meridian

24 May 2016

Submissions
Electricity Authority
By email: submissions@ea.govt.nz

Assessment of real time pricing options

Meridian welcomes the opportunity to provide feedback on the Electricity Authority's consultation paper 'Assessment of real time pricing options'.

Meridian supports consideration of real time pricing options

Meridian agrees that price uncertainty in real time may deter some parties from taking action in response to those prices. As such, we support the Authority's ongoing work on this issue, subject to our comments below on prioritising incremental improvements.

Option B is likely to have greatest net benefits

Meridian agrees with the Authority's assessment that Option B is likely to have the greatest net benefits of the four options assessed. In particular, using ex-ante or 'look ahead' prices is likely to be more actionable than where prices are finalised ex-post.

We agree that Option B would reduce the incentive of parties to bias their inputs relative to Option A, due to the ability to re-dispatch the system and set a new price during the trading period. However, we question whether this incentive would be eliminated entirely. We encourage the Authority to consider this issue carefully during the next phase of real time pricing development.

Careful consideration of implementation issues required

Meridian considers there will be numerous challenges in implementing a real time pricing approach. As identified by the Authority, these include automating the process to deal with infeasibilities, automating the high spring washer process, and automating the process to resolve pricing errors. Each of these processes will require careful thought and consideration of unintended consequences. These challenges mean that development and implementation of a real time pricing approach should not be rushed. There may be benefit in initially

deploying real time pricing in parallel with the current pricing approach to test for any implementation issues before such prices are used to settle the market. Alternatively, retaining some ability to republish final prices – at least initially – may be required to ensure any significant errors in the new process do not bind and cause instability to the market.

If Option B is ultimately pursued, a critical consideration will be how frequently the system can be re-dispatched (with a consequent new price) during a half-hour trading period. Does the Authority have a minimum re-dispatch period in mind? For example, could the system be re-dispatched with a new price set 30 seconds before the end of the trading period? Meridian's view is that the more frequently re-dispatch is permitted (but not required), the sharper and more efficient the price signal will be.

Incremental improvements should be pursued first

Given the significant change inherent in a real time pricing approach and the time required to develop and implement such an approach, Meridian considers that any 'quick wins' should be identified and adopted first.

In particular, Meridian considers that improving the current approach to short term demand forecasting could bring significant benefits at relatively low cost. At times, the centrally-provided demand forecast deviates substantially from actual demand. This can cause volatility in wholesale market offers and undermine efficient pricing and dispatch. There are already demand forecasting models available which perform considerably better than the System Operator's current model. Meridian's view is that improving the centralised demand forecasting model would be a clear 'quick win' for improving participants' decision-making in the lead up to and during real time. Similarly, managing the volatility of wind generation through enabling block dispatch of wind and hydro could improve price forecasts and lead to more efficient consumption decisions.

We note this view is consistent with the position reached by the Wholesale Advisory Group (WAG) in its project on aligning forecast and settlement prices. WAG recommended an incremental approach to improving the spot pricing process, including improving the quality of demand and intermittent generation forecasts and aligning the assumptions used in real-time pricing and settlement pricing as closely as possible. Many of these actions appear to remain outstanding. We recommend these incremental improvements are fully explored and, where appropriate, adopted prior to more radical changes to spot market pricing.

Further cost-benefit assessment should be undertaken prior to final decision on real time pricing

Following adoption of any 'quick wins', a further cost-benefit assessment should be undertaken before a final decision is made to move to a real time pricing approach. Meridian considers there is inevitably an overlap in the benefits of aligning forecast and settlement pricing and the benefits of a real time pricing approach. A further cost-benefit assessment should aim to ensure that the benefits associated with real time pricing are clearly attributable to such an approach and are likely to be achieved.

Reduced gate closure will complement real time pricing

The Authority notes that enhancements to real-time pricing would complement reduced gate closure by improving the quality and robustness of information available to participants in the lead up to and during real time. Meridian strongly agrees. A move to real time pricing may be an appropriate opportunity to further reduce gate closure to 30 minutes. There may be potential to minimise system change costs by rolling out these complementary changes together. We encourage the Authority to consider this option.

End goal should be made clear

If the Authority has an ultimate goal in mind with respect to the design of the spot market, it would be helpful to understand this. For instance, if it is envisioned that we will ultimately progress to the 'ideal' approach of aligning the trading period interval with the intervals used for dispatch and pricing (see Figure 4 in consultation paper), this will clearly have a bearing on the most appropriate option to adopt as a progression towards this ideal, including appropriate and efficient system changes in the meantime. Is there an end goal in mind?

Meridian's responses to the Authority's specific consultation questions are attached in Appendix A.

Please contact me if you have any questions regarding this submission.

Yours sincerely,

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Appendix A: Meridian response to consultation questions

	Question	Comment
1	Do you agree the spot pricing issues identified by the Authority are worthy of further investigation?	As noted in our cover letter, we support in principle the Authority's investigation into real time pricing options. However, we consider that the Authority should pursue available 'quick wins' in advance of progressing a real time pricing approach. In particular, we consider improvements to short term demand foreasting should be pursued.
2	Are there any options you think we missed? If so, please describe them.	As above, the Authority should pursue incremental improvements to the spot pricing process, including improvements to demand forecasting, before implementing more radical reforms.
3	Do you agree with the cost benefit assessment? If not, why not?	The cost-benefit assessment appears reasonable, subject to the following points: • It is unlikely there will be no cost to participants from a shift to real time pricing. Meridian anticipates that we would update trading processes and systems in response to such a change, which would impose some cost. As an indicator, changes to our systems to accommodate the Demand Side Bidding and Forecasting project cost around $2 million. • The calculated reliability benefits are highly theoretical; it is difficult to know how much, if any, of these benefits would accrue in practice. We note that spot prices can be 'unreliable predictors of final prices' in both directions i.e. both underestimating and overestimating final prices. As such, this unpredicatbility may be as likely to favour underinvestment as overinvestment. The base expectation may therefore be that the impact is neutral. The Authority's observation that "there is no clear evidence to indicate that capacity margins have been below efficient levels" further reinforces that the most appropriate base case assumption is that reliability benefits will be zero. • As discussed above, there is inevitably an overlap in the benefits of aligning forecast and settlement pricing and the benefits of a real time pricing approach. We suggest that the Authority first pursues any 'quick win' options available, and undertakes a further cost-benefit assessment of real time pricing once any initial benefits have been achieved. This will ensure that the benefits identified by the Authority are clearly attributable to real time pricing and are likely to be realised.