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Energy Networks Australia
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By email: info@energynetworks.com.au

**Re: Response to the Consultation Paper – Open Energy Networks
Submission from *The Customer Advocate***

Thank you for the opportunity to provide a submission regarding the AEMO / AER consultation paper *Open Energy Networks* released in mid-2018, and the subsequent workshop in Sydney on 19th July.

The Customer Advocate is a small organisation focused on representing the needs of energy consumers. As such, the comments in this response focus largely on respecting the position of energy consumers who will be critical in the successful implementation of industry change, including the issues discussed in the *Open Energy Networks* paper.

Building on the work by the ENA UK, the ENA is to be congratulated for taking steps to help articulate the emerging concept of the Distribution System Operator (DSO) model for networks in Australia. The conversation will benefit from clarity in the need for such a model, the options being considered and of course the costs and benefits that may ensue.

Of some concern however, is that this recent discussion is tending to overlook many important initial stages of engagement and change, including the socialisation of the modelling and assumptions, validating customer needs, undertaking a genuine and wide-ranging options analysis and considering the costs and risks of the possible approaches. The current engagement appears to have focused largely on the form of the centralised control framework that may be needed, without providing reasonable justification to stakeholders that such a framework is required.

In our industry, the customer engagement and narrative are critical in achieving change.

Lessons learnt from the Victorian smart meter rollout are useful in highlighting the importance of taking powerful, transparent and genuine steps to 'bring stakeholders along' in understanding the problem, the risks, the range of choices and the most importantly the costs and opportunities - well before the form of a framework, particularly a centralised one, is placed on the table.

I trust this response is of assistance in the progression of this important conversation. Of course, I will be happy to meet with the ENA to discuss this submission should it be desired.

Thank you once again for the opportunity to respond.

Regards,

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Understanding the framework of DER Dispatch

The consultation paper notes that *the growth in Distributed Energy Resources (DER) provides opportunities to delay or eliminate the need for certain network investments, and to function as competition to traditional large-scale generation for both energy and support services.*¹

Such an outcome is attractive to customers through the assumption that it will deliver reductions in network charges and the price of wholesale energy. Whilst this general approach is acknowledged and supported, there is a very important discussion that must take place in the energy community to consider the reality, delivery mechanism, sharing and timing of these benefits to all energy customers. This consultation paper is largely silent on this important matter.

It is important to note that many energy customers will not or cannot invest in DER, and any proposed framework that requires funding to establish and operate the scheme that comes from all electricity bills must consider the benefits to all customers.

Paraphrasing the consultation paper, it appears that the discussion takes three fundamental positions:

1. That there is a rapidly emerging and pressing problem created by the forecast growth of embedded solar PV and Virtual Power Stations that requires action soon as *customers may suffer*². The two aspects of the problem are:
 - a. There is risk to system security at a transmission and market level as the amount of embedded generation will eventually exceed minimum customer demand, and network power flows and frequency control may no longer be adequately managed by existing market mechanisms; and
 - b. The existing approach to constraining the amount of lower-cost energy being fed into the network and market is limiting the opportunity for local energy trading and wider demand response, diminishing the potential economic returns to investors of DER and risking inefficient investment in network assets.
2. A largely centralised framework, with varying levels of support from distributors and aggregators, is required to support a broad spectrum of DER opportunities ranging from the trading of energy from embedded sources to the dispatch of demand and local generation; where this framework is best represented by an extension of the central dispatch and trading model currently provided by AEMO. As part of this framework, customers will be required to provide funding to develop facilities for the greater visibility of the operation of the extensive and varied low-voltage networks; and
3. That this framework will by definition deliver many benefits to stakeholders.

This response to the consultation paper does not suggest that the frameworks proposed do not represent one feasible outcome or that there not will be benefits for energy customers and other industry stakeholders. Many of the risks and opportunities as stated are acknowledged as being real.

What is of concern is that these three fundamental positions are largely unjustified as being the only solutions that are workable, efficient and supported by customers. Little or no information is presented

¹ Discussion paper, p3

² Discussion paper, p3

regarding the timing and extent of the risks, alternative mitigating factors that may be applied, and the timing and certainty of the benefits.

Above all, the framework consultation is very unclear the impact on energy costs to all customers, and whether the benefits to customers of such a framework will exceed the costs required to implement it.

These issues are discussed in more detail below.

As a consequence of these broader concerns regarding the lack of information available to assess the proposal in the context of risk, alternatives and benefits, this response does not address the specific questions asked in the consultation paper.

Key issues regarding the consultation paper

In responding to the consultation paper, four key points are highlighted that reflect the process being followed more than the actual questions posed in the paper. These four points of note are:

1. *Discussing centralised frameworks and choosing 'solutions' may be premature and could damage this important conversation.*

Customers' acceptance of the framework is critical, as it will be customers who will ultimately be asked to pay for and participate in any new framework. To gain such acceptance, customers must be 'brought along' in the discussion, not just provided with 'solutions'.

A clear lesson learnt from the implementation of the smart meter programme in Victoria is that customers will be very reluctant to accept and engage in industry initiatives without first being able to understand and accept the reasoning behind the risks and opportunities that are on offer.

Doing is important but being trusted is critical.

2. *The modelling must be released for consideration by stakeholders soon.*

There are many moving parts in the energy industry at the moment, and the modelling that underpins the proposals must be provided to the community and stakeholders for scrutiny and assessment not only of the findings, but also of the assumptions inherent in the models.

One reason for this public discussion is to gain acceptance and, in many ways, validate the future risks and opportunities; another is to inform the wider community for solutions and actions that may not already be considered.

3. *A decentralised network that more and more reflects varied customer needs deserves the consideration of a decentralised connection and trading model*

As the energy industry 'decentralises'- technically, commercially and socially – it is reasonable to assume that a viable future framework may be heavily decentralised with a wide range of local solutions and accountabilities. Any future framework must include a real consideration of a highly-decentralised model, with little more than a small number of rules or guides to manage the energy future in a light-handed way.

4. *A 'no regrets' approach must not be a substitute for robust and considered planning*

In an environment where customers are paying some of the highest retail electricity charges in the world, customers demand networks to respect every dollar that is spent on their behalf. A 'no regrets

approach' suggests a level of chance and uncertainty that many customers may not be prepared to pay for. The modeling and analysis must include options analysis, sensitivities to timing and scope, risk assessment and cost-benefit estimates; and be seen to have considered all possible avenues as best as possible before committing to expenditure.

5. *Understanding and committing to the benefits for customers is as important as discussing the framework design itself*

The paper is extensive in discussing the options for the framework, and references are made to the CSIRO modelling of 'the problem'. It is critical that the impact on the customer receive the same level of consideration. The paper suggests the benefits will largely stem from reduced investment in electricity networks and local energy sources competing with centralised 'grid power'. It is noted that one distributor has made use of a respected consultant's report on the customer value, however the conversation will benefit greatly from a wider and much more transparent articulation of the benefits of the framework to customers and the validation of the assumptions underpinning those benefits.

Discussion

The public discussion about the framework may also benefit from the following:

1. *Large renewable generators and policy makers must be seen to share the network stability risks.*

It is reasonable to assume that the concerns raised by AEMO regarding the risk to market stability and energy security have been brought to the attention of regulators, policy makers and governments. The industry and consumers must be able to clearly see that these risks are recognised by regulators and governments, and that the 'heavy lifting' in mitigating these risks is carried by utility scale energy resources before small customers, who are largely only responding to the commercial signals in their bills, are asked to pay for 'solutions'.

2. *The discussion will benefit from a clear problem (and opportunity) statement.*

DER already impacts many parts of the network in many ways, both positive and negative, across technical considerations and in the market. These many impacts, from local power quality to optimal integration with the energy market, each have a range of risks, breadth of impact and opportunities with individual cost and benefit considerations.

A 'razor sharp' understanding of the problems we are trying to fix, or the available opportunities that will benefit from being unlocked, will permit each opportunity to be validated and assessed for risk, likelihood, timing and cost impact.

3. *The wide range of possible responses – local and centralised – must be considered, including interim or scalable positions.*

An initial level of options analysis, each with an early assessment of costs, risks and sensitivities, should be undertaken. A wide range of potential technical, commercial, pricing, contractual and legislative solutions to the impacts of DER growth; including low-cost local approaches and a range of targeted solutions.

Some will not be as 'optimal' as others, however they may stack up strongly in terms of cost / benefit. For instance, wider use of inverter local control features, demand tariffs or well-considered individual VPP operational agreements may preclude the need for a centralised dispatch framework for many, many years.

4. *The distributed architecture of DER suggests a distributed response.*

It is interesting that the current proposed frameworks centre on a centralised dispatch model. The energy community, however, is showing a propensity for local energy solutions; such as microgrids, home energy automation, niche traders to and community energy models. 'Ownership' of operational control and performance, short and effective control loops, and targeted, scalable solutions are all opportunities presented by distributed technical and market architecture.

'Local solutions to local problems' should feature in the response.

5. *Any approach must be scalable and reflect 'causer -pays'.*

The cost to individual customers or their agents (such as aggregators) to participate in a DER dispatch framework must reflect the real cost of connecting and participating in the framework.

Should a VPP operator wish to provide high levels of energy feed-in at particular times that may result in localised high voltage or network stability risks, then that participant should be exposed to the cost to be able to carry out that action.

Similarly, many parts of the distribution network can accept more embedded generation without risk, and customers can opt to manage their energy export through simple ways that do not require centralised dispatch, such as utilising local voltage control. These unaffected customers should not be required to meet the cost of any centralised solution.