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

# Real-time pricing proposal

Genesis Energy Limited (**Genesis**) welcomes the opportunity to provide a submission to the Electricity Authority (**the Authority**) on the consultation paper "Real-time pricing proposal" dated 1 August 2017 (**consultation paper**).

The move to real-time pricing (**RTP**) will fundamentally change the ways spot prices are calculated in the New Zealand electricity market requiring substantive amendments to the Electricity Industry Participation Code 2010 (**the Code**).

We are pleased to see the Authority and System Operator (**SO**) acknowledge this and prioritise engagement with industry stakeholders as to the optimal design and delivery of this project.

**Future proofing net benefits for consumers**

Genesis agrees that the flow-on effect of more certain and actionable prices for generators and purchasers in the market will deliver net benefits to consumers. Having greater confidence that 'what you see is what you get' regarding prices should enable more efficient generation scheduling, and there will potentially be significant benefits for switched-on consumers who are willing to change their behaviour in response to price signals.

We note that improved demand response is the expected main benefit from RTP. Genesis believes that in the future technological advancement will see demand response become more automated, giving rise to lower barriers to entry for a raft of potential demand-side participants.

We urge the Authority and SO to reflect on whether its proposed market design can accommodate what demand response might look like in the future e.g. automated household level demand-side participation in the thousands. No one can foresee the

future, but it would be unfortunate to find ourselves locked-in to a market that only anticipated demand response from large-medium consumers or load aggregators.

**Confidence in the new market design will be key**

With RTP aiming to provide timely and reliable information on spot prices, we have some concerns about retaining a modified form of interim pricing. Confidence in RTP could be undermined if available in 'real-time' means available 'at a later time' in the event of material pricing error claims. That said, we agree that having a process in place, of some kind, could be an important safeguard, particularly while RTP is new.

Genesis therefore believes the design of any process to be very important, key considerations of which include:

- If we can pinpoint the source of pricing errors, would it be better to address this instead, essentially solving the problem before it becomes a problem?

- Should any process be a transitionary measure that can be phased out over time as participants grow comfortable with RTP?

- How can we best define the minimum materiality threshold, given that 'material' might mean different things to different participants?

We provide some thoughts on this in our responses to the consultation questions included below as Appendix A, but are very interested to hear other stakeholders' views and would like to see this worked on further, following this consultation.

We also have some concerns that confidence in the market may be undermined if there is not an even playing field for market conduct, which could in theory leave the door open to strategic bidding/offering.

To counter this, it is important that there are equivalent behavioural expectations on all participants e.g. when it is permitted to revise bids/offers within trading periods. We note the Authority's compliance team will monitor participant behaviour to ensure there is no manipulation with the advent of RTP.

**Next steps in the process**

Genesis appreciates the Authority and the SO providing a four-year window to deliver RTP. While in a perfect world we would like to see the benefits of RTP sooner, we acknowledge that the timeline accommodates the significant changes needed to the market's systems and processes.

During this time, we expect further engagement on the progress of RTP, an appropriate lead-time to prepare our own systems for integration, and opportunities to engage further with other stakeholders on detailed design considerations as they arise.

If you would like to discuss any of these matters further, please contact me by email: margie.mccrone@genesisenergy.co.nz or by phone: 09 951 9272.

Yours sincerely

Margie McCrone
Regulatory Advisor

# Appendix A: Responses to Consultation Questions

| QUESTION | COMMENT |
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| Q1: Do you agree with the broad principle of using dispatch prices to determine final prices? If not, please explain your reasoning. | Yes, subject to the following comments: While Genesis understands the justification for calculating prices based on a 30-minute trading period, we do wonder if this will be out of step with the pace with which technology, computing power and the electricity market is moving. We would like to see the Authority commit to leaving the door open for five-minute trading periods in the future. |
| Q2: Do you agree with using the timeweighted average of dispatch prices to calculate prices for a trading period? If not, please explain your reasoning. | Yes, subject to the following comments: Genesis would like to see a transition to volume-weighted dispatch prices in the future, as per section 3.12 of the consultation paper. |
| Q3: Do you agree with disestablishing the pricing manager and allocating residual functions to other parties? If not, please explain your reasoning. | Yes. |
| Q4: Do you agree with the general approach of using default scarcity values to handle generation shortages? If not, please explain your reasoning. | Yes, subject to the following comments: Genesis has some concerns about arbitrarily setting default scarcity price blocks for forecast demand and embedding these within the Code. This does not provide any scope or agreed parameters for price adjustment over time. We suggest that the scarcity values should sit outside the Code where they can be transparently amended and (or) there be provisions/triggers provided for periodic adjustment e.g. not unlike how Transpower inflates the value of lost load when assessing the benefit of reducing unplanned losses of supply in grid upgrade proposals. |

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| 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. | See response to Q4 above. |
| 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? | Yes.<br><br>Genesis notes that it does not consider changes to be necessary, at this time, rather, we believe this is part of a separate workstream and contingent on phase three of the Electronic Dispatch Facility (**EDF**) programme. |
| Q7: What is your view on the preferred treatment of disconnected nodes? Please explain your reasoning. | Genesis considers the proposed treatment of disconnected nodes is reasonable. We recognise there must be a trade-off between achieving optimal accuracy and the administrative costs of removing all approximation. |
| 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 | Yes. |
| Q10: Do you agree with the proposed removal of the high spring washer pricing provisions in the Code? If not, please explain your reasoning. | Yes. |
| 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. |

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| Q13: What is your view on the best approach to incorporate dispatchable demand within an RTP framework? Please explain your reasoning. | Genesis is of the view that the existing dispatchable demand (**DD**) product has been designed 'by industry, for industry', which puts off many potential DD participants with its complex, jargon-laden code specifications. This point was well raised at the August 22 workshop: the focus of consumers is their business, not electricity, and few have the resources available that would justify participation in current DD.<br><br>Specific to the consultation paper, Genesis considers the SO's proposal to include ramp rates and minimum cycle times for DD bids would drive further complexity into what is already a complex product. As for concerns about a 'yo-yo' effect, we see this to be part of operating in the market, and note that, in reality, no DD participant would bid all of their load at one price: they would offer it in tranches, meaning a detrimental 'yo-yo' effect would be very unlikely.<br><br>We also note that it is likely that DD participation – and demand response generally - will be automated in the future (e.g. battery storage can be used to provide swing) which means it is important for the RTP framework not to hinge on DD participation as it is currently designed. |
| Q14: Do you agree with the proposed features for a dispatch-lite product? If not, please explain your reasoning. | No, for the reasons provided as follows:<br><br>Genesis fails to see the benefit of offering an alternative model to DD, which itself would become less onerous as a result of RTP, and cannot imagine there will be much appetite from consumers in the dispatch-lite product proposed, despite its catchy name.<br><br>There do not appear to be any compelling benefits of dispatch-lite, particularly when offset against additional Code complexity and SO concerns discussed in section 3.5.2 of the RTP Report (TAS060).<br><br>We recommend the Authority focuses on having a single, fit-for-purpose framework |

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| | for DD, and prepares this for a future that will be automated and software driven. |
| 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. Genesis notes that it advocates for all participants to be subject to the same behavioural expectations. |
| Q16: Do you agree with using the last bid or offer received in a trading period when calculating constrained on and off payments? If not, please explain your reasoning. | Yes, subject to the following comments: Genesis notes that constrained on/off amounts are paid by purchasers. This is a potential (perceived) complexity and market confidence issue for spot exposed parties, who may expect RTP to reflect actual spot market energy costs, when in fact they face variable spot market costs over and above the final price. One possibility to consider is incorporation of a small charge in final prices for demand to fund constrained payments and frequency keeping costs. While this may reduce the transparency of costs paid by spot-exposed consumers (although it would zero-out over time), it would ensure that the prices they see are as actionable as possible. |
| Q17: Do you agree we should retain a process for addressing material pricing errors? If not, please explain your reasoning. | Yes, subject to the following comments: Genesis considers that managing rare events (i.e. material pricing errors) without undermining the benefits of RTP and maintaining confidence in the market is a challenge. We also note the definition of pricing error in the Code is "an error that is the result of an incorrect input being used or incorrect process being followed to calculate the interim price". A pricing error would, therefore, necessarily derive from either the SO or the Clearing Manager (**CM**) as the parties responsible for inputs and processes. The SO and CM would also be the parties most likely to make a pricing error claim, as they have visibility of the inputs and processes that other participants do not. This might mean the |

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| | process is not that useful for participants other than the SO and CM, and begs the question we posed in the cover letter: if we can pinpoint the source of pricing errors, would it be better to address this instead, essentially solving the problem before it becomes a problem?<br><br>Notwithstanding our comment above, if there is to be a process for addressing material pricing errors, we consider the design of this to be crucial, including how this should look over time once RTP has been bedded-in. We discuss this further in our response to Q18 below. |
| Q18: Which approach do you prefer for managing pricing errors: a manual claim or automated checking? Please explain your reasoning (this could include suggestions for an automated filter). | Genesis would prefer an automated process if inputs are corroborated. This could be coupled with a mandated random auditing process to ensure robustness.<br><br>We can however understand that, at least initially, a manual process for managing pricing errors may be desired. As was stated at the 22 August workshop, this could provide an important 'safety valve' for the market under the new RTP regime.<br><br>We are interested to hear other stakeholders' views on this matter, and would be keen to 'workshop' the design of this process with industry e.g. take the opportunity to discuss, with our peers, what material might mean in this context. Genesis suggests materiality could be based on a whole-of-market cost deviation from 'correct' pricing rather than at an individual participant level, and should apply symmetrically to both under and over pricing errors. |
| Q19: If we retain a manual claim process for pricing errors under RTP, who should perform that role: – the system operator? – the Authority? – the pricing manager, as their only function? – some other party? Please explain your reasoning, including regarding any possible conflict of interest. | Genesis considers the SO should perform this role, with a formal sign-off required from the Authority. |

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| Q20: Do you agree with the proposed treatment of spot prices during market system outages? If not, please explain your reasoning. | Yes.<br><br>Genesis notes that it agrees with the philosophy expressed in section 3.108 of the consultation paper. We should be aiming to make RTP as 'real-time' as possible. |
| 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 for transitioning to RTP? If not please explain your reasoning. | Yes, subject to the following comments:<br><br>While we appreciate that the four-year time allowed for transition to RTP is to accommodate SO market system changes, we strongly believe EDF phase three needs to happen as soon as possible. We consider GENCO to be sunset technology unfit for today's (and tomorrow's) electricity market. |
| 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? 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. | No comment. |
| Q26: Do you agree with our assessment of alternative RTP designs? If not, why not? | Yes. |