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Economists

Efficiency of Transgrid's base year operating expenditure

A report for Transgrid

13 December 2021

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Disclaimer

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1. Introduction

We have prepared this report at the request of Transgrid. Its subject is the efficiency of Transgrid's proposed base year (ie, 2021/22, FY22) operating expenditure (opex) that it has used as the basis to forecast operating expenditure for the regulatory control period commencing on 1 July 2023.

1.1 AER's approach to assessing forecast operating expenditure

The AER prefers to assess a transmission network service provider's (TNSP's) proposed opex using its 'base step trend' approach.[1]

This involves evaluating a TNSP's proposed opex by reference to its actual opex in a recent year – the 'base year' – provided the AER's assessment of that 'revealed expenditure' does not identify any evidence that it is materially inefficient. The AER undertakes this assessment of revealed opex using a range of approaches, including economic benchmarking.[2]

If the AER does not find any evidence that a TNSP's actual opex in the base year is materially inefficient, it then applies a 'rate of change' to project the efficient level of opex in future years, while applying additions or subtractions for step changes in costs that are not reflected in base year opex and an estimated annual rate of change.

The application of the base-step-trend approach reflects the AER's view that:[3]

- total opex is relatively stable and follows a predictable path over time; and
- the incentives to improve efficiency that arise from its various incentive schemes[4] mean that, for a business that is responsive to those incentives, actual past opex should be a good indicator of future efficient opex.

An important consequence of the base-step-trend approach is that it does not require a forensic examination of the individual components of a TNSP's actual or proposed forecast opex. Rather, the efficiency of actual opex in the base year and proposed future opex is assessed in aggregate.

There are however certain circumstances in which the AER will accept the separate treatment of a particular opex item outside of the base-step-trend approach. These costs are included as a 'category specific forecast' and, if accepted by the AER, are added to the level of forecast opex arising from the base-step-trend approach in each year.

1.2 Structure of our report

The remainder of our report is structured as follows, ie:

- in section two we describe Transgrid's category specific forecasts for opex, which are not included in the application of the AER's base-step-trend approach;
- in section three we explain the derivation of Transgrid's base year opex – Transgrid is proposing that FY22 is the base year for the purpose of its opex forecast, ie, the penultimate year of the current regulatory period; and

[1] AER, *Expenditure forecast assessment guidelines for electricity transmission*, November 2013, p 22.

[2] AER, *Expenditure forecast assessment guidelines for electricity transmission*, November 2013, p 22.

[3] See: AER, *Expenditure forecast assessment guidelines for electricity transmission*, November 2013, p 8; and AER, *Draft Decision – AusNet Services Transmission Determination 2022 to 2027 Attachment 6 Operating expenditure,* June 2021, p 13.

[4] For example, the efficiency benefit sharing scheme (EBSS), the service target performance incentive scheme (STPIS) and the capital expenditure sharing scheme (CESS).

- in section four we assess and present our conclusion on whether there is any evidence that Transgrid's forecast base year opex is materially inefficient.

2. Category specific forecasts

A category specific forecast is an amount that is included in a TNSP's opex forecast that is neither appropriate for inclusion in base opex nor to be the subject of a step change, but that nevertheless meets the criteria for efficient opex.[5]

These costs are separately forecast (a category specific forecast) and then added to the opex forecast that arises from application of the base-step-trend approach.

The AER's preference to apply the base-step-trend approach is again evident in its general apprehension to the use of 'category specific forecasts'. This reflects the AER's view that:[6]

> Some costs may go up, and some costs may go down—despite potential volatility in the cost of certain individual opex activities, total opex is generally relatively stable over time. …a business has an incentive to inflate its total opex forecast by identifying new and increasing costs, but it does not have the same incentive to identify declining costs in its forecasts. Consequently, there is a risk that providing a category specific forecast for opex items identified by the business may upwardly bias the total opex forecast.

Transgrid is proposing to adopt two category specific forecasts for opex in its revenue proposal. We review the appropriateness of Transgrid's proposed category specific forecasts below.

2.1 Benchmark debt raising costs

The AER has previously adopted a category specific forecast for debt raising costs for a range of network businesses to provide consistency between this benchmark cost allowance and the forecast cost of debt reflected in the rate of return cost building block.[7] The AER has previously explained that debt raising costs:[8]

> …include underwriting fees, legal fees, company credit rating fees and other transaction costs.

In our opinion it is therefore appropriate for Transgrid to include benchmark debt raising costs as a category specific forecast in its revenue proposal.

Further, we understand that Transgrid has engaged Frontier Economics to estimate the level of benchmark debt raising costs for the 2023-28 regulatory period, consistent with the AER's accepted estimation methodology.

2.2 Network support costs

The AER has previously approved the use of a category specific forecast for network support costs to facilitate the cost pass through process applied to these costs under the National Electricity Rules ('the rules).[9]

[5] AER, *Draft Decision – United Energy Distribution Determination 2021 to 2026 Attachment 6 – Operating expenditure*, September 2020, p 20.

[6] AER, *Draft Decision – United Energy Distribution Determination 2021 to 2026 Attachment 6 – Operating expenditure*, September 2020, p 20.

[7] See: AER, *Draft Decision – AusNet Services Transmission Determination 2022 to 2027 Attachment 6 – Operating expenditure*, June 2021, p 29; and AER, *Draft Decision – ElectraNet transmission determination 2018 to 2023 Attachment 7 – Operating expenditure*, October 2017, p 13.

[8] AER, *Draft Decision* – AusNet Services Transmission Determination 2022 to 2027 Attachment 3 Rate of return June 2021, p 8.

[9] See: AER, *Draft Decision – ElectraNet transmission determination 2018 to 2023 Attachment 7 – Operating expenditure*, October 2017, p 13; and NER, clause 6A.7.2.

Transgrid currently has three network support contracts in place in connection with its 'Powering Sydney's Future' (PSF) project, the cost of which is expected to be $1.5 million in the 2021/22 base year. Each of these contracts is due to expire prior to the next regulatory control period and, at present, Transgrid has not entered into any future network support contracts.

At this early stage, there are a range of projects that are the subject of an on-going Regulatory Investment Test-Transmission (RIT-T) process and for which a non-network option could form part of the yet-to-be identified efficient option, eg:

- back-up supply from diesel generators and compressed-air energy storage facilities in relation to the RIT-T for supply to Broken Hill; and
- voltage and thermal support from solar farms and battery facilities in relation to the RIT-Ts for supply in the Bathurst, Orange and Parkes areas in Central West New South Wales (NSW) and/or in the North West Slopes area.

We understand that Transgrid will adopt a category specific forecast for any forecast network support costs that are identified as efficient once the relevant RIT-T processes have been completed.

In our opinion, this approach is appropriate and consistent with the AER's approach to assessing forecast opex.

3. Derivation of base year operating expenditure

In this section we set out our understanding of the approach applied by Transgrid to derive its forecast FY22 base year opex.

The AER typically calculates base year opex by removing from the level of 'total opex' reported in the regulatory information notice (RIN):

- any movements in provisions that occurred in that year;[10] and
- one-off expenditure items that are inconsistent with the presumed recurrent nature of base year opex and therefore not appropriate to be trended forward.

We understand from Transgrid that it will ultimately calculate its base year opex by removing from total opex reported in the RIN:

- any movements in provisions;
- non-recurrent expenditure related to bush-fires, which is the subject of a cost-pass through; and
- non-recurrent expenditure on the implementation of a cloud-based solution to replace its enterprise management system.

We comment below on the removal of these three opex items and on the approach applied by Transgrid to derive a forecast of base year opex, since actual opex is not yet available for the base year.

3.1 Removal of movements in provisions

Transgrid proposes to deduct any movement in provisions in the calculation of its base year opex.

The AER explained in its Expenditure Forecast Assessment Guideline for Electricity Transmission that it will:[11]

> …likely assess base year expenditure exclusive of any movements in provisions that occurred in that year.

Consistent with this guidance, the AER has removed movements in provisions in its previous determinations.[12] In our opinion, the deduction of any movements in provisions in the calculation of Transgrid's base year opex is therefore consistent with the AER's approach.

3.2 Removal of bush fire costs

For the purposes of calculating base year opex, Transgrid proposes to deduct from its actual opex in FY22 the costs associated with bushfires that occurred between September 2019 and February 2020 in Northern NSW, Central NSW and Southern NSW/Snowy Mountains.

Actual and expected costs associated with these bush fires were the subject of a positive cost pass through that was approved by the AER in May 2021, for recovery over the FY23 to FY25 period.[13]

[10] AER, *Expenditure Forecast Assessment Guideline for Electricity Transmission, November 2013, p 22.*

[11] AER, *Expenditure Forecast Assessment Guideline for Electricity Transmission, November 2013, p 22.*

[12] AER, *TasNetworks 2019-24 - Transmission - Final decision - Opex Model - April 2019*, 'Input | Reported Opex' worksheet, cell M41.

[13] AER, *Decision – Cost pass through Transgrid's 2019-20 bushfire natural disaster event*, May 2021, p 6.

In its decision to approve that positive cost-pass through the AER highlighted that:[14]

> …the operating expenditure that Transgrid incurs within the current regulatory period as a result of the positive change event will not be assumed to be part of Transgrid's recurrent opex requirements in the following regulatory period under our base-step-trend forecasting approach.

In our opinion, the removal of opex associated with these bushfires is therefore consistent with the approach that the AER is expected to apply in its assessment of Transgrid's base year opex.

3.3 Removal of non-recurrent SaaS implementation costs

Transgrid's enterprise management system, Elipse, reaches the end of its economic life in 2022 and is to be replaced by a cloud-based (software as a service, or SaaS) solution. Further, we understand that recent guidance published by the International Financial Reporting Standards (IFRS) Interpretations Committee (IFRIC) requires these SaaS implementation costs to be expensed, rather than capitalised, as they would have been prior to the new guidance.

The consequence of these circumstances is that Transgrid's FY22 opex budget includes $24.1 million (dollars of the day) of expenditure on SaaS implementation costs. In Transgrid's opinion, this level of expenditure on SaaS implementation is materially different to its expected recurrent level of SaaS implementation costs.

Transgrid has therefore removed from its FY22 opex budget the component of its FY22 SaaS implementation costs that it deemed to be above its expected typical recurrent cost. It calculated this downwards adjustment equal to its FY22 SaaS implementation costs less the average annual SaaS implementation costs it expects over the forthcoming regulatory period.[15]

The removal of significant one-off expenditure items from the base year is consistent with the presumed recurrent nature of base year opex. On this basis, Transgrid's proposed reduction in base year expenditure to reflect the unusually high level of SaaS implementation costs in that year appears to be consistent with the AER's base-step-trend approach.

3.4 Forecast of base year opex

The AER will ultimately assess Transgrid's actual (revealed) opex in the FY22 base year, as reported in the RIN.

The level of 'total opex' reported in the RIN does not include network support costs or debt raising costs, thereby avoiding any potential double counting of opex between Transgrid's proposed category specific forecasts and the base year.

However, since actual opex is not yet available for FY22, Transgrid's proposal is based on its internal budget for opex relating to its prescribed transmission services in FY22, which includes a limited amount of network support costs ($1.5 million, dollars of the day).

We understand that, for the purpose of *forecasting* base year opex in its regulatory proposal, Transgrid therefore removed these network support costs from its FY22 budget opex, in addition to the deductions noted in sections 3.1, 3.2 and 3.3.

For the avoidance of doubt, we also understand from Transgrid that the internal opex budget used to derive FY22 base year opex included no debt raising costs or yet-to-be capitalised operating expenditure

[14] AER, *Decision – Cost pass through Transgrid's 2019-20 bushfire natural disaster event*, May 2021, p 5.

[15] Transgrid calculated this downwards adjustment equal to $24.1 million less $4.7 million (dollar of the day terms), where the latter is the average annual forecast expenditure on SaaS implementation costs during FY24 to FY28.

associated with the Network Capability Incentive Parameter Action Plan (NCIPAP),[16] which will similarly not be included in the level of 'total opex' reported in the RIN.

We summarise Transgrid's calculation of FY22 base year opex in Table 3.1.

Table 3.1 – Transgrid's calculation of base year opex in FY22

	Amount (dollars of the day, million)	Amount (FY23 end of year dollars, million)	Reason for exclusion
FY22 opex budget	$215.62	$223.48	
Less budgeted movements in provisions	-$4.86	-$5.03	AER established approach
Less budgeted bush-fire costs	-$21.60	-$22.39	Non-recurrent expenditure
Less non-recurrent SaaS implementation costs	-19.45	-20.16	Non-recurrent expenditure
Less budgeted network support costs	-$1.50	-$1.55	Avoid any future double-counting with category specific forecast. It will not be necessary to make this deduction from 'total opex' as reported in the RIN.
Proposed base year opex	**$168.21**	**$174.35**	

Source: Transgrid, operating expenditure model, 7 December 2021.

In our opinion, the approach applied by Transgrid to derive its forecast of FY22 base year opex, as described in this section, is consistent with the approach that the AER is likely to apply based on the methodology it has adopted for other network service providers.

[16] The NCIPAP is part of the STPIS incentive scheme applying to TNSPs.

4. Efficiency of proposed base year operating expenditure

The AER will apply a range of approaches to assess the efficiency of a TNSP's opex in the base year, including economic benchmarking.[17]

We explain in a separate report entitled '*Assessment of Transgrid's benchmarking performance*' (our 'benchmarking report') that the AER can be expected to adjust revealed opex in the base year only if its benchmarking results suggest that level of opex is 'materially inefficient'.[18] This approach reflects:[19]

- the limitations recognised by the AER of economic benchmarking analysis for TNSPS, as described in our benchmarking report; and
- the AER's view that, for a business that is responsive to the incentive mechanism in the regulatory framework, actual past opex should be a good indicator of future efficient opex.

The analysis in our benchmarking report indicated that for the most recent year for which the benchmarking analysis is available (ie, FY20):[20]

> …Transgrid's relative opex MPFP performance places it within close proximity to the outcomes for other TNSPs (with the exception of TasNetworks, whose performance is not representative of the outcomes for a stand-alone TNSP).
>
> Further, Transgrid's opex MPFP shows improvement over time, consistent with Transgrid responding to the incentives it faces under the regulatory framework.

We therefore concluded that the AER's economic benchmarking has identified no evidence that Transgrid's actual opex in FY20 is materially inefficient, or that the incentive-based regulatory framework administered by the AER is not working as intended.[21]

4.1 Implications for forecast opex in the FY22 base year

There is currently no data available by which directly to benchmark Transgrid's expected base year opex. We therefore draw inferences as to whether that level of opex is likely to be materially inefficient by reference to a comparison of the relative efficiency implied by:

- Transgrid's actual opex in FY20, for which we found no evidence of material inefficiency; and
- Transgrid's budget opex in FY22.

The AER generally uses the level of total opex reported in the RIN as a basis for its economic benchmarking. However, the level of total opex reported in the RIN in FY22 is currently expected to include significant one-off costs that were beyond Transgrid's control, ie, $21.6 million of costs related to the bushfires (discussed in section 3.2).

In our opinion opex efficiency in the base year is best assessed by the exclusion of bushfire costs for the purpose of economic benchmarking, instead of including those costs in total opex and qualitatively assessing their contribution to any perceived inefficiency. The exclusion of bush fire costs is also consistent with the

[17] AER, *Annual benchmarking report electricity transmission network service providers*, November 2020, footnote 26, p 15.

[18] HoustonKemp, *Assessment of Transgrid's benchmarking performance*, 6 December 2021, p 9.

[19] HoustonKemp, *Assessment of Transgrid's benchmarking performance*, 6 December 2021, pp 7 to 9.

[20] HoustonKemp, *Assessment of Transgrid's benchmarking performance*, 6 December 2021, p 15.

[21] HoustonKemp, *Assessment of Transgrid's benchmarking performance*, 6 December 2021, p 13.

AER's guidance that that these costs will not be treated as recurrent opex under its base-step-trend approach.[22]

In our opinion, there is also a basis to exclude the newly expensed SaaS implementation cost that remain in Transgrid's base year opex (being the recurrent level of SaaS implementation costs) for the purpose of comparison with its actual opex in FY20. This is because the change in accounting standards that led to the expensing of these costs (as discussed in section 3.3) occurred after FY20, with the consequence that there were no SaaS implementation costs included in opex in FY20. A conclusion derived on this basis would reflect an assumption that the effect on opex efficiency of this change in accounting standards will be similar across all TNSPs.

Nevertheless, for the purposes of consistency we have assessed the efficiency of Transgrid's base year opex by reference to its proposed base year opex, which includes $4.7 million (dollars of the day) of recurrent SaaS implementation costs. For the reasons we discuss above, this is an inherently conservative approach to assessing the efficiency of Transgrid's base year opex.

We would not expect the AER to exclude any SaaS implementation costs for the purpose of applying its benchmarking model in FY22, as the change applies across all TNSPs. We note that the impact of the change in the IFRS standard on other TNSPs will depend on the extent to which they have also currently been treating these SaaS implementation costs as opex, rather than capitalising them.

We have therefore estimated Transgrid's forecast opex MPFP in FY22 by reference to:

- its budgeted 'total prescribed opex' ($215.62 million) less bush fire costs ($21.60 million) and newly expensed, non-recurrent SaaS implementation costs ($19.45 million), ie, $174.57 million in dollars of the day; and
- forecast output measures.

We present the forecast output measures for FY22 provided to us by Transgrid in Table 4.1.

Table 4.1 – Transgrid's forecast outputs in FY22

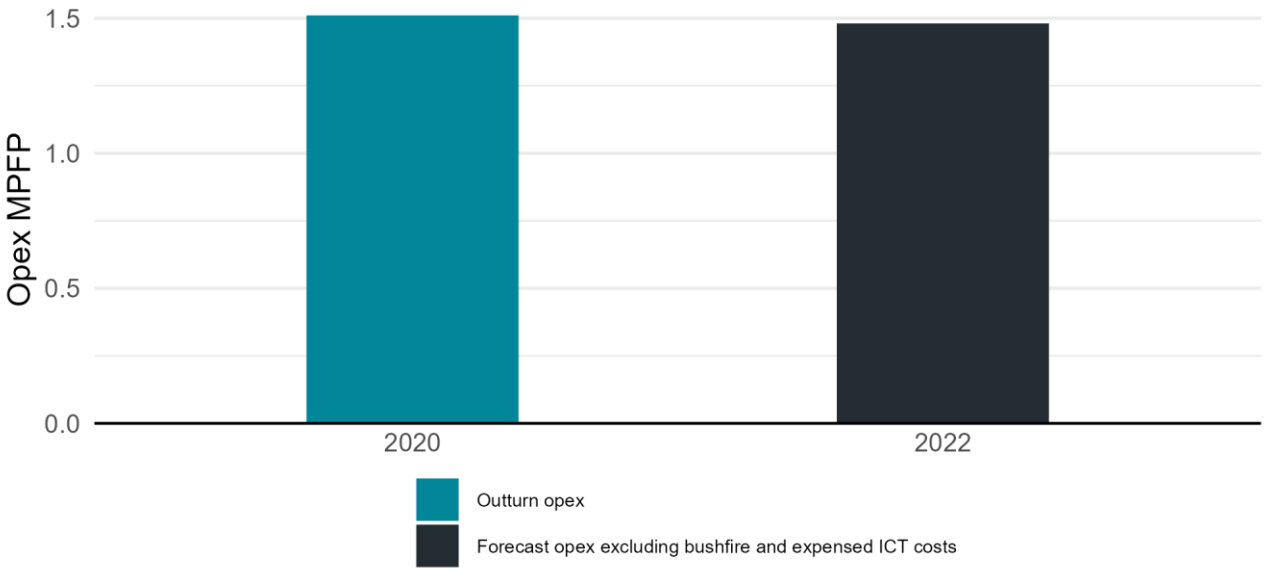
Measure of output	Unit	FY22 (forecast)
Total energy transported	Gigawatt hours	71,076
Maximum demand	Megavolt amperes	18,886
Circuit length	Kilometres	13,039
Customer numbers	Customers	4,052,993
Energy not supplied	Megawatt hours	95.6

Source: Transgrid, Rate of Change inputs, 26 Nov 2021.

We present in Figure 4.1 estimates of Transgrid's opex MPFP score in FY20 based on its actual opex and in FY22 based on its budgeted opex, exclusive of bush fire costs and newly expensed, non-recurrent SaaS implementation costs.

[22] AER, *Decision – Cost pass through Transgrid's 2019-20 bushfire natural disaster event*, May 2021, p 5.

Figure 4.1 – Estimated Opex MPFP scores for Transgrid in FY20 and FY22



4.2 Conclusion

The opex MPFP scores illustrated in Figure 4.1 indicate that Transgrid's forecast MPFP score in FY22 (excluding one-off bushfire costs and newly expensed, non-recurrent SaaS implementation costs) is not materially different from its opex score in FY20 based on actual opex. This reflects that the comparative increase in Transgrid's budgeted opex in FY22 is expected to be accompanied by a commensurate increase in outputs.

Since we concluded in our benchmarking report that the AER's economic benchmarking analysis has identified no evidence that Transgrid's actual opex in FY20 was materially inefficient, in our opinion it is reasonable to conclude that the same applies to Transgrid's budgeted opex in FY22.

We conclude from this analysis that there is no evidence to suggest that Transgrid's budgeted opex in FY22 is materially inefficient or that the AER should apply any adjustments to Transgrid's budgeted base year opex.[23] These findings also suggest that the base-step-trend approach to opex forecasting would be appropriate for the 2023-28 regulatory period.

[23] We note that our conclusion reflects the underlying assumption that the effect on opex efficiency of the new IFRS requirements regarding the expensing of certain ICT costs (see section 4.1) will be similar for all TNSPs.

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