

Determination

Advanced Metering Infrastructure

2014 revised charges

31 October 2013

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# Summary

The Australian Energy Regulator (AER) assessed proposals by five licenced Victorian distribution network service providers (the businesses) to revise their 2014 advanced metering infrastructure (AMI) charges against the AMI Order in Council provisions (AMI Order).

1. The five businesses—CitiPower, Powercor, Jemena, SP AusNet and United Energy—are responsible for the rollout of smart meters in Victoria. The AMI Order requires them to use their best endeavours to complete the rollout by December 2013 as part of a State government mandated rollout of smart meters.

Background

1. We forecasted the 2014 charges for these services when we originally set the AMI budgets for the 2012–2015 period in October 2011 (2012–15 Approved Budget).[[1]](#footnote-1) That budget forecast both capital and operating expenditure that each distribution network service provider (DNSP) would need to acquire and upgrade assets for the AMI roll out, such as expenditures on information technology and communications. We also set out forecast AMI charges for each year of the 2012–15 budget period that would enable the DNSPs to fully recover the forecast expenditures by the end of the 2012–15 budget period.

The AMI charges we set in the 2011 final determination were based on forecast expenditures. Hence, the DNSPs are required to revise the charges to apply in the next year using actual expenditures and any forecast expenditure updates. The AMI Order requires the DNSPs to submit these 'charges revision applications' to the AER by 31 August each year for charges to apply in the subsequent years of the 2012–15 budget period. We must then make a determination on these applications by 31 October each year.

1. SP AusNet sought review of the AER's AMI determination for 2012–15. On 26 April 2012, the Australian Competition Tribunal (Tribunal) set aside part of the AER's October 2011 Final Determination. The Tribunal ordered the AER to allow an amount for foreign exchange contracts and project management labour costs in SP AusNet's 2012–15 Approved Budget.
2. This remittal decision resulted in an amendment to the Final Determination Approved Budget in favour of SP AusNet by $17.5 million ($2011).[[2]](#footnote-2) This amendment did not include switching costs for WiMax ($72.2 million) which the AER did not accept.[[3]](#footnote-3) The WiMax switching costs are currently under judicial review.

Review of 2014 AMI charges revision applications

1. The AER is required to accept the charges revisions proposed by the Victorian businesses if three criteria are met, namely that the expenditure for 2012 is:

* certified by an auditor
* in relation to matters that are within the scope of the AMI Order
* does not exceed the approved budget.[[4]](#footnote-4)

1. As we describe below, we reviewed the businesses’ AMI charges revision applications and consider they met these three criteria. As such, we must approve the revisions as proposed.
2. All businesses included audit reports in their applications that certified the veracity of 2012 expenditure. From our assessment, which included correspondence with the businesses, we consider this expenditure is within scope of the AMI Order.

We reviewed their actual expenditures in 2012 against the expenditures approved for that year in the 2012–15 Approved Budget. Actual total expenditures (capex and opex) were below the forecast expenditures in the Approved Budget for all businesses by between 0.6 per cent and 30.8 per cent. The average underspend was 9.3 per cent.[[5]](#footnote-5) Section 3.1 discusses their AMI expenditure in more detail.

1. CitiPower and Powercor's AMI charges for 2014 are 8.6 per cent and 9.8 per cent lower in nominal terms than their 2013 charges, respectively. Jemena, SP AusNet and United Energy's charges have increased by 11.8 per cent, 22.8 per cent and 13.6 per cent, respectively. Section 4 sets out the AMI charges that will apply for the period 1 January to 31 December 2014. Note that the 2015 charges represent an estimate based on current information and may be amended by the businesses in their charges revision applications to be lodged with us in August 2014.

Other matters

1. The businesses made a joint submission on the return on capital to apply to the charges revision applications for 2014 and 2015.[[6]](#footnote-6) Section 3.2 details our consideration of the rate of return. The joint submission included the businesses' consideration of the debt raising costs. Section 3.3 details our finding on this issue.

We also note some businesses anticipate AMI expenditure that is greater than the approved expenditure in the 2012–15 Approved Budget for some or all of the years between 2013 and 2015.[[7]](#footnote-7) In these cases, we will be required to assess this expenditure excess against the requirements of the AMI Order in future charges revision applications.[[8]](#footnote-8)

# Legislative framework

1. Clause 5G.3 of the AMI Order requires the AER to make a determination of the revised charges to apply by 31 October each year.
2. Clause 5H.1 of the AMI Order provides that amongst other things charges revision applications include actual AMI expenditure and revenue for 2012 and contain an updated forecast of AMI expenditure and revenue for the remaining years of the subsequent (2012–15) AMI budget period.
3. Charges revision applications must also be accompanied by an audit report that is consistent with clause 5H.2 of the AMI Order, including certifying that:

* the actual expenditure incurred is for activities within scope; and
* the actual expenditure incurred has been incurred in the amount claimed.

1. Clause 5I.2 of the AMI Order specifies how the AER must determine the building blocks in making a determination in response to a charges revision application. In particular, clause 5I.2 states:
2. 5I.2 In determining the building blocks the Commission must:

include actual capital expenditure and actual maintenance and operating expenditure for year t–1 where actual Total Opex and Capex for that year:

is certified in an audit report under clause 5H.2;

Note: An audit report provided for the purposes of this clause is not conclusive as to whether expenditure is for activities that are within scope.

is for activities within scope at the time of commitment to or incurring of that expenditure; and

in the case of the initial AMI budget period, is up to 120 per cent of the Approved Budget for that year or in the case of the subsequent AMI budget period, does not exceed the Approved Budget for that year; and

where year t–1 is the year commencing 1 January 2009 also include the expenditure determined pursuant to clause 5D.4.

Note: Clause 5D.4 provides for the making of a determination with respect to certain items of expenditure that have been incurred between 1 January 2006 and the Start Date.

1. As such, in applying clause 5I.2 we must make an assessment of how much of the actual expenditure should be included in the building blocks used to determine charges. In making this assessment, we turn our mind to the following:

* whether the actual expenditure for the period 1 January 2012 to 31 December 2012 is within the scope of activities allowed by the AMI Order;
* and whether the expenditure does not exceed the approved budget in the subsequent budget period (2012–15).[[9]](#footnote-9)

1. Where satisfied of these matters, we then must include this actual expenditure in determining charges in accordance with the building block model.
2. The AMI Order permits us to include in the building blocks the amount of any excess in expenditure (expenditure excess) for the 2012–15 subsequent budget period provided clauses 5I.7A, 5I.7B and 5I.8 are satisfied.

These clauses detail the approach that must be taken in making an assessment of whether ‘expenditure excess' is prudent. They require us, among other things, to make an assessment on the circumstances and information available to the business at the time of incurring the expenditure excess and the nature of any competitive tender process undertaken.[[10]](#footnote-10)

Clause 4.1(j) of the AMI Order requires us to determine the weighted average cost of capital (WACC) to apply in 2014 and 2015. Clause 2.1 defines the WACC so as to require the AER to use the formula in clause 6.5.2(b) of the National Electricity Rules (version 52). The formula in clause 6.5.2(b) sets out calculations for the cost of debt and cost of equity, but makes no mention of debt or equity raising costs.

Clause 4.1(j) of the AMI Order requires WACC parameters to be consistent with the AER's Statement of Regulatory Intent (the Statement) unless there is persuasive evidence justifying a departure.

The businesses must submit their charges by 31 August and the AER must decide on those charges no later than 31 October in the year before they take effect, as per clauses 5G.2 and 5G.3.

# Key findings

## Assessment of Expenditure

The actual expenditure in 2012 was less than the approved budget for that year for all of the businesses. Table 3.1 compares their actual expenditure with the expenditure set out in the approved budget.

Table 3.1 Comparison of 2012 approved and actual expenditure ($nominal)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | CitiPower | Powercor | Jemena | SP AusNet | United Energy |
| Actual | $55,976,335 | $142,052,317 | $49,556,540 | $181,029,383 | $91,944,131 |
| 2012-15 Approved budget | $56,319,041 | $142,989,936 | $56,405,408 | $184,750,516 | $132,999,171 |
| Difference | -$342,705 | -$937,619 | -$6,848,867 | -$3,721,133 | -$41,055,040 |
| Difference (per cent) | -0.6 | -0.7 | -12.1 | -2.0 | -30.9 |

Source: Victorian businesses AMI charges revision applications 2014.

The table shows the businesses' actual expenditure for 2012 was between 0.6 per cent and 30.8 per cent below the approved budget. Our assessment revealed some businesses’ expenditure for sub-components (opex or capex) exceeded those in the approved budget. Specifically, CitiPower's and SP AusNet's actual opex for 2012 exceeded the approved budget by $1.2 million (nominal) and $2.3 million (nominal), respectively. Powercor's actual capex for 2012 exceeded the approved budget by $1.7 million (nominal).

Nevertheless, our approval of expenditure is at the total level, not a sub-category analysis. We must accept an application if actual total expenditure does not exceed the approved budget (among other criteria). The businesses fulfil these criteria of the AMI Order.

1. During our assessment, we found several issues with some figures in the businesses' AMI charges revision applications. In many cases, these related to variances between figures in their applications and their regulatory accounts.[[11]](#footnote-11) We discussed these issues with them and consider they addressed our concerns.[[12]](#footnote-12) Some of the more substantial issues we discussed included:

* Jemena's AMI charges model contained a negative figure for the 'Other' subcategory of its 2013 capex forecast
* The total revenue amount in SP AusNet’s AMI charges application model is higher than the amount in its regulatory accounts by $10.96 million.

1. Jemena explained that the 'Other' capex category in 2013 contains an underlying cost forecast offset by a lump sum credit. The lump sum credit was larger than the cost forecast resulting in the negative figure. Following the AER’s inquiry, Jemena undertook a more detailed investigation of the credit. Jemena subsequently provided a revised charges application model that correctly allocates the payments between the capex categories. The total capex for 2013 remained unchanged.[[13]](#footnote-13) We consider Jemena's response addresses our concerns.
2. SP AusNet explained that due to an escalation error, the tariff revenue presented in its revised charges application was overstated by $10.96 million. That is, the actual tariff revenue in calendar year 2012 was $83.59 million (nominal), the same figure as reported in SP AusNet’s regulatory accounts. By overstating the actual revenue collected in 2012, the proposed charges under-recover required revenues. We consider SP AusNet's response addresses our concerns and we incorporated the correction to their revenue in our assessment of SP AusNet's application. Correcting for this over-statement of the 2012 revenue results in a slight increase to SP AusNet’s AMI Charges in 2014 and 2015.[[14]](#footnote-14)

## Rate of return

### Decision

This section sets out the AER's approach to assessing the weighted average cost of capital for advanced metering infrastructure for 2014 and 2015. The AMI Order refers to this as the subsequent AMI WACC period.[[15]](#footnote-15) The WACC represents the rate of return earned by the businesses on their AMI investment.

We approve the businesses’ proposal for all WACC parameters, except the proposed market risk premium (MRP) of 7.28 per cent and the value of the debt risk premium (DRP). We have decided not to depart from the MRP of 6.5 per cent set out in the 2009 Statement of Regulatory Intent (the Statement). Updating for the risk free rate and debt risk premium calculated during the agreed averaging period of 16 September to 11 October 2013 inclusive, the AMI WACC applicable to setting AMI charges in 2014 and 2015 is 7.57 per cent.[[16]](#footnote-16) The individual AMI WACC parameters are set out in Table 3.2.

Table 3.2 AMI WACC parameters, 2014 and 2015

|  |  |  |
| --- | --- | --- |
| Parameter | Businesses' proposal | AER decision |
| Risk free rate | 4.02% | 4.02% |
| Debt risk premium(a) | 2.62% | 2.45% |
| Equity beta | 0.8 | 0.8 |
| Market risk premium | 7.28% | 6.50% |
| Value of debt as a proportion of the value of equity and debt | 60% | 60% |
| Forecast inflation | 2.47% | 2.47% |
| Company income tax rate | 30% | 30% |
| Franking credits value (Gamma) | 0.25 | 0.25 |
| Nominal Vanilla WACC | 7.92% | 7.57% |

Source: Businesses’ AMI WACC submission and AER analysis. (a) Note on 23 October 2013, UE submitted a revised application for the AMI 2014 charges. Different to the other businesses, it proposed a DRP of 3.04 per cent, which produced a nominal vanilla WACC of 8.17 per cent.

### Assessment approach

1. Except for the MRP and debt risk premium (DRP), the businesses' proposal was consistent with the Statement, relevant tribunal decisions and recent AER decisions. As a result, our assessment focussed on the businesses' proposal to depart from the Statement's value for MRP. We also observed that the businesses used a slightly different approach to calculate the debt risk premium to our standard approach. We have adopted our standard approach in setting that parameter (see section 3.2.3).
2. Ordinarily, our approach to assessing the MRP is especially detailed. For example in the recent Victorian Gas Access Arrangement Review we provided approximately 100 pages of detailed reasoning relating to each of the following :

* Historical excess returns
* Academic research on excess return predictability
* Survey evidence
* Forward looking MRP measures
* Recent Tribunal decisions
* Consultant advice
* Recent decisions among Australian regulators

1. As part of this we also undertook a significant level of detailed analysis. This included holding discussions with stakeholders, two rounds of submissions, issuing a draft decision and a pre-determination conference explaining the draft decision. This provided a comprehensive opportunity for stakeholder review and engagement.
2. Taking this approach, we were able to obtain all stakeholders' views, undertake comprehensive analysis of all of the evidence, including expert advice which was subject to separate scrutiny from interested parties and deliver a well-reasoned decision. We consider taking such an approach in deciding whether to depart from the Statement is preferable, given the disputed nature of the evidence in relation to this issue and the WACC more generally and the substantial impact MRP and other WACC parameter decisions can have on regulated revenues and network prices.
3. It is relevant in this case that the current decision making process has substantially curtailed our ability to use our usual assessment approach to determine whether a departure from the Statement is justified. We received the businesses' AMI WACC submission (including 49 substantial attachments) on 30 August 2013. We must publish our decision no later than 31 October 2013. In that time, it was not practically possible to implement the processes we normally use for a decision which would involve a significant re-assessment of the MRP. It has not been possible to prepare a draft determination, provide stakeholders with the opportunity to make submissions on the draft and consider those submissions. It has also not been possible to obtain the expert advice we ordinarily seek and have it fully aired with interested parties and seek submissions on such advice.
4. We had assessed much of the businesses' material in previous determinations. However, there was also substantial new material. We have considered this material. However, it was not possible to subject all this material to the type of scrutiny that we would normally apply.

### Reasons for decision

1. Except for the value of the MRP and the DRP, the AER accepts the businesses' AMI WACC proposal. This is because aside from the two exceptions, the remaining aspects of the businesses' proposal are consistent with the Statement, relevant tribunal decisions and recent AER decisions, see Table 3.3.

Table 3.3 Method and decision on various WACC parameters

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Parameter | 2009 Statement of Regulatory Intent | Tribunal decisions | Businesses' AMI WACC proposal | AER decisions |
| Method for calculating risk free rate | 10 year CGS yield calculated based on the agreed averaging period | N/A | 10 year CGS yield calculated based on the agreed averaging period | 10 year CGS yield calculated based on the agreed averaging period |
| Method for calculating debt risk premium | N/A | 7 year Bloomberg BBB yield extrapolated to 10 year | 7 year Bloomberg BBB yield extrapolated to 10 years using paired bond analysis (CEG method) | 7 year Bloomberg BBB yield extrapolated to 10 years using paired bond analysis (PwC method) |
| Equity beta | 0.80 | N/A | 0.80 | 0.80 |
| Value of debt as a proportion of the value of equity and debt (per cent) | 60 | 60 | 60 | 60 |
| Forecast inflation (per cent)[[17]](#footnote-17) | N/A | N/A | 2.47 | 2.5 |
| Company income tax rate (per cent) | 30 | 30 | 30 | 30 |
| Franking credits value (Gamma) | 0.65 | 0.25 | 0.25 | 0.25 |

Source: AER, 2009 Statement of Regulatory Intent, DNSPs' AMI WACC submission, AER analysis.

Note: the businesses used different bonds to calculate the DRP during two separate submissions to the AER. We rejected that and instead adopted our standard bond selection approach to calculate this parameter.

1. For MRP, we have decided that a departure from the statement's value of 6.5 per cent is not justified. As a result, we have not approved the businesses’ proposal of 7.28 per cent for the MRP. We have set out our reasons below.

Market risk premium

1. The MRP is the expected return over the risk free rate that investors require to invest in a well-diversified portfolio of risky assets. It represents the risk premium that investors who invest in such a portfolio can expect to earn for bearing only non–diversifiable (systematic) risk. The MRP is common to all assets in the economy and is not specific to an individual asset or business.
2. The MRP cannot be directly observed. As a result, it is necessary to estimate the MRP. There are some methodologies available to inform views about investor expectations of the MRP. These include:

* examining historical excess returns
* conducting surveys of the MRP used by practitioners and academics
* employing a Dividend Growth Model (DGM) and
* using other financial market indicators such as an implied volatility approach.

1. Academic literature as well as reports put forward by regulated entities recognise that the available evidence that can be used to estimate the MRP (including that listed above) is imprecise and subject to varied interpretation.[[18]](#footnote-18) There is no consensus among experts on either the appropriate methodology or the assumptions for different methodologies to be used in estimating the MRP. In addition, each of these methodologies has strengths and deficiencies.
2. As mentioned above, the businesses' AMI WACC submission included 49 substantial attachments. Largely, the submission and attachments updated or furthered previous submissions. The new material:

* Proposed using a specific dividend growth model as the primary method to estimate an MRP of 7.28 per cent in current market conditions
* Criticised earlier advice in relation to the use of the dividend growth model
* Updated survey evidence (takeover valuation reports)
* Submitted that the historical estimates used by the AER has a downward bias
* Submitted that the return on Commonwealth Government Securities (CGS) currently has a negative beta and that the beta varies over time.

1. Based on these points, the businesses proposed to depart from the Statement's MRP of 6.5 per cent and substitute 7.28 per cent.
2. In the time available we have reviewed this material to the extent possible. We have particularly focussed on that which is new or additional to that which we have considered previously. Our review has raised some specific concerns. They include:

* SFG's dividend discount model is relatively complex and lacks transparency. Also, as the Tribunal and the courts have noted, there is no single method for calculating the MRP.[[19]](#footnote-19)
* On survey evidence, the takeover valuation reports are only one of several different sources of survey evidence.
* The Competition Economist Group (CEG) criticises the use of a historical MRP by reference to CGS having a time varying and currently negative beta. However, the AER does not solely rely on the historical estimate of the MRP in its determinations on WACC.

1. We recognise that the new material certainly adds to the discourse on the MRP. Nevertheless, it does not decide it. Moreover, we are not satisfied that this material is more than a group of consultants' views in an area where expert views often differ. As a result, we have concluded that this evidence does not justify a departure from the Statement, to an MRP value of 7.28 per cent.
2. Also, since the Statement, several of our MRP decisions have provided detailed analysis to support a finding that there is persuasive evidence justifying a departure from the Statement for an MRP value of 6 per cent. While applying a different legal test, the Tribunal, in various reviews of our decisions, has found that an MRP of 6 per cent is open on the evidence.[[20]](#footnote-20) This analysis involved looking at a range of evidence including:

* Historic returns to estimate forward looking MRP
* Dividend growth model estimates
* Survey evidence
* using other financial market indicators such as an implied volatility approach.

1. Therefore, there has been persuasive evidence justifying a departure from the Statement in the opposite direction from that which the businesses propose in their submission.
2. Given these factors, our consideration of the body of evidence on MRP (both from previous decisions and in the businesses' submission) leads to the conclusion that departing from the Statement for this decision is not justified. Therefore, we have decided for this specific decision, to use the Statement's MRP value of 6.5 per cent.
3. Importantly, we note that this AMI WACC decision is not to be taken as representing or indicating what MRP value we may adopt in future determinations, including under the current National Electricity Rules and National Gas Rules. The previous rules requirements relevant to this decision—in particular the need for persuasive evidence to depart from the Statement and the very short decision making timeframes—are unique to this AMI decision. For our future distribution and transmission determinations, under the national energy regime, our starting point for consideration on the MRP as well as all the other WACC parameters will be our rate of return guideline. We plan to release our final rate of return guideline in mid-December 2013.[[21]](#footnote-21)

Calculation of debt risk premium

1. We accept the businesses proposed DRP benchmark based on an Australian corporate fixed rate bond issuance with a term to maturity of 10 years and a BBB+ credit rating. However, we do not accept their paired bonds selection to extrapolate the Bloomberg BBB fair value curve from seven to 10 years based on the analysis undertaken by the CEG.[[22]](#footnote-22) Nor do we accept United Energy’s revised submission of 23 October 2013 proposing to use CEG’s Nielson-Siegel yield curve to calculate the DRP.[[23]](#footnote-23) We have consistently applied the PricewaterhouseCoopers (PwC) selection criteria to identify the paired bonds for this extrapolation in recent regulatory decisions.[[24]](#footnote-24) The PwC’s criteria for selecting the sample of paired bonds include: [[25]](#footnote-25)

* The paired bonds are corporate bonds with the following characteristics
* Australian issuance by Australian companies
* A credit rating of either BBB, BBB+ or A- by Standard and Poor’s
* The issuing entity is not a financial entity
* The corporate bond is senior (i.e. not subordinated)
* The bond is a standard corporate bond without special features such as call options attached and
* The term to maturity is more than one year.
* The longer dated bond has a term to maturity that is close to 10 years
* The shorter dated bond has a term that is closest to the shorter term that is of concern (i.e. closest to 7 years) and
* The match is between a pair of fixed coupon bonds, or a pair of floating rate bonds.

1. Based on these selection criteria, we cannot reconcile the inclusion of the paired Citigroup and Wesfarmers bonds in the businesses’ proposal. For these two paired bonds identified by the CEG, the longer dated bond does not have a maturity greater than seven years. We do not consider it is reasonable to use paired bonds with the longer dated bond that has a term less than seven years to extrapolate the Bloomberg BBB fair value curve from seven to 10 years. Further, the Citigroup bonds are issued by the United States financial entity, which is not comparable to the definition of the Australian domestic Bloomberg BBB fair value curve.

Additionally, the CEG noted the Coca-Cola bonds were excluded as it is possible to find both positive and negative slopes for these bonds. However, we note this observation similarly applies to the Stockland bonds and the CEG included Stockland bonds for this analysis. As both the Coca-Cola bonds and Stockland bonds satisfy the PwC’s selection criteria, for consistency purposes, we have included the Coca-Cola and the Stockland bonds for the extrapolation sample.

Based on our updated bond pairing analysis, we calculate the extrapolated 10 year Bloomberg BBB fair value DRP at 2.45 per cent. This is calculated by extrapolating the Bloomberg seven year BBB fair value curve yield of 2.32 per cent to 10 years using the averaging bond pair estimate of 4.55 basis points per annum.

## Debt raising costs

1. The Victorian businesses proposed a debt raising costs allowance of 23 basis points, based on recent evidence.[[26]](#footnote-26) We do not consider this is appropriate because our 2012–15 Approved Budget established a debt raising costs benchmark of 10.8 basis points to apply until 2015. Therefore, this matter has already been considered and settled.
2. In our draft and final decisions for the 2012–15 Approved Budget, we established debt raising costs of 10.8 basis points per annum for the 2014–15 budget.[[27]](#footnote-27) We considered this is consistent with the commercial standard that a reasonable business would exercise in the circumstances.[[28]](#footnote-28) The businesses, with the exception of SP AusNet, accepted our draft decision on debt raising costs.[[29]](#footnote-29) The businesses did not challenge this component of our final decision.
3. We note that the AMI Order requires debt raising costs to be a separate operating expenditure allowance and not be part of the WACC parameters, which was the case for the WACC in 2009-11. We have reflected this in the charges models sent to all five businesses.

Further, we assessed the Victorian businesses joint submission for the purposes of making our decision on WACC parameters for the subsequent AMI WACC period, pursuant to clause 4.1(j) of the AMI Order. That clause requires us to determine WACC as if clause 6.5.4 of the NER (as it then was) applied. Under that definition, debt raising costs are not part of the WACC. The NER WACC definition is concerned only with the return on capital, as defined in the clause. Return on debt is simply the risk free rate plus the debt risk premium. Clause 6.5.4(e) defines the DRP as the difference between the risk free rate and the benchmark corporate rate. It does not include an allowance for debt raising costs.

# Approved metering charges

The AMI charges set out in Table 4.1 will apply from 1 January to 31 December 2014. We have compared the charges for 2014 that we set out in the 2012–15 determination, with the charges that are now set to apply in 2014, based on the true up of actual expenditure and the AMI WACC set out in section 3.2.

Table 4.1 **Comparison of 2014 approved and revised charges ($nominal, excludes GST)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Distributor | Meter type | Previous approved 2014 charges | Revised 2014 charges approved | Variance (per cent) |
| CitiPower | Single phase | 117.29 | 116.55 | -0.6 |
| CitiPower | Three phase direct connected meter | 153.30 | 152.33 | -0.6 |
| CitiPower | Three phase CT connected meter | 193.62 | 192.40 | -0.6 |
| Powercor | Single phase | 120.90 | 115.27 | -4.7 |
| Powercor | Three phase direct connected meter | 159.47 | 152.04 | -4.7 |
| Powercor | Three phase CT connected meter | 211.29 | 201.47 | -4.6 |
| JEN | Single phase single element meter | 195.26 | 193.82 | -0.7 |
| JEN | Single phase single element meter with contactor | 195.26 | 193.82 | -0.7 |
| JEN | Three phase direct connected meter | 239.95 | 238.19 | -0.7 |
| JEN | Three phase current transformer connected meter | 266.78 | 264.81 | -0.7 |
| SP AusNet | Single phase single element | 143.38 | 160.21 | 11.7 |
| SP AusNet | Single phase two element with contactor | 164.76 | 184.10 | 11.7 |
| SP AusNet | Multiphase | 199.06 | 222.42 | 11.7 |
| SP AusNet | Multiphase with contactor | 220.81 | 246.73 | 11.7 |
| SP AusNet | Multiphase current transformer connected | 284.33 | 317.70 | 11.7 |
| United Energy | Single phase single element meter | 142.64 | 141.33 | -0.9 |
| United Energy | Single phase single element meter with contactor | 145.58 | 141.33 | -2.9 |
| United Energy | Three phase direct connected meter | 160.87 | 159.39 | -0.9 |
| United Energy | Three phase current transformer connected meter | 171.60 | 170.02 | -0.9 |

Source: AER analysis.

Table 4.2 sets out the AMI charges from 2012 to 2015. The charges for 2015 represent an estimate of those to apply based on the updated expenditure forecast estimates for 2013, 2014 and 2015 in the businesses' revised charges applications. As actual expenditure for 2013 becomes known, 2015 charges can be amended accordingly after our assessment.

Table 4.2 **Historic, current and future charges ($nominal, excludes GST)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Distributor | Meter type | 2012 charges | 2013 charges | Approved 2014 charges | Forecast 2015 charges |
| CitiPower | Single phase | 99.31 | 127.45 | 116.55 | 116.56 |
| CitiPower | Three phase direct connected meter | 129.80 | 166.57 | 152.33 | 152.33 |
| CitiPower | Three phase CT connected meter | 163.94 | 210.39 | 192.40 | 192.40 |
| Powercor | Single phase | 102.96 | 127.75 | 115.27 | 115.27 |
| Powercor | Three phase direct connected meter | 135.80 | 168.50 | 152.04 | 152.04 |
| Powercor | Three phase CT connected meter | 179.94 | 223.27 | 201.47 | 201.47 |
| JEN | Single phase single element meter | 153.95 | 173.38 | 193.82 | 214.27 |
| JEN | Single phase single element meter with contactor | 153.95 | 173.38 | 193.82 | 214.27 |
| JEN | Three phase direct connected meter | 189.19 | 213.07 | 238.19 | 263.32 |
| JEN | Three phase current transformer connected meter | 210.34 | 236.88 | 264.81 | 292.75 |
| SP AusNet | Single phase single element | 107.25 | 130.45 | 160.21 | 196.76 |
| SP AusNet | Single phase two element with contactor | 123.24 | 149.90 | 184.10 | 226.11 |
| SP AusNet | Multiphase | 148.89 | 181.10 | 222.42 | 273.17 |
| SP AusNet | Multiphase with contactor | 165.16 | 200.89 | 246.73 | 303.02 |
| SP AusNet | Multiphase current transformer connected | 212.67 | 258.68 | 317.70 | 390.19 |
| United Energy | Single phase single element meter | 106.57 | 124.45 | 141.33 | 170.80 |
| United Energy | Single phase single element meter with contactor | 108.77 | 124.45 | 141.33 | 170.80 |
| United Energy | Three phase direct connected meter | 120.19 | 140.35 | 159.39 | 192.64 |
| United Energy | Three phase current transformer connected meter | 128.21 | 149.71 | 170.02 | 205.48 |

Source: AER analysis.

Figure 4.1 depicts the charges for single phase single element meters between 2012 and 2015. As with Table 4.2, the charges for 2015 represent an estimate of those to apply based on the updated expenditure forecasts for 2013, 2014 and 2015 in the businesses’ revised charges applications.

Figure 4.1 Historic, current and future charges for single phase single element meters ($nominal, excludes GST)



Source: AER analysis.

1. AER, Final determination: Victorian advanced metering infrastructure review: 2012–15 budget and charges applications, October 2011. [↑](#footnote-ref-1)
2. AER, Final decision: Advanced metering infrastructure review: SPI Electricity Pty Ltd 2012–15 budget and charges applications: Amendments pursuant to the Australian Competition Tribunal's Orders, February 2013, p. viii. [↑](#footnote-ref-2)
3. AER, Final decision: Advanced metering infrastructure review: SPI Electricity Pty Ltd 2012–15 budget and charges applications: Amendments pursuant to the Australian Competition Tribunal's Orders, February 2013, pp. iv—viii. [↑](#footnote-ref-3)
4. Section 2 summarises the legislative requirements in the AMI Order that are relevant to our assessment. [↑](#footnote-ref-4)
5. AER analysis. [↑](#footnote-ref-5)
6. Victorian Electricity Distribution Businesses, Submission on the rate of return to apply to the charges revision applications for Advanced Metering Infrastructure, 30 August 2013. [↑](#footnote-ref-6)
7. Victorian distribution network service providers’ AMI charges revision applications 2014. These are available in the AER's website: [www.aer.gov.au](http://www.aer.gov.au). [↑](#footnote-ref-7)
8. Order in Council, Order under Section 15A and section 46D of the Electricity Industry Act 2000, August 2007, as amended, Clauses 5i.5, 5I.7 and 5I.7A. [↑](#footnote-ref-8)
9. While we determine an approved budget, this is not entirely determinative of the actual expenditure a business can recover. The charges revision process allows businesses to apply to recover the actual expenditure incurred for a given year, subject to certain conditions. We conduct an annual ex post review of audited actual expenditure in the previous year with the expenditure provided in the approved budget for the corresponding year. [↑](#footnote-ref-9)
10. Note that for this 2014 charges revision assessment, we have not needed to apply these clauses. [↑](#footnote-ref-10)
11. The exception was United Energy, whose application matched their regulatory accounting statements. [↑](#footnote-ref-11)
12. Jemena, RE: Questions regarding JEN's AMI charges applications: Jemena response to AER email of 19 September 2013, 25 September 2013; SP AusNet, RE: Questions regarding SP AusNet's AMI charges application: SP AusNet response to AER email of 19 September 2013, 23 September 2013; CitiPower and Powercor, RE: Questions regarding CitiPower's & Powercor's AMI charges applications: CitiPower and Powercor response to AER email of 19 September 2013, 20 September 2013. [↑](#footnote-ref-12)
13. Jemena, RE: Questions regarding JEN's AMI charges applications: Jemena response to AER email of 19 September 2013, 25 September 2013. [↑](#footnote-ref-13)
14. SP AusNet, RE: Questions regarding SP AusNet's AMI charges application: SP AusNet response to AER email of 19 September 2013, 23 September 2013. [↑](#footnote-ref-14)
15. AMI Order, defined terms, clause 2.1. [↑](#footnote-ref-15)
16. AMI Order, clause 4.1(j)(i)(ii). [↑](#footnote-ref-16)
17. Necessarily changes as new consumer price index become available. [↑](#footnote-ref-17)
18. See for example academic papers by R. Mehra and E. C. Prescott, *The equity premium, A puzzle*, Journal of Monetary Economics, 15, 1985, pp. 145–161; A. Damodaran, *Equity Risk Premiums (ERP), Determinants, Estimation and Implications*, September 2008, p. 1; J. S. Doran, E. I. Ronn and R. S. Goldberg, *A simple model for time-varying expected returns on the S&P 500 Index*, August 2005, pp. 2–3. For an example report from regulated entities see Officer and Bishop, *Market risk premium, a review paper*, August 2008, pp. 3–4. [↑](#footnote-ref-18)
19. Australian Competition Tribunal, Application by APA GasNet Australia (Operations) Pty Limited (No 2) [2013] ACompT8, at [233] and [234] [↑](#footnote-ref-19)
20. See AER, Final distribution determination, Aurora Energy Pty Ltd, 2012–13 to 2016–17, April 2012, Attachment 10, p.p.137-153; AER, APT Petroleum Pipeline Pty Ltd, Access Arrangement final decision, Roma to Brisbane Pipeline, 2012–13 to 2016–17, August 2012, Part B Attachments, p.p.60-84; AER, Final decision, NT Gas, Access Arrangement Proposal for the Amadeus Gas Pipeline, p. p. 70-73; AER, Access Arrangement Final Decision, SPI Networks (Gas) Pty Ltd 2013–17, March 2013, Part 3 Appendices, p.p. 13-71. [↑](#footnote-ref-20)
21. Issued as part of our better Regulation work program, see <http://www.aer.gov.au/node/18859> [↑](#footnote-ref-21)
22. In August, the AMI businesses propose that the DRP to be calculated over the agreed averaging period by taking the arithmetic average of the daily longest-dated Bloomberg BBB fair value yields over the measurement period and extrapolated that to a ten-year yield using a paired bond analysis. They note this DRP estimation approach is consistent with that used by the AER in its recent decision for the Victorian gas distribution businesses. See: Victorian electricity distribution businesses, *Submission on the rate of return to apply to the charges revision application for Advanced Metering Infrastructure*, 30 August 2013, p.8. However, we note their proposed approach was based on CEG’s bond selection criteria, which is different to the PwC selection criteria commonly used by the AER for the recent decisions. AMI businesses submitted a supplementary submission on 21 October 2013 with an updated bond samples for their actual averaging period based on an updated CEG report. See: Victorian electricity distribution businesses, *Supplementary submission on the rate of return to apply to the charges revision application for Advanced Metering Infrastructure: updated for the actual averaging period*, 21 October 2013, pp.3-5; CEG, *Estimating the debt risk premium: update report, October 2013.*  [↑](#footnote-ref-22)
23. UE submitted eight consultant reports to the AER on 23 October 2013 and proposed to use CEG’s Nielson-Siegel analysis to calculate the DRP instead of the previously proposed CEG’s paired bonds extrapolation analysis, which is used by the other AMI businesses. [↑](#footnote-ref-23)
24. AER, *Draft decision: SP AusNet transmission determination 2014-15 to 2016-17*, August 2013; AER, Drat decision: APA GasNet access arrangement, September 2012; AER, D*raft decision: Envestra access arrangement Vic*, September 2012; AER, *Draft decision: Multinet access arrangement*, September 2012; AER, *Draft decision: SPI Networks access arrangement*, September 2012 [↑](#footnote-ref-24)
25. PwC, SP AusNet: Debt risk premium for the 2013 Victorian transmission revenue review, March 2013, p.9 and p.p.13-14. [↑](#footnote-ref-25)
26. Victorian Electricity Distribution Businesses, Submission on the rate of return to apply to the charges revision applications for Advanced Metering Infrastructure, 30 August 2013, pp. 2, 36–37. [↑](#footnote-ref-26)
27. The AMI Order is silent regarding the approach to debt raising costs for the period 2014-2015. [↑](#footnote-ref-27)
28. AER, Draft determination: Victorian advanced metering infrastructure review: 2012-15 budget and charges applications, 28 July 2011, pp. 209–211; AER, Final determination: Victorian advanced metering infrastructure review: 2012–15 budget and charges applications, October 2011, pp. 113–115. [↑](#footnote-ref-28)
29. AER, Final determination: Victorian advanced metering infrastructure review: 2012–15 budget and charges applications, October 2011, pp. 114, 189 and 288. [↑](#footnote-ref-29)