10 November 2020

Ms Claire Preston
Director, Network Expenditure
Australian Energy Regulator
Level 17
2 Lonsdale Street
Melbourne VIC 3000

Dear Claire

AER's draft 2020 Annual Benchmarking Report

Energy Queensland Limited (Energy Queensland) appreciates the opportunity to continue to work collaboratively with the Australian Energy Regulator (AER) in relation to its benchmarking of distribution network service providers (DNSPs), including the opportunity to provide feedback to the AER in relation to its draft 2020 Annual Benchmarking Report (the draft Report).

Energy Queensland's submission on the draft Report, which is available for publication, is provided on behalf of its DNSPs, Ergon Energy Corporation Limited (Ergon Energy) and Energex Limited (Energex).

Energy Queensland is largely comfortable with the draft Report, particularly in light of the refinements made by the AER to its benchmarking methodology (i.e. updating the non-reliability outputs in the productivity equation and adopting the most up-to-date customer reliability (VCR) estimates). We agree with the AER and their consultant, Economic Insights, that less weight should be placed on the customer numbers and energy throughput outputs and more weight on circuit length and ratcheted maximum demand. As stated on page 4 of the draft Report, this *"better reflects the main function of the distribution network, which is to transport electricity from bulk supply points to end users…… This is because total costs are significantly influenced by the fixed costs of holding long-lived assets in this industry."*

We wholeheartedly agree with this statement, though notwithstanding, we consider further work is required in this regard, including:

- the development of a new output variable to account for differences in single-wire earth return (SWER) networks between DNSPs. In general, SWER is an aging network type, mainly built in the 1970s and 1980s as a cheap but effective method to supply electricity to rural areas. These networks are being challenged by several issues, including their limited capacity which inhibits DNSPs' responses to peaks in demand or outages. As there are significant differences in both the length and percentage of each DNSPs' network

comprising SWER lines, the AER's current benchmarking techniques are not correctly assessing the relative efficiency of each DNSP, in not taking these often significant differences into account. Given this, Energy Queensland looks forward to working with the AER in 2021 to develop a SWER variable as a next step in the evolution of its benchmarking techniques.

General comments

Energy Queensland is generally supportive of the use of economic benchmarking as a technique to compare the relative efficiency of Ergon Energy and Energex with their peers to inform assessments of our proposed expenditure requirements and assist in the revenue determination process.

Energy Queensland was pleased to note from the draft Report that in 2019 Queensland was the second most productive state in the NEM. We also note that Queensland was the only state that had a slightly higher productivity level in 2019 than in 2006.

Improvements in Energex's relative productive efficiency in 2019 were achieved through its lower operating expenditure.

While reliability was noted by the AER as the key driver for Ergon Energy's decrease in productivity, it should be noted that Ergon Energy's reliability performance for 2018-19 was favourable for all six STPIS performance measures. In fact, Short Rural (SR) and Long Rural (LR) SAIDI categories were the only measures that Ergon Energy did not outperform its STPIS targets by greater than 10 per cent.

Energy Queensland considers further development is required to ensure reliable and meaningful comparisons between DNSPs. Specifically, further focus is required by the AER on ensuring there is:

- More consistent interpretation and approaches taken by DNSPs in preparing the Regulatory Information Notice (RIN) data

  Energy Queensland remains concerned that differences in interpretation and approaches taken by DNSPs in the preparation of their RIN data may significantly impact benchmarking results. For example, there are varying approaches and interpretations taken by the various DNSPs in the reporting of vegetation management data. It should be recognised that inconsistencies do exist, and consideration given to excluding specific measures from benchmarking until consistency in interpretation and application is agreed and implemented. Alternatively, we ask the AER to acknowledge the potential impact of such differences on the results contained in the Annual Benchmarking Report and the fact that the RIN data set is still maturing. Some stakeholders may not be aware that changes in accounting practices (amongst other things) can significantly influence year-on-year variations, but not reflect any change in efficiency.

- An overall improvement in data quality

  In our view, data quality should continue to be a very important focus for the AER. It is essential that data quality issues and other anomalies are identified and corrected to ensure an accurate data set is available to enable valid benchmarking results.

  In recent regulatory reporting periods, Ergon Energy and Energex have undertaken significant reviews of their network mapping and conducted field inspections to correct data which has contributed to significant improvements to

the accuracy of some reported RIN variables. However, some of these data quality improvements cannot be back cast which means that the data reported each year represents the best data available at that time.

Ergon Energy and Energex are committed to continuing their focus on improving the quality of their data. However, the rate of improvement in data quality will be impacted by various factors, including the requirement for system changes, staff training and the vast volume and geographical spread of their network assets. Of significance, the Energy Queensland Group is undertaking a digital transformation involving the implementation of a fully digital system that will result in better connection of our systems and data, and therefore our people. This transformation will not only provide improved data capabilities, but also further improve the quality of our data. However, in the meantime, there will likely continue to be some data quality issues until a baseline data set is obtained.

For these reasons, Energy Queensland recommends that the AER note in the body of the Annual Benchmarking Report that the RIN data set is still maturing and some year-to-year movements may reflect data quality corrections rather than relative changes in efficiency between DNSPs.

- Assessment of the impact of distributed energy resources (DER)and demand management activities across the industry on the benchmarking output specifications

It is important that the AER's performance benchmarking evolves to accurately capture the valued services delivered by networks across an increasingly two-way grid, including the capacity for customers to connect and realise value from DER investments.

Specific comments

In addition to Energy Queensland's general comments above, we provide the following feedback on specific issues we have identified in relation to the draft Report:.

SWER

Energy Queensland is very supportive of the AER's correction to its benchmarking techniques in putting less weight on the customer numbers and energy throughput outputs and more weight on circuit length and ratcheted maximum demand. We agree with the AER that this change better reflects the drivers of total cost for distribution networks than the previous weights.

We think further work is required though. In particular, the development of a new variable to account for differences in SWER networks between DNSPs.

The SWER is an aging network, mainly built in the 1970s and 1980s as a cheap but effective method to supply electricity to rural areas of Queensland. The primary purpose of those SWER networks was to accommodate basic domestic and farm loads. These networks are being challenged by a number of issues such as:

- load growth beyond original design capacity
- diversified load profiles
- voltage regulations
- power quality
- protection limitations

- topology of LV networks supplied by SWER schemes

- changing customer demographics, expectations and choice of energy supply

- changes in customer appliance technology

- asset condition declination with age, and

- ongoing safety considerations.

The Ergon Energy distribution network covers approximately 97% of Queensland servicing over 762,000 customers of which only 26,000 customers (3.4%) are SWER connected customers. In other words, 40% of Ergon Energy's network supplies 3.4% of its customers.

As can be seen from the graph below, the size and the proportion of Ergon Energy's network which are SWER lines makes it an outlier compared to other Australian DNSPs.
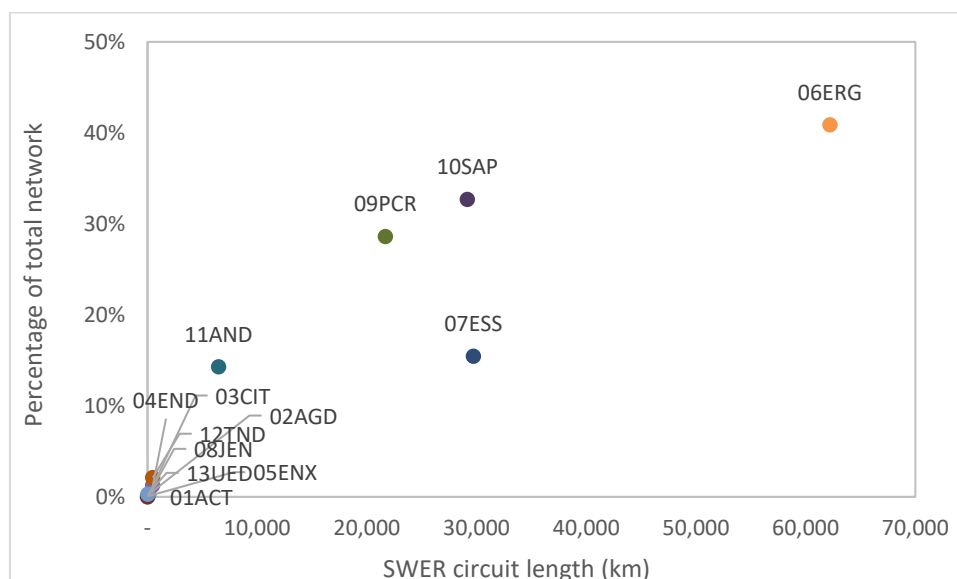
The limited capacity of the SWER lines and their often extremely remote locations, limits responses available to Ergon Energy to meet peaks in demand or outages.

Traditionally Ergon Energy has dealt with these problems by augmenting the SWER line, by for example, reconductoring power lines, installing voltage regulators and upgrading isolation transformers, often to satisfy a short peak demand. These are expensive solutions and asset utilisation is often low. Ergon Energy has been transitioning to alternative solutions, such as the use of Grid Utility Storage System units to support peak capacity constraints and voltage regulations in small sections of its SWER network. Potential new solutions like Stand-Alone Power Systems (SAPs) provide possible opportunities for further improvements. However notwithstanding, given the size of the SWER network this will be neither a rapid or low cost transition.

As a result, by not considering a significant legacy difference between DNSPs such as this, the AER's current benchmarking techniques are not correctly assessing current relative efficiency. Energy Queensland looks forward to working with the AER in 2021 to develop a SWER variable as a next step in the evolution of its benchmarking techniques.

Emergency response expenditure

Ergon Energy is concerned that the current data used to calculate the emergency response expenditure excluding Major Event Days (MEDs) has been calculated as total emergency response expenditure (as shown in part A of the Category Analysis (CA) RIN Template 2.9) less MED operating and maintenance (O&M) expenditure (as shown in part C of the CA RIN Template 2.9). Further, the definitions included in the CA RIN require the MED O&M expenditure (as shown in part C of the CA RIN Template 2.9) to be calculated as the "daily operating expenditure incurred on each date of those major event days and summing up the expenditure for each event".

However, given the vast geographical area covered by the Ergon Energy network and the nature of the damage caused by severe weather events such as cyclones, there can be a significant delay between when the MED occurs and the commencement of emergency response works (and therefore significant delays in when the operating expenditure is incurred).

Energy Queensland therefore recommends that the AER consider changing the calculation of this variable to Total Emergency Response Expenditure less Major Events O&M Expenditure (i.e. part (a) of CA RIN Template 2.9 less the total of part (b) of CA RIN Template 2.9).

Vegetation management

Ergon Energy and Energex have concerns about the use of the current data set from the CA RIN Template 2.7 (Vegetation Management) for benchmarking purposes. Specifically, they are concerned that the difference in approaches and interpretations applied by the various network service providers makes vegetation management benchmarking results meaningless. Until common approaches and interpretations have been agreed and applied by all DNSPs, we recommend that the current limitation is recognised in the AER's Annual Benchmarking Report, or alternatively, that vegetation management benchmarking is delayed.

Reliability

While reliability was noted by the AER as the key driver for Ergon Energy's decrease in productivity, it should be noted that its reliability performance for 2018-19 was favourable against all six STPIS performance measures. The difference between its network performance and the target was greater than ± 10 per cent for four of the six measures. Short Rural (SR) and Long Rural (LR) SAIDI categories were the only measures that did not outperform STPIS targets by greater than 10 per cent for 2018-19.

Comparing the 2018-19 actual performance to the STPIS targets:

• Urban (UR) SAIDI and SAIFI outperformed the targets by 19% and 28% respectively;

• Short Rural (SR) SAIDI and SAIFI outperformed the targets by 9% and 15% respectively;

• Long Rural (LR) SAIDI and SAIFI outperformed the targets by 3% and 17% respectively.

Weather pattern variability continued to demonstrate a strong relationship to the reliability of supply outcomes for the Ergon Energy customers. The summer storm season intensified in 2018-19 by comparison to the previous years, with Northern Queensland experiencing a larger number of severe weather events. The Queensland

network experienced an increase in storm and lightning events across the state which impacted:

- The UR Category in the Far North and North Queensland regions throughout February and March 2019
- The SR Category in the Far North and Wide Bay regions throughout November and December 2018
- The LR Category in the Far North, North Queensland and Capricornia regions throughout October 2018 and February 2019.

Furthermore, UR experienced an increase of HV asset, trip and manual reclose failures, while SR experienced an increase of blow-in/fall-in vegetation, external fires, trip and manual reclose failures.

A monsoon trough impacted the Far North and North Queensland regions between 25 January and 10 February 2019. Townsville was the most severely impacted by this event, receiving a year's worth of rain (>1,000mm) during this period, causing widespread flash and prolonged flooding. As a result, Ergon Energy made the decision to isolate supply to customers (mostly on 2 and 3 February) or was directed by emergency services to do so. This led to the exclusion of approximately 94 million customer minutes and approximately 21,000 customer interruptions from network performance as Public Safety Isolations.

For 2018-19, four Major Event Days (MEDs) were identified associated with severe weather events. The exclusion of the interruptions occurring on MEDs provided an effective mechanism to manage performance variability in the UR, SR and LR categories.

Achieving performance in the rural network segments that is consistently favourable to the STPIS targets is a challenge for Ergon Energy. The annual variability in supply interruptions occurring in the rural areas is influenced significantly by the severity of weather events and in general by longer term weather patterns. The duration of the supply interruption events in these areas is extended (by comparison to the urban areas) because of the vast geographical spread of assets serviced by the regional depots and the interruption exposure resulting from the predominantly radial arrangement of the supply chain in this network type. Limited safe access during wet season has further adverse impact on supply restoration.

Similarly, Energex also performed very well relative to its STPIS targets. In fact, all six measures where favourable to target in excess of the +/-10% threshold for 2018-19. Also. like Ergon Energy's experience, Energex experienced four MEDs declared for STPIS, however there was a relatively milder impact due to weather across the Energex network. For CBD the failure rate was low as performance in this category is inherently more reliable by design. The SAIDI and SAIFI reflect this performance against target. The UR and Rural Category performance is more susceptible to adverse weather and external factors. However, the performance against SAIFI for both categories was well below the target in 2018-19. This reflects the application of capital expenditure in previous years which has limited the initiation of outages. SAIDI performance for UR and Rural also performed well below target with Rural SAIDI being closest to the allowable measure.

Energex achieved a:

- CBD SAIDI = -71.4%

- CBD SAIFI = -90.7%

- UR SAIDI = -24.2%

- UR SAIFI = -38.4%

- RURAL SAIDI = -12.2%

- RURAL SAIFI =-31.1%

Of note, Energex's telephone answering performance for 2018-19 was within 10% of the target performance measure specified in STPIS.

Operating environment factors (OEFs)

As stated on page 41 of the draft Report, Sapere-Merz's analysis and report was a *"preliminary quantification"* of OEFs, it is important work continues to further develop it. The recent Black Summer emphasised that OEFs will need to be reviewed on an ongoing basis for all DNSPs.

The 9 November 2019 unprecedented declaration of a State of Emergency across 42 local government areas across southern, central, northern and far northern Queensland highlighted the changing natural environment in which we operate. Risks once thought unfathomable are likely to significantly impact our operations and thus our efficiency in the future. Historical data may not provide a good indication of the significance of these emerging risks. Energy Queensland looks forward to working with the AER to better quantify current and emerging Queensland specific OEFs.

Should you require additional information or wish to discuss any aspect of this submission, please do not hesitate to contact ████████████████

Yours sincerely

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