13 October 2017

Consultation Paper – real-time pricing proposal

Mercury welcomes the opportunity to comment on the Electricity Authority (Authority) real-time pricing (RTP) proposal. No part of our submission is confidential. We congratulate the Authority on the quality of its work on this project to date and look forward to working closely with the Authority during the design and implementation stages. We see this as an important project, which providing industry participants and the Authority work together constructively, should deliver significant improvements over the status quo and bring us into line with most other countries and help future proof the electricity market as new technologies such as battery storage and smart appliances are deployed.

At present, wholesale spot prices published in real-time are only indicative. The pricing manager publishes final prices for any given day at least two days after real-time. While these indicative prices are normally a sound guide to final prices, large differences can arise especially when the system is under stress making the spot prices uncertain which makes it harder for parties to make efficient real-time decisions about their consumption and generation. We are particularly supportive of scarcity pricing measures being built in to the RTP regime to replace the current scarcity pricing arrangements which are complex and confusing.

Mercury would like the Authority to establish a technical working group made up of industry participants to assist with working through the design details for RTP. Mercury would be happy to provide a representative to participate in such a group. While the Authority is responsible for the overall project and Code changes we think it is important that as much input is provided by those who will be implementing and responding to the changes as possible. By the same token we believe it is crucial that the Authority and the System Operator run a twelve month parallel pilot when RTPs are published alongside the status quo so any problems with the proposed changes can be ironed out before the RTP package goes live.

We support the System Operator publishing RTD prices now to replace or complement five minute RTP prices. We see this initiative as a quick win that can be implemented immediately as limited Code changes (if any) would be required and it could theoretically be done without incurring significant costs.

While Mercury supports the proposals we have a number of concerns. First, we think it will be important for the Authority to carefully consider how it will monitor participant behaviour under RTP to ensure that any gaming behaviour is minimised. For example, the time-weighted average aspect and the opportunity to revise offers during trading periods. Mercury would like the Authority to give more consideration to how it will scrutinise RTP in practice. This may involve allocating resources specifically to increased market monitoring and surveillance in the initial period when the new system is bedding in.

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Secondly we believe that the proposed scarcity pricing blocks of $10,000, $15,000 and $20,000 for non-bid load, need to be carefully thought through and road tested to ensure they are set at the appropriate level because while they are not price caps they will set some de facto expectations and precedents. Mercury would like these prices to be reviewed periodically by a technical working group rather than being set and then forgotten by the Authority. This would enable them to be subject to regular, comprehensive scrutiny and adjusted if market conditions change.

Thirdly we do not think the adoption of a new form of dispatchable demand for small bid purchasers (dispatch lite) will achieve the Authority's objective of encouraging consumers (or their agents) to directly participate in the spot market. Mercury agrees that greater participation from small bid purchasers is desirable, but our view is that the best way to encourage participation from small bid purchasers is to proactively seek out then educate participants and provide them with cost-benefit models and case studies. We consider that it is important that generation and demand are subject to the same compliance regime as any relaxation in the compliance requirements for demand runs the risk of enabling unhelpful habits to develop which would create uncertainty in the system when full compliance becomes mandatory in the future.

Finally, we would appreciate the opportunity to comment on the draft Code amendments again when they are revised following this round of consultation. It is important that the requirements of the new regime are as clear and accurate as possible.

If you have any questions regarding this submission please contact Nick Wilson nick.wilson@mercury.co.nz 09 580 3623.

Yours sincerely

Nick Wilson
Manager Government and Regulatory Affairs

Consultation Questions

Question	Comment
Q1. Do you agree with the broad principle of using dispatch prices to determine final prices? If not, please explain your reasoning.	Yes
Q2. Do you agree with using the time-weighted average of dispatch prices to calculate prices for a trading period? If not, please explain your reasoning.	Yes
Q3. Do you agree with disestablishing the pricing manager and allocating residual functions to other parties? If not, please explain your reasoning.	Yes, as long as the residual functions remain in place.
Q4. Do you agree with the general approach of using default scarcity values to handle generation shortages? If not, please explain your reasoning.	Yes we support clarifying and streamlining the scarcity pricing regime but there needs to be a transparent process to set the thresholds and these need to be reviewed periodically. It would be inappropriate to set and forget the thresholds as the market will evolve over time. Mercury would like to see a technical working group established to set the thresholds and review them annually.
Q5. Do you agree with using default scarcity bids before generation or dispatchable demand offered at a higher price in the dispatch schedule? If not, please explain your reasoning.	Yes
Q6. Do you agree the system operator does not need to make changes to the existing process it uses to notify distributors of emergency load shedding?	Mercury believes the system operator load shedding process going forward needs to be a well-documented, transparent, efficient process that is applied consistently, is made as public as possible in a timely manner and takes advantage of latest advances in technology. We believe that there are more efficient means of communicating with potential load shedders than resorting to phone calls. This is particularly important as load shedding is not an exact fit with bids. We suggest that the load shedding process be reviewed in the upgrade of the electronic dispatch function.
Q7. What is your view on the preferred treatment of disconnected nodes? Please explain your reasoning.	Mercury supports the treatment specified in the consultation paper for the reasons outlined there. We support the system operator assigning a proxy price to nodes marked as dead or disconnected by the market system. This proxy would set the price at an appropriate adjacent node for the relevant trading period multiplied by the historic average of the affected node's location factor over some period.
Q8. Do you agree that it is not desirable to apply a cumulative price limit under RTP? If not, please explain your reasoning.	Yes
Q9. Do you agree the current principle of partially relaxing reserve procurement before invoking emergency load shedding should continue under RTP? If not, please explain your reasoning.	While we accept that the current process of relaxing reserve procurement before invoking emergency load shedding makes sense, we strongly urge caution around the price applied when reserves are relaxed. Scarcity prices for reserves need to be carefully considered, potentially via a technical working group. It is undesirable that reserves are valued below energy, and relaxing the reserve requirement will lead to the reserve prices appearing artificially lower than they would otherwise, sending incorrect pricing signals to the market about reserve needs. This is undesirable and more reserve being offered into the market should be

	encouraged.
Q10. Do you agree with the proposed removal of the high spring washer pricing provisions in the Code? If not, please explain your reasoning.	We understand that high spring washer (HSW) prices are likely to be "relaxed" under RTP by scarcity pricing values and increased responsiveness by both supply and demand. Where the HSW price is below the lowest scarcity price it is more likely that the HSW price becomes final and erroneously so. This is because these prices will not so much reflect economic costs (i.e., marginal generation) but potentially many multiples thereof due to sensitivities in SPD. In this way, many HSW prices may go unadjusted in RTP. We would like the EA and the system operator to do further work on alternative options aimed at reducing this impact. Mercury has two suggestions that we think are worth further analysis, the first is to look at the model formulation changes mooted in the Authority's consultation on HSWs in June 2012. The second could be to use the highest priced generation as a proxy for a HSW outcome instead of a relaxation and potentially even include defaults such as 0 in the unconstrained area and last offered generation in the constrained area.
Q11. Do you agree with the proposed changes for demand inputs? If not, please explain your reasoning.	Yes
Q12. Do you agree that ION meter data should be the primary data source for demand inputs. If not, please explain your reasoning.	Yes
Q13. What is your view on the best approach to incorporate dispatchable demand within an RTP framework? Please explain your reasoning.	Mercury agrees with the proposal outlined in the consultation paper in para 3.77 that dispatchable demand should be dispatched from the dispatch schedule, in the same way as generators are today. We agree that yo-yo dispatch instructions for dispatchable demand providers will be relatively rare. However, a dispatchable demand provider subject to yo-yo dispatch could use the ability to rebid within the trading period to avoid being on the margin and therefore subject to yo-yo dispatch. We agree that such rebidding within the trading period (except during a grid emergency) would make them ineligible for constrained on or off payments.
Q14. Do you agree with the proposed features for a dispatch-lite product? If not, please explain your reasoning.	No. Mercury believes there should be one dispatchable demand product and one compliance regime. The best way to facilitate more demand response is to educate participants and provide them with the cost-benefit models and case studies to help with understanding the process. Relaxing compliance just removes any incentive for full participation in dispatchable demand which in turn undermines the system and does not encourage the discipline required for any future time when full compliance might be required.
Q15. Do you agree with the proposal to allow revisions to offers and bids within trading periods in some circumstances? If not, please explain your reasoning.	Yes, as this will provide the most accurate information and reduce the amount of time-consuming verbal communication between participants and the system operator. Deviation events often go under the radar so the change would see them automatically included as revisions improving transparency. This change would need to be accompanied by robust scrutiny of participant behaviour from the Authority.
Q16. Do you agree with using the last bid or offer received in a trading period when calculating	Yes

constrained on and off payments? If not, please explain your reasoning.	
Q17 Do you agree we should retain a process for addressing material pricing errors? If not, please explain your reasoning.	Yes
Q18. Which approach do you prefer for managing pricing errors; a manual claim or automated checking? Please explain your reasoning.	Mercury prefers manual checking because in our experience pricing error claims can involve issues where standard processes have broken down in subtly unexpected ways that automatic checks (such as thresholds for changes in price and flow) alone might not detect. Pricing error claims are also relatively rare and so a manual claim process will not overburden market participants. Mercury also believes that the definition of a "pricing error" warrants re-examination as part of the transition from today's arrangements to RTP. For example, the status quo interim pricing process requires a lot of information to be correctly input/re-input in the wake of prior schedules – be it actual demand, final offers, grid capability and so on. Some of this information is new information (e.g., metered demand) whilst some of this information is just copied across from a prior schedule (e.g., transmission constraint, grid capability, etc.) As a result, a pricing error claim under today's arrangements could (and has) simply centre(d) on whether the data from past schedules was re-input for interim pricing – transmission constraints being one such example. With the transition to RTP, errors occurring in interim pricing relative to prior schedules will be essentially impossible as dispatch prices will flow directly into interim pricing through time-weighted averaging. Therefore, the focus on pricing errors under RTP should shift somewhat. For example, the question as to whether the prior schedule's transmission constraint was copied across for interim pricing could become whether the grid capability inputs provided to the System Operator and/or the transmission constraints developed according to these grid inputs were sufficiently valid so that economically efficient dispatch occurred.
Q19. If we retain a manual claim process for pricing errors under RTP, who should perform that role?	The System Operator should largely handle and investigate pricing error claims as they understand power system operation, inputs to the market system model and the workings of the market system the best. We have also observed that under today's arrangements, the Authority and the Pricing Manager have relied on the System Operator's insights for resolving many pricing error claims.
Q20. Do you agree with the proposed treatment of spot prices during market system outages? If not, please explain your reasoning.	Mercury cannot think of a better method than that proposed in the consultation document but we recognise that what is proposed is not optimal because it undermines the benefits of moving to RTP and

	therefore potentially dilutes the RTP approach. We are open to the Authority doing further work on this issue to see if a better solution can be developed.
Q21. Do you agree with the proposed changes to forecast schedules to align them with dispatch schedules? If not, please explain your reasoning.	Yes
Q22. Do you agree with the proposed use of dispatch schedules to apportion loss and constraint excess for financial transmission rights each month (if that is required)? If not, please explain your reasoning.	Yes
Q23. Do you agree with the proposed approach to transitioning to RTP? If not, please explain your reasoning.	Yes but Mercury would strongly support getting RTD prices published immediately to replace five minute RTP prices. We see this as a quick win as limited (if any) Code changes are required and the change would likely be relatively inexpensive. Mercury also supports a parallel pilot publishing RTP prices for 12 months prior to RTP going live so demand side participants can learn by doing and other market participants can also see how the system responds.
Q24. Do you agree with the objective of the proposed Code amendment? If not, please explain your reasoning.	Yes
Q25. Do you agree with the cost benefit assessment?	Mercury has not assessed the cost benefit in detail. We strongly believe moving to the RTP regime will be good for the NZ electricity market for the reasons outlined in the consultation paper. We do not think that participant implementation costs will be zero and we consider that demand side participation will possibly lead to fewer benefits than estimated.
Q26. Do you agree with our assessment of alternative RTP designs? If not, why not?	Yes, see our submission on the previous round of consultation.