

27 July 2020

The Chief Executive
Australian Energy Market Commission
Level 15, 60 Castlereagh Street
Sydney NSW 2000



Submitted through the AEMC website

Dear Mr Barr,

**The Customer Advocate – Response to the AEMC Consultation Paper
“Distributed Energy Resources Integration – Updating Regulatory Arrangements”**

Thank you for the opportunity to respond to the above consultation paper.

The Customer Advocate is a small consultancy that promotes the interests of mainstream residential energy consumers in the changing energy environment, through a balanced technical and consumer viewpoint in work with governments, regulators and more recently the AER Consumer Challenge Panel.

An initial observation is that the development of this new energy environment, of which Distributed Energy Resources (DER) is a major component, is a very crowded space that is proving exceedingly difficult to navigate. Despite the work by the ESB and the DER Integration Workplan, the cacophony of varying state and federal government policies and public messaging, AEMO’s actions related to the looming risks of system security, increasing DNSP capital expenditure to address changing customer demands and ever-growing levels of DER uptake results in a very complex system where the impact and effectiveness of individual initiatives will be almost impossible to predict.

The same applies for these proposed rule changes. Whilst it is very clear that the status quo is unsustainable, as are normal forms of ‘market evolution’, the uncertainty that lies ahead in a post-pandemic world also places in to question many of the assumptions and expectations that underpin proposed changes.

Key to the effective development and application of the rule changes is ‘to put ourselves in the shoes of the customer.’ Whilst we are looking very closely at the tools and systems that consumers may use in the future, missing in the discussion is ‘*what do consumers in, say 10 years’ time look like, and are these tools that we are developing likely to be adopted and effective by some, most or all consumers?*’

Despite the difficulty to consider the future noted above, taking holistic view of future consumers (within confidence levels, of course) would allow the wide range of reforms and initiatives to be tested to consider effectiveness, likely adoption, priority and risks. It may be useful to revisit the ENA / CSIRO work of some years ago in establishing the *Network Futures Roadmap*, where cohorts of future consumers can be considered, and the proposed changes tested, against the holistic outcomes.

Another feature of recent DER conversation has been the fascination in energy export. Many of the opportunities that are noted in these proposals can result from effective integration between localised generation and side energy demand - often at the same premises. The rule changes must consider the role of demand response in their operation; given DR will almost always deliver the best economic return

to the consumer for their DER investment, as well as deliver many of the advantage in network development and utilisation.

Specifically, in this consultation, many of the issues raised across the three proposals are supported. These can be supported summarised in a few key points that should be considered in the rule change process.

1. Considering the rule change from the 'Mum and Dad' consumer perspective, the proposal is largely supported, recognising that change is necessary to preserve a level of equity in cost and access as the new energy environment continues to develop. Viewing energy export and DNSP-provided export services is inevitable.
2. The vast majority of consumers who have invested in DER, in particular rooftop PV, have done so with the primary intention of reducing the household energy bill. Any change that imposes new costs on consumers is not only likely to be viewed poorly, it could drive counter-intuitive behaviours.
3. As we learned from the practical experience of the uptake of time-varying tariffs through the smart meter rollout in Victoria, a good idea does not always translate to the adoption with open arms. There is a real risk that consumer pushback may trigger political influence on the adoption of the proposal (or otherwise).
4. The electricity distribution network is highly under-utilised. Any action, through new tariffs and charges, must support better use of the existing electricity system.
5. A fundamental advantage of embedded generation is that energy is most often produced at the site where it is consumed, and no distribution charges apply. Any rule change that facilitates or encourages energy transfer through the network, such as energy sharing or peer trading, must consider the application of more appropriate DUoS charging structures, such as 'per kilometer'.
6. Simplicity is critical. Consumers and networks are familiar with connection processes, simple energy tariffs and demand response concepts, including the widespread application of off-peak energy tariffs. Extrapolation of these simple concepts to the 'flip side' of energy feed-in in concept, application and economic return is essential for the proposal to be widely adopted. In this sense, many of the connection concepts proposed by SAPN in their proposal are endorsed.
7. Communication is key. With well over 2 million owners of rooftop PV, and many more with more passive demand response applications such as off-peak hot water, any change will need to be carefully communicated with crafted messages. To proceed through the normal AEMC rule change process in the 'back rooms of rule makers and stakeholders' will be insufficient when we are considering such a wide range of affected consumers who may or may not choose to be actively involved in the environment following the rule changes. The risk of misinformation, concern and ultimately failure to achieve the intended outcomes is high.

The question arises "*who will champion these changes, and progress them in the consumer's interests ?*"

Section 2 of this letter covers the response to the 8 questions raised in the consultation paper.

Thank you once again for the opportunity to respond to this important consultation.

(signed)

Mike Swanston

The Customer Advocate

Response to questions

1.1 Is the assessment framework appropriate ?

No. The framework fundamentally lacks consideration of the many 'moving parts' in the consumer environment generally and DER space in particular that will influence consumer behaviour and ultimately the effective application of the rules. There is a real risk that if we do not strive to understand how these rules 'fit' in the bigger consumer picture, they could very possibly result in a lot of work for little return or drive unintended consequences.

The goal of regulatory clarity and certainty will be almost impossible in this environment.

DER is fundamentally a consumer- driven phenomenon. Therefore, the framework must include clear consideration of how consumers are likely to react to the change, embrace the advantages and consider their own responses. It could be argued that this aspect is inherent in the fact that the rule change has consumer groups as proponents, however given the fact that Australians across so many demographics embrace DER, and that the DER industry is emerging as a major component of the energy landscape, a genuine, wide-ranging and balanced assessment of the way these rule changes will be perceived by millions of energy consumers must be part of the assessment framework.

1.2 Any other considerations ?

Some are highlighted in Q1 above.

In addition, under the banner of regulatory burden, the cost-benefit of these proposed changes to consumers through additional charges, new market entities, communication and infrastructure costs and cybersecurity must be considered in a transparent and effective way.

Risk assessment must include the immediate impacts of the pandemic as well, that could very well result in:

- An advantage in 'hastening slowly' for some (not all) aspects of the proposal as consumer environment attitudes and capability may change rapidly. For instance, working from home may change the level of self-consumption and therefore change consumer attitudes to energy export.
- Questioning the economic conditions that are needed to support effective change, such as falling wholesale energy prices reducing the advantage to invest in systems that export energy.
- Considering changes in consumer trust in the energy industry generally, and how that will impact adopting change
- Incorporating any unintended consequences of the many other initiatives, forces and policies currently being considered in the industry generally and DER in particular.

2. Should export services be recognised as part of network services ?

The way many consumers use energy is changing. The ability to export energy is becoming commonplace, so the extension of distribution services to include energy export is seen as inevitable and necessary. The key so to embrace export capability as a fundamental feature of a retail customer in the future.

There should be a reasonable parallel in the between the regulatory and technical (connection) treatment of a small customer who consumes energy as one that may export some energy consequential to the operation of DER at the premises.

So long as the distribution network 'operating envelope' design is not compromised, a retail customer should be able to be connected under an new version of the basic connection agreement, that allows for a

reasonable level of maximum demand and export using similar diversity considerations as currently apply in network design (such as 5kVA demand, say 3kVA export).

Similarly, demand response should also be offered and encouraged as part of the connection offer.

The amendment that prosumers are recognised as the export equivalent of retail customers through Ch 5A and CH 10 is supported.

In so doing, the rule change should consider:

- Simplicity and clarity for consumers in the connection process.
- Extension of the consumer protections and back-to-back obligations for networks, consumers and retailers to apply to prosumers.
- That a small nominal amount of export capability is considered permissible in a diversified, statistical operation of the network, just as consumer demand is locational, diversified and somewhat unspecified.

3. Classification of services

The SAPN approach to the classification of services is supported.

4. Obligations on DNSPs

The SAPN proposal represents a workable extension of existing arrangements to accommodate generation customers. However, the TEC document provides an insight into a more dynamic, customer focussed approach that had many upsides as well as introduce a number of risks and unknowns.

A fundamental flaw in the extension of current arrangements is the lack of a strong imperative and reward for DNSPs to be innovative, embrace DER and gain significant benefit in optimising the use of existing network assets.

At present, a DNSP's revenue is largely anchored on asset value, and has truly little relationship with the optimal utilisation of existing assets. This rule change presents the opportunity to extract significant benefit for consumers with minimal capital investment and traditional costs from DNSPs to consumers. The rules should provide strong incentives for DNSPs to see DER development – both generation and demand response – as worthwhile areas for innovation, service and developing solutions that are clearly in the consumers interests. The only way to do so that is to use the 'carrot' of revenue opportunities or incentives, rather than a heavier regulatory burden of rules and obligations.

Therefore, the TEC proposals that encourage optimising existing hosting capacity, allowing customers to 'purchase' extra access in a manner similar to purchasing above-standard demand capacity is supported.

4.1 DNSPs should be obliged to provide export services in just terms to the consumer, recognising that the concept of 'technical operating envelopes' must prevail, and operational constraints will exist. A parallel to the right to export similar to the right for nominal demand, as expressed in the basic connection agreements, may be a possible framework.

4.2 It is useful for DNSPs to consider DER integration in planning, as they do now. However, the rules should provide for benefits to both the network and the consumer to encourage positive outcomes for both. A net market benefit test may be useful, recognising the complexity that may exist in determining the parameters for such a test.

4.3 As ADMD (After Diversity Maximum Demand) is a core parameter for network planning, a parallel concept (After Diversity Maximum Generation ?) could form the principle for the allocation of export capacity. The ADMG can be location or customer-type specific.

5. Efficiency incentives

Should the definition of distribution services expand as proposed, it is logical that the customer service incentive schemes and value of reliability be reviewed as well.

No new scheme is needed.

Most generation connection agreements between consumers and the network operator preclude claims for costs of loss in income should local generation be unavailable. This should continue in the medium term at least until the role of non-commercial exports are better understood.

One opportunity may be to review the *Demand Management Incentive Scheme* and the Incentive allowance. As embedded degeneration and demand response become more common, consumers would be well-served if the focus of the DMIS shifted to explicitly encourage optimisation of network asset utilisation and innovative application of customer-side generation and demand response.

6. Pricing arrangements

The various proposals raise important issues. Key, though, is to consider why consumers adopt DER and expect to pay for it.

There is evidence in many studies (e.g. Monash) that customers adopt DER, whether it is demand response such as off-peak water heating or embedded generation because:

- a) They are realising cost savings by using less 'grid energy' especially at high cost times, and
- b) A perception that by being more 'grid independent', some pressure is being taken off the development of poles and wires.

Whilst we in the industry have a more privileged view of the issues that underpin the true cost of DER, these perceptions are extraordinarily strong in the community, and to shift them will require care and a strong communication strategy.

6.1 It is not unreasonable for DNSPs to charge for export services, provided it is time and demand-based to reflect the true impact on the network. Consumers with embedded generation should not be penalised for:

- a) The connection of embedded generation where most or all of the energy generated is self-consumed, or
- b) Energy is exported at a time or location where such export has little or no negative impact on the operation of the network (i.e. within the 'operating envelope')

Any pricing signals that encourage consumers to self-consume energy (which are already strong for most consumers with DER) are to be supported.

6.2 The concept of customers being able to negotiate deeper connection agreements is supported, in a manner that would operate in a similar fashion to negotiating increased demand capability.

6.3 An enhanced form of the *Basic Connection Agreement – MEG* or *Standard Connection Agreement* under Chapter 5A may be considered, as they are already used in the industry with a degree of familiarity.

6.4 Existing forms of tariffs should apply wherever possible. Where utilities are moving towards demand and time-based consumption tariffs, the reflection of these mechanisms should be considered for energy feed-in. On the issue of cost allocation, it is likely to be very difficult to identify the DNSP's costs for consumption services versus export services – at least in any transparent and consistent way. This raises concerns with the SAPN proposal. Perhaps consideration can be given to the costs to

maintain a 'standard operating envelope', much like the way network costs relate to the provision of supply within required quality standards.

6.5 It has been extremely hard to date to identify DER benefits to DNSPs in the form of clear capital investment deferral or operating cost reductions. Therefore, the ability to 'return' cost advantages to consumers who export in any explicit manner will be hard. In addition, the other market initiatives as part of the 2-sided market and AEMO generation response capability through market agents (in SA) will further cloud any way a consumer can identify with benefit delivery.

Existing tariff incentives and benefits - demand response, peak deferral, solar sponge – should be sufficient, identifiable to consumers and more practical and cost-effective to implement.

About *The Customer Advocate*:

Mike Swanston, a professional engineer with over thirty years of experience in the Australian electricity distribution industry, is principal consultant of his business *The Customer Advocate*

With a passion for energy sustainability and a fair deal for energy customers, Mike's mission is to further the empowerment of residential and small business energy customers in today's changing energy markets.

The consultancy has been appointed by governments and regulators in Australia and overseas to advise on the application of innovative technologies and incentives through effective and honest consumer engagement and communication, with a focus on sensible, simple and efficient service to the energy customer.

Mike is a Registered Professional Engineer, a Fellow of the Institution of Engineers Australia and a member of the Australian Energy Regulator Consumer Challenge Panel.