

Jemena Electricity Networks (Vic) Ltd

**2016-20 Electricity Distribution Price Review
Regulatory Proposal**

Revocation and substitution submission

Attachment 9-1 Alternative control metering services

Public

5 January 2016



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Appendix A Metering and distribution services cost classification

GLOSSARY

Metering services	Metering services, for the purposes of this attachment, encapsulates the alternative control services of (i) type 5, 6 and smart metering services and (ii) exit fees.
AMI Order in Council	Advanced Metering Infrastructure Order in Council made by the Governor of Victoria under section 15A and section 46D of the Electricity Industry Act 2000 (Vic) and published in the Victoria Government Gazette on 28 August 2007, including amendments up to 30 July 2015.
Metering RAB	The value of the assets we use in providing metering services.
Optimal NEO Position	The position which contributes to the achievement of the NEO to the greatest degree and best promotes the long term interests of consumers of electricity.
Rule change	AEMC, <i>Rule determination, National Electricity Amendment (Expanding competition in metering and related services) Rule 2015 & National Energy Retail Amendment (Expanding competition in metering and related services) Rule 2015</i> , 26 November 2015 (Final determination).

ABBREVIATIONS

ACS	Alternative Control Service
AEMC	Australian Energy Market Commission
AMA	Asset Management Agreement
AMI	Advanced Metering Infrastructure
ARR	Annual Revenue Requirement
AUD	Australian Dollars
CAM	Cost Allocation Methodology
capex	Capital Expenditure
CIS	Customer Information System
CMS	Customer and Market Services
CMSA	Customer and Market Services Agreement
EWOV	Energy and Water Ombudsman (Victoria)
F&A	Framework and Approach
FTEs	Five Full Time Equivalents
JAM	Jemena Asset Management
JEN	Jemena Electricity Networks (Vic) Ltd
MAR	Maximum Allowed Revenue
MDMS	Meter Data Management System
MRO	Mass Rollout Program
NEO	National Electricity Objective
NER	National Electricity Rules
NIC	Network Interface Card
NMS	Network Management System
NPV	Net Present Value
opex	Operating Expenditure
PTRM	Post Tax Revenue Model
RAB	Regulatory Asset Base
TAB	Tax Asset Base
TFP	Total Factor Productivity
USD	US Dollars

OVERVIEW

Key messages

- We welcome the preliminary decision acknowledgement that Jemena Electricity Networks (Vic) Ltd's (**JEN's**) actual metering opex in 2014 contains no material inefficiencies and that the Victorian distribution businesses generally are efficient, as well as the use of the 'base, step and trend' method to develop operating expenditure (**opex**) forecasts over the 2016 regulatory period.
- We largely agree with the preliminary decision outcomes, but are concerned with a few key areas. In particular, the preliminary decision rejected our proposal to reclassify:
 - \$60.9m (\$2015) in network systems and customer services support opex that JEN had included in its distribution services proposal, to metering services, and
 - \$2.6m (\$2015) in metering capital expenditure (**capex**) that JEN had included in its distribution services proposal, to metering services.
- The preliminary decision stated one reason for proposing this cost reclassification change is that, in the current absence of a Distribution Ring-Fencing Guidelines, the AER should rely on the classification of costs underpinning the AMI Order in Council. JEN disagrees with this, as it believes that the AER has erred in its interpretation of the National Electricity Rules (**NER**). The preliminary decision fails to consider the core issue – being which cost classification approach best meets the requirements of the NER and promotes the **Optimal NEO Position**.¹
- This submission maintains our position on some costs being reclassified to distribution services—however we refined our cost classification based on the preliminary decision comments. We now submit an amount of \$46.5m (\$2015) for opex. For capex, we revisited the classification drivers and now submit that the \$2.6m (\$2015) relates to the provision of metering services rather than distribution services.
- We disagree with other areas within the preliminary decision, these include:
 - the allowed rate of return required to operate and maintain the metering assets
 - meter hardware capex costs
 - meter installation capex costs
 - the treatment of the accounting one-off adjustment or as the AER has termed it, JEN's step change, and
 - the way opex base year is trended to derive the preliminary decision alternative opex forecasts.
- For exit fees, the preliminary decision proposed some minor adjustments to JEN's proposed exit fees, which JEN largely accepts. However, JEN believes the preliminary decision has erred in removing the tax allowance component.

1. The April 2015 proposal (together with any supporting material contained or referred to in the April 2015 proposal) is incorporated into, and forms part of this submission.

¹ The position which contributes to the achievement of the National Electricity Objective (**NEO**) to the greatest degree and best promotes the long term interests of consumers of electricity.

2. Table OV–1 provides a snapshot of JEN’s response to the preliminary decision on Annual Revenue Requirement (**ARR**), Maximum Allowed Revenue (**MAR**), X-factors, form of price control and exit fees for **metering services**.

Table OV–1: Overview of JEN’s response to the preliminary decision for metering services

Key inputs and assumptions	Our response to the preliminary decision
ARR (‘unsmoothed’ building block costs)	
MAR (‘smoothed’ revenue) and X-factors	
Regulatory Asset Base (RAB) roll-forward	
Tax Asset Base (TAB) roll-forward	
Depreciation	
Form of price control	
Exit fees	

3. Table OV–2 outlines our submission ARR, MAR and ‘X-factors’ for metering services, as compared to our April 2015 proposal, and the preliminary decision.

Table OV–2: Proposed ARR, MAR and X-factors for metering services (\$2015, \$millions)

	2016	2017	2018	2019	2020	Total
April 2015 proposal						
ARR (‘unsmoothed’ building block costs)	42.16	31.12	31.62	27.39	25.59	157.88
MAR (‘smoothed’ revenue)	31.17	31.55	31.94	32.33	32.73	159.71
X-factors (1)	58.82%	(1.22%)	(1.23%)	(1.23%)	(1.23%)	n/a
Preliminary decision						
ARR (‘unsmoothed’ building block costs)	44.85	43.37	38.26	39.59	38.91	204.97
MAR (‘smoothed’ revenue)	43.13	42.06	41.00	39.98	38.98	205.16
X-factors (1)	43.01%	2.50%	2.50%	2.50%	2.50%	n/a
This submission						
ARR (‘unsmoothed’ building block costs)	38.07	36.86	32.63	33.34	32.35	173.24
MAR (‘smoothed’ revenue) (2)	43.27	31.52	32.13	32.73	33.33	172.97
X-factors (1)	43.01%	27.14%	(1.91%)	(1.89%)	(1.81%)	n/a

(1) Positive X-factors imply real revenue decreases.

- (2) The MAR for 2016 of \$43.27m (\$2015) in this submission is different to the preliminary decision of \$43.13m (\$2015) because of different assumption in forecast inflation, even though the X-factor is consistent.
4. Our proposed MAR for metering services for the 2016 regulatory period differs to the MAR included in the preliminary decision. This is primarily attributable to JEN's adjustments (with the preliminary decision as starting point) regarding:
 - Upward adjustments for:
 - the update to the allowed rate of return required by investors to provide metering services
 - meter hardware and meter installation capex
 - the way the preliminary decision trended JEN's operating expenditure (**opex**) base year
 - the treatment of JEN's one-off base year adjustment (or as the preliminary decision termed it, JEN's step change).
 - Downward adjustment for:
 - the reclassification of some network systems and customer services support costs (as per a refined method taking into account feedback from the preliminary decision) to distribution services.
 5. Our proposed MAR for metering services for the 2016 regulatory period reflects the amount necessary to recover the prudent and efficient costs of providing metering services to customers consuming <160MWh per annum.
 6. For the 2016 year our submission aligns the MAR—adjusting for forecast inflation—to the preliminary decision, and proposes that the effects of adjustments be made over the 2017 to 2020 period with the majority of price reductions handed back in 2017.
 7. MAR is expected to significantly reduce in 2016 to recognise the lower costs associated with the rollout of advanced metering infrastructure (**AMI**) meters (completed in 2014) to JEN's customers. A further downward reduction in MAR is submitted for 2017, followed by modest increases over the 2018 to 2020 period.
 8. Table OV-3 outlines metering exit fees in our April 2015 proposal, the preliminary decision and our January 2016 submission.

Table OV-3: Proposed exit fees for metering services (\$2015, \$dollars)

	2016	2017	2018	2019	2020
April 2015 proposal					
Single Phase	610.65	646.12	598.08	562.74	530.21
Single Phase, Two Element	612.11	645.24	593.67	556.70	527.60
Three Phase Direct Connect	631.74	676.68	630.86	597.84	567.96
Three Phase Current Transformer	634.71	677.66	628.29	590.27	561.28
Preliminary decision					
Single Phase	596.77	543.64	503.22	472.03	445.98
Single Phase, Two Element	598.12	543.03	500.16	467.89	444.20
Three Phase Direct Connect	616.14	565.15	526.00	496.09	471.52

	2016	2017	2018	2019	2020
Three Phase Current Transformer	618.90	565.87	524.24	490.93	466.99
This submission					
Single Phase	609.30	563.77	601.66	568.05	539.77
Single Phase, Two Element	610.14	561.95	599.14	568.02	542.30
Three Phase Direct Connect	629.87	587.70	634.15	600.30	571.84
Three Phase Current Transformer	636.10	591.03	636.59	602.16	573.00

9. JEN largely agrees with the approach the AER adopted in the preliminary decision to calculate metering exit fees over the 2016 regulatory period, however, disagrees with the non-recovery of a tax allowance component.

1. INTRODUCTION

10. The structure of this attachment is as follows:

- Chapter 1 explains our approach to determining the ‘X-factors’, introduces the relevant cost categories, describes a recent study that demonstrates our efficiency in providing metering services, and explains how recent rule changes will affect our costs in the 2016 regulatory period.
- Chapter 2 sets out our ARR for each year of the 2016 regulatory period using a building block approach, outlining the difference between our submission, the preliminary decision and our April 2015 proposal.
- Chapter 3 describes our proposed:
 - MAR for each year of the 2016 regulatory period (so that the ARR and MAR for the total period are equal in net present value terms),
 - X-factors for each year of the 2016 regulatory period to recover the ARR, and
 - outlines the differences between our submission forecasts, the preliminary decision and our April 2015 proposal.
- Chapter 4 sets out our proposed metering exit fees for each year of the 2016 regulatory period, which largely reflects the approach adopted in the preliminary decision.
- Chapter 5 describes proposed changes to preliminary decision in relation to cost classification between distribution and metering services for metering capex and opex by activity.
- Appendix A provides supporting detail regarding our submission on metering and distribution services costs classification.

1.1 APPROACH TO DETERMINE X-FACTORS

11. Consistent with the AER’s Framework and Approach paper (**F&A**),² we propose the ‘X-factors’ that determine the average change in our network revenue (in real terms, i.e. on top of changes in forecast inflation) for metering services in each year of the 2016 regulatory period.
12. We believe our submitted MAR is necessary for us to invest in, operate and maintain our network efficiently, and earn a reasonable return on our investment in metering services over the 2016 regulatory period.
13. Using this approach we determined the X-factors by:
- Calculating the ARR or ‘unsmoothed cost of service’ for each year of the 2016 regulatory period using a ‘building block’ approach, including:
 - return on and of capital (considering opening **metering RAB** or our sunk investment, forecast capex or investment in our metering services assets, allowed rate of return and regulatory depreciation),
 - opex costs to operate and maintain our metering services, and
 - tax costs (if applicable) to compensate us for any tax liability payable to the Australian Tax Office.

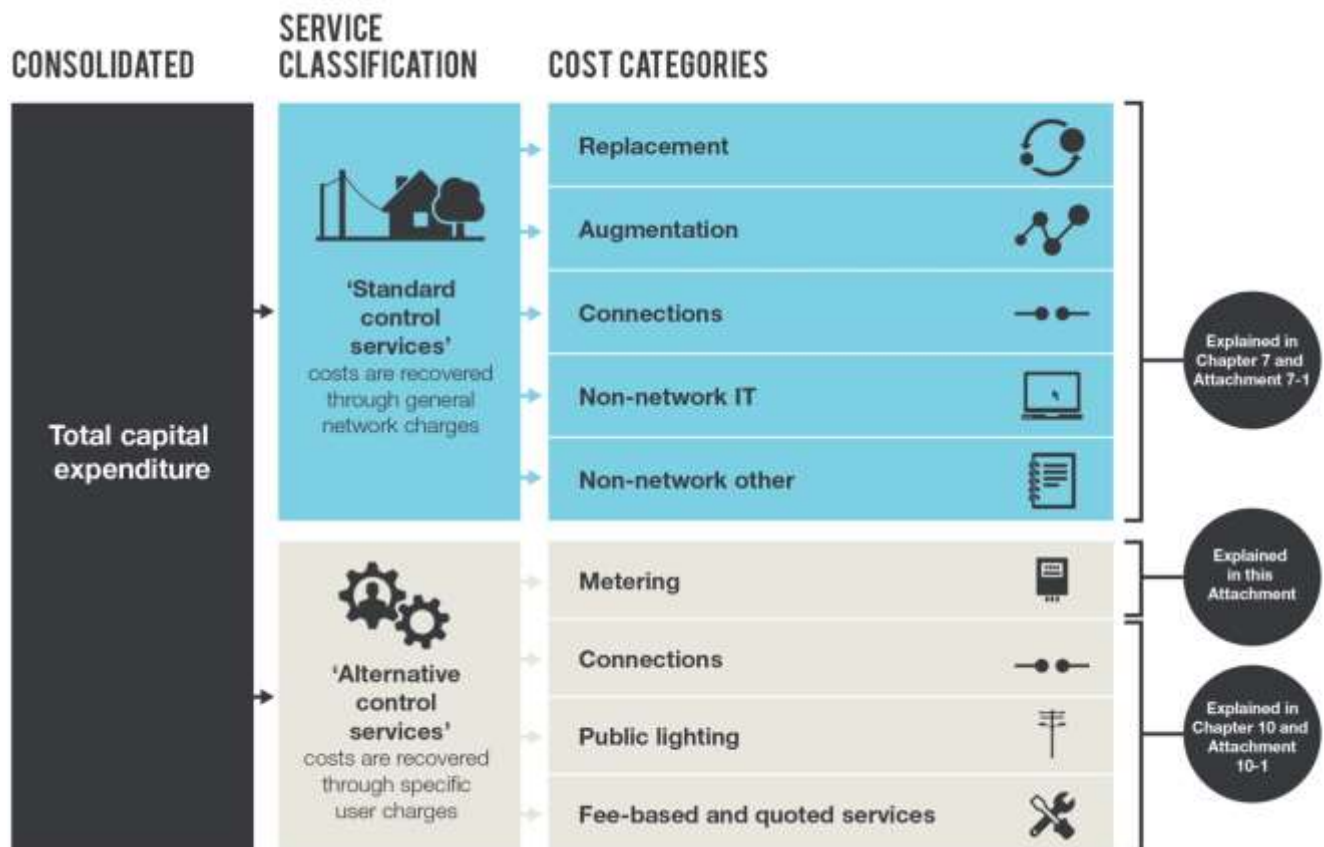
² AER, *Final Framework and Approach for the Victorian Electricity Distributors, Regulatory control period commencing 1 January 2016*, 24 October 2014.

- Calculating our MAR or ‘smoothed revenues’ for each year of the 2016 regulatory period so that the ARR and MAR for the total period are equal in net present value terms
 - Calculating the X-factors for each year of the 2016 regulatory period to recover the ARR, via the MAR.
14. To develop our proposed X-factors we used the Post Tax Revenue Model (**PTRM**)³ (see Attachment 9-2 of this submission).

1.2 JEN’S METERING CATEGORIES

15. Our metering services include the cost of operating and maintaining our metering system and providing metering data to the market for billing and settlement purposes (see categories outlined in Figure 1–1).

Figure 1–1: JEN’s capital expenditure classification categories



1.3 JEN IS AN EFFICIENT PROVIDER OF METERING SERVICES

During the 2011 regulatory period JEN has managed and operated its metering obligations to deploy meters to the mass market⁴ prudently and efficiently. During this period the AER classified mass market metering as an

³ NER cl 6.3.1(c) requires the building block proposal to be prepared in accordance with the AER’s PTRM, and to comply with the requirements of any relevant regulatory information instrument.

unclassified service⁵ recognising the regulation of these falls within the jurisdiction of the Advanced Metering Infrastructure Order in Council (**AMI Order in Council**).⁶

16. Under the AMI Order in Council, JEN's expenditure is subject to an ex-post review, creating a discipline on JEN to provide metering services prudently and efficiently.
17. Recent amendments to the AMI Order in Council⁷ changed the way ex-post reviews are conducted, with the explicit use of benchmarking over the life of the mass rollout program (**MRO**), where previously ex-post efficiency was restricted to 'within year' analysis.
18. To assess JEN's efficiency, we engaged Hugin to undertake a benchmarking efficiency assessment across the Victorian market in accordance with the AMI Order in Council assessment criteria⁸ and to assess JEN's efficiency more broadly. This report demonstrates that on a benchmark efficiency basis—using the AER's preferred benchmarking techniques—JEN ranks on the efficient frontier amongst its Victorian peers. This is demonstrated in Figure 1–2 where those businesses on the frontier are ranked with the highest score or close to the highest score.

⁴ The mass market generally refers to the class of customers consuming less than 160MWh per annum and comprises residential and small to medium size businesses.

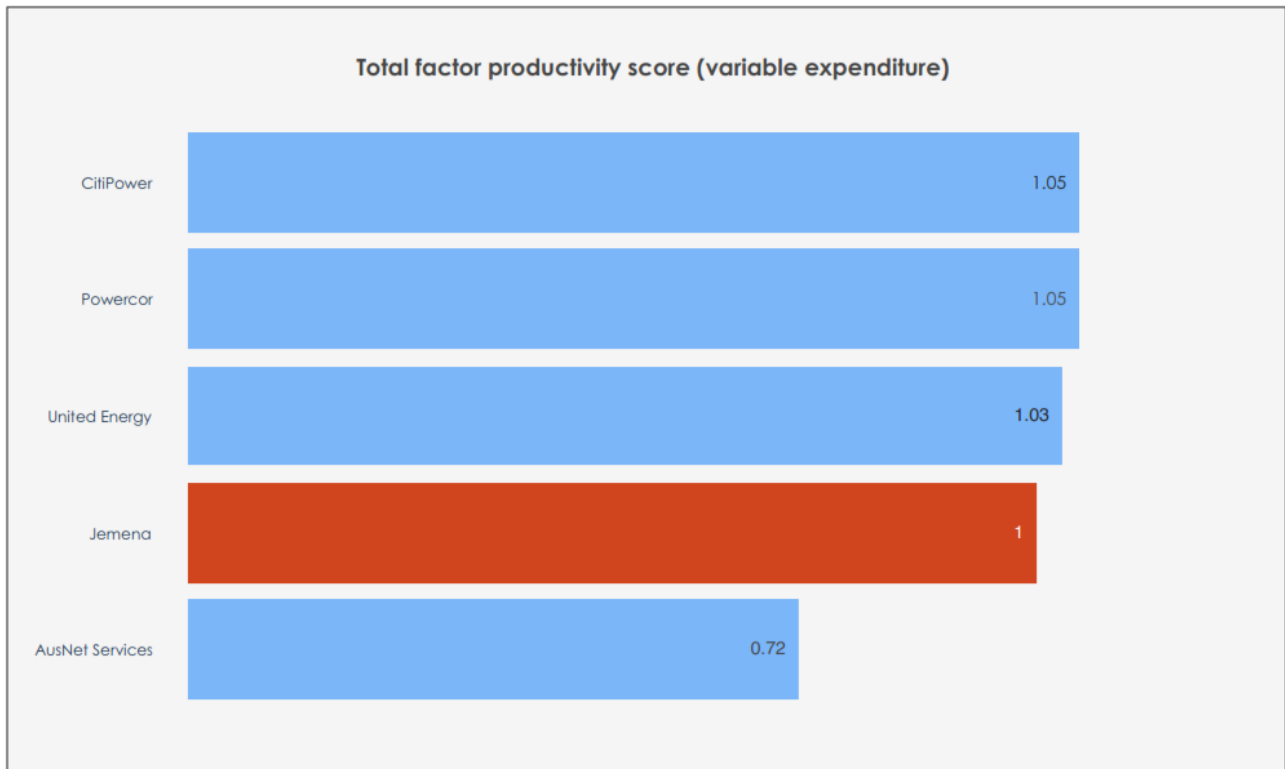
⁵ AER, *Preliminary Decision, Jemena distribution determination 2016 to 2020, Attachment 13 – Classification of services*, October 2015, p 13-24.

⁶ Advanced Metering Infrastructure Order in Council made by the Governor of Victoria under section 15A and section 46D of the Electricity Industry Act 2000 (Vic) and published in the Victoria Government Gazette on 28 August 2007, including amendments up to 30 July 2015.

⁷ Victoria Government Gazette, No. S 263

⁸ Hugin, *Advanced Metering Infrastructure Expenditure, Benchmarking Victorian metering expenditure from 2009 to 2014, Version 1.1*, 9 September 2015 [See Attachment 9-7 of this submission]

Figure 1–2: Total factor productivity scores for variable expenditure (Victorian electricity distribution businesses)

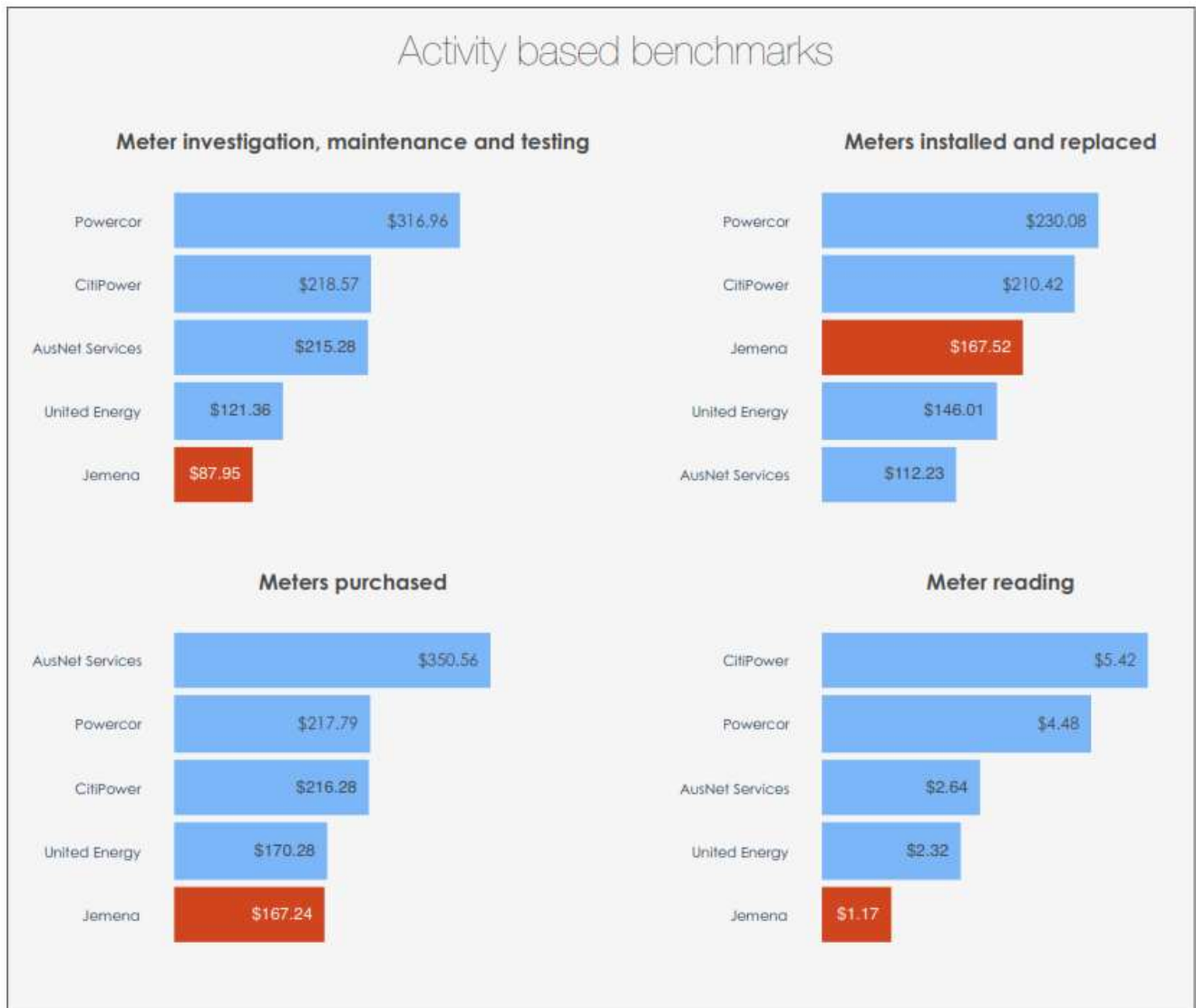


Source: Figure 7 - TFP Scores - Variable Expenditure, Heugin 2015⁹

19. Heugin also measured JEN's performance on (i) aggregate category analysis (through the total factor productivity (**TFP**) score, measuring relative performance in terms of output to input ratio) and (ii) activity-based category analysis (measuring activity cost per meter).
20. For category analysis JEN ranks first amongst its peers on having lowest cost on three of four key categories, this is outlined in Figure 1–3.

⁹ Heugin, *Advanced Metering Infrastructure Expenditure, Benchmarking Victorian metering expenditure from 2009 to 2014, Version 1.1*, 9 September 2015, p 17.

Figure 1–3: Category analysis (Victorian electricity distribution businesses)



Source: Figure 5 - Activity Based Benchmarks, Heugin 2015¹⁰

21. For aggregate category analysis JEN's performance is at the efficient frontier when taking the scale of the electricity distribution businesses into account and assessing fixed and variable expenditure.
22. Along with Huegin's assessment of efficiency we note that the AER's own assessments in its preliminary decision also conclude that "the Victorian distribution businesses are generally efficient".¹¹
23. With the independent benchmarking analysis and AER's own assessment we believe there is sufficient evidence that JEN is an efficient provider of metering services to the mass market.

¹⁰ Ibid, p 15.

¹¹ AER, *Preliminary Decision, Jemena distribution determination 2016 to 2020, Attachment 16 – Alternative control services*, October 2015, p 16-43.

1.4 RULE CHANGES FOR CONTESTABLE METERING SERVICES

24. On 26 November 2015 the Australian Energy Market Commission (**AEMC**) released a rule change introducing competition in metering services (**rule change**)¹² that will see the development of a new market commencing on 1 December 2017. Whilst competition already exists in the provision of metering services to large customers, this change now introduces metering competition to the mass market (the residential and small business customers). This change will have a number of implications for JEN in this submission, relative to our April 2015 proposal.

1.4.1 UPGRADE SYSTEMS TO OPERATE IN THE CONTESTABLE METERING ENVIRONMENT

25. JEN must modify its systems and processes to operate in an environment where it no longer has exclusive obligations to provide metering services. As a result JEN proposes a step up in its IT capital program for distribution services and a once-off opex step change for type 4 metering accreditation (see section 3.4.1 in Power of Choice program establishment business case in Attachment 7-17 of this submission) for metering services.

1.4.2 TRANSITIONAL RULE REQUIREMENTS

26. Transitional provisions in the new rules—particularly relevant in Victoria—are:
- NER Cl. 9.9C.4 Classification of relevant metering installations – This rule requires that only those meters which are not capable of remote acquisition remain as type 5 and type 6 meters. As JEN's fleet of AMI meters are capable of remote acquisition then they must be converted to type 4. Details of the implications of this change are outlined in 1.4.2.1.
 - NER Cl. 9.9C.2 Expiry Date – This rule change extends the metering derogation until 1 December 2017, which means JEN will remain the exclusive provider of metering services for an additional period of 11 months beyond the previous date. The associated implications for this submission are outlined in section 1.4.2.2.
27. We anticipate the following key impacts due to the transition to a competitive metering environment:

1.4.2.1 Type 4 meter accreditation

28. In Victoria special provisions created a 'type 5 RWD' meter type as a part of the MRO. Under the rule change, these meters will now become type 4 and consequently JEN must upgrade its accreditation, as recognised by the AEMC in its final determination.¹³ Further, early discussions with AEMO on developing the accreditation framework suggests:
- Conversion costs – JEN has determined that it will require \$20.2m (\$2015) of capex to convert its systems and processes for the network to accommodate metering competition including the data conversion of all existing type 5 RWD metering fleet to type 4 and \$0.7m (\$2015) of opex to operate and maintain these new systems.
 - Once off type 4 metering accreditation costs - JEN has determined that it will incur \$0.35m (\$2015) of costs to obtain accreditation to operate as a type 4 metering provider.

¹² AEMC, *Rule determination, National Electricity Amendment (Expanding competition in metering and related services) Rule 2015 & National Energy Retail Amendment (Expanding competition in metering and related services) Rule 2015*, 26 November 2015 (**Final determination**).

¹³ AEMC, *Rule determination, National Electricity Amendment (Expanding competition in metering and related services) Rule 2015 & National Energy Retail Amendment (Expanding competition in metering and related services) Rule 2015*, 26 November 2015 (**Final determination**), p 528.

29. Further details on these costs can be found in sections 6.2 and 7.2 of Attachment 7-17 of this submission and Appendix A of this Attachment.

1.4.2.2 Meter deployment profile

30. The meter deployment profile for our April 2015 proposal assumed deployment in each year of the 2016 regulatory period. In light of the rule change, this submission has reduced meter deployment in the years following the metering competition (that is 2018 to 2020) to zero.
31. Additionally, JEN has determined that it is more efficient to accelerate its deployment of AMI meters under its obligation in the AMI Order in Council.¹⁴ JEN has an obligation to read electricity meters of mass market customers—including those that we have not been able to convert to AMI meters. Once contestable metering comes into effect, JEN can no longer deploy AMI meters, but is obliged to manually read those non-AMI meters. To minimise these costs—in the long term—JEN will accelerate the deployment of AMI meters whilst the derogation remains in Victoria.¹⁵

¹⁴ AMI Order in Council, Cl. 14AA.

¹⁵ The AEMC notes in its final determination on metering competition “The NER final rule extends the expiry of the current Victorian derogation until 1 December 2017 so that it coincides with the commencement of the new framework”, AEMC, *Rule determination, National Electricity Amendment (Expanding competition in metering and related services) Rule 2015, National Energy Retail Amendment (Expanding competition in metering and related services) Rule 2015*, 26 November 2015, p 28.

2. PROPOSED ANNUAL REVENUE REQUIREMENT

32. The ARR represents the amount of revenue we need to generate over the 2016 regulatory period to allow us to invest in, operate and maintain our metering assets efficiently and earn a reasonable return on our investment in providing the metering services that our customers value.
33. To calculate our proposed ARR, we used a building block approach. This involved calculating and summing the following building block costs: return on capital (or funding costs); return of capital (depreciation); forecast opex; and forecast tax costs.
34. Table 2–1 sets out our submission ARR and building block costs for metering services over the 2016 regulatory period.

Table 2–1: Submission ARR for metering services (\$2015, \$millions)

	2016	2017	2018	2019	2020	Total
Return on capital (funding costs)	10.15	8.77	7.40	6.23	5.13	37.67
Return of capital (depreciation)	16.08	15.60	10.68	11.06	10.97	64.39
Forecast opex	11.84	12.49	12.49	12.88	13.25	62.95
Tax costs	-	-	2.06	3.17	3.00	8.23
Total annual revenue requirement	38.07	36.86	32.63	33.34	32.35	173.24

35. The following sections outline each of our proposed building block costs in more detail, including the approaches we used to calculate them, and explain the reasons for areas which differ from positions in the preliminary decision.

2.1 RETURN ON CAPITAL

36. Our proposed return on capital allowance representing around 22% of our total metering services building block costs. We calculated this allowance using three key inputs: our proposed opening value of the asset base; forecast capex; and proposed rate of return.

2.1.1 JEN'S APRIL 2015 PROPOSAL

37. In our April 2015 proposal, we included \$31.15m (\$2015) of return on capital allowance, which was based on our proposed opening value of the metering RAB, forecast capex and proposed rate of return.

2.1.2 PRELIMINARY DECISION

38. The preliminary decision allowed \$26.89m (\$2015) of return on capital allowance, by making adjustments to all three key inputs namely:
- Reduced forecast capex by allowing lower meter purchase and installation costs
 - Provided for a lower allowed rate of return

- Calculated a slightly higher opening metering RAB by using forecast data for 2014 and 2015 (consistent with the most recent AER approved annual AMI charges application model¹⁶ for JEN, rather than updating 2014 data for actual information) – see section 2.1.4.

2.1.3 JEN'S RESPONSE AND THIS SUBMISSION

39. JEN agrees with the AER's approach for setting the opening metering RAB (i.e. by using the most recent AER approved AMI annual charges application model), which contained forecast information for 2014 and 2015, but will be subject to a revenue true up in 2017 and aligned this opening metering RAB in this submission.
40. However, JEN disagrees with the two other areas of forecast capex (see section 2.2) and allowed rate of return (see section 2.3), and updated its proposed return of capital allowances to \$37.67m (\$2015) over the 2016 regulatory period.
41. Table 2–2 sets out our January 2016 submission return on capital allowances, compared with our April 2015 proposal and the preliminary decision. Attachment 6-1 details our submission on the allowed rate of return.

Table 2–2: Submission return on capital allowance for metering services (\$2015, \$millions)

	2016	2017	2018	2019	2020	Total
April 2015 proposal	8.39	6.84	6.00	5.22	4.71	31.15
Preliminary decision	7.06	6.09	5.17	4.58	3.99	26.89
This submission	10.15	8.77	7.40	6.23	5.13	37.67

2.1.4 PROPOSED OPENING VALUE OF THE METERING ASSET BASE

42. The value of the assets we use in providing metering services is known as the metering RAB. This value represents the (as yet) unrecovered past capital investments we have made to provide services to our customers. The value of the metering RAB changes over time. As we invest in new assets, this expenditure is added to the metering RAB. As our assets depreciate, this value is subtracted from the metering RAB. And as customers make capital contributions or we dispose of assets, these proceeds are subtracted from the metering RAB.
43. Table 2–3 sets out our January 2016 submission opening value of the metering RAB, compared with our April 2015 proposal and the preliminary decision.

Table 2–3: Proposed opening value of RAB for metering services (\$2015, \$millions)

Opening value of RAB for metering services	As at 1 Jan 2016
April 2015 proposal	119.75
Preliminary decision	120.35
This submission	120.35

44. To calculate the opening value of the metering RAB for the 2016 regulatory period, we used the used the RAB value from the most recent approved charges model¹⁷ consistent with the approach adopted by the AER in its

¹⁶ AER, *Jemena - AMI Charges Model (2015 Charges Application) FD.xlsx*, October 2014

¹⁷ AER, *Jemena - AMI Charges Model (2015 Charges Application) FD.xlsx*, October 2014

preliminary decision, with the difference attributable to the 2014 data where the model uses forecast information rather than actual.

2.2 FORECAST CAPEX

2.2.1 JEN'S APRIL 2015 PROPOSAL

45. In our April 2015 proposal we forecast capex of \$16.61m (\$2015) by developing a 'bottom-up' estimate of costs using expected volumes and unit rates obtained from contractors. We sought costs for:
- Meter purchases (see section 5.2.1)
 - Meter installations (see section 5.3.1).
46. In addition, we also proposed to reclassify some capex from metering services to distributions services (see section 5.1.1).

2.2.2 PRELIMINARY DECISION

47. The preliminary decision accepted our bottom up approach to forecasting, however disallowed the:
- Reclassification of some capex costs from metering services to distribution services (see section 5.1.2)
 - Purchase price of the meters acquired (see section 5.2.2)
 - Unit rates proposed to install the meters (see section 5.3.2).
48. The adjustments result in an alternative capex forecast of \$15.70m (\$2015).

2.2.3 JEN'S RESPONSE AND THIS SUBMISSION

49. JEN disagrees with the AER's adjustments to forecast capex and maintains its position from its April 2015 proposal, but refines some key assumptions such as unit rates and meter deployment profile. Section 5 provides more detail on JEN's changes to forecast capex.
50. Our forecast capex for metering services over the 2016 regulatory period is \$12.66m (\$2015).
51. Table 2–4 sets out our January 2016 submission forecast capex, compared with our April 2015 proposal and the preliminary decision.

Table 2–4: Proposed capex for metering services (\$2015, \$millions)

Gross capex	2016	2017	2018	2019	2020	Total
April 2015 proposal	2.47	2.67	3.02	3.25	5.21	16.61
Preliminary decision	2.02	2.30	2.49	2.81	6.08	15.70
This submission	3.29	2.90	0.92	1.08	4.45	12.66

2.3 PROPOSED RATE OF RETURN

52. Our submission rate of return for the 2016 regulatory period is set out in Table 2–5, which compares it to the April 2015 proposal and the preliminary decision. We calculate this rate using an approach consistent with the approach adopted for distribution services. See Chapter 6 of our submission and Attachment 6-1.¹⁸

Table 2–5: Submission rate of return ('nominal vanilla WACC') (%)

Parameters	JEN proposal
April 2015 proposal	7.18
Preliminary decision	6.02
This submission	8.62

53. Our submission approach to determining the rate of return is different to the method employed by the AER in its preliminary decision.¹⁹

2.4 RETURN OF CAPITAL (DEPRECIATION)

54. The return of capital allowance reflects the regulatory depreciation of our assets (both existing over the 2016 regulatory period)—that is, the decrease in their value due to usage and ageing.
55. Our proposed return of capital allowance for metering services represents around 37.2% of our total metering services building block costs.

2.4.1 JEN'S APRIL 2015 PROPOSAL

56. In its April 2015 proposal, JEN proposed that:
- For existing assets, regulatory depreciation to be calculated as the opening metering RAB value divided by the weighted average remaining lives (subject to a constraint where the latter is less than five years)
 - For new assets, regulatory depreciation is calculated using a real straight-line depreciation method based on forecast net capex and standard asset lives assumptions.
57. We calculated this allowance using an approach consistent with the NER²⁰ and the AER's PTRM.

2.4.2 PRELIMINARY DECISION

58. The preliminary decision accepted JEN's proposed approach to depreciation. In addition, the preliminary decision specified a standard asset life of:
- 15 years for remotely read intervals meters and transformers

¹⁸ JEN, *Electricity Distribution Price Review 2016-20 Regulatory Proposal, Revocation and substitution submission, 1 January 2016 - 31 December 2020*, 6 January 2016

¹⁹ AER, *Preliminary decision, Jemena distribution determination 2016 to 2020, Attachment 16 – Alternative control services*, 29 October 2015, s.16.3.3.4,

²⁰ NER cl 6.5.5.

- 7 years for IT, communications and other metering related assets.
59. These standard lives reflect the likely technical life of the assets and is considered to result in an efficient outcome whereby the economic and technical lives of the assets are likely to coincide.

2.4.3 JEN'S RESPONSE AND THIS SUBMISSION

60. JEN accepts the preliminary decision outcome, and maintains its approach to depreciation.
61. Table 2–6 sets out our submission return of capital allowances for metering services over the 2016 regulatory period, compared to our April 2015 proposal and the preliminary decision.

Table 2–6: Submission return of capital allowance for metering services (\$2015, \$millions)

Building block cost	2016	2017	2018	2019	2020	Total
April 2015 proposal	21.70	12.19	11.85	8.45	6.94	61.13
Preliminary decision	15.72	15.23	10.33	10.79	10.80	62.87
This submission	16.08	15.60	10.68	11.06	10.97	64.39

2.5 FORECAST OPEX

62. Our opex includes the costs of operating and maintaining our meters and metering system, as well as performing related functions like collecting meter information and providing billing information to retailers, and represents approximately 36% of the total ARR.

2.5.1 JEN'S APRIL 2015 PROPOSAL

63. In our April 2015 proposal we proposed the 'base, step and trend' method for forecasting opex. To forecast each of these components the following actions were taken:
- **Base** – we took the 2014 base year and adjusted for one off corrections (see section 5.4.1)
 - **Step** – we did not propose any step changes
 - **Trend** – we trended forward the operating cost to account for increased cost attributed to growth on the network (see section 5.5.1)
 - **Category specific forecasts** – we proposed a benchmark debt raising cost rate of 0.18 per cent
 - **Service reclassification** – we also proposed reclassifying some network systems and customer services support costs to distribution services (see section 5.1.1).

2.5.2 PRELIMINARY DECISION

64. The preliminary decision accepted JEN's proposed 'base, step and trend' approach to forecasting opex and allowed \$110.2m (\$2015) of opex allowances:
- **Base** – used the incorrect (or higher) amount for the 2014 base year (see section 5.4)
 - **Step** – treated JEN's proposed one-off accounting adjustment to the 2014 base year as a step change and disallowed it (see section 5.4.2)

- **Trend** – removed any scale escalation (trend) on the basis that the operating costs are mostly fixed and do not increase with volume (see section 5.5.2)
- **Category specific forecasts** – substituted the benchmark debt raising cost rate to 0.09 per cent
- **Service reclassification** – rejected JEN’s proposal to reclassify of opex from metering services to distribution services (see section 5.1.2).

2.5.3 JEN’S RESPONSE AND THIS SUBMISSION

65. We do not agree with any of the preliminary decision adjustments. In summary:
- **Base** – we maintain the correct amount for the 2014 base year (as a starting point before any one-off adjustment) and revisited the one-off accounting adjustment amount (following external advice from JEN’s external auditors)
 - **Step** – we maintain our position from our April 2015 proposal to propose no additional step changes
 - **Trend** – we revised our assumptions within the opex rate of change—used to trend the efficient base year forward
 - **Category specific forecasts** – we agree with the preliminary decision and align the benchmark debt raising cost rate (see Attachment 6-1 for more detail)
 - **Service reclassification** – we maintain that some network systems and customer services support costs are associated to distribution services, but reclassified a lower amount than the April 2015 proposal (following feedback from the preliminary decision).
66. Table 2–7 sets out our submission forecast opex for metering services over the 2016 regulatory period, compared to our April 2015 proposal and the preliminary decision.

Table 2–7: Submission forecast opex for metering services (\$2015, \$millions)

	2016	2017	2018	2019	2020	Total
April 2015 proposal	10.68	10.97	11.31	11.70	12.07	56.73
Preliminary decision	22.06	22.05	22.05	22.04	22.04	110.24
This submission	11.84	12.49	12.49	12.88	13.22	62.95

(1) Forecast opex includes debt raising costs.

2.6 TAX COSTS

67. Like other businesses, we must pay income tax to the Australian Taxation Office. The allowance for tax costs—representing approximately 5% of the total ARR—reflects our expected tax liabilities over the regulatory period. Key inputs for this approach include the corporate tax rate and the value of imputation credits to reflect the value of ‘franking credits’ to investors.²¹

²¹ Australia has had an imputation tax system since 1 July 1987. It exists to avoid investors’ corporate profits being taxed twice. These franking credits—or imputation credits—are provided to investors for tax paid at the corporate level to off-set against an investor’s personal income tax.

2.6.1 JEN'S APRIL 2015 PROPOSAL

68. Our April 2015 proposal used the AER's 'established' tax calculations within the PTRM and required two key inputs namely the corporate tax rate (we propose 30 per cent) and the value of imputation credits (we proposed 25 per cent). This resulted in a total tax cost allowance of \$7.47m (\$nominal) over the 2016 regulatory period.

2.6.2 PRELIMINARY DECISION

69. The preliminary decision accepted our approach to calculating tax costs, but rejected some inputs to it, where the preliminary decision substituted the assumed for value of imputation credits from 25 per cent to 40 per cent.

70. This resulted in a tax cost allowance of \$4.97m (\$2015) over the 2016 regulatory period.

2.6.3 JEN'S RESPONSE AND THIS SUBMISSION

71. We do not agree with the preliminary decision and maintain our key assumptions from our April 2015 proposal:

- Corporate tax rate of 30%
- Value of imputation credits of 25%.

72. This submission includes a forecast tax cost allowance of \$8.23m (\$2015) over the 2016 regulatory period.

73. Table 2–8 sets out our submission forecast tax cost allowances for metering services over the 2016 regulatory period, compared to our April 2015 proposal and the preliminary decision. Attachment 6-1 includes our submission on the value of imputation credits.

Table 2–8: Submission tax cost allowance for metering services (\$2015, \$millions)

	2016	2017	2018	2019	2020	Total
April 2015 proposal	-	1.12	2.46	2.03	1.86	7.47
Preliminary decision	-	-	0.71	2.18	2.09	4.97
This submission	-	-	2.06	3.17	3.00	8.23

3. MAXIMUM ALLOWED REVENUES AND X-FACTORS

74. Once we have determined our efficient costs (or ARR) we then calculate our revenues necessary to cover these expenditures through a revenue allowance, referred to as MAR under a 'revenue cap' form of price control.

3.1 MAXIMUM ALLOWED REVENUES

3.1.1 JEN'S APRIL 2015 PROPOSAL

75. We 'smoothed' our proposed ARR of \$157.88m (\$2015) to derive MAR for each year of the 2016 regulatory period using an approach consistent with NER requirements and the AER's PTRM. We ensured the MAR is equal to the ARR in NPV terms, subject to minimising the variance between the expected revenue and the ARR in 2020.²²
76. This resulted in a total MAR of \$159.71m (\$2015) for our metering services over the 2016 regulatory period, or \$139.89m (\$2015) in NPV terms. Our proposed MAR reflected:
- Our intention to pass on to customers the reductions in our costs following the completion of the roll-out of AMI meters as soon as possible (i.e. in 2016), followed by
 - Modest real increases over 2017 to 2020.

3.1.2 PRELIMINARY DECISION

77. The preliminary decision allowed JEN to recover \$204.97m (\$2015) of ARR and \$205.16m (\$2015) of MAR over the 2016 regulatory period, or \$185.94m (\$2015) in NPV terms.
78. A key driver of the higher amount is because the AER rejected JEN's proposal to reclassify some network systems and customer services support costs to distribution services.
79. The preliminary decision largely accepted JEN's proposed MAR profile (i.e. a front loaded one), followed by equal 2.50% real reduction in MAR over 2017 to 2020, to align with 'stable' state of providing metering services and opportunity for JEN to deliver cost efficiencies over the 2016 regulatory period.

3.1.3 JEN'S RESPONSE AND THIS SUBMISSION

80. We aligned the MAR for 2016 (adjusted for different forecast inflation assumption) to equal to the preliminary decision.
81. Based on the ARR for metering services in this submission, we are able to pass on further MAR reductions to our customers over the 2016 regulatory period. Recognising that the MAR for 2016 is fixed, we submit that the balance of revenue reductions be handed back to our customers—in majority—during the 2017 regulatory year. By stacking the MAR reductions in 2017 for metering services, we are able to mitigate against the MAR increase for distribution services also submitted for 2017.
82. This submission includes total ARR of \$174.32m (\$2015), total MAR of \$174.02m (\$2015), or \$146.42m (\$2015) in NPV terms over the 2016 regulatory period.

²² NER, cl 6.5.9.

83. Table 3–1 sets out our submission MAR for metering services over the 2016 regulatory period, compared to our April 2015 proposal and the preliminary decision.

Table 3–1: Submission MAR for metering services (\$2015, \$millions)

	2016	2017	2018	2019	2020	Total	NPV
April 2015 proposal							
ARR ('unsmoothed' building block costs)	42.16	31.12	31.62	27.39	25.59	157.88	139.89
MAR ('smoothed' revenue)	31.17	31.55	31.94	32.33	32.73	159.71	139.89
Preliminary decision							
ARR ('unsmoothed' building block costs)	44.85	43.37	38.26	39.59	38.91	204.97	185.94
MAR ('smoothed' revenue)	43.13	42.06	41.00	39.98	38.98	205.16	185.94
This submission							
ARR ('unsmoothed' building block costs)	38.07	36.86	32.63	33.34	32.35	173.24	146.21
MAR ('smoothed' revenue)	43.27	31.52	32.13	32.73	33.33	172.97	146.21

(1) The NPV is calculated by discounting the ARR and MAR cash flows, using the nominal vanilla WACC.

3.2 X-FACTORS

84. Our metering services will be regulated through a revenue cap form of regulation in the 2016 regulatory period, with the form of control being CPI-X. The X-factors for the 2016 regulatory period need to reflect the change in our revenue (on top of CPI) necessary to allow us to recover our AAR in each year of the period.

3.2.1 JEN'S APRIL 2015 PROPOSAL

85. Our April 2015 proposal's MAR profile over each year of the 2016 regulatory period equates to annual revenue changes (in real terms) of 58.82% in 2016, followed by modest increases of 1.22 to 1.23% over 2017 to 2020.
86. We note that the proposed X-factors do not necessarily determine the actual movements in our individual network tariffs or the actual customer bill outcomes. This is because:
- The X-factors are those under a revenue cap and therefore relate to the annual change in revenues. Prices necessary to recover the allowed revenues will depend on the volume forecast in each year
 - Under the form of control determined by the AER in its F&A paper, the X-factors will be updated annually to account for the annual movements in the return on debt and under and over recoveries from the prior year.²³

²³ The AER developed a rate of return guideline in 2013 (AER, *Better regulation, Rate of return guideline*, December 2013.). This guideline allows the return on capital component of the building blocks to be updated annually to account for annual movements in the cost of debt. This was developed following changes to the NER in 2012. As a result of these annual updates to the return on capital component of the building blocks, the X-factors will be updated annually. (AER, *Proposed amendments to the electricity transmission and distribution network service providers' post-tax revenue models—Explanatory statement*, October 2014, p14.)

3.2.2 PRELIMINARY DECISION

87. The preliminary decision largely accepted JEN’s proposed X-factor profile (i.e. majority of the real MAR reduction occurring in the first year of the 2016 regulatory period), followed by equal 2.50% real reduction in MAR over 2017 to 2020, to align with ‘stable’ state of providing metering services and provides JEN the opportunity to deliver cost efficiencies over the 2016 regulatory period.

3.2.3 JEN’S RESPONSE AND THIS SUBMISSION

88. We aligned the MAR for 2016 to equal to the preliminary decision, meaning a 43.01% decrease in MAR (in real terms), then:
- Included further MAR reduction of 27.14% in 2017, followed by
 - Modest real increases in MAR ranging between 1.81% to 1.91% over 2018 to 2020.
89. Table 3–2 sets out our submission X-factors for metering services over the 2016 regulatory period, compared to our April 2015 proposal and the preliminary decision.

Table 3–2: Submission X-factors for metering services (%)

	2016	2017	2018	2019	2020
April 2015 proposal	58.82%	(1.22%)	(1.23%)	(1.23%)	(1.23%)
Preliminary decision	43.01%	2.50%	2.50%	2.50%	2.50%
This submission	43.01%	27.14%	(1.91%)	(1.89%)	(1.81%)

(1) A positive X-factor represents a revenue decrease in real terms.

90. The price control mechanism for updating the X-factors is provided in Attachment 2-2 of this submission.

3.3 TRUE-UP FOR PRELIMINARY DECISION PRICES IN 2016

91. We expect the AER’s final decision by the end of April 2016. As this falls within the 2016 regulatory year, any change to allowances from those in the preliminary decision for that year will not be reflected in tariffs for that year; instead they need to be reflected in tariffs for 2017 to 2020.
92. To true-up for any change, we propose—consistent with clause 11.60.4(d)(2) of the NER:
- Having ARR for each year of the 2016 regulatory period updated to reflect the AER’s final decision
 - Setting MAR for 2016 equal to that in the preliminary decision
 - Determining the MAR over 2017 to 2020 so that the NPV of MAR and AAR over the 2016 regulatory period are equal.
93. We do not consider any other true-up is required.

4. PROPOSED EXIT FEES

94. The AMI Order in Council provides for the AER to determine an exit fee that would be paid by a retailer²⁴ to the distributor where that retailer becomes the responsible person in respect of a metering installation for a customer with annual electricity consumption of 160MWh or less which, immediately prior to that time, included:
- A revenue meter that is a remotely read interval meter which complies with the specifications and that has been previously installed by a distributor
 - The responsible person in respect of that metering installation immediately prior to that time was the distributor.
95. JEN considers that a number of features of this framework for deriving exit fees provide for outcomes that support Optimal NEO Position. In particular, the framework:
- Promotes regulatory certainty for an area of expenditure where distribution businesses have made significant sunk investments, which, in JEN’s opinion, is a pre-requisite for promoting the long-term interests of consumers
 - Leads to cost-reflective price signals being sent to parties who are seeking to churn existing meters once metering competition eventuate, thereby supporting allocative efficiency in the metering services market. Thus the exit fee derived using the AMI Order in Council method should contribute to the efficient churn of existing meters (i.e. where the benefits of churn exceed the costs).
96. Table 4–1 outlines our submission metering exit fees, as compared to our April 2015 Proposal, and the preliminary decision.

Table 4–1: Submission exit fees metering services (\$2015, \$ per service)

Exit Fee metering service	2016	2017	2018	2019	2020
April 2015 proposal					
Single Phase	610.65	646.12	598.08	562.74	530.21
Single Phase, Two Element	612.11	645.24	593.67	556.70	527.60
Three Phase Direct Connect	631.74	676.68	630.86	597.84	567.96
Three Phase Current Transformer	634.71	677.66	628.29	590.27	561.28
Preliminary decision					
Single Phase	596.77	543.64	503.22	472.03	445.98
Single Phase, Two Element	598.12	543.03	500.16	467.89	444.20
Three Phase Direct Connect	616.14	565.15	526.00	496.09	471.52
Three Phase Current Transformer	618.90	565.87	524.24	490.93	466.99
This submission					
Single Phase	609.30	563.77	601.66	568.05	539.77
Single Phase, Two Element	610.14	561.95	599.14	568.02	542.30

²⁴ AMI Order In Council, s. 7.1.

Exit Fee metering service	2016	2017	2018	2019	2020
Three Phase Direct Connect	629.87	587.70	634.15	600.30	571.84
Three Phase Current Transformer	636.10	591.03	636.59	602.16	573.00

4.1.1 JEN'S APRIL 2015 PROPOSAL

97. In our April 2015 proposal JEN sought to recover its efficient costs from retailers who sought metering services from an alternative service provider. The approach developed was consistent with the AMI Order in Council. Full details can be found in Attachment 11-6 of our April 2015 proposal.

4.1.2 THE PRELIMINARY DECISION

98. In deciding JEN's metering exit fees, the preliminary decision largely accepted the approach put forward by JEN and acknowledged the operation of the AMI Order in Council during the 2016 regulatory period. However, the preliminary decision made a number of adjustments to the approach JEN employed in its calculations, notably:²⁵
- **Opening RAB value** – the exit fee recovers JEN's historical, sunk capital costs. Therefore to determine these costs, it is necessary to determine a RAB value. The AER made a decision on the RAB²⁶ adopting the closing RAB from the AMI Order in Council charges approach used during the 2011 regulatory period.
 - **Dependence on the type 5, 6 and smart metering charges model** – in calculating the metering exit fee, it is necessary to determine the costs that are to be recovered. These costs are calculated in Attachment 9-6 of this submission.
 - **Tax allowance** – the preliminary decision has disallowed the tax allowance proposed by JEN from the exit fee model.

4.1.3 JEN'S RESPONSE AND THIS SUBMISSION

99. We note that our April 2015 proposal (and all supporting evidence and other material contained, or referred to, in it) is incorporated into, and forms part of, this submission.
100. In this submission JEN maintains its approach to calculating the metering exit fee and responds as follows:
- **Opening RAB value** – as noted in section 2.1.4, JEN has employed an approach of determining the open RAB value from the AMI Order in Council charges approach used during the 2011 regulatory period; this is consistent with the approach adopted by the AER in its preliminary decision.
 - **Dependence on the type 5 and 6 and smart metering charges model** – to the extent that changes are made to the AER's PTRM and those changes flow through to the exit fee calculation, JEN accepts the method employed by the AER.
 - **Tax allowance** – as noted in section (1) JEN is obligated to pay tax and therefore an allowance must be made to recover these legitimate costs. JEN includes a tax allowance component of the exit fee, where JEN is forecast to be in a tax loss position (calculated from the AER's PTRM). The reason why the AER has removed this component from the exit fee model is not evident from its preliminary decision (see section 16.3.4.3 of the preliminary decision).

²⁵ AER, *Preliminary decision, Jemena distribution determination 2016 to 2020, Attachment 16 – Alternative control services*, October 2015, Section 16.3.4.3.

²⁶ *Ibid*, Section 16.3.1.2.

101. JEN believes that the AER must reinstate this tax allowance in the exit fee allowance. This is necessary to allow JEN to recover its efficient costs and thereby supports the Optimal NEO Position.

4.1.4 TRUE-UP FOR PRELIMINARY DECISION PRICES IN 2016

102. The NER contemplates a true-up of revenues or prices for Alternative Control Service (**ACS**) services due to the re-opening of the preliminary decision,²⁷ This rule requirement therefore applies to instances where customers exit our AMI metering service, given the ACS service classification submitted by JEN.²⁸
103. However, given the metering derogation is in place for the whole of 2016²⁹—we currently foresee no customers exiting our AMI metering service in 2016 and therefore do not expect any exit fee revenue to be recovered—we submit that a true-up method to 2016 exit fees is unnecessary
104. If the AER chooses to implement a true-up mechanism for this service we submit that an approach consistent with our approach for price-capped ACS services (see Attachment 10-1, section 1.4.1) is adopted.

²⁷ NER cl. 11.60.4(d)(2).

²⁸ See Attachment 2-1 of this submission.

²⁹ NER cl. 9.9C.2.

5. PROPOSED CHANGES TO THE PRELIMINARY DECISION

5.1 COST CLASSIFICATION – CAPEX AND OPEX

5.1.1 JEN'S APRIL 2015 PROPOSAL

105. JEN's April 2015 proposal sought to recover some forecast network systems and customer services support opex and capex through distribution service charges, on the basis that distinguishable portions of JEN's customer and market service costs can be apportioned in accordance with the relevant activities. In adopting this approach, JEN correctly attributed service costs to distribution services charges, metering services and customer initiated metering service charges.

5.1.2 PRELIMINARY DECISION

106. In not accepting JEN's proposal to reclassify costs to distribution services, the preliminary decision considered that key framework issues for Victorian metering in the 2016 regulatory period were:³⁰
- Facilitating a smooth transition of governance under the AMI Order in Council to regulation under the modified NER, and
 - The possibility of Victoria adopting the competitive metering framework sometime in the future.
107. After considering these issues, the preliminary decision reclassified:
- \$60.9m (\$2015) in metering opex that JEN had included in its distribution services proposal, to metering services
 - \$2.6m (\$2015) in metering capex that JEN had included in its distribution services proposal, to metering services.
108. The AER also considered a consistent approach across Victorian service providers preferable to the classification of costs that previously were regulated under the AMI Order in Council.³¹

5.1.3 JEN'S RESPONSE AND THIS SUBMISSION

5.1.3.1 Cost classification

109. As a result of JEN refining cost classifications (see Table A1–5 in Appendix A), we submit \$46.5m (\$2015) of network systems and customer services opex should be moved from metering services to distribution services, as these costs relate to the provision of distribution services, and therefore should be recovered through distribution services charges. These are network costs that JEN will incur even if it did not provide metering services.
110. JEN has identified three deficiencies in this aspect of the preliminary decision:

³⁰ AER, *Preliminary decision, Jemena distribution determination 2016 to 2020, Attachment 16 – Alternative control services*, October 2015, p 16-39.

³¹ *Ibid*, p 16-39.

- The substituted reclassification in the preliminary decision does not promote the Optimal NEO Position, and is inconsistent with the requirements of the NER. It is not appropriate to rely on future regulation (in the form of future Distribution Ring-Fencing Guidelines) to resolve cost classification issues faced now. The decision should be made under the regulatory framework as in force at the time of the preliminary decision. Further, the preliminary decision fails to explain how the Distribution Ring-Fencing Guidelines will affect cost allocation for JEN's ongoing regulated metering services.
 - The AER fails to take account of the fact that the AMI Order in Council was a legislative instrument that temporarily distorted the classification of costs that would otherwise have been classified to distribution services if assessed under the NER.
 - The preliminary decision is internally *inconsistent*, in that it has provided for the recovery of some capex from distribution services, but not the opex that supports that capex.
111. The classification of costs in our submission will positively influence metering competition—which will take effect from 1 December 2017—and will in fact lead to more efficient outcomes by supporting allocative efficiency in the metering services by better ensuring cost reflective pricing of metering services.
112. The NEO³² states that:
- “the objective of this Law is to promote efficient investment in, and efficient operation and use of, electricity services for the long term interests of consumers of electricity with respect to—(a) price, quality, safety, reliability and security of supply of electricity; and (b) the reliability, safety and security of the national electricity system”.*
113. The NEO reflects the three components of economic efficiency:
- Productive Efficiency – ('promote efficient investment in') tariffs should, in totality, only recover the 'efficient costs' of investing in regulated services;
 - Allocative Efficiency – ('efficient...use of, electricity services') tariffs should be reflective of the forward looking costs of providing those services (cost reflective), so that consumption only occurs where the benefit to the consumer outweighs the cost to the society of providing those services; and
 - Dynamic Efficiency – ('for the long term interests of consumers of electricity with respect to...price') regulated businesses should be incentivised to seek make efficiency investments in the long-term, including seeking out efficiency gains over time and improving performance where the benefits exceed the costs, such that efficiency is promoted in the long-term.
114. The NEO will only be achieved if costs are allocated to the correct services (i.e., to the services that are in fact driving those costs to be incurred), so that prices for those services can reflect those costs. It is this feature that underpins the *“efficient...use of, electricity services for the long term interests of consumers”*.³³
115. The costs that the preliminary decision has reallocated relate to the provision of distribution services, and therefore are, distribution services. JEN will incur these costs irrespective of who provides the metering services. The services are for network purposes and therefore should be marginally allocated.
116. The preliminary decision does not explain or support how its proposed reclassification of costs back into metering services will lead to costs being allocated to the correct services, so that the prices for those services reflect the costs of providing those services. Rather, the AER states its preference for allocating all costs

³² NEL, s. 7.

³³ NEL, s. 7.

formerly regulated under the AMI Order in Council to alternative control services, maintaining the status quo until the Distribution Ring-Fencing Guidelines process is completed.

117. JEN firmly believes that the approach taken in the preliminary decision will lead to outcomes that are inconsistent with the NEO. Everything else being equal, the:

- Prices for distribution services will be too low, which, everything else being equal, will lead to inefficient (over-consumption) of distribution services³⁴
- Prices for metering alternative control services will be too high, which, everything else being equal, will lead to inefficient (under-consumption) of metering alternative control services³⁵ and/or inefficient churn of meters under metering competition.

118. Also, how metering charges are set during this process will affect how metering competition unfolds in the future, and in particular, whether competition will lead to the efficient classification of resources (allocative efficiency). The risk is acknowledged by the AER when its states that³⁶:

The cost allocation approaches by incumbent providers have the potential to affect competition from new entrants and competition between existing providers in Victoria

119. In particular, the preliminary decision increases the prices JEN will charge for metering alternative control services. This outcome increases the financial benefits that would accrue to customers who switch metering providers under the proposed competitive arrangements. Though not necessarily an adverse outcome of itself, with the preliminary decision proposed reclassification of costs, this outcome will be partly driven by the *misclassification* of costs to different services. There is a clear risk under the preliminary decision that a customer who changes metering providers once the competitive arrangements are introduced would:

- not pay a metering charge to JEN, and therefore, not contribute to the costs of undertaking the tasks that the AER has reallocated back to metering services, from distribution services, yet
- as one of JEN's distribution customers, continue receiving the benefits from JEN spending that money to undertake those tasks.

120. This leads to:

- Inequitable outcomes, as customers who do not switch metering providers once competition commences will effectively be cross-subsidising those customers who do switch metering providers, but who still receive distribution services from JEN
- Inefficient churn of JEN's existing metering asset base by customers, as a result of the incorrect metering price signal the preliminary decision reclassification creates, which is inconsistent with the NEO (given its focus on promoting efficient investment in and use of electricity services).

121. Finally, JEN considers that the preliminary decision reliance on the AMI Order in Council on this issue is problematic, and inconsistent with the broader regulatory framework. In particular, we are of the opinion that:

³⁴ This will occur if these costs are passed through in variable energy or demand charges, and demand for energy is not perfectly inelastic.

³⁵ This will occur if these costs are passed through in variable metering related chargers, and demand for metering services is not perfectly inelastic.

³⁶ AER, *Preliminary decision, Jemena distribution determination 2016 to 2020, Attachment 16 – Alternative control services*, October 2015, p 16-39.

- The AMI Order in Council was a legislative instrument that temporarily altered cost classifications for distribution services as assessed under the NER (for example, JEN had a specific allowance for distribution related systems³⁷)
 - Cost classification provisions under the AMI Order in Council do not provide a legal basis for this decision – even in the absence of the Distribution Ring-Fencing Guidelines. Rather, it is the NEL and the NER which apply, and these support JEN’s submission that these costs should be recovered from distribution services.
122. We also reviewed our position on the reclassification of some metering capex to distribution services (see Table A1–2 in Appendix A), in particular two capex activities namely:
- **AMI telecommunication assets** – these provide metrology and advanced network service functionality. In our April 2015 proposal, we classified 62.5% of the capex related to this activity to metering services, and the balance to distribution services. The key driver was based on a weighted on the communication bandwidth utilisation for metrology and network support functions.
 - **Network Management System (NMS)** – this is the head end system for the AMI communications network and provides a supervisory and batch processing function. The NMS provides metrology and network functions. In our April 2015 proposal, we classified 59% of the capex related to this activity to metering services, and the balance to distribution services. The key driver was based on the weighted usage of NMS across metrology and network support services.
123. Our April 2015 proposal position resulted in an amount of \$2.6m (\$2015) to be reclassified to distribution services. However, we now submit that the primary purpose of the assets servicing these two activities is related to metering services, and therefore we have classified 100% of these costs to metering services.
124. Details on opex and capex classifications are in Appendix A.

5.1.3.2 Consistency across Victorian distribution businesses

125. The preliminary decision considers a consistent approach across Victorian service providers is preferable to the classification of costs previously regulated under the AMI Order in Council. However, there are several reasons why consistency is not necessary:
- Alignment is not a rule requirement – The NER do not require distribution business to adopt the same methods for allocating costs between service types, each distribution business develops its own cost allocation methodology (**CAM**), rather than a common classification method.
 - Different systems and processes – Each distribution business uses systems to operate its business, and each has a different system. This is made evident in Schedule 2 of the AMI order in council where processes and systems are specifically classified as in scope (S2.1) and others are classified as out of scope (S2.2 and S2.3) and that these classifications vary by distribution business. This means that some distribution businesses treat the costs as AMI and other treat them as standard control services and therefore further normalisation across the Victorian distribution business will be required to attain consistency. For example, a DNSP that had to replace its billing systems to implement AMI will have the costs of these systems and their support in the metering cost base during the AMI OIC period even though these costs inherently relate to the billing and revenue functions of the SCS distribution service.
126. Given the practical differences between the businesses, and absent a regulatory obligation for conformity, there is no reason to compel alignment of all businesses’ costs and approach in determining the classification of cost allowances between distribution and metering services for JEN.

³⁷ AMI Order in Council, s. S2.4.2(e).

5.2 METERING CAPEX – HARDWARE COSTS

5.2.1 JEN'S APRIL 2015 PROPOSAL

127. JEN's April 2015 proposal sought to recover costs for meter hardware consistent with historical contract rates adjusted for movements in foreign exchange rates. In proposing these rates we considered the loss of volume due to the end of the mass roll out would be offset by the cost improvements in technology.

5.2.2 PRELIMINARY DECISION

128. The preliminary decision:

- Accepted JEN's proposed unit costs for single phase, single element and three phase meters – which, collectively cover the majority of meters JEN forecasts to install over the forthcoming regulatory period, but
- Rejected JEN's proposed unit costs for four other types of meters.

129. In making its preliminary decision, the AER selected the lowest unit cost (by meter type) that was forecast by a Victorian electricity distribution business.³⁸ The AER states that:³⁹

The fact that another Victorian business has been able to obtain lower unit costs for the same meter types indicates to us that our substitute unit costs are currently commercially available in Victoria and therefore are a reasonable benchmark.

130. It is not clear from the preliminary decision that the correct level of comparability or normalisation had taken place when determining unit costs. JEN has been unsuccessful in its efforts to obtain from the AER and test the data referred to in its preliminary decision.⁴⁰

5.2.3 JEN'S RESPONSE AND THIS SUBMISSION

131. The AER has not presented detailed information in its preliminary decision that would enable JEN to understand the basis for the preliminary decision. For example, the preliminary decision does not cite:

- Which business's unit rate was applied in lieu of JEN's proposed rate, or
- The assumptions used by that business to underpin the development of that benchmarked unit rate.

132. In this context, JEN's is concerned about five key issues, namely that the AER:

1. May not be comparing JEN's unit rate to a like-for-like meter, namely one that has all of the functionality that JEN would require for it to be installed in JEN's network
2. Has not considered the extent to which small differences in underlying assumptions underpinning the build-up of unit costs may affect the proposed unit rates

³⁸ AER, *Preliminary decision, Jemena distribution determination 2016 to 2020, Attachment 16 – Alternative control services*, October 2015, p 16-40.

³⁹ AER, *Preliminary decision, Jemena distribution determination 2016 to 2020, Attachment 16 – Alternative control services*, October 2015, p 16-40.

⁴⁰ JEN wrote to Chris Pattas of the AER on 13 November 15, and received an email reply on 3 December 2015 indicating the AER was "unable to provide that table because a majority of the proposed unit costs are subject to confidentiality claims". See email from Moston Neck, dated 3 December 2015 1:08pm.

3. Has not considered whether or not the benchmarked unit rate is based on procuring a certain volume of meters, which may not be able to be purchased by another, otherwise prudent and efficient, business
 4. Has not considered whether or a not a business, in purchasing the types of meters being benchmarked, would have to incur additional opex in order to support the use of those meters in the future
 5. Has adopted an approach to benchmarking that is inconsistent with its own expenditure assessment guidelines.
133. In relation to the first issue, JEN's understands that the preliminary decision benchmark unit rates as outlined in Table 5–1 are based on comparative businesses.

Table 5–1: Unit rate by meter type (\$2015)

Meter type	April 2015 proposal	Preliminary decision benchmark unit costs
AMI 1Ph 1e	174.03	166.62
AMI 1Ph 1e + contactor	228.34	198.41
AMI 1Ph 2e + contactor	278.33	217.73
AMI 3 Ph	303.63	288.34
AMI 3 Ph + contactor	376.46	296.44
AMI 3 Ph CT	415.21	379.11

Note: JEN unit costs are average AUD amounts adjusted for JEN AUD:USD exchange rate forecast.
Source: JEN, April 2015 proposal and preliminary decision.

134. At least one of these benchmarks reflects AusNet Services' proposed unit rates. Subsequent to the preliminary decision, JEN has discovered that AusNet Services did not include the costs of a network interface card (**NIC**) in its unit rates, which is required for a meter to be operable within JEN's network. Therefore, the rate:
- Is not comparable to the rate in JEN's April 2015 proposal
 - Is not fit-for purpose, in the context of its use as a benchmark rate
 - At approximately \$50USD per card, materially impacts upon the overall unit cost of the meter.
135. In relation to the second issue, JEN understands that all businesses procure meters in US dollars (**USD**), thus the unit prices presented by each business will have been converted to Australian dollars (**AUD**). The AER's benchmarking approach, as a bare minimum, must benchmark rates in USD terms, and then convert the lowest cost unit rate to AUD using an acceptable forecast of the exchange rate. Otherwise, the results of its benchmarking may simply reflect different exchange rate assumptions.
136. In relation to the third issue, different business will forecast different volumes of meters (for each meter type), depending on their scale, and the specific requirements of their customers.
137. Part of a meter provider's cost structure will be fixed. Therefore, the unit price it charges per meter will in part reflect the underlying volumes forecast to sell under that contract. Whilst all distribution businesses will be purchasing smaller meter volumes than they have historically – therefore one would expect unit prices to be higher than historic levels across the board – each business will be operating at a different scale over the forthcoming regulatory period. The preliminary decision approach does not take account of these scale differences. In particular, without making an allowance for volume differences, the AER's underlying assessment framework is just as likely to penalise (reward) low volume (high volume) businesses as it is

efficient (inefficient) businesses. Given JEN is the smallest stand-alone service provider; this issue is of particular importance when assessing its unit rates (see section 1.3 for further details on efficiency and scale).

138. In relation to fourth issue, the benchmarking results are unable to account for the additional costs that an otherwise prudent and efficient service provider may have to incur if it were to procure meters from the same service provider that provides meters to the best performing benchmarked business. In particular, there are costs associated with introducing additional metering vendors, including the additional:
- Administrative and implementation costs associated with managing multiple vendors (particularly across a small volume of meters)
 - System changes that may (or in JEN's case, would) be required to support multiple meter vendors.
139. In relation to the fifth issue, the AER's expenditure assessment guidelines and its benchmarking practice recognises that the costs of frontier firms may not be cheapest for all items. Thus, in the presence of evidence that JEN is materially efficient in the provision of metering services (see Attachment 9-7), there is no basis to substitute the lowest Victorian DNSP unit rates for JEN's proposed rates.
140. JEN has previously adopted a single vendor strategy to obtain greater scale efficiency. The achievement of these historical efficiencies, however, limits JEN's flexibility in going to market to procure meters from additional vendors.
141. For the above reasons, this submission retains the unit rates proposed in our April 2015 proposal.

5.3 METERING CAPEX – INSTALLATION COSTS

5.3.1 JEN'S APRIL 2015 PROPOSAL

142. In JEN's April 2015 proposal, we sought to recover the costs for installing interval meters, with the costs based on an estimate scaled upwards for the loss of previous scale efficiency obtained through the mass roll out of AMI meters.

5.3.2 PRELIMINARY DECISION

143. The preliminary decision did not accept JEN's proposed meter installation unit costs, but did not provide reasons for this decision.⁴¹ Instead, the AER developed a substitute meter installation unit cost, based on the time it approved for a new connection multiplied by JEN's proposed field worker hourly labour rate. This equates to \$204.22. In justifying its proposed rate, the preliminary decision states, amongst other things:⁴²

We consider that the time taken for a replacement meter installation should, as an upper limit, take no more time than a new connection service. This is because a new connection involves time to install a meter and other activities as well.

We have not accepted Jemena's proposal that replacement meter installation should vary by meter type. We note that the labour component of a new connection service does not vary by meter type. Further, even if there were some differences in the work involved for various replacement meter

⁴¹ AER, *Preliminary decision, Jemena distribution determination 2016 to 2020, Attachment 16 – Alternative control services*, 29 October 2015, p 16-40.

⁴² AER, *Preliminary decision, Jemena distribution determination 2016 to 2020, Attachment 16 – Alternative control services*, 29 October 2015, p 16-40.

installation types, any variation should still be completed within the substitute time taken which we consider to be the upper limit of time taken for a replacement meter installation.

5.3.3 JEN'S RESPONSE AND THIS SUBMISSION

- 144. The preliminary decision assessment framework does not take into account the time required to administer and support the replacement of a meter installation, which is a material cost driver.
- 145. In particular, JEN notes that the preliminary decision makes no allowance for the back-office costs JEN will incur to, amongst other things:
 - Raise work orders in the system and despatch them to the field
 - Make changes in systems that record metering related information
 - Close out jobs in the system.
- 146. These activities are similar to the Project Management Office that supported the MRO under the AMI Order in Council, where JEN incurred back-office costs to manage the process for changing out meters; the only material difference is that the activities are on a site-by-site basis, rather than a program basis and thus have less synergy.
- 147. These activities are limited to faulted and or end of life legacy meter replacements until the end of derogation where:
 - A faulted meter replacement is usually a like for like physical replacement with the customer records remaining unchanged in the customer information system (CIS) system and faulted meter replacements are low in volume (1,000) for the period due to the low age of the AMI meter population
 - A legacy type 5 or 6 meter is exchanged for an AMI type 5 meter with a different metering installation configuration and the customer records are ported from the legacy CIS to the AMI CIS system in relatively high volume during the period (4,000).
- 148. JEN has not undertaken a bottom-up estimate of the time required to provide back-office support services under different meter replacement scenarios in order to estimate the incremental costs that it will incur as a result of having to undertake these tasks.
- 149. Instead, JEN proposes that the AER adopts the back office rate and time from the new connection charge, as a proxy for back-office services. This rate is \$82.33 (\$2014)/per job. We note that this rate may be lower than our actual back-office costs, as the time required to provide back-office support to a new connection is likely to be less than for a meter replacement, particularly where the meter replacement is switching out an accumulation meter for an AMI meter. The time required to update information in JEN's IT systems is significantly more in this case (because of the need to interrogate and change two different systems).
- 150. Having regard to the above information, JEN's proposes that the installation charges outlined in Table 5–2.

Table 5–2: Submission Installation costs (\$2015)

Installation costs	Preliminary decision	January 2016 submission
Installation costs	204.22	208.93
Back office costs	-	84.23
Total installation costs	204.22	293.16

5.4 BASE YEAR AND ONE-OFF ADJUSTMENT

5.4.1 JEN'S APRIL 2015 PROPOSAL

151. Our April 2015 proposal (see Table 5–3) included:

- The use of 2014 revealed cost as our base year opex of \$24.24m (\$nominal), and
- One-off adjustments amounting to \$1.69m (\$nominal).

Table 5–3: Metering 2014 base year breakdown (\$millions, \$nominal).

	Metering	Distribution	Fee based	Total
2014 reported opex	21.81	1.83	0.61	24.24
less one-off adjustments:				
Claims and complaints	(1.34)	-	-	(1.34)
Meter data management	(0.77)	(0.13)	-	(0.90)
Accounting adjustment (1)	-	0.55	-	0.55
Adjusted base year	19.70	2.24	0.61	22.55

(1) One-off adjustment includes a positive correction due to an accounting adjustment of \$551,182 (\$nominal) made in 2015 that related to a previous calendar year 2014 and subsequently corrected in 2014. In the absence of such adjustment, the base year opex would be substantially understated with a five-fold multiplier effect (when developing opex forecasts) over the 2016 regulatory period.

152. These amounts are then classified as costs to provide either metering, distribution or fee based services in accordance with the current service classification over the 2011 regulatory period (based on the relevant activities). This means that the reported opex for metering services amounts to \$21.81m (\$nominal), within one-off adjustments of \$2.11m (\$nominal), resulting in an adjusted base year opex of \$19.70m (\$nominal).

5.4.2 PRELIMINARY DECISION

153. The preliminary decision accepted the use of the 'base, step and trend' approach to develop opex forecast over the 2016 regulatory period. In doing so, the preliminary decision:

- Started with the incorrect (and higher) reported opex of \$24.24m rather than \$21.81m (\$nominal),
- Accepted two out of the three 'one-off adjustments' and treated the accounting adjustment of \$0.55m (\$nominal) as a step change (which was rejected in the preliminary decision)
- Did not apply an inflation adjustment to convert the base year from nominal dollars to real 2015 dollars.

154. The AER acknowledged the two incorrect treatments for (a) starting with the incorrect (but higher) reported opex and (b) application of inflation.⁴³

155. On the accounting adjustment, the preliminary decision stated that:⁴⁴

⁴³ Email from Moston Neck to Ana Dijanosic, *Re: Letter to AER – Preliminary decision (request for information and AER analysis) [SEC=UNCLASSIFIED]*, 3 December 2015.

⁴⁴ AER, *Preliminary decision, Jemena distribution determination 2016 to 2020, Attachment 16 – Alternative control services*, October 2015, p 16-43.

When modelling its metering opex, however, we observed that Jemena included a positive adjustment for one-off costs. This adjustment increased Jemena's base opex by \$0.6 million (\$2015) for "customer contact and back office". We consider that this adjustment is, in effect, a proposed step change and hence we have treated it as such.

156. JEN corresponded with the AER on a specific question about this issue during the AER’s deliberations for its preliminary decision. JEN acknowledged that this was a one-off adjustment related to customer contact and back-office costs. In particular, JEN stated:⁴⁵

Aegis provides manual data (paper) processing of AMI meter exchanges (capex) as well as metering fault and service desk activities (opex). In 2013, an accounting accrual of \$551,182 (\$nominal) was posted as opex for Aegis services, but this should have been treated as capex. In 2014, following the (a) accrual reversal and (b) goods receipting of the actual invoice, we transferred the cost from opex to capex (via a manual journal).

157. In that correspondence, JEN provided the details now in Table 5–4 setting out the amount reported over 2013 and 2014, and a table demonstrating the accounting entries and correcting journals necessary to set a fair base year for opex.

Table 5–4: History for Aegis capex services between 2013 and 2014, \$nominal

Transaction	2013	2014
Accounting accrual posting (as opex)	551,182	
Accounting accrual reversal posting (as opex)		(551,182)
Goods receipt - invoice received from Aegis (recorded as opex)		551,182
Journal – cost transfer (from opex to capex)		(551,182)
Net impact to opex	551,182	(551,182)

158. Drawing on this information, the AER concluded in its preliminary decision:⁴⁶

We do not accept the proposed step change increase for customer contact and back office. Consistent with our Expenditure forecast assessment guideline, we will only accept a proposed step change if it is associated with a new regulatory obligation or a capex/opex trade-off. We are not satisfied that either of these requirements has been met and, thus, the proposed costs have not been added to the base.

5.4.3 JEN’S RESPONSE AND THIS SUBMISISON

159. This submission:

- Maintains the 2014 reported opex of \$21.81m (\$nominal) for metering services as the base year, and
- Includes the three one off adjustments, maintains its position of not treating the accounting adjustment as a step change, but amended the amount from \$551,182 to \$334,176—based on further evidence obtained which is also supported by a review conducted by KPMG.⁴⁷

⁴⁵ JEN, *JEN AER IR#022, Response to AER questions*, 9 September 2015.

⁴⁶ AER, *Preliminary decision, Jemena distribution determination 2016 to 2020, Attachment 16 – Alternative control services*, October 2015, p 16-44.

160. JEN notes that the term ‘step change’ is not defined in the NER, nor does it reflect an overarching objective that the AER is required to give consideration to when assessing JEN’s submitted expenditure. Rather, the AER has developed the step change assessment framework in order to operationalise its assessment of a regulated business’s proposed opex forecasts, to enable decisions that comply with the requirements of the NER.
161. In this context, JEN believes that the assessment framework adopted by the AER is incorrect, and misinterprets the content and effect of JEN’s April 2015 proposal. In particular:
- JEN did not characterise and propose this expenditure as a step change
 - None of the information presented by JEN could reasonably be interpreted as inferring that the underlying expenditure claim could or should be treated as step change.
162. The preliminary decision’s basis for rejecting this expenditure claim is its treatment of this expenditure as a step change. However, JEN is of the view that the AER should assess this expenditure claim against the requirements of the NER, as they pertain to the assessment of a regulated business’s opex forecasts, not the step change criteria.

5.5 METERING OPEX - ESCALATION

5.5.1 JEN’S APRIL 2015 PROPOSAL

163. JEN’s April 2015 proposal allowed for meter movements into and out of service. This approach enabled net meter growth to align with the network net customer growth, and to take into consideration historical meter additions, alterations, faults and abolishments.
164. JEN’s April 2015 proposal allowed for labour and material escalation rates in accordance with type of labour and materials.

5.5.2 PRELIMINARY DECISION

165. The preliminary decision, when trending JEN’s metering opex forward:

- Did not adjust for metering customer growth
- Applied zero forecast real price and productivity growth.

166. In coming to this conclusion, the AER has stated that:⁴⁸

We have decided not to adjust for customer growth on the basis that the majority of operating costs associated with delivering AMI services are fixed. More specifically, the relevant costs involve IT and communications infrastructure; the cost of which tends not to vary according to the number of customers a service provider has. We conclude that it is unnecessary to adjust for any growth in metering customers Jemena may experience

Additionally, we expect Jemena opex to be relatively flat over the 2016–20 regulatory control period. This reflects that it will be entering a business-as-usual phase of its AMI operations.

⁴⁷ KPMG, *Transmittal letter*, 18 December 2015, [See Attachment 9-8 of this submission].

⁴⁸ AER, *Preliminary decision, Jemena distribution determination 2016 to 2020, Attachment 16 – Alternative control services*, October 2015, p 16-44.

Because of this, we have decided to apply zero forecast real price and productivity growth. We also reached this conclusion after adopting the view that Jemena should be able to manage any real price changes through productivity improvements.

5.5.3 JEN'S RESPONSE AND THIS SUBMISSION

167. JEN does not agree with the preliminary decision conclusions that:
- Because JEN is entering a business-as-usual phase of its AMI operations, JEN's opex should be expected to be relatively flat over the 2016 regulatory control period⁴⁹
 - This makes it reasonable to apply zero forecast real price and productivity growth⁵⁰
 - The underlying assumption is that JEN should be able to manage any real price changes through productivity improvements.⁵¹
168. Firstly, the AER does not provide a basis to support its conclusion that JEN should be able to manage any real price changes through productivity improvements or that the quantum of the productivity savings exactly offsets the real price increase from year to year.
169. Furthermore, this approach is inconsistent with broader aspects of the preliminary decision, as well as established regulatory precedence, where it has:
- Allowed for a positive average annual labour price growth to be applied to JEN's distribution labour related opex⁵² and
 - Assumed zero per cent productivity growth⁵³
170. Finally, though the preliminary decision refers to JEN's metering business being in a business-as-usual phase of its AMI operations as a reason for assuming JEN ability to manage any real price changes through productivity improvements, it is unclear:
- How this could theoretically impact the price JEN has to pay for labour in the broader market (i.e. how the state of the market affects the real labour rates applicable to employees within that market, or the productivity that could be assumed to be generated from employees working within that market), or
 - Whether there is evidence from other markets that supports this assertion (e.g. whether businesses operating in business-as-usual phases in other markets have been able to realise productivity improvements that offset real labour cost increases).
171. JEN maintains its position from its April 2015 proposal in that the efficient metering base year cost should be trended using an opex rate of change, made up of the following components:

⁴⁹ AER, *Preliminary decision, Jemena distribution determination 2016 to 2020, Attachment 16 – Alternative control services*, October 2015, p 16-44.

⁵⁰ *Ibid*, p 16-44.

⁵¹ *Ibid*, p 16-44.

⁵² AER, *Preliminary decision, Jemena distribution determination 2016 to 2020, Attachment 7 – Operating expenditure*, October 2015, p 7-57.

⁵³ *Ibid*, p 7-57.

- **Real price growth** – using the preliminary decision’s real labour price growth for distribution services (not allowing for any real material price growth), but applying the escalation weights of 83:17 between labour and non-labour. These escalation weights are different to the 62:38 used by the AER for distribution services (which was based on a benchmark split for distribution services, rather than metering services).
- **Output growth** – using customer numbers as the sole driver for opex (i.e. as the metering customer base grows, so will the cost of maintaining, operating the metering assets and serving these customers) as opposed to including circuit length and network system physical capacity as output growth drivers from our April 2015 proposal. Attachment 7-7 provides more detail on the forecast growth in customer numbers over the 2016 regulatory period, and
- **Productivity growth** – using a zero productivity adjustment over the 2016 period, because we believe there is not sufficient evidence to suggest that businesses operating in business-as-usual phases in other markets have been able to realise productivity improvements that offset real labour cost increases.

Table 5–5 sets out our submission opex rate of change, compared with our April 2015 proposal and the preliminary decision.

Table 5–5: Submission opex rate of change for metering services (%)

	2016	2017	2018	2019	2020	Avg.
April 2015 proposal	2.56%	3.02%	3.24%	3.54%	3.29%	3.13%
Preliminary decision	-	-	-	-	-	-
This submission	2.35%	2.57%	2.98%	3.13%	2.96%	2.80%

Appendix A

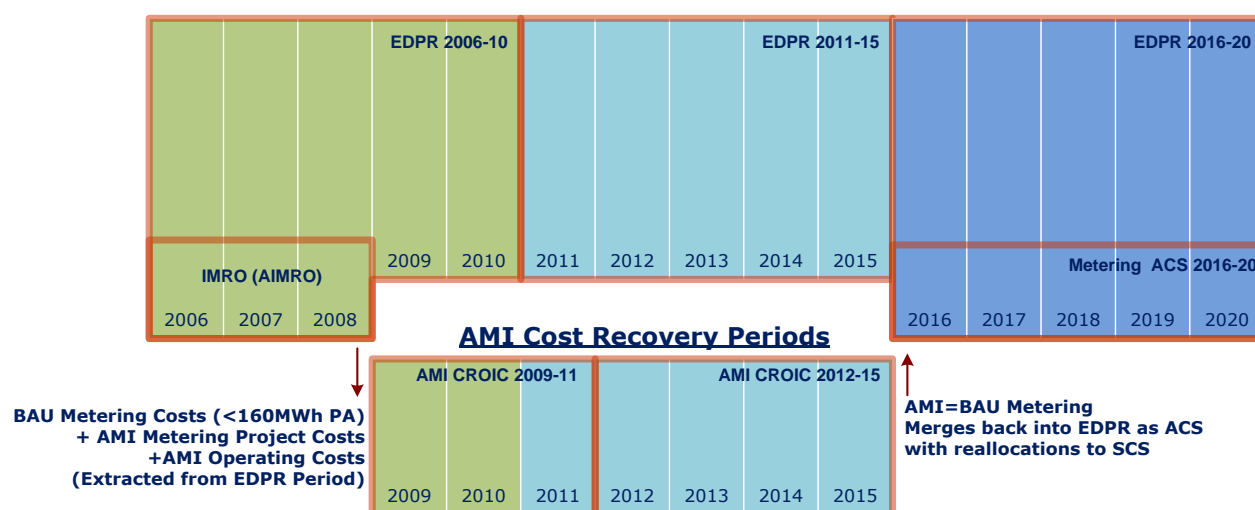
Metering and distribution services cost classification

A1. METERING AND DISTRIBUTION SERVICES COST CLASSIFICATION

A1.1 BACKGROUND

- Under the AMI Order in Council, the 2011 regulatory period capital and operating expenditure for metering is recovered through a ring-fenced cost recovery framework separate from the NER. The AMI Order in Council allows for JEN's actual costs incurred to 31 Dec 2015 to be recovered via a cost pass through mechanism (budget and charges application)⁵⁴, provided that the costs are within the AER approved allowance and JEN demonstrates any costs incurred above the allowance are efficient. This is outlined in Figure A1–1.

Figure A1–1: AMI Order in Council transition to direct control services



- The submitted case for the 2016 regulatory period transfers costs to distribution services where reasonable to do so.
- This Appendix documents the method, definition and classifications of activities formerly classified as AMI Order in Council costs for the 2016 regulatory period.

A1.2 AMI ORDER IN COUNCIL TO NER TRANSITION

A1.2.1 MACRO LEVEL VIEW

- The Customer and Market Services Agreement (**CMSA**) provided a framework for accounting of customer, market and metering services required for or affected by AMI deployment.
- The CMSA was the principle agreement between Jemena Asset Management (**JAM**) and JEN for delivery of metering and customer related services. The JEN CMSA expired at the end of CY2014 after a one year extension beyond its originally conceived end debt which was coincident with the end of the rollout. With the expiry of the CMSA the equivalent scope of services is now delivered under the JEN/JAM Asset Management

⁵⁴ AMI Order in council, s. 5.

Agreement (**AMA**). Notably the JAM/JEN accounts are now settled via an intercompany transaction as opposed to invoicing of a related party under the CMSA. Despite the transition to the AMA the AMI legacy account structure of the CMSA has been maintained as is the reporting.

3. The scope of AMI Order in Council is greater than metering activities and includes non-network IT impacts for various network metering systems (amongst other things).
4. The F&A paper⁵⁵ for the Victorian distribution businesses outlines the transition of AMI Order in Council for the subsequent regulatory period with consideration of the forthcoming contestable metering market. For the next regulatory control period metering services under 160 MWh/pa are to remain unbundled and charged as an ACS. The AMI Order in Council scope is prescriptive and partly variable for each of the Victorian distribution businesses as it allows for network impacts (mostly non-network IT) where the introduction of AMI meters into the existing operations will cause a failure to a non-metering system or process. Thus the scope of AMI Order in Council is greater than metering.
5. The AMI Order in Council scope is wholly included in the scope of the CMSA, however the CMSA scope is broader as it includes ACS and SCS services like faults desk (amongst other things).
6. The AMI Order in Council scope is inclusive of all metering services for small to medium customers (below 160MWh/pa that have a type 5 or type 6 meters) which captures all basic legacy meters as well as the new replacement AMI meters. The AMI Order in Council specifically excludes certain activities that are related to metering—for instance a customer initiated alteration to a metering installation, the meter and materials are in scope of AMI Order in Council, but the installation labour is out of scope as the cost is recovered via an ACS activity. However a faulty meter replacement is included in scope of AMI Order in Council for both the labour and the materials. Consequently the CMSA scope includes all metering services, as well as all customer contact services and is therefore wholly inclusive of AMI Order in Council but also includes ACS and SCS services.
7. As we transition to the subsequent regulatory period, the Customer and Market Services (**CMS**) and AMI Order in Council services accounting structures will dissolve and be replaced by the NER that govern the cost recovery of ACS and SCS. The CMS and AMI Order in Council cost stack and forecast was used as a basis in preparing the metering elements of the April 2015 proposal and this submission.
8. This submission is based on a CMS cost and volume forecast, normalised a business-as-usual year (non AMI rollout year) and then redistributed to ACS and SCS.
9. Figure A1–2 depicts the mapping of CMS transition to ACS and SCS in the 2016 regulatory period.
10. Table A1–1 shows the categories of cost classifications and a description of the services within each of the category.

⁵⁵ AER, *Final framework and approach for the Victorian Electricity Distributors*, 24 October 2014.

Figure A1–2: CMS transition to ACS and SCS

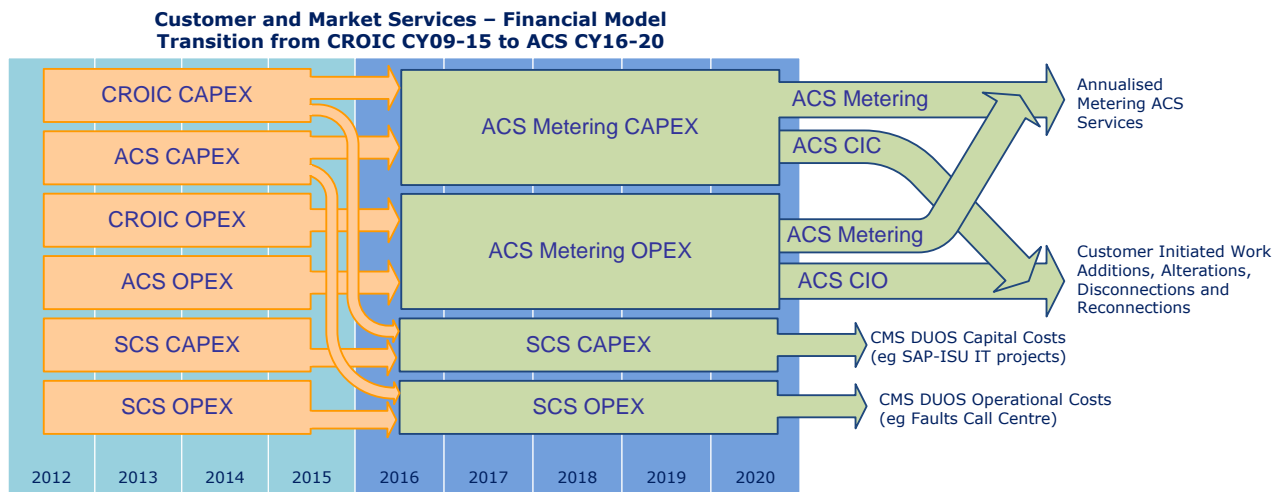


Table A1–1: Summary of CMS activities

Classification	Description / types of services
AMI Order in Council capex	<p>Capital works within the scope of the AMI cost recovery order in council which covers the period 2009-2015:</p> <ul style="list-style-type: none"> • Meters (mass rollout) • Installation (mass rollout) • New connections, additions and alterations • AMI technology and communications • IT infrastructure & systems • AMI projects • MRO back office
ACS capex	<p>Customer initiated capital metering works—labour component only:</p> <ul style="list-style-type: none"> • Meter installation labour • Back office charges (eg new connections)
AMI Order in Council opex	<p>Operational works within the scope of the AMI cost recovery Order in Council which covers the period 2009-2015:</p> <ul style="list-style-type: none"> • Asset strategy & planning • Asset operations • Customer contact & back office • AMI network operations • Meter data collection • AMI transitional business activities • AMI backhaul communications • Management • Finance & HR • Regulatory audit • Service delivery & contract management • Stakeholder relations

Classification	Description / types of services
	<ul style="list-style-type: none"> • Premises • Debt raising costs • IT Level 2 & 3 application support • IT hardware & infrastructure support • IT software application maintenance • Base non AMI IT maintenance & support
ACS opex	<p>ACS opex is the operational component of costs which relate to customer initiated provision of a service such as dis-connection, re-connection, special reads, and meter testing—i.e. fulfilment of operational excluded services that do not improve the networks capital value of the metering installation or network assets:</p> <ul style="list-style-type: none"> • New connections administration • B2B service orders • Re-energisation / de-energisation • Service desk • Meter investigation, reconfiguration • Manage meter data • Manage customer contact & back office
SCS capex	<p>Network services provided under the CMSA that are not related to metering but typically relate to customer or retailer services. Note projects and services delivered under CMSA may be in whole or in part allocated component/s to SCS and in particular where that service or project is cross functionally network, metering and customer service delivery. Note these projects are forecast by JEN. This category is used to ensure visibility of whole projects.</p>
SCS opex	<p>Metering and customer service activities that are excluded from the AMI Order in Council scope:</p> <ul style="list-style-type: none"> • Faults and emergency call centre • Network billing • Manage meter data • Ensure regulatory compliance • Manage customer contacts & back office • Stakeholder relations

Classification	Description / types of services
ACS metering capex	ACS Metering capex—formerly AMI Order in Council capex—is the capital component of costs (eg Metering RAB) which relates to the annual fixed charge for providing the meter infrastructure assets (Meter, Communications and IT).
ACS metering opex	ACS metering opex—formerly AMI Order in Council opex—is the operational component of costs which relates to the annual fixed charge for providing the meter services (metering operations, meter data collection, meter asset management, metering IT support, maintenance, etc.)

A1.3 SUBMISSION ASSUMPTIONS

This submission is built on a combination of:

- Volume unit rate forecast
- Growth forecast assumptions
- Project forecast assumptions
- Normalised baseline opex and redistribution
- Market change assumptions
- Economic assumptions.

Our submission assumptions, service classifications and transformation and underlying assumptions are stated below.

A1.3.1 METERING CAPEX

Table A1–2: Capital program service classification

Metering Capex	Description and Service Classification	ACS	SCS
Remotely read AMI meters and transformers	Metering regulatory category		
Meter dispatchments	Meters and associated materials. Service classification: Physical meters assets principle function is metrology and is therefore attributed 100% to ACS metering.	100%	0%
Meter installation	Metering installation labour costs for installation and replacement of faulty and end of life meters only. (Note adds and alts are ACS-CIC) Service classification: End-of-life meter replacement labour forms part of the capital cost of the metering installation and is attributed 100% to ACS metering.	100%	0%
Communications	Metering communications (and technology) regulatory category.		
Technology and communications	AMI communication equipment and installation costs for field components, access points, relays, antennas, batteries, modems. (Note boundary of the AMI LAN is at the edge routers of the data centre) Service classification: AMI telecommunication assets provide metrology and advanced network service functionality. The key driver or classifying was based on a weighted communication bandwidth utilisation between metrology and network support functions. The weighted average utilisation indicates 62.5% for metering. A summary is provided in Table A1–4 As the primary purpose of the technology and communications is for metering, we have allocated 100% of the capex to ACS in this submission.	100%	0%
IT infrastructure and systems	Metering IT regulatory category		

Metering Capex	Description and Service Classification	ACS	SCS
Software application upgrade – NMS	<p>Lifecycle upgrades of the Network Management System (NMS). The NMS is the head end system for the AMI communications network and provides a supervisory and batch processing function. The NMS provides metrology and network functions:</p> <ul style="list-style-type: none"> • Network management of AMI infrastructure • Network management of AMI Meters • Collection of meter data • Collection of event data • Collection of network data • Remote energisation, de-energisation and other advanced network services <p>Service classification: The NMS provides metrology and network service functions as the meters are compliant with the Victorian AMI minimum functionality specification. The key driver of classifying the costs was based on a weighted average usage of NMS functionality between metrology and network services, where metrology functions are attributed to ACS and advanced network services are attributed to SCS. The weighted average usage of NMS indicates 59% is for metering. A summary is provided in Table A1–3.</p> <p>As the primary purpose of the NMS is for metering, we have allocated 100% of the capex to ACS in this submission.</p>	100%	0%
Software application upgrade – MDM	<p>Lifecycle upgrades of the Meter Data Management System (MDMS). The primary purpose of the MDMS is to support network billing. The MDMS is the primary repository of all versions of interval consumption and interval settlement data.</p> <p>Service classification: Meter data management systems are required regardless of whether JEN provides meter data provision or meter provision services. If a distribution business did not have a meter business, it would still require meter data management for network billing purposes. However the source of the data would be a third party. Therefore the service classification is assigned 100% to SCS.</p>	0%	100%
Software application upgrade SAP systems	<p>Lifecycle upgrades and of the SAP-ISU IT System, which includes:</p> <ul style="list-style-type: none"> • Customer Information System • Network Billing System • AMI Asset Management System 	0%	100%

Metering Capex	Description and Service Classification	ACS	SCS
	Service classification: SAP-ISU is required for connection point management, customer information management and network billing. If the meter asset management function was removed, SAP-ISU would still be required so is therefore 100% SCS.		
Software application upgrade - ESB/B2B	Lifecycle upgrades of the Business to Business (B2B) Enterprise Service Bus (ESB) IT System. Service classification: The enterprise service bus is required for integration of systems (application to application) which was established for AMI but is used by non-AMI IT systems to transact in a corporation wide service oriented architecture part of which is JEN and part thereof AMI. JEN's classification of ESB/B2B is therefore attributed 100% to SCS.	0%	100%
Provision for ongoing development	Incumbent system incremental improvement such as efficiency projects, reporting and defect rectification. Service classification: Forthcoming metrology development is limited. Development is forecast to support advanced metering functionality of AMI meters for network efficiencies and network performance. Therefore system improvement is attributed 100% to SCS.	0%	100%
Growth of metering systems – Licenses	Incremental IT licencing cost increases due to natural growth of data and systems. Service classification: Growth of incumbent IT systems and licencing are required irrespective of the meter and meter data provision and therefore attributed 100% to SCS.	0%	100%
Replace the legacy Customer Information Systems (CIS+)	Retirement and consolidation of legacy Customer Information Systems into incumbent platforms. Service classification: Customer information systems are required for the network irrespective of the meter and meter data provision and therefore attributed 100% to SCS.	0%	100%
Contestable metering	Provisional for the proposed market change associated with the introduction of metering competition for the distribution network to be made whole and be able to accept third party metering provider data and transactions. ⁵⁶	0%	100%

⁵⁶ Note the submitted case was a nil provisional allowance in favour of a step change for the greater program of works for power of choice market reforms

Metering Capex	Description and Service Classification	ACS	SCS
	Service classification: These works will be required to make the network business compliant with additional obligations on the DNSP. Note that the network would need to be able to deliver meter data to the market as it does today, as well as receiving meter data from other parties and/or the market in accordance with the new market rules. This project does not allow for the establishment of a DNSP contestable metering business as that would be an unregulated (or lightly regulated) service provision.		
Power of Choice program	<p>JEN's Power of Choice program addresses the changes in the regulatory and commercial environment as a consequence of the Power of Choice market reforms. In our view these reforms are limited to distribution activity. Our Power of Choice program excludes any unregulated JEN activity.</p> <p>Please refer to the Power of Choice Program Establishment Business Case for further details.</p> <p>Service classification: The Power of Choice reforms impact JEN's network activity as JEN prepares for an environment with contestable metering service providers operating in its distribution area.</p> <p>The project delivery does however include one off opex step change associated with transitional activities like re-accreditation. For further detail please refer to the Power of Choice Program Establishment Business Case</p>	0%	100%
Growth - customer connections and network growth	<p>Allowance for incremental IT cost due to natural growth of network connections.</p> <p>Service classification: IT system growth is required for the network irrespective of the meter and meter data provision and therefore attributed 100% to SCS.</p>	0%	100%

Table A1–3: Weighted average usage of NMS functionality

NMS / AMI Functionality	Weight	% allocation to ACS	% allocation SCS	Comments
3.1 Metrology	35.0%	100%	-	Primary function of NMS, meter data
3.2 Remote and local reading of meters	10.0%	100%	-	Primary function of NMS, meter data collection
3.3 Supply disconnect and reconnect	15.0%	-	100%	Non metrology core functionality
3.4 Time synchronisation	3.0%	100%	-	Metrology function but not an advanced capability
3.5 Load control	2.5%	-	100%	Non metrology secondary functionality
3.6 Meter 'loss of supply' detection and outages detection	5.0%	-	100%	Non metrology core advanced functionality
3.7 Quality of supply & other event recording	5.0%	-	100%	Non metrology network monitoring advanced functionality
3.8 Supply capacity control	5.0%	-	100%	Non metrology Demand management capability
3.9 Interface to Home Area Network (HAN)	5.0%	50%	50%	Metrology and demand side network functionality
3.10 Tamper detection	2.5%	100%	-	Metrology function but not an advanced capability
3.11 Communications and data security	5.0%	50%	50%	Security for metrology and network functions
3.12 Remote firmware upgrades	5.0%	50%	50%	Firmware upgrade for metrology and network functions
3.13 Self registration of meters	2.0%	50%	50%	Self-register for metrology and network functions
Total	100.0%	59.0%	41.0%	

Table A1–4: Weighted average utilisation of communications bandwidth

Technology and Communications Functionality	Weight	% allocation to ACS	% allocation to SCS	Comments
Meter data	50.00%	100%	-	Meter data read every 4 hours and is largest payload of any traffic
Event data (meter & network)	25.00%	50%	50%	Event data is read every alternate 4 hours and is 50:50 Metering SCS:ACS
Electricity network management	25.00%	-	100%	Network management data is on demand traffic (e.g. remote connect / disconnect, ping) traffic is low and intermittent
Total	100.0%	62.5%	37.5%	

A1.3.2 METERING OPEX

Calendar year 2014 provides the base year opex to forecast. However this year is an exceptional year as the first six months included a large scale AMI rollout. This submission includes a normalisation of the 2014 base year prior to the change in cost recovery (from AMI Order in Council to the NER) through classifications to ACS metering and SCS.

As the AMI program is transformed for the business operations the total CMSA cost was re-examined at a CMS category level prior to the assignment to the ACS/SCS classifications set out in Table A1–5.

Table A1–5: Metering operations service classification

Metering Opex	Description and Service Classification	Metering ACS	SCS
Customer support – (a) Claims and complaints	<p>To resolve all complaints relating to the JEN services inclusive of metering, within 5 business days of receipt for complaints and within 20 business days of receipt for claims, and notify the end-consumer that the claim or complaint has been resolved. If JAM s is unable to resolve the claim within 20 business days or complaint within 5 business days, JAM must escalate the claim or complaint to JEN and prepare and provide JEN with an action plan to resolve that claim or complaint.</p> <p>To allocate any other complaints received from customers in regards to other network services to the relevant service provider and promptly notify the service provider of that complaint.</p> <p>Support Energy and Water Ombudsman (Victoria) (EWOV) complaints: To provide assistance for JEN to respond to complaints that have been escalated to the EWOV.</p> <p>Service classification: Driven by headcount. Metering complaints raised against metering should be addressed by the metering business irrespective of the root cause. 2014 base year includes 6 months of AMI rollout and is not a normal year. The base year allowance was adjusted down by the difference between the actual for 2014 and forecast 2015. Two of five full time equivalents (FTEs) are allocated to ACS metering opex of the normalised base year.</p> <p>JEN have revised the service classification between the April 2015 and Jan 2016 submissions so that Claims and Complaints as the primary purpose being customer relations and greater than 50% should therefore be allocated 100% to SCS.</p>	0%	100%
Customer support – (b) Staff management	<p>Provide leadership and strategic direction for the ongoing management of the customer service business unit.</p> <p>Service classification: Driven by activity. The JEN leadership function for customer support has reintegrated into the Network Asset Management portfolio and is allocated 100% to SCS.</p>	0.0%	100.0%
Customer support – (c) Faults and emergency call centre	The purpose of this service is to receive calls and determine if the call relates to an outage or if a trouble order needs to be raised.	0.0%	100.0%

Metering Opex	Description and Service Classification	Metering ACS	SCS
	Service classification: Driven by base year costs during the AMI mass rollout, an increased volume of calls was received through the faults and emergency call centre that were redirected to the AMI rollout call centre. As the rollout program has completed notionally, faults and emergencies do not relate to metering rather supply and connections to premises. 100% is now allocated to network SCS.		
Customer support – (d) Manage customer contact and back office	Manage NMI standing data, CATS and customer information system updates including management of exceptions to and from the market (MSATS).	0.0%	100.0%
Customer support – (e) Service desk	<p>To provide a service desk to receive, manage and respond to requests for information and enquiries received from Retailers and end-consumers within applicable timeframes. (This service may include management of end-consumer defects or may result in an escalation of the end-consumer enquiry into an end-consumer claim and complaint).</p> <p>Manage customer defects and access: To coordinate the process for resolution of customer defects within applicable regulatory timeframes (including notifying the end-consumer, as required). This service may include coordination with service providers and resolving access issues with tenants and owner occupiers.</p> <p>Service classification: Driven by service orders. Service desk supports retail interface, enquiries are equivalent to B2B classifications for B2B service orders</p> <p>JEN have revised the service classification between the April 2015 proposal and this submission so that the service desk of which their primary functions is to supporting B2B distribution network requests to 100% SCS.</p>	0%	100%
Technology and communications	<p>AMI technology and communications opex is third party telecommunications costs associated with access points and an classification of the fibre lease between the two primary and disaster recovery data centres. Note in base year, these costs were bundled into the IT opex category and not separable.</p> <p>Service classification: Driven by share of utilised bandwidth. Data purpose is shared meter data, event data, and network management data. Weighting is biased towards meter data at 62.5% ACS metering.</p> <p>JEN have revised the service classification between the April 2015 and Jan 2016 submissions so that the technology and communications' primary purpose being metering and greater than 50% should therefore be allocated 100% to ACS metering.</p>	100%	0%

Metering Opex	Description and Service Classification	Metering ACS	SCS
AMI network operations	The purpose of this service is to manage the operation of the AMI network by monitoring, identifying, correcting and reporting to JEN (including AMI network status reporting) on AMI network operational issues and performance issues	100%	0%
	<p>Service classification: Driven by activity and volumes. AMI Network Operations remotely manage the smart meter population including responding to customer (via B2B) and network initiated requests. Classification splits are driven by activity type and volume for meter reading, investigations, meter exchange and communications infrastructure planning.</p> <p>JEN have revised the service classification between the April 2015 and Jan 2016 submissions so that the AMI Network Operations which are principally supporting technology and communications and AMI network management systems both being primary services for ACS metering.</p>		
Reporting and finance – (a) Finance	The purpose of this service is to manage the payment of installation and management costs of assets and includes management and preparation of financial reporting for accounts receivable and accounts payable.	0.0%	100.0%
	Service classification: Driven by FTE. Finance is an enterprise function and classifications to metering are via overheads. Management accounting, and audit function is still required in the metering business. Classification is driven by CAM classifications to the ACS Metering activity.		
Reporting and finance – (b) Performance	The purpose of this service is to provide a reporting capability to manage performance including a Business Intelligence dashboard capability to ensure proactive management of key performance indicators to ensure that regulated business service obligations are maintained.	0.0%	100.0%
	Service classification: Driven by activity. Customer and market systems performance management is a divisional network obligation and allocated to SCS network. Note AMI systems use an automated reporting system and resources allocated to maintain those reports and data warehouses are part of the IT opex category.		

Metering Opex	Description and Service Classification	Metering ACS	SCS
Reporting and finance – (c) Contract management and procurement	<p>This service includes strategic procurement and management of contracts and vendor agreements. The key tasks provided by this service are to provide strategic procurement of new contracts, operational performance management of established contracts, ensure third-party services integrate effectively with internal processes and comply with company policies and objectives</p> <p>Service classification: Driven by number of contracts. Classification of contract management is driven by the number of active contracts managed and use of those systems, products or vendors. Note the base year is not representative of a normal year due to 6 months of mass rollout activities in 2014.</p> <p>JEN have revised the service classification between the April 2015 and Jan 2016 submissions so that the contract management and procurement are principally supporting contracts for distribution services.</p>	0%	100%
Compliance and industry representation	<p>Industry representation minimises the risks associated with direction, decision and issues from wider industry relating to metering which may have adverse impact on JEN. This role ensures that JEN is appropriately represented and its position is communicated at working groups, committees and decision-making bodies relating to the field of metrology and DNSP interfaces thereto. The position will provide written responses to industry consultations. This service is also responsible for preparing information required by JEN for AER submissions and budgets, and facilitating response to related questions from AER.</p> <p>Service classification: Driven by activity. Industry development for metering extends to network implications of smart metering, customer benefits, markets and market participants. Classification is driven by activity based task analysis of industry engagement activities being metering compliance and network.</p> <p>JEN have revised the service classification between the April 2015 and Jan 2016 submissions so that the industry development functions reflect the area of attention for the subsequent period as opposed to the previous period which will be dominated by Power of Choice reforms and impacts to the network operator.</p>	0%	100%

Metering Opex	Description and Service Classification	Metering ACS	SCS
Network systems IT opex	<p>This provides the service delivery function for the business. This function consists primarily of the service desk, which provides level 1 support and management of incidents raised by automated alerting or calls from end users. Other functions of this service include.</p> <ul style="list-style-type: none"> • Release management • Change management • Capacity management • Configuration management • Contract management • Security management • Service desk (Level 1 support) • Incident Management • Availability Management • Problem Management • Level 2 and 3 support • IT service continuity management <p>Service classification: Driven by use of systems and resource headcount. IT costs stack are apportioned based on use of metering system to ACS or SCS. Breakdown of systems are required for IT costs to allow for use of system calculation. Detail is provided in Table A1–6 below.</p> <p>As the most significant opex cost in the CMS IT remains, it is appropriate to sub classify the costs of metering IT into Metering IT costs and CMS IT costs</p>	44.1%	55.9%
Metering operations – Meter asset management plan	<p>The purpose of this service is to manage meter assets in accordance with the approved Meter Asset Management Plan including the annual regulated meter test program.</p> <p>Manage regulatory requirements: This purpose of this service is to manage compliance of regulatory obligations and ISO certification. It will also record and monitor the controls within the organisation needed to enable compliance with regulatory or industry mandates as well as internal policies.</p>	100.0%	0.0%

Metering Opex	Description and Service Classification	Metering ACS	SCS
	Service classification: Driven by base year expenditure. Metering operations is 100% focused on metering activities for small and medium customers and is wholly allocated to ACS.		
Meter data management	<p>The purpose of this service is to ensure meter data and meter events are collected from both AMI enabled devices and manually read Type 5 & 6 meters through the AMI communications network or via manual meter reading.</p> <p>Ensure all meter data is received, validated and provided to the market in line with the requirements of the Rules and the Metrology procedures and publish to the market for end use customer billing, AEMO for market settlements and revenue management for retailer invoicing.</p> <p>Service classification: Driven by base year expenditure. MDM is 100% Metering Opex. Note a separate service classification is used for Network billing below.</p>	100.0%	0.0%
Metering communications, strategy and planning	<p>The purpose of this process is to drive the strategy for management of AMI communication and metering assets. In particular, the services related to planning, monitoring, analysing and developing the communication asset performance and augmentation works.</p> <p>Service classification: Driven by activity. Metering asset management extends to network enabled benefits of metering. Activity based classification are used to identify SCS component classification from;</p> <ul style="list-style-type: none"> • Regulatory compliance • Meter asset management • Communications asset management • AMI network benefit realisation <p>JEN have revised the service classification between the April 2015 and Jan 2016 submissions so that the Metering Communications, Strategy & Planning of which their primary functions is to supporting Metering activities.</p>	100%	0%

Metering Opex	Description and Service Classification	Metering ACS	SCS
Network billing	<p>The purpose of this service is to generate NMI level invoices, perform reconciliation and collate simulation results daily for the first 6 business days of the month to monitor billing completeness.</p> <p>Generate and send aggregated retailer invoices on a monthly basis. This includes the receipt of payments and remittance advice.</p> <p>Manage retailer disputes: The purpose of this service is to manage and resolve claims or disputes relating to a retailer, including further investigation to resolve the disputed charge if necessary.</p>	0.0%	100.0%
	<p>Service classification: Driven by base year expenditure. Network billing is a network function derived from metering data but not a metering function and is therefore 100% SCS allocated.</p>		
Connection points management	<p>The purpose of this service is to perform administrative activities associated with the scheduling and processing of service requests for replacements and abolishments of service connections including and metering additions and alterations. This includes managing enquiries, scheduling and managing works with the relevant field service provider, recording and completing jobs, reconciling meter records and managing customer data.</p>	0%	100%
	<p>Service classification: Driven by activity and volume. JEN have revised the service classification between the April 2015 and Jan 2016 submissions so that the New Connections of which their primary functions is to supporting connection services.</p>		
Regulated meter testing and replacement	<p>The purpose of this service is to manage regulated meter test and replacement projects for JEN as set out in the metering and communications strategy. This process covers the requirement to perform meter tests for a 'family' or other asset grouping. Meter tests must be executed prior to the compliance expiry date with sufficient lead time to allow for replacement where a family meter fails testing.</p>	100.0%	0.0%
	<p>Service classification: Driven by base year expenditure. This is 100% ACS metering opex—e.g. annual sample testing program for AMI meters.</p>		

Metering Opex	Description and Service Classification	Metering ACS	SCS
Regulatory compliance	<p>Manage compliance of regulatory obligations and ISO certification. It will also record and monitor the controls within the organisation needed to enable compliance with regulatory or industry mandates as well as internal policies.</p> <p>Manage Retailer of Last Resort events and obligations for the LNSP, MDP and MPB when event occurs. This includes management of standing data updates, meter data processing, network billing, and management of in-progress customer transfers and service orders.</p> <p>Ensure technical, regulatory, safety and quality compliance obligations and maintain accreditation as an MDP, MPB and DNSP operating in the NEM. This service aims to ensure Regulatory and Technical compliance across AEMO Accreditation, AEMO centralised audit, Meter Field Audits (incl. MRO), Metrology Testing, ACMA Audits and ISO certification.</p> <p>Service classification: Driven by activity and volume. Activity is broader than metering of CMS. Historical activity is used to determine the ACS metering classification.</p> <p>JEN have revised the service classification between the April 2015 proposal and this submission so that the regulatory compliance primarily supports metering compliance—hence 100% ACS.</p>	100%	0%
Corporate overhead (CAM)	<p>Enterprise support function overheads</p> <p>Service Classification: Driven by base year expenditure. Average weighting based on the total opex dollar classification collectively for each service category above. The underlying CAM classification is determined based on the level of client time writing attributed to JEN's AMI.</p> <p>JEN have revised the service classification between the April 2015 proposal and this submission the corporate overhead that was charged to the metering opex during the previous period and should therefore be allocated on a like for like basis.</p>	100%	0%

Table A1–6: IT opex weighted average service classification

NMS / AMI Functionality	FTE	FTE ACS	FTE SCS
Meter Data Management System (Itron)	6	4	2
Meter Network Management Systems (SSN)	3	1	2
Enterprise Service Bus / Business to Business Market Gateway (Web Methods)	3	1	2
Business Intelligence Data Warehouse / Reporting (Cognos)	3	1	2
Connection Point Management System (SAP-ISU)	8	3	5
Infrastructure Support	5	2	3
Total (includes weighting)	100.0%	44.1%	55.9%