

25 January 2021

Mr Brett Everett  
Independent Pricing and Regulatory Tribunal (IPART)  
PO Box K35  
Haymarket Post Shop, Sydney NSW 1240

Lodged: *via online portal*

Dear Mr Everett,

## **DRAFT REPORT: REVIEW OF DISTRIBUTION RELIABILITY STANDARDS**

Endeavour Energy appreciates the opportunity to provide this response to IPART's draft report on the NSW distribution reliability standards. The objective of the review, as set by the NSW Premier, is several-fold but primarily focused on making changes to the NSW reliability framework that could deliver bill savings for customers, maintain service quality and provide a stable regulatory environment to encourage networks to utilise new technologies.

As per this scope, the draft report proposes several amendments to the existing framework. In particular, IPART propose to:

1. Remove overall reliability standards which duplicate the incentives under the Australian Energy Regulator's (AER) Service Target Performance Incentive Scheme (STPIS).
2. Update individual feeder standards by applying a model-based formulaic approach.
3. Set a minimum level of reliability for direct connection customers.
4. Replace the existing Guaranteed Service Levels (GSLs) and payment amounts.
5. Introduce new Distributed Energy Resources (DER) reporting requirements.
6. Introduce Standalone Power Systems (SAPS) standards which extend protections to SAPS customers as traditionally grid connected customers.

These amendments represent a significant change to the way reliability standards in NSW will be set in the 2024-29 regulatory period. In developing these changes IPART has engaged extensively with the NSW networks on technical and regulatory issues. We welcome IPART continuing to liaise closely with the NSW distributors on issues discussed in this paper prior to finalising the standards.

Overall, whilst each of the recommended changes may not individually promote bill savings for NSW customers we consider collectively they are reasonable and represent an improvement on the existing standards for Endeavour Energy. Our more detailed comments are as follows.

### **Reliability standards**

#### Network overall standards

We are supportive of removing overall network standards as the STPIS provides NSW networks with a stronger and more effective incentive for managing service quality whilst delivering cost efficiencies. This is evidenced by the general reduction in costs for the NSW networks since the introduction of the STPIS which has been achieved whilst reliability outcomes have been maintained or slightly improved.

The updated NSW standards will therefore be more appropriately focussed on providing customers a safety net or minimum acceptable level of reliability performance. In addition to the removal of the overall standards, the move to annual reporting should also reduce network administrative costs without adversely impacting performance compliance monitoring.

### *Major Event Days (MEDs)*

We support aligning excluded events with those in the STPIS as this will reduce the reporting burden. However, we note there will not be consistency if a box-cox transformation method is not used to identify MEDs where this is used in applying the STPIS. The STPIS allows for alternate data transformation methodologies where they demonstrably result in a more normally distributed data set. The AER has accepted Endeavour Energy's use of the box-cox transformation method in the last two regulatory determinations.

We suggest IPART also allow for alternatives to the 2.5 beta method. This would better promote consistency with the STPIS, allow for the potential to set a more reasonable MED boundary and ensure that reporting requirements and published performance data are consistent.

### *Planned outages*

We also note the new reporting requirements for planned outages and MEDs aims to provide stakeholders with greater information regarding outages. As standard industry practice, we already endeavour to provide customers with timely and relevant updates during unplanned interruptions and MEDs via our website, outage apps and social media channels. However, the proposed annual reporting on the duration of planned outages for each postcode will be a new requirement for which the benefit to customers is not clear.

We understand the importance of limiting planned outage times to the lowest efficient and practicable level with specific notification requirements in place meaning customers are well prepared and less inconvenienced relative to unplanned interruptions. However the discretion networks have to reduce the frequency and duration of planned outages is limited as network maintenance is largely driven by network age and asset condition and is more frequent on the overhead network. Additional scrutiny on planned interruption performance may adversely incentive networks to perform more field activities "live" or increase the incidence of unplanned interruptions as a result of asset failure.

Setting obligations to report on outages exceeding estimation time may also adversely incentivise networks to lengthen outage estimation windows and inadvertently impair the transparency of restoration performance.

It should also be noted that network planned interruptions are also driven by the need for retailers to perform metering work where supply to multiple premises is affected. This further limits the control networks have in performing planned interruptions and the inferences that can be made about network operational efficiency from planned outage data.

### Individual feeder standards

IPART considers the STPIS does not incentivise the reliability performance of individual feeders and therefore propose to retain individual feeder standards. However, IPART propose to replace the existing standards which are set by urban, short rural, long rural and CBD categories with a formulaic approach that is primarily feeder length based.

As required by the scope of the review, IPART have developed a cost-to-serve model to estimate an efficient level of reliability for feeders. This estimation is based on the assumed level of network costs associated with a given level of reliability and associated value of expected unserved energy at that level of reliability. The network model is a simplified one based on a set of assumed feeder characteristics and costs. For Endeavour Energy, the model produces (after incorporating a margin to account for expected year on year variations and other unmodeled factors) a standard that would deliver a slight reduction in the number of non-compliant feeders from current levels. However, the composition of non-compliant feeders would change with more short rural feeders and less urban feeders not complying to the new standard.

In our view, maintaining individual feeder standards should provide assurance that worst served customers are being monitored and their service outcomes improved where it is efficient to do so. However adopting a new methodology that differs markedly from those currently in effect NSW and in other NEM jurisdictions requires close examination and evidence to suggest the proposed change will

deliver superior reliability and cost outcomes in accordance to the terms of reference relative to the existing standards. Our key considerations in assessing whether the recommended standards will deliver better outcomes for customers are set out below.

*Are the new standards consistent with the national framework?*

As aforementioned, IPART propose to remove the existing duplication with the STPIS which should reduce our costs (at least administrative costs). Although it is worth noting that the STPIS still provides effective incentives to improve performance outcomes for both the average and worst performing customer.

In which case we consider the role of the jurisdictional regulator is to provide an additional layer of protection to ensure there is transparency around the investigation and rectification of poor performing feeders. Provided the standards do not distort the STPIS incentives and mandate additional expenditure, which they do not appear to for Endeavour Energy, they will complement the national framework.

*Is the model effective?*

The purpose of the model is to establish a formulaic basis by which poor performing feeders can be identified. In our view, the reliance that can be placed upon the model and how it can be used is dependent on how the model performs against a number of criteria:

- **Validity:** a valid model should relate to operating the network for reliability purposes in one or more meaningful dimensions. Whilst the reliance on feeder length is valid, in reality the reliability of a feeder is a complex, multi-faceted issue. The NSW networks have been constructed and amalgamated over several decades under numerous standards and regulations and operated under a wide variety of conditions and expectations.

These conditions and expectations will continue to become more complex in the future with the increase in two-way energy flows and will require the effective operation of the distribution network to evolve. Whilst it would not be possible to capture such a dynamic and complex environment in a model this does limit the purposes for which a simplified model can be used.

- **Accuracy and reliability:** the model should provide an unbiased estimate of efficient feeder performance without a high degree of variance (i.e. reproducibility). There will most certainly be instances where, for individual feeders, the model produces unusual outcomes or where change in the input assumptions can produce materially different outcomes.

This would be problematic where the model is applied deterministically with an expectation that individual feeder performance converges with the modelled level over time (which would be impractical). Instead, the model is being used to direct investigation which should allow for networks to justify non-investment in instances where the model is demonstrably inaccurate.

- **Manipulation:** a good model should not result in unforeseen behaviours or distorted incentives. The model is being used to derive a formula, meaning it is not “live” in a manner that would allow for continual debate or attempts to change input assumptions to produce a different outcome. Provided the initial approach is reasonable and the approach is reviewed periodically for legitimate changes it should not be open to manipulation.
- **Parsimony:** the model should be no more complex than required. This is important in assisting interpretability, avoiding data mining, reducing data collection costs and allowing greater comparability across networks. The model performs well in this regard, most likely at the expense of ‘validity’ and ‘accuracy and reliability’. It would be impractical and costly to develop a model for dozens of construct feeders or for every actual feeder configuration and environment across all networks.
- **Fit-for-purpose:** a model can have many purposes, some of which will require greater accuracy, reliability and robustness. For instance, where a model is being used to determine a revenue allowance or level of investment. Where a model is being used to identify areas for investigation

then a lower degree of accuracy, reliability and robustness is required. It is important that the model is not used for alternate purposes for which it is not suitable for.

In our view the model directs investigation and not investment which is reasonable given its limitations. Whilst this is the case for Endeavour Energy we would note this criteria would infer a higher degree of scrutiny is required where the model is producing a materially higher level of non-compliant feeders. In this case investigations would become resource intensive and it would increase the prospect that a material amount of investment is required.

To avoid this, it is important that the interpretation of an appropriate margin to account for the factors outside of the model remain constant in any future update or iteration of the standards. Where a network has delivered reliability improvements, it should therefore follow that standards would be set based on a reduction in probability of non-compliance.

#### *Are the new standards promoting efficient outcomes?*

Under the current standards Endeavour Energy spends approximately \$3M-\$4M p.a. on reliability compliance capex. The risk is that the new standards result in a higher level of investment which may improve service quality but increase costs. Given the new standards are likely to result in a similar or reduced number of non-compliant feeders for Endeavour Energy we do not expect there to be a material change in investment, although the shift in non-compliance from urban to short rural feeders may affect the economic case for investment in previously compliant feeders.

It will be important that networks and IPART work collaboratively in administering the standards to ensure that the threshold for investment remains at or above the current level so that increases in costs and network charges are avoided. Conversely, where current feeder performance exceeds the standards, opportunities to reduce costs would likely be limited in the short-to-medium term as the transition to efficient levels will largely depend on the asset replacement cycle and the decisions made when long-lived network assets reach end-of-life.

#### **Customer GSL**

We consider adequate incentives exist between the national and jurisdictional frameworks to ensure that customers receive an appropriate level of service quality. However, we accept that a GSL scheme provides an additional layer of protection and critically, a more direct acknowledgement of the inconvenience experienced by customers by poor service quality for an essential service.

It is important that GSLs and payments are balanced with the overall objective of the review of improving energy affordability for all NSW customers. Whilst GSL eligible customers will receive a “refund”, this payment will be funded by the remaining customer base. A material increase in the number of eligible customers and/or payment amounts could result in an increase in overall network costs. This would also exacerbate existing cross subsidies between low-cost-to-serve customers (who typically receive good reliability) and high-cost-to-serve customers (prone to poorer reliability) who often pay less than what it costs to maintain supply to their connection.

The proposed GSL payments are set in a more complex manner which may not be well understood by customers. However, the “refund” principle is likely to resonate well with customers receiving relatively poor reliability. In our view, refunding the annual service and usage charges overstates the impact of the interrupted service in some circumstances and ignores the quality electricity supply service which is provided over the remainder of the year.

Furthermore, the National Energy Customer Framework (NECF) provides electricity customers with increased protections and avenues of recourse than for non-essential goods and services where Australian Consumer Law (ACL) applies. Although we note that whilst refunds are one remedy under the ACL, refunds are not a feature of the electricity service frameworks in the NEM and may not be appropriate in the context of unplanned interruptions where the underlying cause of poor service, unlike normal goods and services, is often out of the control of network service providers.

Linking GSL payments to network costs is a relatively new concept with equivalent schemes in other states and the STPIS adopting a fixed payment approach independent from network charges. Although

they have been considered, a GSL scheme based on network charges has to date not been adopted broadly due to the lack of a relationship between how network expenditure is determined, approved and recovered, and what GSLs are intended to address.

For instance, the Queensland Competition Authority stated that GSL payments are intended to provide recognition of poor reliability or service which is a separate concept to the network charges in electricity prices<sup>1</sup>. They also recognised that network costs can be volatile, as they are influenced by a vast number of inputs (not necessarily related to service reliability) and determined by the AER using principles of regulatory economics.

One example where refunds are offered for essential services is by Sydney Water and NSW Water (which are also regulated by IPART) who provides rebates equivalent to the annual water service charge for an unsatisfactory level of unplanned interruptions. Whilst it is reasonable to expect that this opportunity for recourse could be expanded to other essential services, it should be noted that not all of the NSW water utilities offer service charge-based rebates for exceeding unplanned interruption thresholds and the water industry as a whole lacks the customer protections applicable to the electricity consumers via a NECF-equivalent framework.

Furthermore, electricity networks are inherently more susceptible to interruptions from a range of uncontrollable external factors impacting supply (e.g. storms, fire, winds, weather-based asset deterioration, third-party interference and damage, fauna). This is particularly the case for customers connected to the overhead network and applying a refund-based compensation scheme could be a disproportionate response relative to the more resilient water network.

In determining whether GSL payments should be linked to electricity network charges, it may be useful to consider and clearly establish the purpose of these payments, or more specifically, whether providing an incentive for networks to improve the reliability for eligible customers forms part of the purpose. It is widely agreed that GSL payments should represent an acknowledgment of the inconvenience of receiving poor service below the reliability standard but is not designed to compensate customers for losses stemming from the interruption. There is less consensus on whether they should incentivise reliability improvements.

In our view, the GSL scheme would deliver the most balanced cost-reliability outcomes for all customers if payments were not set to provide a strong incentive to improve reliability but be more modestly set as acknowledgement of inconvenience. Efficient reliability improvements are already incentivised through the STPIS and the individual feeder standards and if GSLs further added to these incentives, increased network investment and prices would invariably follow. Furthermore, if the GSL scheme is concerned with the worst-served customers in areas where it is not economical to improve reliability, it therefore logically follows that GSLs would have no role to play in improving reliability performance.

It should be accepted that the worst served customers are unlikely to receive service improvements due to the high cost of improving the quality of supply. Maintaining GSLs at more modest levels to reflect acknowledgment of inconvenience will ensure networks accept some level of GSL liability rather than try to avoid instances of poor reliability as doing so could be inefficient and expensive.

Given the proposed changes are likely to increase the payments made by networks and therefore increase overall costs which is at odds with the objective of the review, we suggest actual payments are monitored (as per the reporting requirements) and IPART allow for the review and/or revision of the standards should a material and unintended increase in payments occur. The increased reporting and communication requirements should ensure customers better understand their entitlements. It is also appropriate that the scheme remain application based rather than automatic so that it only reflects inconvenience realised.

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<sup>1</sup> QCA, Final Decision, Review of Guaranteed Service Levels to apply to Energex and Ergon Energy from July 2020, March 2019, p36

## **Emergent technologies**

### DER

We support IPART's draft decision not to implement a DER incentive scheme or DER standards at this stage. There are several national market reviews and rule changes currently considering DER integration and regulation. It would be premature and potentially distortionary or duplicative for NSW to pre-empt the outcomes of these reviews. Instead, a reporting framework is appropriate at this stage to gather further information on DER and potential issues which may need to be addressed in the future.

We are supportive of a 'best endeavours' approach until 2024 although we consider some of the requirements will be challenging from a cost or practical perspective to report on. The ability of networks to monitor and report on DER is restricted given customer owned DER is on the customer side of the metering installation and metering is provided on a contestable basis.

For DER curtailment this would need to be done on a high-level modelled basis (which we presume is acceptable) given the difficulties associated with modelling curtailment at an installation level. The latter would require a significant amount of data, including (but not limited to) time series (most likely 5 minute interval) individual premise specific solar irradiance measurement, details of PV panel type and 3-D orientation and condition (to ascertain impact of dust, shadow, etc.), inverter type, condition and settings and time series household load and voltage data.

We note the AEMC are currently reviewing the national competitive metering framework and we consider data access to be an important issue that requires reform. Metering data will also be essential if the STPIS is expanded to include a DER related quality of supply component as is being considered by the AEMC as part of the DER integration rule change. However, even if networks gain improved access to data we consider some curtailment reporting requirements to be of questionable value. For instance, estimating the volume of electricity that could not be produced due to insufficient hosting capacity is impacted by a number of factors outside of a networks control such as the weather, upstream limitations or customer load control agreements with third parties.

We also seek clarification on whether DER reporting will include electric vehicles (EVs). The draft report suggests these would be included as 'DER devices'. For reporting purposes we suggest EVs be excluded as networks could not practically report on EV use within our franchise area. EVs could be used (and charged) across network boundaries and without a networks knowledge. For instance an EV may not require a modification to a customer's connection and if it did we may not be informed of the appliance triggering the change.

### SAPS

We support the principle of extending customer protections to SAPS connected customers as if they are traditionally grid connected customers. However, as with direct connection customers, any standards should accommodate circumstances where bespoke reliability standards have been agreed to and/or acknowledge the role the customer themselves are likely to play in ensuring the reliability of SAPS units when considering corrective actions.

We would welcome the opportunity to discuss our submission further. If there are any specific questions on this response, please contact Patrick Duffy, Regulatory Strategy Manager at Endeavour Energy on



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