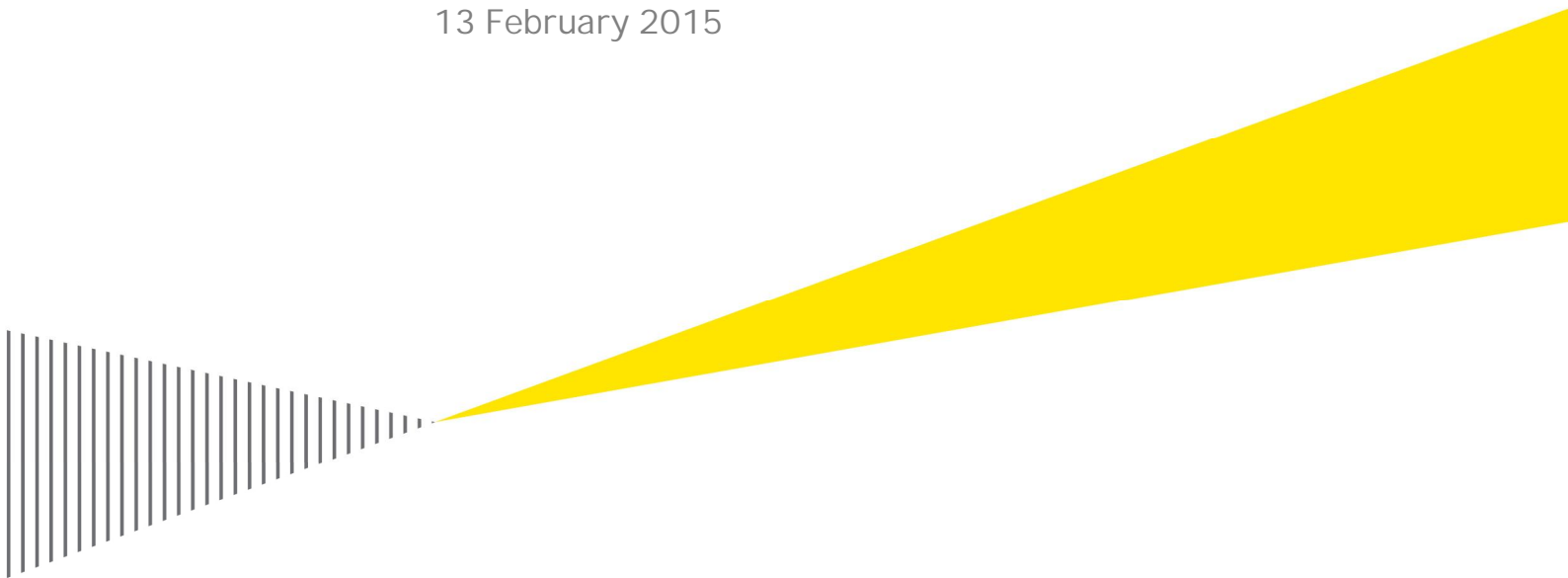


Briefing Paper: RIN Data Review

Ergon Energy

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Building a better
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1. Scope and summary findings

This document sets out the results of our review into certain approaches and methodologies applied by distribution network service providers (DNSPs) when responding to the Australian Energy Regulator's (AER) Regulatory Information Notices (RIN). The 2006-13 Economic Benchmarking (EB) and 2008-13 Category Analysis (CA) RINs submitted by DNSPs in 2014 have been used as the basis of the AER's benchmarking, which has in turn been used in setting operating expenditure (opex) in the recent draft decisions for the New South Wales (NSW) and Australian Capital Territory (ACT) DNSPs.

To assess how the DNSPs approached reporting the data, we have reviewed specific elements of both the EB and CA RINs, the associated Basis of Preparation (BoP), and the DNSP Cost Allocation Method (CAM) documents. Consistent with the AER's benchmarking approach, we have focussed on the 2006-13 and 2008-13 RINs. To inform our analysis we have also reviewed various documents relating to the determination processes of NSW, ACT and Queensland.

As requested by Ergon Energy and given the volume of RIN data, the DNSPs considered were SA Power Networks (SAPN), Ausnet Services (previously SP Ausnet), Powercor, CitiPower, United Energy, Jemena, Essential Energy and Ergon Energy.

The aim of the review was to identify differences in methodologies and approaches used by DNSPs when completing the RINs. The review also sought to assess whether the differences could be material if they were relied on for benchmarking purposes. Our review was limited in nature and data accuracy was not assessed.

As agreed, the areas investigated for variations were:

- Use of data estimates, rather than actuals
- Capitalisation policies
- Cost allocation methods
- Balancing items
- Route line length (customer density).

We found that:

- A number of differences have been identified in the methodologies, definitions and interpretations underlying the RIN data
- It has not been possible to quantify the materiality of these differences in the time available due to the complexity of the AER's benchmarking approach and given that much of the business information required to support such analysis is not publicly available
- The existence of these differences and the level of estimation applied in the development of the data suite however suggest the need for more detailed consideration as to whether and how, the data should be used for the purposes of regulatory analysis and drawing conclusions about the efficiency of DNSPs.

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3. Analysis

3.1 Estimates v actuals

We have found that there is variability in the RIN data provided by DNSPs, both in terms of the level of estimated v actual data and the methodologies applied to produce estimates. Additionally, the benchmarking relies on an average of eight years of RIN data of which some may be actuals and some estimates for the same line item.

As a consequence, data may not be consistent between DNSPs or across the relevant time series for individual DNSPs.

All DNSPs have made material use of the ability to provide estimated data for the purposes of responding to the RINs. We reviewed the BoPs for the 2006-2013 EB RINs submitted by PowerCor, CitiPower and Essential Energy on the basis that these businesses have provided BoPs which indicate whether particular tables, or particular years within tables, are actuals or estimates. Using that information we counted the number of cells that were identified as estimates and compared that number to the total number of cells in the RIN. The proportion of estimates used ranged from approximately 70% for Essential Energy to 43% for CitiPower and 31% for PowerCor¹.

These DNSPs also applied a grading system for RIN data developed by the Energy Networks Association to code the estimates in terms of data availability and the complexity of the process of derivation (i.e. a form of self assessment)²:

Code	Availability of data	Amount of notional allocations/estimation techniques	Likelihood to pass and audit	Is management comfortable that information is accurate and reliable?
Green	Available and verifiable	Straightforward – no additional work or minor work around (e.g. source data from a secondary system)	Likely	Yes
Yellow	Available but with some gaps	Moderate – estimate based on statistically significant sample size	Possible but uncertain	Yes
Orange	Little or no data available	Complex – estimate based on formula, standard parameters or other source	Not likely	No
Red	Little or no data available	Impossible – rough estimate (e.g. rule of thumb from experience) or not possible	No	No
Black	Not applicable to relevant NSP	n/a	n/a	n/a

It should be noted that CitiPower and Powercor did not explicitly reference the final two columns in their BoPs.

¹ In some cases judgement was used to allocate data points between estimates and actuals

² ENA, *AER Better Regulation: Regulatory information notices to collect information for economic benchmarking*, October 2013, p 19

Further, we note the following from Jemena's BoP³:

JEN notes that approximately 68% of the information provided (by cell) is estimated, of which JEN considers only 16% to be reliable estimates for the purposes of regulatory analysis and/or decision making (colour-coded as yellow, refer to JEN's colour coding explanation in Annexure 2 of JEN's RIN response). JEN has also provided its best estimates for the other 84% of estimated information (colour coded as orange and red) because the RIN compels JEN to do so. However, JEN does not consider these estimates to be reliable or fit for the purpose of regulatory analysis or decision-making.

There appears to be considerable variability, in terms of the level of estimated v actual data provided, the methodologies applied to produce estimates and the level of confidence that DNSPs have in the data produced for the purposes of regulatory analysis.

3.2 Capitalisation policies

Asset lives drive depreciation expense, therefore depreciation costs in individual years might look significantly different between DNSPs who apply differing asset lives.

We reviewed the asset lives published in the 2006-2013 EB RINs. Our review identified that there is variation in the asset lives used by the DNSPs, for example the asset lives used for overhead network assets less than 33kV ranges from 36 (United Energy) to 62 (Jemena) years, with Ergon Energy at 48 years and an average of approximately 50 years. In the absence of a direct correlation between the asset purchase price and its useful life, where the same price is paid for an asset, the depreciation cost will vary for each DNSP making the relative costs appear different when in fact they may be the same or similar.

Assessment of the materiality of these variations would require detailed information about each DNSP's spend on each asset class, broken down by unit and unit price, for the years covered by the RIN, which is not publicly available.

3.3 Cost allocation methods

Cost allocation methodologies influence the level of indirect costs allocated to regulated activities and how they are allocated across expenditure categories.

We reviewed the CAMs of the DNSPs and noted that shared or indirect costs are allocated on different bases (i.e. a range of differing cost allocators are applied). For example, the costs of the finance department might be allocated based on revenue or expenditure of the service class, FTEs or headcount. This has the potential to impact the comparability of benchmarking undertaken at expenditure category level; noting however that overall, the same amount of cost is being allocated so the total benchmarking of shared or indirect costs should not be affected.

³ Jemena Electricity Networks (Vic) Ltd, *Response to the economic benchmarking regulatory information notice for the 2006-13 regulatory years (cover letter)*, April 2014, p 1

3.4 Balancing items

Balancing items are data categories that allow DNSPs to enter an amount which will bring the total summarised expenditure into balance with the sum of the category breakdown tables.

We reviewed how DNSPs used the balancing items allowance in the 2008-13 CA RINs. Duplications are permitted to occur between worksheets in the CA RIN, however when duplication occurs the expenditure amounts must be accounted for using the balancing item in worksheet 2.1 Expenditure Summary. There are several worksheets in the CA RIN that allow duplications to occur, specifically worksheets 2.6 Non-Network, 2.10 Overheads and 4.2 Metering.

The instructions for the Non-Network worksheet state the following⁴:

If expenditure is directly attributable to an expenditure category in this regulatory template 2.6 it is a Direct Cost for the purposes of this regulatory template. Report all capex and/or opex Direct Costs as required, irrespective of whether any Direct Costs are also classified as Corporate Overheads, Network Overheads or other capex or opex categories. To the extent this results in multiple reporting of expenditures, identify this in accordance with instructions at paragraph 2.3 above.

The instructions for the Overheads worksheet also specifies categories that must be reported under both Network and Corporate Overheads⁵. These include mandatory reporting categories and any categories that have been reported as overhead expenditure in previous Regulatory Accounting Statements. Either requirement can lead to duplication occurring between worksheets.

We identified that there are differences between DNSPs in the application of balancing items, which creates a query over the comparability of data between DNSPs across specific worksheets. For example, if it is not necessary for a DNSP to apply a balancing item, it implies that the numbers may have been provided within a specific worksheet on a difference basis to a DNSP who has applied a balancing item to adjust the multiple reporting of expenditure that may occur. Further information on the use of balancing items can be found in Appendix 1.

3.5 Route line length

An area of potential material impact is the route line length, as noted by the AER in the Essential Energy Draft Determination⁶:

Customer density is the most significant environmental factor which drives capex.

The majority of DNSPs considered use a GIS system to map and calculate line length. Route line length is the variable used to quantify customer per km of line length, however this data was not collected by DNSPs until 2013 when it became a reporting requirement.

Differing methodologies have been applied to derive the estimations:

- The majority of DNSPs reported that the 2006-2012 route line length data was estimated based on the relationship between circuit length and route length actuals in 2013
- Powercor and Citipower used this method for overhead length and used estimates for all years for underground length

⁴ AER, *Regulatory Information Notice under Division 4 of Part 3 of the National Electricity (State) Law*, p 34

⁵ AER, *Regulatory Information Notice under Division 4 of Part 3 of the National Electricity (State) Law*, p 38

⁶ AER, *Draft decision Essential Energy distribution determination – Attachment 6 – Capital Expenditure*, November 2014, p 6-81

- SAPN does not record actuals for route line length and for 2013 provided an estimate based on the percentage of route for each voltage that runs parallel to other voltages. SAPN estimates for earlier years were based on the relationship between the 2013 estimate and circuit length.

All historic estimates that rely on the relationship between circuit length and route line length assume that the relationship remains constant over time.

This indicates that DNSPs have used different methodologies to estimate their route line lengths, which could call into question the comparability of data. Further detail on the methodologies applied can be found in Appendix 1.

As noted by Essential Energy in its EB RIN 2014 BoP⁷:

Figures obtained from the GIS are assumed to be 'actual', even though it is acknowledged that the data may be incomplete, incorrectly located or duplicated.

The statement highlights that actuals are only as reliable as the information represented in the underlying systems and may change over time for a variety of reasons. The definition of 'actual' in the AER's EB RIN instructions is as follows⁸:

Information presented in response to the Notice whose presentation is Materially dependent on information recorded in DNSP's historical accounting records or other records used in the normal course of business, and whose presentation for the purposes of the Notice is not contingent on judgments and assumptions for which there are valid alternatives, which could lead to a Materially different presentation in the response to the Notice.

'Accounting records' include trial balances, the general ledger, subsidiary accounting ledgers, journal entries and documentation to support journal entries. Actual financial information may include accounting estimates, such as accruals and provisions, and any adjustments made to the accounting records to populate DNSP's regulatory accounts and responses to the Notice.

'Records used in the normal course of business', for the purposes of non-financial information, includes asset registers, geographical information systems, outage analysis systems, and so on.

For example, Essential Energy's 2014 EB RIN BoP adjusts its route line length, in part due to general improvements made to the method applied. This demonstrates that actual data, as defined in the AER's Instructions and definitions for the EB RINs, can be subject to change over time for valid reasons. We note also that this data does not appear to have been updated in the benchmarking data used by the AER in the NSW DNSP's draft determinations. While this is likely due to timing (the 2014 RINs were submitted on 31 October 2014 and the draft determinations released 27 November 2014), it does highlight an issue that needs to be managed through the decision making process.

⁷ Essential Energy, *Economic Benchmarking RIN – Basis of Preparation*, October 2014, p 61

⁸ AER, *Economic benchmarking RIN for DNSPs – Instructions and definitions*, November 2013, p 5

3.6 AER position

It should be noted that many of these issues have previously been raised by DNSPs, during the benchmarking consultation process and in the regulatory proposals submitted by the NSW DNSPs⁹.

In the draft decisions for the NSW DNSPs, the AER responded to the concerns raised in a variety of ways:

- Cost allocation methods were acknowledged to cause differences, but it was suggested that the 10% allowance (on top of the weighted average efficiency level for the top quartile) for operating and environmental factors covered any variances this might cause
- Capitalisation policies were not deemed to be material as the benchmarking results for opex per customer and total cost per customer were similar, indicating to the AER that differences in capitalisation policies do not have a material impact
- Questions about the accuracy of data were refuted, by describing the process and consultations undertaken by the AER to gather the data, including¹⁰:
 - A year long consultation process to develop the information requirements including numerous workshops and circulation of draft requirement documents
 - Identification and resolution of data issues through submission of draft, unaudited responses
 - Requiring DNSPs to seek independent audit of their final benchmarking data and requiring CEO certification of accuracy
 - Releasing a draft benchmarking report which gave opportunity for DNSPs to raise data issues.

⁹ Ausgrid, *Regulatory proposal: Attachment 5.33*, May 2014, p 5, Endeavour Energy, *Regulatory proposal: attachment 0.12 p 7*, Essential Energy, *Regulatory proposal: attachment 5.4*, May 2014, p 6

¹⁰ AER, *Essential Energy draft decision - Attachment 7: Operating expenditure*, November 2014, p 7-49

4. Conclusion

A number of differences have been identified in the methodologies, definitions and interpretations underlying the RIN data.

It has not been possible to quantify the materiality of these differences in the time available due to the complexity of the AER's benchmarking approach and given that much of the business information required to support such analysis is not publicly available. Without transparency as to the detail that builds up into a data input for the RIN, it is difficult to say what the same data input would be under a different methodology.

The existence of these differences and the level of estimation applied in the development of the data does however suggest the need for more detailed consideration as to whether and how, the data should be used for the purposes of regulatory analysis and to draw conclusions about the efficiency of DNSPs.

Issue	Methodology category	Ergon Energy	Essential Energy	PowerCor	CITIPower	Ausnet Services	United Energy	Jemena	SA Power Networks
CA RIN 2008-13 Balancing items		Used to remove duplication only: difference in the treatment of gifted assets	2008-14 CA RIN not published	No balancing item	No balancing item	2008-14 CA RIN not published	Balancing item for SCS capex, no mention of the make up of the balancing item in the BoP	Balancing items in SCS capex and ACS capex and opex to add back in 'contested services' to arrive at the excluded services number as per the Regulatory accounts, and account for double counting	Includes reported Negotiated Distribution costs and reconciling differences
EB RIN 2006-13 Route line length	Source	Sourced data from SOREP Oracle Spatial database, which is replicated from the Smallworld GIS electrical data store.	GIS database	GIS database	GIS database	Asset management system	GIS database	GIS database	GIS database and relying on opinion of experienced manager using what reliable data is available.
	Estimate or actual	2013 actual, earlier years are estimates	Overhead: 2006-09 estimates Overhead: 2010-2013 actuals Underground 2006-10 estimates Underground 2011-13 actuals	Overhead: 2013 actual, earlier years are estimates Underground: all years are estimates	Overhead: 2013 actual, earlier years are estimates Underground: all years are estimates	2013 actual, earlier years are estimates	2013 actual, earlier years are estimates	2013 actual, earlier years are estimates	All years are estimates

Issue	Methodology category	Ergon Energy	Essential Energy	PowerCor	CitiPower	Ausnet Services	United Energy	Jemena	SA Power Networks
EB RIN 2006-13 Route line length	Estimation technique	Ratio of overhead route length to overhead circuit length for 2013	Overhead 2006-09: ratio of overhead route length to average overhead circuit length for years 2010 to 2013 Underground 2006-10: the ratio of underground route length to average underground circuit length for years 2011 to 2013	Overhead: ratio of overhead route length to overhead circuit length for 2013 Underground: assumption made regarding ratio of underground route length to circuit length	Overhead: ratio of overhead route length to overhead circuit length for 2013 Underground: assumption made regarding ratio of underground route length to circuit length	Ratio of overhead route length to overhead circuit length for 2013	Ratio of overhead route length to overhead circuit length for 2013	Based on change in the overhead length each year. Underground cable route length appears to be excluded.	2013 based on estimate of percentage of route for each voltage that runs parallel to other voltages. Conductor on the same route was estimated by voltage starting with LV and working up to 132kV. Estimate of route line length for earlier years has been pro-rated by historical GIS circuit length data.

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