Review of measures of financial performance that could be applied to the Electricity and Gas businesses the AER regulates

Final report

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McGrathNicol

Contents

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The documents used in support of our findings are identified throughout the report.

Definitions and key terms

AER	Australian Energy Regulator
ASIC	Australian Securities and Investment Commission
ASX	Australian Stock Exchange
Capex	Capital Expenditure
CAPM	Capital Asset Pricing Model
EBIT	Earnings Before Interest and Tax
EBITA	Earnings Before Interest, Tax and Amortisation
EBITDA	Earnings Before Interest, Tax, Depreciation and Amortisation
EV	Enterprise Value
IRR	Internal Rate of Return
NEL	National Electricity Law
NER	National Electricity Rules
NGL	National Gas Law
NGR	National Gas Rules
NPAT	Net Profit after Tax
Ofgem	Office of Gas and Electricity Markets
OEB	Ontario Electricity Board
Opex	Operating Expenditure
PBT	Profit Before Tax
PE Ratio	Price Earnings Ratio
PPE	Property, Plant and Equipment
PTRM	Post Tax Revenue Model
RAB	Regulatory Asset Base
Regulatory accounts	Financial accounts prepared for the regulated business only, excluding any non-regulated revenues, expenses, assets and liabilities.
RFM	Roll Forward Model
RIN	Regulatory Information Notice
ROA	Return on Assets
ROCE	Return on Capital Employed
ROE	Return on Equity
ROI	Return on Investment
ROIC	Return on Invested Capital
RORE	Return on Regulatory Equity
Statutory accounts	Financial statements for the entity prepared in accordance with the relevant accounting standards and Corporations Act requirements
WACC	Weighted Average Cost of Capital

1 Executive summary

1.1 Objective of this scoping study

The AER is responsible for the economic regulation of electricity transmission, electricity distribution, gas transmission and gas distribution networks in all Australian jurisdictions except Western Australia. The AER regulates 31 electricity and gas transmission and distribution service providers. The businesses are regulated through determination of their allowable revenue. Allowable revenue is developed through a "building block framework" that determines the revenues that a business can recover from its network customers.

In accordance with the Order for Services, the AER engaged McGrathNicol to undertake a scoping study into relevant measures of financial performance that could be applied to the electricity and gas businesses that the AER regulates ("Service Providers" or "regulated businesses").

1.2 Concerns of consumer groups

A number of consumer groups and individuals have raised concerns regarding the level of profitability of the regulated businesses. A consistent argument from consumer groups has been that the building block framework may overcompensate regulated businesses and enable them to earn super profits, or returns above what would be expected given the risk to the businesses. Partly in response to these consumer group concerns, the AER has commenced a review into the profitability measures that may be applied to the businesses it regulates. This scoping study has been conducted to assist the AER with their review.

Given the nature of the consumer concerns, the focus of this report is on measures that relate to profitability (financial return to the owners of the businesses).

1.3 The AER's current analysis of the profitability of the regulated businesses

In the past, the AER has published reports which include some analysis of financial performance of the regulated businesses. Based on our review of these reports, it appears that whilst some profitability measures have been considered by the AER and applied to certain businesses, this is not done on a consistent basis across the regulated businesses.

Challenges faced by the AER in conducting financial performance analysis on the regulated businesses appear to include a lack of comparative data over years; inconsistency of data between entities; and the inconsistent approach by businesses to the allocation of interest and tax expenses from statutory accounts to regulatory accounts.

Accordingly, the AER does not currently have in place a systematic performance measurement framework that would provide a clear picture of the profitability of electricity and gas distribution and transmission service providers.

1.4 Identification of potential financial performance measures

Through evaluation of financial ratios we know to be commonly used to measure financial performance across a range of industries, and review of financial performance measures used by some overseas regulators of electricity and gas network businesses, we have sought to identify a broad number of financial performance measures that are potentially relevant to measuring the profitability of regulated electricity and gas businesses.

Our review found that there are a large number of financial performance measures used to assess the financial performance of a business, including a number of variations to the way some of these financial performance measures are calculated. In this scoping study we have not sought to identify every possible financial performance measure, rather we have tried to identify commonly used financial performance measures that may be of relevance when analysing the profitability of the regulated businesses.

The table below sets out the financial performance measures we have assessed in this scoping study:

Table 1: List of measures

Profitability measure	Proposed formula for calculation
Return on Assets (EBIT)	EBIT / RAB or total assets
Return on Assets (net profit after tax)	Net profit after tax / RAB or total assets
Return on Assets (operating cash flow)	Operating cash flow / RAB or total assets
Return on non-current assets	EBIT / non-current assets
Return on capital employed	EBIT / (total assets less current liabilities)
Return on invested capital	Net profit after tax / the book value of debt and equity less cash and cash equivalents
Return on equity	Net profit after tax / total equity
Economic profit	EBIT – pre-tax WACC x (total assets (or RAB)); or EBIT – pre-tax WACC x (total assets (or RAB) – current liabilities)
Net profit margin	Net profit after tax / total regulated revenue
Operating profit margin	EBIT / total regulated revenue
IRR	The IRR is the discount rate that results in a net present value of zero for an asset or project. The IRR is the actual economic return that is earned by the asset or project over its life.
Earnings per share and earnings yield	Earnings per share is calculated as Net profit after tax / number of shares issued. Earnings yield is calculated as Earnings per share / share price. The earnings yield is the inverse of the PE ratio.
Operating profit per customer	EBIT / total customer number
RAB multiples	Enterprise Value / RAB

Source: McGrathNicol

Ideally, use of a financial performance measure would allow the AER to:

- compare profit of the regulated business to the statutory profit earned by the owner of the regulated business;
- analyse the profits of a regulated business over time;
- compare the profit of a regulated business to the profit earned by other regulated businesses; and
- compare the profit of a regulated business to businesses in other industries, including ASX listed companies.

Further analysis of results could then be undertaken to identify individual elements that may be driving material differences, and unusual results that vary significantly from benchmarks.

However, there is unlikely to be one perfect measure that will be appropriate for measuring the profitability of all regulated businesses, appropriate for comparison between regulated businesses, and appropriate for comparison to profits generated by businesses in other industries.

1.5 Assessment of the appropriateness of the identified financial performance measures

In order to provide structure to our assessment of the appropriateness of financial performance measures, in consultation with the AER we developed two key objectives and five criteria against which the potential financial measures set out in this report have been assessed.

The key objectives of the financial performance measures are to:

- measure the actual profitability of the regulated entity; and
- allow the AER to compare the actual profitability of the regulated entity to:
  - the allowed return on equity from its regulatory determination;
  - actual profit of other regulated entities; and
  - actual profit of other businesses operating in the Australian economy.

If a financial performance measure does not meet at least one of the two key objectives, it will be considered to be inappropriate. However, on the basis that all measures identified in this scoping study meet the objective of being measures of actual profitability of the regulated entity, we have focused our assessment on appropriateness of the financial performance measures against the following five criteria:

- Criterion 1 - requirements are based on clear concepts and performance measures are able to be calculated consistently over time.
- Criterion 2 - calculation does not require significant manipulation of data, or require assumptions to be made. The measure's calculation is not significantly impacted by accounting adjustments, taxation treatments, or the entity's financing structure.
- Criterion 3 - generally accepted by industry experts as a good measure of profitability, and easily understood and meaningful to persons without a financial background.
- Criterion 4 - suitable given the industry characteristics (e.g. capital intensive, long life assets, regulated revenue and returns).
- Criterion 5 - readily able to be compared to other businesses in the sector and other businesses in the broader economy.

In order to rate the appropriateness of the financial performance measures, we assessed the measures against the criteria using the below rating classifications:

Table 2: Ratings classifications against the individual criterion and overall criteria

Rating against individual criterion	Comments on rating against individual criterion	Overall rating against criteria	Comments on overall rating against criteria
	▪ Good – Strongly meets the criterion.		▪ Appropriate measure - Good rating against each criterion, or good rating against all criteria but one (where rating against this criterion is fair).
	▪ Fair - Reasonably meets the criterion.		▪ May be an appropriate measure - Ratings of good or fair against all criteria.
	▪ Poor - Does not meet the criterion.		▪ Not likely to be an appropriate measure. One or more ratings of poor against an individual criterion.

Source: McGrathNicol

The results of our assessment of the financial performance measures against the criteria are summarised in the table below.

The ratings against the criteria have been determined assuming that all relevant data is available to the AER to calculate the financial performance measures.

Table 3: Overview of financial performance measures against criteria

Financial performance measure	Proposed formula for calculation	Criterion 1	Criterion 2	Criterion 3	Criterion 4	Criterion 5	Overall
Return on Assets (EBIT)	EBIT / RAB or total assets	🟢	🟢	🟢	🟢	🟢	🟢
Return on Assets (net profit after tax)	Net profit after tax / RAB or total assets	🟢	🟡	🟢	🟢	🟡	🟡
Return on Assets (Net operating cash flow)	Operating cash flow / RAB or total assets	🟢	🟡	🟡	🟡	🟢	🟡
Return on non-current assets	EBIT / non-current assets	🟢	🟡	🟡	🟢	🟢	🟡
Return on capital employed	EBIT / (total assets less current liabilities)	🟢	🟡	🟢	🟡	🟢	🟡
Return on invested capital	Net profit after tax / the book value of debt and equity less cash and cash equivalents	🟢	🟡	🟢	🟡	🟡	🟡
Return on equity	Net profit after tax / total equity	🟢	🟡	🟢	🟢	🟢	🟢
Economic profit	EBIT – pre-tax WACC x (total assets (or RAB)); or EBIT – pre-tax WACC x (total assets (or RAB) – current liabilities)	🟢	🟢	🟢	🟢	🟡	🟢
Net profit margin	Net profit after tax / total regulated revenue	🟢	🟡	🟢	🟡	🔴	🔴
Operating profit margin	EBIT / total regulated revenue	🟢	🟢	🟢	🟡	🟡	🟡
IRR	The IRR is the discount rate that results in a net present value of zero for an asset or project. The IRR is the actual economic return that is earned by the asset or project over its life.	🟡	🟡	🟡	🟢	🟢	🟡
Earnings per share / earnings yield	Earnings per share is calculated as Net profit after tax / number of shares issued. Earnings yield is calculated as Earnings per share / share price. The earnings yield is the inverse of the PE ratio.	🟢	🟡	🟢	🟡	🟡	🟡
Operating profit per customer / connection	EBIT / total customer number	🟢	🟢	🟢	🟢	🟡	🟢
RAB multiples	Enterprise Value / RAB	🟡	🟡	🟡	🟢	🟡	🟡

Source: McGrathNicol

1.6 Conclusion on appropriateness of financial performance measures

Based on our assessment of the appropriateness of the financial performance measures:

- the Return on Assets (EBIT) performance measure strongly meets all criterion; and
- a number of other performance measures may also be appropriate, including:
  - Return on Equity, which may be a useful measure for understanding the ultimate return to a business' owners after all expenses and tax has been paid;
  - Operating profit per customer / connection, which could provide an indication of a business' changes in profitability from year to year; and
  - Economic profit, which similar to the return on assets (EBIT) performance measure, will provide a clear analysis of financial performance compared to the WACC.

Our analysis of the appropriateness of the financial performance measures against the criteria indicates that performance measures using EBIT as the measure of profit / return may be the most appropriate. EBIT is determined before the impact of interest and tax, which may differ significantly between businesses depending on the amount of debt funding and the business' ownership structure. Accordingly, EBIT may allow for a better comparison to other businesses than other representations of profit / return would.

In respect of other common representations of profit / return used in the financial performance measures, we note the following:

- NPAT is determined after tax and interest. Accordingly, NPAT is impacted by financing and taxation treatments of a business, and performance measures based on NPAT may be less comparable to other businesses. However, an advantage of NPAT is that it is the final profit available for distribution to business owners.
- EBITDA states the return before depreciation expense. However, although not a cash impact, depreciation is likely to be a reasonable approximation of capital maintenance expenditure required by businesses. Analysis of returns before depreciation expense could overstate financial performance measures, particularly when compared to the performance of businesses in other less capital intensive industries.
- Operating cash flow is less commonly used as a profitability measure. However, generation of positive cash flow is relevant to the businesses, and analysis of operating cash flow may enable a useful comparison to EBIT returns.

Use of multiple measures may be valuable, as different measures can highlight different aspects of profitability.

1.7 Data requirements

In addition to the above criteria used to determine an appropriate financial performance measure, a critical requirement is that data is available to enable the calculation of the financial performance measure.

Based on the financial information that is currently provided by the regulated businesses, the AER does not have sufficient data to calculate any of the identified financial performance measures for all regulated electricity and gas businesses. At present, existing data allows:

- some of the identified financial performance measures to be calculated for electricity distribution and transmission businesses (electricity distribution and transmission businesses are required to provide income statements as part of their annual reporting requirements);
- some of the identified financial performance measures to be calculated for gas distribution businesses (not all gas distribution businesses are currently subject to Annual Reporting RINs); and
- no financial performance measures to be calculated for gas transmission businesses (gas transmission businesses are not currently subject to Annual Reporting RINs).

Based on the financial performance measures identified in this scoping study and the current availability of data to calculate these performance measures, we have set out in the table below details of additional data the AER may wish to request from the businesses going forward.

Table 4: Overview of data which the AER may wish to request

Data the AER may wish to request	Comments
The AER may request a reconciliation of the Statement of Comprehensive Income between: ▪ the statutory accounts of the regulated business (i.e. the specific entity which owns the regulated assets); and ▪ the regulatory accounts of the regulated business. To support the reconciliation, the AER may wish to seek explanations for adjustments from the statutory accounts to the regulated accounts.	▪ Currently provided by electricity businesses in the annual RIN / Regulatory Accounts. ▪ However, is also required for gas distribution and transmission businesses. ▪ Obtaining a Statement of Comprehensive Income is critical to the calculation of almost all financial performance measures identified in this scoping study.
The AER may request a reconciliation of the Statement of Financial Position between: ▪ the statutory accounts of the regulated business (i.e. the specific entity which owns the regulated assets); and ▪ the regulatory accounts of the regulated business. To support the reconciliation, the AER may wish to seek explanations for adjustments from the statutory accounts to the regulated accounts.	▪ Required for all regulated businesses. ▪ Obtaining a Statement of Financial Position is critical to the calculation of the majority of proposed performance measures identified in this scoping study.
The AER may request a reconciliation of the Statement of Cash Flows between: ▪ the statutory accounts of the regulated business (i.e. the specific entity which owns the regulated assets); and ▪ the regulatory accounts of the regulated business. To support the reconciliation, the AER may wish to seek explanations for adjustments from the statutory accounts to the regulated accounts.	▪ Required for all regulated businesses. ▪ A Statement of Cash Flows is required for the calculation of the return on assets (operating cash flow) performance measure.

Source: McGrathNicol

If the information set out above is obtained, the AER will be able to calculate the financial performance measures outlined in this scoping study, and develop a framework for measuring the financial performance of all regulated businesses.

2 Scope

2.1 Scope

In accordance with the Order for Services, the AER engaged McGrathNicol to undertake a scoping study into relevant measures of financial performance that could be applied to the electricity and gas businesses that the AER regulates ("regulated businesses").

McGrathNicol has been requested to:

- Scope alternative measures of financial performance that provide meaningful insights on the earnings and profitability of the electricity and gas businesses the AER regulates:
  - identify all relevant measures and the advantages and disadvantages of each measure; and
  - the measures should allow the AER to evaluate the profitability of the regulated services provided by the business where that business might earn income from both regulated and unregulated services.
- Describe the identified measures in terms of standard financial reporting concepts and relevance to the businesses the AER regulates.
- Specify the data requirements to develop the identified financial performance measures.
- Explore any business specific characteristics (e.g. company structures, ownership arrangements, etc.) that would impact the use of the identified measures, and identify adjustments or alternative measures for businesses with those characteristics.
- Review the AER's existing datasets to determine the suitability of the data for the identified measures and any new data that may be required for the measures.
- Define all relevant concepts and terms associated with the identified measures.

In accordance with the Order for Services, this report addresses the above scope.

2.2 Limitations

In respect of this scoping review and report, it is important to note the following:

- This report and our scope does not encompass a critique of the building blocks framework, and no attempt has been made to do so.
- We have not attempted to critique the AER's approach to the determination of the rate of return, including the use of a "benchmark business"[1].
- We have not attempted to recommend which of the financial performance measures identified in this report should be adopted. This is a matter for the AER to determine after consideration of matters (including information contained in this report).
- We have not sought to identify every possible relevant financial performance measure. This report focuses on financial performance measures that relate to profitability.

It is also noted that the NER is more explicit than the NGR in respect of the economic regulation of the regulated businesses, and the AER has developed more conceptual material regarding the application of the building blocks framework in the electricity sector. In addition, there has been greater focus from consumer groups on the financial performance of regulated electricity businesses than gas businesses. For the purposes of this review, we have assumed (except where specifically noted) that the requirements of a financial performance measuring framework apply equally to electricity and gas businesses.

[1] The National Electricity Rules do not define benchmark efficient entity. However, clause 6.5.2(c) states that "the allowed rate of return objective is that rate of return for a DNSP [that is] commensurate with the efficient financing costs of a benchmark efficient entity with a similar degree of risk as that which applies to the DNSP in respect to the provision of standard control services (the allowed rate of return objective).

2.3 Sources of information

In undertaking this scoping review we have relied on the following sources of information:

- Information provided by the AER;
- Information publicly available on the internet; and
- Financial statements obtained from ASIC.

A full listing of the sources of information is attached as Appendix D.

3 Background

3.1 Regulated businesses

The AER is responsible for the economic regulation of electricity transmission and distribution networks and gas transmission and distribution pipelines in all Australian jurisdictions except Western Australia.

The AER regulates 31 electricity and gas transmission and distribution service providers ("Service Providers" or "regulated businesses").[2] By sector, there are:

- 20 electricity Service Providers (13 distribution and 7 transmission); and
- 11 gas service providers (7 distribution and 4 transmission).

The AER is investigating measures of financial performance, focusing on profitability, for the electricity and gas transmission and distribution network businesses which it regulates. The AER may decide to include profitability measures in the AER's future performance reporting with the aim of enhancing transparency and stakeholder engagement in the AER's regulatory processes. This is in accordance with the AER's objectives as outlined in the *AER Stakeholder Engagement Framework*.[3]

3.2 Building block framework

The network businesses regulated by the AER are natural monopolies. Accordingly, economic regulation applies to them, regulating the revenue they can collect from energy users. The revenue allowed to be recovered from network users is determined through a "building block framework".

The regulatory regime (including the building blocks framework) is contained in the following:

- Chapter 6 of the NER (electricity distribution);
- Chapter 6A of the NER (electricity transmission); and
- Part 9 of the NGR (gas distribution and transmission).

Put simplistically, a regulated business' prices are set for a regulatory period at a level that allows them to meet operating expenses, and earn a rate of return on the RAB. The rate of return is the estimated percentage return the service providers require to attract investment. In accordance with the building block framework, the rate of return is determined by the WACC.

The building block framework does not guarantee a set return, or mean that a business might not financially outperform or underperform.

3.3 Concerns of consumer groups

A number of consumer groups and individuals have raised concerns regarding the level of profitability of regulated businesses. These concerns have been raised directly with the AER through submissions to revenue determinations.

A consistent argument from consumer groups has been that the building block framework may overcompensate regulated businesses and enable them to earn super profits, or returns above what would be expected given the risk to the businesses.

Partly in response to these consumer group concerns, the AER has commenced a review into the profitability measures that may be applied to the businesses it regulates. This scoping study has been conducted to assist the AER with its review.

3.4 Financial performance measures

3.4.1 What is a measure of financial performance

Measures of financial performance include trend analysis, financial ratios and benchmarking as methods to assess an organisation's performance. Using these measures, we can determine variances between actual performance and expectation, and then analyse variances to understand underlying causes and assist decision-making.

[2] https://www.aer.gov.au/networks-pipelines/service-providers-assets?f[0]=type%3Aaccc_aer_service_provider

[3] https://www.aer.gov.au/publications/reviews/aer-stakeholder-engagement-framework-2013

Most financial information reflects an organisation's financial performance at a specific time. Trend analysis involves collating data over a period of time and identifying patterns in order to gain perspective on organisational performance. Furthermore, trend analysis combined with assessment of data interrelationships can yield strong insights into an organisation's financial performance and key drivers underlying it.

Financial ratio analysis can better illustrate key aspects of financial performance that can be less clearly seen from simply reviewing the figures stated in financial reports. Ratio analysis can facilitate comparisons across organisations of different size, and against industry or other specific benchmarks. Furthermore, trends in financial ratios can be used to evaluate financial performance over time.

Financial ratios are often categorised as:

- Profitability ratios;
- Liquidity ratios;
- Financing / gearing ratios; and
- Activity ratios.

Each of these classes of financial performance ratios are discussed below:

Profitability ratios

Profitability ratios measure an organisation's use of its resources to generate profit, including ratios that assess:

- Profitability; and
- An organisation's ability to generate earnings from its resources.

Ratios that assess profitability in the context of its sales will usually be calculated with total revenue as the denominator, for example:

- EBIT / Total revenue; and
- Operating expenses / Total revenue.

Ratios that assess an organisation's ability to generate earnings from its resources will usually be calculated with a measure of an organisation's asset base as the denominator, for example:

- EBIT / Total assets; and
- EBIT / Net assets (total equity).

Ratios calculating returns on revenue may not be comparable across industries as returns will vary depending on the specific capital requirements, sales volumes and operating margins of each industry. Both types of profitability ratios outlined above tend to be expressed as a percentage.

Liquidity ratios

Liquidity ratios measure an organisation's ability to pay its short-term debt by comparing its most liquid assets (readily convertible to cash) to its short-term liabilities. Generally, the greater the difference between the level of liquid assets and short-term liabilities (where liquid assets exceed short-term liabilities), the better the organisation's liquidity. Liquidity ratios include the current ratio and the quick ratio.

Financing ratios

Financing ratios measure the financial risk associated with an organisation by assessing the way in which it is financed (i.e. leveraging and ability to meet interest payments). Generally, the lower the level of leveraging (the lower the debt compared to equity) and the higher the level of interest coverage, the lower the organisation's financial viability risk. Financing ratios include the debt to equity ratio and the interest coverage ratio.

Activity ratios

Activity ratios measure how effectively an organisation's income-producing assets are working. Activity ratios include asset turnover, working capital turnover, inventory days, debtor days, and creditor days.

3.4.2 Financial performance focus for this scoping review

Given the nature of the consumer concerns identified at section 3.3 above, the focus of this report is on measures that relate to profitability (financial return to the owners of the businesses).

The report does not include analysis of other financial performance measures, such as those that relate to liquidity, financing or activity.

3.4.3 Features of a good financial performance measure

Financial ratio analysis is often used in order to make an overall assessment of the financial position, viability or value of a business. Accordingly, ratios may be less valuable in isolation, as often the interrelation of ratios is important in considering the overall financial circumstances of a business.

Features of a good financial performance measure are:

- data is readily available to calculate the measure;
- data is transparent (i.e. not presented in a way which is indecipherable);
- it is commonly used and therefore easily understood;
- it can be calculated consistently over a number of years, allowing for comparisons to be made (improvement / deterioration);
- the data is not subject to significant accounting adjustments;
- it can be compared across businesses in an industry;
- it has a reliable benchmark; and
- it provides meaningful interpretation of the financial performance of a business that is useful to business owners, investors and other decision makers.

3.5 Key objectives and criteria for financial performance measures

In order to provide structure to our evaluation of the appropriateness of financial performance measures, we have developed two key objectives and five criteria against which the financial performance measures set out in this report have been assessed. It is noted that if a financial performance measure does not meet at least one of the two key objectives, it will be considered to be inappropriate.

The key objectives of the financial performance measures are to:

- measure the actual profitability of the regulated entity; and
- allow the AER to compare the actual profitability of the regulated entity to:
  - the allowed return on equity from its regulatory determination;
  - actual profit of other regulated entities; and
  - actual profit of other businesses operating in the Australian economy.

The criteria for the profitability measures are:

- requirements are based on clear concepts and performance measures are able to be calculated consistently over time;
- calculation does not require significant manipulation of data, or require assumptions to be made. The measure's calculation is not significantly impacted by accounting adjustments, taxation treatments, or the entity's financing structure;
- generally accepted by industry experts as a good measure of profitability, and easily understood and meaningful to persons without a financial background;
- suitable given the industry characteristics (e.g. capital intensive, long life assets, regulated revenue and returns); and
- readily able to be compared to other businesses in the sector and other businesses in the broader economy.

Using the above key objectives and criteria, the appropriateness of the financial performance measures has been evaluated.

In addition to the above criteria, a critical requirement is that data is available to enable the calculation of the financial performance measures. At present, the AER does not have sufficient information to calculate any of the financial performance measures for regulated businesses in all sectors and segments. Accordingly, we have not included current availability of data as a criterion in our assessment of the appropriateness of the identified financial performance measures. However, we highlight that without the AER obtaining additional data (as set out in Section 8 of this report), the AER would not be able to calculate the financial performance measures and implement a robust financial performance monitoring framework.

4 AER's current approach to understanding the Service Providers' earnings and profitability

A core objective of the *AER Stakeholder Engagement Framework* is to increase the transparency of its regulatory activities and processes, and increase participation in these activities and processes.[4] As stated in the AER's publication, *Priorities and Objectives of Electricity Network Service Provider Performance Reports April 2011*:

"The AER considers performance reports will enhance the effectiveness of the regulatory regime and reflect the National Electricity Law requirements to foster the achievement of the National Electricity Objective through incentive based regulation. The AER considers this will be achieved through enhancing the transparency and accountability of Network Service Providers, and facilitating performance improvements."

In order to achieve the above, the AER has outlined a number of priorities for its performance reports, one of which being reporting network service providers' profitability, comparing businesses within and across jurisdictions and regulatory control periods.[5]

4.1 Electricity businesses

Under the NEL,[6] the AER may prepare Service Provider performance reports on the financial performance and operational performance of Service Providers in providing electricity network services. It is noted that under Division 5 section 28V subparagraph 2(a)(iii) of the NEL, the performance report may deal with the profitability and efficiency of Service Providers in providing electricity network services.

The AER has reported on the financial performance of Service Providers in a number of its publications, such as the reports set out in the table below:

Table 5: AER reports addressing financial performance of Electricity Service Providers

AER report	Financial performance measures applied by AER	Limitations (as highlighted in AER report)
Electricity Distributors 2011-13 Performance Report (June 2015)	▪ Forecast vs. actual capital expenditure ▪ Forecast vs. actual regulatory asset base ▪ Forecast vs. actual operating expenditure ▪ Forecast vs. actual revenue ▪ Earnings before interest and tax	▪ Comparative data on earnings is not included in the report as the data is inconsistent across the Service Providers and across years (p.3).
Transmission Network Service Providers Electricity Performance Report 2010-11 (July 2013)	▪ Forecast vs. actual expenditure ▪ Forecast vs. actual capital expenditure ▪ Actual capital expenditure over average regulatory asset base ▪ Forecast vs. actual operating expenditure ▪ Actual operating expenditure over average regulatory asset base ▪ Financial incentives earned ▪ Earnings before interest and tax	▪ For businesses that own more than one regulated network, pay tax and hold debt at the corporate level, any allocation of tax or debt to their electricity transmission network will be somewhat arbitrary. The allocation is only done for the regulatory accounts and not the statutory accounts (p.57).

[4] https://www.aer.gov.au/publications/reviews/aer-stakeholder-engagement-framework-2013

[5] https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/priorities-and-objectives-of-electricity-network-service-provider-performance-reports-2011

[6] The National Electricity Law is contained in a Schedule to the National Electricity (South Australia) Act 1996. The National Electricity Law is applied as law in each participating jurisdiction by application statutes.

AER report	Financial performance measures applied by AER	Limitations (as highlighted in AER report)
	▪ Earnings before interest, tax, depreciation and amortisation ▪ Net profit after tax ▪ Return on equity ▪ Return on assets ▪ Debt ratio ▪ Interest cover ratio	
Victorian Electricity Distribution Network Service Providers Annual Performance Report 2010 (May 2012)	▪ Forecast vs. actual pre-tax return on distribution assets ▪ Forecast vs. actual revenue ▪ Forecast vs. actual operating and maintenance expenditure ▪ Forecast vs. actual capital expenditure ▪ Forecast vs. actual customer contributions to the cost of capital works	▪ None appear to be noted.

Source: McGrathNicol

4.2 Gas businesses

Under the NGL,[7] the AER may prepare Service Provider performance reports on the financial performance or operational performance of scheme pipeline service providers in providing pipeline services by means of a scheme pipeline.[8] It is noted that under Division 5 section 64 subparagraph 2(a)(iii) of the NGL, the performance report may deal with the profitability and efficiency of scheme pipeline service providers in providing pipeline services.

Table 6: AER reports addressing financial performance of Gas Service Providers

AER report	Financial performance measures applied by AER	Limitations (as highlighted in AER report)
Victorian Gas Distribution Business Comparative Performance Report 2012 (February 2014)	▪ Forecast vs. actual revenue ▪ Forecast vs. actual expenditure ▪ Forecast vs. actual capital expenditure ▪ Forecast vs. actual operating expenditure ▪ Forecast vs. actual return on assets	▪ None appear to be noted.

Source: McGrathNicol

We note that no performance reports have been published by the AER in regard to gas transmission Service Providers.

[7] The National Gas Law is set out in the National Gas (South Australia) Act 2008. Mirror application legislation has been enacted in other jurisdictions implementing the National Gas Law in all States and Territories. It is noted an amended National Gas Law is applied in Western Australia under the National Gas Access (WA) Act 2009.

[8] A scheme pipeline is a covered pipeline or an international pipeline to which a price regulation exemption applies.

4.3 Adequacy of the AER’s current financial performance measurement activities

Based on our review of the AER’s reports that address the performance of the regulated businesses, it appears that whilst some profitability measures have been considered by the AER and applied to certain businesses, this is not done on a consistent basis across the regulated businesses. Challenges faced by the AER in reporting on the regulated businesses appear to include a lack of comparative data over years; inconsistency of data between entities; and the inconsistent approach by businesses to the allocation of interest and tax expenses from statutory accounts to regulatory accounts.

Accordingly, the AER does not currently have in place a systematic performance measurement framework that would provide a clear picture of the profitability of electricity and gas distribution and transmission Service Providers.

5 Financial performance measures / approaches in overseas electricity and gas distribution and transmission

We have sought to identify overseas electricity and gas businesses that earn a regulated return. We have identified these based on publicly available information, and note that they may not be directly comparable to the AER's framework, or necessarily represent all relevant overseas examples.

The table below sets out the examples we identified, and the financial performance measure(s) used by the relevant regulators to assess the financial performance compared to returns that might be expected under the framework applying in that country.

Table 7: Financial performance measures / approaches in overseas electricity and gas distribution and transmission

Country	Performance measurement framework
United Kingdom – electricity distribution, electricity transmission, gas distribution, gas transmission Regulated by Ofgem	▪ Ofgem measures network owners' financial performance. ▪ Ofgem calculates a Return on Regulatory Equity (RORE), predominantly to test the sensitivity of how RORE has or would vary in response to outperformance or underperformance against certain scenarios.[9] Ofgem state than RORE helps monitor the financial performance of distribution network operators under price control.[10] ▪ RORE can be compared to the cost of equity allowed at the start of the price control.[11] ▪ It is noted that Ofgem also uses profit per customer measures to analyse the energy companies it regulates.[12]
Canada (Ontario) – electricity distribution Regulated by the Ontario Electricity Board ("OEB")	▪ The OEB calculates a return on equity to review the financial performance (profitability) of all of the electricity distributors in Ontario. ▪ The OEB allows a distributor to earn within +/- 3% of the expected return on equity.[13] ▪ The other financial performance measures tracked by the OEB are the current ratio (which is a test of a distributor's liquidity), and the total debt to equity ratio (which is a ratio that identifies a distributor's gearing and exposure to risk associated with debt financing).
New Zealand – electricity distribution Regulated by the Commerce Commission New Zealand	▪ IRR nominal return (real return through cash flows plus compensation for actual inflation through asset revaluations) compared to expected return (based on a nominal estimate of the WACC). ▪ IRR is calculated based on three components: – Opening asset value; – Cash flows during the period; and – Closing asset value. ▪ The IRR is the discount rate that would make the net present value of the three components equal to zero.[14]

Source: McGrathNicol

The profitability measures identified in the table above (return on equity and IRR) have been included in the list of financial performance measures that have been identified at Section 6 below.

[9] AER

[10] www.ofgem.gov.uk/data-portal/network-indicators

[11] www.ofgem.gov.uk/data-portal/network-indicators

[12] Ofgem, The revenues, costs and profits of the large energy companies in 2012 (25 November 2013)

[13] Ontario Electricity Board, Frequently Asked Questions - Scorecard for Ontario's Electricity Distributors

[14] Commerce Commission New Zealand, Profitability of Electricity Distributors Following First Adjustments to Revenue Limits, 8 June 2016

6 What are the potential measures of financial performance?

6.1 How have potential measures been identified?

We have identified potential measures through:

- review of financial ratios and measures commonly used to measure financial performance across a range of industries; and
- review of measures of financial performance captured by regulators of electricity and gas businesses in the United Kingdom, New Zealand and Canada, being countries where these businesses are subject to regulated returns.

We have sought to identify a broad number of measures that are potentially relevant to assessing the profitability of regulated electricity and gas businesses.

6.2 List of measures

We have set out below a list of all potentially relevant profitability measures we were able to identify from our review.

Table 8: List of measures

Profitability measure	Proposed formula for calculation
Return on Assets (EBIT)	EBIT / RAB or total assets
Return on Assets (net profit after tax)	Net profit after tax / RAB or total assets
Return on Assets (operating cash flow)	Operating cash flow / RAB or total assets
Return on non-current assets	EBIT / non-current assets
Return on capital employed	EBIT / (total assets less current liabilities)
Return on invested capital	Net profit after tax / the book value of debt and equity less cash and cash equivalents
Return on equity	Net profit after tax / total equity
Economic profit	EBIT – pre-tax WACC x (total assets (or RAB)); or EBIT – pre-tax WACC x (total assets (or RAB) – current liabilities)
Net profit margin	Net profit after tax / total regulated revenue
Operating profit margin	EBIT / total regulated revenue
IRR	The IRR is the discount rate that results in a net present value of zero for an asset or project. The IRR is the actual economic return that is earned by the asset or project over its life.
Earnings per share and earnings yield	Earnings per share is calculated as Net profit after tax / number of shares issued. Earnings yield is calculated as Earnings per share / share price. The earnings yield is the inverse of the PE ratio.
Operating profit per customer	EBIT / total customer number
RAB multiples	Enterprise Value / RAB

Source: McGrathNicol

6.3 Analysis of potential financial performance measures

This section sets out for each of the 14 financial performance details of how the measure would be calculated; level of current usage; possible benchmarks that the performance measure could be compared to; advantages and disadvantages; and data requirements to calculate the financial performance measure.

6.3.1 Return on assets (EBIT)

Table 9: Return on assets (EBIT)

Criteria	Comments
How the ratio would be calculated	▪ Regulatory EBIT / RAB – where these figures are available from RINs and regulatory accounts provided by the businesses. ▪ Statutory EBIT / total assets - EBIT and total assets would be taken from the business' statutory financial statements.[15]
Level of common usage / acceptance	▪ The return on assets ratio is a very commonly used and understood profitability ratio that is used across many industries. However, it is often calculated as NPAT / total assets, where total assets would be in accordance with an organisation's audited financial statements.
Benchmarks	▪ The benchmark for the regulatory return on assets would be the pre-tax WACC applying to the business in that year. We note that the AER uses a vanilla WACC to calculate a Service Provider's rate of return. The vanilla WACC would need to be adjusted to consider the tax implications. ▪ The regulatory return on assets could also be compared to the statutory return on assets.
Advantages	▪ Whilst commonly NPAT is used in the calculation of this ratio, for the analysis of regulated businesses there is an advantage for the numerator to be EBIT rather than NPAT. EBIT measures the return available to meet both equity and debt holders before the impact of taxation. It is noted that the AER uses a vanilla WACC to calculate a Service Provider's rate of return. The vanilla WACC would need to be converted to a pre-tax WACC to be comparable to the service providers' EBIT. ▪ Whilst commonly total assets is used in the calculation of this ratio, for the analysis of regulated businesses there may be an advantage in using RAB for the denominator, rather than total assets. This is because total assets will include assets that are not regulated, and not subject to a regulatory return (this could include other business operations and investments). ▪ This ratio is a very good measure of profitability, because it directly enables comparison to the returns available through investment in other assets, and assessment of whether profits are consistent with the cost of capital.
Disadvantages	▪ This performance measure does not illustrate the final return available for distribution to the owners of a business after interest and tax has been paid.
Data requirements (refer to Appendix B for detailed data source information)	▪ Regulatory Return on Assets (EBIT): – Regulatory EBIT; and – RAB. ▪ Statutory Return on Assets (EBIT): – Statutory EBIT; and – Statutory Total Assets.

Source: McGrathNicol

[15] Chartered Accountants Australia and New Zealand.

6.3.2 Return on assets (net profit after tax)

Table 10: Return on assets (net profit after tax)

Criteria	Comments
How the ratio would be calculated	▪ Regulatory net profit after tax / RAB – where these figures are available from RINs and regulatory accounts provided by the businesses. ▪ Statutory net profit after tax / total assets - Net profit after tax and total assets would be taken from the business' statutory financial statements.
Level of common usage / acceptance	▪ The return on assets ratio is a very commonly used and understood profitability ratio that is used across many industries.
Benchmarks	▪ The statutory return on assets could be compared to the regulatory return on assets to help illustrate the potential difference between regulatory profits and profits generated by the business as a whole (including non-regulated activities). ▪ The return on assets for businesses in the sector could be compared to other industries (and ASX listed businesses) to see how returns compare.
Advantages	▪ Commonly used and understood financial performance measure. ▪ Whilst commonly total assets is used in the calculation of this ratio, for the analysis of regulated businesses there may be an advantage in using RAB for the denominator, rather than total assets. This is because total assets will include assets that are not regulated, and not subject to a regulatory return (this could include other business operations and investments).
Disadvantages	▪ Should not be compared to the WACC, but may be able to be compared to the cost of equity. ▪ As profit is after tax, the ratio may result in misleading comparisons where businesses pay significantly different rates of taxation. ▪ Profit after tax can be impacted by non-operating adjustments (such as revaluations of assets) and prior period adjustments (such as the use of tax losses to reduce taxation in the year).
Data requirements (refer to Appendix B for detailed data source information)	▪ Regulatory Return on Assets (NPAT): – Regulatory NPAT; and – RAB. ▪ Statutory Return on Assets (NPAT): – Statutory NPAT; and – Statutory Total Assets.

Source: McGrathNicol

6.3.3 Return on assets (net operating cash flow)

Table 11: Return on assets (Net operating cash flow)

Criteria	Comments
How the ratio would be calculated	▪ Regulatory net operating cash flow / RAB. ▪ Statutory net operating cash flow / total assets – net operating cash flow is generally separately identified in the Statement of Cash Flows included in a business' financial statements.
Level of common usage / acceptance	▪ Net operating cash flow records the cash receipts and payments a business makes in a period, and therefore excludes non cash items such as depreciation, amortisation and accruals. Net operating cash flow as per the accounting standards includes interest payment cash flows. ▪ The return on assets ratio is a very commonly used and understood profitability ratio that is used across many industries. However, it is most commonly calculated as NPAT or EBIT / total assets. ▪ Net operating cash flow is very commonly used in assessing a business' liquidity. Whilst less commonly used as a ratio of total assets, it is a valuable measure of profitability and useful comparison to EBIT and NPAT returns.
Benchmarks	▪ A benchmark may be able to be generated for the regulated businesses based on historical performance.
Advantages	▪ High depreciation and amortisation expenses and other non cash items can significantly reduce profits. Where these do not fairly reflect the decline in asset values, net operating cash flows can be a more accurate measure of financial performance.
Disadvantages	▪ Includes cash flows related to interest expenses, and therefore is not a measure that considers performance before the impact of a business' financing. ▪ The exclusion of depreciation may unfairly overstate performance, where depreciation reflects a genuine decline in asset value and cost to the business.
Data requirements (refer to Appendix B for detailed data source information)	▪ Regulatory Return on Assets (operating cash flow): – Regulatory operating cash flow; and – RAB. ▪ Statutory Return on Assets (operating cash flow): – Statutory operating cash flow; and – Statutory Total Assets.

Source: McGrathNicol

6.3.4 Return on non-current assets

Table 12: Return on non-current assets

Criteria	Comments
How the ratio would be calculated	▪ Statutory EBIT / non-current assets. EBIT and non-current assets would be taken from the business' statutory financial statements.
Level of common usage / acceptance	▪ This ratio is not commonly used as it assumes that a business' earnings are all attributable to non-current assets. This is unlikely to be accurate for most businesses as they would also expect a return to be made on the full investment in assets of the business, which includes current assets. We have included this ratio for the statutory accounts only, as it may be reasonably comparable to the EBIT return on RAB as set out at Section 6.3.1 above. This is due to RAB only consisting of non-current assets.
Benchmarks	▪ The benchmark would be the pre-tax WACC applying to the business in that year. We note that the AER uses a vanilla WACC to calculate a Service Provider's rate of return. The vanilla WACC would need to be adjusted to consider the tax implications.
Advantages	▪ There may be an advantage in using non-current assets for the denominator, rather than total assets. This is because total assets will include assets that are not regulated, and not subject to a regulatory return. A business' non-current assets are likely to largely consist of its regulated assets and accordingly, statutory return on non-current assets may be more comparable to regulatory return on RAB.
Disadvantages	▪ This ratio is not commonly used as it assumes that a business' earnings are all attributable to non-current assets. This is unlikely to be accurate for most businesses as they would also expect a return to be made on the full investment in assets of the business, which includes current assets.
Data requirements (refer to Appendix B for detailed data source information)	▪ Statutory Return on Non-current Assets (EBIT): – Statutory EBIT; and – Statutory Non-current Assets.

Source: McGrathNicol

6.3.5 Return on capital employed (ROCE)

Table 13: Return on capital employed (ROCE)

Criteria	Comments
How the ratio would be calculated	▪ This ratio is generally calculated as EBIT / total assets less current liabilities. ▪ The ratio is very similar to the return on assets (EBIT) ratio. The difference is that it removes current liabilities from the asset base, on the basis that these liabilities are not equity or debt funds that are used to finance the business. ▪ As for the return on assets ratio, ROCE could be calculated based on the regulatory data, or based on the statutory financial information.
Level of common usage / acceptance	▪ ROCE is reasonably commonly used, particularly by businesses for internal purposes. It is less commonly used when comparing profitability across businesses.
Benchmarks	▪ The statutory ROCE could be compared to the regulatory ROCE to help illustrate the potential difference between regulatory profits and profits generated by the business as a whole (including non-regulated activities). ▪ The ROCE for businesses in the sector could be compared to other industries (and ASX listed businesses) to see how returns compare.
Advantages	▪ Reasonably well known profitability measure. ▪ Is a meaningful indicator of financial performance from the perspective of a business owner or investor.
Disadvantages	▪ The subtraction of current liabilities understates the business' assets, and therefore may overstate returns. ▪ Removal of current liabilities would not allow the ROCE to be benchmarked against the WACC, which in accordance with the building block framework is based on a return on RAB without subtraction of an amount representing assets funded by current liabilities.
Data requirements (refer to Appendix B for detailed data source information)	▪ Regulatory Return on Capital Employed: – Regulatory EBIT; – RAB; and – Regulatory Current Liabilities. ▪ Statutory Return on Capital Employed: – Statutory EBIT; – Statutory Total Assets; and – Statutory Current Liabilities.

Source: McGrathNicol

6.3.6 Return on invested capital (ROIC)

Table 14: Return on invested capital (ROIC)

Criteria	Comments
How the ratio would be calculated	▪ ROIC is generally calculated as net profit after tax divided by the book value of debt and equity less cash and cash equivalents. ▪ The ratio is very similar to the return on assets (net profit after tax) ratio. The difference is that it removes cash and cash equivalents from the asset base, on the basis that these funds are not invested in the business but available to be used for additional investment. ▪ As for the return on assets ratio, it could be calculated based on the regulatory data, or based on the statutory data.
Level of common usage / acceptance	▪ ROIC is reasonably commonly used, particularly by businesses for internal purposes. It is less commonly used when comparing profitability across businesses.
Benchmarks	▪ The statutory ROIC could be compared to the regulatory ROIC to help illustrate the potential difference between regulatory profits and profits generated by the business as a whole (including non-regulated activities). ▪ The ROIC for regulated businesses could be compared to other industries (and ASX listed businesses) to see how returns compare.
Advantages	▪ Reasonably well known profitability measure. ▪ Is a meaningful indicator of financial performance from the perspective of a business owner or investor.
Disadvantages	▪ As profit is after tax, the ratio may result in misleading comparisons where businesses pay significantly different rates of taxation. ▪ Profit after tax can be impacted by non-operating adjustments (such as revaluations of assets) and prior period adjustments (such as the use of tax losses to reduce taxation in the year). ▪ The subtraction of cash and cash equivalents understates the business' assets, given that a level of working capital (cash) is required for the ongoing operation of the business.
Data requirements (refer to Appendix B for detailed data source information)	▪ Regulatory Return on Invested Capital: – Regulatory NPAT; – RAB; and – Regulatory Cash. ▪ Statutory Return on Invested Capital: – Statutory NPAT; – Statutory Total Assets; and – Statutory Cash.

Source: McGrathNicol

6.3.7 Return on equity

Table 15: Return on equity

Criteria	Comments
How the ratio would be calculated	▪ Return on equity is typically calculated as net profit after tax / equity (net assets).[16] ▪ The ratio could be calculated as both a regulatory and statutory return on equity.
Level of common usage / acceptance	▪ The return on equity ratio is a very commonly used and understood profitability ratio that is used across many industries. ▪ Return on regulatory equity is used by Ofgem to test the sensitivity of how RORE has or would vary in response to outperformance or underperformance against certain scenarios for regulated businesses in the United Kingdom, and used by the Ontario Electricity Board to measure the financial performance of the distribution businesses they regulate.
Benchmarks	▪ The benchmark would be the business' cost of equity. Where the actual return on equity exceeds the cost of equity, the business may be considered to be outperforming. ▪ The return on equity could be readily compared to other businesses and returns on equity in other industries.
Advantages	▪ The ratio clearly shows the ultimate return to the owners of the business. Therefore, the return can be assessed against required equity returns to assess the profitability of the business. ▪ It would allow for meaningful comparison between businesses.
Disadvantages	▪ The return on equity is not comparable to the business' cost of capital (building block WACC). ▪ As profit is after tax, the ratio may result in misleading comparisons where businesses pay significantly different rates of taxation. ▪ Profit after tax can be impacted by non-operating adjustments (such as revaluations of assets) and prior period adjustments (such as the use of tax losses to reduce taxation in the year).
Data requirements (refer to Appendix B for detailed data source information)	▪ Regulatory Return on Equity: – Regulatory NPAT; and – Regulatory Total Equity. ▪ Statutory Return on Equity: – Statutory NPAT; and – Statutory Total Equity.

Source: McGrathNicol

[16] Chartered Accountants Australia and New Zealand.

6.3.8 Economic profit

Table 16: Economic profit

Criteria	Comments
How the ratio would be calculated	▪ The economic profit would be calculated as net profit after tax less the cost of long-term debt and equity. This could be calculated as either: – EBIT – [pre-tax WACC x (total assets (or RAB))]; or – EBIT – [pre-tax WACC x (total assets – current liabilities)]. ▪ The first methodology assumes the return is earned on total assets. The second methodology removes current liabilities from the asset base, on the basis that these liabilities are not equity or debt funds that are used to finance the business. As such, the second methodology assumes the return is earned on capital employed. ▪ The ratio could be calculated on both the regulatory EBIT and the statutory EBIT. ▪ The cost of long-term debt and equity is calculated as the pre-tax WACC multiplied by total assets or the RAB (i.e. the return on capital). This produces a dollar value for cost of long-term debt and equity that can be subtracted from the EBIT to produce the economic profit.
Level of common usage / acceptance	▪ Economic profit is reasonably commonly used, particularly by businesses for internal purposes. It is less commonly used when comparing profitability across businesses as economic profit is an absolute measure of performance i.e. it produces a dollar value and will favour larger businesses with higher earning capacities.
Benchmarks	▪ If EBIT less cost of long-term debt and equity is positive, then an economic profit has been generated. Economic profit could be considered to be a return greater than the expected profit under the AER's regulatory framework. If economic profit is negative, then an economic loss has been incurred and the business has performed below expectations under the AER's regulatory framework.
Advantages	▪ The ratio clearly shows whether the business has outperformed the expected return on capital.
Disadvantages	▪ Economic profit is an absolute measure of performance (i.e. it produces a dollar value) and it will favour larger businesses with higher earning capacities. Accordingly, it may not allow for meaningful comparison between businesses.
Data requirements (refer to Appendix B for detailed data source information)	▪ Regulatory Economic Profit: – Regulatory EBIT; – Pre-tax WACC; – RAB; and – Regulatory Current Liabilities (depending on calculation method). ▪ Statutory Economic Profit: – Statutory EBIT; – Pre-tax WACC; – Statutory Total Assets; and – Statutory Current Liabilities (depending on calculation method).

Source: McGrathNicol

6.3.9 Net profit margin

Table 17: Net profit margin

Criteria	Comments
How the ratio would be calculated	▪ Regulatory net profit after tax / total regulatory revenue. ▪ Statutory net profit after tax / total revenue. Net profit after tax and total revenue would be taken from the business' statutory financial statements.[17]
Level of common usage / acceptance	▪ The net profit margin is a very commonly used and understood profitability ratio that is used across many industries.
Benchmarks	▪ The most appropriate benchmark will be the average net profit margin of businesses in the industry. Benchmark net profit margins will vary significantly between industries, so net profit margins of regulated businesses cannot simply be compared to net profit margins in other industries.
Advantages	▪ Easy to calculate, widely used and understood measure of profitability. ▪ As the ratio uses net profit after tax, it shows the final return that is available to be distributed to the owners of the business, or reinvested. ▪ Is of most value when comparing to benchmarks and between companies in the same industry.
Disadvantages	▪ The net profit margin does not enable determination of whether the profit is a reasonable return on an investment in the assets of the business, or a reasonable return on the equity injected in the business. ▪ As profit is after tax, the ratio may result in misleading comparisons where businesses pay significantly different rates of taxation. ▪ Profit after tax can be impacted by non-operating adjustments (such as revaluations of assets) and prior period adjustments (such as the use of tax losses to reduce taxation in the year).
Data requirements (refer to Appendix B for detailed data source information)	▪ Regulatory Net Profit Margin: – Regulatory NPAT; and – Regulatory Revenue. ▪ Statutory Net Profit Margin: – Statutory NPAT; and – Statutory Revenue.

Source: McGrathNicol

[17] Chartered Accountants Australia and New Zealand.

6.3.10 Operating profit margin

Table 18: Operating profit margin

Criteria	Comments
How the ratio would be calculated	▪ Regulatory EBIT / total regulatory revenue. ▪ Statutory EBIT / total revenue. EBIT and total revenue would be taken from the business' statutory financial statements.[18]
Level of common usage / acceptance	▪ The operating profit margin is a very commonly used and understood profitability ratio that is used across many industries.
Benchmarks	▪ The most appropriate benchmark will be the average operating profit margin of businesses in the industry. Benchmark operating profit margins will vary significantly between industries, so operating profit margins of regulated businesses cannot simply be compared to operating profit margins in other industries.
Advantages	▪ Easy to calculate, widely used and understood measure of profitability. ▪ As EBIT is used, it will measure profitability before the impact of financial structure (interest costs) and taxation, and therefore may be more comparable to other regulated businesses than the net profit margin. ▪ Is of most value when comparing to benchmarks and between companies in the same industry.
Disadvantages	▪ The operating profit margin does not enable determination of whether the profit is a reasonable return on an investment in the assets of the business, or a reasonable return on the equity injected in the business.
Data requirements (refer to Appendix B for detailed data source information)	▪ Regulatory Operating Profit Margin: – Regulatory EBIT; and – Regulatory Revenue. ▪ Statutory Operating Profit Margin: – Statutory EBIT; and – Statutory Revenue.

Source: McGrathNicol

[18] Chartered Accountants Australia and New Zealand.

6.3.11 Internal Rate of Return

Table 19: IRR

Criteria	Comments
How the ratio would be calculated	▪ The IRR is the discount rate that results in a net present value of zero for an asset or project. The IRR is the actual economic return that is earned by the asset or project over its life. It is typically used for analysis of assets or projects, rather than an entity's profitability.[19] ▪ The IRR may need to take into consideration the opening RAB, regulatory cash flows during the period and closing RAB.
Level of common usage / acceptance	▪ Well known and regularly used financial measure, though most often used as a tool for assessing investment or project returns, rather than a pure measure of profitability. ▪ An IRR approach is used by the Commerce Commission of New Zealand to assess profitability of regulated electricity distribution businesses, by comparing the IRR to the expected return.
Benchmarks	▪ In respect of the performance of the regulated businesses, the IRR may be able to be compared to the WACC.
Advantages	▪ A single IRR can be calculated over a regulatory period. ▪ May enable a simple comparison of IRR to WACC for a business, and therefore a quick determination of whether the business has either outperformed or underperformed the expected return.
Disadvantages	▪ Based on review of the New Zealand model a number of adjustments to cash flows may be required. ▪ May require a significant amount of data to be provided by Service Providers which is not currently provided, and adjustments to RIN data in order to derive required data inputs for the calculation. ▪ As the IRR uses cash flows, depreciation does not impact the IRR. Given their large asset base, depreciation is likely to be significant for the regulated businesses, and reflective of a decrease in the value of assets. However, the New Zealand model appears to compensate for this through the inclusion of capital expenditure cash flows.
Data requirements	We have outlined below a number of the high-level data requirements which may be required in order to calculate this measure. ▪ Opening RAB balance; ▪ Operating Cash Inflows; ▪ Operating Cash Outflows; ▪ Timing of Operating Cash Flows; ▪ Investing Cash Inflows; ▪ Investing Cash Outflows; ▪ Timing of Investing Cash Flows; ▪ Closing RAB balance; and ▪ Pre-tax WACC / Vanilla WACC / Post-tax WACC. In addition to the above, there may be further tax and interest considerations. We note that this measure may require a significant amount of data to be provided by Service Providers which is not currently provided, and adjustments to RIN response templates in order to derive required data inputs for the calculation.

Source: McGrathNicol

[19] This methodology for this calculation is based on the calculation as used in the Commerce Commission New Zealand Electricity Distribution Business: Analysis of EDB Performance 2010-2015 IRR Model.

6.3.12 Earnings per share and earnings yield

Table 20: Earnings per share and earnings yield

Criteria	Comments
How the ratio would be calculated	▪ Earnings per share is calculated as Net profit after tax / number of shares issued. ▪ Earnings yield is calculated as Earnings per share / share price. The earnings yield is the inverse of the PE ratio.
Level of common usage / acceptance	▪ Earnings per share and Earnings yield are commonly used for analysing the profitability of businesses listed on a stock exchange. ▪ This profitability measure is less commonly used for businesses that are not traded on an exchange, as the value of the shares is often difficult to obtain (where it cannot be readily observed on an exchange).
Benchmarks	▪ By using the average PE ratio of companies listed on the Australian stock exchange (which is readily available), an average earnings yield can be determined. This may be considered an appropriate benchmark, noting that more accurate benchmarks may be obtained from only using PE ratios of similar businesses.
Advantages	▪ Commonly used and well understood ratio. ▪ Relevant benchmarks are generally easy to identify.
Disadvantages	▪ Often can be difficult to obtain values (prices) for shares of non-stock exchange listed businesses. ▪ Not a clear measure of profitability, as the earnings yield may be impacted significantly by the value of the shares (and the risk of future earnings). ▪ Not applicable for calculating the regulatory profitability, as it is a measure that would be based on statutory financial information. ▪ As "earnings" is profit after tax, the ratio may result in misleading comparisons where businesses pay significantly different rates of taxation. ▪ As "earnings" is profit after tax, the ratio can be impacted by non-operating adjustments (such as revaluations of assets) and prior period adjustments (such as the use of tax losses to reduce taxation in the year).
Data requirements (refer to Appendix B for detailed data source information)	▪ Statutory Earnings per Share: – Statutory NPAT; and – Number of Shares.

Source: McGrathNicol

6.3.13 Operating profit per customer

Table 21: Operating profit per customer

Criteria	Comments
How the ratio would be calculated	▪ Regulatory EBIT / total customer numbers. Total customer numbers would be taken from the Reset RIN Response, and EBIT would be taken from the business' annual reporting RINs. ▪ Statutory EBIT / total customer numbers. EBIT would be taken from the business' statutory financial statements.
Level of common usage / acceptance	▪ Ofgem uses a profit per customer measure to analyse the energy companies it regulates.[20] ▪ This ratio may be more meaningful for distribution service providers than transmission service providers as total customer numbers is likely to be more highly correlated with distribution service providers' operations than transmission service providers' operations.
Benchmarks	▪ It appears unlikely there would be a suitable benchmark that could be applied for all regulated businesses. As each regulated business operates in different geographic regions, sectors and segments, each regulated business will have a different customer base, with different characteristics, opex requirements and capex requirements. Accordingly, operating profit per customer would best be compared from year to year for each regulated business, not between regulated businesses.
Advantages	▪ Easy to calculate and easily understood measure of profitability. ▪ As EBIT is used, it will measure profitability before the impact of interest and tax.
Disadvantages	▪ May not be comparable between the regulated businesses.
Data requirements (refer to Appendix B for detailed data source information)	▪ Regulatory Operating profit per customer: – Regulatory EBIT; and – Number of customers. ▪ Statutory Operating profit per customer: – Statutory EBIT; and – Number of customers.

Source: McGrathNicol

[20] Ofgem, The revenues, costs and profits of the large energy companies in 2012 (25 November 2013)

6.3.14 RAB multiples

Table 22: RAB multiples

Criteria	Comments
How the ratio would be calculated	▪ Enterprise value / RAB. ▪ Enterprise value is the total market value of the business (as determined by a recent sale of the business, comparison to recent sales of comparable businesses, or based on a business valuation technique), including the value of debt and equity. For the purposes of this calculation, enterprise value should exclude non-regulated assets. ▪ RAB is the regulated asset base as determined by the AER.
Level of common usage / acceptance	▪ Used as a profitability measure for regulated businesses, however, not commonly used as a profitability measure for non-regulated businesses.
Benchmarks	▪ A ratio of greater than 1 indicates that the business is valued at greater than the value of its RAB. ▪ A ratio above 1 may indicate that the business is earning (or is expected to earn) greater than the allowed return.[21] ▪ A higher EV to RAB ratio for a business may indicate higher profitability (or potential higher future profitability) than a business with a lower EV to RAB ratio. ▪ A ratio significantly higher than 1 (and higher than comparable businesses) may indicate that the business is highly profitable or potentially overvalued. ▪ A ratio of less than one may indicate that the business is not profitable or expected to be profitable, not expected to earn a reasonable return on the asset base, or potentially undervalued.
Advantages	▪ Can provide an independent perspective on the value of the business. ▪ May indicate that a business is earning adequate returns (where the RAB Multiple is greater than 1). ▪ Output is a simple number that can be compared to a benchmark of 1.
Disadvantages	▪ Enterprise values would need to be determined through a business valuation process, or based on a market capitalisation, and therefore may not be accurate. ▪ Enterprise value for the regulated business may be difficult to determine and separate from the value of the non-regulated aspects of the business. ▪ The RAB multiple is not a precise measure of profitability, and whilst it may be an indicator of the value the market is likely to put on a business' expected cash flows, there may be a number of factors (other than profitability) that influence enterprise value. Accordingly, may not be accurate to interpret a ratio greater than 1 as meaning that a business is earning profits in excess of its cost of capital (WACC).
Data requirements (refer to Appendix B for detailed data source information)	▪ Enterprise Value, where enterprise value may be determined: – as the entity's market capitalisation (which usually requires the entity's share price to calculate); or – using a business valuation technique such as earnings multiplied by a capitalisation multiple); or – by comparison to transactions involving similar businesses. ▪ RAB.

[21] Cambridge Economic Policy Associates Ltd – Advice on estimation of the risk free rate and market risk premium report prepared for the AER. In this report it is stated that "at its simplest, the concept is that in the absence of other factors a company will earn its allowed return on its RAB, and hence any premium in a company's valuation over the RAB will come from: expectations of earnings; an actual cost of capital that is below the allowed cost; and wider stock market or M & A activity".

Source: McGrathNicol

6.4 Comments on financial performance measures above

6.4.1 Current availability of data

We have not identified a current lack of data as a disadvantage for any of the above financial performance measures. However, given the information available to the AER at present, lack of data would be a disadvantage for all measures. At present, existing data allows:

- some of the identified financial performance measures to be calculated for electricity distribution and transmission businesses (electricity distribution and transmission businesses are required to provide income statements as part of their annual reporting requirements);
- some of the identified financial performance measures to be calculated for gas distribution businesses (not all gas distribution businesses are currently subject to Annual Reporting RINs); and
- no financial performance measures to be calculated for gas transmission businesses (gas transmission businesses are not currently subject to Annual Reporting RINs).

6.4.2 Various measures of profit or return

Our analysis at Section 6.3 above illustrates that there are a number of potential financial performance measures, and there may be multiple methods of calculating financial performance measures using slightly different data. A prime example of this is the use of profit / return in a number of the performance measures. Profit or return may be represented as NPAT, PBT, EBIT, EBITDA, EBITA or cash flow. Which is most appropriate to use will depend on the nature of the business being reviewed, what the financial performance measure is being used for, and what the financial performance measure is being compared to. In respect of the regulated businesses, we have summarised in the table below the likely suitability of each way of stating profit or return.

Table 23: Representations of profit or return

Criteria	Comments
NPAT	▪ Determined after tax and interest. Accordingly, NPAT is impacted by financing and taxation treatments of a business, and performance measures based on NPAT may not be directly comparable to other businesses. ▪ Commonly used, so therefore included in the financial performance measures at Section 6.3.
Profit before tax	▪ Determined before tax but after interest. Accordingly, PBT is impacted by the financing structure of a business, and performance measures based on PBT may not be directly comparable to other businesses. ▪ Not commonly used in financial performance measures, therefore not considered at Section 6.3.
EBIT	▪ Determined before tax and interest, and therefore may be a good measure of operational performance that can be compared to other businesses. ▪ Also commonly used, so therefore included at Section 6.3.
EBITA	▪ May be more appropriate than EBIT when amortisation expense for a business is very high, and this amortisation expense is significantly impacting the return. ▪ However, amortisation expense is only a potential issue for statutory performance measures, as there are no intangible assets in the RAB. ▪ As less commonly used, not considered at Section 6.3.

Criteria	Comments
EBITDA	▪ May be more appropriate than EBIT for a business where depreciation expenses are high, and not reflective of the true decline in value of the business' assets. ▪ However, as depreciation is a significant cost (and although not a cash impact, likely to be a reasonable approximation of capital maintenance expenditure required by businesses), removal of depreciation expense could overstate profitability measures for regulated businesses, particularly if the measures are used to compare to the performance of businesses in other industries. ▪ Therefore, not considered at Section 6.3.
Cash flow	▪ Cash flow records the cash receipts and payments a business makes in a period, and therefore excludes non-cash items such as depreciation, amortisation and accruals. ▪ As cash flow is relevant to the businesses, and may be an interesting comparison to EBIT, a cash flow return on assets has been considered at Section 6.3.

7 Challenges in calculating and analysing performance measures

7.1 Accounting and corporate structure issues

When identifying potential performance measures and reviewing financial information provided to the AER and included in statutory accounts, we have identified a number of potential challenges or issues that may impact on the ability to apply the financial performance measures. These are set out in the table below:

Table 24: Challenges in calculating and analysing performance measures

Challenge / issue	Potential impact	Adjustments, alternative measures to overcome issue
▪ Where a business is a subsidiary of a larger group, there may be intercompany arrangements in place (for example, shared overheads) that result in the financial statements of the business not reflecting the revenues, expenses, assets and liabilities it would if it were a stand-alone entity.	▪ These intercompany transactions could result in either the overstatement or understatement of the statutory profits of the business. ▪ In addition, there may be under or overstatement of regulatory net profit in the annual reporting RIN.	▪ Compliance by businesses with the AER's Ring Fencing Guidelines should substantially overcome this issue.
▪ Cost allocation from the statutory accounts to the regulatory accounts in the annual reporting RIN may be applied inconsistently by businesses. ▪ Also, in some cases not all expenses (particularly expenses such as overheads, interest and tax) may be allocated to the regulatory activities.	▪ May result in the understatement or overstatement of regulatory profit in the annual reporting RIN.	▪ Compliance by businesses with the AER's Cost Allocation Guidelines should substantially overcome this issue. ▪ Ensure that businesses provide detailed explanations and workings in the annual reporting RIN illustrating the adjustments made to the statutory Statement of Comprehensive Income to produce a regulatory Statement of Comprehensive Income.
▪ A business may not pay taxation at the Australian company tax rate. This may be due to tax minimisation, the business being part of a tax consolidated group where tax is paid by a related entity, or where the business is owned by a State or Territory government.	▪ The result may be comparison of the financial performance of a business to a benchmark that is derived based on an assumption that tax is paid at the Australian company tax rate. Alternatively, there may be risk of comparison to similar businesses that do not pay the same rate of tax.	▪ Prioritise performance measures that use EBIT, rather than net profit after tax. ▪ Where no tax expense on profit has been paid, apply a theoretical tax amount based on the company tax rate when calculating net profit after tax. This may be helpful in understanding differences between a financial performance measure and its benchmark.

Challenge / issue	Potential impact	Adjustments, alternative measures to overcome issue
▪ Use of accumulated tax losses by the business to reduce the tax payable in a year.	▪ The result may be comparison of the financial performance of a business to a benchmark that is derived based on an assumption that tax is paid at the Australian company tax rate. Alternatively, there may be risk of comparison to similar businesses that do not pay the same rate of tax.	▪ Prioritise performance measures that use EBIT, rather than net profit after tax. ▪ Where a reduced tax expense on profit has been paid as a result of utilisation of prior year tax losses, apply a theoretical tax amount based on the company tax rate when calculating net profit after tax. This may be helpful in understanding differences between a financial performance measure and its benchmark.
▪ As revenue decisions are made only once every 5 years, the RAB data may need to be an estimate for a number of years until an RFM is completed for the new regulatory period.	▪ Given that the PTRM is likely to include a good estimate of the RAB, the impact may be reasonably minor.	▪ Utilise the annual RAB in the Economic Benchmarking RIN, if they differ significantly from the forecasts of RAB in the PTRM.
▪ Where businesses have been acquired, there may be large balances of intangible assets (goodwill on acquisition) recorded as non-current assets in the statutory accounts.	▪ Where goodwill is significant (for example where a business has been acquired for a value that is significantly above an EV / RAB ratio of 1), then statutory assets may be significantly larger (and not directly comparable) to RAB. This could impact a number of the financial performance measures (all that have either total assets, net assets or non-current assets as the denominator).	▪ Intangible assets (and in particular goodwill on acquisition) could be removed from total assets if they are identified as being a significant balance for businesses. ▪ If intangible assets are removed, consideration would need to be made as to whether amortisation expense in the statutory accounts should also be removed from EBIT and net profit after tax.
▪ Where businesses have been acquired, other non-current assets (particularly property, plant and equipment) will be restated from historical cost to fair value in the statutory accounts.	▪ This has two potential impacts; – higher values of property, plant and equipment in the statutory accounts; and – higher depreciation expense in the statutory accounts on the higher asset values.	▪ Where depreciation is likely to vary significantly between the regulatory accounts and statutory accounts, EBITDA rather than EBIT could be used in the return on assets financial performance measure. However, this should only be done when comparing the regulatory return to the statutory return for an individual business. Generally, EBIT is considered to be more appropriate than EBITDA for use in the financial performance measures, as it will represent the performance after the depreciation cost (which given the asset intensive nature of the businesses and the requirement

Challenge / issue	Potential impact	Adjustments, alternative measures to overcome issue
		for ongoing capital maintenance, is reflective of a significant real cost).
▪ It may be misleading to compare regulatory return on assets to the statutory return on assets. This is because RAB only includes certain non-current physical assets that are allowed in accordance with the NER to be included in the asset base, whereas total assets in the statutory accounts will also include current assets such as cash and receivables. ▪ Whilst RAB only includes non-current assets, in reality a return on RAB can only be derived by a business that has working capital assets such as cash and accounts receivable.	▪ Given that the regulated businesses are capital intensive, and have a high proportion of non-current assets, the impact may be reasonably minor.	▪ Use tangible non-current assets for the purposes of calculating the statutory return on assets. However, this may overstate the return (EBIT or net profit after tax) as the return could not be derived without the investment in working capital assets.
▪ Non-reporting entities have no obligation to prepare financial statements that are in accordance with Australian Accounting Standards.[22]	▪ Use of non-standard accounting treatments could materially misrepresent the financial information, including profitability.	▪ Require businesses to prepare audited financial statements in accordance with the Australian Accounting Standards, and require that statutory figures in the annual reporting RIN agree to financial statements prepared in accordance with the standards.

[22] Non-reporting entities are not reporting entities. Reporting entities are all entities (including economic entities) in respect of which it is reasonable to expect the existence of users dependent on general purpose financial reports for information which will be useful to them for making and evaluating decisions about the allocation of scarce resources (Statement of Accounting Concepts SAC 1: Definition of the Reporting Entity).

7.2 Potential reasons for differences between regulatory and statutory profitability

Some possible reasons why there may be a material difference between the regulatory profit (and financial performance measure) and the statutory profit is that one or more of the following may apply:

- There may be substantial differences between the value of the RAB, and the value of the regulated assets in the statutory accounts. If the RAB is much higher (which it may be due to potentially longer asset lives, and a higher original value when the RAB was first set) then the returns on the statutory asset values (determined in accordance with accounting standards and accounting depreciation rules) will be greater than the return on RAB.
- Statutory profits will be impacted by items that are excluded from the regulatory accounts such as:
  - amortisation expense related to any goodwill or intellectual property, which will reduce EBIT and net profit after tax;
  - revaluations of assets, depreciation expenses, impairment losses, unrealised gain and losses on investments and other accounting adjustments, which will impact net profit after tax (refer to Appendix C for more detail regarding revaluations, depreciation and impairment); and
  - income from holdings of cash and investments, as these current assets are not allowed to be included in the RAB.
- The statutory accounts will include non-regulated activities. Where the profitability of non-regulated activities is substantially higher or lower than regulated activities, there may be material differences between regulatory and statutory profits (returns).
- Generally, capital contributions will not be permitted to be included in a business' RAB. However, in the statutory accounts, capital contributions will likely need to be recorded as assets in accordance with accounting standards. If capital contributions are included as assets in the statutory accounts (increasing the asset base) it may understate the statutory return on assets compared to the regulatory return on assets.

8 Data requirements

8.1 What data is currently available?

8.1.1 Data available from the AER's existing data sets

The below table outlines our current understanding of the AER's existing datasets, based on the example datasets provided to us by the AER. We note that the AER collects a range of data for a variety of purposes. The table below highlights data which we consider to be relevant and useful for the calculation of financial performance measures. Please refer to Appendix A for a detailed analysis of the AER's existing datasets.

Table 25: AER's relevant datasets and information for each sector and segment in regards to financial performance measures

Sector / Segment	Relevant datasets	Data which could be used for financial performance measures
Electricity Distribution	▪ Roll forward model ▪ Post-tax revenue model ▪ RIN response – Annual reporting ▪ RIN response – Reset	▪ RAB ▪ WACC ▪ Statutory / Regulatory: Revenue, Opex, Depreciation, EBIT, Finance costs, Income tax expense, NPAT ▪ Total customer numbers
Electricity Transmission	▪ Roll forward model ▪ Post-tax revenue model ▪ Regulatory accounts ▪ RIN response – Reset	▪ RAB ▪ WACC ▪ Statutory / Regulatory: Revenue, Opex, Depreciation, EBIT, Finance costs, Income tax expense, NPAT
Gas Distribution	▪ Roll forward model ▪ Post-tax revenue model ▪ RIN response – Annual – Financial and non-financial ▪ RIN response – Reset ▪ Annual Compliance Order Report (where available)	▪ RAB ▪ WACC ▪ Statutory / Regulatory (where available): Revenue, Opex, Depreciation, EBIT, Finance costs, Income tax expense, NPAT ▪ Total customer numbers
Gas Transmission	▪ Roll forward model ▪ Post-tax revenue model ▪ Annual Compliance Order Report (where available) ▪ RIN response – Reset	▪ RAB ▪ WACC ▪ Statutory: Revenue, Opex, Depreciation, EBIT, Finance costs, Income tax expense, NPAT (where available)

Source: McGrathNicol

8.1.2 Data available from annual reports and other publicly available information

The main sources of publicly available financial information for the regulated businesses are:

- Company websites;
- The AER's website (noting that the financial information available in RINs is discussed at Section 8.1.1 above); and
- ASIC.

Whether a business releases its financial information publicly depends on the type of company it is, its owners, and any legislative requirements. Businesses owned by state governments are likely to be required to release financial information publicly.

For a number of businesses, they may be part of consolidated group, and although financial information may be provided by the group, the financial results for the entity that operates the regulated business can usually not be separated from the financial results of the overall group.

The table below sets out a summary of the information publicly available for each sector:

Table 26: Annual reports and other publicly available information for Service Providers

Sector	Comments on financial information available publicly
Electricity Distribution	Financial statements appear to be publicly available for a number of the businesses. We note that for the Service Providers where financial statements are publicly available, the information in the financial statements appears to align with the data in the RIN responses.
Electricity Transmission	Financial statements appear to be publicly available for some businesses. We note that for the Service Providers where financial statements are publicly available, the information in the financial statements appears to align with the data in the RIN responses.
Gas Distribution	Financial statements appear to be publicly available for only a small number of the businesses. The AER has collected the Service Providers' financial statements as part of the Annual Compliance Order Report to the AER for some of the business, but generally these statements are for the consolidated group entity and not the individual regulated business.
Gas Transmission	Financial statements are not generally publicly available for the businesses. The financial statements collected as part of the Annual Compliance Order Report to the AER appear to be for the larger group entity and not specific to the individual regulated business.

Source: McGrathNicol

8.2 What additional data may need to be captured?

8.2.1 Data which the AER may wish to request from the regulated businesses in the future

Based on our review of potential financial performance measures, and the financial information that is currently available, it appears that the AER does not currently have access to sufficient financial information to conduct comprehensive financial performance measurement across all regulated businesses.

Whilst a reasonable level of financial information is available for electricity distribution and transmission businesses, data availability is lower for gas distribution and transmission businesses.

In terms of measuring profitability, obtaining the Statement of Comprehensive Income and Statement of Financial Position for a business is critical, as the Statement of Comprehensive Income sets out the profit / return to the business for the year, and the Statement of Financial Position sets out the assets and equity of the business that gives context to the profit or return.

Based on the performance measures identified in this report and the current availability of data to calculate these performance measures, we have set out in the table below details of data the AER may wish to request from the businesses going forward.

Table 27: Data which the AER may wish to request from the regulated businesses in the future

Data the AER may wish to request	Ease for businesses to provide
The AER may request a Statement of Financial Position (balance sheet) be provided by regulated businesses. The Statement of Financial Position sets out the assets and equity of the business that gives context to the profit or return. Without a Statement of Financial Position, a number of the financial performance measures identified at Section 6 would not be able to be calculated.	It appears likely that all regulated businesses would maintain sufficient financial information to prepare a reconciliation of their Statement of Financial Position between: ▪ the statutory accounts of the regulated business (i.e. the specific entity which owns the regulated assets); and ▪ the regulatory accounts of the regulated business.

<table>
<tr><th>Data the AER may wish to request</th><th>Ease for businesses to provide</th></tr>
<tr><td>The AER may request a reconciliation of the Statement of Financial Position between:
▪ the statutory accounts of the regulated business (i.e. the specific entity which owns the regulated assets); and
▪ the regulatory accounts of the regulated business.

To support the reconciliation, the AER may wish to seek explanations for adjustments from the statutory accounts to the regulated accounts.

We note that a reconciliation from statutory accounts to regulatory accounts appears to have been sought from:
▪ Electricity Distribution Service Providers up to FY13;
▪ Electricity Transmission Service Providers up to FY14; and
▪ Victorian Gas Distribution Service Providers up to FY12.</td><td>However, it is noted that this reconciliation and the supporting explanations may require additional time and effort to prepare.

The reconciliation and accompanying explanations should be audited.</td></tr>
<tr><td>The AER may request a Statement of Comprehensive Income (income statement) be provided by regulated businesses. The Statement of Comprehensive Income sets out the profit or return generated by a business. Without a Statement of Comprehensive Income, the majority of the financial performance measures proposed at Section 6 would not be able to be calculated.

The AER may request a reconciliation of the Statement of Comprehensive Income between:
▪ the statutory accounts of the regulated business (i.e. the specific entity which owns the regulated assets); and
▪ the regulatory accounts of the regulated business.

To support the reconciliation, the AER may wish to seek explanations for adjustments from the statutory accounts to the regulated accounts.

The AER may wish to request that the businesses complete the reconciliation consistent with the template included in the current annual reporting RIN for electricity distribution and transmission businesses.

We note that a reconciliation from statutory accounts to regulatory accounts appears to have been sought from:
▪ Electricity Distribution Service Providers up to FY16;
▪ Electricity Transmission Service Providers up to FY16;
▪ Gas Distribution Service Providers up to FY16 (Victorian businesses only).</td><td>It appears likely that all regulated businesses would maintain sufficient financial information to prepare a reconciliation of their Statement of Comprehensive Income between:
▪ the statutory accounts of the regulated business (i.e. the specific entity which owns the regulated assets); and
▪ the regulatory accounts of the regulated business.

However, it is noted that this reconciliation and the supporting explanations may require additional time and effort to prepare.

The reconciliation and accompanying explanations should be audited.</td></tr>
</table>

<table>
<tr><th>Data the AER may wish to request</th><th>Ease for businesses to provide</th></tr>
<tr><td>The AER may request a statement of cash flows be provided by the regulated businesses. The Statement of Cash Flows sets out the cash from operating, investing and financing activities for a business. A Statement of Cash Flows would assist in calculating the return on assets (net operating cash flow) performance measure.

The AER may request a reconciliation of the Statement of Cash flows between:
▪ the statutory accounts of the regulated business (i.e. the specific entity which owns the regulated assets); and
▪ the regulatory accounts of the regulated business.

To support the reconciliation, the AER may wish to seek explanations for adjustments from the statutory accounts to the regulated accounts.</td><td>It appears likely that all regulated businesses would maintain sufficient financial information to prepare a reconciliation of their statement of cash flows between:
▪ the statutory accounts of the regulated business (i.e. the specific entity which owns the regulated assets); and
▪ the regulatory accounts of the regulated business.

However, it is noted that this reconciliation and the supporting explanations may require additional time and effort to prepare.

The reconciliation and accompanying explanation should be audited.</td></tr>
</table>

9 Review of appropriateness of performance measures

9.1 Discussion on appropriate measures

Based on our review and as set out at Section 6 above, there are a number of profitability measures that could be used to assess the financial performance of the regulated businesses.

However, there is unlikely to be one perfect measure that will be appropriate for measuring the profitability of all regulated businesses, appropriate for comparison between regulated businesses, and appropriate for comparison to profits generated by businesses in other industries. Accordingly, we have attempted to set out below a framework for determining which financial performance measures may be appropriate.

The key objectives and criteria for the financial performance measures have been outlined in Section 3.5. To be considered appropriate, financial performance measures must meet at least one of the objectives. On the basis that all measures identified at Section 6 meet the objective of being measures of profitability, we have focused our assessment of the appropriateness of the financial performance measures against the following criteria:

- Criterion 1 - requirements are based on clear concepts and performance measures are able to be calculated consistently over time.
- Criterion 2 - calculation does not require significant manipulation of data, or require assumptions to be made. The measure's calculation is not significantly impacted by accounting adjustments, taxation treatments, or the entity's financing structure.
- Criterion 3 - generally accepted by industry experts as a good measure of profitability, and easily understood and meaningful to persons without a financial background.
- Criterion 4 - suitable given the industry characteristics (e.g. capital intensive, long life assets, regulated revenue and returns).
- Criterion 5 - readily able to be compared to other business in the sector and other businesses in the broader economy.

In addition to the above criteria, a critical requirement is that data is available to enable the calculation of the financial performance measures. At present, the AER does not have sufficient information to calculate any of the proposed financial performance measures for regulated businesses in all sectors and segments. Accordingly, we have not included current availability of data as a criteria in our assessment of the appropriateness of the performance measures. However, we highlight that without the AER obtaining additional data (as set out in Section 8 above), the AER would not be able to reliably calculate the financial performance measures.

In order to rate the appropriateness of the financial performance measures, we assessed the measures against each of the criterion using the below rating classifications:

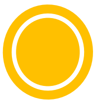
Table 28: Ratings classifications against the individual criterion

Rating against individual criterion	Comments on rating against individual criterion
	▪ Good – Strongly meets the criterion.
	▪ Fair - Reasonably meets the criterion.
	▪ Poor - Does not meet the criterion.

Source: McGrathNicol

Based on the results against each individual criterion, we have then determined an overall rating against the five criteria as outlined in the table below.

Table 29: Overall ratings classifications against the criteria

Overall rating against criteria	Comments on overall rating against criteria
	▪ Appropriate measure - Good rating against each criterion, or good rating against all criteria but one (where rating against this criterion is fair).
	▪ May be an appropriate measure - Ratings of good or fair against all criteria.
	▪ Not likely to be an appropriate measure. One or more ratings of poor against an individual criterion.

Source: McGrathNicol

9.2 Assessment of performance measures against the criteria

The appropriateness of the various financial performance measures has been evaluated against the key criteria, as illustrated in the table below.

The ratings against the criteria have been determined assuming that all relevant data is available to the AER to calculate the financial performance measures.

Table 30: Overview of financial performance measures against criteria

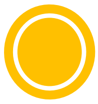
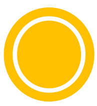
Financial performance measure	Proposed formula for calculation	Criterion 1	Criterion 2	Criterion 3	Criterion 4	Criterion 5	Overall
Return on Assets (EBIT)	EBIT / RAB or total assets	🟢	🟢	🟢	🟢	🟢	🟢
Return on Assets (net profit after tax)	Net profit after tax / RAB or total assets	🟢	🟡	🟢	🟢	🟡	🟡
Return on Assets (Net operating cash flow)	Operating cash flow / RAB or total assets	🟢	🟡	🟡	🟡	🟢	🟡
Return on non-current assets	EBIT / non-current assets	🟢	🟡	🟡	🟢	🟢	🟡
Return on capital employed	EBIT / (total assets less current liabilities)	🟢	🟡	🟢	🟡	🟢	🟡
Return on invested capital	Net profit after tax / the book value of debt and equity less cash and cash equivalents	🟢	🟡	🟢	🟡	🟡	🟡
Return on equity	Net profit after tax / total equity	🟢	🟡	🟢	🟢	🟢	🟢
Economic profit	EBIT – pre-tax WACC x (total assets (or RAB)); or EBIT – pre-tax WACC x (total assets (or RAB) – current liabilities)	🟢	🟢	🟢	🟢	🟡	🟢
Net profit margin	Net profit after tax / total regulated revenue	🟢	🟡	🟢	🟡	🔴	🔴
Operating profit margin	EBIT / total regulated revenue	🟢	🟢	🟢	🟡	🟡	🟡
IRR	The IRR is the discount rate that results in a net present value of zero for an asset or project. The IRR is the actual economic return that is earned by the asset or project over its life.	🟡	🟡	🟡	🟢	🟢	🟡
Earnings per share / earnings yield	Earnings per share is calculated as Net profit after tax / number of shares issued. Earnings yield is calculated as Earnings per share / share price. The earnings yield is the inverse of the PE ratio.	🟢	🟡	🟢	🟡	🟡	🟡
Operating profit per customer / connection	EBIT / total customer number	🟢	🟢	🟢	🟢	🟡	🟢
RAB multiples	Enterprise Value / RAB	🟡	🟡	🟡	🟢	🟡	🟡

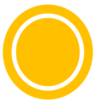
Source: McGrathNicol

Further discussion on each performance measures overall rating against the criteria is set out in the table below. Where good ratings were awarded against an individual criterion, no comments are noted.

Table 31: Detailed analysis of financial performance measures against criteria

Performance measure	Overall rating against criteria	Comments
Return on Assets (EBIT)		▪ None noted.
Return on Assets (net profit after tax)		▪ Earnings are based on net profit after tax, which is determined after tax and interest. Accordingly, the ratio is impacted by financing and taxation treatments. ▪ As a result, this performance measure is not readily compared to other businesses in the sector or businesses in other industries.
Return on Assets (net operating cash flow)		▪ Includes cash flows related to interest expenses, and therefore is not a measure that considers performance before the impact of a business' financing. ▪ The exclusion of depreciation may unfairly understate performance, where depreciation reflects a genuine decline in asset value and cost to the business. ▪ Accordingly, may be less suitable given the industry characteristics (capital intensive) unless there is an adjustment made to operating cash flow to include capital maintenance expenditure cash flows.
Return on non-current assets		▪ Assumes that all businesses' earnings are attributable to non-current assets, which is not likely to be reasonable, as an investment in cash holdings and debtors (which are current assets) would be required at a minimum. However, may be valuable to calculate the statutory return on non-current assets ratio for comparison to return on RAB, as RAB appears to only include non-current assets. ▪ Not a commonly used measure of financial performance. ▪ Not regularly calculated by businesses in other industries, but assuming that financial information is available it is easily calculated.
Return on capital employed		▪ The subtraction of current liabilities understates a business' assets, and therefore may overstate returns. ▪ May be less suitable than other measures, as removal of current liabilities would not allow the ROCE to be benchmarked against the WACC.

Performance measure	Overall rating against criteria	Comments
Return on invested capital		▪ Earnings are based on net profit after tax, which is determined after tax and interest. Accordingly, the ratio is impacted by financing and taxation treatments. ▪ As a result, this performance measure is not as readily compared to other businesses in the sector or business in other industries. ▪ The subtraction of cash and cash equivalents understates a business' assets, given that a level of working capital (cash) is required for the ongoing operation of the business. ▪ May be less suitable than other measures, as the subtraction of cash and cash equivalents would not allow the ROIC to be benchmarked against the WACC.
Return on equity		▪ Earnings are based on net profit after tax, which is determined after tax and interest. Accordingly, the financial performance measure is impacted by financing and taxation treatments. ▪ However, may be a useful measure for understanding the ultimate return to a business' owners after all expenses and tax has been paid, and comparison to the ultimate return of other companies.
Economic profit		▪ Economic profit is an absolute measure of performance (i.e. it produces a dollar value) and it will favour larger businesses with higher earning capacities. Accordingly, it may not allow for meaningful comparison between businesses. ▪ However, similar to the return on assets (EBIT) performance measure, will provide a clear analysis of financial performance compared to the WACC.
Net profit margin		▪ Earnings are based on net profit after tax, which is determined after tax and interest. Accordingly, the ratio is impacted by financing and taxation treatments. ▪ Less suitable for use in analysing the regulated businesses, as the net profit margin does not enable determination of whether the profit is a reasonable return on an investment, or a reasonable return on the equity injected in the business. ▪ As a result, this performance measure is not readily compared to other businesses in the sector or businesses in other industries.
Operating profit margin		▪ Less suitable for use in analysing the regulated businesses as the operating profit margin does not enable determination of whether the profit is a reasonable return on an investment, or a reasonable return on the equity injected in the business. ▪ Whilst comparable to other similar businesses, the operating profit margin is not comparable to businesses in other industries.

Performance measure	Overall rating against criteria	Comments
IRR		▪ Application may not be clear to all users, and may require detailed explanation to clarify appropriateness. May be difficult for persons without a financial background to understand. ▪ A number of adjustments are likely to be required (based on our review of the New Zealand model), and as a result the calculation becomes complex. ▪ Difficult to reliably determine an IRR based on the statutory financial statements without making a number of assumptions.
Earnings per share and earnings yield		▪ Earnings are based on net profit after tax, which is determined after tax and interest. Accordingly, the ratio is impacted by financing and taxation treatments. ▪ As a result, this performance measure is not readily compared to other businesses in the sector or businesses in other industries.
Operating profit per customer		▪ Not comparable to businesses in other industries. ▪ Also may be misleading if directly compared to other businesses in the sector, as geographic location, length of network or pipelines and other factors may significantly impact the ratio. ▪ However, could provide a good analysis of a business' profitability from year to year.
RAB multiples		▪ May be difficult to calculate consistently over time, due to reliance on the availability of data used to determine enterprise values (for example, there may be no recent sale of similar businesses that could be used as comparable transactions). ▪ Enterprise values would need to be determined through a business valuation process, and therefore may not be accurate and are likely to rely on assumptions. ▪ There is support by industry experts for RAB multiples as a measure of profitability, though there may be a number of factors (other than profitability) that influence the RAB multiple. Accordingly, it may not be accurate to interpret a ratio greater than 1 as meaning that a business is earning profits in excess of its cost of capital (WACC). ▪ May be comparable to other regulated businesses, but less comparable to businesses in other industries (as a market asset ratio for businesses in non-regulated industries would incorporate factors such as management capability and internally generated goodwill that is not able to be capitalised in the asset base). ▪ However, may be useful to calculate for the regulated businesses as likely to be a good, although potentially imprecise, indicator of profitability (or expected profitability). Also may indicate that a business is earning adequate returns (where the RAB Multiple is greater than 1).

Source: McGrathNicol

9.3 Conclusion on the appropriateness of performance measures

Our analysis of the appropriateness of the financial performance measures against the criteria illustrates that:

- the Return on Assets (EBIT) performance measure strongly meets all criterion; and
- a number of other performance measures may also be appropriate, including the following:
  - Return on Equity;
  - Operating profit per customer / connection; and
  - Economic profit.

Use of multiple measures may be valuable, as they can highlight different aspects of profitability. Our analysis indicates that using the performance measures identified, the AER may be able to develop a framework for measuring the financial performance of the regulated businesses. However, it is highlighted currently the AER does not have sufficient information to calculate any of the proposed financial performance measures for regulated businesses in all sectors and segments. Additional information would need to be obtained from the businesses as set out in Section 8.

Appendix A: AER's existing data sets

The below table outlines our current understanding of the AER's existing datasets, based on the example datasets provided to us by the AER. We note that the AER collects a range of data for a variety of purposes. The table below highlights data which we consider to be relevant and useful for the calculation of financial performance measures.

Table 32: Electricity Distribution existing datasets

Report	Timing	Relevant Data
Roll forward model – Regulatory proposal	▪ Annual figures. ▪ Completed every five years.	▪ Historical opening / closing RAB (for each of the five years).
Roll forward model – Final decision	▪ Annual figures. ▪ Completed every five years.	▪ Historical opening / closing RAB (for five years).
Post-tax revenue model – Final decision	▪ Annual figures. ▪ Completed every five years.	▪ Forecast opening / closing RAB (for five years). ▪ Vanilla WACC / Pre-tax WACC.
Post-tax revenue model – Update – Return on debt	▪ Annual figures. ▪ Completed annually during the control period.	▪ Forecast opening / closing RAB (for five years) ▪ Vanilla WACC / Pre-tax WACC.
RIN response – Reset – Regulatory proposal	▪ Annual figures.	▪ Operating expenditure: – Standard control services – Alternative control services ▪ Total customer numbers.
RIN response – Annual reporting – Financial	▪ Annual figures. ▪ Completed annually.	▪ Statutory accounts: – Total revenue – Operating expenses – Depreciation – Finance costs – Loss on disposal of assets – Impairment losses – Profit before tax – Income tax expense – Profit after tax. ▪ Regulatory accounts: – Total revenue – Operating expenses – Depreciation – Finance costs – Loss on disposal of assets – Profit before tax – Income tax expense – Profit after tax.
RIN response – Annual reporting – Non-financial	▪ Annual information. ▪ Completed annually.	▪ No relevant data.

Report	Timing	Relevant Data
RIN response – Economic benchmarking	▪ Annual figures. ▪ Completed annually.	▪ Revenue: – Standard control services – Alternative control services ▪ Operating expenditure: – Standard control services – Alternative control services ▪ Regulatory asset base: – Network services – Standard control services – Alternative control services.
RIN response – Category analysis	▪ Annual figures. ▪ Completed annually.	▪ Operating expenditure: – Standard control services – Alternative control services

Source: McGrathNicol

Table 33: Electricity Transmission existing datasets

Report	Timing	Relevant Data
Roll forward model – Regulatory proposal	▪ Annual figures. ▪ Completed every five years.	▪ Historical / forecast opening / closing RAB (for each of the five years).
Roll forward model – Final decision	▪ Annual figures. ▪ Completed every five years.	▪ Historical opening / closing RAB (for each of the five years).
Post-tax revenue model – Regulatory proposal	▪ Annual figures. ▪ Completed every five years.	▪ Forecast opening / closing RAB (for five years). ▪ Vanilla WACC / Pre-tax WACC.
Post-tax revenue model – Final decision	▪ Annual figures. ▪ Completed every five years.	▪ Forecast opening / closing RAB (for five years). ▪ Vanilla WACC / Pre-tax WACC.
Post-tax revenue model – Update – Return on debt	▪ Annual figures. ▪ Completed annually during the regulatory control period.	▪ Forecast opening / closing RAB (for five years) ▪ Vanilla WACC / Pre-tax WACC.
Regulatory accounts	▪ Annual figures. ▪ Completed annually.	▪ Audited financial statements: – Total revenue – Operating expenses – Depreciation – Loss on disposal of assets – Earnings before interest and tax – Finance costs – Profit before tax – Income tax expense – Profit after tax. ▪ Statutory: – Total revenue – Operating expenses – Depreciation – Loss on disposal of assets – Earnings before interest and tax

Report	Timing	Relevant Data
		– Profit before tax – Income tax expense – Profit after tax. ▪ Regulatory: – Total revenue – Operating expenses – Depreciation – Loss on disposal of assets – Earnings before interest and tax.
RIN response – Reset – Regulatory proposal	▪ Annual figures. ▪ Completed every five years.	▪ Historical operating expenditure ▪ Forecast opening / closing RAB (for five years).
RIN response – Economic Benchmarking	▪ Annual figures. ▪ Completed annually.	▪ Historical revenue ▪ Historical operating expenditure ▪ Historical opening / closing RAB (for five years).
RIN response – Category analysis	▪ Annual figures. ▪ Completed annually.	▪ Historical operating expenditure.

Source: McGrathNicol

Table 34: Gas Distribution existing datasets

Report	Timing	Relevant Data
Roll forward model – Regulatory proposal	▪ Annual figures. ▪ Completed every five years.	▪ Historical opening / closing RAB (for each of the five years).
Roll forward model – Final decision	▪ Annual figures. ▪ Completed every five years.	▪ Historical opening / closing RAB (for each of the five years).
Post-tax revenue model – Final decision	▪ Annual figures. ▪ Completed every five years.	▪ Forecast opening / closing RAB (for five years) ▪ Vanilla WACC / Pre-tax WACC.
Post-tax revenue model – Update – Return on debt	▪ Annual figures. ▪ Completed annually during regulatory control period.	▪ Forecast opening / closing RAB (for five years) ▪ Vanilla WACC / Pre-tax WACC.
RIN response – Reset - Regulatory proposal	▪ Annual figures. ▪ Completed every five years.	▪ Historical operating expenditure. ▪ Total customer numbers.
RIN response – Annual – Financial and non-financial	▪ Annual figures. ▪ Completed annually.	▪ Statutory accounts: – Total revenue – Operating expenses – Depreciation – Finance costs – Loss on disposal of assets – Impairment losses – Profit before tax – Income tax expense – Profit after tax.

Report	Timing	Relevant Data
		▪ Regulatory accounts: – Total revenue – Operating expenses – Depreciation – Finance costs – Loss on disposal of assets – Profit before tax – Income tax expense – Profit after tax.
RIN response – Annual - Reporting	▪ Annual figures. ▪ Completed annually.	▪ Historical operating expenditure.
Annual Compliance Order Report	▪ Annual figures. ▪ These reports are submitted in response to the annual regulatory information order made by the AER on 7 November 2008 under section 48 of the NGL. ▪ Completed annually (it is noted these reports appear to have been collected by the AER up until and including the 2015 financial year).	▪ Statutory accounts (where available): – Total revenue – Operating expenses – Depreciation – Finance costs – Loss on disposal of assets – Impairment losses – Income tax expense – Profit after tax – Property, plant and equipment – Current liabilities – Non-current liabilities – Equity.

Source: McGrathNicol

Table 35: Gas Transmission existing datasets

Report	Timing	Relevant Data
Roll forward model – Regulatory proposal	▪ Annual figures. ▪ Completed every five years.	▪ Historical opening / closing RAB (for each of the five years).
Roll forward model – Final decision	▪ Annual figures. ▪ Completed every five years.	▪ Historical opening / closing RAB (for each of the five years).
Post-tax revenue model – Final decision	▪ Annual figures. ▪ Completed every five years.	▪ Forecast opening / closing RAB (for five years) ▪ Vanilla WACC / Pre-tax WACC.
Post-tax revenue model – Update – Return on debt	▪ Annual figures. ▪ Completed annually during regulatory control period.	▪ Forecast opening / closing RAB (for five years) ▪ Vanilla WACC / Pre-tax WACC.
RIN response – Reset – Regulatory proposal	▪ Annual figures. ▪ Completed every five years.	▪ Historical operating expenditure.
Annual Compliance Order Report	▪ Annual figures. ▪ These reports are submitted in response to the annual regulatory	▪ Statutory accounts (where available): – Total revenue – Operating expenses – Depreciation

Report	Timing	Relevant Data
	information order made by the AER on 7 November 2008 under section 48 of the NGL. ▪ Completed annually (it is noted these reports appear to have been collected by the AER up until and including the 2015 financial year).	– Finance costs – Loss on disposal of assets – Impairment losses – Income tax expense – Profit after tax – Property, plant and equipment – Current liabilities – Non-current liabilities – Equity.

Source: McGrathNicol

Appendix B: Sources of Data

For each data requirement below, we have outlined what financial information, which has already been collected by the AER, could be used to meet the data requirement. We have only reviewed the financial information collected by the AER for FY11 to FY16 and accordingly only refer to the financial information collected by the AER for FY11 to FY16.

Electricity Distribution

Table 36: Electricity distribution sources of data

Data	Data source
Regulatory Revenue	▪ FY11-FY12: Total revenue, Regulated distribution business column, 7a Financial Performance worksheet, RIN response – Annual workbook. ▪ FY13-FY16: Total revenue, Distribution business column, Income worksheet, RIN response – Annual workbook.
Statutory Revenue	▪ FY11-FY12: Total revenue, Audited statutory accounts column, 7a Financial Performance worksheet, RIN response – Annual workbook. ▪ FY13-FY16: Total revenue, Audited statutory accounts column, Income worksheet, RIN response – Annual workbook.
Regulatory EBIT	▪ FY11-FY12: EBIT, Regulated distribution business column, 7a Financial Performance worksheet, RIN response – Annual workbook. ▪ FY13-FY16: Profit before tax + Finance charges, Distribution business column, Income worksheet, RIN response – Annual workbook.
Statutory EBIT	▪ FY11-FY12: EBIT, Audited statutory accounts column, 7a Financial Performance worksheet, RIN response – Annual workbook. ▪ FY13-FY16: Profit before tax + Finance charges, Audited statutory accounts column, Income worksheet, RIN response – Annual workbook.
Regulatory NPAT	▪ FY11-FY12: NPAT, Regulated distribution business column, 7a Financial Performance worksheet, RIN response – Annual workbook. ▪ FY13-FY16: Profit after tax, Distribution business column, Income worksheet, RIN response – Annual workbook.
Statutory NPAT	▪ FY11-FY12: NPAT, Audited statutory accounts column, 7a Financial Performance worksheet, RIN response – Annual workbook. ▪ FY13-FY16: Profit after tax, Audited statutory accounts column, Income worksheet, RIN response – Annual workbook.
Regulatory Cash	▪ FY11-FY12: Cash, Regulated distribution business column, 7b Financial Position worksheet, RIN response – Annual workbook. ▪ FY13: Cash and cash equivalents, Distribution business column, Balance worksheet, RIN response – Annual workbook. ▪ FY14-FY16: Not available.
Statutory Cash	▪ FY11-FY12: Cash, Audited statutory accounts column, 7b Financial Position worksheet, RIN response – Annual workbook. ▪ FY13: Cash and cash equivalents, Audited statutory accounts column, Balance worksheet, RIN response – Annual workbook. ▪ FY14-FY16: Not available.
RAB	▪ Interim Closing Regulated Asset Base / Closing Regulated Asset Base, Total actual RAB roll forward worksheet, RFM – Final decision workbook. ▪ If the relevant RFM is not available, use Closing RAB, Assets worksheet, PTRM – Final decision workbook.
Statutory Non-current Assets	▪ FY11-FY12: Total non-current assets, Audited statutory accounts column, 7b Financial Position worksheet, RIN response – Annual workbook. ▪ FY13: Total non-current assets, Audited statutory accounts column, Balance worksheet, RIN response – Annual workbook. ▪ FY14-FY16: Not available.

Data	Data source
Statutory Total Assets	▪ FY11-FY12: Total assets, Audited statutory accounts column, 7b Financial Position worksheet, RIN response – Annual workbook. ▪ FY13: Total assets, Audited statutory accounts column, Balance worksheet, RIN response – Annual workbook. ▪ FY14-FY16: Not available.
Regulatory Current Liabilities	▪ FY11-FY12: Total current liabilities, Regulated distribution business column, 7b Financial Position worksheet, RIN response – Annual workbook. ▪ FY13: Total current liabilities, Distribution business column, Balance worksheet, RIN response – Annual workbook. ▪ FY14-FY16: Not available.
Statutory Current Liabilities	▪ FY11-FY12: Total current liabilities, Audited statutory accounts column, 7b Financial Position worksheet, RIN response – Annual workbook. ▪ FY13: Total current liabilities, Audited statutory accounts column, Balance worksheet, RIN response – Annual workbook. ▪ FY14-FY16: Not available.
Regulatory Total Equity	▪ FY11-FY12: Net assets / (liabilities), Regulated distribution business column, 7b Financial Position worksheet, RIN response – Annual workbook. ▪ FY13: Net assets / (liabilities), Distribution business column, Balance worksheet, RIN response – Annual workbook. ▪ FY14-FY16: Not available.
Statutory Total Equity	▪ FY11-FY12: Net assets / (liabilities), Audited statutory accounts column, 7b Financial Position worksheet, RIN response – Annual workbook. ▪ FY13: Net assets / (liabilities), Audited statutory accounts column, Balance worksheet, RIN response – Annual workbook. ▪ FY14-FY16: Not available.
Pre-tax WACC	▪ Pre-tax nominal WACC, WACC worksheet, PTRM – Final Decision workbook.
Number of customers	▪ Customer numbers, State of the Energy Market reports.
Number of shares	▪ Number of ordinary shares, Notes of audited financial statements (where audited financial statements are prepared specifically for the Service Provider).
Operating cash flow	▪ Audited financial statements.

Source: McGrathNicol

Electricity Transmission

Table 37: Electricity transmission sources of data

Data	Data source
Regulatory Revenue	▪ FY11-FY16: Total revenue, Regulatory financial statements column, Statement of Comprehensive Income – Prescribed Transmission Services worksheet, Regulatory accounts workbook.
Statutory Revenue	▪ FY11-FY16: Total revenue, Audited financial statements column, Disaggregation Statement – Income worksheet, Regulatory accounts workbook.
Regulatory EBIT	▪ FY11-FY16: EBIT, Regulatory financial statements column, Statement of Comprehensive Income – Prescribed Transmission Services worksheet, Regulatory accounts workbook.
Statutory EBIT	▪ FY11-FY16: EBIT, Audited financial statements column, Disaggregation Statement – Income worksheet, Regulatory accounts workbook.
Regulatory NPAT	▪ FY11-FY16: Not available.
Statutory NPAT	▪ FY11-FY16: Profit (Loss) after Income Tax Expense, Audited financial statements column, Disaggregation Statement – Income worksheet, Regulatory accounts workbook.
Regulatory Cash	▪ FY11-FY14: Cash and cash equivalents, Regulatory financial statements column, Statement of Financial Position – Prescribed Transmission Services worksheet, Regulatory accounts workbook. ▪ FY15-FY16: Not available.
Statutory Cash	▪ FY11-FY14: Cash and cash equivalents, Audited financial statements column, Disaggregation Statement – Statement of Financial Position (Summary) worksheet, Regulatory accounts workbook. ▪ FY15-FY16: Not available.
RAB	▪ Interim Closing Regulated Asset Base / Closing Regulated Asset Base, Total actual RAB roll forward worksheet, RFM – Final decision workbook. ▪ If the relevant RFM is not available, use Closing RAB, Assets worksheet, PTRM – Final decision workbook.
Statutory Non-current Assets	▪ FY11-FY14: Total non-current assets, Audited financial statements column, Disaggregation Statement – Statement of Financial Position (Summary) worksheet, Regulatory accounts workbook. ▪ FY15-FY16: Not available.
Statutory Total Assets	▪ FY11-FY14: Total assets, Audited financial statements column, Disaggregation Statement – Statement of Financial Position (Summary) worksheet, Regulatory accounts workbook. ▪ FY15-FY16: Not available.
Regulatory Current Liabilities	▪ FY11-FY14: Total current liabilities, Regulatory financial statements column, Statement of Financial Position – Prescribed Transmission Services worksheet, Regulatory accounts workbook. ▪ FY15-FY16: Not available.
Statutory Current Liabilities	▪ FY11-FY14: Total current liabilities, Audited financial statements column, Disaggregation Statement – Statement of Financial Position (Summary) worksheet, Regulatory accounts workbook. ▪ FY15-FY16: Not available.
Regulatory Total Equity	▪ FY11-FY14: Net assets / (liabilities), Regulatory financial statements column, Statement of Financial Position – Prescribed Transmission Services worksheet, Regulatory accounts workbook. ▪ FY15-FY16: Not available.
Statutory Total Equity	▪ FY11-FY14: Net assets / (liabilities), Audited financial statements column, Disaggregation Statement – Statement of Financial Position (Summary) worksheet, Regulatory accounts workbook. ▪ FY15-FY16: Not available.

Pre-tax WACC	▪ Pre-tax nominal WACC, WACC worksheet, PTRM – Final Decision workbook.
Number of customers	▪ Assumed to be the total of all customers in the relevant jurisdiction. Based on electricity distribution customer numbers as stated in the State of the Energy Market reports.
Number of shares	▪ Number of ordinary shares, Notes of audited financial statements (where audited financial statements are prepared specifically for the Service Provider).
Operating cash flow	▪ Audited financial statements.

Source: McGrathNicol

Gas Distribution

Table 38: Gas distribution sources of data

Data	Data source
Regulatory Revenue	▪ FY10-FY12: Total revenue, Gas distribution business base amount column, Regulatory Accounting Statement – 1: Statement of Comprehensive Income, Regulatory accounts workbook. ▪ FY13-FY15: Total revenue, Regulated business base amount column, Income worksheet, RIN response – Annual workbook.
Statutory Revenue	▪ FY10-FY12: Total revenue, Audited base amount column, Regulatory Accounting Statement – 1: Statement of Comprehensive Income, Regulatory accounts workbook. ▪ FY13-FY15: Total revenue, Statutory accounts base amount column, Income worksheet, RIN response – Annual workbook.
Regulatory EBIT	▪ FY10-FY12: Profit / (loss) before tax + borrowing costs, Gas distribution business base amount column, Regulatory Accounting Statement – 1: Statement of Comprehensive Income, Regulatory accounts workbook. ▪ FY13-FY15: Profit / (loss) before tax + net finance charges, Regulated business base amount column, Income worksheet, RIN response – Annual workbook.
Statutory EBIT	▪ FY10-FY12: Profit / (loss) before tax + borrowing costs, Audited base amount column, Regulatory Accounting Statement – 1: Statement of Comprehensive Income, Regulatory accounts workbook. ▪ FY13-FY15: Profit / (loss) before tax + net finance charges, Statutory accounts base amount column, Income worksheet, RIN response – Annual workbook.
Regulatory NPAT	▪ FY10-FY12: Profit / (loss) after tax, Gas distribution business base amount column, Regulatory Accounting Statement – 1: Statement of Comprehensive Income, Regulatory accounts workbook. ▪ FY13-FY15: Profit / (loss) after tax, Regulated business base amount column, Income worksheet, RIN response – Annual workbook.
Statutory NPAT	▪ FY10-FY12: Profit / (loss) after tax, Audited base amount column, Regulatory Accounting Statement – 1: Statement of Comprehensive Income, Regulatory accounts workbook. ▪ FY13-FY15: Profit / (loss) after tax, Statutory accounts base amount column, Income worksheet, RIN response – Annual workbook.
Regulatory Cash	▪ FY10-FY12: Cash, Gas distribution business base amount column, Regulatory Accounting Statement – 2: Statement of Financial Position, Regulatory accounts workbook. ▪ FY13-FY15: Not available.
Statutory Cash	▪ FY10-FY12: Cash, Audited base amount column, Regulatory Accounting Statement – 2: Statement of Financial Position, Regulatory accounts workbook. ▪ FY13-FY15: Not available.
RAB	▪ Interim Closing Regulated Asset Base / Closing Regulated Asset Base, Total actual RAB roll forward worksheet, RFM – Final decision workbook. ▪ If the relevant RFM is not available, use Closing RAB, Assets worksheet, PTRM – Final decision workbook.
Statutory Non-current Assets	▪ FY10-FY12: Total non-current assets, Audited base amount column, Regulatory Accounting Statement – 2: Statement of Financial Position, Regulatory accounts workbook. ▪ FY13-FY15: Not available.

Statutory Total Assets	▪ FY10-FY12: Total assets, Audited base amount column, Regulatory Accounting Statement – 2: Statement of Financial Position, Regulatory accounts workbook. ▪ FY13-FY15: Not available.
Regulatory Current Liabilities	▪ FY10-FY12: Total current liabilities, Gas distribution business base amount column, Regulatory Accounting Statement – 2: Statement of Financial Position, Regulatory accounts workbook. ▪ FY13-FY15: Not available.
Statutory Current Liabilities	▪ FY10-FY12: Total current liabilities, Audited base amount column, Regulatory Accounting Statement – 2: Statement of Financial Position, Regulatory accounts workbook. ▪ FY13-FY15: Not available.
Regulatory Total Equity	▪ FY10-FY12: Net assets / (liabilities), Gas distribution business base amount column, Regulatory Accounting Statement – 2: Statement of Financial Position, Regulatory accounts workbook. ▪ FY13-FY15: Not available.
Statutory Total Equity	▪ FY10-FY12: Net assets / (liabilities), Audited base amount column, Regulatory Accounting Statement – 2: Statement of Financial Position, Regulatory accounts workbook. ▪ FY13-FY15: Not available.
Pre-tax WACC	▪ Pre-tax nominal WACC, WACC worksheet, PTRM – Final Decision workbook.
Number of customers	▪ Customer numbers, State of the Energy Market reports.
Number of shares	▪ Number of ordinary shares, Notes of audited financial statements (where audited financial statements are prepared specifically for the Service Provider).
Operating cash flow	▪ Audited financial statements.

Source: McGrathNicol

Gas Transmission

Table 39: Gas transmission sources of data

Data	Data source
Regulatory Revenue	▪ Not available.
Statutory Revenue	▪ Not available.
Regulatory EBIT	▪ Not available.
Statutory EBIT	▪ Not available.
Regulatory NPAT	▪ Not available.
Statutory NPAT	▪ Not available.
Regulatory Cash	▪ Not available.
Statutory Cash	▪ Not available.
RAB	▪ Interim Closing Regulated Asset Base / Closing Regulated Asset Base, Total actual RAB roll forward worksheet, RFM – Final decision workbook. ▪ If the relevant RFM is not available, use Closing RAB, Assets worksheet, PTRM – Final decision workbook.
Statutory Non-current Assets	▪ Not available.
Statutory Total Assets	▪ Not available.
Regulatory Current Liabilities	▪ Not available.
Statutory Current Liabilities	▪ Not available.
Regulatory Total Equity	▪ Not available.
Statutory Total Equity	▪ Not available.
Pre-tax WACC	▪ Pre-tax nominal WACC, WACC worksheet, PTRM – Final Decision workbook.
Number of customers	▪ Not available.
Number of shares	▪ Number of ordinary shares, Notes of audited financial statements (where audited financial statements are prepared specifically for the Service Provider).

Source: McGrathNicol

Appendix C: Treatment of PPE under Accounting Standards

Below we have provided an overview of the revaluation, depreciation and impairment of property, plant and equipment as according to the Accounting Standards. These accounting treatments can materially impact an entity's financial performance and financial position. Accordingly, these accounting treatments are a factor that should be considering when reviewing any differences between an entity's statutory and regulatory profitability.

Revaluation

An item of property, plant and equipment that qualifies for recognition as an asset shall be measured at its cost. After recognition of an asset, an entity shall choose either the cost model or the revaluation model as its accounting policy and shall apply that policy to an entire class of property, plant and equipment.[23]

- Under the cost model, the item of property, plant and equipment shall be carried at its cost less any accumulated depreciation and any accumulated impairment losses.
- Under the revaluation model, the item of property, plant and equipment whose fair value can be measured reliably shall be carried at a revalued amount, being its fair value at the date of the revaluation less any subsequent accumulated depreciation and subsequent accumulated impairment losses.

Accumulated depreciation and accumulated impairment losses are contra asset accounts (i.e. have a negative balance) which are linked to asset accounts and used to offset the balance in the asset account (to reflect accumulated depreciation and impairment losses without altering the balance of the asset account). When depreciation expense or impairment loss is recognised in the Statement of Comprehensive Income, the balances of accumulated depreciation or accumulated impairment losses will increase respectively.

For the purposes of the revaluation model, fair value is the price that would be received to sell an asset in an orderly transaction between market participants at the measurement date.[24] Three widely used valuation techniques to determine fair value are the market approach, the cost approach and the income approach.

- The market approach uses prices and other relevant information generated by market transactions involving identical or comparable (i.e. similar) assets, liabilities or a group of assets and liabilities, such as a business.
- The cost approach reflects the amount that would be required currently to replace the service capacity of an asset (often referred to as current replacement cost).
- The income approach converts future amounts (e.g. cash flows or income and expenses) to a single discounted amount. When the income approach is used, the fair value measurement reflects current market expectations about those future amounts.

When an item of property, plant and equipment is revalued, the carrying amount of that asset is adjusted to the revalued amount. The carrying amount is the amount at which the asset is recognised in the financial statements less any accumulated depreciation and accumulated impairment losses.

- If an asset's carrying amount is increased as a result of a revaluation, the increase shall be recognised in other comprehensive income (i.e. not in profit and loss)[25] and accumulated in equity under the heading of revaluation surplus. However, if a revaluation decrease of the same asset was previously recognised in profit and loss, the increase shall be recognised in profit and loss to the extent that it reverses the previous revaluation decrease (if the revaluation increase exceeds the previous revaluation decrease, the difference shall be recognised in the revaluation surplus).
- If an asset's carrying amount is decreased as a result of a revaluation, the decrease shall be recognised in profit and loss. However, if a revaluation increase of the same asset was previously recognised in the revaluation surplus, the decrease shall be recognised against the revaluation surplus to the extent that it reverses the previous revaluation increase (if the revaluation decrease exceeds the previous revaluation increase, the difference shall be recognised in the profit and loss).

[23] AASB 116 Property, Plant and Equipment

[24] AASB 13 Fair Value Measurement

[25] It is noted that Statement of Profit and Loss and Statement of Other Comprehensive Income are both included in Statement of Comprehensive Income.

Depreciation

Depreciation is the systematic allocation of the depreciable amount of an asset over its useful life. The depreciable amount is the cost of an asset, or other amount substituted for cost, less its residual value. The residual value of an asset is the estimated amount that an entity would currently obtain from disposal of the asset, after deducting the estimated costs of disposal, if the asset were already of the age and in the condition expected at the end of its useful life. Useful life is the period over which an asset is expected to be available for use by an entity; or the number of production or similar units expected to be obtained from the asset by an entity.

The depreciation method used to allocate the depreciable amount of an asset over its useful life shall reflect the pattern in which the asset's future economic benefits are expected to be consumed by the entity. Depreciation methods include the straight-line method and the diminishing balance method.

- Straight-line depreciation results in a constant charge over the useful life if the asset's residual value does not change.
- The diminishing balance method results in a decreasing charge over the useful life.

Depreciation charges for each period are usually recognised in the profit and loss.

Impairment

An asset is impaired when its carrying amount exceeds its recoverable amount. The recoverable amount of an asset is the higher of:

- its fair value less costs of disposal; and
- its value in use.[26]

Value in use is the present value of the future cash flows expected to be derived from an asset.

If the recoverable amount of an asset is less than its carrying amount, the carrying amount of the asset shall be reduced to its recoverable amount. That reduction is an impairment loss.

An impairment loss shall be recognised immediately in profit or loss, unless the asset is carried at a revalued amount in accordance with the revaluation model as outlined above. Any impairment loss of a revalued asset shall be treated as a revaluation decrease in accordance with the revaluation model.

After the recognition of an impairment loss, the depreciation charge for the asset shall be adjusted in future periods to allocate the asset's revised carrying amount, less its residual value (if any), on a systematic basis over its remaining useful life.

An impairment loss recognised in prior periods for an asset shall be reversed if there has been a change in the estimates used to determine the asset's recoverable amount since the last impairment loss was recognised. If this is the case, the carrying amount of the asset shall, except as described below, be increased to its recoverable amount. That increase is a reversal of an impairment loss.

- The increased carrying amount of an asset attributable to a reversal of an impairment loss shall not exceed the carrying amount that would have been determined (net of amortisation or depreciation) had no impairment loss been recognised for the asset in prior years.
- Any increase in the carrying amount of an asset above the carrying amount that would have been determined (net of amortisation or depreciation) had no impairment loss been recognised for the asset in prior years is a revaluation. In accounting for such a revaluation, the revaluation model would be applicable to the asset.

[26] AASB 136 Impairment of Assets

Appendix D: List of Sources of Information

Table 40: List of Sources of Information

National Gas (South Australia) Act 2008
National Electricity (South Australia) Act 1996
National Electricity Rules Version 89 (9 February 2017)
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Electricity Distribution Post-tax revenue model - Final decision
Electricity Distribution Post-tax revenue model - Update - Return on debt
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Electricity Distribution RIN response - Annual reporting - Financial
Electricity Distribution RIN response - Annual reporting - Non-financial
Electricity Distribution RIN response - Economic benchmarking
Electricity Distribution RIN response - Category analysis
Electricity Transmission Roll forward model - Regulatory proposal
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