

To: Australian Energy Regulator (AER)
From: Bev Hughson and David Prins of the AER's Consumer Challenge Panel (CCP)

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Review of drafts of the AER's 2020 Annual Benchmarking Reports for electricity distribution and transmission networks

We thank the AER for the opportunity to respond to the 2020 Annual Benchmarking Reports for electricity distribution and transmission networks. To date, the AER has not undertaken a similar assessment of the productivity of the gas distribution and transmission regulated networks.

We understand that this is the first time that consumer representatives have been asked to contribute to these reports, and we congratulate the AER for making this initial step towards consumer consultation.

This year, the CCP has had limited time to engage in the process after completion of the drafts of the AER's 2020 Annual Benchmarking Reports for distribution and transmission networks.

We hope that more extensive engagement can be undertaken in future years prior to and during the production of the draft reports. This will contribute to a greater understanding by the CCP (and other consumer-facing stakeholders) of the drivers of network operating and capital cost productivity, as well as the relative performance of the electricity distribution and transmission networks.

The CCP's interest in early engagement in this process arises from our recognition of the importance of the AER's Annual Benchmarking Reports to the integrity of the regulatory process. The AER's Annual Benchmarking Reports have been an important contributor to halting the decline in total factor productivity that was observed during the period 2006 to 2015.

The AER's Annual Benchmarking Reports for electricity distribution networks preceded the Annual Benchmarking Reports for electricity transmission networks, and are at this stage the more mature. The benchmark modelling has been progressively enhanced in conjunction with the networks, along with improvements in the quality and quantity of the data provided by the networks. As a result, the focus of our comments below relates to the 2020 Annual Benchmarking Report for the electricity distribution businesses.

Various concerns have been raised by the electricity distribution networks about benchmarking over the years since that the AER has been publishing its Annual Benchmarking Reports. With ongoing enhancement of the benchmarking methodology, consumers and consumer advocates and other stakeholders have increasing confidence in the quality of the AER's analyses of the relative productivity and efficiency of the regulated networks.

As discussed below, we have more concerns with the use of the benchmarking outputs than with the outputs themselves. We also support the AER's plans to enhance these measures as follows (p 47):

- Ongoing incremental improvement in data and methods that support the AER's annual benchmarking reporting;
- Specific issues that have the potential to materially affect the benchmarking results and should involve consultation with affected stakeholders; and
- Changes and improvements in the way that the AER and other stakeholders use economic benchmarking in decision making.

We consider these improvements further in this letter.

The AER's benchmarking report includes three distinct albeit complementary approaches to assessing productivity and efficiency:

- Economic techniques including productivity index numbers: total factor productivity, opex partial factor productivity, and capital partial factor productivity indices;
- Econometric opex cost function models; and
- Partial performance indicators.

We support the use of all these approaches, as they provide different insights into the performance of the networks. For example, the economic benchmarking provides insights into trends in the overall, capex and opex productivity of the electricity networks, and trends in the productivity of individual networks.

The partial performance indicators provide a snap shot in time, and allow for control of specific variables. Examples include total cost per customer, and vegetation management opex per km of overhead circuit length.

Examination of these benchmarking approaches has enabled the CCP and other stakeholders to appraise and analyse the regulatory proposals submitted by each of the networks.

For example, the AER's benchmarking of the proposed operating costs in the NSW distribution networks revenue proposal enabled the CCP to provide significant support to the AER in its decision to reduce the NSW networks' operating cost allowances in its 2014-19 determinations. As a result, there has been ongoing improvement in opex productivity of the two largest NSW distributors up to 2018. The AER reports that across all the distribution businesses, opex productivity has increased between 2012 and 2018 by 2.8% per year on average (p 14).

Despite these improvements up to 2018, there has been a concerning 'pause' in total and opex productivity improvement in 2019, while capex productivity has continued to decline since 2006. The AER explains this pause as follows:

- Opex productivity has declined between 2018 and 2019 as a result of "worsening reliability" (p 15).
- Capital productivity has continued to decline as network inputs have been growing at a faster rate than key model outputs such as customers and maximum demand.

The productivity performance of the networks has been converging. That is, the best performing networks have either remained static or declined, while the worst performing networks have generally improved.

These trends highlight three areas of particular concern with the current status of the benchmarking:

- The benchmarking process is not driving improvements in capital productivity. As noted above, the improvements in opex have been significant in the short term. However, capital efficiency is critical to long-term improvement in the productivity of the industry. We recognise that improving capital productivity is considerably more complex, given the extent of the sunk costs in the RAB, and the overall regulatory framework that indexes this RAB each year for CPI. We also recognise the challenges that arise from the need to invest in new infrastructure in response to the emerging two-way energy market. These are areas in capital expenditure that can – and must – be a focus for future regulatory determinations.
- The AER’s approach to the application of the current opex benchmarking (rather than the actual opex cost function models), appears to be leading to some complacency by those businesses that are designated as ‘efficient’. It is important that the AER and the businesses all have a culture of continuous improvement. In practice this means:
 - The “efficient opex frontier” is a relative measure, and should not be considered static. Rather, it should evolve over time in line with new technologies and processes. A company such as CitiPower that sits on the efficient frontier should not be absolved from continual pressure to improve its operating cost efficiency.
 - The AER adopts an arbitrary benchmark cut-off point that is currently set at 0.75, and adjusted further for Operating Environment Factors (OEFs), which reflects the upper quartile of efficiency scores by distribution businesses. We consider that this approach is no longer fit for purpose. One of the rationales given for this decision was uncertainty over the modelling. The AER may have been justified initially in adopting a degree of caution over the use of its benchmarking techniques to determine efficient opex, although the CCP was not convinced of that. Nevertheless, given the ongoing developments in the modelling techniques and in the quality of the input and output measures, this caution is no longer warranted.
- The assessment of the Operating Environment Factors (OEFs). The OEFs are operating cost factors that are not accounted for in the economic modelling. However, they do contribute materially to differences in operating costs for each impact, independent of efficiency differences. As such, the attempts arise to address the challenge put to any benchmarking study – ‘but we are different’.

The OEF factors and their impacts were a source of much controversy in the initial benchmarking studies, given the significance of the benchmarking to the AER’s cost allowances. For this reason, we welcome the independent review in 2018 by Sapere-Merz¹ (S-M) of the OEFs.

¹ Sapere Research Group and Merz Consulting, *Independent review of Operating Environment Factors use to adjust efficient operating expenditure for economic benchmarking*, August 2018.

Importantly, the S-M report outlined three criteria for identifying relevant OEFs, as well as identifying and quantifying the OEFs that materially affect the relative opex of each DNSP. We support the three criteria identified in the report (p 41):

1. **Is it outside of the service provider's control?** Where the effect of an OEF is within the control of the service provider's management, adjusting for that factor may mask inefficient investment or expenditure.
2. **Is it material?** Where the effect of an OEF is not material, we would generally not provide an adjustment for the factor. Many factors may influence a service provider's ability to convert inputs into outputs.
3. **Is it accounted for elsewhere?** Where the effect of an OEF is accounted for elsewhere (e.g. within the benchmarking output measures), it should not be separately included as an OEF. To do so would be to double count the effect of the OEF.

The S-M report identified six OEFs that materially affect the relative opex of each distribution network (p 41):

- The higher operating costs of maintaining sub-transmission assets.
- Differences in vegetation management requirements.
- Jurisdictional taxes and levies.
- The costs of planning for, and responding to, cyclones.
- Backyard reticulation (in the ACT only).
- Termite exposure.

Based on the information in the AER's 2020 Report, these six factors represent a reasonable list of exogenous factors that could impact on a network's opex, and should be accounted for in addition to the inputs and outputs in the economic models.

Our concern at this point in time is with the OEF: "vegetation management requirements". As noted by the AER (p 42-43):

Vegetation management expenditure accounts for between 10–20 per cent of total opex for most DNSPs and can differ due to factors outside of their control. Some of these factors include:

- *Different climates and geography affect vegetation density and growth rates, which may affect vegetation management costs per overhead line kilometre and the duration of time until subsequent vegetation management is again required*
- *State governments, through enacting statutes, decide whether to impose bushfire safety regulations on DNSPs*
- *State governments also make laws on how to divide responsibility for vegetation management between DNSPs and other parties.*

S-M recognised the importance of this opex component, and concluded that it did not have sufficient information to quantify the impact. Similarly, the AER has attempted to quantify the impact of this OEF, and was not able to draw clear conclusions, partly because of problems with comparability of data.

The AER has applied a modified OEF for vegetation management, based on differences in vegetation management relating to managing bushfire risk, and differences in responsibilities. From our perspective, this approach is understandable in the circumstances. However, it is an area requiring further research.

In addition to conducting further research on the vegetation management OEF, the AER indicates that it is continuing to investigate the cost of the following matters:

- **Differences in cost allocation and capitalisation approaches.** The networks have highlighted the impact of different cost allocation approaches, and in particular capitalisation practices that distort the assessment of relative efficiency. We agree that this has been a long-standing issue, particularly capitalisation, and reflects both differences between businesses, and the changes that businesses make in their capitalisation process over time. At times, it appears to be an ‘escape clause’ for networks to avoid unfavourable comparisons by stakeholders.

We remain very keen to see the AER require more consistency in the reporting of this area, albeit recognising that some flexibility in capitalisation practices will always be required. We also note that the AER has attempted to provide adjustments, or additional ratio measures (such as opex/totex ratio), to allow some high-level comparisons between networks in the 2020 Report.

We note the AER’s preliminary conclusion that: “capitalisation practices” are not likely to have a sizeable impact on efficiency results for most distribution networks. However, there are some outlier networks, and the AER suggests that for these networks it “may consider it appropriate to adopt a case-by-case approach” (p 49). Accordingly the AER sets out a potential approach as follows (p 49):

- Assess the most appropriate methods to measure differences in capitalisation practices across distribution networks, and the capacity of these measures to account for material capitalisation policy differences.
- Where these measures indicate that a network’s capitalisation practices are materially different as compared to the comparators, consider a range of other assessment processes, including a specific OEF adjustment.

We agree with the AER, that these additional ratio measures that it is currently applying have limitations. From our perspective, they are no substitute for a more consistent approach to capitalisation. It is also not clear what use can be put to this type of measure when assessing the productivity of individual networks, given these limitations.

We would be concerned if the AER undertook ‘case-by-case’ analysis for those networks whose practices materially differ from comparators, as this may impact on transparency, and assumes a level of accuracy in the measurement process that appears not to be warranted by the modelling. More generally, if the AER were to adopt this practice for individual networks with variant practices, it appears to be moving towards a cost-for-service approach in setting an efficient opex, rather than allowing the inbuilt incentive mechanisms to operate under the current incentive regime.

Although the same issue and response of further investigation was identified in its 2019 report, we support the AER’s proposal to treat this issue as a priority, and to extend and consult further on this issue over the next twelve months. It is important that consumer

representatives are included, at least at key decision points, in this development process.

- **Reviewing benchmarking modelling to account for distributed energy resources (DER)**

As the AER recognises, DER is a rapidly emerging issue that has consequences for many aspects of the regulatory framework, including both opex and capital efficiency, and the benchmarking of these expenditures.

In particular, we recognise that the current benchmark modelling includes output measures such as delivered ratcheted maximum demand and energy throughput. However, an increasing proportion of end-use demand is met by DER. In addition, at least some networks may have to commit to additional capex and opex to safely manage their network, and this has been recognised by the AER in its regulatory decisions.

We agree therefore that if the benchmarking continues to rely on current model inputs and outputs, the benchmark results have the potential to be distorted. This will not only impact on the ability to make comparisons over time and across networks; it will also impact on the AER's ability to define the efficient opex frontier if networks differ in the extent of the DER.

At this stage, it is difficult to define what changes to the model or the inputs and outputs are required to allow for this trend. We therefore support the AER's proposal to scope out the issues to be considered over the next twelve months.

- **Benchmarking comparison point for opex assessment**

As noted above, the AER has set an arbitrary cut of point of 0.75, equivalent to the upper quartile of opex cost function results. The AER uses this figure in its assessment of the efficiency of base year operating costs in its regulatory determinations.

The CCP has long advocated that this approach is inadequate to ensure that the AER determines the efficient benchmark operating costs for a distribution network. This benchmark comparison point should be raised. This in turn will impact on the AER's assessment of whether a network's opex is "not materially inefficient".

The AER's 2020 benchmarking paper appears to maintain the view that the comparison point should be "conservative while our benchmarking models are maturing and the underlying data and method are being refined..." (p 51).

We do not agree with this conclusion. After some seven years of model and data development, we do not accept that the models are "still maturing", or that data is inadequate.

This is not to say that there are no issues, and we indicated above that they require continual development. However, this is an ongoing process and one that will continue into the future. It is therefore more than time for the AER to assess whether setting the target at 0.75 is still appropriate, and whether the decision to retain this benchmark comparison point is in the long term interests of consumers as required by the NEO and the NGO. There is little merit in postponing this important step in the pursuit of some sort of benchmarking 'purity'.

In making this assessment, we also highlight the relative stagnation of the efficiency scores for the networks that were categorised as the most productive in the initial benchmarking analyses. The AER observes (p 25):

Further, while Powercor, SA Power Networks and CitiPower have consistently been the most productive DNSPs in the NEM as measured by the MTFP and opex MPFP over the 2006 to 2019 period, they have also experienced a gradual decline in productivity. As a result, their productivity is now much closer to the DNSPs that are middle ranked.

If these three network businesses make up most of the top quartile, then it follows that the efficiency frontier is likely to decline. Over time, the incentives across the whole industry to improve efficiency of service delivery to consumers will also stagnate.

We therefore urge the AER to go beyond its stated position (p52):

We will continue to assess the appropriateness of the current benchmark comparison point ...

To conclude, we thank the AER for this opportunity to comment on the benchmarking and we look forward to additional consumer engagement at an early stage in the process in the future.

We are supportive of the AER's commitment to ongoing improvements in the economic modelling, data collection processes and OEF descriptions and values. However, the important OEF 'vegetation management' is clearly a work in progress and we support the AER's continuing investigation of this.

We are also very pleased to see the AER recognise that the growth in DER requires a further review of the economic model input and output factors and believe the CCP is well placed to contribute to that discussion given our participation in the other aspects of the AER's review of DER.

We encourage the AER to:

- Review the different cost allocation and capitalisation practices, but to also use this review to promote a more consistent approach by networks to capitalisation practices, particularly as the networks regularly state that this is an important reason for invalidating benchmarking outcomes.
- To undertake a study of the way benchmarking is used by the AER in determining a network's efficient base year operating costs. Given that the existing models have been progressively developed over the last 7 years, and given the evidence of convergence in benchmark outcomes, it is now time to revisit the 0.75 'not materially inefficient' target.