

29 August 2017

Evan Lutton
Assistant Director, Networks Branch
Australian Energy Regulator
GPO Box 520
Melbourne, VIC 3001

Via email: Evan.Lutton@AER.gov.au

Dear Evan,

Re: Review of transmission benchmarking model – Position Paper

We remain of the view that benchmarking results should be treated with caution because they are highly sensitive to model specification and operating environment factors. Productivity benchmarking is therefore not a precise tool and is better suited to identifying trends and high-level observations than it is to being used deterministically, particularly in transmission.

Notwithstanding this, we support the key recommendations set out in Economic Insights' Position Paper on its review of the transmission benchmarking model.

The Position Paper's key recommendations are as follows:¹

- Substitution of jurisdictional end-user numbers for the current voltage-weighted connections output;
- Adoption of revised output cost share weights derived from a Leontief cost function model applied to data for the 2006 to 2015 period; and
- Application of a cap of 5.5 per cent of gross revenue on the output share of energy not served with the cap being achieved by changes in the price of energy not served rather than its quantity.

Economic Insights have also recommended that the EB RINs be expanded to include data on the MVA capacity of transformers at connection points, to facilitate the potential use of this data to weight connection points in future model specifications.

Adopting the Position Paper's recommendations would address the most significant specification issues affecting the current transmission benchmarking model, principally in relation to its measurement of transmission output. AusNet Services' previous submission to this review provides detailed explanation of these issues, and the reasons why they should be addressed.²

As noted by Economic Insights, the recommended changes can be implemented immediately as they draw on robust data that are currently available.³ Accordingly, we strongly encourage the AER to reflect these changes in its 2017 annual benchmarking report, which is expected later this year.

¹ Economic Insights, *Review of Economic Benchmarking of Transmission Network Service Providers – Position Paper*, August 2017, p.37

² AusNet Services, *Submission to review of transmission benchmarking model – issues paper*, May 2017

³ Economic Insights, *Review of Economic Benchmarking of Transmission Network Service Providers – Position Paper*, August 2017, p.23

The remainder of this submission discusses why the recommendations outlined above should be adopted. Two other issues explored in the Position Paper are also briefly discussed.

Substitution of end-user numbers for the current voltage-weighted connections output

We strongly support the Position Paper's recommendation to adopt end-users in place of the current voltage weighted connections output. Implementing this change will address the significant model specification and comparability issues being caused by the current voltage weighted connections output. We also support Economic Insights' views that entry points do not necessarily need to be included in the end-user output measure and could be instead dealt with through OEFs, and that this approach maintains comparability with the DNSP benchmarking specification.⁴

As explained in our earlier submission, the voltage weighted connections output is impacted by a number of significant issues and, hence, is fundamentally flawed.⁵ These issues, which have been recognised in the Position Paper,⁶ are distorting the results being produced by the current model.

The benchmarking results shown in the Position Paper, which have been calculated using Economic Insights' preferred specification of end-users, indicate that the revised model is producing more intuitive and sensible outcomes than the current model.

In particular, adopting end-user numbers has resulted in a narrowing of productivity scores compared to the existing model. It has also removed the outliers that indicated specification issues with the current model. Figure 3 (a) from the Position Paper, which has been reproduced below, shows that, using the current voltage weighted measure, TasNetworks' 2015 MTFP score (1.2) is almost twice that of AusNet Services (0.69), Powerlink (0.71) and TransGrid (0.70). In contrast, Figure 3 (b) shows that, using end-user numbers instead, the 2015 MTFP scores are significantly more compressed, all falling within the range of 0.70 to 0.90.

⁴ Ibid., p.12

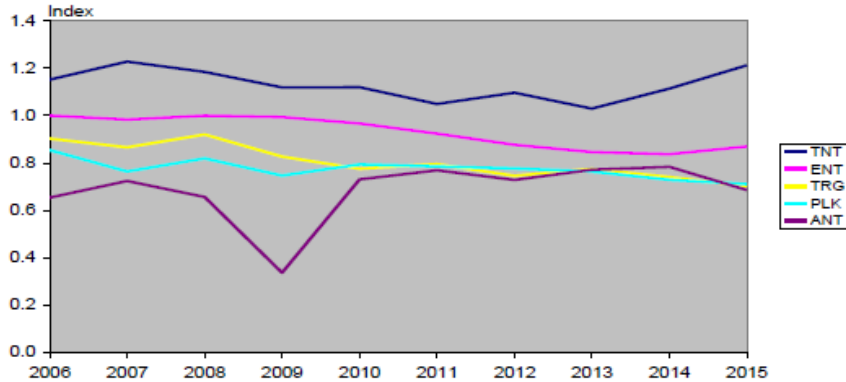
⁵ AusNet Services, *Submission to review of transmission benchmarking model – issues paper*, May 2017 p.3

⁶ Economic Insights, *Review of Economic Benchmarking of Transmission Network Service Providers – Position Paper*, August 2017, p.22

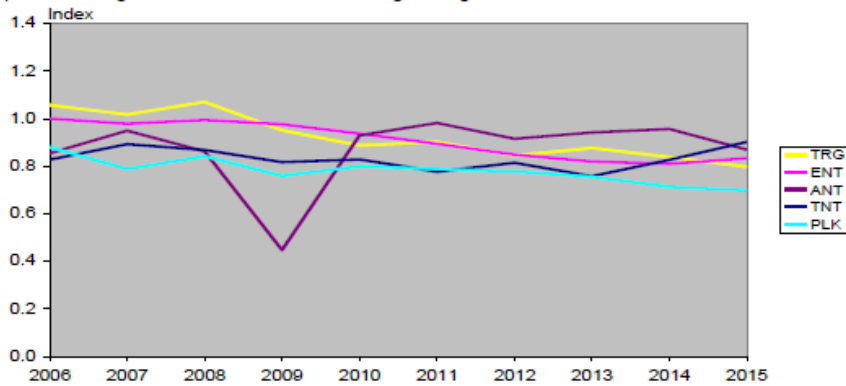
Figure 1: Reproduction of Position Paper’s Figure 3 (a) and Figure 3 (b)

Figure 3 Multilateral total factor productivity index by TNSP, 2006 to 2015

a) Using voltage-weighted connections



b) Substituting end-user numbers for voltage-weighted connections



Source: *Economic Insights, Review of Economic Benchmarking of Transmission Network Service Providers – Position Paper, August 2017, p.18*

The narrowing of productivity scores under the end-user numbers specification, as shown above in Figure 3 (b), indicates a more robust model. These results also more closely reflect the partial performance indicator differences that exist between the transmission networks, which are substantially less than those applying to distribution networks. In contrast, the current specification produces outlier results – for example, the significant gap between TasNetworks and the other TNSPs shown in Figure 3 (a) – that cast doubt over its robustness and, hence, usefulness to the AER and stakeholders. These results add to the body of evidence that end-users is a more robust and intuitive output measure than the voltage weighted connections output.

For the above reasons, we strongly encourage the AER to accept Economic Insights’ recommendation to substitute jurisdictional end-user numbers for the current voltage-weighted connections output. Accepting this change would mark a significant improvement in the robustness of the model, and allow it to be used in future regulatory processes as a useful efficiency indicator.

We also support in principle the Position Paper’s recommendation to expand the EB RIN to incorporate data on the MVA capacity of transformers at connection points. As stated in our earlier submission, using MVA capacity data to weight connection points would result in a significantly much robust output measure than the current, voltage weighted measure.⁷

⁷ AusNet Services, *Submission to review of transmission benchmarking model – issues paper*, May 2017 p.8

However, in considering this recommendation, the AER should take a pragmatic approach to ensure that any MVA capacity data collected through the RIN process is fit for purpose for benchmarking. Because TNSPs are likely to collect this data from a range of information sources (e.g. connection agreements), there is the potential for comparability issues to emerge between TNSPs, which could introduce a new bias into the model compared to a model using end-user numbers.

Accordingly, a decision to expand the EB RIN to include MVA capacity data should be informed by careful consultation with TNSPs to ensure the data is fit for purpose and, therefore, warrants the additional regulatory burden.

Finally, we support Economic Insights' view that OEFs should be used to account for differences that are not captured by its preferred specification.⁸ The use of OEFs to refine benchmarking models ensures that, to the extent possible, environmental differences between TNSPs that impact measured productivity are accounted for.

Adoption of revised output cost share weights

We consider that a balance is required between accounting for the most recent data, and ensuring a stable benchmarking model that is fit for the purpose for measuring productivity changes over time. We agree with Economic Insights that if output specification changes are made, it is necessary to re-estimate the output weights.

On this basis, we support the Position Paper's preferred, updated output weights, which have been calculated using the Leontief cost function. In line with good regulatory practice, these weights reflect more recent data than the previous set of weights used in the last annual benchmarking report and, hence, should be applied in future reports.

We note that the preferred weights differ materially in some respects to the previous weights – for example, the weight assigned to circuit length has increased from 29% to 38%.⁹ All else equal, this change is expected to improve the benchmarking performance of rural networks compared to the current model, due to these networks' relatively high output quantities for circuit length.

Application of a cap on energy not served

We support the Position Paper's recommendation to apply a cap of 5.5% on the value of energy not supplied as a share of gross revenue. Implementing this change will reduce the disproportionately large impact transmission outages have on the productivity scores being produced by the current model. Accordingly, we strongly encourage the AER to accept this recommendation.

Other issues

Counting connection points

Economic Insights considered that where multiple DNSPs connect to a terminal station, the voltage weighted connections output should count only a single connection point.¹⁰ We maintain that this approach creates an internal inconsistency in the benchmarking model.¹¹ However, due to the Position Paper's recommendation to replace the voltage weighted connections output with end-user numbers, we accept this position.

⁸ Economic Insights, *Review of Economic Benchmarking of Transmission Network Service Providers – Position Paper*, August 2017, p.23

⁹ *Ibid.*, p.31

¹⁰ *Ibid.*, p.15

¹¹ AusNet Services, *Submission to review of transmission benchmarking model – issues paper*, May 2017 p.9

Additive versus multiplicative capacity measures

AusNet Services' earlier submission considered that the current approach to calculating the MVAkms input creates a bias against TNSPs with relatively large volumes of high-voltage lines.¹² We submitted that this issue could be addressed by including a scale efficiency factor in the calculation to reflect the fact that the relationship between input cost and line capacity is not linear.¹³ Economic Insights did not favour this approach as it considered it would introduce a degree of arbitrariness into the model, and that any bias in the model against large TNSPs would be addressed by removing the voltage weighted connections output.¹⁴

We maintain our position that introducing a scale efficiency factor, or some mechanism to account for the fact that there is a non-linear relationship between input cost and line capacity, would improve the robustness of the model. The economic benchmarking model should continue to evolve to address shortcomings that are identified, as demonstrated by the recommendations discussed above (e.g. the introduction of a cap on reliability). Accordingly, while we recognise that calculating a scale efficiency factor would require engineering and economic analysis and a degree of judgement, this should not preclude it from being explored as a further model refinement.

We would welcome the opportunity to discuss this submission further with the AER and Economic Insights. If you have any questions regarding this submission, please contact Rob Ball, Senior Economist, on 03 9695 6281.

Sincerely,



Tom Hallam
General Manager, Regulation and Network Strategy
AusNet Services

¹² AusNet Services, *Submission to review of transmission benchmarking model – issues paper*, May 2017 pp.12-14

¹³ *Ibid.*, pp.12-14

¹⁴ Economic Insights, *Review of Economic Benchmarking of Transmission Network Service Providers – Position Paper*, August 2017, p.35