

16 June 2010

Electricity Commission
Level 7, ASB Bank Tower
PO Box 10041
Wellington 6143

by email: submissions@electricitycommission.govt.nz

SUBMISSION ON DISPATCHABLE DEMAND REGIME

- 1 Orion New Zealand Limited (**Orion**) welcomes the opportunity to respond to the Dispatchable demand regime consultation paper (**the paper**) released by the Commission in May 2010.
- 2 Our submission is in two parts:
 - 2.1 General comments on the paper,
 - 2.2 As a schedule, responses to the Commission's specific questions.

General comments

- 3 The paper has come up with a proposal that looks to be workable, at least for a relatively small number of large direct connected customers. We do not think that the proposal as described can readily be extended to dispatchable demand within "shared" GXPs or balancing areas, despite the comment that "there would be no prohibition against smaller electricity users participating as dispatchable load stations."
- 4 We suspect smaller users would struggle to meet all of the participation requirements, even if arrangements with intermediaries were used. And even then the intermediaries would face issues with:
 - 4.1 being able to ensure response to and compliance with dispatch instructions

- 4.2 providing metering information with appropriate resolution, and
- 4.3 ring fencing.
- 5 Note that we do not consider that the possible failure of this proposal to provide a solution for smaller users is necessarily a problem; it is just something that needs to be acknowledged. It may be that a different approach can still be developed for them. And we note that pursuing the proposed option does not rule out parties contracting with each other for demand response outside of any formal dispatchable demand arrangements.
- 6 However, we are extremely concerned that the proposal does not explicitly address the important coordination issues that need to be considered to ensure that the proposal does not reduce system security. We have previously raised the coordination issue in regard to consideration of the hierarchy of uses that demand response (via load management) can be applied to.¹
- 7 We remind the Commission that significant demand side participation occurs outside of the wholesale market context, and its interaction with dispatchable demand (and indeed wider forms of demand response) needs to be considered. We are referring in particular to the load management carried out by distributors to manage network and regional loads for a variety of reasons, but principally to manage peak demands, system security and transmission costs. While this tends to occur on only a relatively few hours each year, it is nevertheless quite feasible that it will coincide with periods when dispatchable demand arrangements are in place.
- 8 Where the dispatchable demand participant is grid connected and therefore a contracted party for transmission, the trade-offs between the various uses of demand response capability will be appropriately internalised. However, were there to be dispatchable demand *within* a distribution network:
- 8.1 there will be times when distributor load management actions offset the dispatchable demand response (this would happen on the Orion network if it happened to be a time when we were participating in Upper South Island load control.),

¹ See for example our 4 September 2009 submission on the Commission's "Property rights for load management" discussion paper.

- 8.2 during such times, the restoration of the dispatchable demand will also be masked (the distributor will tend to turn off some other load), and
- 8.3 either way both the system operator and the local distributor could conceivably be confused by the real or apparent response to their instructions or actions.
- 9 As it develops this and other demand-side proposals, we urge the Commission to consider the possible impact on the wider stability and coordination of the electricity supply chain.
- 10 Before progressing much further with the proposal, it may also be prudent to conduct some sort of trial with likely participants to establish initial interest, levels of capability, and even test the response process in a controlled situation.

CONCLUDING REMARKS

- 11 Thank you for the opportunity to make this submission. If you have any questions relating to this submission, please contact Bruce Rogers (Pricing Manager) DDI 03 363 9870 email bruce.rogers@oriongroup.co.nz.

Yours faithfully



Bruce Rogers
Pricing Manager

Schedule: Responses to specific questions

Q No.	Question	Response
1	Would the Proposed Design be workable?	<p>Yes we believe it is workable for the small (by number) group of very large direct connect customers. Whether it is sufficiently attractive to them needs to be considered before the market changes needed to support the proposal are made.</p> <p>We do not think it is a practical solution for smaller loads. Even if aggregated, we believe it will be very difficult to meet the technical requirements. The proposal notes that such response is “not prohibited”, but the Commission should probably explain how it could come about given the proposed requirements.</p> <p>We are also unsure if the proposal is consistent with the demand side bidding and forecasting proposal to replace purchaser bids with a System Operator forecast at conforming GXPs.</p> <p>Finally we note the potential interaction of dispatchable demand with other forms of demand management, and in particular distributor load management.</p>
2	What approach should be used to allow dispatchable electricity users to manage the risk of yo-yo dispatch during a trading period? (Refer to the section beginning at paragraph 3.4.15).	This is a technical question best dealt with in discussion with the potential participants. We note however the observation made by others that the nature of the demand being dispatched may not lend itself to the same level of control as generator output. Specifically it may be a piece of plant that is either on or off, but cannot be anywhere in between.
3	What metering and communications obligations should a dispatchable load station have (refer to paragraphs 3.3.4 to 3.3.9)?	<p>We have no strong views, but note that the underlying rationale for the proposal is that the demand bid is being seen as equivalent to a generator offer, so the starting point would be that the obligations are the same.</p> <p>Metering is clearly a difficult problem as reductions in load are inherently difficult to measure.</p>
4	Should a dispatchable load station be required to be “ring fenced” from non-dispatchable load? Why? How should this be managed? (Refer to the section beginning at paragraph 3.3.10).	We can see the rationale for this, but it might be better dealt with as a compliance matter dealt with by exception rather than being a necessary feature in every case. We also note this might be analogous to block dispatch for generators, where there is some discretion as to how a particular dispatch instruction is met.
5	How accurate would dispatch compliance need to be, both for system	Again we see the starting point being existing generator requirements.

Q No.	Question	Response
	security purposes (including matters like keeping asset loadings within limits) and for maintaining the integrity of market prices calculated using bids?	
6	What other adjustments to the Proposed Design might be helpful?	It is not really an adjustment, but it might be useful if aspects of the proposal were trialled with one or two parties. This may uncover some issues that have not been anticipated.
7	In your best judgement, would the Proposed Design be likely to produce net benefits over reasonably practicable alternatives (including the status quo)? What priority should be attached to this work?	We cannot make this judgment as we are not aware of the likely benefits or costs of the change. The Commission would need to be confident of significant participation if the presumably costly changes to SPD and System Operator systems are to be made.
8	Is the net benefit analysis framework described in section 3.7 appropriate?	<p>Some comments:</p> <ul style="list-style-type: none"> • The benefits listed look rather tricky to quantify. Surely the key benefit we expect from demand side participation is lower prices? While this will itself be difficult to quantify, we need to at least be confident that it will happen. • The possible adverse security consequences (3.7.2 (a)) need to be considered in the light of the considerable freedom that demand has to vary when it is not participating in demand dispatch. • Given that participation will be voluntary, the costs of “lost freedom” should not be a factor. However it does reinforce the point that there needs to be an expectation of material participation before the necessary changes are made.
9	Is the net benefit analysis framework described in section 3.7 appropriate?	See our answer to question 8.
10	If you are an electricity user, would you be likely to participate in the Proposed Design? What quantity (in MW) might you typically make available for price-responsive dispatch?	<p>We are not an electricity user. We do however carry out significant load management at various times, which in an aggregate sense impacts on actual demand, irrespective of purchaser bids whether or not those bids include a dispatchable demand component.</p> <p>The possible implications of the interaction of dispatchable demand with other forms of load management needs to be carefully considered.</p>