



19 August 2015

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

Shortened gate closure and revised bid and offer provisions

Meridian welcomes the opportunity to provide feedback on the Electricity Authority's consultation paper 'Shortened gate closure and revised bid and offer provisions'.

Meridian supports shortening gate closure

Meridian supports the Authority's proposal to reduce gate closure to one hour. As identified by the Authority, reducing the gate closure window will increase the ability of generators (and dispatchable demand participants) to take efficient actions in response to changing market circumstances, such as changes in demand, wind generation levels, unplanned plant outages and unplanned transmission outages. We consider the productive efficiency benefits of this additional flexibility will be considerable.

We encourage the Authority to move towards 30 minute gate closure

While we support moving to a one hour gate closure now, we consider there would be further benefits in moving to a 30 minute gate closure. Just as circumstances can change between two hours and one hour from real time, so too can circumstances change between one hour and 30 minutes from real time. A 30 minute gate closure would further enable efficient actions to be taken by market participants, yielding further productive efficiency benefits. In particular, the accuracy of wind forecasts improves between one hour and 30 minutes from real time (forecast error drops from 13% to 6%), allowing generators to manage their portfolios with greater accuracy and efficiency. This also benefits the industry as a whole through stability in price schedules and not imposing last-minute changes on other (possibly less flexible) marginal plant.

We acknowledge the System Operator's (SO) concern that a 30 minute gate closure may compromise its ability to meet its PPOs. However, we note that even in current circumstances there can be late 'bona fide' changes to offers close to real time, and that the SO manages this

risk effectively. As such, we consider the security implications of a 30 minute gate closure period are likely to be manageable.

We encourage the Authority to undertake a cost-benefit analysis of moving to a 30 minute gate closure. If such an analysis does not indicate a net benefit at this time (or is inconclusive), we encourage the Authority to undertake a 12-month review following the implementation of 1 hour gate closure to assess the feasibility and benefits of reducing gate closure further.

Strategic re-offering is not a significant concern

Meridian notes that 'strategic re-offering' is a risk no matter what the gate closure period. Participants will always have the ability to lodge last-minute offer changes prior to the gate closure period, whether that is 2 hours, 1 hour or 30 minutes from real-time. We agree with the Authority that a number of Code provisions act to restrict strategic re-offering in the wholesale market, most notably the market conduct standard (clause 13.5A and 13.5B of the Code). We think these provisions collectively provide sufficient discipline on wholesale market participants. We do not consider that reducing the gate closure window will significantly increase concerns regarding strategic re-offering.

Meridian supports regular updating of intermittent generation offers

We agree with the Authority that intermittent generation can on occasion vary considerably over the last two hours before a trading period, and that the current requirement to only update offers once during this two-hour period is insufficient. Meridian's current practice is to update our intermittent generation offers at least once every trading period. We support the proposed Code change to require that intermittent generation offers are updated every 30 minutes in the two hours before real time.

Meridian supports the various clarifications to general offer obligations

Meridian supports the Authority's proposed Code amendments to clarify and simplify various offer provisions, including:

- Clarifying that total offer quantities should not exceed the quantity of electricity "the generator expects to be able to generate";
- Clarifying the quantity change threshold requiring a generator to immediately revise its offer (and setting this threshold at 5 MW);
- Requiring that any change in offer after the gate closure period that is due to a "bona fide physical reason" being limited to the quantity necessary to respond to that "bona fide physical reason";
- Revoking the Code provisions relating to cancellation of offers, bids, and reserve offers; and
- Introducing a process to allow a participant to permanently cease providing offers, bids or reserve offers at a particular location.

This support is subject to our drafting comments in response to Question 17 in Appendix A.

Meridian supports the Grid Owner being accountable for late revisions to grid information

The configuration of the grid has a direct impact on the settlement of the market. Grid information (relating to the grid configuration) is an important consideration for participants in making bids and offers. We consider it important that the Grid Owner makes every effort to submit accurate grid information prior to gate closure. Where it submits revisions to grid information after gate closure, we consider there should be some accountability on the Grid Owner to explain the reasons for these late revisions, particularly where there is a significant impact on market outcomes.

We agree that the current practice which sees the Grid Owner submit 500+ reports per month on late revisions to grid information appears to be overly onerous. However, we would support a requirement on the Grid Owner to explain the reasons for late revisions to grid information where a participant requests this. We consider this would provide an appropriate balance between not imposing overly onerous compliance obligations on the Grid Owner while still ensuring that there are valid reasons for not meeting gate closure timeframes. This information may also be useful in determining how the Grid Owner can improve its processes around submitting grid information in the future. Alternatively, the obligation could be changed so that the Grid Owner is only required to report on late revisions to grid information where those revisions relate to a reduction in grid capacity (or cause a constraint to bind).

Implementation timing

We note that the Authority has indicated that it expects the proposed Code amendment, if approved, would come into force in mid to late 2016. Meridian considers this is a long timeframe for implementation. Given the SO has indicated that one hour gate closure can be implemented with “minor to moderate tool changes and further training of support energy coordinators” we question whether it is possible to accelerate implementation in order to capture the identified benefits earlier.

Clarification on whether plant can exceed its offered capacity under block dispatch

Paragraph 3.2.14(b) of the consultation paper states: “A planned generation outage finishes earlier than expected. Unless the returning plant is part of a block dispatch group, its operator may not bring it back into service until two hours have elapsed.”

A related footnoted adds: “Even if it is part of a block dispatch group, it cannot be brought back without reducing output elsewhere in the block so that the total MW of the block stays the same.”

Meridian queries whether under current Code provisions this implies that a station could be operated at above its offered capacity provided total block dispatch quantities are met. For instance, imagine three stations (A,B and C) are operating in block dispatch. Each station has a capacity of 150 MW. Station A is on partial outage and operating at 100 MW with the other

two stations operating at capacity (meaning the block is dispatched at 400 MW). Maintenance at Station A is completed early, meaning it can return to full capacity, but offers have been locked down for the gate closure period. Would it be possible to increase production at Station A to 150 MW while reducing production at Station B to 100 MW and retaining Station C at 150 MW, thereby complying with the block dispatch quantity of 400 MW (but with Station A exceeding its offered quantity of 100 MW)? Put another way, is it acceptable to generate at above the offered quantity of one plant provided total block dispatch quantities are met?

Our responses to the Authority's specific consultation questions are attached as Appendix A.

Please contact me if you have any questions relating to this submission.

Yours sincerely,

A handwritten signature in blue ink, appearing to read 'M. Hall', is positioned above the typed name.

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Appendix A Responses to consultation questions

	Question	Response
1	Do you have any comments on the existing provisions in Chapter 2 of this paper?	Meridian broadly agrees with the Authority's description of existing provisions. We consider the risk of "strategic re-offering" may have been overstated. See our comments in the cover letter.
2	Do you have any comments on the problem definition relating to gate closure?	We agree with the Authority's description of the problem definition relating to gate closure. We consider there are significant productive efficiency benefits that can be realised by shortening the gate closure period.
3	Do you have any comments on the problem definition relating to the way gate closure and grid emergency provisions apply to bids?	We agree with the Authority's description of the problem definition.
4	Do you have any comments on the problem definition relating to requirements on intermittent generators to submit persistence-based forecasts in the last two hours?	We agree with the Authority's description of the problem definition. We note that Meridian currently submits intermittent generation offers at least once every trading period in the last two hours before real time.
5	Do you have any comments on the problem definition relating to the drafting issues with re-offer provisions?	We agree with the Authority's description of the problem definition.
6	Do you have any comments on the problem definition relating to grid owner reporting of late updates?	While we agree that the current obligation to report on every instance of a late offer revision can be considered onerous, we believe that grid information is a critical input into market settlement and that the Grid Owner should have some accountability for submitting late revisions to grid information. See our comments in the cover letter.
7	Do you have any comments on the problem definition relating to the cancellation of bids?	We agree with the Authority's description of the problem definition.
8	Do you consider that the proposed Code amendments would carry a risk of unintended consequences? If so, what are they?	Our main concern is that removing any obligation on the Grid Owner to report on late revisions to grid information may reduce the obligation on the Grid Owner to make every effort to submit accurate grid information prior to gate closure. In Meridian's view, this would impact on the efficient and orderly settlement of

		<p>the market. See our comments in the cover letter.</p> <p>We also request that the Authority consider how the obligation for offer quantities not to exceed “the quantity of electricity that the generator expects to be able to generate” will work alongside the safe harbour provision in clause 13.5B of the Code that requires that “the generator makes offers in respect of all of its generating capacity that is able to operate in a trading period”. We do not consider there to be a conflict but welcome the Authority’s consideration.</p> <p>We consider there would be benefit in the Authority developing guidance notes with respect to how a “persistence forecast” should be applied under 13.18A. For instance, it would be useful to set out how offers should indicate that a wind farm is coming back from outage (0 MW output).</p>
9	<p>If you are a generator or a dispatchable load purchaser, can you quantify the extent to which one-hour gate closure would allow you to reduce your cost of production? Please provide supporting evidence.</p>	<p>Meridian considers there will be significant productive efficiency benefits from reducing gate closure from two hours to one hour. We do not consider it is possible to foresee and calculate all the productive efficiency benefits that will eventuate. However, we have previously made the following calculations:</p> <ul style="list-style-type: none"> • Unplanned plant availability changes e.g. early return of plant from planned maintenance. Benefit of ~\$234k per annum based on one early return per week providing one hour of benefit from returned generation, assuming a conservative \$1/MWh reduction in wholesale prices from the additional generation multiplied by ~4500MW average national load. • Unplanned grid availability changes e.g. late return of HVDC from planned maintenance. Typically offers are setup quite differently during HVDC outages, and inability to adjust offers results in significant changes to market prices. The benefit from being able to respond more quickly is estimated at ~\$405k per annum based on six late returns per year, one hour of benefit, a \$25/MWh reduction in North Island prices multiplied by average North Island load of ~2700MW. • Weather events e.g. electrical storms that result in double circuits being treated as contingent risks. Benefit of ~\$444k per annum e.g. CYD_CML_TWZ

		circuits on 8 December 2013 resulted in a price lift of \$10/MWh for all nodes north of the constraint. Assumes 12 events of this type a year each with a one hour window of response and a \$10/MWh reduction in prices for load which in this case is ~3700MW.
10	Do you have any other comments on the costs and benefits of the proposed Code amendment?	We agree with the Authority's assessment that the benefits of the proposal will clearly exceed the costs.
11	Do you agree that the proposed Code amendment will better meet the objectives than the status quo? If not, why not?	We agree, but note our alternative proposal relating to the obligation on the Grid Owner to report on late revisions to grid information.
12	Do you prefer the proposed Code amendment or Option B which would use a subjective structure for revising offers? Please explain.	No. We agree that a subjective offer obligation would be difficult to enforce.
13	Do you prefer the proposed Code amendment or Option C which would use the structure for revising offers proposed by AEMC? Please explain.	No. We consider that this would be a significant departure from the current New Zealand approach, and that a clear rationale has not been established for the need for such a change.
14	Do you prefer the proposed Code amendment or Option D which would reduce gate closure restrictions in an alternative way such as providing more exceptions, moving to half-hour gate closure, or removing gate closure completely? Please explain.	As noted in our cover letter, we encourage the Authority to undertake a cost-benefit analysis of moving to a 30 minute gate closure. If such an analysis does not indicate a net benefit at this time (or is inconclusive), we encourage the Authority to undertake a 12-month review following the implementation of 1 hour gate closure to assess the feasibility and benefits of reducing gate closure further. We consider that there would be further productive efficiency benefits from moving to a 30 minute gate closure.
15	Do you consider that the proposed Code amendment in Section 4 is preferable to the status quo and other options? If not, please explain your preferred option(s) in terms consistent with the Authority's statutory objective.	Yes.
16	Do you consider that the proposed Code amendment in Section 4	Yes.

	<p>complies with section 32(1) of the Act, and with the Code amendment principles, and should therefore proceed?</p>	
<p>17</p>	<p>Do you have any comments on the drafting of the proposed Code amendment in Section 4, which is included in Appendix A?</p>	<p>Meridian has the following comments on the drafting of the proposed Code amendments:</p> <ul style="list-style-type: none"> • Meridian is concerned with the drafting of proposed clause 13.18A(3)(b). In particular, we consider: <ul style="list-style-type: none"> - The term “generating units” may exclude expected changes in availability and capability from other parts of a wind farm (e.g. transformers or transmission infrastructure). We consider the term “generating plant” (as currently defined in Part 1 of the Code) would be a useful addition. - Furthermore, the words “...availability and capability...” should be expanded to read “...settings, availability and capability...” which we understand is what the Authority intends by the words “availability and capability.” • We consider clause 13.18(2)(b) should be modified with the addition of “unless otherwise agreed with the Electricity Authority”. We consider this change is necessary as it is not entirely clear what behaviour is allowable under this clause with respect to block offers (e.g. whether it is allowable to remove quantities across a block offer, meaning the change would affect multiple plant). Inclusion of such wording would provide flexibility to agree an appropriate approach. • As “gate closure period” is defined with reference to trading periods for which a generator or ancillary services agent has submitted an offer, where a generator has not previously submitted an offer for a particular trading period there is by definition no gate closure period applicable to that period for that generator. Meridian does not know if this creates any practical issues but the Authority may wish to consider this further. If the Authority considers the definition should capture situations where a generator has not previously submitted an offer in respect of a particular trading period, the Code drafting could be amended by

	<p>deleting the words “in relation to a trading period for which a generator or ancillary service agent has submitted an offer or reserve offer, or for which a dispatchable load purchaser has submitted a nominated dispatch bid” and replacing the word “the” before “offer” in paras (a) and (b) with “an”.</p> <ul style="list-style-type: none"> • Does the Authority intend that a generator will be in breach of clause 13.9A if it learns, during the gate closure period, that it will not be able to generate to its offer, but that the total MW that it is able to generate will only be 4MW or less than its offer? The proposed Code amendments are clear that in this situation the generator must not revise its offer unless clause 13.18(1), 13.18A or 13.19 applies. Assuming none of those clauses apply, does the clear direction not to revise its offer under clause 13.17 excuse what would otherwise be a breach of clause 13.9A? What if the shortfall in generation is 5MW or more and therefore the generator is able to take advantage of clause 13.18(1) and revise its offer? We understand that the Authority intends that in both these situations a generator will be in breach. If so we suggest clause 13.9A is amended by adding ‘A generator that revises its offer does not excuse a prior breach of this clause.’ • In clause 13.18(1) the proper interpretation of the word “immediately” is difficult to determine. While it clearly cannot mean “instantaneously”, there are a range of possible alternative interpretations. We suggest that, for clarity, this clause should be amended to read: “A generator must immediately submit a revised offer to the system operator <u>if as soon as it becomes aware that the total MW specified...</u>”
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