

3 May 2019

Submissions

Electricity Authority

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### **Re: Consultation Paper—Remaining Elements of Real-time Pricing**

Thank you for the opportunity to provide comment on the ‘Remaining elements of real-time pricing (RTP), Consultation Paper.

Contact supports the Authority’s view that RTP will result in improved price certainty and more actionable market outcomes. This will ensure that participants are better informed to react to the real time price, subject to there being no unexpected outcomes. However, we recommend that the Authority conduct thorough testing of past stressed market conditions to ensure market outcomes under RTP are as modelled or predicted.

Please see our general comments below and Appendix 1 for our response to the consultation paper’s specific questions.

#### **1. Improved Demand Forecast for RTP**

As mentioned in Contact’s October 2017 submission, the accuracy of the System Operator (SO) demand forecast needs to be improved. Accuracy of the forecasted price is an important part of the success of RTP as the gate closure period (1 or 2 trading periods) means that market participants cannot react to price in real time. We recommend that the Authority’s projects for RTP and improving SO demand forecast need to be progressed in parallel.

The proposed dispatch-lite product needs to incentivise the inclusion of the unscheduled demand shedding that currently occurs as this is a major cause of the existing forecast inaccuracy. The Authority should make demand bidding mandatory under the Code, and provide improved guidelines so that demand participants are not able to bonafide offers based on price. This product needs to incentivise the inclusion of the unscheduled demand shedding that occurs at present to ensure demand forecast accuracy.

#### **2. Scarcity and Reserve Price Curve Values**

Contact also has concerns regarding scarcity pricing values proposed for RTP (as per October 2017 submission). Contact supports the review of these prices (reliability parameters) to ensure that there are sufficient signals for investment and that all reasonable offers are cleared.

Setting these scarcity values too low effectively means signalling demand shedding (pre-contingent action) before signalling for increased reserve offers to manage the risk of post-contingent demand shedding using automatic under-frequency load shedding (AUFLS). Our view is that whatever price values are finalised for scarcity and reserves there needs to be a buffer maintained between the two, this will ensure that reserves shortfalls are signalled prior to demand shedding signalling even under a multiple binding risk scenario (price multipliers).

### **3. High Spring Washer Situations (HSWS) under RTP**

We believe the Authority needs to undertake further work to understand the impact HSWS will have under RTP. HSWS are highly impacted by minor changes to modelling assumptions, and can have vastly different economic outcome. Whilst the current approach to slightly relieve constraints during the interim price period helps to address this, our understanding is that no such mechanism will be used under RTP.

Participants need to be assured that there will not be any unexpected outcomes under HSWS. We recommend existing processes and changes be reviewed to ensure that these type of outcomes do not occur; for example, that scarcity price signalling should be directed at the correct nodes to manage the situation. Past HSWS should be tested to give confidence to the market that RTP is robust under these scenarios.

Given the potential for more volatile locational pricing under RTP, we anticipate greater scrutiny will need to be placed on Transpower to ensure that certain planned outages occur at low risk periods, or alternatively that these outages are cancelled if scarcity prices are consistently signalled when all known market solutions have been exhausted. A further question is what will occur in RTP when the prices are negative under a HSWS?

### **4. Reduction in gate closure to 1 Trading Period**

Contact's view is that the gate closure period for all market participants should be 1 trading period to realise the full potential RTP due to the increased accuracy of offers or bids. The forecasted price within 1 trading period will be different to those outside that timeframe if there is an increased number of demand participants in the bidding process. Without a reduced gate closure period there is potential for a mismatch, participants will take action based on different price forecasts resulting in an inefficient market outcome.

If you require further clarification on any of our responses please do not hesitate to contact me directly.

Yours sincerely,

Gerard Demler

A handwritten signature in blue ink, appearing to be "Gerard Demler".

**Transmission Manager, Contact Energy**

## Appendix 1

Question	Comment
Q1. Do you agree with our proposed criteria for distributed generation to be eligible for dispatch-lite? If not, please explain your reasoning	Agree
Q2. Do you agree with our proposed criteria for purchasers to be eligible for dispatch-lite? If not, please explain your reasoning.	Agree
Q3. Do you agree participants providing SCADA telemetry should be eligible for dispatch-lite? If not, please explain your reasoning.	Agree. SCADA should not be a requirement for dispatch-lite
Q4. Do you agree combining an acknowledgement response via the dispatch system with an obligation to immediately rebid or reoffer is the best design option? If not, please explain your reasoning.	Agree, although even for automated systems several minutes must be allowed to respond to dispatch notifications and rebid/reoffer. This is because systems may generate rebid/reoffers on an interval basis, rather than “on demand” when a dispatch notification is received.
Q5. Do you agree gate closure for all dispatch-lite participants should be set at 30 minutes (one trading period), the same as for current embedded generators?	Agree
Q6. Do you agree with the proposed compliance arrangements for dispatch-lite? If not, please explain your reasoning.	Agree
Q7. Do you agree with the proposed method to allow dispatch-lite participants to withdraw from dispatch? If not, please explain your reasoning.	Agree
Q8. Do you agree we should implement dispatch-lite as part of RTP, should we decide to proceed? If not, please explain your reasoning	Agree. We’re not sure the Authority’s worked examples in Appendix D are applicable to all loads. The examples assume a load could switch off / ramp down for a 5 minute period, then switch back on for the next 5 minutes, and continuing switching off / on in 5 minute intervals. Many electrical loads/equipment, and the control systems controlling those loads will not allow/enable this. For example, after a load shutdown process, the load may need several hours to

	<p>restart and be in a position for another event to occur. For example in Figure 13, when the load receives a dispatch notification at the 10 minute mark to switch back on, it would need to bona fide / rebid / reoffer as non-dispatchable for the remainder of the trading period (and the following gate closure period) to ensure it was not dispatched again. (In Figure 13 it would not reduce load at the 15 minute mark and the 25 minute mark). The Authority may want to consider the implications of loads responding like this in the final design. Many loads are far more suited to, for example, responding to a Transpower demand response program event notification which dispatches the load for a fixed period, for example from 5.30-7.30pm.</p>
<p>Q9. Do you agree reserve pricing under RTP should place a higher cost on scarcity of FIR than scarcity of SIR? If not, please explain your reasoning</p>	<p>Agree</p>
<p>Q10. Do you consider the risk-violation curve approach would increase incentives or opportunities for gaming? Please explain your reasoning.</p>	<p>No. The Code of Conduct sets sufficient boundaries for participant behaviour.</p>
<p>Q11. Do you agree we should implement the risk-violation curve we have described to handle reserve shortfalls under RTP? If not, please explain your reasoning.</p>	<p>Agree in principle but the prices cannot be finalised until a review of the scarcity pricing values as mentioned in Q15.</p>
<p>Q12. Which configuration of the risk-violation curve do you consider we should adopt? Please explain your reasoning.</p>	<p>As per our Q11 response we cannot fully comment on these specific curves until scarcity values have been reviewed.</p> <p>We do note that the lower price risk-violation curve has pricing below historic generation of last resort offers from plant such as Whirinaki. This has the potential for emergency generation not being dispatched in favour of running the grid in a less secure state. This suggests these reserve values are too low.</p>

<p>Q13. Should we set a total reserve shortfall quantity limit if we implement the risk-violation curve under RTP? Please explain your reasoning.</p>	<p>More work is needed on this from an engineering perspective regarding what the minimum quantity is to avoid cascade failure of the grid. We do expect a limit is required.</p>
<p>Q14. Do you agree a new type of formal notice to cover periods of reserve shortfall under RTP is not warranted? If not, please explain your reasoning</p>	<p>Agree, the price signal is sufficient enough notice.</p>
<p>Q15. Do you agree with the proposed methodology to calculate the scarcity pricing values? If not, please explain your reasoning.</p>	<p>Agree subject that all new technologies and that true VOLL costs are accounted for.</p>
<p>Q16. Do you agree the Authority should have an obligation to review the scarcity pricing values at least once every five years? If not, please explain your reasoning.</p>	<p>Agree, but would prefer 1-2 years initially for the review period to address any issues post RTP implementation.</p>
<p>Q17. Do you agree with the objectives of the proposed amendment? If not, why not?</p>	<p>Agree, this amendment would result in a more efficient market outcome as both demand and generation participants will have a better indicator of actual real time price. This is subject to scarcity and reserve risk violation prices and quantities being set at appropriate levels to signal the appropriate actions in real time (see our general response, note 2 'Scarcity and Reserve Price Curve Values') and appropriate investment in energy and/or reserve products.</p>
<p>Q18. Do you agree with the objective of the proposed Code amendment? If not, please explain your reasoning.</p>	<p>Agree subject to our response in Q17.</p>
<p>Q19. Do you agree with the cost benefit assessment? In particular: – what (if any) other sources of benefit should be included in the assessment? What is your view on key assumptions, such as the level of improved demand response enabled by RTP? What (if any) other sources of costs should be included in the assessment? Please explain your reasoning.</p>	<p>Somewhat agree. The Authority states that most of the quantifiable benefits come from more efficient demand response. Most unscheduled demand shedding at present is by EDBs. Without EDB's providing more information to improve load forecasts, we believe a number of the benefits of RTP may not be fully recognised.</p>
<p>Q20. Do you agree with our assessment of alternatives? If not, why not?</p>	<p>No comment.</p>

<p>Q21. Do you have any comments on the drafting of the proposed Code amendment?</p>	<p>Regarding the gate closure definition in Part 1, amend clause (b) to 1 trading period to enable more efficient dispatch as per our general comments in note 4 'Reduction in gate closure to 1 Trading Period' above.</p> <p>Regarding 13.58AA, we have concerns about having the scarcity price and reserve shortfall values in the code if they need to be altered in a timely manner based on the review mentioned in Q16. As per our response in Q12, Contact's preference is for the higher price CVP values listed in clause (3). We also support a review of the price and quantity values in clause (2).</p> <p>Regarding 13.58AB, as per our response in Q16 the review time should be no later than 1-2 years initially.</p> <p>Regarding the removal of 13.71, are all of these inputs mentioned elsewhere in the code i.e. revised offers and generator ramp rates? If not then these need to be reinstated.</p> <p>13.182A mentions interim prices to 14:00 1 day following the trading day, what is the reasoning for this delay as we were of the opinion that the real time price was the final price?</p>
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