



Ausgrid Submission
AER Draft 2020 benchmarking report
November 2020



10 November 2020

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Dear Ms Preston

Ausgrid welcomes the opportunity to provide feedback on the Australian Energy Regulator's (AER) draft 2020 Benchmarking Report prior to its finalisation and publication.

As highlighted in the draft 2020 Benchmarking Report, Ausgrid has improved productivity at a greater rate than its peers in recent years. In the last five years, Ausgrid's overall productivity (MTFP) has improved by 3.73%, well above the industry average of 0.69% and the highest growth rate among our peers. Growth in opex multilateral partial factor productivity (MPFP) over the same period has also been the highest among our peers, at 11.51%, compared to an industry average of 3.40%.

Benchmarking nonetheless has limitations, as highlighted by the identification of a coding error in the AER's benchmarking modelling. This error is highly concerning, and casts doubt about the reliability of benchmarking. After reviewing the draft 2020 Benchmarking Report, we have several concerns including:

- **New output weightings:** to correct the identified error, new output weightings were calculated for the AER's productivity index models which, based on the analysis in the draft 2020 Benchmarking Report, cannot be supported on economic or engineering grounds;
- **Reputational impact:** the AER publishes opex MPFP and stakeholders including customer representatives track relative performance using this methodology. We were expecting to climb to 9th position based on published 2019 data, which reflects our significant business transformation efforts. Notwithstanding the issue noted in the above bullet point, the correction of the error pushes Ausgrid back to 12th on opex MPFP, which is unexpected, disappointing and has the potential to cause reputational damage to Ausgrid;
- **Cost allocation methods (CAMs):** Powercor and CitiPower have new, updated CAMs but are still benchmarked according to the '2014 frozen CAMs'. This provides these businesses with material advantages over its peers in benchmarking; and
- **Powercor's CAM is key:** efficiency scores are calculated relative to the frontier firm i.e. Powercor. This means a $\pm 1\%$ change in Powercor's capitalisation rate will lead to roughly a $\pm 1\%$ change in the efficiency scores of all other electricity distributors. When diagnosing if its benchmarking framework adequately adjusts for variations in capitalisation policies, we believe the AER should focus on how Powercor's CAM differs to other firms.

We do agree with the AER the error would not have impacted previous efficiency assessments. This is because that the productivity index models that were affected are not used to inform the magnitude of any opex efficiency adjustments in AER regulatory determinations. This point needs to be made more clearly in the 2020 Benchmarking Report.

We thank the AER for allowing us to share the draft 2020 Benchmarking Report with members of our Customer Consultative Committee (**CCC**). This allowed us to engage with CCC members on the report and obtain their feedback, which has then been incorporated into our submission. We have been engaging with CCC members on all key regulatory submissions in an effort to become a more customer-centric organisation.

There may be a need for a broader benchmarking 'health check'. The AER has been working with the same consultant, Economic Insights, for a significant period. It may now be timely, following the identification of an error, for the AER to engage a third party to undertake a one-off review of the benchmarking framework. This is to 'check in' on its health and make sure that it is working towards achieving outcomes in the long-term interests of customers. The customer representatives with whom we shared this submission were generally supportive of an external review.

If you would like to discuss our submission in more detail please contact [REDACTED]

Yours sincerely

A handwritten signature in black ink, appearing to read "Alex McPherson".

Alex McPherson
Head of Regulation

Appendix A: Submission

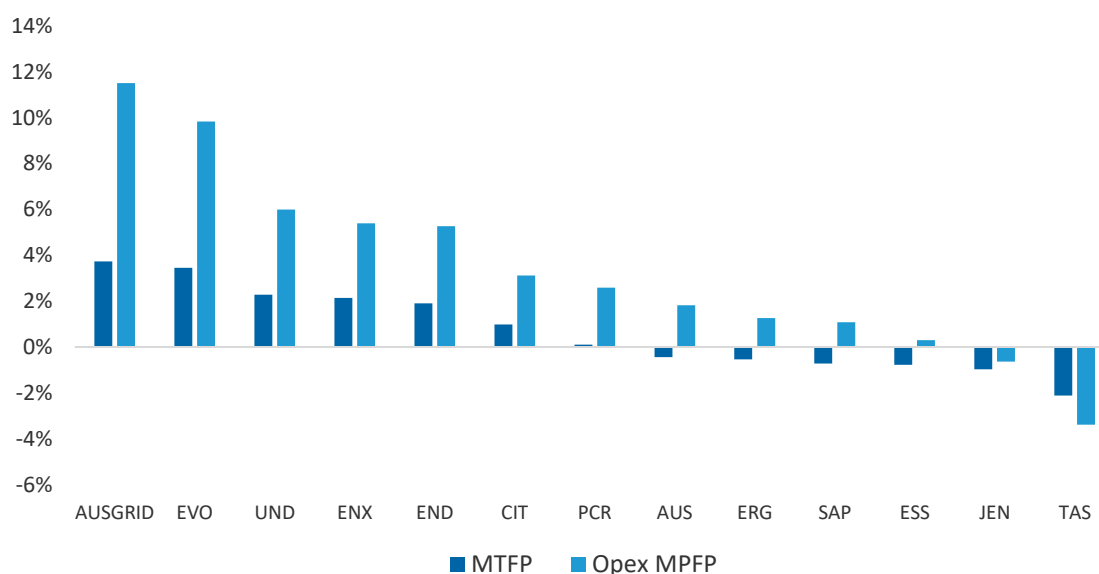
1. AUSGRID'S TRANSFORMATION STRATEGIES DRIVING IMPROVED EFFICIENCY FOR CUSTOMERS

Summary

- **Our transformation:** in the last five years our productivity has improved at a greater rate than any of our peers, demonstrating that our transformation strategies, while still on-going, are unlocking efficiency savings for our customers.

Our benchmarking performance has improved significantly in the last five years, with our growth rate in productive efficiency since 2015 outperforming all our peers in the national electricity market (NEM). Figure 1 shows that our total productivity (MTFP) has increased by 3.73% in this period, well above the industry average of 0.69%, while our opex MPFP has grown by 11.51%.

Figure 1: Growth rate in MTFP and opex MPFP in the last five years



Our transformation program is on-going, with further efficiencies needed to withstand multiple pressures on our business and unlock efficiency savings for our customers. The pressure to improve has also now increased following the identification of a 'coding error' that, once corrected, negatively impacts our efficiency scores.

We elaborate further on this error in the next section of our submission. It demonstrates that while benchmarking analysis can provide helpful guidance about comparative performance, it should not be used deterministically to set the expenditure allowances of electricity networks.

2. CODING ERROR RAISES IMPORTANT QUESTIONS

Summary

- **Rankings and league tables:** there is a disproportionate focus on productivity index (MTFP/MPFP) rankings and league tables given that only the econometric models are used to make efficiency adjustments in AER determinations.
- **Reputation:** while the AER is correct to point out that the coding error would not have impacted previous efficiency assessments, this overlooks the significant reputational impact given the current level of emphasis on MPFP/MTFP rankings and league tables.
- **New output weightings:** to correct the identified coding error, new output weightings have been calculated for the AER's productivity index models:
 - the increase in weight placed on **ratcheted maximum demand** cannot be supported on engineering or economic grounds since it will award lower efficiency scores to networks that spend opex on demand reduction activities; and
 - the fall in weighting on **customer numbers** does not reflect the fixed nature of network costs and the Leontief regression results are **not statistically significant**.
- **Confidence in framework:** there are now large differences in the efficiency scores calculated by the AER's productivity index and econometric models. This inconsistency undermines confidence in the AER's benchmarking framework and casts doubt over the reliability of the results.

The identified 'coding error' leads to significant output-weighting changes in Economic Insights' productivity index models (MTFP/MPFP). The AER considers that, as a consequence of this error:

"there are no changes in scores or rankings material enough to suggest any of our previous efficiency assessment would have been materially different".¹

We broadly agree with this assessment. While the impact of the error is significant, the movement in rankings is strictly limited to the productivity index models which the AER does not use to make opex efficiency adjustments in regulatory determinations. The AER only uses its econometric models to make such adjustments, which are unaffected by the coding error. This is a key point which must be made more clearly in the 2020 Benchmarking Report. Other key considerations that need to be addressed are outlined below.

2.1 Impact of the error could be more clearly presented by the AER

The productivity index models calculate efficiency scores by assessing the level of inputs (expenditure) used to produce certain functional outputs. As each output does not have the same level of impact on expenditure levels, the AER weights them based on statistical analysis.

These weightings were only recently updated in 2018. We therefore suggest that the impact of the coding error, which leads to a further update, could be assessed according to their 'pre-2018 weightings', 'post 2018 weightings' and '2020 corrected weightings'.

As set out in Table 1, this longer time horizon shows the considerable movement in these weightings since 2018. This is important context which we suggest be included in the 2020 Benchmarking Report

¹ AER, Draft 2020 Benchmarking Report, 2020, p. 5.

so that customers and other key stakeholders are aware of a major underlying driver of changes in efficiency scores and rankings in recent years.

Table 1: Changes in productivity index model output weightings since 2018

	Pre-2018 weighting	Post-2018 weightings (before error corrected)	2020 corrected weightings
Customer numbers	45.80%	30.29%	18.52%
Circuit length	23.80%	28.99%	39.14%
Ratcheted maximum demand	17.60%	28.26%	33.76%
Energy throughput	12.80%	12.46%	8.58%

Improved transparency with respect to the impact of the coding error is needed given the significant reputational impacts that the productivity index models have. Stakeholders place a large amount of weight on opex MPFP and other productivity index models. For example, the Victorian CCP cited opex MPFP as a key measure of opex efficiency, notwithstanding that this benchmarking model is not actually used by the AER to make efficiency adjustments.²

We strongly encourage the AER to take this into account. While the AER is correct to point out that the coding error would not have impacted previous efficiency assessments, this overlooks the significant reputational impact from the current level of emphasis on MPFP/MTFP rankings and league tables. These impacts are compounded when there are large, unexpected swings in results, such as Ausgrid falling from an anticipated 9th position on opex MPFP, to 12th place once the coding error has been corrected. EvoEnergy also falls three spots while United Energy and Endeavour Energy fall two spots.

2.2 New weightings are not supported on economic or engineering grounds

To correct the identified coding error, the output weightings in the productivity index models have been adjusted. We consider the merits of these changes below.

2.2.1 Higher weighting on Ratcheted Maximum Demand incentivises poles and wires solutions over demand management

The weighting placed on ratcheted maximum demand has nearly doubled since 2018 from 17.60% to 33.76%. We do not consider this to be justified on economic or engineering grounds.

Electricity distributors should ideally be encouraged to identify opportunities to improve utilisation of their networks. The increase in weighting on ratcheted maximum demand runs counter to this by determining lower efficiency scores for electricity distributors that devote more effort towards demand reduction activities. This is because more opex spent on reducing demand will increase expenditure 'inputs' in the productivity index models, without delivering a corresponding improvement in the 'output' (i.e. ratcheted maximum demand) that is measured. In effect, networks may now appear less productive if they engage in demand reduction activities.

The weighting placed on ratcheted maximum demand should form part of the AER's flagged review into how its benchmarking models account for distributed energy resources (DER).³ There is a need to update the output specifications in the AER's benchmarking models, so they reflect the costs that

² CCCP17, Predetermination conference presentations: Victorian electricity distributor determination 2021-26, 15 October, slide 5

³ Economic Insights, Benchmarking Report, 2013, p. 8.

drive electricity distribution networks today and in a post-2025 NEM. We consider this may look like a set of output specifications which put less weight on ratcheted maximum demand, while adding an output that relates to managing DER. To get to this point, we acknowledge that regulatory reporting may need to be adjusted to collect additional information on DER and the related costs.

2.2.2 Lower weighting on customer numbers does not reflect high fixed costs

The output weighting on customer numbers has fallen from 45.80% to 18.52% since 2018. This is a significant change which cannot be supported on economic grounds.

The AER's consultant, Economic Insights, has commented on the costs that customer numbers are intended to capture in its productivity index modelling. It has stated: 'The customer numbers output is included to capture the fixed costs associated with having a customer connected'.⁴ In 2013, Economic Insights also noted that the fixed costs captured by customer numbers includes 'customer connections, customer calls and, more importantly, connection related capacity (e.g. having more residential customers may require more local distribution transformers and low voltage mains)'.⁵

We agree that customer numbers provide a good proxy for the highly fixed nature of electricity distributors' costs. The reduction in this functional output therefore requires further explanation. From an economic perspective, considering the high fixed costs of networks, we would expect an output weighting more akin to 53.35% i.e. the value customer numbers have under the econometric models (see section 2.2.3 below).

2.2.3 Output weightings are now materially different to econometric models

The AER has two sets of benchmarking models which now have vastly different output weightings. Table 2 below sets out this comparison. It shows that the productivity index models attribute a 18.52% cost share to customer numbers compared to 53.35% for the econometric models – a difference of 34.83%. There is also a large disparity in the weightings for circuit length.

Table 2: Comparison of opex MPFP and econometric model output weightings

	Index models (2020 corrected weightings)	Econometric models (Ave 2006-19)	Difference
Customer numbers	18.52%	55.95%	- 37.43%
Circuit length	39.14%	15.48%	+ 23.66%
Ratcheted maximum demand	33.76%	28.58%	+ 5.18%
Energy throughput	8.58%	n/a	n/a

Note: Opex MPFP corrected weightings and econometric models (average 2006-19)

The large differences in output weightings are difficult to reconcile on economic or engineering grounds. We would expect that a robust benchmarking framework would have multiple models which all have similar output weightings. This is because the statistical analysis that is being undertaken involves a similar dataset and the same subject matter.

Notwithstanding, the draft 2020 Benchmarking Reports states that 'from an economic and engineering perspective the revised weights [for the productivity index models] are more reflective of the drivers of total cost of distribution networks than the previous weights'.⁶ In our view, further analysis is required before reaching this conclusion. Both the productivity index and econometric models cannot be

⁴ Economic Insights, Benchmarking Report, 2020, p. 4.

⁵ Economic Insights, Benchmarking Report, 2013, p. 8.

⁶ AER, Draft 2020 Benchmarking Report, 2020, p. 4.

correct at the same time. Customer numbers, for example, cannot simultaneously drive 18.52% of operating costs (productivity index model) and 53.35% of costs (econometric models).

2.2.4 Leontief regression results are not statistically significant

The identification of the coding error has led to an update to the Leontief regression results used to allocate cost share 'weightings' to each functional output in the productivity index models.

For ease of reference, we have reproduced the updated regression results in Table 3 below. It shows that there are few significant coefficients. For example, only two electricity distributors have significant coefficients for customers numbers.

Table 3: Leontief regression results for real opex

	Energy	Ratcheted maximum demand	Customer numbers	Circuit length
EVO		2.125*		2.728*
AGD		7.928		
CIT	2.193			
END	3.013			-0.719*
ENX		6.921*		
ERG		2.786*		1.225*
ESS			0.577	
JEN			0.383	
PCR		2.220*		-1.153*
SAP		-6.193		
AND		7.378		
TND	3.398			
UED	3.080	1.564*		

Note *: the numbers in red have a "t-score" that statistically may not be considered reliable

We note that Economic Insights emphasised the 'improved... statistical performance of the [Leontief] regressions'⁷ based on 28 of the 52 regressions now have one significant output coefficient, 17 have two significant output coefficients and 2 have three significant output coefficients'.⁸ We believe it is important for the AER set out its own views as to whether the updated Leontief regression results are statistically significant.

There is also a risk that the regression analysis could mistake correlation with causation. To mitigate against this, the AER may wish to scrutinise the statistical results on economic and engineering grounds, potentially as part of a broader benchmarking health check (see section 4.2 of this

⁷ Economic Insights, Benchmarking Report, 2020, p. 123.

⁸ Economic Insights, Benchmarking Report, 2020, p. 123.

submission). An analysis of certain calculations, such as inconsistent results for ratcheted maximum demand for Ausgrid (7.928) and SA PowerNetworks (-6.193), could form part of this review.

2.2.5 Large difference in efficiency scores produced by econometric models

The draft 2020 Benchmarking Report observes that notwithstanding the differences in the features and data requirements of the productivity index and econometric models, their opex efficiency scores are broadly consistent and that this 'reinforces the confidence in the results from each model'.⁹

The AER should interrogate this point further. Table 4 shows that there are material differences in the efficiency scores produced by the opex MPFP and econometric models for EvoEnergy, Endeavour Energy, Ergon Energy, Jemena, SA PowerNetworks, AusNet Services, and United Energy.

Table 4: Comparison of opex MPFP and econometric model efficiency scores (ave 2006-19)

	Econometric models	Opex MPFP	Absolute difference	% difference
EVO	0.448	0.517	0.068	15%
END	0.583	0.632	0.049	8%
ERG	0.587	0.640	0.053	9%
JEN	0.619	0.533	-0.086	-14%
SAP	0.801	0.948	0.147	18%
AND	0.712	0.651	-0.061	-9%
UED	0.781	0.649	-0.132	-17%

3. CAPITALISATION / COST ALLOCATION REQUIRES AER ATTENTION

Summary

- **Cost allocation methods (CAMs):** Powercor and CitiPower have new, updated CAMs but are still benchmarked according to the '2014 frozen CAMs'.
- **Frontier firm's impact:** efficiency scores are calculated relative to the frontier firm (i.e. Powercor). This is such that a $\pm 1\%$ change in Powercor's capitalisation rate will lead to roughly a $\pm 1\%$ change in the efficiency scores of all other electricity distributors

The AER's current benchmarking approach does not do enough to adjust for differences in capitalisation policies. Significant issues exist which require the AER's attention. We are pleased to see that the AER intends to consult further on this matter over the next 12 months.

⁹ AER, Draft 2020 Benchmarking Report, 2020, p. 59.

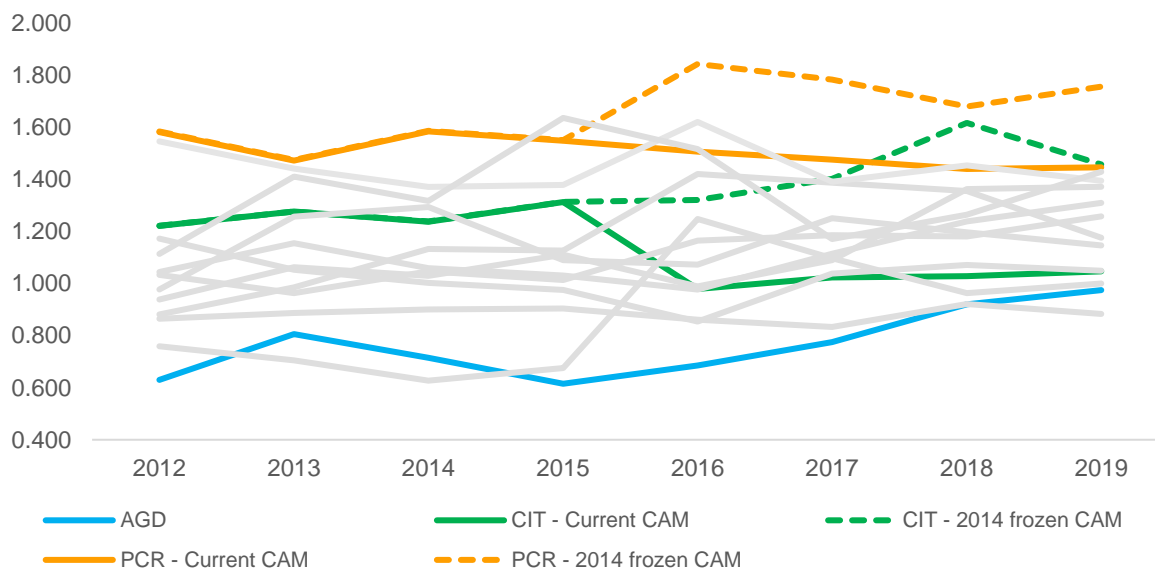
3.1 Frozen 2014 CAMs skew results for everyone

Since the introduction of benchmarking, Powercor and CitiPower have revised their CAMs. The AER has in response ‘frozen’ their CAMs based on the policies these businesses had in place in 2014. This is concerning for two reasons:

- it artificially lifts the efficiency scores of Powercor and CitiPower; and
- has NEM-wide effects on **all** electricity distributors in the NEM given that efficiency scores are calculated relative to the frontier business i.e. Powercor.

The extent to which Powercor and CitiPower benefit from higher efficiency scores is indicated in Figure 2 below. It sets out the opex MPFP efficiency scores for all electricity distributors in the NEM, but with Powercor and CitiPower results highlighted. The dotted orange (Powercor) and dotted green (CitiPower) lines show that these businesses’ efficiency scores are much higher under their 2014 frozen CAMs used for benchmarking purposes. This is compared to their actual underlying operating costs allocated according their current CAMs.

Figure 2: Opex MPFP index modelling – All DNSPs (PCR, CIT and AGD highlighted)

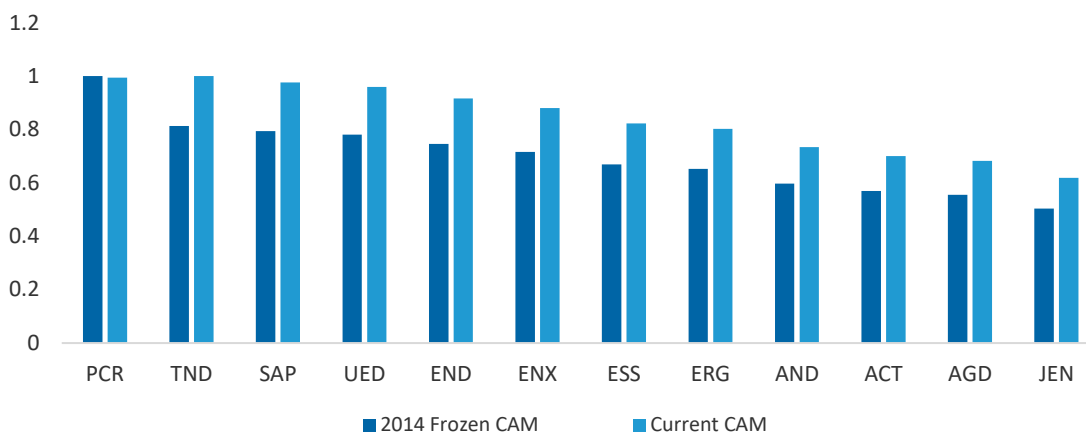


From a customer’s perspective, the continued use of the frozen 2014 CAMs could be considered misleading. It may be that customers take comfort from the high efficiency scores that CitiPower and Powercor achieve, without knowing that the actual level of opex these businesses spend under their current approved CAMs is much higher i.e. less efficient.

The 2014 frozen CAM for Powercor also skews the benchmarking results for all other electricity distributors. This is shown in Figure 2 which calculates opex MPFP scores for all firms in the NEM with and without the 2014 frozen CAMs in place. This NEM-wide impact is driven by the fact that the efficiency score of **every** electricity distributor is calculated relative to the performance of the most efficient firm i.e. Powercor. In the case of Figure 2 below, it should be noted:

- Powercor’s opex under its current CAM is higher than under its 2014 frozen CAM; and
- the higher opex for Powercor under its current CAM improves the efficiency scores of all other firms because their scores are recalculated relative to a lower benchmark i.e. higher opex for Powercor under its current CAM improves efficiency scores for everyone else.

Figure 2: Opex MPFP efficiency scores with frozen 2014 CAMs and current CAMs ¹⁰



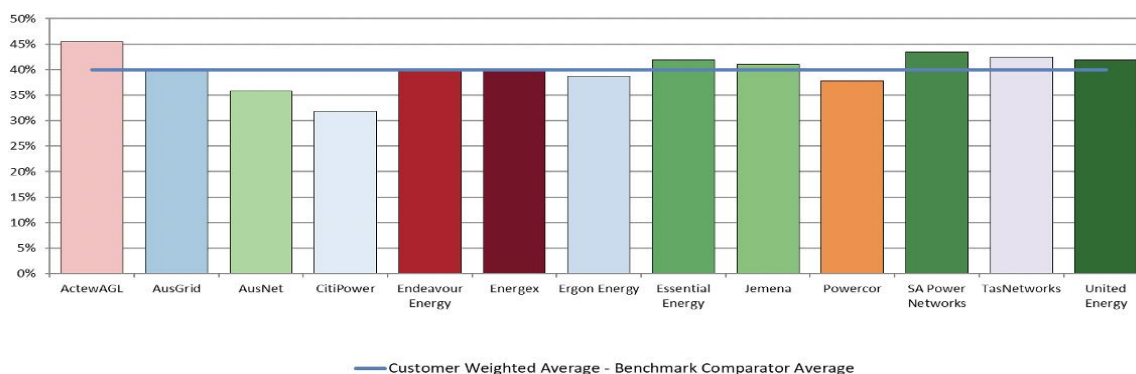
3.1 Inconsistencies in AER analysis of different capitalisation policies

The draft 2020 Benchmarking Report includes a section assessing whether there is a problem posed by differences in capitalisation policies among electricity distributors in the NEM. We commend the AER for including this section but have observed the AER’s opex/totex analysis, which is used to diagnose if there is a problem, applies an inappropriate comparison point.

3.1.1 Inappropriate comparison point – average comparator capitalisation rate

To test if differences in capitalisation policies are affecting benchmarking results, the AER looked at ‘opex/totex’ across the NEM. Using this approach, the AER found that ‘most DNSPs’ opex/totex ratios are not substantially different from the customer-weighted average of the benchmark comparator’.¹¹ We disagree with this conclusion based on the comparison point the AER has selected. For ease of reference, the AER’s analysis is reproduced in Figure 4 below. The comparison point we take issue with is the blue line.

Figure 4: AER’s analysis of opex to totex ratios, average 2012-19 (frozen 2014 CAMs)



The “customer weighted average – benchmark comparator average” (blue line in Figure 4) is based on the opex/totex ratios of multiple electricity distributors (Powercor, SA Power Networks, United Energy, CitiPower). This is not a valid comparison point since a weighted average of multiple firms does not reflect how efficiency scores are calculated in the AER’s benchmarking models.

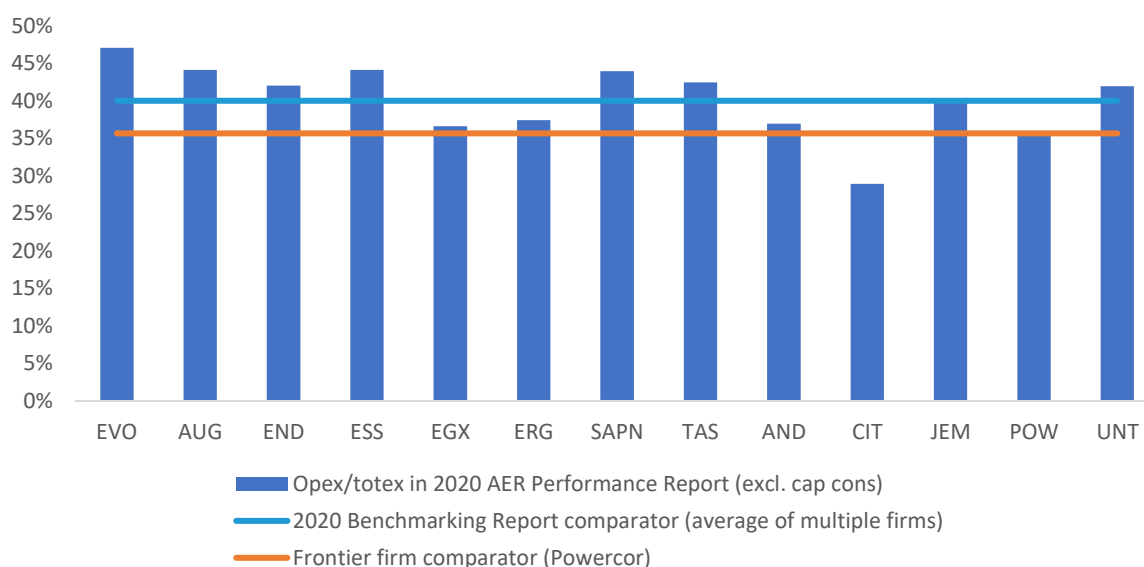
¹⁰ CitiPower has been removed from the above analysis since it also has a frozen 2014 CAM
¹¹ AER, Draft 2020 Benchmarking Report, 2020, p. 83-84.

As noted in section 3.1 above, the efficiency scores of every electricity distributor are calculated relative to the most efficient business i.e. Powercor. The policies of Powercor are therefore critical for determining whether there is an issue with differences in CAMs, not the capitalisation rate of multiple firms at or close to the frontier. It follows that the AER must shift its focus away from the opex/totex ratios of multiple firms (blue line in Figure 4 above), in favour of an approach that considers how opex/totex ratios differ to Powercor.

3.1.2 Opex/totex analysis done in a way that is consistent with benchmarking models

We have recalculated the AER's opex/totex analysis using Powercor's capitalisation policies as the appropriate comparison point. In undertaking this analysis, we used the dataset published with the AER's 2020 Performance Report. To be consistent, the AER's 2020 Benchmarking Report should use the same dataset which excludes capital contributions.¹²

Figure 5: Recalculated opex to totex ratios, average 2012-19 (frozen 2014 CAMs)



In Figure 5 above, it is shown that using Powercor (orange line) as the comparison point has a material impact on the opex/totex analysis in the AER's draft 2020 Benchmarking Report (blue line). Powercor's opex/totex ratio is 36% which is the second lowest among all firms. In terms of opex benchmarking, this provides an advantage since, relative to its peers, Powercor incurs less opex by capitalising more of its total expenditure.

There are NEM-wide impacts too. Powercor's advantage in opex benchmarking, because of its 2014 frozen CAM, disadvantages all other electricity distributors in the NEM. This is because all efficiency scores are calculated relative to the efficiency score of the frontier firm (i.e. Powercor).

For example, Ausgrid's opex/totex ratio (44%) is higher than Powercor's ratio (36%) under its frozen 2014 CAM. If, however, Powercor's opex/totex mix was adjusted to be in line with Ausgrid's practices then Powercor's opex would increase. This would lead to:

- a lower efficiency score for Powercor because of its increase in opex; and
- an improved efficiency score for Ausgrid given that our efficiency scores is calculated relative to a benchmark from the frontier firm (i.e. Powercor).

¹² The 2020 Performance Report excludes capital contributions when measuring capex. This is important since capital contributions vary significantly between jurisdictions, particularly in NSW where there are contestable arrangements for new connections in place. The 2020 Benchmarking Report should adopt the same approach.

Table 5 below sets out this analysis for all firms in the NEM. The 'potential efficiency score improvement' shows roughly how much better a firm would do under AER benchmarking if the frontier firm (Powercor) had the same rate of capitalisation as them. It assumes that a $\pm 1\%$ change in Powercor's capitalisation rate would roughly lead to a $\pm 1\%$ change in the efficiency scores of all other electricity distributors.

Table 5: Opex / totex ratio for all NEM businesses compared to Powercor

	Opex / totex ratio (frozen 2014 CAMs)	Benchmark opex / totex (Powercor)	Potential efficiency score improvement
EVO	47%	36%	11%
AGD	44%	36%	8%
CIT	29%	36%	-7%
END	42%	36%	6%
ENX	37%	36%	1%
ERG	37%	36%	1%
ESS	44%	36%	8%
JEN	40%	36%	4%
SAP	44%	36%	8%
AND	37%	36%	1%
TND	42%	36%	7%
UED	42%	36%	6%
Average ^	41%	-	5%

Note: average does not include CitiPower or Powercor's opex / totex ratio.

3.2 Recommended improvements

We consider more work needs to be done to refine how the AER adjusts for different CAMs.

Our main concern is that the efficiency scores of all electricity distributors in the NEM are currently 'pegged' to a frontier business (Powercor) whose benchmarking performance is based on a CAM it no longer has in place. The robustness of the AER benchmarking framework could also be strengthened if a consistent method for adjusting for different cost allocation and capitalisation approach was adopted following a broader, industry wide consultation process. Table 6 sets out possible changes that the AER may consider implementing.

Table 6: Potential improvements to adjusting for different CAMs

Option	Overview
Activity based benchmarking	Benchmarking analysis could be undertaken at the pre-capitalisation 'activity level'. Activities could include maintenance, connections, mains and services repair /

	replacements. This would be similar to the approach used by Ofgem, but would require substantial changes to regulatory information notices (RIN)
Update CAMs to another set point	The 'frozen' CAMs the AER currently applies would be updated to the cost allocation methods each business currently has in place. However, this may be a short-term solution if businesses update their CAMs again, resulting in a new 'freezing' of cost allocation approaches.
Make OEF adjustments for capitalisation	We note that the AER has considered this in its recent 2021-26 determination for Jemena. This may be a robust solution but would require industry consultation.
Fixed capitalisation rate	The AER could benchmark electricity distributors based on a fixed, industry wide capitalisation rate. This would provide a consistent capitalisation rate for benchmarking purposes but would not account for differences in capital spend requirements across each electricity distributor.

Of the options listed above, we consider the adoption of a fixed capitalisation rate should be approached with the most caution. We acknowledge that other electricity distributors have suggested this as a potential approach. Our concern, however, is that each network in the NEM is likely to be at a different stage in their investment cycle. As a result, there are likely to be significant variations in capital spend requirements that will not be taken into account if a fixed, uniform capitalisation rate is applied for benchmarking purposes. Similarly, caution should be exercised if considering a switch to 'activity based' benchmarking or an update of frozen CAMs to another set point.

The AER notes that 'applying an OEF adjustment is consistent with our general approach of adjusting benchmarking scores for material exogenous factors not otherwise accounted for in our benchmarking approach'.¹³ At this stage, an OEF adjustment may offer a robust mechanism to address differences in capitalisation policies, although the approach taken would need to be outlined further. We look forward to continued engagement with the AER on this issue during its planned consultation over the next 12 months.

4. CUSTOMER'S PERSPECTIVE

Summary

- **Customers:** volume and complexity of benchmarking results creates a barrier to robust, transparent engagement on important matters that impact expenditure outcomes.
- **Benchmarking tools:** the AER could consider providing clearer guidance about how it uses each of its benchmarking models.
- **Benchmarking health check:** following the identification of an error, now is a good time for the AER to take stock of its benchmarking framework and address deficiencies.

The draft 2020 Benchmarking Report provides insights into the relative efficiency of electricity distributors in the NEM. When read from a customer's perspective, however, additional commentary may be needed so that the analysis presented is more widely accessible.

¹³ AER, Draft 2020 Benchmarking Report, 2020, p. 59.

4.1 Volume and complexity of benchmarking results is a barrier to engagement



For most customers, a barrier to engaging with the 2020 Benchmarking Report is likely to be the high number of modelling results. These include:

- 4 three-output models for 2 time periods (8 modelling results)
- 8 two-output models for 2 time periods (16 modelling results)
- 2 three-output models for 2 time periods with different translogs (4 modelling results)
- 4 two-output specifications with different translog coefficients (4 modelling results)

In total, we counted 32 separate modelling results covering different time periods, translog estimates and coefficients. To help navigate this breadth of analysis, the AER's 2020 Benchmarking Report may need further explanation on how each modelling result differs and the unique insight it offers.

Greater clarity could also be provided in terms of how each benchmarking model is used to assess expenditure allowances. For example, the AER notes that it does **not** use the productivity index models 'deterministically to make efficiency adjustments in a regulatory determination (**we use our econometric opex cost models to inform the magnitude of any efficiency adjustments**) (emphasis added)'.¹⁴ This point could be made clearer. We suggest a high-level summary such as in Table 7 below, clearly setting out which models are used to directly inform 'efficiency adjustments' in AER determinations.

Table 7: Role each model plays in informing the magnitude of efficiency adjustments

Type	Models	Informs magnitude of opex efficiency adjustments
Econometric models	Cobb-Douglas stochastic frontier analysis (SFA)	
	Cobb-Douglas least squares	
	Translog least squares	
	Translog SFA	
Productivity index models	Multilateral total factor productivity (MTFP)	
	Opex multilateral partial factor productivity (MPFP)	
	Capex MPFP	

The draft 2020 Benchmarking Report does include an explanation of how efficiency adjustments are applied using the econometric models. For ease of reference, we have reproduced that explanation:¹⁵

The econometric models produce average opex efficiency scores for the period over which the models are estimated. The results we are using in this section reflect average opex efficiency over the 2006–19 period and the 2012–19 period. Where there are rapid increases or decreases in opex, it may take some time before the period average efficiency scores reflect these changes, in particular for the longer period. This means that in some circumstances the efficiency scores will not reflect a DNSP's relative efficiency in the most recent year.

To use the econometric results to assess the efficiency of opex in a specific year, we can estimate the efficient opex of a benchmark efficient service provider operating in the target DNSP's circumstances. We do

¹⁴ AER, Draft 2020 Benchmarking Report, 2020, p. 5.

¹⁵ AER, Draft 2020 Benchmarking Report, 2020, p. 29-30.

this by first averaging the DNSP's actual opex (deflated by the opex price index) and calculating its efficiency score over the relevant period. We then compare the DNSP's opex efficiency score against a benchmark comparison score, adjusted for potential differences in operating environments. Where the DNSP's efficiency score is below the adjusted benchmark score, we adjust the DNSP's average opex by the difference between the two efficiency scores. This results in an estimate of average opex that is not materially inefficient. We then roll forward this period-average opex to a specific base year using a rate of change that reflects changes in outputs, OEFs and technology between the average year and the specific year. We then compare the DNSP's actual opex in the base year to the rolled forward efficient opex benchmark.

This is a complex series of steps. From a customer's point of view, a diagram may be a helpful way of explaining how the AER uses its econometric models to inform efficiency adjustments.

4.2 Potential next steps for strengthening engagement with customers

As the AER undertakes further work to refine its approach over the coming 12 months, we recommend that it may be an opportune time to:

- engage with customers about its AER's benchmarking approach; and
- undertake a benchmarking 'health check'.

Last year the AER published a review on its replacement expenditure (repex) model. The AER noted that the 'objective of this review was to continue refining the AER's repex model'¹⁶ with an aim of helping 'the industry understand the model, including how it is applied during distribution determinations'.¹⁷ We suggest that the AER undertakes a similar consultation process with respect to its benchmarking models.

At the same time, the AER should consider undertaking a benchmarking 'health check'. This could be achieved by the AER engaging a third-party benchmarking expert to conduct a one-off review of the framework. We consider a health check would be timely given the coding error identified and the significant period of time the AER has been working with the same consultant, Economic Insights.

We shared a draft version of this submission with members of our Customer Consultative Committee. The feedback we received was supportive of an external review into the current benchmarking framework. Pete Newman, a member of the CCC advocating for the senior community, was of the view that the benchmarking report may be of limited utility to consumers on account of its complexity and accordingly suggested an extensive external review to inform an instrument more suited to all stakeholders, particularly consumers.

Other members of our CCC, including the Energy Users Association of Australia, agreed that there is likely to be value in a timely external review of the benchmarking methodology.

¹⁶ <https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/replacement-expenditure-modelling-assumptions-review-2019/implementation>

¹⁷ <https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/replacement-expenditure-modelling-assumptions-review-2019/implementation>

Thank you

