16 November 2018

Mr Mark Feather
General Manager
Policy and Performance
Australian Energy Regulator (AER)
GPO Box 520
Melbourne Vic 3001

Dear Mr Feather,

RE: AER Consultation Paper – Values of Customer Reliability

Endeavour Energy welcomes the opportunity to provide feedback to the AER's consultation paper on Values of Customer Reliability (VCR). The consultation paper focusses on developing a suitable methodology for determining VCR values following a rule change that formally assigned responsibility for calculating VCRs to the AER.

VCRs are most commonly used by networks as an input into the investment decision making process. As a proxy for the value customers place on a reliable electricity supply, VCRs are a particularly important in determining appropriate investments to deliver valued service outcomes. From a consumer perspective, accurate VCR estimates are critical to reduce the risk of excessive or insufficient investment in network infrastructure.

Network investment is typically driven by localised demand constraints resulting from load growth or asset retirements and as such technical assessment of investment options are made with reference to units of demand (MW, kVA etc.). However, VCRs are expressed in dollars per kilowatt hour. We believe the use of an energy-based measure to derive a 'cost of outage' is somewhat incongruous to the demand based constraints which drive network investment. Therefore, we consider VCR values based on energy throughput on their own do not adequately recognise that networks are required to deliver 'point in time' capacity. Moreover, as discussed later, kWh is a measurement of energy delivered to the connected customer, and thus does not recognise the benefit of any reverse direction energy flows.

However, we recognise that VCR values have multiple uses and will play an increasingly important role not only within the context of network investment, but also the broader regulatory framework. Our views on some of the issues raised in the consultation paper are detailed below.

Model based approaches to complement survey methods

As the VCR is not a parameter that can be easily observed, it must be ascertained through careful and considered analysis. We appreciate this is a complex task that will likely require the AER to employ a range of survey methods and modelling techniques to convert qualitative responses into hypothetical scenarios and dependable and robust VCR values.

Of the surveying approaches discussed in the consultation paper, Contingent Valuation Surveys and Choice Modelling appear best able to capture intangible costs. For VCRs to be fit-for-purpose, it is important that the values customers' place on a reliable supply not be limited to direct financial losses but also include non-financial impacts such as loss of comfort or convenience.

We support the AER's proposed approach to build upon AEMO's methodology and note these two surveying approaches were utilised in their 2014 VCR review. AEMO's review involved an extensive examination of VCR estimation methodology and has produced values that have been generally adopted by networks. Close regard to AEMO's previous work would allow the AER to focus efforts on refinements that enhance the applicability of the VCR. This may include the use of model based approaches to provide a valuable cross check of VCR values derived from surveys.

Representation of consumers of future energy services

The energy landscape has changed markedly since AEMO's VCR review. Advances in technology coupled with cost changes have empowered customers to take greater control of their energy use. With the take up of distributed energy resources (DER) expected to accelerate in the near future, the AER's VCR methodology will need to reflect the transition towards two-way energy flows.

A consequence of this transformation is that network assets will be increasingly relied upon to facilitate emerging energy services. As markets for energy trading and network support services become more developed, customers will have greater access to a variety of potential revenue and value streams. We expect DER customers will increasingly value the distribution network for its role as an enabling platform for many of these emerging services rather than its traditional function of delivering energy from a centralised source.

We believe the current approach of linking VCR estimates to unserved energy may not adequately capture the value of network availability to DER customers. For instance, a supply interruption would in many cases deny DER customers the opportunity to transact in the NEM and optimise their DER investment to reduce energy costs. Therefore, the value for DER customers will be increasingly aligned to the ability of the distribution system to facilitate these services rather than the energy it provides.

To better capture the value of avoiding disruptive impacts associated with outage events, we consider there is merit in aligning the VCR methodology toward capturing the value customers place on their connection to the grid instead of simply the energy delivered from it.

Determining VCRs for new connecting customers

The value that connected customers place on continuity of supply is likely to be different to the value customers waiting to connect will place on having access to supply. In the absence of a clear methodology to account for these differences, we have adopted AEMO's VCR estimates for greenfield development planning. However, these values do not reflect the priorities, considerations and impact of supply unavailability for yet-to-be connected customers and consequently may not be fit-for-purpose.

We believe the AER's methodology should make a distinction between customers who receive supply through an existing connection (and will experience a damage function in the event of an outage) and a customer wanting to receive supply but is unable to do so due to there being no network to make a connection to. Although the intending customer will not experience a damage function from a supply loss, they will invariably experience an opportunity cost from not receiving supply that should be captured in VCR estimates.

Incorporating the broader impacts of system outages

From a planning perspective, rare events which have a particularly high consequence for a large number of customers should be treated differently to more frequent events which have a comparatively smaller customer impact. For this reason, we support the AER adapting the VCR methodology to consider the costs related to high impact, low probability (HILP) events. However, we believe the applicability of VCR could be enhanced by further broadening the outage characteristics considered by surveyed customers.

Through their responses, customers will tend to reveal the value they place on a reliable supply with regard to the way they use the electricity they are responsible for. For instance, a residential customer is likely to consider the impact of a supply loss only within the context of their residence. Given that customers do not spend all their time within their categorised VCR cohort, the true value placed on a reliable electricity supply may currently be understated.

In reality, continuity of supply is relied upon by customers across a variety of routine situations. This reliance may be shared simultaneously with other customers (e.g. traffic lights to facilitate road movements; light and sound at major event arenas; communication services) or solely for the benefit of a single customer (e.g. medical devices in hospitals; elevator/lifts). Prolonged and widespread outages in these situations have shown to create significant disruption and inconvenience to customers. The value customers place on maintaining continuity of supply to avoid these adverse impacts is likely to be material and worthy of further consideration.

Developing a methodology which captures the social impacts of supply interruptions will lead to more fit-for-purpose and effective VCRs that allows for more informative investment planning and operational decisions. We suggest deriving VCR estimates for hospitals, water pumping stations and other critical loads would assist in this regard.

If you have any queries or wish to discuss this matter further please contact Joe Romiti, Regulatory Analyst at Endeavour Energy on (02) 9853 6232 or via email at joseph.romiti@endeavourenergy.com.au.

Yours sincerely,

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