

Benchmarking fact sheet – April 2015

We use benchmarking to compare the cost of undertaking similar activities across service providers in the National Electricity Market. Assessing relative costs enables us to understand efficiency, which is an important consideration for determining expenditure allowances as part of our pricing decisions.

Benchmarking in expenditure assessment

The National Electricity Rules ('NER') require us to determine operating and capital expenditure allowances that reasonably reflect the efficient costs of providing safe and reliable electricity supply.

In doing so, the NER also require us to have regard to benchmarking when forming a view about the efficiency of a service provider's proposed expenditure.

Benchmarking is a useful tool that enables us to compare a service provider to its peers. By examining the cost of undertaking similar activities, we can determine how efficient the service provider is relative to its peers.

We have a number of benchmarking techniques. We developed these techniques as part of the Better Regulation process that commenced in late 2012.

The NER require us to have regard to benchmarking when determining efficient expenditure allowances.

Our approach

Our approach to benchmarking includes a process that captures a broad range of material from stakeholders. We set out this approach in the *Expenditure Forecast Assessment Guideline* (**the Guideline**) that we published in November 2013.

We developed the Guideline following extensive consultation and effective and inclusive consumer engagement throughout 2013. This consultation included numerous workshops with service providers and consumer representatives to seek their input in developing our benchmarking techniques.

Following the Guideline process, we collected independently audited data from each service provider in the National Electricity Market ('NEM'), which we then tested and validated in consultation with the service providers. We have used this data to develop and refine our benchmarking techniques.

While benchmarking is a key component of our approach, it is not all we consider. We use evidence from other sources to make a holistic decision.

Therefore, in making our final and preliminary decisions we have reviewed a large amount of material. This includes reports from experts engaged by the service providers by us and submissions from service providers, users, consumer groups and the Consumer Challenge Panel.

Overall, our approach is consistent with what we set out in the Guideline. Further details of our Guideline approach are available at <http://www.aer.gov.au/node/18864>.

Our assessment approach involves numerous benchmarking techniques, which we complement with other analysis to make a holistic decision.

Benchmarking for operating expenditure

As operating expenditure ('opex') is largely recurrent and predictable, we assess a service provider's proposed opex by developing our own estimate starting with the actual opex the service provider spent in one year of the previous regulatory period. We refer to this year as the '**base year**'.

We use our techniques to assess the efficiency of the base year. If we find the base year is materially inefficient, we adjust it. Then we apply a rate of change to account for changes in prices, productivity and the outputs the business is required to deliver. In certain circumstances, we may also include additional efficient costs.

We then compare our estimate with the service provider's proposal to determine if the proposal reasonably reflects the opex criteria.

Our application of opex benchmarking

For electricity distribution service providers, benchmarking is central to assessing the efficiency of the base year. We engaged Economic Insights to develop the following economic benchmarking techniques to assist with this, including:

- Multilateral total factor productivity (MTFP)
- Multilateral partial factor productivity (MPFP)
- Cobb Douglas stochastic frontier analysis (SFA)
- Translog least squares estimate regression, and

- Cobb Douglas least squares estimate regression.

Figure 1 shows the results of Economic Insights’ four opex modelling techniques (unadjusted for operating environment characteristics). A score of 1.0 is the highest score.

The historic opex of ActewAGL, Ausgrid, Endeavour Energy and Energex Ergon Energy and Essential Energy (**the ACT/NSW/QLD service providers**) have low efficiency scores, as shown in Figure 1. SA Power Networks is one of the better performers under each of the models.

We also conducted analysis using partial performance indicators (**PPIs**) and opex driver-based category analysis metrics. The results of these simpler benchmarking techniques are consistent with the Economic Insights benchmarking results.

With the assistance of our consultants, Deloitte and EMCa, we investigated the likely drivers of these benchmarking results. This analysis corroborated our benchmarking findings, and indicated that there was scope for Queensland, NSW and ACT service providers to achieve efficiency improvements.

As a result we did not use the current opex of these businesses as the starting point for our forecast of opex. We used our preferred benchmarking model as the starting point to arrive at an alternative estimate. In making this adjustment we:

1. accounted for the effect of operating environment circumstances not directly captured in the model
2. adjusted to a level consistent with the lower bound of the top quartile of efficiency scores (in this case, represented by the efficiency score for AusNet Services).

The resulting adjustments to base year opex for each of the ACT/NSW/QLD service providers are (\$2013-14):

ActewAGL	– \$22.1 million (32.8%)
Ausgrid	– \$118 million (24%)
Endeavour Energy	– no reduction
Essential Energy	– \$109.8 million (26.3%)
Energex	– \$63.6 million (15.5%)
Ergon	– \$36.5 million (10.7%)

For electricity transmission service providers, we produced MTFP, MPFP and PPI analysis. However, due to limited data, we were unable to draw conclusions about relative efficiency of base year opex.

Due to the absence of sufficient data, we were unable to conduct benchmarking to assess opex for gas or for interconnectors.

Figure 1 Opex modelling results

