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23 September 2015

John Rampton
Market Design
Level 7, ASB Tower
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By email: submissions@ea.govt.nz

Dear John

Demand Response principles

We appreciate the opportunity to provide feedback to the Authority on its *principles for demand response* released 11 August.

Various forms of demand response have been used successfully by electricity network companies in New Zealand for many years to manage constraints and to defer distribution and transmission network investment. As the Authority is aware, we are developing demand response capability to complement existing mechanisms and to help defer or avoid transmission investment.

We agree with the description for demand response taken from that used by the United States' Department of Energy in its review to quantify the national benefits of such response. The review identifies the benefits obtained through both electricity price response and incentive payment response. We note, however, that the Authority has focussed on 'price-responsive' mechanisms and seeks to discount initiatives that use 'incentive payments' for load reductions. We suggest that circumstance is the appropriate determinant of the more efficient mechanism rather than one mechanism always being preferable. For example, the costs and benefits of network investment deferral or avoidance (the economic rationale for demand management by distribution and transmission businesses) bear no direct relation to wholesale market pricing.

Efficient demand response

We consider the efficient wholesale energy *price* is the reflection of economic decisions made by a range of industry participants on both a pre-emptive and reactive basis, and not simply the marginal cost of electricity. This efficiency measure should include out-of-market instruments such as hedging arrangements, generation and retail strategies, and the effect of transmission investments (including transmission alternatives). With an exclusive focus on wholesale price as the efficiency measure, demand response arrangements (and indeed hedging activity) could be assessed as not meeting the principles when on a more complete

assessment they would meet the principles i.e. that take account of whole of system costs and benefits.

Transmission alternative test trials

Procured demand response for transmission deferral is an opex solution to what would otherwise be a capex problem. With the limited exception of product development and testing we would never expect to procure demand response where cost exceeds the present value of avoided capex plus option value i.e. procured demand response is only used where it is efficient.

Currently, we have three areas of the grid where demand response could complement transmission and distribution price signals to defer transmission investment. We are currently inviting tenders to establish price and quantity information for demand response capacity three areas. Those areas are:

- Otahuhu, Wiri and surrounding areas
- Timaru, Temuka and surrounding areas
- Oamaru and surrounding areas.

More information on the tendering process and our demand response programme is available on our website.¹ Once we have assessed tenders we will decide whether and how to utilise demand response to achieve our transmission investment deferral objectives in the most efficient manner. We will publish the observed price curve to aid transparency and price discovery. In the interests of promoting competition in demand response we agree that interventions which seek to specify technologies or require high compliance costs may act as barriers to the competitive development of demand-side initiatives. Our own program accepts a wide range of load and metering technologies, assisting participation and enhancing competition.

Finally, we accord with the Authority's view that demand response initiatives do not have to satisfy every principle to proceed – this permissive application of the principles is necessary so that the full range of nationally efficient demand response programmes can be progressed.

If you have any questions about this submission please don't hesitate to contact me

Yours sincerely



Jeremy Cain
Regulatory Affairs & Pricing Manager

¹ See: <https://www.transpower.co.nz/about-us/demand-response>