

Expenditure Forecast Assessment Guidelines

Working Group meeting No. 14

Summary of meeting – 7 May 2013

Economic benchmarking – measurement of NSP inputs

On 7 May 2013, the AER, as part of its Better Regulation package, hosted a working group meeting on the economic benchmarking component of the development of the Expenditure forecast assessment guidelines (the Guidelines).

A full attendee list can be found at Attachment A.

This summary outlines the key topics and themes of the meeting, including views expressed at the meeting, without ascribing particular comments to any one individual or organisation.

1 *Introductions*

AER staff noted this workshop concluded phase two of the AER's consultation on the use of economic benchmarking.

In this workshop, AER staff sought feedback from stakeholders on issues relating to the measurement of inputs for economic benchmarking of network service providers (NSPs).

The AER's consultant, Economic Insights, summarised its briefing notes on measurement of inputs, provided a short list of data requirements and examples of different input specifications.

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*

Model Specification

Economic Insights noted that a narrow coverage analogous to the AER's network services group coverage would be adopted for distribution. It was noted that the corresponding coverage for transmission would be for prescribed services.

A stakeholder requested a mathematical representation and written discussion on how year on year changes would work.

AER staff noted that a model will be provided to stakeholders for the application workshop with explanatory documentation.

Economic Insights noted that in the meantime stakeholders may find it useful to look at the spreadsheet model Economic Insights prepared for the AEMC comparing productivity-based and building blocks regulation outcomes. While this model was aimed specifically at productivity-based regulation, many of the calculations would be the same as for economic benchmarking applications. The model is available at <http://www.aemc.gov.au/Market-Reviews/Completed/review-into-the-use-of-total-factor-productivity-for-the-determination-of-prices-and-revenues.html> under 'Preliminary Findings'.

Easements

AER staff noted they had received a submission suggesting that easements should be potentially excluded from economic benchmarking calculations.

A stakeholder noted that easements are still paid for by users, and should be treated like other costs. It was also noted that some NSPs were better than others at managing the use and cost of easements.

Stakeholders noted that easements were a sunk cost and exogenous to the control of networks.

AER staff asked if it might be appropriate to separate easements initially included in RABs and those acquired afterwards.

Economic Insights asked TNSP stakeholders to confirm they had easements on underground assets . Several TNSP stakeholders responded that they had easements on at least some underground assets.

A stakeholder requested that this and other questions should be put in writing to stakeholders so that they can be referred to experts within their organisations.

Network complexity

A stakeholder noted that issues concerning differences in network complexity (such as the boundary between transmission and distribution) affected transmission as well as distribution. Economic Insights noted that where DNSPs had more complex system structures, the associated TNSP usually had a simpler structure and vice versa.

Economic Insights noted that both the DNSP and TNSP data requirements had been formed with these issues in mind and attempted to identify where there were intermediate transformation steps in both distribution and transmission.

Economic Insights also noted that, as a cross-check or sanity check, comparison of the economic benchmarking efficiency results could also be performed across the jurisdictions' entire transmission plus distribution networks to recognise the different network complexities and boundary differences across jurisdictions and NSPs.

Data requirements

A stakeholder noted that it would be worth seeing the intended data templates before the draft decision.

AER staff noted that they are currently working with the categories analysis work stream and will try to release a consolidated template before the draft decision.

A stakeholder asked what years of data would be required.

AER staff noted that it would need backcast data for the next set of reviews and it was yet to be determined if current data were fit for purpose. AER staff also noted that the AEMC recommended eight years of data and that this would be a good starting point to consult on.

A stakeholder noted that the AER/ACCC has been regulating TNSPs for a long period and that this should provide sufficient data for a time series analysis.

A stakeholder suggested that historical data would not be good enough and that it should be eight years from today.

Economic Insights noted that the AEMC's eight year data requirement was for productivity trends to be used as the sole basis for setting the price cap and so there was a high hurdle. In this case economic benchmarking will be used to inform a building blocks decision and so the number of observations hurdle may not need to be as high.

Economic Insights asked if the AER will be requiring NSPs to provide backcasted data or whether the AER would undertake the backcasting based on information it currently holds?

AER staff noted that it will initially look at what data are currently available and see what gaps need to be filled. There are likely to be data gaps on quantities and operating environment variables. It would likely ask NSPs to provide relevant data from, say, 2005 onwards.

A number of stakeholders noted that while some of the data would be available much of it would have been prepared at a summary level only and not subject to audit. Sourcing financial data not already in the regulatory accounts would likely require the use of allocations.

AER staff noted that, wherever possible, backcast data would be limited to what is available directly from the NSPs systems.

A stakeholder noted that AEMO may be a better source for some components of Victorian transmission data such as network capacity and growth, and it would generally be necessary to add the transmission components of AEMO's costs to SP AusNet's transmission activities to obtain a like-with-like comparison with other TNSPs.

WACC

Stakeholders noted that the regulatory WACC is a benchmark WACC and that the benchmark varies from year to year.

A stakeholder noted that there was a strong relationship between the WACC and revenue.

A stakeholder asked how important the different WACCs are for benchmarking.

Economic Insights noted that the actual WACC for each year, the WACC from each NSP's most recent regulatory determination or the WACC from the most recent regulatory determination completed could be used. The WACC is only used to form part of the weight for capital inputs. Changes in the WACC hence affect the weightings of inputs but they do not affect the quantity of inputs used.

Stakeholders noted that changes in WACC from decision to decision have a material impact on them, particularly for those NSPs that have a large RAB.

However, Economic Insights noted that the materiality in terms of efficiency scores was an empirical question. If an NSP's inputs were all growing at roughly the same rate then even large changes in the WACC may have negligible effects on economic benchmarking results. However, if an NSP's inputs were growing at different rates then WACC changes could potentially be material due to their impact via the weightings used to form the total input quantity.

Stakeholders asked what was Economic Insight's preference.

Economic Insights noted that it did not have a strong preference at this stage.

A stakeholder asked why actual WACC is being considered, given that revenues are based on regulatory determination WACC. AER staff clarified that actual WACC was not likely to be considered as an option.

AER staff noted that this was a matter that would be considered further and a decision would be informed by the findings of the rate of return work stream of the Better Regulation program. They indicated a preference for the regulatory WACC rather than a business's actual WACC. AER staff also noted that it would be happy to receive suggestions on the appropriate WACC for use in economic benchmarking.

Stakeholders suggested that if a year on year WACC is used, an NSP could be seen as less productive due simply to a change in the WACC.

Economic Insights reiterated that the WACC only affects the weights used and, depending on relative movements in input quantities, efficiency results may be less sensitive to WACC changes than might at first be thought. It noted that using the WACC from the most recent regulatory determination completed could be the most appropriate but sensitivity analysis should be undertaken.

A stakeholder asked how the risk free rate would be accounted for because it is outside of the cost of capital.

AER staff considered that the risk free rate would be included.

Opex inputs

Economic Insights noted that either the average weekly ordinary time earnings (AWOTE) or the wage price index (WPI) could be used to obtain the quantity of labour component of opex for economic benchmarking as long as the same labour price measure was used consistently across all

parts of the building blocks framework. Economic Insights noted the WPI may be better in theory as it attempts to account for changes in labour quality over time. However, this is only likely to be the case when there are no abnormal labour market pressures. In recent years NSPs have faced considerable competition for field staff from the mining industry and, in practice, the AWOTE has more likely better captured 'classification creep' where NSPs are likely to have promoted staff to higher classifications to retain them rather than because their skill levels have increased. In these circumstances using AWOTE will result in a higher observed price for labour and, therefore, a lower quantity of labour and consequently a higher rate of measured productivity growth.

A stakeholder noted that the inclusion of the waste services industry in the new Australian Bureau of Statistics (ABS) electricity, gas, water and waste services (EGWW) sector was a source of concern as waste industry wages are generally lower than energy industry wages.

Economic Insights noted that it would be preferable to capture only energy related labour. But the ABS does not release measures for only electricity or gas, probably due to the confidentiality provisions in its Act. However, it would be worth trying to request this data from the ABS.

A stakeholder suggested that given the value of such information to regulatory determinations and the AER's long-term objectives for benchmarking, if there was demand for it, there could be value in engaging the ABS to produce a sole electricity and gas measure, provided any legal constraints the ABS faces can be overcome.

A stakeholder asked if the AER would adopt its chosen Labour index for benchmarking (using AWOTE or WPI) in regulatory determinations so that the basis for benchmarking and determinations are consistent. AER staff indicated this would be decided in regulatory determinations.

A stakeholder noted that vegetation management is contracted out more than in the past due to a greater focus on reliability and that the costs were tracked internally. This stakeholder noted that the change in their contractor prices did not appear to track with the labour indexes proposed. The counter point was made that the increased contracting of works was a common phenomenon across DNSPs.

AER staff noted that there could be scope to use a broader index and that the increasing use of contracting out to external parties in some NSPs is a result of efficiencies rolling through the industry.

A stakeholder asked how Economic Insights chose its opex breakdown.

Economic Insights noted that the opex break down and weights in the briefing note is from now dated work relating to the Victorian electricity DNSPs. This break down is indicative and is not necessarily the final break down. The final breakdown would take account of the work of the category analysis team. To the extent possible, the break down used for economic benchmarking would be the same as that used category analysis. This may require selection of a different set of Producer price indexes to more closely match the resulting break down.

Economic Insights also noted that it may be appropriate to use different weightings for TNSPs compared to DNSPs in forming the opex price index to be used in economic benchmarking.

Capital inputs

A stakeholder asked Economic Insights to again explain the difference between the system capacity measure for outputs and the quantities of capital inputs.

Economic Insights noted that the system capacity measure was the product of line length and the capacity of the final downstream stage of transformation. This is designed to reflect the system's capacity to supply power to end users. The quantity of lines capital inputs, on the other hand, was the summation of voltage classes' lengths multiplied by their respective weighted average MVA ratings and the quantity of transformer capital input was the capacity of transformers at all stages of transformation. This is designed to capture the quantity of all assets employed.

Economic Insights noted that current duplication in the outputs and inputs data lists would be removed from the consolidated list.

A stakeholder asked if system capacity would include interconnection.

Economic Insights confirmed that it would and that interconnectors would be treated the same as any downstream user.

A stakeholder noted that the lines data definitions did not include thermal ratings that were agreed in the previous workshop and noted that the briefing note definition would mean that a 10km and 100km line were not equivalently rated.

Economic Insights noted that the briefing note for the inputs workshop was sent to stakeholders before the outputs workshops had taken place. Positions agreed at the outputs workshops would be included in subsequent work.

A stakeholder noted that the main function of a transformer may be to step down, but there could still be a customer taking power from that transformer and it would be hard to distinguish the two uses in calculating system capacity.

Economic Insights noted that ideally these customers should be picked up and more thought needs to be given to how to handle this situation if it proves to be material.

A stakeholder questioned the use of the second and third capital input specifications and how it was possible to have a price derived by dividing a value by a constant price quantity series. It was noted that an example of these calculations work would be helpful. Economic Insights noted the concept was similar to that discussed earlier for opex and used standard empirical economics methods. Economic Insights referenced the spreadsheet model it had prepared for the AEMC (source given above) as an example of the general application of constant price quantity series.

A stakeholder noted that the 'other' category can be substantial for TNSPs because it includes substations components such as circuit breakers. While substations make up a substantial part of TNSP costs, transformers may only be a small part of substation costs.

AER staff asked if these costs were correlated with the size of the transformers.

A stakeholder stated that this may not necessarily be the case.

A stakeholder noted that other also included land, SCADA and motor vehicles and in the short term there could be sizeable differences with the price expressed as a function of MVA capacity.

Economic Insights noted that the first input specification assumes that the quantity of other capital is moving the same as transformers. The alternative would be to split it out and include it as a fourth capital input. However, this would require the asset value of other capital to be deflated by an appropriate price index and a suitable price index would be difficult to obtain so trade-offs have to be made.

A stakeholder noted that given the difficulty in separating out individual components of terminal/sub stations the RAB data lists could be reduced by rolling the RAB roll forward values of “terminal point connections to DNSPs” and “direct connection to end user (where equipment is owned by the TNSP)” into the “transmission switchyards, substations” category. Economic Insights agreed to look at doing this.

It was suggested that it might be informative to include a column explaining why data is required in the data tables.

A stakeholder noted that information on asset ages should be collected to allow later testing of the one hoss shay physical depreciation proxy assumption.

A stakeholder noted that the proposed RAB depreciation-based quantity proposed in the second specification may be problematic due to the use of different deflators for the initial capital base and capex components.

Economic Insights noted that this specification is similar to specification one however it is easier to calculate. Economic Insights also later pointed out that all series would first be converted to nominal terms so only one deflator would be used in deriving the quantity proxy.

A stakeholder noted that there may be problems with identifying a substation or a transformer while backcasting because different allocations may have been used in the past.

AER staff noted that the relevant values would be taken from the asset register.

Stakeholders noted that the asset register is not linked to the RAB and represents a book value, rather than a regulated value.

A stakeholder asked how the AER would deal with an NSP getting extra years of use from its assets.

AER staff noted that this will be captured in the calculated price of capital.

A stakeholder noted that in a previous workshop the AER Chairman had suggested that an increase in asset life from 50 to 52 years for one NSP due to its innovations in asset management would then be applied to all NSPs.

AER staff noted that this was in the context of the repex model, however this approach may have merit and AER staff would consider it in the context of economic benchmarking.

Attachment A: Attendee list

Melbourne office

Name	Organisation
Anh Mai	SP AusNet
Megan Wilcox	CitiPower & Powercor
Bruce Mountain	CME
Damien O'Connor	SA Power Networks
Michael Seddon	Transend Networks
Anthony Seipolt	AER
Lawrence Irlam	AER
Su Wu	AER
Jason King	AER
Kevin Cheung	AER

Sydney office

Name	Organisation
Andrew Kingsmill	Transgrid
Bill Jackson	ElectraNet
Guy Mutasa	Energex
Jeff Balchin	Incenta
Jim Bain	Energy Networks Association
Mark Hillsdon	Essential Energy
Matt Cooper	Ausgrid
Warwick Tudehope	Jemena
Andrew Ley	AER
Matt Le Cornu	AER
Denis Lawrence	Economic Insights
John Kain	Economic Insights