



# MAJOR ELECTRICITY USERS' GROUP

28 May 2010

Submissions Administrator  
Electricity Commission  
By email to [submissions@electricitycommission.govt.nz](mailto:submissions@electricitycommission.govt.nz)

Dear Administrator

## Submission on Dispatchable demand regime

1. This is a submission by the Major Electricity Users' Group (MEUG) on the Electricity Commission consultation paper "*Dispatchable demand regime*", dated 19<sup>th</sup> May<sup>1</sup>.
2. MEUG appreciates the opportunity to have discussed the development of a dispatchable demand regime with Commission staff and advisors prior to this consultation paper being finalised and published. This is an idea that has often been talked about. The consultation paper is helpful in advancing how such a regime would work in detail and realistic about the initially limited but possibly valuable role of such a regime. There is a possibility that continuous development of the regime may uncover innovative new entrants.
3. Given the analysis to date and the interest of some MEUG members to participate in such a regime, MEUG believe the Commission should continue to treat this work as a high priority.
4. Responses and comments to the consultation paper questions follow:

Question	Response
1. Would the Proposed Design be workable?	Based on the analysis in the consultation paper, MEUG believe that conceptually the Proposed Design is workable and consistent with the overall market design.
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)	The option of providing for dispatchable load stations bids to specify maximum ramp rates seems like it might work (refer paragraph 3.4.16 of the consultation paper). This gives the consumer flexibility to cover how it can manage plant and the System Operator information on how much flexibility is required. In some cases the flexibility required by the consumer may exceed the level that can be optimally dispatched consistent with achieving the PPO. The risk of this occurring keeps an incentive on consumers to bid realistic ramp rates.

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<sup>1</sup> Refer <http://www.electricitycommission.govt.nz/consultation/dispatchable-demand-regime/>

3. What metering and communications obligations should a dispatchable load station have (refer to paragraphs 3.3.4 to 3.3.9)?	The minimum necessary to ensure the System Operator achieves their PPO's.
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).	<p>Agree there is a need for ring fencing arrangements to avoid the risk that the System Operator may "dispatch" one machine at a direct connect consumer site only for that dispatch instruction to be offset by a non-dispatched machine increasing demand.</p> <p>The consultation paper suggests the ring fencing arrangements<sup>2</sup> "... could be considered part of the process by which the system operator approves a dispatch load station as eligible to participate in dispatch." MEUG agrees this may be the best solution because trying to write a prescription into the Code would be daunting. A case by case approach would seem pragmatic at the outset as only a few load dispatch stations are expected.</p> <p>Finding case by case ring fence arrangements for a single consumer at a GXP will be easier than designing a ring fence for dispatchable load embedded in a distribution network. Nevertheless the opportunities for much wider participation by embedded dispatchable load stations may in the future exceed those of direct connect consumers. Therefore MEUG recommends the Commission and System Operator in designing the ring fence framework within which the System Operator will have discretion should keep in mind precedents to allow future embedded dispatchable load stations.</p>
5. How accurate would dispatch compliance need to be, both for system security purposes (including matters like keeping asset loadings within limits) and for maintaining the integrity of market prices calculated using bids	MEUG may wish to comment after considering the response by the System Operator to this question.
6. Do you agree that large binary machines should not be eligible for dispatch? (Refer to the section beginning at paragraph 3.4.11). Why or why not?	No. As the regime is rolled out the easier wins may be non-binary machines or clusters of smaller binary machines. However we do not accept that large binary machines should not be eligible until further investigation of whether SPD can be modified. Some aspects of SPD have been modified to manage non-linear functions and we see no reason why large binary machines cannot be similarly considered.
7. What other adjustments to the Proposed Design might be helpful?	We agree with the comment in the consultation paper (paragraph 3.2.9) that " <i>The Commission considers that reducing gate closure restrictions is important to make a dispatchable demand regime more attractive to potential participants.</i> "

<sup>2</sup> Consultation paper, paragraph 3.3.11

<p>8. 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?</p>	<p>As a back-of-the-envelope estimate, assume the cost of implementing the rule change, changes to the system operator processes and establishing dispatchable load stations with aggregate capacity of 50 MW is \$100,000. Further assume for any single event use of the dispatchable load results in the market clearing price decreasing by \$200/MWh. Finally assume the change in price over that trading period of \$200/MWh and the change in demand (decreased by 50 MW) is a more efficient outcome than without the dispatchable load regime.</p> <p>The dead-weight-loss triangle net benefit in that trading period is given by <math>\frac{1}{2}(50 \times \frac{1}{2} \text{ MW} \times \\$200/\text{MW})</math>. Note the quantity is halved because the trading period is a half hour. The net economic benefit in this case is \$2,500.</p> <p>By dividing the implementation cost (\$100,000) by the net economic benefit per event (\$2,500) derives the breakeven number of events at which point continuing with this work is likely to be beneficial. The breakeven point is 40. As a matter of judgment we think there is a good probability that over the next few years there will be in excess of 40 trading periods when such events might occur and therefore further work on this project should be undertaken.</p>
<p>9. Is the net benefit analysis framework described in section 3.7 appropriate?</p>	<p>Agree with the additional benefits, relative to the status quo, listed in paragraph 3.7.1.</p> <p>Agree with the implementation costs listed in paragraph 3.7.2 (c). It is less clear that the other two costs listed in paragraph 3.7.2 should be included or will be material, ie:</p> <ul style="list-style-type: none"> <li>▪ <i>"The adverse security consequences (including on management of asset loadings) caused by any substantial deviations by dispatchable load stations from their dispatch points."</i></li> </ul> <p>MEUG note that the System Operator will only agree to dispatchable load stations that will not undermine the PPO's. The System Operator will, and indeed we want them, to act cautiously and if anything err on ensuring security. The risk, relative to the status quo, of dispatchable load stations increasing security risks is highly unlikely as that risk is managed by the System Operators ability to approve or decline proposals. Therefore MEUG does not agree this is a risk that should be included in the cost-benefit-analysis.</p> <ul style="list-style-type: none"> <li>▪ <i>"The additional operational costs faced by participating dispatchable load stations, including the value of the lost freedom to use electricity to meet business needs, and the cost of metering and communications systems."</i></li> </ul> <p>We agree with the first part of this cost, ie additional</p>

	operating costs by the end consumer. We do not agree with the inclusion of " <i>the value of the lost freedom to use electricity to meet business needs.</i> " The end consumer will only bid at the point where their assessment of being dispatched has more benefit than continuing to demand power and face high spot prices. In other words with a dispatchable load station the end consumer can more accurately manage the use of electricity to ensure every kWh used leads to a net benefit. Rather than losing freedom to manage the business, the end consumer improves their ability to manage.
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?	Not applicable.

5. We look forward to participating in the next steps to finalise this regime.

Yours sincerely



Ralph Matthes  
Executive Director