Memorandum

**From:** Denis Lawrence   **Date:** 6 August 2018

To: AER Opex Team

Subject: Assessment of Ausgrid's proposed base year opex

Economic Insights has been asked to undertake additional economic benchmarking modelling to assess the likely efficiency of AGD's proposed base year opex. To do this we have extended the economic benchmarking modelling from the AER (2017) Annual Benchmarking Report to include actual data for AGD for 2017 and forecast data for AGD for 2018 and 2019.

Figure 1: **DNSP multilateral opex partial productivity indexes, 2006–2016, with AGD forecast to 2019**
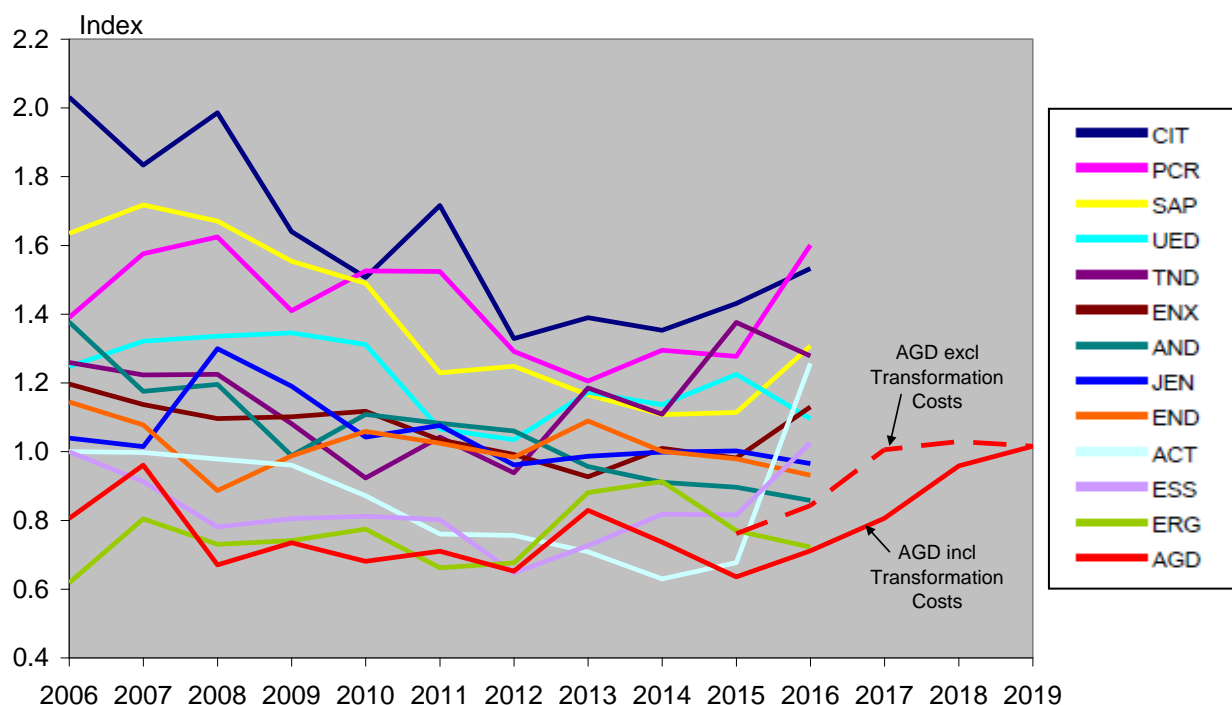
Opex MPFP results are presented in figure 1. Separate opex MPFP series for AGD for 2015 to 2019 are presented with AGD's transformation costs included and excluded. Transformation costs comprise redundancy payments and costs associated with 'stranded' labour.

Looking at AGD's performance when transformation costs are included first, AGD lay in 13th place in terms of opex MPFP levels in 2016. AGD's opex MPFP level then increased by 13.3 per cent in 2017 (noting that this still included a significant amount of redundancy payments). It then increases by a further 18.9 per cent in 2018 (based on its forecast opex) and

a further 6.0 per cent in 2019. If we compare AGD's opex MPFP level in 2018 with those of the other DNSPs in 2016, AGD would lie in tenth position, behind PCR, CIT, SAP, TND, ACT, ENX, UED, ESS and JEN and just ahead of END. AGD's forecast 2019 opex MPFP level would move it up to ninth place in the 2016 rankings to lie between ESS and JEN.

Looking next at AGD's performance when transformation costs are excluded, AGD lay in 12th place in terms of opex MPFP levels in 2016. AGD's opex MPFP level then increases by 19.3 per cent in 2017, increases by a further 2.4 per cent in 2018 (based on its forecast opex) before declining by 1.3 per cent in 2019. If we compare AGD's opex MPFP level in 2017 with those of the other DNSPs in 2016, AGD would lie in ninth position, behind PCR, CIT, SAP, TND, ACT, ENX, UED and ESS and ahead of JEN, END, AND and ERG. AGD's forecast ranking in 2018 and 2019 on the same basis would remain at ninth. Transformation costs are forecast to be zero by 2019. The effect of excluding transformation costs from the analysis is that AGD achieves its ranking of ninth in 2017 instead of 2019.

Turning to the econometric cost function analysis, the SFACD parameters from the AER (2017) Annual Benchmarking Report are combined with the actual and forecast outputs for AGD to roll forward AGD's mid–point target opex to 2017–2019 and AGD's actual and forecast opex are compared with that target series. In the first instance the same operating environment factor margin of 11.7 per cent is used as that adopted in the AER (2015) AGD Final Determination modelling. AGD would still require significant cuts to its opex in 2016 and 2017 to achieve the target levels of opex but it comes very close to achieving the target in 2018 and does better than the 2019 target opex levels based on its forecast opex for 2018 and 2019 (ie it would not require cuts to its opex in those years). Relevant data are presented in table 1.

Table 1: **AGD target, actual and forecast opex with 12.9 per cent OEF, 2016–2019**

Year	2016	2017	2018	2019
Target opex ($'000RY2016)	420,188	430,417	440,490	450,162
Including transformation costs:				
Actual/forecast opex ($'000RY2016)	588,179	519,811	440,876	417,938
Opex reduction to achieve target ($'000RY2016)	167,991	89,394	387	0
Opex reduction to achieve target (%)	28.6%	17.2%	0.1%	0.0%
Excluding transformation costs:				
Actual/forecast opex ($'000RY2016)	496,246	416,667	410,529	417,938
Opex reduction to achieve target ($'000RY2016)	76,058	0	0	0
Opex reduction to achieve target (%)	15.3%	0.0%	0.0%	0.0%

If transformation costs were excluded from AGD's opex, a cut would still be required to AGD's opex in 2016 to achieve the target opex level but the target is now achieved in 2017, as well as in 2018 and 2019. The cut required in 2016 is, of course, smaller than the one that would be required based on AGD opex including transformation costs (see table 1 above).

We also examined the use of a smaller set of 'core' OEFs which include subtransmission, license conditions, OH&S and termites but exclude the accumulated other and capitalisation components used in the AER (2015) AGD Final Determination. The core OEFs lead to an

OEF margin of 6.9 per cent (instead of 11.7 per cent) in setting the target. Larger cuts to AGD's opex would be required to achieve the target opex levels in 2016 and 2017 and a small cut in 2018 but no cuts would be required in 2019. That is, the forecast 2018 AGD opex level is 4.4 per cent higher than the target for that year but the forecast 2019 AGD opex level achieves the target, even with the much less generous OEF treatment. If AGD's transformation costs are excluded from opex, the more onerous target level is achieved in both 2018 and 2019, and 2017 opex is within 1 per cent of the target. The results are presented in table 2.

Table 2: **AGD target, actual and forecast opex with 6.9 per cent OEF, 2016– 2019**

Year	*2016*	*2017*	*2018*	*2019*
Target opex ($'000RY2016)	402,132	411,921	421,561	430,817
Including transformation costs:				
Actual/forecast opex ($'000RY2016)	588,179	519,811	440,876	417,938
Opex Reduction to achieve target ($'000RY2016)	186,047	107,890	19,315	0
Opex Reduction to achieve target (%)	31.6%	20.8%	4.4%	0.0%
Excluding transformation costs:				
Actual/forecast opex ($'000RY2016)	496,246	416,667	410,529	417,938
Opex Reduction to achieve target ($'000RY2016)	94,114	4,746	0	0
Opex Reduction to achieve target (%)	19.0%	1.1%	0.0%	0.0%

The opex MPFP results are presented in the file 'Economic Insights AER AGD Opex MPFP Results excl Transf Costs 6Aug2018.xls'. It should be noted that the opex MPFP analysis includes two additional outputs (energy throughput and reliability) compared to the cost function analyses but includes less adjustment for operating environment differences. The results for the SFACD cost function analysis using 11.7 per cent OEF are presented in the file 'Opex base year adjustment AGD Full OEFs 6Aug2018.xlsx' while the results using the core OEF of 6.9 per cent are presented in the file 'Opex base year adjustment AGD Core OEFs 6Aug2018.xlsx'.

References

Australian Energy Regulator (AER) (2015), *Final Decision: Ausgrid Distribution Determination 2014–15 to 2018–19 – Attachment 7: Operating Expenditure*, Melbourne, April.

Australian Energy Regulator (AER) (2017), *Annual benchmarking repor*t *– Electricity distribution network service providers*, Melbourne, November.

Economic Insights (2017), *Economic Benchmarking Results for the Australian Energy Regulator's 2017 DNSP Benchmarking Report*, Report prepared by Denis Lawrence, Tim Coelli and John Kain for the Australian Energy Regulator, Eden, 31 October.