AUSTRALIAN ENERGY REGULATOR

Explanatory note – Return on assets

The Australian Energy Regulator (AER) reports four regulatory profitability measures for regulated networks and accompanying explanatory notes.

This note explains our approach to reporting on the return on assets (ROA) for the electricity network service providers (NSPs) we regulate. This note also explains factors to consider when interpreting ROA:

- What is ROA
- How to interpret ROA
- How we calculate ROA

What is ROA

ROA is a simple and commonly used ratio, indicating how profitable a company is relative to its total assets. ROA is suited to capital intensive businesses and allows us to compare NSPs' profits against their allowed rates of return.

We calculate ROA using the following formula:

$$\text{ROA} = \frac{\text{EBIT}}{\text{Capital base}}$$

Where:

- EBIT is earnings before interest and tax
- Capital base is the value of the NSP's assets at the start of the regulatory year– that is, the opening regulatory asset base (RAB)

How to interpret ROA

Our regulatory framework targets a real rate of return, compensating NSPs for actual inflation outcomes and preserving the purchasing power of NSPs and investors. To capture these two components of our framework, we report the:

- Real rate of return, which excludes inflation and is compared against the real pre-tax rate of return
- Nominal rate of return, which includes inflation and is compared against the nominal pre-tax rate of return

An NSP's ROA can be compared against:

- Its allowed rate of return
- ROA for other NSPs in the sector
- Australian and international regulated businesses where the RAB is valued on a similar basis to the NSP

It is difficult to compare an NSP's ROA directly to those of unregulated businesses. This is due to the unique characteristics of the RAB under the regulatory framework and the resulting rules for regulatory accounting, which differ to statutory accounting requirements.

Factors contributing to differences between ROA and the allowed rate of return

Factors that can influence differences in the ROA relative to the allowed rate of return can include strong NSP performance under incentive schemes and against allowances.

An NSP's returns can also temporarily deviate from its allowed rate of return in a given year due to the application of the regulatory framework. These factors can affect how regulated revenues are recovered from customers in subsequent regulatory years and should be considered when interpreting the ROA. These can include:

- Revenue smoothing
- Unders and overs arrangements
- Cost pass throughs and other pass through events

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- Transitional decisions and remittal processes, such as the NSW/ACT remittal
- Jurisdictional schemes, such as solar bonus schemes and feed-in tariffs

Revenue smoothing

Allowed revenues for an NSP are calculated using the various building block costs, which result in an annual revenue requirement.

These revenues are smoothed over the regulatory period to avoid material changes between yearly revenues. This smoothing results in a series of 'X–factors', which are a key driver of annual network revenue targets.

Due to smoothing, the profile of target revenues over the regulatory period often differs to what would have resulted from the raw (unsmoothed) building blocks.

Unders and overs arrangements

NSPs operating under a revenue cap may recover above or below their allowed revenue target in a given year due to differences between forecast and actual demand. The unders and overs arrangement evens out any over or under spends in subsequent years so NSPs recover their allowed revenue in net present value terms over time.

Cost pass through events

A cost pass through mechanism recognises that an NSP may be exposed to material cost changes beyond its control. Cost pass through events, when approved, allow an NSP to recover costs that were not built into its revenue determination, or return costs that it will no longer incur.

Other pass through events

Electricity distribution NSPs also recover other pass through revenues, including revenue earnt on behalf of transmission NSPs and revenue related to jurisdictional schemes.

An electricity distribution NSP may under or over recover revenues for these pass throughs in a given year, resulting in its returns deviating from allowances.

An electricity distribution NSP must operate an unders and overs account for both transmission and jurisdictional scheme revenues. This allows the NSP to recover its allowed revenue in net present value terms over time.

The financial performance dataset includes an option to calculate an NSP's ROA inclusive and exclusive of pass through revenues.

NSW/ACT transitional decision and remittal

Analysis for the NSW/ACT electricity distribution NSPs over the 2014–19 regulatory period should be interpreted with caution. Reported revenues for those years are not adjusted for:

- The transitional decision in 2015, which set a higher revenue target than what was in the final regulatory determination. Revenues recovered in 2015 were therefore materially higher than the final decision. This over recovery was returned to customers over the remainder of the regulatory period.
- Our 2014–19 regulatory determinations, which were set aside after NSPs appealed them. During the appeal period, we accepted undertakings by NSPs on how they would recover revenues for years 2017–2019. These undertakings resulted in NSPs collecting more revenue than what the final remittal decision provided. Any revenue over recoveries from this process are being returned to customers in the 2019–25 regulatory period.

Queensland solar bonus scheme

During the 2010–15 regulatory period for Energex and Ergon Energy, we included forecast solar bonus scheme payments in the opex allowance. We included a pass through mechanism for any difference to be applied two years later during the annual pricing process. Uptake of this scheme materially exceeded forecasts. This resulted in substantial under recoveries during regulatory years 2014 and

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2015, which were recovered through higher revenue targets in 2016 and 2017.

In the 2015–20 regulatory period, solar bonus scheme amounts were recovered through a different mechanism (a jurisdictional scheme obligation). This fed into distribution charges as part of the annual pricing process.

Due to the changing treatment of this scheme, the switch in our model to remove pass through events does not 'zero out' the scheme's specific impacts as applied in the 2010–15 regulatory period. As a result, returns in regulatory years 2014 and 2015 appear lower than they otherwise would, and returns in 2016 and 2017 appear higher than they otherwise would.

ACT Government's feed-in tariffs for large-scale renewable energy generation

Evoenergy must apply to the ACT Government to recover reasonable costs in relation to the feed-in tariff for large-scale renewable energy generation. As application occurs in the middle of the regulatory year, Evoenergy must use forecasts rather than actual expenditure. This can result in large over or under recoveries of jurisdictional revenue.

Due to this, there has been substantial over recoveries of jurisdictional revenue in regulatory years 2018, 2019 and 2020, and a substantial under recovery in 2021.

As a result, when determining the ROA inclusive of jurisdictional schemes, returns in regulatory years 2018 and 2019 appear higher than they otherwise would, and returns in 2020 and 2021 appear lower than they otherwise would.

How we calculate ROA

This section sets out our approach and data sources for calculating ROA. This approach aims for the best possible comparison of NSPs' actual returns against allowed returns on capital. We source data for calculating ROA from:

- The latest approved or proposed roll-forward models (RFMs) for the NSP
- The latest approved or proposed post-tax revenue models (PTRMs) for the NSP
- The NSP's annual data submissions, including through regulatory information notices (RINs)

Revenue and expenditure

For electricity distribution NSPs, we source revenue and expenditure data from the income worksheet of the annual reporting RINs. For electricity transmission NSPs, we source that data from the disaggregated income statement of the annual regulatory accounts.

This data only relates to core regulated services for electricity NSPs, which are:

- Standard control services for distribution
- Prescribed transmission services for transmission

Revenue excludes the following:

- Capital contributions: These are not included in the RAB and are not used in to calculate returns in the regulatory framework.
- Interest income: This is excluded as it is not part of the regulatory framework.
- Profit from the sale of fixed assets: Disposals (gross proceeds from an asset's sale) are removed from the RAB. The value of disposals in any given year is not used to calculate returns for that year and is therefore excluded from our annual calculations.

  Disposals, however, affect returns on capital in future years by reducing net capex added to the RAB. We capture this effect by using the actual opening RAB as the basis for calculating returns.

Expenditure excludes the following:

- Finance charges: These largely comprise interest payments on debt and are therefore excluded from ROA, which is based on EBIT.
- Impairment losses: These not permitted by the regulatory framework.
- Losses from the sale of fixed assets are excluded as the NSP is compensated through return of capital (depreciation).

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Distribution NSPs, Ausgrid and Evoenergy are owners of dual function assets. These assets operate in parallel with TransGrid's transmission network and essentially perform a transmission function by supporting the main NSW transmission network.

Revenue and expenditure associated with dual function assets are treated as standard control services for the relevant distribution NSPs.

Depreciation

We have reported depreciation using nominal straight-line depreciation, which is measured on an as-incurred basis for all NSPs.

Depreciation is sourced from the final decision RFM where available. Where this is unavailable, we use the most recent regulatory proposal or draft decision RFM. Where those models are unavailable, we source depreciation from the NSP's PTRM, updated for the Consumer Price Index (CPI) to reflect inflation.

Regulatory asset base

To allow comparisons between actual and expected returns, we use the opening RAB in calculating ROA.

We have reported the RAB on an as-incurred basis for both electricity distribution and transmission NSPs.

The opening RAB is sourced from the final decision RFM where available. Where this is unavailable, we use the most recent regulatory proposal or draft decision RFM. Where those models are unavailable, we calculate a partially as-incurred RAB roll-forward using as-incurred capex reported in the annual RIN. This allows us to consistently report the opening RAB on an as-incurred basis.

The PTRM calculates the opening RAB using forecast inflation. We have updated the opening RAB using actual inflation where available.

When calculating real ROA, we inflate the opening RAB by CPI. This is because an NSP's returns on capital are calculated using the nominal rate of return (nominal pre-tax return on debt and nominal post-tax return on equity). Inflating the RAB by CPI ensures an NSP's returns and RAB are in the same dollar terms.

When calculating nominal ROA, inflating the RAB is not required. RAB indexation is included as part of an NSP's returns, compensating the NSP for actual inflation.

Indexation of the opening RAB

Indexation of the RAB is sourced from the final decision RFM where available. Where this is unavailable, we use the most recent regulatory proposal or draft decision RFM. Where those models are not available, we calculate indexation on the opening RAB using CPI figures sourced from the Australian Bureau of Statistics.

Incentive scheme rewards and penalties

Our regulatory framework provides NSPs with rewards or penalties through targeted incentive schemes aimed at improving network efficiency and reliability. These schemes allow NSPs to earn rewards (penalties) above (below) their allowed rate of return.

Customers should ultimately benefit from these schemes through lower regulated prices and improved reliability.

We have calculated ROA both with and without incentive scheme outcomes to show the impact of incentives on actual returns.

The rewards and penalties from incentive schemes have been sourced from the revenue sheet of the economic benchmarking RIN (table 3.1.3).

Annual updates

We will update ROA annually, using appropriate RFM data where available.