24 February 2017

Mr Warwick Anderson
General Manager, Network Regulation
Australian Energy Regulator
GPO Box 3131
Canberra ACT 2601

Dear Mr Anderson

Re: CONSULTATION PAPER - DEMAND MANAGEMENT INCENTIVE SCHEME AND INNOVATION ALLOWANCE MECHANISM

CitiPower and Powercor welcome the opportunity to respond to the Australia Energy Regulator's (**AER**) consultation paper on the Demand Management Incentive Scheme (**DMIS**) and Demand Innovation Allowance Mechanism (**DMIA**). We support the need to improve the existing DMIS and DMIA, to better promote demand management solutions and ground-breaking research and development.

Our submission demonstrates the following:

- the existing regulatory framework and commercial environment provide incentives to minimise both capital and operating expenditure, and do not promote a clear preference for one type of expenditure over the other;
- DMIS should allow more of the value of demand management solutions to be internalised (i.e. including any option value and net market benefit of the larger value chain);
- consumers should not bear the cost of inefficient demand management (e.g. we do not support STPIS exclusions, or the setting of arbitrary demand management targets); and
- we support expanding the current DMIA and developing a model for larger research and development funding.

Should the AER have any queries regarding this submission, please do not hesitate to contact Sonja Lekovic on (03) 9683 4784, or slekovic@powercor.com.au.

Yours sincerely,

Brent Cleeve
Head of Regulation, CitiPower and Powercor

DMIS

Existing regulatory framework promotes balanced efficient investment

The existing regulatory framework, as well as the prevailing commercial environment, promote efficient investment in both network and non-network solutions.

Regulatory framework

The regulatory framework includes measures to ensure both network and non-network alternatives are considered, and that equal incentives exist to minimise both capital and operating expenditure. For example:

- the Efficiency Benefit Sharing Scheme (**EBSS**) and the Capital Expenditure Sharing Scheme (**CESS**) provide equal incentives for minimising capital and operating expenditure, and we concur with the AER that this assists in putting each on an equal footing;
- the regulatory investment test for distributors (**RIT-D**) requires consideration of the net benefit of both capital-based network solutions and operating expenditure-based non-network alternatives, preventing biased decision making;
- we are required to publish a broad range of information on network constraints—including, for example, in our Distribution Annual Planning Report (**DAPR**)—to ensure non-network proponents have sufficient capability to develop alternative (non-network) solutions; and
- we undertake condition-based risk management (**CBRM**) processes and probabilistic planning. These approaches ensure the cost of removing network constraints are balanced against the value of customer reliability, deferring augmentation where possible (either through managing increasing levels or risk, and/or implementing non-network solutions).

Commercial factors

Our commercial strategy is focused on providing stable long-term returns for our shareholders through continuing to represent value for our customers. This requires maintaining efficient levels of expenditure to keep network tariffs low. This is evidenced by our performance in the AER's benchmarking measures, and more generally, in the comparatively low percentage that distribution charges represent in the typical customer retail bill in Victoria.

Notably, the risk of long-term investment is increasing in today's environment of low demand growth and emerging new technologies. These risks have been recognised, for example, by the Commerce Commission in New Zealand (through provisions that allow distributors to reduce the asset lives of network assets). In this context, growing our regulatory asset base (**RAB**) through inefficient investment in network solutions may expose our business to the heightened risk of stranded assets and lost returns.

Our non-network option experience

As part of our usual practices, we undertake measures that reduce peak demand and lower the need for augmentation. For example, we diversify the time of switching 'on' of selected hot water units and slab heaters under controlled load network tariffs.

When a network constraint exists, we also recognise the benefit of other flexible non-network solutions, and actively engage with proponents to identify where these solutions may be economically viable. For example, we have previously employed the Royal Melbourne Hospital's existing embedded generation for network support in our CitiPower network to respond to a peak demand constraint in the Melbourne Central Business District (**CBD**). In another example, we contract participants in peak load shedding at the Charlton Zone Substation in order to maintain system voltages.

Notwithstanding the above, the penetration of demand management solutions in the electricity system is still limited as the market is immature. In our experience to date, including the separate Truganina, Geelong East and Melton/Bacchus Marsh network constraints, potential non-network providers were either unable to provide sufficient support to address the constraint, their business models did not fit the requirements of the constraints, and/or they did not present the highest net economic benefit in comparison to the proposed network option.

Improving the DMIS, however, may foster a deeper market for demand management. As discussed in the following sections, this may include providing more value to be captured when comparing the benefits of network and non-network alternatives.

Internalising the value of demand management solutions

Demand management solutions create benefits that are not captured under the current regulatory framework. As recognised by the AER, this includes the option value of more flexible and shorter-term solutions in times of uncertainty, as well as the shared net market benefit in all parts of the value chain (particularly in deferred generation and transmission capacity). Providing greater scope for businesses to internalise some of these positive externalities would ensure a more complete comparison of the benefits of non-network solutions with network alternatives.

A broader DMIS is also likely to be more successful in fostering the market for demand management solutions by encouraging more uptake. In turn, dynamic efficiencies from innovative solutions may instigate technological and commercial advancements that will lead to efficiencies and lower costs in the long-run.

Estimating the option value and the net market benefit is likely to prove difficult and burdensome, particularly on a case-by-case basis. Further, it is likely to result in a spurious level of accuracy. Instead, we support recognising these values through an estimated broad benefit recovery rate incentive, to be applied to all employed demand management solutions. As per the Network Capability Improvement Incentive Scheme example noted by the AER, for every $1 spent on demand management solutions distributors could receive $1.50 in incentives.

We support the AER in further investigating the most effective recovery rate, so that it captures the range of benefits that may arise from demand management options.

Customers should not bear the cost of inefficient demand management

The AER's consultation paper set out a number of methods for removing disincentives for demand management (e.g. excluding some demand management-related interruption from the STPIS liability) and promoting demand management (e.g. setting deployment targets and better information provision). These are discussed below.

<u>STPIS</u>

Our demand side engagement strategy sets out the payment principles we consider in discussions with non-network solution providers. This includes limiting our exposure and customers to potential costs arising from the failure of a non-network solution to deliver the stated solution and appropriate sharing of risks from any failure of the non-network solution.

The AER presents the risk of a STPIS penalty as the main disincentive for distributors to engage non-network solutions. The AER proposes two approaches to combat this disincentive:

- provide incentive payments for insurance policies against the risk of non-delivery of the demand management solution; and/or
- limiting penalties associated with demand management projects under the STPIS, by excluding a defined number of network interruptions associated with unexpected underperformances of demand management projects.

Our experience to date is that 'insurance' can only be provided by over-purchasing any required non-network solution (e.g. contracting for 1.5kWh of demand reduction from diverse sources, even if we only expect to require 0.75kWh). Insurance is also difficult for demand management proponents to attain, as the premiums related to potential STPIS penalties can be much higher than the revenue received. Self-insurance, therefore, is considered to be relatively inefficient at present.

Conversely, the main concern about removing a number of interruptions from STPIS is that the risk of poorer reliability is then effectively passed onto consumers. Reliability is an important 'cost' that should be priced in evaluating alternative solutions, and we are better placed to manage these risks.

As such, we do not support the proposal to either self-insure or limit penalties associated with demand management projects.

Setting targets is inefficient

Setting arbitrary targets for the employment of demand management solutions is likely to lead to inefficient outcomes, by compromising the existing efficiency and technology-neutral investment principles and creating perverse incentives to invest in non-network options. As demand management solutions are most efficient when responding to particular network constraints, the risk of inefficient targets is even higher in today's environment of lower demand growth.

The immaturity of the demand management market at present can also lead to the creation of 'local monopolies' of demand management solutions providers. 'Local monopolies' represent proponents that provide a service which does not have adequate competition at the location they provide it in. For example, there may be only one solar power aggregator providing demand management in a certain part of the network. If there is congestion in this part of the network and the distributors are pressed to reach a target, the 'local monopoly' is not persuaded from charging inefficiently.

Information provision requirements

The existing regulatory framework ensures distributors share the necessary information with the potential demand management solutions proponents. This includes the publication of network limitations and planning information in our DAPR, our Demand Management Engagement Strategy (**DMES**), the network opportunities map developed by the Institute for Sustainable Futures at the University of Technology Sydney and our own network limitations map published on our website. Under the AEMC's new December 2016 rule on Local Generation Network Credits, DAPRs will soon be expanded to include more detailed information on system limitations under a uniform template.

We also maintain registers based on applications to our dedicated Demand Management webpage, for parties to notify their interest in being advised of developments relating to the network planning. We use this register not only to consult with interested parties, but also to determine their level of interest and ability to participate in the development of non-network options.

The current information provided on system limitations, and the opportunity to engage formally and informally, allows demand management providers to compete openly and to propose innovative solutions to network constraints. It is not clear, therefore, that additional reporting requirements will provide additional benefit to consumers (particularly relative to the costs involved).

DMIA

We believe there is merit in both continuing the current DMIA for smaller demand management projects and developing a larger 'innovation fund' with broader-scope research and development. The 'innovation fund' can reflect either a high-cap allowance for each distributor with ex-ante approval or a competitive bidding model. This would be a similar approach to Ofgem's electricity network research and development funding scheme, which includes the Network Innovation Allowance (**NIA**) and the Network Innovation Competition (**NIC**).

As noted by the AER, the benefit of the current DMIA and its uptake is likely to grow when combined with the new DMIS and with other recent regulatory changes directed at developing the market for non-network alternatives. We support AER's proposed extensions to the status quo.

The 'innovation fund' should encompass larger projects that might run across regulatory periods. Introducing a competitive framework is more likely to provide customers with value for money, as only the 'best' projects will be funded. Alternatively, a high-cap allowance for each distributor is likely to require fewer resources to administer. The scope of the 'innovation fund' projects should be expanded to include all potential options that improve the long-term benefit to consumers, rather than limiting the projects to demand management. As with Ofgem's NIC, the fund should allow for a wide range of options that put together the technological, operational and commercial arrangements which stimulate technological advancements, cost reductions and system security.