



Summary of Workshop

Expenditure Forecast Assessment Guidelines

Working Group meeting No. 5

Summary of meeting – 13 March 2013

Economic benchmarking – distribution outputs and environmental factors

The AER hosted a working group meeting on 13 March 2013 as part of its *Better Regulation* package (the workshop). The Workshop was in relation to the development of the Expenditure forecast assessment guidelines (the Guidelines) and was chaired by AER General Manager Chris Pattas.

Attachment A contains a list of attendees.

The following is a broad summary of key topics and themes discussed at the workshop. Comments and views are not ascribed to any individual or organisation. The outline follows that of the agenda.

1 Introduction

AER staff explained that the purpose of the Workshop is to seek feedback from stakeholders on outputs and environmental factors that may be used when undertaking economic benchmarking of distribution network service providers (DNSPs).

AER staff provided a brief summary of the underlying theory of economic benchmarking and why it is relevant to the review of expenditure forecasts.

Economic Insights, in their role as consultant to the AER, provided a summary of the briefing notes that they had prepared in relation to the possible outputs and operating environment factors that may be used in economic benchmarking DNSPs. Economic Insights also presented a 'short list' of potential outputs and environmental factors.

The briefing notes and slides used in the presentation are available at: <http://www.aer.gov.au/node/19508>

2 Major issues for discussion and feedback from the workshop

Application of economic benchmarking

Discussion by stakeholders included the following:

- When discussing the proposed application of economic benchmarking, it was important to consider the counterfactual to cost benchmarking. It was suggested that all possible counterfactuals have errors and flaws.
- A stakeholder expressed the view that the proposed scope of economic benchmarking proposed by the AER is 'timid'.
- Proposals that compare businesses with past productivity levels may be problematic because studies suggest that the industry has experienced decreases in productivity levels recently.
- Economic benchmarking analysis undertaken by the AER should include information and data from many capital intensive industries and not just the electricity industries. It was suggested that benchmarking studies should not use monetary values to derive efficiency levels. Rather, they should be derived from the conversion of input quantities into output quantities.
- It is important to ensure that the efficient frontier is not defined 'too softly'.
- The point was made that it would be useful to obtain further guidance from the AER in relation to how and when economic benchmarking will be implemented particularly as it relates to the next round of reviews.
- It was suggested that the *National Electricity Rules* (the Rules) provide firms with a reasonable opportunity to recover efficient costs. The Rules also refer to concepts such as 'average efficiency' and that it is important for a firm to be rewarded for obtaining 'average efficiency' levels under any future economic benchmarking regime. It was also suggested that the Rules refer to an 'average WACC'.
- A number of conceptual issues arise when assuming that capital is 'fixed' in the short-run and when considering issues related to the notion of the 'short-run' and the 'long-run'.
- There is a need to consider the broad context of the proposed economic benchmarking work. This includes considering that network businesses employ assets with long lives. This was likened to the businesses in the mining sector that have 'investment cycles'. Reference was made to a report by the Productivity Commission.
- It is important to employ a consistent data set. Further, data needs to be collected efficiently to minimise the costs of collecting the data. It was suggested that the data collected by the AER for the purposes of economic benchmarking should be consistent with the current Regulatory Information Notices (RINs) in order to minimise costs for businesses.
- Reference was made to the AEMC report that suggested that eight years of data is required in order to have 'confidence' in results from economic benchmarking studies using TFP analysis. AER staff suggested that the purpose of the AEMC report was to identify the data required to set prices directly and that this is different to the purpose that the AER is looking to employ economic benchmarking. AER staff said that they will objectively consider how much data is required in order to undertake economic benchmarking analysis. It was noted that the AEMC report on TFP was conducted in the context of a rule change where TFP would only have been used only to set the rate of change of prices – the level of prices would still have been set by reference to revealed costs.

It was also noted that there was general concern with the process of implementing economic benchmarking and this included concerns that the AER may disregard problems with data and will

'back-cast' and then set future expenditure levels for DNSPs. AER staff noted that economic benchmarking would be one of a number of assessment tools used to assess expenditure forecasts in the next round of determinations. Further, AER staff noted that material data issues would be considered when assessing expenditure forecasts.

AER staff said they are looking to respond to these concerns. Further, it was looking to develop a 'strawman' model in order to provide a better understanding in relation to how economic benchmarking may be applied.

Outputs

Discussion by stakeholders included the following:

- When considering the 'short-list' of output variables proposed, it would be useful to disaggregate each variable by type of customer to the extent possible and meaningful.
- There is a problem with the inclusion of 'system capacity' as a measure of a DSNP's outputs because it will provide an incentive for DSNP's to increase network capacity above demand requirements. Others considered Economic Insights' analogy, where DNSP networks are akin to a road operator supplying road capacity where and when required but with little control over the amount of traffic actually using the road, persuasive.
- It is important to collect sufficient data now so that it can be used to conduct more extensive economic benchmarking at a later stage.
- Consumers do not conceptualise the variable 'peak-output' when consuming electricity. Rather, they are primarily concerned with reliability of the network.
- Peak-demand is a measure of output that has been used in many previous economic benchmarking studies of electricity industries. . A number of participants considered demand more meaningful as an output than capacity as it is a key driver of investment. They suggested that forecasting of non-coincident or spatial peak demand rather than coincident global peak demand would provide a better measure of network output.
- Businesses may not have the information required to assign accurate weights for outputs used in economic benchmarking models.
- In broad terms, the criteria in the 'short-list' proposed by Economic Insights are reasonable.
- It was noted that throughput was not a driver of costs.
- It was noted that customers value reliability and security. However, reliability of a network depends on decisions made four or five years previously. Therefore, it may be useful to include a variable that represents a 'lag' of investment into an economic benchmarking model.
- There was concern that some economic benchmarking models only use a limited number of outputs. For example, some previous studies by Economic Insights and PEG only employ one or two measures of outputs.
- Networks are built to facilitate capacity. There was concern that networks may appear 'inefficient' in an economic benchmarking study because businesses have built network capacity based on expected (forecast) future peak demand. The problem is that expected

future peak demand is uncertain and may not eventuate. It was suggested that investment performance should be considered against the information available at the time, particularly the forecast non-coincident maximum demand included in the latest regulatory determination.

- Questions were then raised about whether peak demand should be used as an output. An additional issue is that observed peak demand can be volatile.
- Throughput is not the best measure of an output for DNSPs.

Some stakeholders said they were keen to engage further at later stages in the process on proposed outputs that are to be used in economic benchmarking models.

There was broad support for a functional output specification over a billed output specification.

Environmental factors

Economic Insights referred to a study of New Zealand that suggested that an increase in customer density may either increase or decrease a network's costs, all else equal. Discussion included:

- The comparability of New Zealand networks with Australian networks
- Costs of installing or replacing substations in urban areas depend on a number of factors, including whether the site is a 'brown-field' site.
- It was noted that the accuracy of an economic benchmarking study may depend on the number of variables that can be incorporated. There may be constraints on with the number of environmental variables that can be included in an economic benchmarking model due to degrees of freedom considerations. There are also statistical issues associated with using environmental factors that are highly correlated with outputs. For example, customer density has been shortlisted as a potential environmental factor and is highly correlated with customer numbers which is a shortlisted output. Energy density is similarly correlated with energy delivered.
- The impact of environmental variables could be quantitatively tested through sensitivity analysis.
- Terrain and topography impacts on the costs and quantity of assets invested in an area. Other issues include the presence of railway corridors and other environmental factors that impact on costs. It is also the case that the impact of terrain and other environmental factors may change over time.
- Victorian distribution businesses are responsible for planning connections with transmission networks which may be an environmental difference in this jurisdiction. This is one of a number of significant environmental differences between the different jurisdictions.
- The results of economic benchmarking studies may be affected by variables that cannot be measured or are not included in the model. This does not necessarily mean that affected businesses are operating 'inefficiently'.

Attachment A: Attendee list

Melbourne office

Name	Organisation
Naomi Donohue	Energex
Anh Mai	SP AusNet
David Headberry	Major Energy Users
Bev Hughson	Darach Energy Consulting Services
Bruce Mountain	CME
Jeremy Rothfield	United Energy & Multinet
Chris Bell	ActewAGL
Megan Willcox	CitiPower & Powercor Australia
Jodi Wilcox	Aurora
Anton Murashev	Jemena Electricity Networks
Denis Lawrence	Economic Insights
John Kain	Economic Insights
Chris Pattas	AER
Su Wu	AER
Mark McLeish	AER
Andrew Ley	AER
Anthony Seipolt	AER
Jason King	AER

Sydney office

Name	Organisation
Shubha Sarma	Matrices Business Consulting Australia
Jim Bain	Energy Networks Association
Warwick Tudehope	Jemena
Damien O'Connor	SA Power Networks
Mark Hillsdon	Essential Energy
Kieran Shanahan	Endeavour Energy
Matthew Le Cornu	AER