21 December 2018

Mr Mark Feather
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Dear Mark

RE: Value Customer Reliability (VCR) – High Impact Low Probability (HILP) events

At the recent Australian Energy Regulator (AER) public VCR forums there was some discussion about what HILP events were and how customers may be impacted. Energy Networks Australia welcomes the opportunity to provide some further comments on these issues.

Energy Networks Australia is the national industry body representing businesses operating Australia's electricity transmission and distribution and gas distribution networks. Member businesses provide energy to virtually every household and business in Australia.

The Table below describes levels of reliability impacts and the VCR analysis considerations.

Scenario	Considerations	Amenability to VCR Analysis
1 - Non HILP Distribution Reliability	• Impact is primarily on electricity customers directly affected by outage event • Loss of economic value to customers/households purchasing electricity	• Amenable through methods being discussed via AER VCR Consultative Committee
2 - Localised HILP Large scale Distribution and/or local Transmission reliability	• Large scale impact, e.g. loss of supply to the whole Sydney CBD, but which does not threaten overall operation of the interconnected grid and NEM • Community impacts and costs beyond direct economic loss to electricity customers in terms of emergency management, alternative transport, security etc.	• Amenable to expanded VCR analysis. • Direct economic loss amenable through methods being discussed via AER VCR Consultative Committee, • Consideration of wider community impacts necessary in terms of consequential costs such as emergency management, alternative transport and economic losses beyond

		the customer(s) paying for the energy. • Extended duration outages not only result in loss train, tram and traffic lights, freeway tunnel closures etc. but also loss of the ability to pump water to the community and loss of sewerage pumping capability, loss of NBN and mobile networks which may impact the community but could also impact new DR/DER arrangements/access to non-network solutions • Difficult but potential sources of data include transport and other Regional economic studies
3 – Interconnected Transmission HILP Reliability and Security impacts such as loss of interconnected grid in one or more NEM Regions	• Events which cause or threaten disruption to customers across a wide geographic area, whole NEM region or regions **AND/OR** • Which have the potential to disrupt the market and generation dispatch. • Includes elements in common with non HILP events at larger scale/higher value plus • Market interactions and resulting risk prevention or mitigation options are significantly more diverse.	• Has same complexities as localised HILP in terms of assessing impacts beyond those directly experienced by affected customers • Further complexity in terms of separating reliability vs security aspects of event

The AER released the Final decision on the Regulatory Investment Test (RIT) Application Guideline on 14 Dec 2018. The decision notes that RIT proponents should use the AEMO VCRs or the new AER VCR's once available. The AER notes that allowing VCRs to reflect community expectations around reliability preferences to avoid HILP events is consistent with the Council of Australian Governments Energy Council recommendation to explore better weighting of HILP events.

In the RIT-T (Transmission) Application Guideline, the AER state that the RIT proponent should use a VCR that is appropriate to the range and duration of customers that a HILP event would affect. If the AER does not seek to address customer value of long duration outages in the VCR's produced by the end of 2019, this would need to be dealt with by the RIT proponent in further VCR consultation to

provide supporting evidence to justify the departure or adjustment. This leads to the development of long duration VCRs on a case by case basis and may lead to VCRs in RIT processes being different to those in ISP modelling which may not be ideal.

Any transmission network service provider adjustment to reflect high impact events VCRs needs to be consulted directly with the AER and impacted customers. Where there is a significant event and customers are off supply for 2-3 days, in the first instance where the AER does not develop HILP VCRs, the AER is proposing there is no difference in VCR to short outages or rolling load shedding.

The AER suggested that risks may be mitigated by exploring the viability and effectiveness of non-network options to manage or respond to the effects of the HILP or to have regard to AEMO's role in determining new protected events which may be taken into consideration for planning as a credible contingency event.

Energy Networks Australia urges the AER to ensure the VCR approach also addresses high impact events and prolonged outages in the nationally consistent development of VCRs for HILP events. As alternatives to customer surveys the AER could consider one or more of the following:

- Direct cost approach
- Scenario analysis and risk thresholds
- Ex-post case study assessment (i.e. costs of past events)
- Insurance value assessment.

Should you have any additional queries, please feel free to contact Verity Watson – Head of Transmission on 03 9103 0407 or vwatson@energynetworks.com.au.

Yours sincerely,

Dr Stuart Johnston
General Manager, Network Transformation