17 February 2017

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By email: dm@aer.gov.au.

Consultation regarding Demand Management Incentive Scheme and Innovation Allowance Mechanism - Submission from *The Customer Advocate*

Dear Warwick,

Thank you for the opportunity to provide a submission regarding the AER's consultation paper in the DMIS of January 201.

The central theme of this response is that the issues faced by network businesses nowadays are very different to those considered at the establishment of the Demand Management Incentive Scheme (DMIS). Whilst the application of non-network solutions as an alternative to new assets to meet network constraints cannot be disregarded even today, the wider issues of degrading load factor, connecting new customer technologies, falling asset utilisation and complex market arrangements must form part of a new DMIS scheme.

Many of the AER's's preliminary findings raised in the discussion paper are supported. The view that there is little effective use of demand management to date is agreed, especially as there is limited evidence of the application of research to date making its way to mainstream customer applications.

To respond to the consultation paper in any detail is complex, detailed and difficult to cover without significant time, resources and expertise. I trust that the attached response is useful in considering the broader issues and concepts for the DMIS>

Of course, I will be happy to meet with the AER to discuss this submission should it be desired.

Thank you once again for the opportunity to respond.

Kind Regards,

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Key Issues

1) It's time to restate the purpose of the DMIS and confirm its focus and objective.

   Demand growth, customer empowerment, technology and price awareness are very different to that when the DMIS scheme was first devised.

   Generally flat demand growth means that traditional Demand Management – that is, the prime objective of the reduction of peak demand and meeting capacity constraints through non-network solutions – is much less relevant that it has been. Customers will benefit where network businesses work to extract maximum utilisation from their assets. This will require a coordinated focus on pricing, technical capability, market integration, customer relationships and incentives to use the 'spare' capacity of distribution assets. This paradigm shift to a coordinated and multi-focused activity must be a priority in any incentive mechanism.

2) Incentives must focus on outcomes and realizing the delivery of benefits to customers, not the research itself.

   Many investments in R&D by network businesses have not led to clear and positive outcomes for energy customers, remaining as 'trials' with little evidence of coordinated integration into wider industry practice. The commercial imperatives for utilities to 'see it through' and transparently adopt the findings of the research need to be stronger.

3) Any scheme must include the requirement to collaborate and formally share results and work programmes across utilities and other research organisations for most efficient use of public funds.

   Many parts of the wider industry, including the CSIRO and universities, are currently undertaking investigations and trials into the commercial and technical impacts of emerging technology, in particular the integration of energy storage and embedded renewable generation. Many of the projects overlap with the requirements of distributors, and a level of oversight, coordination and formal information sharing will provide a more efficient and effective framework for the research.

4) The incentives must reflect a clear pathway to realistic, coordinated and deliverable customer benefits, including technical and commercial aspects that are aligned to actually deliver the improved outcome to consumers.

   Wider market arrangements often reduce the incentive or ability for distributors to take advantage of the research and pass benefits through to customers. DMIS activities will be far more effective if the necessary market conditions and pathway of benefit to the customer is considered and addressed as part of the research.

Almost every utility in Australia is undertaking studies into energy storage. These trials, in conjunction with academic research, need to be coordinated and findings shared through a formal mechanism to ensure an efficient return of the consumers' investment.

Discussion

It is acknowledged that the objective of the Demand Management Incentive Scheme (DMIS) is to provide an incentive for Distribution Network Service Providers (DNSPs) to undertake efficient expenditure on relevant non-network options relating to demand management.

The related Allowance Mechanism is to reward investment in unproven technologies and solutions by providing funding for research and development in demand management projects that have the potential to reduce long term network costs.

In this submission, it is noted that the discussion on the impact of peak demand and network impact is of a generalised nature. As customer energy use changes as a result of new technologies and price response, the diversity of network loading, demand growth and

1. It's Time to Restate the Objectives of DMIS

The DMIS had its genesis in times of high rates of growth of peak demand, with the corresponding rates of investment in network capacity. The high rates of adoption of air condition drove very peaky load factors, and concerns of network reliability and security. Projects were very focused on clipping the peak of the Load Duration Curve.

Three things have happened since then.

a) Investment in distribution network capacity exceeded $2B, leading to the 'gold plating accusations' and significant rises in distribution use of system costs. In recent significant 'heat wave' conditions, few utilities reported significant demand-related concerns, suggesting that the investment has kept pace with demand growth to date.

b) Revised peak demand load forecasts suggest a significant slowing of the rate of growth of peak demand because of air conditioning saturation, energy efficient appliances and a response to energy price elasticity.

c) Renewable energy generation has greatly modified the pattern of energy consumption. Price signals have in some places encouraged small increases in peak demand, but in general network utilisation, as measured by load factor, has fallen considerably ('the duck curve')

Whilst it is acknowledged that the scope of the DMIS considers actions such as load shaping, the core issue of encouraging non-network solutions as an alternative to the construction of new network assets to meet peak demand has been replaced by much wider considerations of poor network utilisation, customer defection, falling load factors and weak tariff signals.

It is valuable to restate the objectives of the DMIS to cover a wider set of objectives that will continue to support lower prices for customers through more efficient use of existing assets.

To date, non-network schemes such as contracted demand management through RIT-D arrangements are rare, with utilities highlighting the importance of the low-risk, high return access to network capacity offered by physical network assets over customer commercial contracts.

2. **Incentives must focus on outcomes and realizing the delivery of benefits to customers, not the research itself**.

Many utilities have undertaken many 'trials' over the past and current regulatory period, including the use of batteries for peak demand management, reward-based tariffs, technical integration of new customer technology and others.

Unfortunately, there is little evidence of many of these trials forming new and effective tariffs and pricing available to a wider customer base, or greater simplicity of connection processes for customers.

The customer benefits of non-network solutions are difficult to validate.

Under the DMIS, utilities should be required to demonstrate the application and integration of the trials into 'business as usual' operations and offerings, otherwise the funding should be returned.

3. **Include the requirement to collaborate and formally share results and work programmes for most efficient use of public funds.**

There are many utilities and research organisations working on similar themes and issues. For instance, there is anecdotal evidence that over thirty organisations are looking at the technical impacts of the integration of inverter-based energy systems to power networks.

Utilities should demonstrate that any requirement for DMIS funding is unique, particular to their customer base, and that similar research is not being undertaken elsewhere.

Findings should be published and made publicly available, within the constraints of privacy requirements.

4. **The incentives must reflect a clear pathway to realistic and deliverable customer benefits across a wide customer base.**

Wider market arrangements often reduce the incentive or ability for distributors to take advantage of the research and pass benefits through to customers. DMIS activities will be far more effective if the necessary market conditions and pathway of benefit to the customer is considered and addressed as part of the research.

For instance, the tension between the role of demand management in a retail hedging context and that for networks is significant. Similarly, technical or commercial arrangements such as payments to customers to join demand management schemes must be complemented by similarly attractive tariff schemes that are supported by retailers.

Response to Questions 1- 4

1. Interpretation and Implementation

The scope that the new rule focus on ‘non network options’ continues to reinforce the paradigm that the DMIS is focused on methods to address demand growth and consider issues that would normally involve new network assets.

The key is that peak demand as a driver of new network assets is now only a small component of the issues that are being faced by utilities. Matter such as grid defection, falling load factor, poor asset utilisation and others are important considerations that are not anchored against new network assets.

The changing demand management paradigm must be addressed.

The issue is wider than ring fencing can consider. Customers see the whole energy supply chain largely as one entity, and the segregation of retail, generation, transmission and distribution and aggregation are largely artificial. The DMIS must consider the fact that overlapping objectives across the market exist.

2. Incentives

The RIT-D threshold reflects thinking of large network constraints. The challenges faced by networks are now largely on widely-distributed low voltage networks, not on single, expensive asset projects that fit under the RIT-D guidelines. The requirement to explore non-network solutions must flow over to broad-based programmes such as voltage management for low voltage network, where individual projects are small, however the overall intent of a programme is significant.

3. Net market benefit sharing mechanism

No response

4. RIT-D

See response to Q2