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United Energy's 2017 AMI Transition Charge Application

Document Information

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Table of Contents

1. Introduction and overview

Introduction

This submission is United Energy's transition charge application for 2017 metering charges. This application seeks to:

- Include 2014 actual costs (this is a cost overrun compared to 2014 allowance)
- Include 2015 actual costs (this is within the 2015 allowance)
- True up actual versus allowed revenue for the 2009 to 2015 period

United Energy has successfully delivered the Advanced Metering Infrastructure (AMI) program, which was mandated by the Victorian Government. The AMI program required the development, installation, and operation of cutting-edge metering and communications technology on a large scale. The project required United Energy to:

- deploy new, complex and advanced meters to replace all existing residential meters;
- implement a large-scale, high-performance, two-way communications network with approximately 655,000 end points;
- establish new business processes for the rollout and ongoing management of the new metering environment;
- put in place information systems and processes to capture metering data at half hourly intervals;
- integrate new information systems to validate, process and store metering data;
- establish new processes and systems to manage the new meter, network and systems environment, and comply with our service obligations; and
- employ business processes to ensure that the existing manual meter reading, back-office and IT systems could operate efficiently throughout the AMI program.

The successful completion of the AMI program is a significant achievement, which is already delivering substantial benefits to our customers. United Energy has delivered the AMI program at the lowest cost of all Victorian businesses.

Overall Cost Performance

The tables below compare United Energy's actual expenditure with the expenditure allowance, in accordance with clause 5I.5 of the CROIC. The tables show that United Energy's total operating and capital expenditure has remained within the CROIC allowance over the 2009-15 period. This is an excellent overall outcome, especially given the challenges in delivering the AMI program. Despite incurring more than the annual 2014 allowance, in total United Energy has spent approximately $7m less than the CROIC allowance of $529m. This is a favourable variance of 1.3% across a seven year program and demonstrates the strong management and operational capability of the company. This is the lowest cost of all Victorian businesses.

Table 1.1: Comparison of United Energy's actual operating expenditure against CROIC allowance 2009-15 ($m nominal)

	2009	2010	2011	2012	2013	2014	2015	Total
Actual	14.02	16.01	27.36	28.99	25.89	23.47	20.17	**155.91**
CROIC Allowance	9.14	17.22	25.94	30.52	25.67	23.53	24.33	**156.34**
Variance	4.89	-1.21	1.42	-1.53	0.22	-0.06	-4.16	**-0.43**

Table 1.2: United Energy's actual capital expenditure against CROIC allowance 2009-15 ($m nominal)

	2009	2010	2011	2012	2013	2014	2015	Total
Actual	73.62	59.03	69.57	62.95	61.03	29.67	9.80	**365.67**
CROIC Allowance	82.39	65.53	91.50	102.48	18.25	6.21	6.11	**372.48**
Variance	-8.77	-6.50	-21.93	-39.53	42.77	23.46	3.69	**-6.81**

While the overall outcome is positive, there are variances (positive and negative) in particular years between the allowance and United Energy's actual expenditure. This is primarily caused by timing differences.

The particular focus of this submission is expenditure performance in 2014 and 2015.

Analysis of 2014 and 2015 total expenditure

Table 1.3 below presents United Energy's actual and budgeted total expenditure for 2014 and 2015[1].

Table 1.3: AMI Budget and actual expenditure for 2014 and 2015 ($m nominal)

	Actual ($m)	Budget ($m)	Variance($m)
Total Expenditure 2014	53.14	29.74	**23.40**
Total Expenditure 2015	29.97	30.44	**(0.47)**

United Energy's total expenditure for 2015 is lower than the AER's budget for that year. In these circumstances, the CROIC[2] requires the AER to accept United Energy's actual expenditure for 2015 for the purpose of calculating the Transition Charge. In relation to 2014 expenditure, however, United Energy has exceeded the AER's budget by $23.4 million. The CROIC allows this 'expenditure excess' to be recovered from customers, providing that it has been prudently incurred.

The AER has previously conducted a prudency assessment in relation to United Energy's 2013 AMI expenditure, which also exceeded the budgeted amount for that year. Following its prudency assessment, the AER disallowed $10.7 million of United Energy's actual expenditure on the basis that it had not been prudently incurred. This AER decision rejected some of United Energy's cost over runs for meter installations and project management costs. Importantly this AER decision also accepted that meter purchase costs over runs due to timing differences are allowed.

1 A certified audit report is attached.

2 Clause 5I.2.

Although United Energy disagrees with the AER's findings in relation to our 2013 expenditure for meter installation and project management costs, it is not productive to revisit these issues or repeat our earlier submissions.

Analysis of United Energy's AMI Expenditure for 2014

Table 1.4 presents a breakdown of United Energy's 2014 AMI expenditure to identify the sources of the 'expenditure excess'. This approach is consistent with the AER's prudency assessment approach in its previous review.

Table 1.4: Breakdown of United Energy's AMI expenditure for 2014 ($m nominal)

	Actual ($m)	Budget ($m)	Variance ($m)
Operating Expenditure	23.47	23.53	(0.06)
Capital Expenditure	29.67	6.21	23.46
Total Expenditure	**53.14**	**29.74**	**23.40**

Table 1.5 shows that the 'expenditure excess' in 2014 is caused by capital expenditure, not operating expenditure. In view of this, Table 1.5 below presents further information on United Energy's budget and actual capital expenditure for 2014.

Table 1.5: Breakdown of United Energy's AMI capital expenditure for 2014 ($m nominal)

	Actual ($m)	Budget ($m)	Variance ($m)	Percentage contribution to expenditure excess[3]
Accumulation Meters	-	-	-	-
Manually read interval meters	-	-	-	-
Meter purchases	**7.83**	**1.34**	**6.49**	**27.7%**
- New connections	2.09	1.34	0.75	3.2%
- AMI rollout	5.74	-	5.74	24.5%
Meter installations	**16.72**	**-**	**16.72**	**71.5%**
AMI communications	**1.08**	**0.76**	**0.32**	**1.4%**
Metering data services (IT)	4.04	4.12	(0.07)	-0.3%
Total capital expenditure	**29.67**	**6.21**	**23.46**	**100.3%**[4]

Note: Numbers may not sum exactly due to rounding.

Table 1.5 also shows that:

[3] The contributions shown are percentages of the expenditure excess in 2014 ($23.40 million).

[4] As the expenditure excess is $23.40 million, the capital expenditure overspend of $23.46 million contributes slightly more than 100% to the expenditure excess.

- Three categories of capital expenditure (shaded in blue in the table) contribute to the 'expenditure excess' in 2014. These are:
  - Meter purchases for new connections and the AMI rollout;
  - Meter installations; and
  - AMI communications.
- Approximately 99 per cent[5] of the 'expenditure excess' in 2014 is caused by meter purchases and meter installations.

The table below illustrates the importance of timing or volume forecasting errors in understanding the 'expenditure excess' in 2014. In this case, United Energy's total expenditure is less than $20m below the CROIC allowance (approximately 9.0 per cent) over the 2009 to 2015 period. In other words, the significant 'expenditure excess' in 2014 reflects a timing difference, rather than an increase in total expenditure.

Table 1.6: Analysis of meter purchase and installation expenditure 2009-15 ($m nominal)

	2009	2010	2011	2012	2013	2014	2015	Total
Actual	6.41	20.66	42.57	49.83	55.77	24.55	3.24	**202.93**
CROIC Allowance	3.89	34.74	82.10	89.82	9.46	1.34	1.37	**222.72**
Variance	**2.52**	**-14.08**	**-39.53**	**-40.09**	**46.31**	**23.21**	**1.87**	**-19.79**

The above table illustrates the importance of examining prudency across a number of years. As explained below, a primary cause of the 'expenditure excess' in 2014 relates to volume forecasting errors.

Program delays led to volume forecasting errors

United Energy has previously provided a detailed explanation of the delays in the AMI program, which were beyond the company's control[6]. As a result of these delays, volumes of work (and costs) occurred later than expected.

The impact of the delay in the AMI rollout program on budgeted and actual meter installation volumes is particularly significant for 2014, as shown in the table below.

Table 1.7: Budgeted and actual AMI installations (excluding new connections) in 2014

	AER's budgeted volume	United Energy's actual volume
AMI meter installations	**0**	**117,701**

The AER's assumption that no meters would be installed in 2014 was based on the planned completion of the AMI rollout program by 31 December 2013. The installation of 117,701 meters in 2014 is a consequence of a later completion date for the program.

5 As noted above, the sum of the individual percentage contributions exceed 100 per cent of the excess expenditure as actual expenditure for Metering Data Services (IT) and operating expenditure are lower than forecast, thereby reducing the expenditure excess.

6 United Energy, 2015 Charges Revision Application, Appendix C, 29 August 2014.

The delay in installing these meters resulted in lower meter installation expenditure and meter charges in prior years. It is therefore appropriate for United Energy to recover the efficient costs of installing the actual volume of meters in 2014.

In its earlier AMI Charges Determination, the AER accepted United Energy's cost increases associated with differences between actual and budgeted meter installation volumes. However, the AER also concluded that the efficient benchmark unit cost was $125 per meter compared to United Energy's $159 per meter. On this basis, the AER disallowed a portion of United Energy's actual meter installation costs.

In examining the drivers of the 2014 'expenditure excess' for meter installations, United Energy has applied the AER's 2013 benchmark unit cost, adjusted to reflect 2014 labour rates. As explained in Chapter 3 of this submission, this conservative approach explains approximately 91 per cent of the 'expenditure excess' for meter installations.

In relation to meter purchases and AMI Communications, the 'expenditure excess' is entirely volume driven, and therefore no issues arise in relation to the efficiency of the unit costs incurred – consistent with the AER's earlier determination.

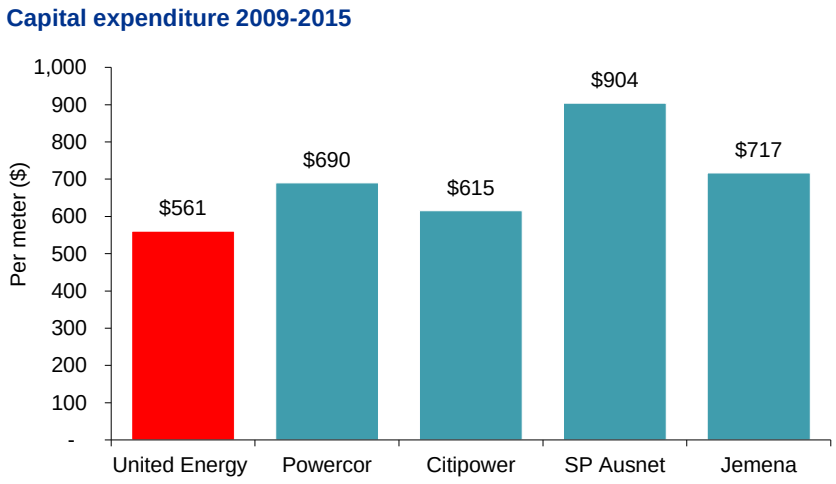
Overall benchmarking shows that United Energy is the lowest cost distributor

Examination of the five Victorian distributors' actual AMI expenditure over the 2009 to 2015 period demonstrates that United Energy's expenditure is prudent and should be accepted by the AER. Specifically, in delivering the AMI program, United Energy has:

- Incurred the lowest total expenditure per meter;
- Incurred the lowest capital expenditure per meter; and
- Proposed the lowest meter prices and exit fees for the 2016 to 2020 period in Victoria.

As higher capital expenditure is the cause of United Energy's 'expenditure excess' in 2014, it is appropriate to examine the capital expenditure benchmarking results for the five Victorian distributors. Figure 1 below shows actual capital expenditure per meter for the five distributors over the 2009-15 period.

Figure 1: Capital expenditure per meter, 2009-15



United Energy regards the above outcome as providing compelling evidence that the company has delivered the AMI program efficiently. Further benchmarking analysis is presented in Chapter 4.

Importantly the AER should assess our capital expenditure relative to other businesses, not against approved expenditure allowances. In fact, the AER describes benchmarking is "a useful tool that enables us to compare a service provider to its peers" [7]. Other businesses have the benefit of having had higher allowances approved – United Energy has delivered the lowest cost compared to its peers. Benchmarking shows United Energy's expenditure to be efficient.

Transition Charge for 2017

For the reasons set out in this submission, United Energy's 'expenditure excess' in 2014 should be approved by the AER as prudent. On this basis, the AER should include United Energy's actual expenditure for 2014 and 2015 in its determination of United Energy's Transition Charge.

United Energy has determined the Transition Charge for 2017 in accordance with the AER's spreadsheet model and the CROIC. United Energy proposes that a Transition Charge of $0.48 million is to be added to the AER's revenue cap for metering charges, which will be determined in the EDPR determination. This is approximately $0.72 per customer.

The table below shows United Energy's expected meter charges for 2017, including the Transition Charge. This compares favourably to the AER's Preliminary Determination.

Table 1.8: Forecast meter charges for 2017 compared to the AER's Preliminary Determination ($m nominal)

	Proposed meter charge ($)	Preliminary Determination meter charge
Single phase single element meter	$63.55	$85.78
Single phase single element meter with a contactor	$63.55	$85.78
Three phase direct connected meter	$71.67	$96.74
Three phase current transformer connected meter	$75.93	$102.50

Other documents relied on in addition to this submission including the appendices

UE also relies on the following documents previously submitted to the AER:

- 2015 Charges Application including appendices A to F
- All information provided to the AER in response to data requests in relation to the 2015 Charges Application
- All other information provided to the AER by UE with its previous budget and charges applications.

Structure of this document

Further details to support United Energy's proposed Transition Charge are set out in the remainder of this submission, which is structured as follows:

- Chapter 2 provides an overview of the key aspects of the regulatory requirements;

7 AER, Benchmarking fact sheet, April 2015, page 1.

- Chapter 3 presents United Energy's actual and budget expenditure for 2014 and 2015. This chapter also provides a detailed explanation of the key causes of United Energy's 'expenditure excess' in 2014.
- Chapter 4 sets out benchmarking information and cost performance data, which demonstrates that United Energy's actual expenditure in 2014 is efficient when considered in the context of the 2009-15 period.
- Chapter 5 provides details of United Energy's proposed Transition Charge.

2. Regulatory requirements

The Cost Recovery Order in Council (CROIC) sets out the regulatory arrangements for determining AMI metering charges. In broad terms, the CROIC allows each distributor to recover its actual costs of delivering the AMI program, providing that the expenditure has been prudently incurred.

This document is United Energy's Transition Charge Application, which is submitted in accordance with clause L.4 of the CROIC. It sets out United Energy's actual costs for 2014 and 2015, and proposes a Transition Charge to apply from 1 January 2017 for one year. The Transition Charge corrects for any difference between United Energy's AMI costs and revenues over the 2009-15 period, expressed in present value terms.

Clause 5L of the CROIC allows each distributor to submit a Transition Charge Application by 31 May 2016.

The Transition Charge is essentially a 'true up' mechanism that corrects for any difference between:

- the approved AMI expenditure over the 2009-15 period; and
- the distributor's revenues from AMI metering charges.

In order for the AER to approve AMI expenditure it must satisfy:

- a scope test; and
- a prudency test.

Each of these tests is discussed in sections 2.1 and 2.2 below. Section 2.3 explains United Energy's approach to this Transition Charge Application, given the CROIC requirements and the AER's earlier AMI Charges Determination.

2.1 Scope test

The CROIC provides that activities are within scope if they are reasonably required for the provision of Regulated Services, and to comply with a metering regulatory obligation or requirement. Regulated Services are defined in the CROIC as:

- Metering services supplied to or on behalf of first tier customers or second tier customers, with annual electricity consumption of 160 MWh or less where:
  - the electricity consumption of that customer is (or is to be) measured using a revenue meter that is either an accumulation meter or a manually read interval meter; and
  - the DNSP is the responsible person in respect of those services.
- Metering services supplied to or on behalf of first tier customers or second tier customers, with annual electricity consumption of 160 MWh or less where:
  - the electricity consumption of that customer is (or is to be) measured using a revenue meter that is a remotely read interval meter; and
  - the DNSP is the responsible person in respect of those services.

In relation to scope, Ernst & Young undertakes an annual audit to verify that the expenditure incurred each year accords with the CROIC scope definition. This verification has been provided in relation to United Energy's actual expenditure for 2014 and 2015, and therefore questions relating to scope are not addressed further in this submission.

2.2 Prudency test

The CROIC allows the AER to exclude any 'expenditure excess' from the building blocks if the distributor has not satisfied the AER that the additional expenditure has been prudently incurred. Clause 5I.7A defines expenditure as prudent where it "reasonably reflects the efficient costs of a business providing the Regulated Services".

The CROIC was amended in June 2015 to include two further clauses to clarify the meaning of prudency. Clauses 5I.7AA and 5I.7B states that:

> *"For the purposes of clause 5I.7 and in any case where an application pursuant to clause 5L is made, the expenditure excess is prudent where the expenditure of the distributor over the entirety of the initial regulatory period reasonably reflects the efficient costs of a business providing the Regulated Services over the entirety of that period."*
>
> *"For the purposes of the Commission being satisfied that the expenditure excess reasonably reflects the efficient costs:*
>
> (a) of a business providing the Regulated Services; or
>
> (b) of a business providing the Regulated Services over the entirety of the initial regulatory period,
>
> (c) the Commission may take into account:
>
> (d) where the expenditure excess is a contract cost, whether the contract was let in accordance with a competitive tender process; and
>
> (e) the matters set out in clause 5I.8."

Clause 5I.8 lists the following matters that the Commission may take into account in determining whether it is satisfied that the 'expenditure excess' reasonably reflects the efficient costs:

- The information available to the distributor at the relevant time.
- The nature of the provision, installation, maintenance and operation of advanced metering infrastructure and associated services and systems.
- The nature of the rollout obligation.
- The state of the technology relevant to the provision, installation, maintenance and operation of advanced metering infrastructure and associated services and systems.
- The risks inherent in a project of the type involving the provision, installation, maintenance and operation of advanced metering infrastructure and associated services and systems.
- The market conditions relevant to the provision, installation, maintenance and operation of advanced metering infrastructure and associated services and systems.
- Any metering regulatory obligation or requirement.
- Capitalisation policies or cost allocations between metering services and distribution services that are not metering services.
- The costs that would have been incurred by a benchmark efficient entity.
- Any other relevant matter.

Clause 5I.8A clarifies that the Commission's prudency review must also take into account:

"the expenditure of a benchmark efficient entity over the entirety of, or any part of, the initial regulatory period [2009-2015]."

2.3 United Energy's approach to this Transition Charge Application

Notwithstanding the recent amendments to the CROIC, described in section 2.2 above, the AER's prudency assessment in its 2015 AMI Charges Determination remains highly relevant to this Transition Charge Application.

The AER's 2015 AMI Charges Determination is particularly relevant to this submission because it included a prudency assessment of United Energy's actual capital expenditure for 2013, which exceeded the AER's budget for that year. The CROIC provisions have subsequently been amended to place more emphasis on benchmarking over the 2009-15 period. This is consistent with the approach adopted by the AER in recent pricing determinations. In our view the AER's primary test should be the assessment of the 'expenditure excess' in total – the testing tool for that the benchmarking data of the Victorian rollout.

The AER explained its prudency assessment in relation to United Energy's 2013 'expenditure excess' in the following terms[8]:

"We have previously stated that the distributors were faced with a number of unforeseeable changes in circumstances in 2013, particularly arising from changes in government policy. Clause 5I.8 sets out circumstances that we may take into account in considering whether and to what extent an expenditure excess reasonably reflects the efficient cost of conducting the AMI rollout. These include the information available, market conditions, regulatory obligations and other matters that we consider relevant. Taking these into account, we view expenditure excesses as "prudent" under clause 5I.7, where: (a) they arose as a result of circumstances that were unforeseeable by the distributor, and (b) the distributor responded to those unforeseen circumstances in an efficient manner."

The AER engaged Energeia to assess United Energy's 'expenditure excess' for 2013, focusing on the high value expenditure categories that were the primary cause of the 'expenditure excess'[9]:

"Energeia's overall assessment approach, directed by us, was to identify the high value, high risk expenditure excesses."

The AER also explained why it considered Energeia's approach to be consistent with the CROIC[10]:

"The Order allows elements of the expenditure excess that are caused by events beyond a distributor's control, but where expenditure is prudent, to be passed through in charges. That Energeia isolated elements of the expenditure excesses that are outside of the distributor's control is consistent with this condition of the Order."

In its 2015 AMI Charges Application, United Energy provided a detailed explanation of the causes of the delay in the AMI program (which were beyond its control) and the measures United Energy took to manage the consequential cost impacts. Based on advice from Energeia, the AER accepted that United Energy faced unforeseeable changes in its circumstances[11]. However, the AER did not regard all of United Energy's responses to be prudent and efficient.

As a consequence, the AER accepted the increase (compared to budget) in the volume of meter installations in 2013, which reflected the delay in the AMI program. However, the AER did not accept United Energy's actual installation costs of $159 per meter. Instead, the AER imposed a benchmark meter installation cost of

8 AER, Advanced Metering Infrastructure 2015 revised charges determination, 12 December 2014, pages 14 and 15.

9 Ibid, page 13.

10 Ibid, page 15.

11 Ibid, page 18.

$125 per meter, expressed in 2013 prices. The AER also rejected United Energy's 2013 project office expenditure. In total, the AER disallowed $10.7 million of United Energy's actual expenditure in 2013.

United Energy has applied the following approach in this submission:

- United Energy accepts the AER's interpretation of the CROIC provisions as set out in the 2015 AMI Charges Determination.
- United Energy accepts the AER's approach to prudency assessment as described in the 2015 AMI Charges Determination.
- United Energy does not challenge the AER's findings in relation to United Energy's 2013 'expenditure excess'.
- United Energy has presented benchmarking data that shows the company to be the lowest cost per meter.

United Energy also notes that the facts regarding the delay in the AMI program and the actions taken by the business to address the cost impacts have been comprehensively described in United Energy's 2015 Charges Revision Application[12]. For the purpose of this Transition Charge Application, United Energy therefore relies on its earlier submission rather than reproducing the same material in this application.

[12] United Energy, 2015 Charges Revision Application, Appendix C, 29 August 2014. See chapter 3 and cross-references to supporting documents.

3. United Energy's 2014 and 2015 AMI expenditure

3.1 High level comparison between actual and budget expenditure

Table 3.1 shows that United Energy's actual AMI expenditure for 2015 was below the AER's budget for that year[13]. In these circumstances, clause 5I.2 of the CROIC requires the AER to accept UE's actual expenditure in 2015 for the purpose of calculating the Transition Charge.

Table 3.1: AMI Budget and actual expenditure for 2015 ($m nominal)

	Actual ($m)	Budget ($m)	Variance($m)
Operating Expenditure	20.17	24.33	(4.16)
Capital Expenditure	9.81	6.11	3.69
Total Expenditure	**29.97**	**30.44**	**(0.47)**

Table 3.2 shows the equivalent information for 2014. In contrast to 2015, United Energy's total expenditure in 2014 exceeded the AER's budget for that year. As explained in Chapter 2, the CROIC allows United Energy to recover the additional costs or 'expenditure excess', providing that it was incurred efficiently.

Table 3.2: AMI Budget and actual expenditure for 2014 ($m nominal)

	Actual ($m)	Budget ($m)	Variance($m)
Operating Expenditure	23.47	23.53	(0.06)
Capital Expenditure	29.67	6.21	23.46
Total Expenditure	**53.14**	**29.74**	**23.40**

The above table shows United Energy's actual operating expenditure was below the AER's budget. Therefore, capital expenditure is the cause of the 'expenditure excess' in 2014 and should be examined in further detail.

Table 3.3 below provides a breakdown of United Energy's capital expenditure in 2014 by category. It shows that the following three categories exceeded the AER's budget and therefore contributed to the 'expenditure excess' in 2014:

- Meter purchases for new connections and the AMI rollout;
- Meter installations; and
- AMI communications.

[13] A certified audit report is attached

Table 3.3: Breakdown of 2014 AMI capital expenditure ($m nominal)

	Actual ($m)	Budget ($m)	Variance ($m)	Percentage contribution to expenditure excess[14]
Accumulation Meters	-	-	-	-
Manually read interval meters	-	-	-	-
Meter purchases	**7.83**	**1.34**	**6.49**	**27.7%**
- New connections	2.09	1.34	0.75	3.2%
- AMI rollout	5.74	-	5.74	24.5%
Meter installations	**16.72**	**-**	**16.72**	**71.5%**
AMI communications	**1.08**	**0.76**	**0.32**	**1.4%**
Metering data services (IT)	4.04	4.12	(0.07)	-0.3%
Total	**29.67**	**6.21**	**23.46**	**100.3%**[15]

As noted in section 2.3, the AER's prudency assessment in relation to United Energy's 2013 expenditure focused on the high value line items that were the largest contributors to the 'expenditure excess'. In this context, it should be noted that the blue highlighted rows in the above table show that:

- meter installations account for 71.5 per cent of the 'expenditure excess' in 2014;
- meter purchases for new connections and the AMI rollout account for 27.7 per cent of the 'expenditure excess' in 2014; and
- AMI communications contributes 1.4 per cent to the 'expenditure excess'.

The AER explained its prudency assessment in relation to United Energy's 2013 'expenditure excess' in the following terms[16]:

> *"We have previously stated that the distributors were faced with a number of unforeseeable changes in circumstances in 2013, particularly arising from changes in government policy. Clause 5I.8 sets out circumstances that we may take into account in considering whether and to what extent an expenditure excess reasonably reflects the efficient cost of conducting the AMI rollout. These include the information available, market conditions, regulatory obligations and other matters that we consider relevant. Taking these into account, we view expenditure excesses as "prudent" under clause 5I.7, where: (a) they arose as a result of circumstances that were unforeseeable by the distributor, and (b) the distributor responded to those unforeseen circumstances in an efficient manner."*

The AER engaged Energeia to assess United Energy's 'expenditure excess' for 2013, focusing on the high value expenditure categories that were the primary cause of the 'expenditure excess'[17]:

14 The contributions shown are percentages of the expenditure excess in 2014 ($23.40 million).

15 As the expenditure excess is $23.40 million, the capital expenditure overspend of $23.46 million contributes slightly more than 100% to the expenditure excess.

16 AER, Advanced Metering Infrastructure 2015 revised charges determination, 12 December 2014, pages 14 and 15.

17 Ibid, page 13.

> *"Energeia's overall assessment approach, directed by us, was to identify the high value, high risk expenditure excesses."*

The AER also explained why it considered Energeia's approach to be consistent with the CROIC[18]:

> *"The Order allows elements of the expenditure excess that are caused by events beyond a distributor's control, but where expenditure is prudent, to be passed through in charges. That Energeia isolated elements of the expenditure excesses that are outside of the distributor's control is consistent with this condition of the Order."*

These elements include:

- Government policy changes; and
- Market condition changes.

As a consequence, the AER accepted the increase (compared to budget) in the volume of meter installations in 2013, (which are offset by significant cost under runs in 2011 and 2012) which reflected the delay in the AMI program. The AER should accept the increase in 2014 (compared to budget) for the same reasons as 2013. The delays experienced prior to 2013 have taken until 2015 to complete. The AMI program has now been completed within the allowances set under the CROIC.

We address meter installations; meter purchases; and AMI communications in the sections below.

3.2 Meter installations

The Government's timetable for the AMI rollout program specified the target completion date as 31 December 2013. United Energy's rollout program and the AER's 2012-2015 budget reflected this target completion date.

The table below shows the planned volume of meter installations, as presented in United Energy's budget application for the 2012-15 period. The table shows that the AMI rollout program was expected to be 95 per cent complete by 31 December 2012, with the remaining 5 per cent to be completed during 2013.

Table 3.4: United Energy's planned AMI meter installation volume 2009-2013[19]

Install – MRO – UED	2009	2010	2011	2012	2013	Total
Single Phase (1 ph 1 element)	11,131	71,453	215,396	104,038	22,128	424,146
Single Phase, two element, off peak	0	0	0	113,218	5,959	119,177
Three Phase Direct connected (3 ph)	1,232	5,794	18,743	41,913	3,796	71,478
Three Phase, two element, Dir. Conn.				12,498	658	13,156
Three Phase CT connected (CT)	0	0	0	2,718	143	2,861
Total	**12,363**	**77,246**	**234,139**	**274,385**	**32,684**	**630,818**
%	2%	12%	36%	44%	5%	100%
Cum. %	2%	14%	50%	95%	100%	-

United Energy's actual meter installation volumes, particularly during 2011 and 2012, were substantially lower than forecast. As already noted, the causes of the delay were beyond United Energy's control. One significant consequence of the delay was to push meter installation volumes into 2014. As the program was

[18] Ibid, page 15.

[19] AMI Budget Application 2012-15, Substantiation of Base Cost to Provide Regulated Services, 25 February 2011, page 53.

planned for completion by 31 December 2013, installation volumes in 2014 were not contemplated in the AER's approved budget for that year.

Given the unavoidable delays in the original program for the AMI meter rollout, an increased volume of meters were required to be installed in 2014. This requirement was specified in clause 14.AA.1 of the CROIC, which mandated the continuation of the AMI rollout program beyond 1 January 2014. Therefore, the efficiency of the meter volume actually installed in 2014 is not in any doubt and has previously been accepted by the AER in its 2015 charges application approval for United Energy.

As already noted, the AER's 2015 AMI Charges Determination accepted the increase in the volume of meter installations in 2013, but did not accept United Energy's installation cost per meter. Instead, the AER accepted Energeia's advice that the efficient benchmark unit cost was $125 per meter installation[20]. In our view, the AER should benchmark outturn actual unit rates across the Victorian businesses and assess whether United Energy's actual unit rate is efficient. We have provided benchmarking evidence that clearly demonstrates that our actual unit rate is the most efficient of all businesses.

For the purpose of this Transition Charge Application, we have applied the AER's determination of the efficient benchmark meter installation cost as a useful comparison. This is a conservative approach, which is likely to understate the extent to which United Energy's actual expenditure is prudent (as demonstrated by the benchmarking results).

To update the AER's 2013 benchmark, we have applied the 2014 annual nominal wage price growth for utilities of 3.6 per cent, as advised by the AER's consultant, Deloitte Access Economics[21]. The equivalent 2014 benchmark cost is therefore $129.50 per meter installation.

Our actual average installation rate for 2014 was $142.49. This compares favourably to the actual 2013 average rate of $166.33[22]. The reason for this improvement is owing to the investment the company made in 2013 to train and mobilise multiple contractors. Given that 2014 was the first full year of the new contractual arrangements the average unit cost for 2014 improved dramatically when compared to 2013. This was foreshadowed in the 2015 Charges Application[23].

The table below shows United Energy's actual installation volumes and expenditure compared to:

- The AER's original budget (set in 2011) for installation expenditure in 2014. This comprises a volume of zero (for the reasons already explained) and a unit cost of $78.19, which we have imputed based on the AER's original unit cost allowance of $75 for installations in 2013.
- The corrected AER budget for 2014, which reflects United Energy's actual installation volume and a benchmark installation unit cost based on the AER's 2015 AMI Charges Determination.

[20] Energeia proposed a 5 per cent margin in addition to the raw benchmark cost of $125 per meter installation. The AER rejected the application of a 5 per cent margin.

[21] Deloitte Access Economics, Forecast growth in labour costs in NEM regions of Australia Report prepared for the AER, June 2015, Table 4.1 page 58.

[22] Appendix C Review and explanation of United Energy 2013 AMI expenditure, lodged to the AER , 31 August 2013

[23] Ibid, page 35

Table 3.5: Efficient meter installation costs, 2014 (nominal)

	Volume	Unit Cost in 2014 prices	Total $m
AER Budget set in 2011	0	78.19[24]	0
United Energy's Actual	117,701	142.07	16.72
"Corrected" AER budget for 2014	117,701	129.50	15.24

From the above table, the following observations can be made regarding the composition of United Energy's meter installation 'expenditure excess' in 2014:

- $6.04 million[25] or 36 per cent of the 'expenditure excess' is explained if the AER's updated benchmark efficient unit cost of $129.50 per meter installation is adopted in preference to the AER's original budget unit cost of $78.19.
- A further $9.20 million[26] or 55 per cent of the 'expenditure excess' is explained by adopting the correct volume of 117,701 meters, rather than the AER's budget of zero.
- $1.49 million or 9 per cent of the 'expenditure excess' is not explained by the above analysis.

While there is a 'gap' of $1.49 million, this analysis adopts the AER's benchmark unit costs without any adjustment (apart from labour escalation). United Energy regards this approach to be conservative.

This 'gap' reflects the AER's decision to provide United Energy with the lowest labour rate approval of any business. For example, Citipower and PowerCor installation rates were approved ranging from $97 to $123 per meter (real 2011) compared to United Energy's approved rate of $78. It is clear that United Energy was too optimistic in its original budget proposal and should not be assessed against that position. The better assessment should be a review of actual costs achieved over the entire period. Benchmarking shows that United Energy is the most efficient business in Victoria.

In support of this, United Energy notes that clause 5I.8A of the CROIC requires the AER's prudency assessment to consider the benchmarking results over the entire 2009-15 period. As explained in Chapter 4, benchmarking and cost performance information provide compelling evidence that United Energy's capital expenditure over the 2009-2015 period is efficient. If this information is taken into consideration, as the AER is required to do, it demonstrates that United Energy's actual expenditure in 2014 reasonably reflect the efficient costs over the entirety of the 2009-15 period, in accordance with clause 5I.7AA of the CROIC.

On this basis, United Energy considers that the AER should accept United Energy's meter installation costs in 2014.

3.3 Meter purchases for AMI rollout and new connections

AMI meters are purchased for the rollout program and 'business as usual' activities, such as new connections and fault replacements. The total expenditure for meter purchases is determined by the meter volume and unit price, which varies by meter type.

[24] The unit cost of $78.19 is the AER's budget determination for 2013, adjusted to 2014 prices by including a labour escalation rate of 3.6 per cent.

[25] This is calculated by applying the actual volume to the difference between the AER's original unit cost ($78.19 per meter) set out in the October 2011 Final Determination for the 2012–15 AMI budget and charges, and the updated AER benchmark of $129.50 per meter.

[26] This is calculated by applying the actual volume to the AER's original unit cost of $78.19 per meter.

In section 3.2, we noted that the AER's 2015 AMI Charges Determination challenged United Energy's unit cost for meter installations. In summary, the AER concluded that United Energy's meter installation costs exceeded the AER's efficient benchmark.

In contrast to meter installation costs, United Energy's unit price for meter purchases was determined through a competitive tender process. In relation to meter purchases, the key role for management is to design and execute the tender process in a manner that is likely to deliver the lowest cost outcome. The key steps in United Energy's approach were:

- Identify nationally and internationally reputable vendors through desk research, specialist advisers and industry reports;
- Issue requests for expressions of interest or proposals to pre-qualify vendors;
- Qualify vendors for short listing through a structured process; and
- Issue requests for tender to qualified vendors, followed by a detailed evaluation and selection process.

After conducting a competitive tender process, Secure Australasia was identified as the successful meter provider. The unit purchase cost of AMI meters is therefore determined by the terms of the contract that was agreed with the successful tenderer, and must be regarded as efficient.

It is also worth recalling that United Energy considered the possibility of engaging a second meter provider in 2011. This option was not pursued as the AER's 2012-2015 AMI budget determination argued that it was not necessary, noting the following advice from its consultant[27]:

"Impaq stated that UE would not require a second meter supplier as it would not face:

- price risk: Secure meters are contracted until 2015. After this period BAU meter volumes are minimal and as such do not justify the [C-I-C] million cost
- supply risk: Secure have multiple factories and as such can produce meters in multiple locations. As such supply risks are mitigated.
- market risk: DNSPs in Victoria and around the world are using Mesh radio meters. As such there would be sufficient competitive pressures within the market."

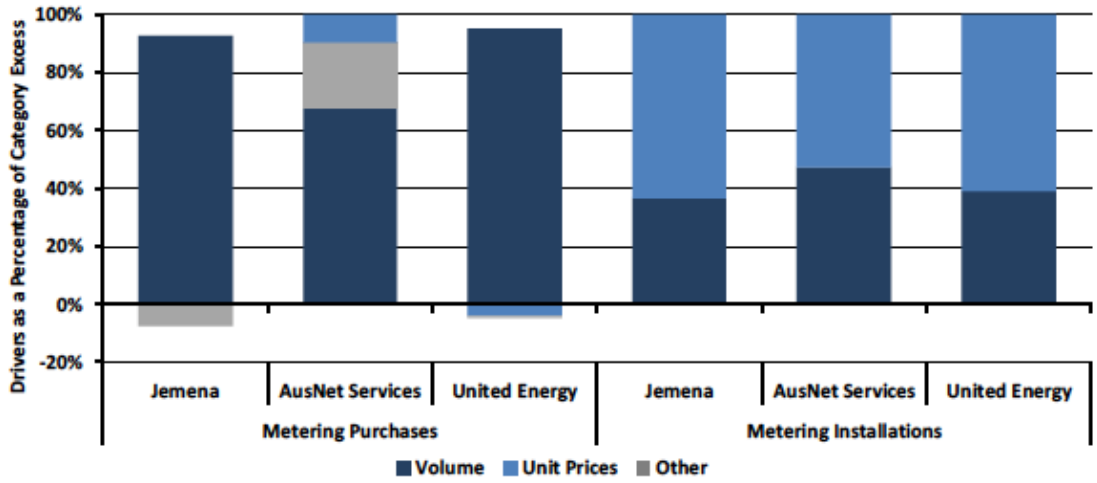
In light of the AER's 2012-2015 AMI budget determination, United Energy retained Secure Australasia as the sole meter supplier for the duration of the AMI rollout program.

While the price of AMI meters is determined by the competitively tendered contract, the annual volume of meter purchases is not fixed. Therefore, United Energy's actual meter purchases in a particular year may differ from the volume assumed in the AER's expenditure budget.

Such a mismatch arose in 2013. In its report for the AER, Energeia confirmed that the volume-driven nature of the 'expenditure excess' for meter purchases did not warrant a detailed prudency review. Energeia highlighted that meter purchases differed from meter installations in this regard, as shown in the figure below.

[27] AER, Final Determination - Victorian Advanced Metering Infrastructure Review 2012–15 budget and charges applications, October 2011, page 161.

Figure 2: Energeia's analysis of meter purchase and meter installation 'expenditure excess'[28]



Energeia's analysis – which relates to the 2013 'expenditure excess' – shows that in United Energy's case, the excess expenditure for meter purchases was entirely volume-driven, whereas the excess expenditure for meter installations was driven by both volume and price effects. The AER accepted Energeia's recommendation that its prudency assessment should be focused on meter installations, not meter purchases.

The circumstances surrounding the 'expenditure excess' for meter purchases in 2014 are unchanged from 2013. For the reasons already outlined, the cause of the increase in costs in 2014 is entirely volume-driven. The key volume forecasting errors in 2014 are summarised below:

- For new connections, actual connections were 11,493 in 2014 compared to the AER's budget forecast of 5,171.
- For meter installations of 117,701, actual meter purchases were 28,968 meters in 2014 compared to the AER's budget forecast of zero.

Importantly, there is not a one-for-one match between the additional installation volumes and the additional meter purchases in 2014. For any particular year, meter purchases will be determined by current stock levels and projected future meter requirements. The table below shows United Energy's meter purchases for 2014, allocated between 'business as usual' meter purchases (for connections and meter faults) and the AMI rollout.

[28] Energeia, Review of Victorian Distribution Network Service Provider's Advanced Metering Infrastructure 2015 Charges Revision Applications Prepared for the Australian Energy Regulator, December 2014, Figure 2, page 58.

Table 3.6: Meter purchases - 2014 (nominal)

	Volume	Average Unit Cost	Total $m
New connections	11,493	$181.85	2.09
AMI rollout	28,968	$198.08	5.75
Total Meter Purchases	**40,461**	**$193.51**	**7.83**

In summary, the excess expenditure relating to meter purchases reflects higher than forecast volumes in 2014. The expenditure has been prudently incurred and should therefore be included in United Energy's AMI building block costs, in accordance with clause 5I.5 of the CROIC.

3.4 AMI communications

AMI communications infrastructure is required in order to operate remotely read meters effectively. The majority of AMI communications equipment was commissioned in 2011. The AER's budget assumed that all access points and repeaters would be purchased and installed by 2012, consistent with the planned completion date of 31 December 2013 for the AMI rollout.

However, the delay in the AMI program led to a number of access points and repeaters being procured and installed later than expected, including in 2014. Some additional infrastructure was also required in 2014 to provide reliable metering data in new developments and sub divisions. As already noted in section 3.3, actual new connections in 2014 were more than double the AER's forecast for that year.

The table below shows that actual AMI communications capital expenditure in 2014 exceeded the budgeted amount by $302,000. In total, the AMI Communications expenditure category contributed approximately 1.4 per cent to the 'expenditure excess' in 2014.

Table 3.7: Difference between forecast and actual capital expenditure ($m nominal)

	Actual ($m)	Budget ($m)	Variance ($m)	Percentage contribution to expenditure excess
AMI communications, 2014	**1.08**	**0.76**	**0.32**	**1.4%**

In summary, United Energy's modest increase in AMI Communications capital expenditure reflects timing delays and volume forecasting errors, similar to those that affected meter installation and meter purchase volumes in 2014. On this basis, United Energy's AMI Communications capital expenditure should be accepted as prudent, in accordance with clause 5I.7 of the CROIC.chmarking and Overall Cost Performance

4. Benchmarking and Overall Cost Performance

Chapter 3 examined each of the capital expenditure categories that contributed to United Energy's 'expenditure excess' in 2014. In summary, the 'expenditure excess' is explained principally by volume forecasting errors, rather than increased unit costs. In relation to the 'expenditure excess' for meter installations, $1.52 million or 9 per cent of the 'expenditure excess' for that category remains unexplained if a benchmark unit cost of $129.50 per meter installation is adopted.

As explained in Chapter 2, following the AER's 2015 AMI Charges Determination, the CROIC was amended to place greater emphasis on benchmarking across the 2009-15 period. United Energy strongly supports this development. In particular, the efficiency of expenditure in a specific year should be assessed within the context of the company's performance over the entire AMI program.

In the remainder of this Chapter:

- Section 4.1 provides benchmarking analysis over the 2009-15 period in accordance with the CROIC requirements; and
- Section 4.2 examines United Energy's cost performance against budget over the 2009-15 period.

This broader analysis provides compelling evidence that United Energy has delivered the AMI program efficiently. The AER's assessment of the 'expenditure excess' for 2014 should consider this broader perspective, in accordance with clause 5I.7AA of the CROIC.

4.1 Benchmarking analysis

In United Energy's 2015 Charges Revision Application, we provided benchmark analysis that explained our relative performance over the 2012-15 period. Based on the best available data at that time, we highlighted that:

- United Energy had the second lowest total capital expenditure across the Victorian distributors;
- United Energy's capital cost per meter was 15% below the Victorian average.

In the figures below, we set out the updated and extended benchmarking results, which cover the period 2009-15 in accordance with clause 5I.7AA of the CROIC. In summary, the benchmarks show that United Energy's cost performance over the 2009-2015 period has delivered the:

- lowest total expenditure per meter; and
- lowest capital expenditure per meter.

Figure 3: Total expenditure per meter, 2009-15

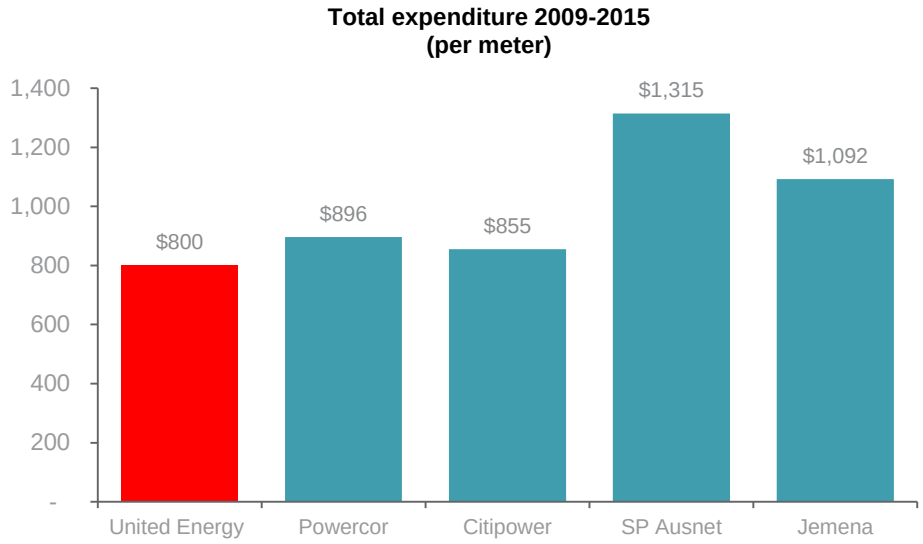
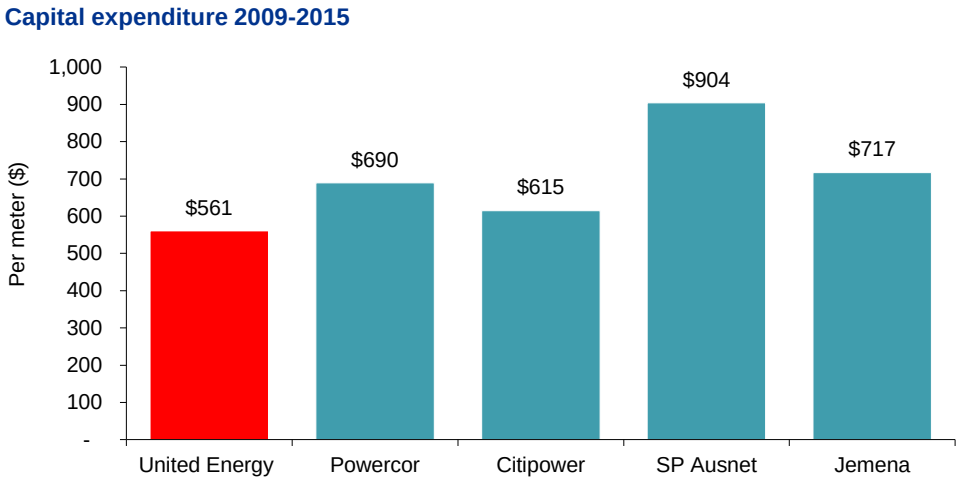


Figure 4: Capital expenditure per meter, 2009-15



United Energy notes that the above benchmarking does not include any adjustments to the raw data to account for differences between the distribution businesses. A case could be made that the raw benchmarks disadvantage United Energy because:

- CitiPower and Powercor operate from a single IT platform, which enables them to spread IT and communications costs across the two businesses; and
- United Energy and Jemena incurred additional capital expenditure in relation to IT systems that other distributors had already upgraded.

We have not made any adjustments to the benchmarks to compensate for these factors. If adjustments were made, the revised benchmarking analysis would show United Energy to be further ahead of its peers.

The benchmarking results set out above provide compelling evidence that United Energy's capital expenditure over the 2009-2015 period is efficient. As the best performing distributor in relation to total

expenditure and total capital expenditure, the AER should conclude that the 'expenditure excess' in 2014 was prudently incurred, in accordance with 5I.7 of the CROIC.

United Energy's superior cost performance is also reflected in the AER's approved meter charges and exit fees in its preliminary determination for the 2016-2020 regulatory period. The table below shows that United Energy's meter charges are the lowest in Victoria for all meter categories. This is a clear demonstration that United Energy's expenditure for the 2009 to 2015 period has been the most prudent of all the Victorian distributors.

Table 4.1: Comparison of Victorian metering charges 2016 to 2020 ($nominal)

	United Energy	Powercor	Citipower	Jemena	Ausnet
Single Phase	$91.55 to $70.60	$94.91 to $74.07	$94.64 to $76.29	$130.42 to $123.89	$131.21 to $86.04
3 phase DC	$103.24 to $79.62	$125.19 to $97.70	$123.71 to $99.72	$160.27 to $152.25	$202.07 to $132.51
3 phase CT	$109.38 to $84.35	$166.18 to $129.69	$156.25 to $125.95	$177.87 to $168.97	$260.10 to $170.56

The table below shows that United Energy's exit fee charges are the lowest in Victoria. As set out in the meter charges table above, the exit fee range commences with the charge at the beginning of the regulatory period, which declines over time.

The exit fees shown focus on the meter and non-meter RAB elements and therefore excludes any administration fees, which are not related to actual capital expenditure incurred. The table below demonstrates again that United Energy's expenditure incurred during the 2009 to 2015 period is the most efficient of all Victorian businesses.

Table 4.2: Comparison of Victorian exit fee charges 2016 to 2020 ($nominal)

	United Energy	Powercor	Citipower	Jemena	Ausnet
Single Phase	$287.21 to $152.85	$352.74 to $231.29	$319.85 to $202.90	$325.18 to $168.12	$442.26 to $250.29
3 phase DC	$339.80 to $195.52	$463.62 to $316.56	$393.01 to $263.20	$344.56 to $193.66	$536.66 to $342.40
3 phase CT	$505.55 to $304.51	$1,032.80 to $790.47	$1,063.09 to $998.90	$347.31 to $189.14	$605.03 to $426.47

The results compared to Powercor and Citipower are surprising given that these two companies completed the roll out of meters before United Energy. By completing the roll out earlier they would have depreciated the assets by at least 12 months longer, which would imply lower exit fees (opening 2016 RAB). The reason they do not have a lower exit fee is a result of the superior cost performance of United Energy during the 2009 to 2015 period.

4.2 Overall cost performance for the 2009-15 period

The analysis in Chapter 3 focused on variances between actual and budget expenditure in 2014. The purpose of this section is to take a broader perspective by examining this variance over the 2009-15 period:

- For total operating and capital expenditure; and

- For meter purchases and installation expenditure, noting that these two categories account for 99 per cent of the 'expenditure excess' in 2014.

In relation to total operating and capital expenditure, the tables below show United Energy's annual expenditure compared to the amount that would be automatically accepted as 'prudent', in accordance with clause 5I.5 of the CROIC. The tables below clearly demonstrate that the 'expenditure excess' in 2014 is the result of timing issues across the period rather than inefficiencies. In particular, the 'expenditure excess' in 2014 (and 2013) are clearly offset by the under expenditure in 2011 and 2012.

Table 4.3: United Energy's actual operating expenditure against CROIC budget 2009-15 ($m nominal)

	2009	2010	2011	2012	2013	2014	2015	Total
Actual	14.02	16.01	27.36	28.99	25.89	23.47	20.17	**155.91**
CROIC Allowance	9.14	17.22	25.94	30.52	25.67	23.53	24.33	**156.34**
Variance	4.89	-1.21	1.42	-1.53	0.22	-0.06	-4.16	**-0.43**

Table 4.4: United Energy's actual capital expenditure against CROIC budget 2009-15 ($m nominal)

	2009	2010	2011	2012	2013	2014	2015	Total
Actual	73.62	59.03	69.57	62.95	61.03	29.67	9.80	365.67
CROIC Allowance	82.39	65.53	91.50	102.48	18.25	6.21	6.11	372.48
Variance	-8.77	-6.50	-21.93	-39.53	42.77	23.46	3.69	-6.81

The tables above indicate that despite the significant challenges in delivering the AMI program, United Energy's total operating and capital expenditure over the 2009-15 period is less than the CROIC allowance. While this analysis does not 'prove' that the 'expenditure excess' in 2014 was incurred prudently, it provides compelling evidence regarding United Energy's overall efficiency.

A more focused analysis is presented below, which concentrates on the CROIC allowance for meter purchases and meter installations. In this case, United Energy's total expenditure is less than $20m below the CROIC allowance (approximately 9.0 per cent) over the 2009 to 2015 period. In other words, the significant 'expenditure excess' in 2014 reflects a timing difference, rather than an increase in total expenditure.

Table 4.5: Analysis of meter purchase and installation expenditure 2009-15 ($m nominal)

	2009	2010	2011	2012	2013	2014	2015	Total
Actual	6.41	20.66	42.57	49.83	55.77	24.55	3.24	202.93
CROIC Allowance	3.89	34.74	82.10	89.82	9.46	1.34	1.37	222.72
Variance	2.52	-14.08	-39.53	-40.09	46.31	23.21	1.87	-19.79

As meter installations and purchases comprise 99 per cent of the 'expenditure excess' in 2014, the above table provides compelling evidence in support of the prudency of United Energy's 2014 actual expenditure.

The analysis in Chapter 3 deliberately adopted a conservative approach in estimating prudent expenditure by adopting the AER's conclusions from its 2015 AMI Charges Determination without any adjustment (apart from labour rates). There is strong evidence from the information presented above that United Energy's

overall cost performance is the best amongst its peers and compares well against the 2009-2015 AMI budget. In aggregate, the evidence presented demonstrates that United Energy's expenditure is prudent.

5. Proposed Transition Charge

5.1 Proposed inclusion of 2014 and 2015 actual expenditure

As explained in Chapter 2, the CROIC provides for the automatic recognition of United Energy's actual expenditure if it is within the AER's budget for that year. Section 3.1 showed that United Energy's actual AMI expenditure for 2015 was below the AER's budget for that year, so the CROIC requires, United Energy's actual expenditure in 2015 to be included in the AER's building block calculation.

For 2014, however, the situation is more complex because United Energy's actual expenditure exceeded the AER's budget for that year. In these circumstances, the AER must be satisfied that the additional expenditure has been prudently incurred if the costs are to be recovered from customers.

In this submission, United Energy has demonstrated that the 'expenditure excess' in 2014 has been prudently incurred. United Energy has applied the AER's earlier approach and its findings to explain the 'expenditure excess' in 2014. This is a conservative approach, which is likely to understate the extent to which United Energy's actual expenditure is prudent.

To summarise:

- Chapter 3 focused on 2014 expenditure and the expenditure categories that contributed to the 'expenditure excess' in that year. Without changing any of the AER's earlier findings, it concluded that $21.88 million[29] or 93.5 per cent of the $23.4 million 'expenditure excess' in 2014 was demonstrably prudent.
- Chapter 4 presented benchmarking and cost performance against the budget for the 2009-15 period in accordance with the CROIC. It shows that United Energy has delivered the AMI program with the lowest expenditure per meter and the lowest capital expenditure per meter. As the lowest cost performer, United Energy's meter charges and exit fees are also the lowest in Victoria. United Energy's expenditure also compares very favourably with the budget over the 2009-15 period.

In summary, the information presented in this submission demonstrates that United Energy's 'expenditure excess' in 2014 was prudently incurred. United Energy has therefore adopted its actual expenditure for 2014 (and 2015) in calculating the Transition Charge. We have also used the model which we supplied with our revised Regulatory Proposal on 6 January 2016 as a basis of the price calculation for 2017. This model differs from the AER's Preliminary Determination model in areas of cost of capital and the transfer of costs to Standard Control Services.

5.2 Transition Charge Calculation

The Transition Charge is essentially a 'true up' mechanism that corrects for any difference between United Energy's approved AMI expenditure over the 2009-15 period and the revenue obtained from AMI metering charges. United Energy has completed the AER's spreadsheet model, which is provided to the AER alongside this submission.

The resulting Transition Charge of $0.48 million must be added to the AER's revenue cap for metering charges, which will be determined in the EDPR. This is approximately $0.72 per customer.

The table below shows United Energy's expected meter charge for 2017, including the Transition Charge.

[29] As noted in section 3.2, only $1.52 million could not be readily explained by applying the AER's benchmark unit cost to United Energy's actual volume.

Table 5.1: Proposed meter charges for 2017 ($m nominal)

	Proposed meter charge ($)	Preliminary Determination meter charge
Single phase single element meter	$63.55	$85.78
Single phase single element meter with a contactor	$63.55	$85.78
Three phase direct connected meter	$71.67	$96.74
Three phase current transformer connected meter	$75.93	$102.50

Note that the 2017 charge is forecast to be lower than the AER's preliminary determination mainly due to opex being transferred to Standard Control consistent with UE's Revised Regulatory Proposal lodged on 6 January 2016.

6. Audit requirements

Under the CROIC, actual revenue and costs relating to 2014 and 2015 must be audited. The actual revenue and expenditure is to be derived from UE's Regulatory Accounting Statements and must be allowed except for any part the AER can establish is not attributable to the provision, installation, maintenance and operation of advanced metering infrastructure and associated services and systems.

UE engaged Ernst & Young to audit the 2014 and 2015 Regulatory Accounts including the costs and revenues attributable to AMI services. Ernst & Young concluded that the expenditures and revenues for 2014 and 2015 are:

> *"in all material respects, in accordance with paragraph 5H.2, 5I.2 and 5I.3 of the Advanced Metering Infrastructure Order in Council 2008 dated 25 November 2008 (as amended from time to time and consolidated at 30 July 2015), and provides the expenditures incurred, and revenues generated, by UED on the Advanced Metering Infrastructure project for the years ended 31 December 2014 and 31 December 2015."*

A copy of the audit letter for the purposes of this revised charges application for 2014 and 2015 expenditure and revenue is included in Appendix A.

In addition to the statement made above in relation to expenditure, Ernst & Young has concluded that the revenue attributed to AMI services is a correct account of revenue attributed for AMI services for the 2014 and 2015 calendar years. This sign off was included as part of the 2014 and 2015 regulatory accounting audit.

In accordance with clause 5I.2, UE can confirm that actual expenditure for 2014 and 2015 satisfies the necessary conditions. Details are provided in Appendix A of this application.

7. Appendices

Appendix A: EY Audit Report

Appendix B: AMI Submission Transitional charge – excel model

Appendix C: Calculation of 2017 price – excel model

Appendix D: Victorian AMI Benchmarking data – excel model

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Building a better working world

Independent auditor's report to the members of United Energy Distribution Pty Ltd

We have audited the attached Advanced Metering Infrastructure Order In Council 2008 expenditures and revenues of United Energy Distribution Pty Ltd ("UED") for the years ended 31 December 2014 and 31 December 2015 specified in tab "DNSP Data Inputs 2013-15" of the spreadsheet entitled AMI Submission Transition Charge ("the Cost Schedule"). The Cost Schedule has been prepared by the Directors of the company based upon the requirements of paragraph 5H.2, 5I.2 and 5I.3 of the Advanced Metering Infrastructure Order in Council 2008 dated 25 November 2008 (as amended from time to time and consolidated at 30 July 2015).

The requirements of the Cost Schedule are set out in paragraph 5H.2, 5I.2 and 5I.3 of the Advanced Metering Infrastructure Order in Council 2008 dated 25 November 2008 (as amended from time to time and consolidated at 30 July 2015).

The expenditures and revenues of United Energy Distribution Pty Ltd ("UED") for the years ended 31 December 2014 and 31 December 2015 specified in tab "DNSP Data Inputs 2013-15" has been prepared for inclusion in the Cost Schedule and is used as a financial performance measure of United Energy Distribution Pty Ltd.

Directors' Responsibility for the Cost Schedule

The directors of the company are responsible for the preparation of the Cost Schedule and have determined that the basis of preparation is appropriate to meet the requirements of the Advanced Metering Infrastructure Order In Council 2008 dated 25 November 2008 (as amended from time to time and consolidated at 30 July 2015) and the needs of the members. The directors are also responsible for such controls as they determine are necessary to enable the preparation of the Cost Schedule that is free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on the Cost Schedule based on our audit. We conducted our audit in accordance with Australian Auditing Standards. Those standards require that we comply with relevant ethical requirements relating to audit engagements and plan and perform the audit to obtain reasonable assurance about whether the Cost Schedule is free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the Cost Schedule. The procedures selected depend on our judgment, including the assessment of the risks of material misstatement of the Cost Schedule, whether due to fraud or error. In making those risk assessments, we consider internal controls relevant to the entity's preparation of the Cost Schedule in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal controls. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by the directors, as well as evaluating the overall presentation of the Cost Schedule.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Independence

In conducting our audit we have complied with the independence requirements of the Australian professional accounting bodies.

Opinion

In our opinion the Cost Schedule is prepared, in all material respects, in accordance with paragraph 5H.2, 5I.2 and 5I.3 of the Advanced Metering Infrastructure Order in Council 2008 dated 25 November 2008 (as amended from time to time and consolidated at 30 July 2015), and provides the expenditures incurred, and revenues generated, by UED on the Advanced Metering Infrastructure project for the years ended 31 December 2014 and 31 December 2015.

Basis of Accounting and Restriction on Distribution

Without modifying our opinion, we draw attention to the Basis of Preparation for the Cost Schedule detailed in the "Audit Requirements" of United Energy's 2016 AMI Transition Charge Application which describes the general approach to collecting and preparing information. The Cost Schedule is prepared to assist United Energy Distribution Pty Ltd to meet the requirements of the Notice. As a result, the Cost Schedule may not be suitable for another purpose. Our report is intended solely for United Energy Distribution Pty Ltd and the Australian Energy Regulator and should not be distributed to any other parties.

Ernst & Young

Ernst & Young
Melbourne
25 May 2016