OPOWER

March 19, 2015

Australian Energy Market Commission
PO Box A2449
Sydney South NSW 1235

RE: ERC0177 – Opower's comments on the proposed National Electricity Amendment (Demand Management Incentive Scheme) Rule 2015

Dear Sir or Madam:

Opower appreciates this opportunity to respond to the AEMC consultation paper on proposed changes to the National Electricity Rules for demand management incentives. Implementation of the proposed rule changes would significantly strengthen distribution network service providers' (DNSPs) incentives to test, prove, and sustain investment in innovative demand management approaches and would negate many of the split incentives that occur with debundling of retail and network assets.

For the purposes of these comments, Opower would like to submit that:

- **Incentivizing innovative and cost-effective demand management remains a prudent policy.** Though the recent introduction of revenue caps should encourage greater efficiency in network management by decoupling the DNSPs' bottom line from electricity sales volume, decoupling alone is unlikely to encourage new demand management approaches.

- **The proposed framework for an enhanced DMEGCIS is consistent with successful practices elsewhere and so we recommend that AEMC and AER prioritize efforts to put the proposed framework into practice.** Experience in other jurisdictions suggests that the combination of the three discrete yet complementary policies raised in the consultation -- an innovation allowance, an incentive scheme, and decoupling via a revenue cap for distribution businesses – address related but different market barriers, and thus generate consistently positive outcomes when used together.

- **The Demand Management Innovation Allowance should be maintained, as pilot funding has proven essential to new policy and technology development.** Pilot funding for innovative approaches, paired with a robust requirement for measurement and verification of results, has proven critical for accelerating technological advance and expanding available non-network options in other international markets for demand management.

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- **The proposed Demand Management Incentive Scheme to quantify and share non-network benefits should be put into practice.** Similar approaches to benefits-sharing have proven successful at stimulating cost-effective investments in demand management resources in US markets. Opower believes that the positive impact of such a policy will be amplified in the unbundled and competitive NEM, where the current incentives for distribution companies to deliver system-wide benefits are more fragmented than in more traditionally integrated utility markets.

Opower is an enterprise software company that is transforming the way utilities engage with their customers. Opower's customer engagement platform enables utilities to reach their customers at moments that matter through proactive and digitized communications that drive energy savings, increase customer engagement and satisfaction, and lower customer operation costs. Opower's software has been deployed to more than 95 utility partners around the world and reaches more than 55 million households and businesses. Having run hundreds of large scale field tests, and been subject to over 40 independent programme evaluations, Opower has amassed the world's largest body of experience in delivering behavioural demand management programmes. Opower demand response programmes reliably reduce household peak consumption by 3-5% and achieve customer participation rates over 80%. Opower energy efficiency programmes have helped save more than 6 terawatt-hours, abated more than 4 million metric tons of CO2, and saved bill payers more than USD 700 million.

Issue 1: Issues this rule change is seeking to address

Incentivizing innovative and cost-effective demand management remains a prudent policy.

Despite significant progress by AEMC and AER since the 2012 Power of Choice Review, Opower believes there is still ample room and legitimate need for adoption of new cost-efficient Demand Management approaches.

As AEMC observes on page 4 of the consultation paper, (1) DM is new, (2) DM benefits do not accrue solely to DNSPs, even though it is the DNSPs' regulated responsibility to pursue DM, and (3) price cap control mechanisms actually reduce incentives to invest in DM that would reduce sales volumes below the maximum allowable revenue.

Though the recent introduction of revenue caps should encourage greater efficiency in network management by decoupling the DNSPs' bottom line from electricity sales volume, decoupling alone is unlikely to pull new demand management approaches online.

Unbundling and deregulation of other portions of the electricity supply chain means that DNSPs' have limited ability to capture "spill over" benefits from DM investments that accrue up- or downstream from the network's regulated jurisdiction.

It is also worth noting that demand forecasting has proven unreliable in the past. The challenge of accurately forecasting demand will only become more complicated as electric vehicles come online and embedded generation becomes more widespread. As such, Demand Management will remain a vital tool.

Issue 2: Proposed DMEGCIS

The proposed framework for an enhanced DMEGCIS is consistent with successful practices elsewhere and so we recommend that AEMC and AER prioritize efforts to put the proposed framework into practice.

Experience in other jurisdictions suggests that the combination of the three policy tools addressed in the consultation -- an innovation allowance, an incentive scheme, and decoupling via a revenue cap for distribution businesses – address related but different DM market barriers. Several leading jurisdictions in the US have proven that these tools can be implemented together in a complementary fashion – to motivate innovation, generate regulatory certainty that non-network DM investments will be put on a level playing field with network investments, and ensure that the most efficient portfolio of proven DM and network investments becomes the "new normal" for BAU operations for regulated utility businesses.

- In **Massachusetts**, regulation provides for a demand management program cost recovery including a budget for research and development. As a result, the impact of demand management programs increased 83% over six years, amounting to 365 GWh of energy savings and over USD 125 million in avoided supply and distribution costs in 2011.[1]

- In **California**, investor-owned utilities have robust budgets for piloting innovative programs, they face full decoupling, and historically have been rewarded with performance incentives of up to 12% of net benefits for meeting demand management goals. As a result, in the last 10 years, average annual savings have consistently exceeded 1% of sales.

In each of these states, policymakers have successfully created an incentivization scheme that encourages regulated utility businesses to introduce new programmes (using pilot funding), to view demand management investments on equal footing with investments in

[1] Dan York, Martin Kushler et al. "Making the Business Case for Energy Efficiency: Case Studies of Supportive

traditional capital assets (knowing that they will share in the financial benefits that primarily accrue to other stakeholders), and to transition them into a diverse portfolio of supply and demand management investments that have proven cost-effective without respect to sales volume (thanks to decoupling via revenue caps).

To the extent that the DNSPs in Australia address a more limited portion of the electricity supply chain than their regulated counterparts in states like Massachusetts and California, we believe the value of taking this kind of integrated policy approach is actually amplified. In particular, the impact of a shared benefits incentive scheme – the one part of this policy mix that is not currently in place in Australia – should enable the critical middle step between innovation and long-term adoption of a new normal.

Issue 3: Demand management innovation allowance

The Demand Management Innovation Allowance should be maintained. Pilot funding for innovative approaches, paired with a robust requirement for measurement and verification of results, has proven critical for accommodating technological advance and expanding available non-network options in other international markets for demand management.

- National Grid started with a 50k household behavioural energy efficiency pilot in 2009, expanding to over 1 million households after regulatory acceptance. The results helped spur the Massachusetts Department of Public Utilities to approve a 3-year, 3.7 TWh statewide efficiency plan that relies on behavioural efficiency programs to drive 24% of electricity savings and 20% of gas savings.[i]

- In California, Opower's first program was a 30k household pilot initiated in 2008 with the Sacramento Municipal Utilities District. By 2012, The California Public Utility Commission had set a "floor" on utility investment in behavioural energy efficiency, by requiring that no less than 5% of residential households in each investor-owned utility participate in behavioral programs by 2014.[ii]

Without pilot funding authorized for research and development of new programmes, Opower and behavioural efficiency at large might never have found regulatory acceptance. Our data-driven, software-based approach to delivering energy efficiency by motivating and rigourously measuring behavior change was a radical departure from the traditional hardware-based, deemed-savings approach to implementing and measuring energy efficiency.

Our initial pilots of behavioral demand response programmes suggest that a similar approach will have a similarly disruptive impact on the cost-effectiveness of residential demand management at scale. We are excited about the prospect of piloting such a program with DNSPs in Australia. The availalability of DMIA funding will make it far more likely that innovative approaches like these will undergo field testing to prove their merit. Without such a

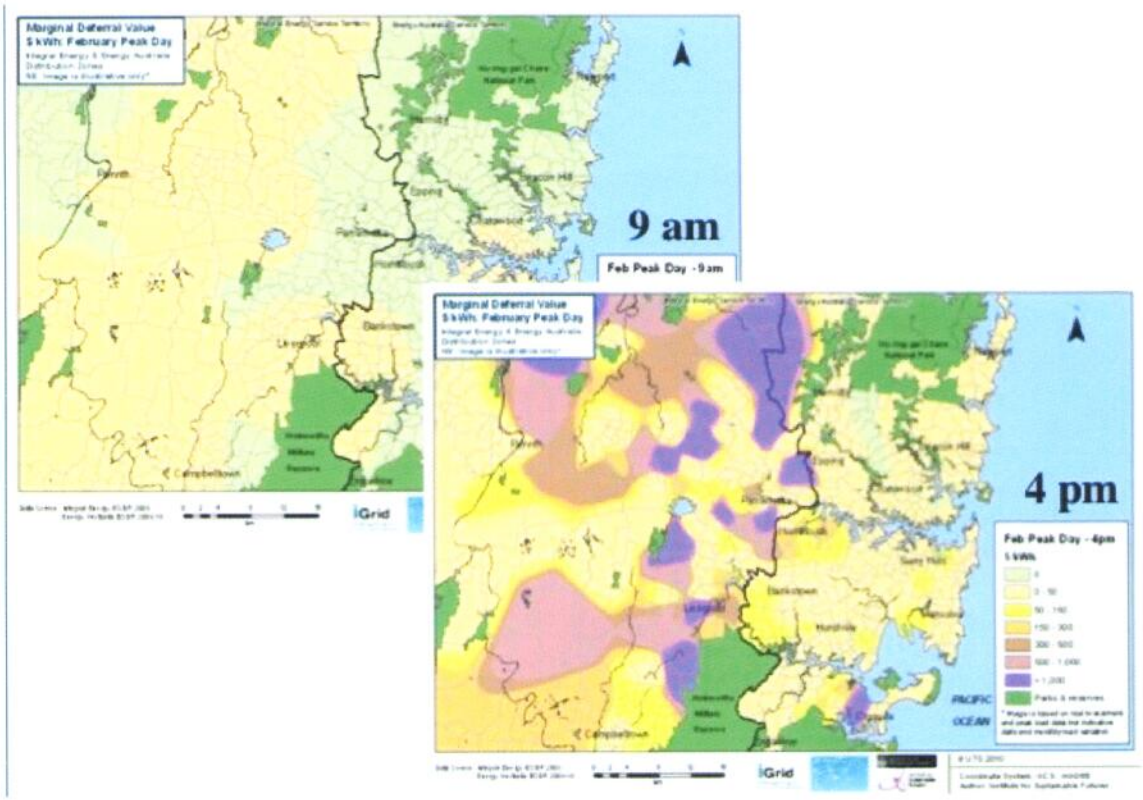
demonstration phase, DNSP investment in experiments like these is unlikely to occur.

Issue 4: Demand management incentive scheme

The proposed Demand Management Incentive Scheme should be put into practice. Similar approaches to benefits-sharing have proven successful at stimulating cost-effective investments in demand management resources in comparable US markets. Opower believes that the positive impact of such a policy will be amplified in the unbundled and competitive NEM, where the current incentives for distribution companies to deliver system-wide benefits are more fragmented than in more traditionally integrated utility markets.

The impact of DM investments by DNSPs can and will have material spillover benefits that will not be captured by DNSP in an unbundled market - yet they should be rewarded for helping to create them on behalf of consumers and the long-run cost of system maintenance and reliability. These benefits include upstream avoided peak capacity costs and downstream end-use energy savings and bill reductions.

The quantifying of benefits should account for the real savings of DM programmes, such as accounting for areas of constraint. Figure 25, taken from the Institute for Sustainable Futures decentralized energy roadmap, demonstrates that even in constrained zones with lower deferral value, we see figures of 300 per kWh: 1500 times the $0.20/kWh value that a typical residential customer on a flat tariff is actually paying for power at that time. This demonstrates the inability of even current time-of-use tariffs (at $0.40) to pass on an adequate pricing signal to consumers to steeply reduce demand. As it is not practically and politically viable to implement fully cost-reflective pricing at the values shown in Figure 25, it is important that if efficient DM options are to be realised, non-network solutions that reduce peak demand be recompensed up to the extent that tariffs are not cost-reflective.



In conclusion, the proposed rule changes show a path to correcting market failures due to split incentives from the unbundling of retail, generation and distribution. Incentivizing activities that have benefits outside of the network itself will bring greater system efficiency and end-customer benefits.

Sincerely,

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[i] DPU Order Approving 2013-2015 Three-Year Electric & Gas Energy Efficiency Plans, relating to dockets
[ii] "Decision Providing Guidance on 2013-2014 Energy Efficiency Portfolios and 2012 Marketing, Education, and Outreach," Public Utilities Commission of the State of California, Decision 12-05-015, May 10, 2012.