

Jemena Electricity Networks (Vic) Ltd

Advanced Metering Infrastructure

Transition application

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- Attachment 7 - Due diligence review, 85% AMI meters RFT [*Confidential*]
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ABBREVIATIONS

AER	Australian Energy Regulator
AMI	Advanced Metering Infrastructure
AMIOIC	AMI Order-in-Council
ABS	Australian Bureau of Statistics
BAU	Business As Usual
BEE	Benchmark Efficient Entity
CPI	Consumer Price Index
CY	Calendar Year
ESCV	Essential Services Commission of Victoria
ESV	Energy Safe Victoria
EDPR	Electricity Distribution Price Review
FSA	Field Service Agreement
GST	Goods and Services Tax
JEN	Jemena Electricity Networks (Vic) Ltd
JGN	Jemena Gas Networks (NSW) Ltd
MRO	Mass roll-out
NER	National Electricity Rules
NITP	Neutral Integrity Test Point
ToU	Time of Use
UED	United Energy

1. INTRODUCTION

1.1 PURPOSE OF THIS DOCUMENT

1. This document is Jemena Electricity Networks (Vic) Ltd (**JEN**) proposal to adjust the allowed revenue for 'type 5, 6 and smart metering – regulated service'—known as Advanced Metering Infrastructure (**AMI**) service—in 2017 (**transition application**) made in accordance with Clause 5L of the AMI Order-in-Council¹ (**AMIOIC**).

1.2 BACKGROUND

2. The Australian Energy Regulator (**AER**) is responsible for determinations under the AMIOIC—a regulatory instrument that determines what costs JEN will recover for AMI related expenditure and how that recovery should occur. The AER's responsibilities under the AMIOIC also included making Budget and Charges Determinations for the 2009-11 and 2012-15 budget periods.
3. Under the AMIOIC, JEN can recover its efficient costs for the rollout, operation and maintenance of AMI services over the initial regulatory period. To ensure network businesses only recover their efficient costs, the AER undertakes an ex-post review of actual expenditure. This process necessitates a two-year lag between expenditure incurred and any true-ups.

1.3 PROPOSED TRANSITION AMOUNT AND APPROACH

4. On 1 January 2016, the National Electricity Rules (**NER**) supplemented the AMIOIC as the governing instrument for AMI cost recovery. To facilitate the transition, the AMIOIC consolidates the CY2014 and CY2015 true-up ex-post expenditure reviews into a single review. Any approved true-ups resulting from this transition review (**transition amount**²) must be reflected in 'type 5, 6 and smart metering – regulated service' charges for CY2017.
5. In this transition application, we propose to refund customers \$814,497.27 (\$2015) as the transition amount for over recovery of actual expenditure in our prescribed metering charges over the CY2012 to CY2015 subsequent AMI budget period (see section 3 for more details).

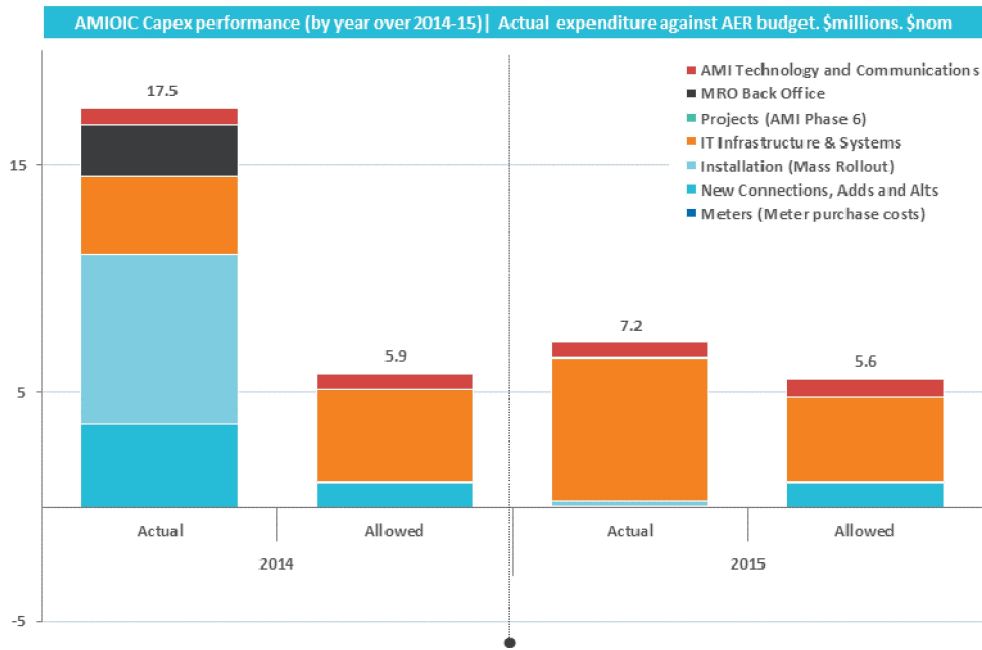
1.4 SUMMARY OF JEN'S EXPENDITURE EXCESS

6. The actual costs that JEN has incurred on AMI expenditure in CY2014 and CY2015 have exceeded the budget allowance for these years—that is, JEN has incurred an expenditure excess, as defined under the AMIOIC. Despite the overspend—relative to the budget allowance—JEN maintains that its expenditure is prudent and efficient and should be allowed in full in the building blocks model to determine the true-up amount as proposed in this transition application.
7. Figure 1–1 highlights the key cost categories driving JEN's CY2014 and CY2015 capital expenditure (**capex**) excess. The excess capex for CY2014 and CY2015 is \$13.2M (nominal).

¹ Order in Council under section 15A and section 46D of Electricity Industry Act 2000, incorporating amendments up to Gazette S26, 30 July, 2015.

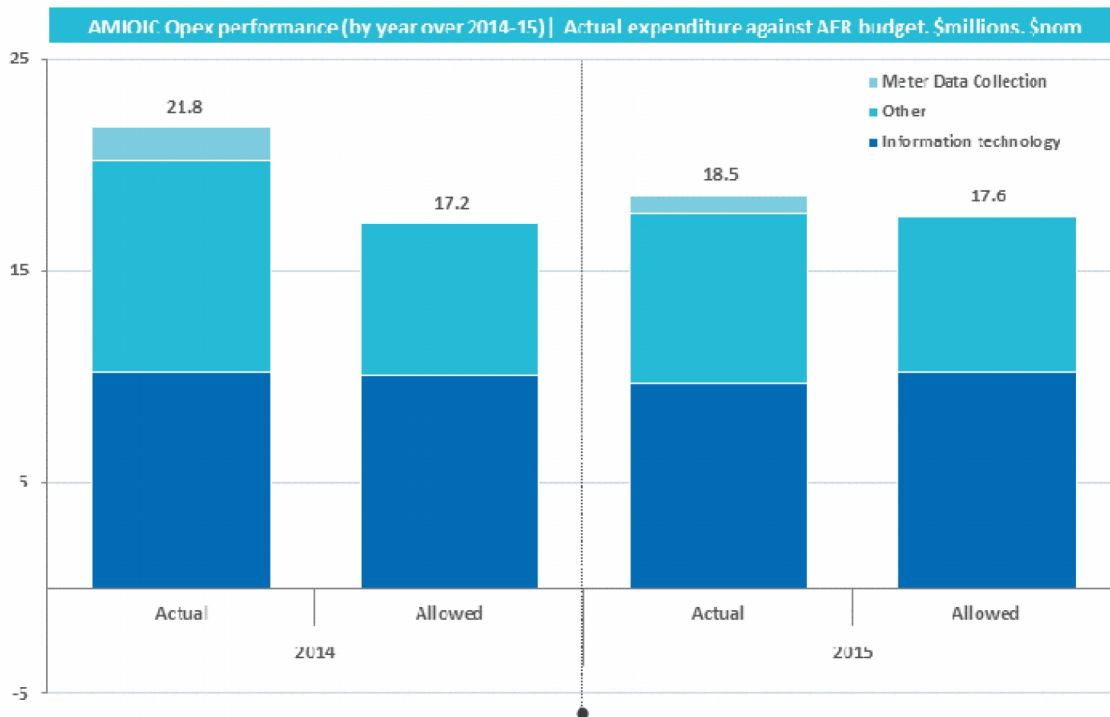
² The transition amount is the total JEN proposes to adjust its revenue by in 2017 as set out in this document.

Figure 1–1: Capital expenditure performance, CY2014 and CY2015



8. Figure 1–2 highlights the key cost categories driving JEN's CY2014 and CY2015 operating expenditure (opex) excess. The excess opex for CY2014 and CY2015 is \$5.5M (nominal).

Figure 1–2: Operating expenditure performance, CY2014 and CY2015



9. Changes in Victorian Government policy positions and market conditions have significantly influenced the timing and quantum of JEN's AMI related costs in CY2014 and CY2015 relative to forecast. Whilst this resulted in

savings early on in the subsequent AMI budget period the longer-term consequences resulted in installation delays and higher costs.

1.5 STRUCTURE OF THIS DOCUMENT

10. This document is structured as follows:
 - section 2 sets out the relevant AMIOIC requirements and JEN's interpretation of those requirements
 - section 3 explains the transition amount and how it will be reflected in prices
 - section 4 explains why JEN's expenditure is prudent and efficient
 - section 5 outlines JEN's expenditure in each major expenditure category.
11. A number of supporting attachments are also included in this transition application. These comprise:
 - Attachment 1 – Charges model
 - Attachment 2 – Advanced Metering Infrastructure Expenditure - Benchmarking Victorian metering expenditure from 2009 to 2015
 - Attachment 3 – Audit report 2014 [*Confidential*]
 - Attachment 4 – Audit report 2015 [*Confidential*]
 - Attachment 5 – Procurement Policy (JEM PO 006) [*Confidential*]
 - Attachment 6 – Audit opinion letter, 85% RFT evaluation models, Financial Model Audit [*Confidential*]
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 - Attachment 8 – Final probity report, 85% RFT process [*Confidential*]

1.6 CONFIDENTIALITY

12. Table A1–1 sets out the sections of this application that JEN claims to be commercial-in-confidence, including the basis of the claim.
13. JEN has applied the rationale for claiming information as commercial-in-confidence as set out in the AER's confidentiality guideline.³
14. JEN has provided reasons detailing how and why disclosure of the information would cause detriment to the business. JEN understands that this confidential information being available to the AER to perform its functions provides a public benefit. JEN has assessed that, in all identified cases, JEN's confidentiality reasons, together with the benefits already realised through the AER's confidential use of this data, are not outweighed by any additional public benefit to disclose the information.
15. Within this application, JEN claims confidentiality over the information shown in square brackets, starting with c-i-c and highlighting in yellow where this is possible, for example [c-i-c...].

³ AER, *Better Regulation, Confidentiality Guideline*, November 2013.

16. JEN also claims confidentiality over the following attachments:
- Audit reports at attachment 3 and 4 – Our auditor prepared reports on CY2014 and CY2015 actual costs for the information of JEN and the AER on terms and conditions that preclude the report from being distributed to any other party.
 - Material supporting procurement practices at attachments 5 to 8 – These reports include material relating to the engagement of contractors in the services market that could harm Jemena’s ability to undertake future negotiations if released to the public.

2. AMIOIC REQUIREMENTS

2.1 OBJECTIVE

17. The objective of this section is to provide an overview of JEN's interpretation of its obligations under the AMIOIC, as well as outlining our understanding of the criteria that the AER is required to consider when assessing JEN's AMI expenditure, including any excess expenditure.

2.2 KEY MESSAGES

- The extension of the AMI program beyond 31 December 2013 and increase in obligations has significantly contributed to JEN's expenditure excess in CY2014 and CY2015.
- The AMIOIC:
 - sets out a prudence test that the AER must apply in assessing the expenditure excess in CY2014 and CY2015: *'For the purposes of clause 5L.7 and in any case where an application pursuant to clause 5L is made, the expenditure excess is prudent where the expenditure of the distributor over the entirety of the initial regulatory period reasonably reflects the efficient costs of a business providing the Regulated Services over the entirety of that period.'*
 - places primacy on the role of benchmarking in the assessment of efficiency of JEN's expenditure excess.
- If the AER is satisfied that the excess expenditure is efficient then the actual expenditure can be added to the building blocks model to determine the transition amount.

2.3 THE AMIOIC REQUIREMENTS

2.3.1 BEST ENDEAVOURS OBLIGATION

18. There are two important qualifications relevant to JEN's obligation under the AMIOIC to complete the rollout by 31 December 2013. These are that the rollout must be completed:
- "to the extent practicable", and
 - on a "best endeavours" basis.
19. On the first component (to the extent practicable), we note that 'practicable' is not defined in the AMIOIC. Therefore, subject to the context in which it appears, JEN gives that term its ordinary and natural meaning. The Macquarie Dictionary relevantly defines 'practicable' as 'capable of being put into practice, done, or effected, especially with the available means or with reason or prudence; feasible'.
20. For the purposes of presenting the material outlined in this document, we have assumed that the insertion of the reference to 'practicable'—which was added into the clause on 22 December 2011—is to clarify that the rollout obligation is not absolute, but is qualified by what is practical, feasible and reasonable in the circumstances.
21. In interpreting the 'best endeavours' clause of the AMIOIC, JEN considers that there is an underlying obligation of 'reasonableness'. That is, 'best endeavours' requires JEN to do all it 'reasonably' can in the circumstances to

achieve the AMIOIC objective, but no more. To operationalise this, JEN has—throughout the initial regulatory period—always considered that:

- ‘best endeavours’ is neither an unqualified obligation to achieve the outcome prescribed in the AMIOIC, nor a warranty that it will be achieved—for example, a best endeavours obligation does not require JEN to select the option that best mitigates the risk of delay, in isolation of the costs associated with implementing that option, and
 - ‘best endeavours’ needs to be considered in the context of the circumstances prevailing at the time that any decision was made—for example, any review of JEN’s decisions needs to be considered in the context of what was known, or reasonably able to be known, by JEN at the time the decision was made.
22. JEN notes that this obligation should be considered a ‘rollout obligation’ for the purposes of assessing its expenditure excess, in particular, clause 5I.8(c) stipulates that ‘the nature of the rollout obligation’ is one of the listed matters that may be considered when assessing JEN’s expenditure excess.

2.3.2 CRITERIA FOR ASSESSING EXPENDITURE EXCESS.

23. The first step in assessing expenditure excess is to identify the amount of opex and capex to be assessed under the AMIOIC. This is verified through the audits required by clause 5I.2(a) and covers the activities ‘within scope’ as required by clause 5H.2. The audit reports (at attachments 3 and 4) outline the opex and capex for the CY2014 and CY2015 years respectively. The amounts contained in these reports reconcile to the amounts included in the charges application model (Attachment 1 to this application) and provide assurance that the expenditure recovery sought by JEN is within scope.
24. The AMIOIC provides for full recovery of total opex and capex that does not exceed the Approved Budget but does not provide a ‘blanket’ provision that would automatically allow the inclusion of any expenditure excess in its building blocks, nor does it provide for a blanket provision that would preclude such expenditure being recovered.
25. Clause 5I.8A of the AMIOIC places significance on the role of benchmarking in the assessment of JENs expenditure excess. More particularly, the AMIOIC supports the AER’s use of benchmarking over the entirety of, or any part of, the initial regulatory period for this assessment. JEN supports the AER relying on benchmarking an entity’s expenditure over the entirety of the initial regulatory period to assess the expenditure excess to:
- assess the efficiency (as opposed to other more rudimentary analytical techniques) as long as the AER utilises appropriate benchmarking techniques; and
 - go some way to addressing the exogenous factor of shifting actual spend into different years’ relative to the budget.
26. More broadly, as secondary support for the results of benchmarking, JEN places attention on its productive efficiency. This reflects a situation where the provision of a given set of outputs—in this case, Regulated Services and using best endeavours to meet the rollout timeframes defined by the AMIOIC—is achieved at least cost, given JEN’s circumstances.
27. The relevant circumstances affecting JEN include, but are not limited to:
- **Exogenous events**—the extent to which costs (and in particular, cost changes underpinning the expenditure excess) are driven by exogenous or endogenous events/circumstances affecting the entire market for those services. Exogenous events that are beyond the control of management, and which affect all providers of Regulated Services, will be reflected in a higher equilibrium price having to be paid to balance the supply and demand for those services.

To be clear, even prudent and efficient service providers will be subject to, and need to pass on, costs that are driven by exogenous events that affect the entire market; and

- **Market conditions**—the market conditions relevant to the provision, installation, maintenance and operation of advanced metering infrastructure and associated services and systems. JEN considers that market conditions refer to the exogenous factors that affect the supply of, and demand for, metering or meter related services procured in a competitive market.

These services include those JEN procures in the competitive market as inputs to JEN's delivery of the mass rollout of AMI meters. This clause captures, for example, factors that may increase the opportunity cost to a prospective employee of providing meter installation services to JEN's meter installation vendor (such as competition among Victorian installation vendors for installers), or reduce the attractiveness of providing meter installation services, relative to other alternative forms of work. We have provided an extensive analysis of these factors in Appendix E-1 of our CY2015 charges applications.⁴

⁴ JEN, *AMI Charges Revision Application for CY2015, Public*, 29 August 2014, Appendix D.

3. TRANSITION AMOUNT AND APPROACH TO PRICING

3.1 OBJECTIVE

28. The objective of this section is to outline how we will determine the quantitative impact of applying the AMIOIC obligations and how we will pass this onto customers.

3.2 KEY MESSAGES

- JEN has used an approach, consistent with the method used to assess prior charges applications, to determine a transition amount. This process has yielded a total refund payable to customers of \$814,497.27 (\$2015).
- Unlike prior charges applications that propose prescribed metering charges, we propose to calculate a transition amount that will be applied to the revenue formula when setting 'type 5, 6 and smart metering – regulated service' charges in 2017. The transition amount will be adjusted for the time value of money at the time of submitting the 2017 pricing proposal.

3.3 DETERMINING THE TRANSITION AMOUNT

29. In this transition application, we propose to refund customers \$814,497.27 (\$2015) as the transition amount for over recovery of actual expenditure in our prescribed metering charges over the 2012 to 2015 subsequent AMI budget period.
30. We have calculated this amount using the charges application model (see Attachment 1) adopted in the AER's previous annual prescribed metering charges decisions with updates for:
- actual capex and opex for CY2014 and CY2015 – these have been audited in accordance with the requirements of the AMIOIC⁵ and are outlined in Table B1–1 and Table B2–1,
 - actual prescribed metering revenues for CY2014 and CY2015 – these have been audited and reported in JEN's response to the annual benchmarking regulatory information notice;^{6,7} the details are outlined in Table B1–1 and Table B2–1, *and*
 - actual inflation for the 2015 September quarter.⁸

⁵ AMIOIC, clause 5H.2.

⁶ JEN, *Attachment 1-1 Appendix B - 2015 regulatory accounting statements*, 30 April 2015

⁷ JEN, *Attachment 1-1 Appendix B - 2015 regulatory accounting statements*, 30 April 2016

⁸ Utilising the September quarter annual Consumer Price Index (CPI) as determined by the Australian Bureau of Statistics (ABS).

3.4 PASING THE REFUND BACK TO CUSTOMERS

31. The approach to refunding the transition amount proposed in this application is consistent with the AMIOIC,⁹ the pricing principles in the AER's 2016-20 Framework and Approach Paper¹⁰ and the 2016-20 Electricity Distribution Price Review (**EDPR**) final decision.¹¹
32. We propose the transition amount is refunded to customers by adjusting the 'type 5, 6 and smart metering – regulated service' revenue in the 2017 regulatory year using the 'T term' of the metering price control formula outlined in the AER's final decision.¹²
33. To determine the final amount to include in the metering price control formula, we propose adjusting the transition amount by the nominal vanilla WACC, as determined in the 2016-20 EDPR, for regulatory year 2016 and regulatory year 2017.

⁹ AMIOIC, clause 5L.3.

¹⁰ AER, *Framework and approach paper – Advanced metering infrastructure review 2009-11, Final Decision*, January 2009.

¹¹ AER, *Final Decision, Jemena distribution determination 2016 to 2020, Attachment 16 – Alternative control services*, May 2016, Figure 16.3.

¹² AER, *Final Decision, Jemena distribution determination 2016 to 2020, Attachment 16 – Alternative control services*, May 2016, Figure 16-3.

4. EXPLANATION OF WHY JEN'S EXPENDITURE IS PRUDENT AND EFFICIENT

4.1 OBJECTIVE

34. The objective of this section of the application is to:
- explain how JEN's expenditure profile compares to its allowance over CY2014 and CY2015, and summarise the reasons for changes in the:
 - timing of expenditure, and
 - magnitude of expenditure, and
 - summarise why the AER should conclude that JEN's AMI expenditure is prudent and efficient, given the requirements of the AMIOIC, with particular reference to the results of independent benchmarking into JEN's AMI related expenditure relative to other Victorian electricity distribution businesses.

4.2 KEY MESSAGES

- JEN's actual expenditure has deviated from forecast expenditure by a number of factors predominately outside of JEN's control, including that:
 - the mass rollout was not completed by May 2013 due to factors including changes in Government and government policy which consequently diminished JEN's 'social licence' to undertake the rollout in a timely manner, and
 - all multi-meter customers were to be re-assigned to ToU tariffs, but this did not eventuate due to changes in government policy.
- Given this, an analytical framework that relies on simply comparing JEN's excess expenditure to its allowance will not adequately take into account the impact of the above factors. Instead, JEN considers that a holistic view of expenditure over the initial regulatory period, as compared to its peers, is the appropriate analytical approach to assess the efficiency of JEN's expenditure excess in CY2014 and CY2015. JEN's view accords with the requirements of the AMIOIC, in that the relevant matter for the AER under clause 51.7 is set out in clause 51.7AA.
- Huegin—an independent consulting firm specialising in benchmarking—was engaged to benchmark JEN's costs over the initial regulatory period. Huegin has concluded that JEN's expenditure is efficient relative to its peers.
- JEN's prudent and efficient actions, and the resultant costs associated with those actions, clearly demonstrate that it has acted prudently both in CY2014 and CY2015, over the entire mass roll out period and more broadly the initial regulatory period.

4.3 JEN'S EXPENDITURE VERSUS THE ALLOWANCE

35. As depicted in Figure 1–1 and Figure 1–2, JEN's actual expenditure for CY2014 and CY2015 has deviated from the budget allowance.

36. There is a high likelihood of deviations from forecast, particularly in the latter years of the initial regulatory period, given the original forecasts were submitted in 2011, 5 years ago.
37. A number of factors outside of JEN's control affected both the magnitude and timing of JEN's actual expenditure relative to forecast. These factors—found in our Charges Application to the AER for assessing the 2013 expenditure excess and on which JEN relies for this application¹³—include, but are not limited to those set out below.

4.3.1 THE MASS ROLL OUT WAS UNABLE TO BE COMPLETED BY MAY 2013 AS ORIGINALLY PLANNED DUE TO SIGNIFICANT PUBLIC OPPOSITION

38. The Victorian Government made a number of policy changes in 2011 that contributed to a significant change in conditions faced by JEN's AMI installers. In particular, the Victorian Government commenced a review of the AMI program, which included public statements that the program was "optional" for residents.
39. The review of the AMI program culminated in the Victorian Government's announcement in December 2011 that the AMI program would continue with improved program governance, greater controls over cost recovery, and a continued moratorium on time-of-use (ToU) tariffs.¹⁴ This added significant uncertainty to the program, increased public scepticism, and inhibited JEN's ability to roll out AMI meters as per the original schedule.

4.3.2 ALL MULTI-METER CUSTOMERS WOULD BE RE-ASSIGNED TO TOU TARIFFS

40. JEN's cost forecast assumed that the moratorium on customer reassignment to ToU tariffs would expire by 1 January 2012, as per the endorsed position of the AMI policy committee. At the time, this assumption was consistent with the underlying metering regulatory obligation¹⁵ that single-element meters were in-scope of the metering specifications, whereas two-element meters were considered outside-of-scope¹⁶ (unless justified on a cost-benefit basis¹⁷).
41. In June 2013, the Victorian Government made it a legal requirement that distributors offer at least one flexible AMI distribution tariff and one flat AMI distribution tariff, as well as providing domestic customers with the option of opting-in and opting-out of ToU tariffs.¹⁸ The net result was that JEN was not able to compulsorily reassign customers onto a ToU (or flexible) tariff over the entire rollout period. This has meant that customers with multiple meters or multiple channels must retain the same number of metered channels after the meter exchange, so that they can retain the existing tariff structure. This has prohibited JEN from consolidating meters and/or channels, which was the original least cost AMI design for JEN.
42. The consequences of this change—part way through the rollout program—meant that additional costs were incurred relative to the efficient rollout process built into the Submitted Budget. These costs were driven by:
- having to re-sequence the entire rollout program against a new standard,
 - skipping installation of meters at certain sites and having to revisit them at a later date, and

¹³ JEN, *AMI Charges Revision Application for CY2015, Public*, 29 August 2014, Appendix D.

¹⁴ Deloitte, *Advanced metering infrastructure customer impacts study Final report, Volume 1*, 18 October 2011, Section 2.2.3.

¹⁵ Clause 14, Electricity Industry Act 2000, Order under section 15A and section 46D, Order in Council, Gazette S263 on 30 July 2015.

¹⁶ *Cost Recovery Order, schedule 2.2(iii), 2.7(iii), 2.11(iii)*.

¹⁷ AER, *Final determination, Victorian advanced metering infrastructure review 2009–11 AMI budget and charges applications*, October 2009, Section 3.3.5.

¹⁸ Energy Legislation Amendment (Flexible Pricing and Other Matters) Bill 2012.

- having to incur greater costs in executing those revisits because (i) the real cost of providing the installation services increased later in the mass rollout program and (ii) the obligations became more onerous; for example, meeting heightened safety requirements.
43. A detailed explanation of the impacts of changes in Government policy regarding re-assignment to ToU tariffs is provided in JEN's 2015 charges application.¹⁹
44. In summary:
- JEN's actual expenditure has varied from its allowance in CY2014 and CY2015;
 - this is to be expected, given: (a) the inherent uncertainty associated with of developing long-term forecasts, and moreover, (b) the specific, exogenous, factors that have significantly affected JEN's rollout over the initial regulatory period, and
 - given the timing variability of fixed and variable expenditure across years, and the influence that exogenous factors have had on all Victorian distribution businesses²⁰ AMI expenditure, as required by the AMIOIC:
 - benchmarking JEN's expenditure over the entire period is the appropriate approach to assessing whether JEN's expenditure excess amount is efficient
 - benchmarking JEN's expenditure in a single year, a subset of years or simply comparing JEN's actual expenditure against its forecast expenditure, are not appropriate approaches to assess whether JEN's expenditure excess amount is efficient.²¹
45. A further explanation for the expenditure excess by major category is provided in section 5.

4.4 BENCHMARKING OVER THE PERIOD DEMONSTRATES THAT EXPENDITURE IS EFFICIENT

4.4.1 BENCHMARKING

46. Clause 5I.8A of the AMIOIC places primacy on the role of benchmarking in the assessment of JENs expenditure excess. This clause states that:
- In any case where an application pursuant to clause 5L is made, the matters the Commission must also take into account include the expenditure of a benchmark efficient entity over the entirety of, or any part of, the initial regulatory period.*
47. The AMIOIC also contains a number of other clauses that further support the use of benchmarking, including clause 5I.8B.
48. In summary, the AMIOIC requires the AER's use of benchmarking over the entirety of, or any part of, the initial regulatory period. For the reasons outlined in the previous section of this application, JEN believes that the AER

¹⁹ JEN, *AMI Charges Revision Application for CY2015, Public*, 29 August 2014, Appendix D, Section 4.7.

²⁰ AER, *Determination Advanced Metering Infrastructure 2015 revised charges*, 12 December 2014, p. 33.

²¹ Clause 5I.8A provides that the AER may (but need not) have regard to the expenditure of a benchmark efficient entity over any part of the initial regulatory period. However, even if the AER does have regard to that expenditure, the test for being satisfied that JEN's expenditure excess is prudent remains whether the expenditure of JEN over the entirety of the initial regulatory period reasonably reflects the efficient costs of a business providing Regulated Services over the entirety of that period. This ties to benchmarking expenditure over the entirety of the period.

should rely on benchmarking an entity's expenditure over the entirety of the program, as opposed to other, more rudimentary, analytical techniques, as long as the AER utilises appropriate benchmarking techniques.

49. JEN engaged Huegin—an independent consulting firm that specialises in benchmarking electricity businesses—to benchmark the relative performance of the Victorian electricity distribution businesses for the provision, maintenance and reading of electricity meters for customers consuming less than 160 MWh per annum between 2009 and 2015.²²
50. The benchmarking techniques utilised by Huegin were:
- aggregate category analysis,
 - activity based category analysis, and
 - total factor productivity analysis.

51. These techniques are consistent with those utilised by the AER and its consultants,²³ when assessing the prudence and efficiency of electricity businesses' expenditure proposals for standard control services. Additionally, Huegin incorporated the requirements of clause 5I.8B(a) of the AMIOIC in its modelling—namely that the benchmark, used to create a benchmark efficient entity (**BEE**), incorporate (i) meter density and (ii) the number of meters subject to regulation under the AMIOIC.

52. In determining the actual BEE Huegin states:

Huegin believe all three should be used holistically to give an indication of the relative cost outcomes between the five victorian DNSPs²⁴

53. Given this, the construct of a BEE does not provide a single measure against which JEN can be assessed; therefore, JEN proposes the comparison against the BEE—to rank JEN's performance relative to its peers—should be, 'on balance,' across all of the measures developed in the Huegin report. Huegin's report is contained in Attachment 2 of this application.
54. Huegin states that except for Communications and IT opex, JEN's AMI expenditure is at or below the median of the five businesses in the sample. In relation to Communications and IT opex, the results reflect the largely fixed nature of costs in this category and that JEN has the fewest customers of the five businesses in the sample.
55. This is also observed by the AER as they note, in its 2016-20 preliminary decision²⁵:

In Victoria, metering costs are largely fixed and relate to IT and communications that tend not to vary according to customer numbers.

56. Huegin found that Citipower and Powercor, with their ability to share fixed costs, perform significantly better than the other three businesses in the Communications and IT category (see Figure 4–1).

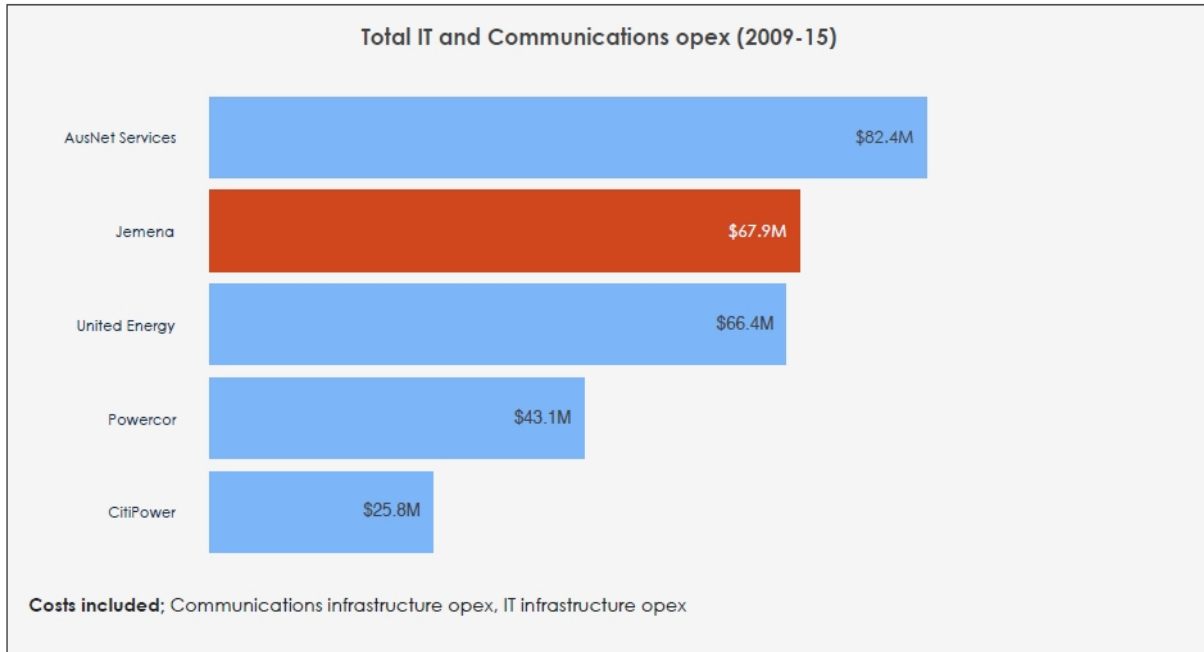
²² Huegin, *Advanced Metering Infrastructure Expenditure, Benchmarking Victorian metering expenditure from 2009 to 2015*, 9 May, 2016, version 1.

²³ Huegin, *Advanced Metering Infrastructure Expenditure, Benchmarking Victorian metering expenditure from 2009 to 2015*, 9 May, 2016, version 1, *Executive Summary*.

²⁴ Huegin, *Advanced Metering Infrastructure Expenditure, Benchmarking Victorian metering expenditure from 2009 to 2015*, 9 May, 2016, version 1, *Executive Summary*.

²⁵ AER, *Preliminary Decision, Jemena distribution determination 2016 to 2020, Attachment 16 – Alternative control services, October 2015*, Pg. 37.

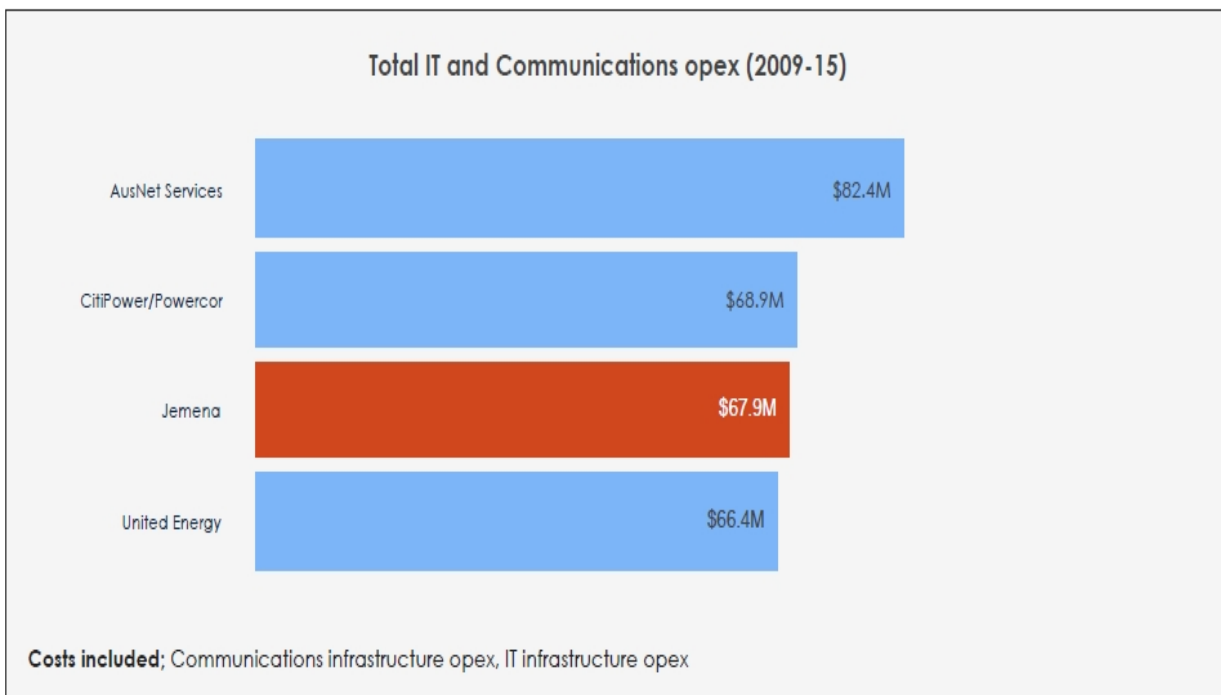
Figure 4–1: Total IT and communications operating expenditure by DNSP (un-normalised) (\$m)



Source: Huegin, *Advanced Metering Infrastructure Expenditure, Benchmarking Victorian metering expenditure from 2009 to 2015*, 9 May, 2016, version 1, Figure 1.

57. Whilst JEN and UED did share program costs, similar to CitiPower and Powercor, for the early part of the initial regulatory period, they did not share IT and communications costs. When the analysis is normalised for fixed cost sharing, JEN's reported performance indicate that its expenditure is below the median of the five businesses (see **Error! Not a valid bookmark self-reference.**) indicating JEN is operating at efficient levels relative to its peers.

Figure 4–2: Total IT and communications operating expenditure by DNSP (normalised) (\$m)



Source: Huegin, *Advanced Metering Infrastructure Expenditure, Benchmarking Victorian metering expenditure from 2009 to 2015*, 9 May, 2016, version 1, Figure 2.

58. In relation to the aggregate category analysis, Huegin states that:

Jemena benchmark well using variable costs per meter and have the lowest variable costs per meter when IT capex is normalised for CROIC capex. Jemena have the second highest costs over the period for IT and Communications opex (fixed costs), it should be noted however that CitiPower and Powercor may not provide a realistic indication (when taken individually) due to their cost sharing arrangements.²⁶

59. In its report, Huegin, like the AER,²⁷ note the importance of making appropriate allowances for fixed and variable costs when benchmarking the Victorian distribution businesses' metering cost structure. For example, Huegin state that:

'how fixed and variable costs are accounted for will have a large impact on the benchmarking results. Using the two extremes provides an example of why the split between fixed and variable costs matters. At one end we could assume that all costs incurred during the metering rollout are fixed, in this case expenditure is independent of the number of meters installed and total expenditure benchmarks can be used. At the other extreme, all costs could be considered variable and total expenditure per meter would be a more appropriate measure.²⁸

60. The following extract from the Huegin report (Figure 4–3) shows the rank of the five Victorian electricity distribution businesses²⁹ when using total expenditure (appropriate for fixed costs) and total expenditure per meter (appropriate for variable costs).

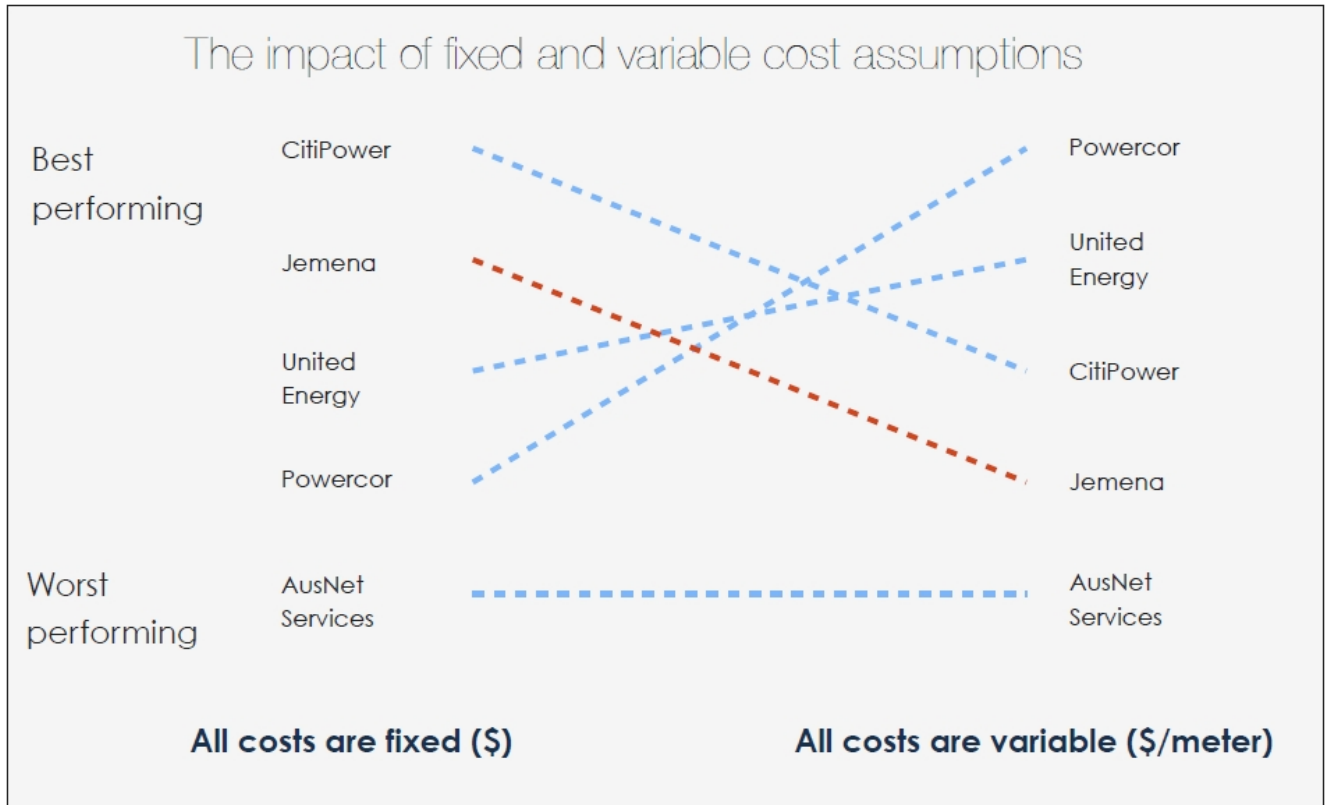
²⁶ Huegin, *Advanced Metering Infrastructure Expenditure, Benchmarking Victorian metering expenditure from 2009 to 2015*, 9 May, 2016, version 1, Pg. 14.

²⁷ AER, Preliminary Decision, *Jemena distribution determination 2016 to 2020, Attachment 16 – Alternative control services*, October 2015, Pg. 37.

²⁸ Huegin, *Advanced Metering Infrastructure Expenditure, Benchmarking Victorian metering expenditure from 2009 to 2015*, 9 May, 2016, version 1, Pg. 14.

²⁹ The technology as well as the cost drivers affecting the metering costs of distribution businesses in other jurisdictions is substantially different to those affecting the metering costs of Victorian distribution businesses. For example, the majority of metering related costs in other jurisdictions are related to the manual reading of meters, whereas in Victoria, it is the fixed costs stemming from the original investment the meter, the communications and IT infrastructure.

Figure 4–3: Summary of fixed versus variable costs



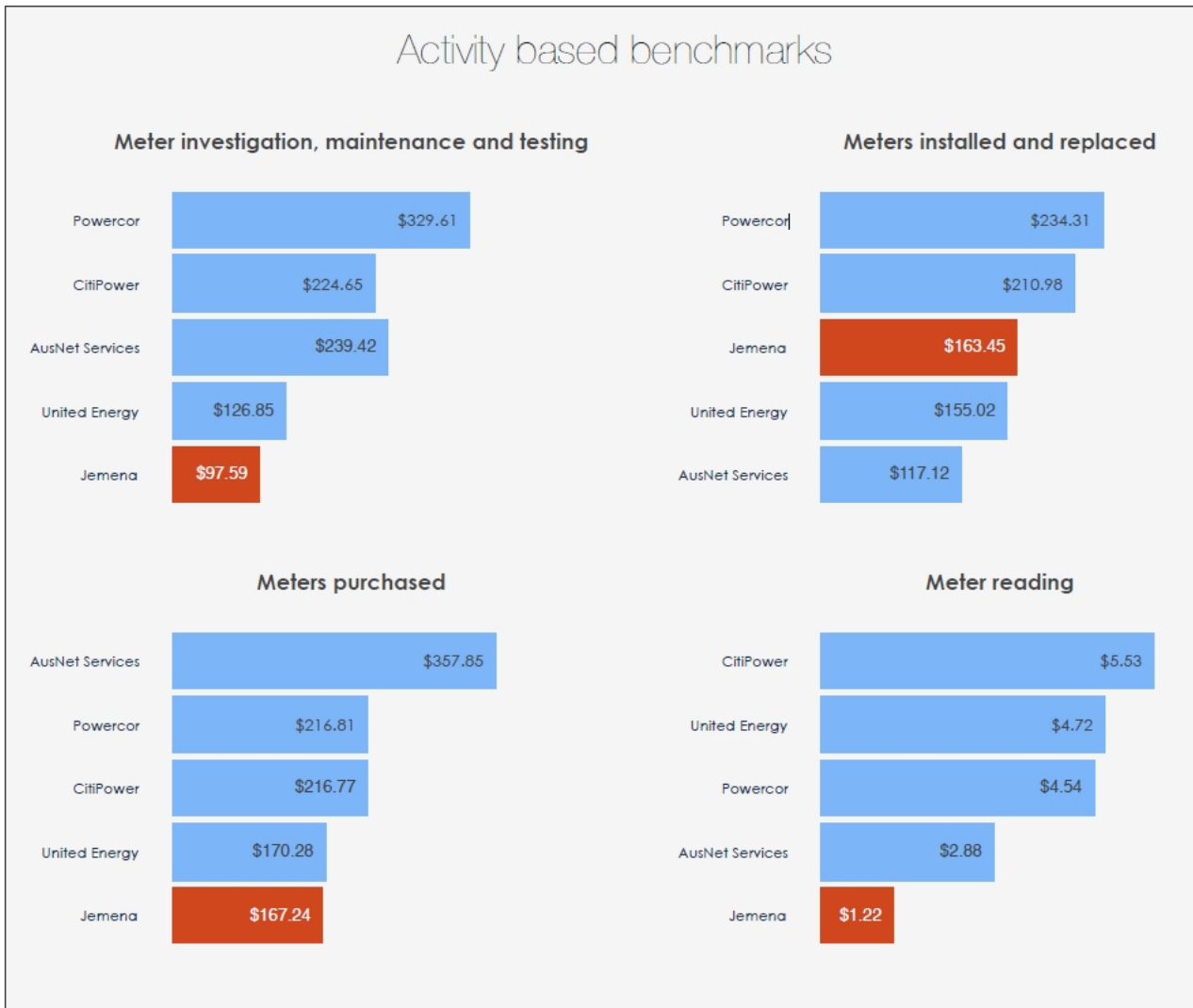
Source: Huegin, *Advanced Metering Infrastructure Expenditure, Benchmarking Victorian metering expenditure from 2009 to 2015*, 9 May, 2016, version 1, Figure 4.

61. As is evidenced by the results presented in Figure 4–3, consideration of this issue is particularly important for a business such as JEN, as it has the fewest number of customers of any standalone³⁰ Victorian distribution business
62. Huegin also undertook ‘Activity Based Category Analysis’, the results of which are summarised as follows:
- For all activities, Jemena is at or below the median of the five businesses benchmarked. The benchmarks in Figure 5 below account for around 54% of total industry metering expenditure over the period (with IT, Communications and Other expenditure forming the remainder).³¹*
63. The figure referred to in the above quote is reproduced in Figure 4–4 below.

³⁰ Whilst Citipower has fewer customers, it is jointly owned and operated with Powercor and thus it was able to benefit from the scale efficiency benefits that came from that structure.

³¹ Huegin, *Advanced Metering Infrastructure Expenditure, Benchmarking Victorian metering expenditure from 2009 to 2015*, 9 May, 2016, version 1, Pg. 15.

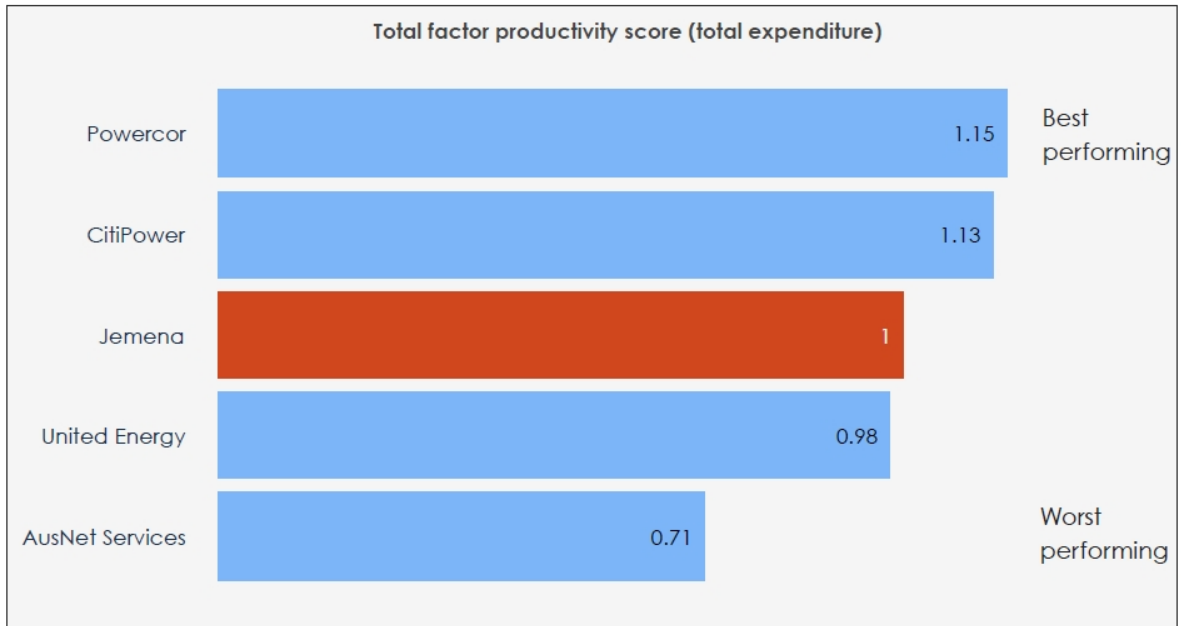
Figure 4–4: Activity based benchmarks (\$ per activity)



Source: Huegin, Advanced Metering Infrastructure Expenditure, Benchmarking Victorian metering expenditure from 2009 to 2015, 9 May, 2016, version 1, Figure 4.

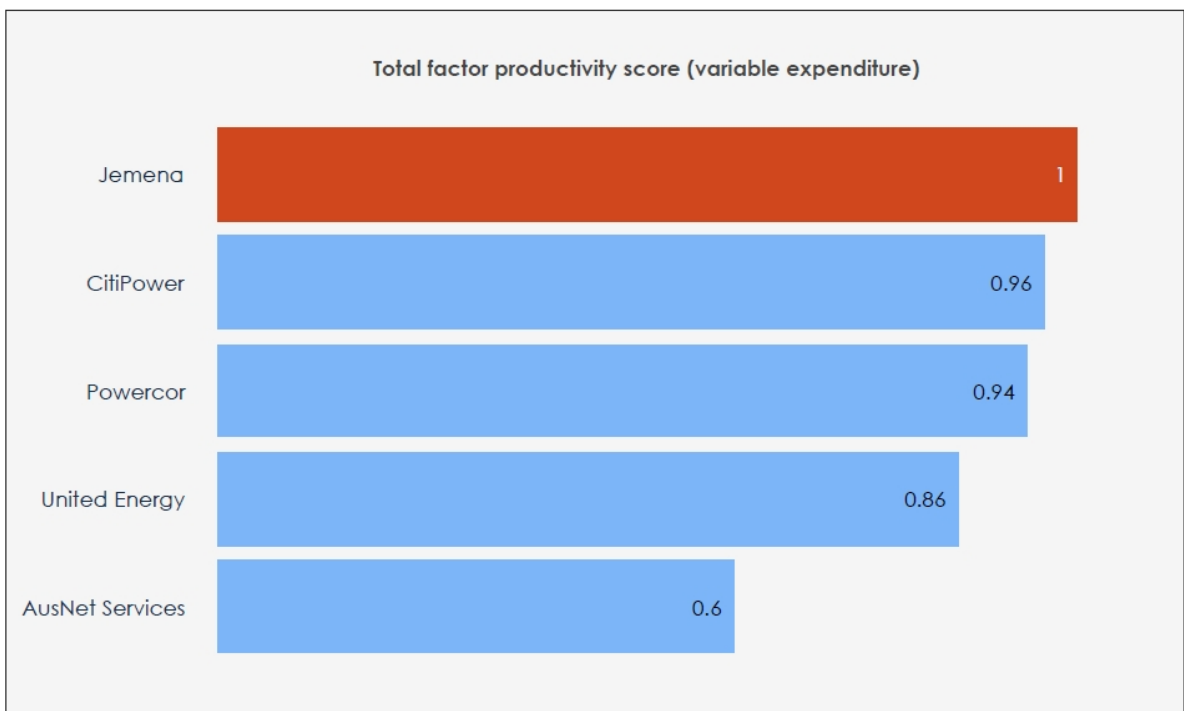
64. The following figures highlight the results of Huegin’s final benchmarking technique – Total Factor Productivity analysis of total expenditure.

Figure 4–5: Total factor productivity – totex score³²



Source: Huegin, Advanced Metering Infrastructure Expenditure, Benchmarking Victorian metering expenditure from 2009 to 2015, 9 May, 2016, version 1, Figure 6.

Figure 4–6: Total factor productivity – variable expenditure score³³



Source: Huegin, Advanced Metering Infrastructure Expenditure, Benchmarking Victorian metering expenditure from 2009 to 2015, 9 May, 2016, version 1, Figure 7.

³² JEN was assigned a score of “1” to scale the other networks performance.

³³ JEN was assigned a score of “1” to scale the other networks performance.

65. Huegin summarises the results of its Total Factor Productivity analysis as follows:

Using total expenditure between 2009 and 2015 Jemena are the median business among the Victorian DNSPs, when IT and Communications Opex is excluded from the analysis (used as a proxy for fixed costs) Jemena have performed slightly better than CitiPower and Powercor over the period.³⁴

66. This implies that using the median as the 'measure' for general efficiency is appropriate and that JEN performs well relative to its peers using this hurdle.

67. Huegin goes on to state that:

Ideally we would compare Jemena's results to CitiPower (its closest comparator in terms of meter installations / replacements albeit with a higher meter density) for an indication however CitiPower has not incurred the actual total costs that a single business would have incurred during the meter rollout period.³⁵

68. To facilitate this, Huegin has made a number of adjustments to estimate the relative efficiency of JEN against CitiPower which, as stated above, is likely to be its closest comparator amongst the Victorian electricity distributors. After making these adjustments (which are detailed in the Huegin report, refer to Attachment 2), Huegin comes to the conclusion that:

most of the difference in measured performance over the period between Jemena and CitiPower is likely to have been caused by the different cost sharing arrangements of DNSPs. When this is accounted for, the efficiency gap between Jemena and CitiPower is much smaller than an aggregate total factor analysis would suggest.³⁶

69. Huegin concludes that:

The AER and other parties have indicated that CitiPower and Powercor should be considered the benchmark against which prudence is measured, there is little indication from any of the three benchmarking techniques used in this report that Jemena's level of efficiency is materially different from CitiPower's when the results have been normalised for the fixed IT opex costs associated with the metering rollout.³⁷

70. JEN is of the view that Huegin's analytical framework compares favourably to other benchmarking frameworks that have previously been adopted for assessing the efficiency of expenditure in previous charges applications. In particular, Huegin's analytical framework:

- accounts for the impact that scale efficiency has on each Victorian distribution business' AMI related expenditure,
- is consistent with the benchmarking framework set out in the AMIOIC,
- uses multiple benchmarking techniques, as opposed to simply relying on one technique,
- looks at expenditure over the entirety of the initial regulatory period, not simply one year in isolation, which is consistent with the AMIOIC requirements, and

³⁴ Huegin, *Advanced Metering Infrastructure Expenditure, Benchmarking Victorian metering expenditure from 2009 to 2015*, 9 May, 2016, version 1, Pg. 17.

³⁵ Ibid, Pg. 17.

³⁶ Ibid, Pg. 18.

³⁷ Ibid, Pg. 18.

- does not attempt to benchmark the revealed costs of a distributor in any one year with the revealed costs of a different distributor from an earlier year—thus failing to take into account, amongst other things, the different scale of the rollout in those years, the different types of meters rolled out in those years across those businesses, and different exogenous factors affecting outcomes in those years.
71. It is for these reasons that JEN considers the analytical framework utilised by Huegin robust and thus reasonable for the AER to rely on the results of that benchmarking study when assessing JEN's expenditure 'over the entirety of, or any part of, the initial regulatory period'.
72. We have compared and contrasted Huegin's approach to the approach adopted by Energeia—when it reviewed JEN's 2013 expenditure excess application in CY2014.³⁸ The following table provides a summary of the differences.

Table 4–1: Comparison of Huegin's approach to the approach adopted by Energeia when assessing JEN's 2013 expenditure excess application

Parameter	Huegin	Energeia
Multiple analytical approaches	Yes – Aggregate category analysis; Activity based category analysis; and Total factor productivity analysis.	No – partial productivity analysis, against only one comparator firm
Allowing for the impact that scale effects (fixed costs) have on a business' cost structure	Yes	No
Allowing for exogenous factors affecting entire market	Yes – as, comparison across all businesses facing similar market conditions	No – comparison against "market rates" for similar skilled employees (who were in fact supplying services into a very different market, ie. meter installation services versus general services provided by registered electrical contractors)
Robustness of model inputs	Drawn from publicly available information, and based on actual revealed costs	Judgement and substitutions were made to input data

73. For these reasons, JEN is of the view that the previous analysis undertaken by Energeia is not fit for assessing the efficiency of expenditure excess under requirements of clause 51.8B (which were introduced into the AMIOIC since the AER used Energeia's methods in its most recent charges application decision) and that the methods developed by Huegin are more robust.

4.4.2 MARKET TESTING

74. In the context of this transition application, the AMIOIC means that the AER should go no further than the Huegin findings.
75. However, for completeness, JEN further provides further information concerning the process that JEN adopted to establish certain contract rates. There are two important principles in this regard:

³⁸ Energeia, *Review of Victorian Distribution Network Service Provider's Advanced Metering Infrastructure 2015 Charges Revision Applications*, Prepared for the Australian Energy Regulator, December 2014.

EXPLANATION OF WHY JEN'S EXPENDITURE IS PRUDENT AND EFFICIENT

- markets are the most efficient and effective means of sending appropriate price signals regarding the factors that impact upon the supply and demand for a particular good or service, and
 - the combination of these price signals will lead to the efficient allocation of resources across the economy (that is, the outcomes that are produced are, by definition, efficient).
76. Following on from this, JEN's key expenditure excess category (in both CY2014 and in CY2015) is for meter installation services. Therefore, the following discussion focuses on this cost category.

4.4.2.1 Comparison of market rates to actual spend

77. The information in Table 4–2 identifies the service providers that JEN utilised in CY2014 and CY2015 to provide mass rollout (**MRO**) meter installation services, the number of MRO meters installed as part of the MRO, a description of the service provided, and the means by which that service provider was engaged (for example, competitive tender).
78. JEN notes that amendments to the AMIOIC—under clause 14.AA.1 of the CROIC—mandated the AMI rollout program continue beyond 1 January 2014. Extending the obligations provides a useful platform from which to assess the efficiency of unit rates over CY2014 and CY2015 years as the obligations are largely the same prior to the rule amendment.

Table 4–2: Information around the number of MRO meters installed in CY2014 and CY2015

MRO Service Provider	Number of meters installed (CY2014)	Number of meters installed (CY2015)	Description of main services provided	Means for engaging service provider
SSIS	6,551	0	AMI installation services Including: - Installation of AMI meters - Installation of access points and relays - Meter and associated equipment supply chain and logistics management	This agreement was established as part of the initial 15% MRO, following a competitive tender process. Then the 85% MRO tender was initiated – a competitive open tender, which did not yield, improved results over the 15% tender but provided means to re-negotiate and improve the 15% tender agreement terms.
Select Solutions	6,887	377	AMI meter installation services	In 2014, Select Solutions were engaged through an extension option exercised from previously struck contract. In 2015, Select Solutions were engaged through a competitive open tender process.
BLS	8,146	0	AMI meter installation services	Direct negotiations. In these processes, we compared the rates against existing service agreements and compared against the results from an expression of interest conducted in late 2012.
Zinfra	5,056	726	AMI meter installation services	
Skilltech	142	0	AMI meter installation services	

EXPLANATION OF WHY JEN'S EXPENDITURE IS PRUDENT AND EFFICIENT

MRO Service Provider	Number of meters installed (CY2014)	Number of meters installed (CY2015)	Description of main services provided	Means for engaging service provider
TOTAL	26,782	1,103		

(1) In these processes, we benchmarked the rates against existing service agreements and benchmarked against expression of interest results from an EOI in late 2012.

79. As can be seen from the above:

- the scale and scope of each service provider's role differed, and
- JEN engaged the service providers that provided MRO services in CY2014 and CY2015 in one of three ways – via direct negotiation, exercising a contract extension option or via competitive tender.

80. The latter is particularly informative, if done correctly; this reveals the rates that service providers available in the market were prepared to offer to undertake those services. However, this does not mean that a prudent and efficient business would adopt a competitive tender approach in all cases. The decision depends on the trade-off between the (higher) administrative costs and (longer) delivery timeframes associated with developing a competitive open tender process to appoint one or more contractors at each stage of the MRO, versus the avoided cost benefits the procurer believes it will obtain from directly negotiating (with knowledge of competitively benchmark rates) with a service provider.

81. For example, if the procurer is aware of rates being offered in the market for similar services, then it may be more efficient to enter into bi-lateral negotiations with an individual service provider for the provision of services. This is particularly relevant in a case where they have only recently gone to market and they are of the belief that the market has not changed materially since it observed those rates—subject to the final negotiated rates being at or around the procurer's understanding of the prevailing market rates.

82. This approach to obtaining efficient market prices, particularly at the end of a significant program like the AMI MRO, is also acknowledged by the AER as unlikely to yield any additional value as noted in their final 2016-20 EDPR decision for JEN:

“Jemena will continue to procure meters from its existing suppliers. We consider this to be reasonable in the circumstances. Running a further tender process for the supply of meters for the 2016-2020 regulatory control period is unlikely to provide any additional value to customers given:

- *the costs involved in undertaking a tender process are not insignificant*
- *the contract will be for a short term because metering contestability commences in Victoria on 1 December 2017*
- *the low volume of meters required.*
- *We consider that the cost of engaging alternative vendors is likely to outweigh the benefits. In addition to the above limitations, even if Jemena is able to procure meters at a lower cost through an alternative vendor, it will incur other operating costs. In particular, end to end testing programs required for communication systems and data collection compliance in accordance with the mandated service levels.”³⁹*

³⁹ AER, *Final decision, Jemena distribution determination 2016 to 2020, Attachment 16 – Alternative control services*, May 2016, section 16.3.4.2.

EXPLANATION OF WHY JEN'S EXPENDITURE IS PRUDENT AND EFFICIENT

83. Whilst the AER specifically refer to the procurement of meters in this circumstance, the same concept can be equally applied to the procurement of meter installation services.
84. To test this, JEN has overlaid its market-tested rates (from the Select Solutions open tender awarded rates) on the overall volume of meters installed under the MRO program in CY2014. The outcomes of this analysis are contained in Table 4–3.

Table 4–3: MRO installation costs using tendered metering rates

Service Type (single metered sites)	Open tender meter installation rates	Number of meters installed in CY2014	Costs assuming open tender meter installation rates (\$2015)	Costs assuming open tender meter installation rates (\$2014) ^[1]	Actual CY2014 costs
Meter Installation - single meter, single or polyphase NT	[REDACTED]	[REDACTED]	\$2,268,181	\$2,234,458	
Meter Installation - two meters, single or polyphase NT	[REDACTED]	[REDACTED]	\$606,840	\$597,818	
Meter Installation - single meter, single or polyphase OT	[REDACTED]	[REDACTED]	\$392,472	\$386,739	
Meter Installation - two meters, single or polyphase OT	[REDACTED]	[REDACTED]	\$105,004	\$103,504	
New CT Installation, & Commission (S, T or W Type CT's)	[REDACTED]	[REDACTED]	\$223,568	\$220,255	
Installation Service component of MRO			\$3,596,065	\$3,542,776	\$3,606,458^[2]

(1) De-escalated for by CPI at 1.50% based on September 2015 data from the Australian Bureau of Statistics.

(2) This includes the raw installation costs only; it does not include the incremental activities of isolation (\$1.37M), supervision, auditing and truck support (\$0.59M), NITP program, no access and aborted job charges (\$1.01M) and nonstandard works, panel replacements, rewire etc. (\$0.85M) which are included in total metering costs reported in

Table 5-1.

85. As can be seen from the table above, if JEN had used the service provider it engaged via the competitive open tender process to undertake all of its MRO meter installations in CY2014, the basic installation costs that it would have incurred would have been almost identical to the actual cost incurred in CY2014.
86. This indicates that:
- JEN's expenditure excess is efficient, given the market factors it faced in CY2014 (it is reasonable to assume that those same factors would be reflected in the winning tenderer's offer as there has not been any significant change in market conditions between CY2014 and CY2015), and
 - justifies the use of the cheaper form of procurement process for a number of its other installation service providers.

4.4.2.2 Comparison of unit rates across different types of engagement

87. JEN has also compared the basic rate under this open tender process to those procured from Zinfra. In making the comparison it is first necessary to normalise for differences in terms and conditions, in this case, it is necessary to remove the back-office costs from the Zinfra rate. The outcomes of this analysis are outlined in Table 4-4.

Table 4-4: Contracted metering installation rate (\$2015)

Service type	Open tender meter installation rates	Test	Zinfra	Less back-office costs	Equivalent market tested prices
Meter Installation - single meter, single or polyphase NT	[REDACTED]	■	[REDACTED] ⁴⁰	[REDACTED] ⁴¹	[REDACTED]

88. This indicates that Zinfra's rates were also efficient.
89. JEN notes that this approach is analogous to the approach that Jemena Gas Networks (NSW) Ltd (**JGN**) used to support its Network Construction, Repairs and Maintenance contract costs.⁴² In summary, JGN tendered out half of the JGN network – the “northern region” (awarding four contracts to two suppliers) – and directly awarded the “southern region” of the JGN network to Zinfra, which is a related party. The Zinfra rates were benchmarked by JGN against those arising from the northern region tender process.
90. The AER, when assessing this, described its assessment process as follows⁴³:

JGN has split its network into a North and South region. It established new contracts for routine construction, repair and maintenance contracts for the Northern region after going out to open tender in October 2012. Zinfra, a subsidiary of the Jemena Group, and so for this purpose a related party to JGN, has been awarded JGN's Southern region.

⁴⁰ Zinfra / JEN, *Field Services Agreement (FSA), Variation Notice 01*, May 2015.

⁴¹ [REDACTED]

⁴² JGN, *2015-20 Access Arrangement Information*, Appendix 4.1, 30 June 2014.

⁴³ AER, *Draft Decision, JGN Access Arrangement 2015-20, Attachment 6 – Capital expenditure, November 2014*, p 6-21.

*We reviewed the tender documents, the tender assessment and the decision to award the four contracts. We are satisfied that this was a competitive tender process. As it was a competitive tender price, we are satisfied that the unit rates established in the contracts reflect competitive unit rates prevailing in the market. On this basis **we are satisfied that the unit rates drawn from these contracts which form the basis of estimates used in JGN's proposed capex are efficient.** [emphasis added].*

91. In their assessment, the AER concluded that JGN could use the outcomes of a competitively tendered contract to support its assessment of JGN's overall capex forecast (which included costs that JGN would incur in engaging a related party via directly negotiated contract).
92. We see no difference between this situation, and the approach JEN has described previously. We also believe that this approach is consistent with what would happen in a competitive market. In particular, it would be inefficient for a business operating in a competitive market to "go to market" via an open tender process for every single purchasing decision.
93. Rather, a business' decision to go to market would be based on the benefits versus the costs of going to the market, with:
 - the benefits inextricably linked to the business' perception of the potential cost reductions it may accrue from 'going to market', which in turn will be related to, amongst other things:
 - the value of the contract, and
 - their underlying knowledge of the market (which, in the case of JEN, is substantial, given it has provided these services for over 5 years), and whether they believe prices quoted under non-competitively tendered arrangements are in line with current market rates, and
 - the costs being inextricably linked to the administrative costs associated with going to the market via a formal tendering process.
94. Notwithstanding any of the above, JEN understands that the AER could reasonably form the view that JEN's competitively tendered rates were efficient, if it also determined that the underlying procurement process was efficient (that is, it was best practice regarding process/timeframes etc.).
95. To this end, JEN notes the following features of the open tender process that was awarded to Select Solutions.

JEN adopts best practice procurement processes

JEN has developed extensive tendering policies⁴⁴ and practices informed by:

- Internal expertise;
- Best practice procurement processes (informed by the CEB Procurement Leadership Council);
- Specific reviews of AMI procurement practices;^{45,46}
- Probity reviews⁴⁷; and
- Financial control through a Delegation of Financial Authority policy.

⁴⁴ JEN, *Procurement Policy (JEM PO 006)*, November 2014. (See Attachment 5 - CONFIDENTIAL).

⁴⁵ Mercer, *Audit opinion letter, 85% RFT evaluation models, Financial Model Audit*, 22 February 2010. (See Attachment 6 - CONFIDENTIAL).

⁴⁶ KEMA, *Due diligence review, 85% AMI meters RFT*, 2 July, 2010 (See Attachment 7 - CONFIDENTIAL).

⁴⁷ Pitcher Partners, *AMI program – 85% RFT process*, 16 July 2010 (See Attachment 8 - CONFIDENTIAL).

Through this framework, we ensure materials and services are procured at the most efficient cost possible.

AMI metering installation services

In relation to the AMI metering installation services, a comprehensive tender pack was established outlining specific requirements for the installation of AMI meters consistent with safety, regulatory and legal obligations. JEN publically issued this as a request for tender through tender-link for the procurement of meter installation services on 11 June 2014.

Eight responses were received which were assessed through an evaluation process that included—but was not limited to the following criteria:

For each respondent (and criteria), a ranking was allocated; these were assessed, along with the qualitative aspects of the tender response materials, by JEN's tender committee. Vendors scoring the highest results in the ranking process were then asked to submit best and final offers, which were then considered in the final selection process.

JEN considers this to be a prudent approach to establishing market driven, efficient prices for the installation of AMI meters.

96. Overall, JEN has revealed rates from a robust competitive tender process and it has established that the application of these rates to JEN's outturn volumes would have led JEN to incur costs almost identical to what it actually did incur. JEN considers that it has established the efficiency of its overall basic install costs in CY2014 and CY2015, given the market conditions that it faced during that period.

4.4.3 THE AER CONSIDERS JEN EFFICIENT

97. In its preliminary decision of JEN's 2016-20 EDPR the AER has stated '*the Victorian distribution businesses are generally efficient*'.⁴⁸
98. Given the base year referred to in the AER's preliminary decision for JEN is CY2014 the AER has in effect made an assessment of JEN's efficiency for this year and concluded that it is efficient, it therefore makes sense that the same conclusion should be drawn for AMIOIC assessment purposes for at least CY2014 and by extension CY2015 also.

4.5 WHY THE AER SHOULD DEEM JEN AS HAVING BEEN PRUDENT

99. Clause 5I.7AA of the AMIOIC defines the prudence test as follows:

For the purposes of clause 5I.7 and in any case where an application pursuant to clause 5L is made, the expenditure excess is prudent where the expenditure of the distributor over the entirety of the initial regulatory period reasonably reflects the efficient costs of a business providing the Regulated Services over the entirety of that period.

⁴⁸ AER, *Preliminary Decision, Jemena distribution determination 2016 to 2020, Attachment 16 – Alternative control services*, October 2015, Pg. 16-43.

100. Clause 5I.7 of the AMIOIC requires the AER to be satisfied that expenditure excess is prudent before including it the building blocks. The test for prudence—found in in Clause 5I.7AA of the AMIOIC—requires that expenditure excess be considered prudent where expenditure over the initial regulatory period is efficient. As outlined in this application, JEN has demonstrated its expenditure, including the excess, is efficient and therefore the amount is prudent.
101. Further supporting JEN's assertion that it has acted prudently is the ESCV's review,⁴⁹ which also concluded that JEN has complied with its prudence obligation.

4.6 CONCLUSIONS

102. In conclusion, the available benchmarking evidence clearly indicates that JEN's expenditure over the entirety of the initial regulatory period is both efficient and prudent.
103. The analytical framework adopted to complete the benchmarking study, referenced in this application, compares favourably to other benchmarking frameworks that have previously been adopted (or considered for adoption). In particular, the analytical framework adopted:
 - accounts for the impact that scale efficiency has on each Victorian distribution business' AMI related expenditure,
 - is consistent with the benchmarking framework set out in the AMIOIC,
 - uses multiple benchmarking techniques, as opposed to simply relying on one technique,
 - looks at expenditure over the entirety of the initial regulatory period, not simply one year in isolation, which is consistent with the AMIOIC requirements, and
 - does not attempt to benchmark the revealed costs of a distributor in any one year with the revealed costs of a different distributor from an earlier year. (Doing so would thus fail to take into account—amongst other things—the different scale of the rollout in those years, the different types of meters rolled out in those years across those businesses and different exogenous factors affecting outcomes in those years).
104. Furthermore, if the meter installation rates revealed via a robust competitive tender process were applied to JEN's outturn volumes, then JEN would have incurred costs almost identical to what it actually did incur in CY2014 and CY2015. This provided solid evidence that that its overall cost of undertaking basic installs in CY2014 and CY2015 is efficient, given the market conditions that installers would have faced in those years.

⁴⁹ ESCV, *Compliance with AMI Regulatory Obligations as at 31 December 2013 (Victorian Electricity Distributors) – Final Report*, October 2014 (C/14/14640).

5. A SUMMARY OF JEN'S EXPENDITURE IN EACH MAJOR CATEGORY

5.1 OBJECTIVE

105. The objective of this section is to:

- Summarise JEN's expenditure (budget versus actual) in each of the key cost categories where an expenditure excess occurred in CY2014 and CY2015, and
- Summarise the key factors contributing to the expenditure excess, including factors that:
 - Led to the original budget assumptions differing to actual outcomes,
 - Affected outturn expenditure but which were exogenous, and therefore, could have not have reasonably been forecast by JEN at the time it developed its original allowance, and
 - Led to outturn unit rates exceeding its forecast costs.

5.2 KEY MESSAGES

- The bulk of JEN's AMI expenditure excess in CY2014 and CY2015 is caused by higher installation costs, which in turn are driven by:
 - JEN having to continue the MRO program beyond the originally scheduled completion date of May 2013, and
 - Changes in market conditions that have affected the market rates that JEN has had to pay for installation services in CY2014 and CY2015, relative to its original forecast.
- Other material impacts include higher operating costs incurred by JEN because of it being forced to continue to provide some metering services through non-AMI meters, rather than discontinuing these services as assumed in the budget.

5.3 INSTALLATION (MASS ROLLOUT) – CAPEX

106.

A SUMMARY OF JEN'S EXPENDITURE IN EACH MAJOR CATEGORY

Table 5–1 provides a snapshot of JEN's budget and actual expenditure in this cost category.

A SUMMARY OF JEN'S EXPENDITURE IN EACH MAJOR CATEGORY

Table 5–1: 'Installation (Mass Rollout)' capex (\$ '000, nominal)⁵⁰

Capex Category	2011	2012	2013	2014	2015	TOTAL
Allowance ⁽¹⁾	8,226	9,989	4,198	0	0	22,413
Actual	5,195	8,619	19,952	7,420	245	41,431
Variance	3,031	1,371	-15,754	-7,420	-245	-19,017

(1) Adjusted for actual CPI.

107. The material drivers of JEN's expenditure excess in this cost category are:

- **Different meter installation volumes:** JEN's Submitted Budget reflected an assumption that it would have completed the MRO by May 2013. JEN considers that the large number of meters that were required to be installed in CY2014 (and therefore its impact on JEN's expenditure excess) and CY2015 was predominately driven by exogenous factors, including changed market conditions as well as changes in regulatory obligations, both of which are relevant factors under the AMIOIC (clauses 51.8 (f) and (g)). These have been discussed in earlier sections of this report.
- **JEN's unit rates for meter installation are efficient:** JEN's Submitted Budget reflected a forecast of the cost of installing meters. JEN's actual unit rate for meter installation has been higher than forecast in CY2014 and CY2015. Whilst this is inevitable, given the new obligations were imposed on JEN that it could have not otherwise forecast, the evidence presented in 4.4.2 indicates that JEN's installation unit rates are efficient.

5.4 NEW CONNECTIONS, ADDS AND ALTS – CAPEX

108. The meters themselves are not differentiated between MRO and BAU (New Connections, Adds and Alts), rather the meters are deployed to meet the regulatory obligation irrespective categorisation under the AMIOIC. Given this and, when combined with other issues such as volumes in excess of budget allowance, the best way to assess the efficiency of these costs categories is by combining them.

Table 5–2: Capex variance for combined MRO and BaU metering (\$ '000, nominal)

Capex Category	2011	2012	2013	2014	2015	Total
Meters (Mass Rollout)						
Allowance ⁽¹⁾	18,453	20,036	7,984	0	0	46,473
Actual	13,109	13,467	15,062	0	9	41,647
Variance	5,344	6,569	-7,078	0	-9	4,826
New Connections, Adds and Alts						
Allowance ⁽¹⁾	1,980	2,175	1,116	1,052	1,101	7,424
Actual	2,532	3,113	2,412	3,642	0	11,699
Variance	-552	-938	-1,297	-2,590	1,101	-4,275
Meters (Mass Rollout) and New Connections, Adds and Alts combined						

⁵⁰ Whilst efficiency should be assessed over the life of the rollout program (ie. 2009 to 2015), the data for 2009 and 2010 is excluded from this table, consistent with AMIOIC clause 5E.2, because the allowances for 2009 and 2010 are taken to be actual.

A SUMMARY OF JEN'S EXPENDITURE IN EACH MAJOR CATEGORY

Capex Category	2011	2012	2013	2014	2015	Total
Allowance ⁽¹⁾	20,433	22,211	9,099	1,052	1,101	53,897
Actual	15,641	16,580	17,474	3,642	9	53,346
Variance	4,792	5,631	-8,375	-2,590	1,092	550

(1) Adjusted for actual CPI.

109. Despite the unfavourable circumstances, the net effect is a favourable outcome in cost by only 1% as can be observed in Table 5–2.
110. The AER has recently undertaken an assessment of JEN's meter procurement practices and come to the conclusion, that the meters are acquired on a competitive tendered basis stating:

“Having examined Jemena’s tendering process for the procurement of metering hardware, we consider that the contracts have been determined on a competitively tendered basis and the meter unit costs represent competitively sourced market rates.”⁵¹

111. Letting contract costs through market testing is prima-facie evidence that the costs are efficient⁵² therefore, when applied in this situation draws us to the conclusion that the costs in Table 5–2 are efficient.

5.5 MRO BACK OFFICE – CAPEX

112. Table 5–3 provides a snapshot of JEN's budget and actual expenditure in this cost category.

Table 5–3: ‘MRO Back Office’ capex (\$ '000, nominal)

Capex Category	2011	2012	2013	2014	2015	Total
Allowance ⁽¹⁾	548	1,670	1,141	0	0	3,360
Actual	261	1,180	2,424	2,274	0	6,139
Variance	287	491	-1,283	-2,274	0	-2,779

(1) Adjusted for actual CPI.

113. The fundamental driver of JEN's CY2014 expenditure excess in this cost category is that JEN's original budget allowance assumed that the MRO program would be completed by May 2013 whereas the program has continued on to June 2014 thus resulting in longer running fixed costs.
114. More specifically, this has led to the following generic costs having to be incurred:
- MRO Project Management
 - MRO Customer Contact, which includes inbound and outbound MRO call centres
 - MRO Scheduling and Dispatch, which includes administering and supporting and managing the MRO

⁵¹ AER, *Final decision, Jemena distribution determination 2016 to 2020, Attachment 16 – Alternative control services*, May 2016, section 16.3.4.2.

⁵² AER, *Better Regulation, Expenditure Forecast Assessment Guideline for Electricity Distribution*, November 2013, Pg. 14.

A SUMMARY OF JEN'S EXPENDITURE IN EACH MAJOR CATEGORY

- MRO Data Processing, which includes the manual processing of paperwork.
115. Faced with increased complexity, increase costs and often a resistant customers, the per unit rate increased significantly relative to that experienced in previous years.

5.6 METER DATA COLLECTION – OPEX

116. Table 5–4 provides a snapshot of JEN's budget and actual expenditure in this cost category.

Table 5–4: 'Meter Data Collection' opex (\$ '000, nominal)

Opex Category	2011	2012	2013	2014	2015	Total
Allowance ⁽¹⁾	778	692	265	0	0	1,735
Actual	517	1,226	2,614	1,528	806	6,692
Variance	261	-534	-2,349	-1,528	-806	-4,957

(1) Adjusted for actual CPI.

117. The fundamental driver for JEN's expenditure excess in this cost category is the delay in completing the rollout. This has resulted in:
- **Higher manual meter reading costs**—JEN had originally forecast that its AMI program would be completed by the end of May 2013, which meant that its original forecast for this cost category reflected the assumption that JEN would not incur *any* costs in having to manually read any accumulation meters in CY2014 or CY2015.

For example, JEN stated in its Submitted Budget for the subsequent AMI budget period that all *'field-based scheduled and special meter reading will reduce to 0 by the completion of AMI mass roll-out, due to the daily delivery of meter data using the AMI remote collection capability. This will result in the 100% reduction in Scheduled Meter Reader activities for <160 metering.'*⁵³

Because of the actual timing of JEN's AMI program, this assumption did not eventuate.

- **Higher back office system operating costs**—JEN has incurred on-going back-office operating costs for the processing and handling of accumulation meter and manually read interval meter data and the exception checking of that data, relative to what it forecast, again, as a result of the extension of the AMI program beyond JEN's original May 2013 end date.

JEN was explicit in its Submitted Budget that its proposed expenditure delivered business *'processes to ensure that the current manual meter-reading, back office environment and current IT systems can be efficiently and effectively operated until replaced by AMI by 2013'* [Emphasis added]⁵⁴

⁵³ JEN, *AMI Budget Application 2012-15 Substantiation of Base Cost to Provide Regulated Services*, 25 February 2011, Pg. 61.

⁵⁴ JEN, *AMI Budget Application 2012-15 Substantiation of Base Cost to Provide Regulated Services*, 25 February 2011, Pg. 10.

Appendix A

Claims for confidentiality

A1. CLAIMS FOR CONFIDENTIALITY

Table A1–1: AMI transition application confidentiality claims

Title, page and paragraph number of document	Description of the confidential information	Topic the confidential information relates to	Confidentiality category	Why the confidential information falls into the selected category	How and why detriment would be caused from disclosing the confidential information	Reasons supporting why the identified detriment is not outweighed by the public benefit
Table 4–3, Table 4–4 and related footnote.	Unit rates (and related information to reverse engineer the unit rates)	Capex	Market sensitive cost inputs	This information contains underlying and contractor unit rates which, if published, could affect JEN's (and third party service providers') ability to obtain competitive prices in future procurement processes.	Revealing unit rates for procuring particular types of materials or services could set a floor in the market when procuring such services in the future. Disclosure could therefore harm JEN's legitimate business interests and, ultimately, increase costs passed onto customers.	While the detriment of publishing the information is clear, JEN is not aware of any material incremental benefit from the AER publishing this information, as opposed to using it on a confidential basis. Confidentiality arrangements can be put in place to allow access to the information for the relevant interested parties involved in regulatory processes.
Supporting attachments 3 and 4. Entire documents	Audit opinion of financial information	Audit report	Market sensitive cost inputs / Market intelligence	Public disclosure could have value implications for Jemena's traded debt. If the audit report in question (and potential similar future reports) were to be published, investors could rely on the information in those	JEN's Special purpose financial report is confidential in entirety, as there would be harm to both JEN and the Auditor. While JEN is not publicly listed, the Jemena Group has publicly listed debt. Therefore, public	While the detriment of publishing the information is clear, JEN is not aware of any material incremental benefit from the AER publishing this information, as opposed to using it on a confidential basis.

Title, page and paragraph number of document	Description of the confidential information	Topic the confidential information relates to	Confidentiality category	Why the confidential information falls into the selected category	How and why detriment would be caused from disclosing the confidential information	Reasons supporting why the identified detriment is not outweighed by the public benefit
				reports.	information could have value implications for Jemena’s traded debt. If the audit reports were to be published, investors could rely on the information in those reports. Most investors would not understand the difference between a statutory audit report and a regulatory audit report. Given this, differences could mistakenly be perceived by investors as an issue with JEN’s statutory financial reporting. This could damage JEN’s reputation with investors and result in unnecessary costs of JEN issuing explanations and re-assurances to the market. Such a situation could also create liability for KPMG.	

Title, page and paragraph number of document	Description of the confidential information	Topic the confidential information relates to	Confidentiality category	Why the confidential information falls into the selected category	How and why detriment would be caused from disclosing the confidential information	Reasons supporting why the identified detriment is not outweighed by the public benefit
Supporting attachments 5 to 8. Entire documents	Information relating to the negotiations in the open market.	Metering capex values	Market sensitive cost inputs.	Publishing the material may prejudice future tender and commercial negotiation processes between JEN and its potential service providers.	Public disclosure of this information could undermine the request for quote, request for tender and negotiating strategies to achieve efficient costs.	While the detriment of publishing the information is clear, JEN is not aware of any material incremental public benefit from the AER publishing this information, as opposed to using it on a confidential basis.

Appendix B
Model data

B1. 2014 MODEL DATA

Table B1–1: 2014 Capex, opex and revenue data

Jemena Electricity Networks (Vic) Ltd			
AMI DATA INPUTS CY2014			
GROSS CAPITAL EXPENDITURE			
	Regulatory		\$
	Life (years)		
Accumulation meters	Depreciated by end of 2014		-
Manually read interval meters	Depreciated by end of 2014		-
Remotely read interval meters and transformers	15.0		13,336,203
IT	7.0		3,451,502
Communications	7.0		708,578
Other	7.0		-
Total (includes related party margins)			17,496,284
Capital Expenditure by Taxation Category			
	Declining balance		\$
	Tax Depn rate		
Meterts & Transformers (Group 1) (Unit cost < \$1000)	37.5%		13,336,203
Meterts & Transformers (Group 1) (Unit cost => \$1000)	6.0%		
IT	40.0%		3,451,502
Communications	21.4%		708,578
Other	17.7%		-
Total			17,496,284
OPERATING & MAINTENANCE EXPENDITURE			
	Sch 6a Maintenance		
Operating and Maintenance Expenditure	2,832,000		21,810,732
Total (includes related party margins)	Sch 8a Operating costs		
	18,978,732		
Tarrieff Revenue			
Actual Tarrieff Revenue			64,349,875

- (1) Costs in Table B1–1 can be verified against the audit report at Attachment 3. Revenues can be verified against JEN's response to the annual regulatory information notice in the income statement for CY2014 (See JEN, *Attachment 1-1 Appendix B - 2015 regulatory accounting statements*, 30 April 2015).

B2. 2015 MODEL DATA

Table B2-1: 2015 Capex, opex and revenue data

Jemena Electricity Networks (Vic) Ltd			
AMI DATA INPUTS CY2015			
GROSS CAPITAL EXPENDITURE			
	Regulatory Life (years)		\$
Remotely read interval meters and transformers	15.0		253,489
IT	7.0		6,278,458
Communications	7.0		684,065
Other	7.0		-
Total (includes related party margins)			7,216,012
Capital Expenditure by Taxation Category			
	Declining balance Tax Depn rate		\$
Meters & Transformers (Group 1) (Unit cost < \$1000)	37.5%		253,489.07
Meters & Transformers (Group 1) (Unit cost => \$1000)	6.0%		
IT	40.0%		6,278,458
Communications	21.4%		684,065
Other	17.7%		-
Total			7,216,012
OPERATING & MAINTENANCE EXPENDITURE			
	Sch 6a Maintenance		
Operating and Maintenance Expenditure	1,706,955		18,526,611
	Sch 8a Operating costs		
	16,819,655.53		
Tarriff Revenue			
Actual Tarriff Revenue			76,572,125

- (1) Costs in Table B2-1 can be verified against the audit report at Attachment 4. Revenues can be verified against JEN's response to the annual regulatory information notice in the income statement for CY2015 (See JEN, *Attachment 1-1 Appendix B - 2015 regulatory accounting statements*, 30 April 2016).