Having some (or most) consumers pay more during constraints than the status quo is a serious detriment for this option compared to Zonal pricing or FTR. Note Zonal pricing has some (or most) consumers paying more almost all the time and some paying less almost all the time. It is just that the cross-subsidy gets hidden from consumers. So the real issue is transparency. Note this is not the only reason why MEUG believes further work on a nationwide LRA of hybrid LRA/FTR is not warranted. Refer paragraphs 5 to 8 of this submission.
2. Do you agree that the LRA option should have no LRA payments in relation to losses? Please state the reasons for your position.	Agree.	
3. Do you agree that participation in the LRA regime should require payment of a premium? If not, please state why	No comment.	
4. If the FTR option were applied, how many hubs should there be and how should they be defined?	FTR hubs should complement energy market "hubs" be they voluntary or mandated (zonal pricing).	
5. If the FTR option were applied, what duration should the FTRs have? Please state your reason for your recommended duration.	Start short periods and extend with experience.	
6. Within the FTR option, should the risk of revenue adequacy be apportioned to FTR holders, the FTR market provider, the grid owner, or another party? Please explain the reasons why you prefer the option you have identified.	Initially FTR holders but the longer term goal should be to shift the risk to the transmission asset owner.	This is an important factor when considering alignment with proposed changes to the transmission pricing methodology.
7. If the FTR option were implemented, how frequently should FTR auctions be held?	Probably monthly but this should be decided after more analysis including the preference of energy market participants.	

Question	Response	Comment
8. If the FTR option were implemented, should there be any pre-allocation of FTRs? If so, to whom and on what basis?	The pros and cons of monthly pre-allocations that gradually unwind over time should be considered.	
9. If the FTR option were implemented, how and to whom should any residue revenue be allocated? Please state your reasons why.	Allocate any residual the same as existing loss and constraint rentals are allocated, ie payers of transmission charges.	The status quo isn't perfect but it does reduce distortions to market participant behaviour with respect to transmission pricing. The allocation of residuals is an area where many parties are more interested in wealth transfers than economic welfare.
10. For the hybrid option, do you agree with the proposal to have FTRs traded between notional North Island and South Island supply hubs for managing inter-island congestion? If not, what alternatives would you recommend and why?	An FTR between islands is sensible though the hybrid option as a whole is probably unworkable or significantly inferior to zonal pricing or FTR.	Refer paragraph 5 and 6 of this submission.
11. For the hybrid option, do you agree with the proposal that inter-island hedges should be scaled to reflect physical capacity on the notional inter-island interconnector? If not, what alternative would you recommend and why?	No comment.	
12. If the zonal pricing option were applied, how many zones should there be and how should they be defined?	Zonal pricing hubs should complement voluntary energy market "hubs."	
13. If the zonal pricing option were applied, how should locational price risk between zones be managed? Please provide reasons in support of your recommended approach.	It is unclear if FTR will be able to hedge inter-zonal price risk or if the same problems with the hybrid LRA/FTR proposal will occur. Detailed analysis and modelling is needed.	
14. Do you agree with the Commission's approach to the high-level cost benefit analysis? Please explain why or why not.	Welcome the Commission tabling the CBA as a first cut at identifying the highest ranking options.	
15. Have any key parameters been omitted from the cost-benefit analysis?	For a high level review no. In the MEUG suggested second round review of the highest candidate options, other parameters will need to be considered.	Refer paragraph 10 of this submission for some other parameters and or analysis to assist the Commission decide a preferred option.

Question	Response	Comment
16. Do you agree that the cost-benefit analysis has identified the best option for managing locational price risk? Please explain why or why not.	No. The estimated benefits of the hybrid option for improving hedge market liquidity and improving competition are overstated. As a result MEUG suggests the overall benefit (refer figure 7, p41 of the consultation paper) for the four options would result in the priority being: ▪ 1st FTR ▪ 2nd Zonal ▪ 3rd = LRA and Hybrid The above relative ranking for FTR and Zonal, that is FTR has a higher overall benefit, is the same as the consultation paper.	Refer the discussion in the second paragraph of paragraph 5 a) of this submission, ie Assuming the hybrid is not feasible if negative LRA payment are enforced, then the hybrid provides less than 100% hedge for HVDC price differentials. Compared to FTR approaches that can provide 100% (or near to) hedge cover for the HVDC, the hybrid will be less successful in stimulating hedge offers and liquidity and therefore competition.
17. Do you support the Commission's initial preferred option of a hybrid LRA/FTR? Please state your reasons why or why not.	No.	Refer discussion in paragraphs 5 and 6 of this submission and response and comment to question 16.
18. Are there any elements of the proposed design of the initial preferred option of a hybrid LRA/FTR that you would recommend changing? If so, please identify the element, your proposed change and the reasons for this.	Not relevant as do not consider hybrid LRA/FTR as being preferred.	
19. Do you agree with the proposed treatment of the costs of ancillary services required to support HVDC transfer, and associated rents?	Yes.	
20. Do you consider that the initial preferred option of a hybrid LRA/FTR is the most effective option for promoting competition? If not, what changes would you recommend be made?	No.	Refer discussion in paragraphs 5 and 6 of this submission and response and comment to question 16.

12. In summary MEUG recommend the Commission cease further work on the hybrid LRA/FTR and pure LRA options because incrementally improving the status quo, which is introducing a simple FTR, has more merit. Based on the analysis to date the next best alternative to introducing a simple FTR is Zonal pricing. Further detailed consideration of these two options is warranted. Whether Zonal pricing or FTR is eventually selected as the preferred approach will need to take into account the need for alignment with the concurrent review of transmission pricing, alignment with voluntary initiatives in the energy market for improving energy price discovery, policies to mitigate market power flowing from the Ministerial Review and the reversibility or sequencing of options.

13. MEUG believes the consultation paper has assisted the industry become reacquainted with the trade-offs required and the work needed to get to the point of finalising decisions on managing locational risk. The Commission could harness this interest and knowledge in a specialist Technical Group of experts to advance consideration of the leading options. The existing Commission Working Groups do not have the expertise to undertake this work. It would be essential Transpower contributed staff and time to that Technical Group because of their expertise as demonstrated by the modelling work that has assisted the industry respond to this consultation round. A specialist Technical Group would also assist in industry buy-in to selection of a preferred option.

Yours sincerely

Ralph Matthes
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