



# COMPLIANCE WITH AMI REGULATORY OBLIGATIONS AS AT 31 DECEMBER 2013

Victorian Electricity Distributors

FINAL REPORT

October 2014



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# 1. INTRODUCTION

This report presents the findings of the independent audits undertaken in March – June 2014, into the compliance of the five licensed Victorian electricity distribution businesses ('distributors') with obligations arising from the Advanced Metering Infrastructure ('AMI') program.

The distributors are Powercor Australia Limited ('Powercor'), CitiPower Pty ('CitiPower'), Jemena Electricity Networks Ltd ('Jemena'), United Energy Distribution Pty Ltd ('United Energy') and SPI Electricity Pty Ltd ('SP AusNet').<sup>1</sup>

The report also presents the Essential Services Commission's ('Commission') conclusions – informed by the audit findings and other material submitted directly by the distributors – regarding the distributors' best endeavours to comply with AMI obligations. The audits considered whether the distributors' actions were timely and directed towards preventing or remedying performance problems. Further details of the auditors' findings are published in their Executive Summaries, which are included in Appendix 1 to 5 of this report.

The AMI program required these distributors to install new 'smart' meters at the premises of residential and small business customers in Victoria. The meters are to connect through communication equipment to the distributors' data processing and control facilities. The AMI installations are required to provide remote meter reading, tamper detection, reporting of supply conditions and other functionality for more efficient operation of the distribution network. As part of the AMI program, some 2.9 million new meters were to be installed over the period 2009–13.

Chapter 2 of this report sets out the Commission's framework for the best endeavours assessment, including the powers used to complete the review.

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<sup>1</sup> Since the time the audits were undertaken, SP AusNet has changed its name to AusNet Services. For consistency, the text of this report and its appendixes continue to use the original name of SP AusNet.

Chapter 3 sets out for each distributor the key audit findings reported, the Commission's assessment of the audit findings and other material submitted, and the Commission's best endeavours conclusions.

Chapter 4 outlines the next steps that the Commission proposes to take to ensure compliance by the distributors with relevant obligations.

#### **SCOPE – MATTERS NOT ASSESSED**

The scope of the audits and the Commission's conclusions did not extend to matters of economic regulation. Such matters not assessed by the Commission include the efficiency and prudence of any expenditure and determining whether the expenditure is within the scope of the AMI program. Additionally, the audits did not assess technical matters such as the reliability of metering components.

## 2. AMI COMPLIANCE ASSESSMENT FRAMEWORK

This chapter identifies the powers under which the Commission initiated the audits and describes the assessment framework the Commission used to reach its best endeavours conclusions of distributors' compliance with AMI obligations.

### 2.1 COMMISSION POWERS

The Commission's role in enforcing a number of AMI regulatory obligations was clarified in a Ministerial Order that was gazetted on 13 June 2013.<sup>1</sup> The Order specified that the Commission is the regulator for certain provisions contained in two Orders in Council, and termed these 'ESC enforceable regulatory requirements'. The specific enforceable regulatory requirements are contained in:

- Clauses 3(a) and 4(a) of the AMI Specifications Order;<sup>2</sup> and
- Clauses 14.1, 14.2 and 14A.1 of the AMI Cost Recovery Order.

The Orders are made under the *Electricity Industry Act 2000* ('EIA').

The enforceable regulatory requirements under the AMI Specifications Order relate to:

- **Functionality** – each distributor is required to use its best endeavours to ensure AMI systems comply with the Minimum AMI Functionality Specification Release 1.2 of September 2013 (covering functions such as remote reading, remote disconnection and tamper detection); and

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<sup>1</sup> The Ministerial Order has since been replaced – see chapter 4.

<sup>2</sup> Relevant extracts of the Ministerial Order and the Orders in Council are given in Appendix 6.

- **Service Levels** – each distributor is required to use its best endeavours to ensure the AMI systems operate in accordance with the Minimum AMI Service Levels Specification Release 1.1 of September 2008 (covering the availability of remote meter reading data and performance of remote disconnection by the stated time period).

The enforceable regulatory requirements under the AMI Cost Recovery Order relate to:

- **The rollout period (target)** – each distributor should use its best endeavours, to the extent practicable, to install remotely-read interval meters (that operate according to the AMI Specifications Order) by 31 December 2013 at all metering installations where a prescribed customer<sup>3</sup> uses 160 MWh of electricity or less per annum; and
- **Risk management strategy** – each distributor must have an effective and up to date strategy for managing AMI program risks.

Details of the enforceable clauses can be found in Appendix 6.

## COMMISSION'S POWERS TO AUDIT

Under the EIA, the Commission has the power to grant licences to businesses involved in the supply of electricity – including distribution businesses. The businesses' licence conditions include requirements to:

- comply with relevant obligations including those contained in an Order; and
- upon request by the Commission, appoint an independent auditor to conduct audits of compliance with those obligations.

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<sup>3</sup> More fully, for the purposes of the audit, the Commission has used the abbreviation 'prescribed customer' to mean a person who buys electricity from a retailer and has an annual electricity consumption of 160MWh hours or less for which the distributor is the responsible person on 31 December 2013 reflecting the regulatory requirements.



## 2.2 COMMISSION FRAMEWORK FOR ASSESSING BEST ENDEAVOURS

To inform its assessment of distributors' compliance, the Commission has relied on the independent audit findings, the other material such as experts' reports and internal working documents provided by the distributors, and the actual audited outcomes achieved by distributors. This section summarises the audit process and the streamlined approach the Commission has used to assess best endeavours.

### AUDIT PROCESS

The audit was conducted in March to June 2014 under the Commission's licensing powers identified above, and related to distributor performance as at 31 December 2013. The audit scope included assessment of distributors':

1. **AMI rollout, functionality and service levels** – areas of the distributor's business processes (e.g. rollout risk management strategy) were reviewed, as were its information technology systems and administration (to the extent needed to demonstrate compliance with the AMI regulatory obligations). These obligations include the requirement to use best endeavours, to the extent practicable, to roll out AMI meters to all prescribed customers with the required functionality and operating to the required service levels by 31 December 2013; and
2. **Compliance framework** – the distributor's compliance framework was assessed against the Australian Standard on compliance, AS 3806-2006 – Compliance Programs ('AS 3806'), including its ability to demonstrate compliance with regulatory requirements in general (as opposed to compliance with the specific regulatory obligations in the rest of the scope).

In performing the audit, the independent auditor of each distributor was directed by:

- the Commission's Guideline 22 – Regulatory Audits of Energy Businesses, providing a common method for assessing and reporting each distributor's compliance; and
- the Commission's Audit Scope document, identifying the key AMI regulatory obligations against which the distributor's compliance was to be assessed, and

selected statistics (such as the number of prescribed customers with a remotely read AMI meter) to be tested to confirm the degree to which the distributor had met its rollout target.

The auditors were engaged by the distributors with the Commission's approval. Where the auditor found that a distributor could not demonstrate that it met all requirements in full, the Commission (and not the auditor) has assessed whether the distributor had used its best endeavours.

During the review some distributors provided other material for the Commission to consider.<sup>4</sup> Where appropriate, the Commission has taken this information into account.

In defining the audit scope and in assessing the information provided by the auditors and the other material provided by distributors, the Commission has not considered matters that are related to economic regulation. Such matters not assessed by the Commission include the efficiency and prudence of any expenditure and determining whether the expenditure is within the scope of the AMI program. These matters are primarily a concern for the Australian Energy Regulator ('AER').

The audit scope did not extend to assessing whether the distributors had proposed or implemented technically suitable infrastructure. The auditors sought confirmation that the distributors had undertaken the necessary reviews, and had established adequate processes and controls, to ensure the functionality and service levels met specifications.

## **COMMISSION ASSESSMENT APPROACH**

In order to efficiently assess and make conclusions on distributor's compliance, the Commission adopted a two-stream approach to determine whether best endeavours had been used.

### *Stream 1 – Audited Outcomes (Quantifiable Criteria)*

The first stream involved assessing the distributor's audited compliance outcomes at 31 December 2013 for each compliance area (functionality, service levels, and rollout

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<sup>4</sup> The other information included material that was provided as commercial in confidence and the Commission has not published it.

target) against quantifiable criteria. These criteria included an administrative threshold set by the Commission for the assessment of the rollout target.<sup>5</sup>

The quantifiable criteria used by the Commission were:

- Functionality
  - 100 per cent of AMI meter functionality met (quantifiable criterion 1 in the list that follows).
- Service levels
  - 100 per cent of service level functionality met (quantifiable criterion 2).
  - AMI meters provide data at specified performance levels (quantifiable criterion 3).
- Rollout target
  - 90 per cent or more of prescribed customers have AMI meters installed and functioning as required (quantifiable criterion 4).

If the distributor met the quantifiable criteria for each of the above compliance areas, then the Commission considered the distributor to be compliant with the best endeavours requirement. The Commission therefore determined there would be no need for a detailed assessment of the process by which the distributor achieved the outcome.

### Stream 2 – Assessment of audit findings and other material (Other related criteria)

To the extent that a distributor could not show it had met one or more of the quantifiable criteria, the Commission assessed the extent to which the distributor had met other related criteria (refer below) and demonstrated best endeavours. These criteria represented good industry practices or controls that, if in place, could be expected to achieve a required outcome. The Commission's assessment was informed by the audit findings and any other material provided by the distributor.

In assessing the other material provided by distributors, the Commission has also taken account of difference between a distributor's outcomes and the quantifiable criteria, and the extent to which the material supported the audit findings.

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<sup>5</sup> The rollout target for the installation of functioning meters was set at below 100 per cent to recognise there were common issues beyond the control of the distributors during the rollout period.

The auditors' findings against the quantifiable criteria in Stream 1 are shown in the summary table in chapter 3 (table 1).

## **CRITERIA FOR ASSESSING BEST ENDEAVOURS – STREAMS 1 AND 2**

### **Clause 3(a) of the AMI Specifications Order (Functionality)**

#### *Quantifiable criterion 1 – Stream 1*

- 100 per cent of the Functional Specifications have been met.

#### *Other related criteria – Stream 2*

- An independent review by an appropriately qualified person was performed to assess if the technology, as proposed, met the Minimum AMI Functionality Specification. Appropriate and timely action was taken to rectify areas that were not met.
- An internal assessment was performed to determine if the technology, as implemented, met the Minimum AMI Functionality Specification. Appropriate and timely action was taken to rectify areas that were not met.
- An independent review by an appropriately qualified person was performed to assess if the technology, as implemented, met the Minimum AMI Functionality Specification. Appropriate and timely action was taken to rectify areas that were not met.

### **Clause 4(a) of the AMI Specifications Order (Service levels)**

#### *Quantifiable criteria 2 and 3 – Stream 1*

- 100 per cent of the service level functionality in the Service Level Specifications (i.e. remote reading and remote reconnections and disconnections) has been met.
- Three performance standards for remote readings set in the Minimum AMI Service Levels Specification have been met.

#### *Other related criteria – Stream 2*

- An independent review was performed to assess if the technology, as proposed, met the Minimum AMI Service Levels Specification. Appropriate and timely action was taken to rectify areas that were not met.

- Implemented technology was tested to ensure it met the AMI Service Levels Specification. Appropriate and timely action was taken to rectify areas that were not met.
- An independent review was performed, to assess if the technology, as implemented, met the Minimum AMI Service Levels Specification. Appropriate and timely action was taken to rectify areas that were not met.

**Clause 14.1 of the AMI Cost Recovery Order (AMI rollout target)**

*Quantifiable criterion 4 – Stream 1*

- 90 per cent or more of prescribed customers have functioning AMI meters installed.

*Other related criteria – Stream 2*

- The distributor had suitable customer management protocols that it followed.
- The distributor had suitable AMI technology implementation and operational protocols that it followed.
- The distributor had increased its efforts in the last year of the rollout to remedy any deficiencies.
- The distributor had remotely read the meter.
- The distributor had visited all prescribed customers' site at least once.
- The distributor had installed an AMI meter at all sites.

In addition to the criteria listed above, the Commission in its assessments also took into account whether the auditor had given a 'generally compliant' rating for the specific obligations and for the distributor's compliance framework.

## 3. COMMISSION'S ASSESSMENT

This chapter sets out the key findings of each of the audits, with a focus on the assessments that the Commission has made of each distributor's best endeavours to comply with the regulatory obligations.

The first section summarises the auditors' reported results relevant to the distributors' compliance frameworks. Separately, it tabulates the audit results that are relevant to assessing the distributors' best endeavours to comply with the specific AMI regulatory obligations.

The remaining five sections summarise the findings of the distributors' audits, with the Commission's assessment of each auditor's findings and further material provided by the distributor, and conclusions as to the distributor's best endeavours. Appendixes 1–5 set out the independent auditors' executive summaries of their audit reports with more details of their findings.

### 3.1 AUDITORS' REPORTED RESULTS

#### FINDINGS RELEVANT TO COMPLIANCE FRAMEWORKS – AS 3806

As well as detailed review of the actions the distributors took to achieve compliance with the specific AMI regulatory obligations in the scope, the auditors also performed a full or limited review of the distributors' compliance frameworks, as applied to their regulatory obligations in general.<sup>1</sup> The purpose was to assess whether distributors had in place effective procedures to review proposed changes to their business processes, such that they could be expected to comply in general with relevant obligations, and identify any breaches and remedy them effectively.

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<sup>1</sup> Licensed electricity distributors, as a condition of their licences, must comply with relevant regulatory obligations, monitor their compliance and report any material breaches to the Commission.

The compliance framework was assessed against the principles of AS 3806.<sup>2</sup> The principles relate to:

- the commitment of the organisation to resourcing an effective compliance program;
- implementation through training and developing necessary behaviour;
- recording, monitoring and reporting measures of compliance; and
- regular review of the compliance framework, to improve its effectiveness.

The auditors reported that all the distributors' compliance frameworks were generally compliant with the Australian Standard AS 3806. The auditors considered that any adverse findings they noted (in relation to the distributors' compliance frameworks) were minor and required routine efforts to correct in the normal course of business.

The Commission notes the auditors' assessments and considers that each distributor had the capability to maintain an effective compliance framework in areas of its business. However, such a framework alone cannot guarantee successful completion of project tasks associated with the AMI program, or compliance with related regulatory requirements.

## **FINDINGS RELEVANT TO BEST ENDEAVOURS – CRITERIA**

The previous chapter lists the Commission's criteria for assessing distributors' best endeavours to meet their obligations for functionality, service levels and AMI rollout target. The list highlights the four quantifiable criteria that, if met, would demonstrate full compliance in one of the areas of the AMI program: functionality, service levels or rollout target.

Where an auditor reported that, in one area of the scope (Service Levels, for instance) the distributor's AMI program met the relevant quantifiable criterion, the Commission could infer that the distributor's endeavours had been sufficient, without further inquiry. Where the quantifiable criterion was not met, the Commission needed to assess in some detail the actions undertaken, and the processes and controls in place.

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<sup>2</sup> In the audits of Jemena and United Energy, the auditor specifically noted that the assessment did not amount to a full review of the distributor's compliance process in place. The Commission considers the assessment sufficient for the purposes of this audit.

Table 1 summarises the distributors' performance against the quantifiable criteria, as confirmed by the auditors.

**Table 1 – Quantifiable criteria for assessing best endeavours, with the auditors' reported results**

Criteria for assessing best endeavours	Powercor	CitiPower	Jemena	United Energy	SP AusNet
<b>Functionality — clause 3(a) of the AMI Specifications Order</b>					
1(a) – 100% of the AMI meter functional specifications have been met.	Yes	Yes	Yes	Yes	<b>No</b>
<b>Service Levels— clause 4(a) of the AMI Specifications Order</b>					
2(a) – 100% of service level functionality specified in the Service Levels Specification (i.e. remote reading and remote re-connections and disconnections) is activated.	Yes	Yes	Yes	Yes	<b>No</b>
2(b) – Smart meters can provide remotely read data at specified performance levels. <sup>3</sup>	Yes	Yes	Achieved 2 out of 3 measures	<b>No</b>	<b>No</b>
<b>AMI Rollout Target – clause 14.1 of the AMI Cost Recovery Order</b>					
3(a) – 90% or more of prescribed customers have AMI meters installed and functioning as required.	Yes (94%)	Yes (97%)	Yes (90%)	<b>No (83%)</b>	<b>No (58%)</b>

<sup>3</sup> In assessing service levels for remotely read data, the auditors considered several requirements. The distributor is to provide actual meter reading data (the remainder being substituted data) to market participants on defined timescales: no less than 95 per cent of actual reads by 0600 hours; not less than 99 per cent within 24 hours after this; and 99.9 per cent within 10 business days. The distributor is also required to perform a remote disconnection or reconnection within two hours of a validated request.



In responding to the questions in the audit scope, the auditors assessed the processes and actions of the distributors in each of the three areas; that is, their attempts to meet the **functionality**, the **service level** and the **AMI rollout target** requirements. The assessment was directed at establishing whether the distributor met basic conditions for compliance.

In making these assessments, the auditors frequently reported that the distributor was 'generally compliant' in an area. As in the assessments of the distributors' compliance frameworks, the phrase indicates that the distributor has met most of the requirements for a reliable process — possibly with some minor shortcomings — and any adverse findings were minor and required routine efforts to correct in the normal course of business. The Commission considers this does not necessarily mean that the distributor met all the criteria for a 'best endeavours' result but it may indicate a well-directed effort, particularly if any corrective action is effective and timely.

Where an auditor's reported results indicate that a distributor did not meet one of the stated key criteria, the Commission then considered whether, to the extent required, best endeavours had been used in the relevant area.

## 3.2 POWERCOR

The auditor found that Powercor met all of the quantifiable criteria. The Commission's assessment of best endeavours recognises Powercor's outcomes achieved.

### RESULTS OF AUDIT

The audit reported that Powercor's processes were generally compliant in the three areas under review — functionality, service level and AMI rollout target — and any adverse findings were considered minor. The audit confirmed that all AMI rollout statistics in the scope were materially correct.

See Appendix 1 for further details of the results of the audit.

The audit also confirmed the following.

## Functionality requirements

Powercor took appropriate steps to ensure the AMI systems implemented met the **functionality requirements** (e.g. remote reading, remote disconnection, tamper detection). The auditor noted independent assessment at procurement stage, and internal technical testing thereafter of compliance with functional requirements and other technical specifications.

## Service level requirements

Powercor took appropriate steps to ensure the AMI systems implemented met the operational **service level requirements** (e.g. performance in remote meter reading). The auditor noted independent review of vendors, the establishment of testing facilities and processes, independent review of specifications, and internal testing and monitoring of performance. The auditor reported that the measurable service levels met and exceeded specifications, but raised two minor adverse findings about the contents of monitoring reports and their retention for review.

## AMI rollout target

Powercor maintained an effective risk management strategy. Powercor achieved 94 per cent of its overall **AMI rollout target** for the whole program (i.e. the target number of AMI meters to be installed and remotely read by 31 December 2013). As at 31 December 2013, only 1 per cent of Powercor's prescribed customers' sites had not yet been visited to install an AMI meter.

## BEST ENDEAVOURS ASSESSMENT

**Functionality requirements:** the audit confirmed that the technology selected and installed by Powercor met 100 per cent of the requirements of the Minimum AMI Functionality Specification.

**Service level requirements:** the audit confirmed that Powercor met all three performance standards for remote reading of AMI meter data, and could remotely connect and disconnect a customer's electricity supply. The two adverse findings were minor, and Powercor's processes were generally compliant in the area.

**AMI rollout target:** as at 31 December 2013, the expected end of the AMI program, Powercor had installed AMI meters at 94 per cent of its prescribed customers' premises and had visited 99 per cent of them to try and install an AMI meter. The Commission considers that the installation of a high percentage of its target overall is evidence that Powercor had an effective risk management strategy.

Powercor for all practical purposes has met the outcomes in all areas and received a 'generally compliant' audit rating in these areas.

## **COMMISSION'S CONCLUSIONS**

On the basis of the assessment above, the Commission concludes that Powercor has used its best endeavours and complied with clauses 3(a) and 4(a) of the AMI Specifications Order and, to the extent practicable, with clause 14.1 of the AMI Cost Recovery Order. It has complied as required with clause 14A.1 of the AMI Cost Recovery Order.

### **3.3 CITIPOWER**

The auditor found that CitiPower met all of the quantifiable criteria. The Commission's assessment of best endeavours recognises CitiPower's outcomes achieved.

#### **RESULTS OF AUDIT**

The CitiPower and Powercor businesses operate largely under the same management and with similar processes. They engaged the same auditor for this audit.

See Appendix 2 for further details of the audit results.

The audit reported that CitiPower's processes were generally compliant in the three areas under review, and any adverse findings were considered minor. The audit found that all AMI rollout statistics in the scope were reliable and materially correct.

The audit also confirmed the following.

## Functionality requirements

CitiPower took appropriate steps to ensure the AMI systems implemented met the **functionality requirements** (e.g. remote reading, remote disconnection, tamper detection). The auditor noted there was independent assessment at the procurement stage, and internal technical testing thereafter of compliance with functional requirements and other technical specifications.

## Service level requirements

CitiPower took appropriate steps to ensure the AMI systems implemented met the operational **service level requirements** (e.g. performance in remote meter reading). The auditor noted the testing facilities and processes that were established, and the reviews, testing and monitoring that were performed. The auditor again reported that the measurable service levels met and exceeded specifications, with two minor adverse findings similar to those raised for Powercor.

## AMI rollout target

CitiPower maintained an effective risk management strategy. CitiPower achieved 97 per cent of its final **AMI rollout target** for the program by 31 December 2013, when only 1 per cent of its prescribed customers' sites had not been visited.

## BEST ENDEAVOURS ASSESSMENT

**Functionality requirements:** the audit confirmed that the technology selected and installed by CitiPower met 100 per cent of the Minimum AMI Functionality Specification.

**Service level requirements:** the audit confirmed that CitiPower met the performance standards for remote reading of AMI meter data, and could remotely connect and disconnect supply. Although the auditor raised adverse findings, they were minor, and CitiPower's processes were generally compliant in the area.

**AMI rollout target:** as at 31 December 2013, CitiPower had installed AMI meters at 97 per cent of its prescribed customers' premises overall, and had visited 99 per cent of them for that purpose. CitiPower employed effective risk management.

CitiPower for all practical purposes has met the outcomes in all areas and received a 'generally compliant' audit rating in these areas.

## COMMISSION'S CONCLUSIONS

On the basis of the assessment above, the Commission concludes that CitiPower has used its best endeavours and complied with clauses 3(a) and 4(a) of the AMI Specifications Order and, to the extent practicable, with clause 14.1 of the AMI Cost Recovery Order. It has complied as required with clause 14A.1 of the AMI Cost Recovery Order.

### 3.4 JEMENA

Jemena met three of the quantifiable criteria and had very minor variations on the other criterion. The Commission's assessment of best endeavours recognises Jemena's outcomes achieved.

#### RESULTS OF AUDIT

The audit reported that Jemena's processes were generally compliant in the three areas under review, and any adverse findings were considered minor. The audit confirmed that all of Jemena's reported AMI rollout statistics in the scope were materially correct.

See Appendix 3 for further details of the results of the audit.

The audit also reported the following.

#### Functionality requirements

To ensure the AMI systems met the **functionality requirements** (e.g. remote operation, tamper detection), Jemena obtained independent reviews of the technology at appropriate phases of the program. The reviews were supported by internal assessments. These reviews confirmed that the technology could meet the Minimum AMI Functionality Specification. There were no adverse findings.

#### Service level requirements

To give assurance that the AMI systems would meet the operational **service level requirements** (e.g. performance in remote meter reading), the distributor was

expected to obtain independent assessments of service levels. The auditor found that the system as proposed and as implemented was not subject to independent review. However, internal reviews had been performed and they indicated that the system would meet the requirements. The auditor's testing confirmed that Jemena's measurable performance met the service level requirement to provide 95 per cent of actual meter readings by 0600 hours and 99 per cent within 24 hours, Jemena was close to meeting the standard for provision within 10 business days (99.48 per cent against the required 99.9 per cent) and certain IT problems were being monitored and addressed. Jemena also met the service level requirements for remote connection and disconnection within two hours of a valid request. Minor findings were reported but Jemena was assessed as generally compliant in the area.

### **AMI rollout target**

Jemena achieved 90 per cent of its **AMI rollout target** for the whole of the AMI program by 31 December 2013. The auditor reported that Jemena had responded to the poor productivity of its outsourced installers, some community opposition to AMI meters, and delays caused by a policy change (on time-of-use tariffs) that required different AMI meters to be installed. Following its risk management process, Jemena assigned more experienced installers to deal with No Access and Refused Access sites. As at 31 December 2013, only 4 per cent of its prescribed customers' sites had not been visited. The auditor made a small number of adverse findings, which were considered minor, in relation to the 'no access' processes of the additional installers engaged later in the program.

## **BEST ENDEAVOURS ASSESSMENT**

The Commission notes that the auditor reported that Jemena was generally compliant in the three areas of the scope.

**Functionality requirements:** the audit confirmed that the technology that Jemena selected met 100 per cent of the Minimum AMI Functionality Specification.

**Service level requirements:** the auditor did not raise significant adverse findings in this area. Jemena's performance, as reported, met two of the three criteria and was within 1 per cent of specifications for the third (99.48 per cent versus 99.9 per cent

required. Actual data delivered within 10 days). The auditor considered that Jemena generally complied in the area.

**AMI rollout target:** as at 31 December 2013, Jemena had installed AMI meters at 90 per cent of prescribed customers' premises and had visited 96 per cent of them for that purpose. The Commission notes that Jemena took action to make up for delays, particularly through supplementing its installation workforce in the first quarter of 2013, and its risk management appeared effective. The auditor did not raise significant adverse findings in this area.

## **COMMISSION'S CONCLUSIONS**

### **Functionality requirements**

On the basis of the assessment of functionality above, the Commission concludes that Jemena has used its best endeavours and complied with clause 3(a) of the AMI Specifications Order.

### **Service level requirements**

Given that the distributor very nearly achieved all the requirements of the Minimum AMI Service Levels Specification and was found to be generally compliant in managing performance as required, the Commission concludes that Jemena has used its best endeavours to meet the required service levels and complied with clause 4(a) of the AMI Specifications Order.

### **AMI rollout target**

The Commission concludes that the distributor's actions and its performance in attempting to meet the rollout target indicate that Jemena, to the extent practicable, used its best endeavours and has complied with clause 14.1 of the AMI Cost Recovery Order. Jemena has also complied as required with clause 14A.1 of the AMI Cost Recovery Order.

### 3.5 UNITED ENERGY

United Energy met two of the quantifiable criteria. The Commission's assessment of best endeavours follows.

#### RESULTS OF AUDIT AND OTHER INFORMATION PROVIDED

The audit noted that the entity Jemena Asset Management (6) Pty Ltd originally managed United Energy's AMI program under a service agreement between the businesses. In June 2013, United Energy moved to take over management of its own rollout.

The audit reported that United Energy was generally compliant in all areas under review, and most adverse findings were considered minor.

See Appendix 4 for further details of the result of the audit.

The audit reported the following.

#### Functionality requirement

To ensure the AMI systems met the **functionality requirements** (e.g. remote operation, tamper detection), United Energy obtained independent reviews of the technology at appropriate times, supported by internal assessments. These reviews confirmed that the technology could meet the Minimum AMI Functionality Specification. There were no adverse findings.

#### Service level requirement

To give assurance that the AMI systems would meet the operational **service level requirements** (e.g. performance in remote meter reading), the distributor was expected to obtain independent assessments of service levels. The auditor made an adverse finding, which it considered minor. This finding related to the lack of an independent audit of service levels as achieved in the implemented system. United Energy was assessed as generally compliant in this area.

The auditor reported that the required functions were operational although the required service levels for delivering actual meter readings on time were not fully met. The auditor's tests showed that United Energy delivered 6.8 per cent less than the required



95 per cent of actual meter reads by 0600 hours, 1.4 per cent less than the required 99 per cent for the reading 24 hours later, and 2.1 per cent less than the required 99.9 per cent for the read within 10 business days. The auditor found that performance could not be assessed over a full year as required by the Specification, only over 210 days due to system limitations. There were delays in performing remote disconnections and reconnections, but they were caused by factors beyond the distributor's control, such as safety considerations. The auditor identified an improvement opportunity to update the software to monitor compliance with the obligation.

### **AMI rollout target**

The quantifiable criterion for **AMI rollout** is that functioning AMI meters should be installed and operating as required for 90 per cent of the prescribed customers.

United Energy achieved 83 per cent of its **AMI rollout target** by 31 December 2013. The auditor noted factors – such as higher than average community opposition, government policy changes, reduced productivity of the incumbent installers and lack of trained installers – that had delayed the rollout. To address these issues, United Energy took a number of actions such as increasing the number of installers it had engaged. The auditor reviewed United Energy's risk management strategy (noting that it was revised in 2013), risk registers and other documentation of its project and risk management, and made no adverse finding. As at 31 December 2013, 12 per cent of its prescribed customers' sites had not been visited.

### **Other information**

United Energy provided other information about the conduct of its AMI program. This information included reports giving independent expert assessments that addressed decisions taken by United Energy management to meet its AMI obligations, especially in relation to the rollout target. The information also clarified a number of issues raised by the auditor. Specific points include:

1. The auditor noted that in July 2012 the joint project management considered engaging a second installer. The audit noted the strategy was later halted due to commercial and program implications.

United Energy's other information showed that the joint program had identified around May 2012 that installer productivity was below plan and a second installer was needed for sites with more complex metering requirements. The information

showed that management was informed that there were risks in this strategy, including the loss of existing installers to the second company. It was noted that it would take some months to select, engage and train the new workforce. The option was abandoned as there were concerns that due to commercial and program matters there would not be an increase in installation rates.

2. The auditor noted that United Energy again reviewed increasing the installer capacity, intending to engage one or more additional installation companies in 2013.

The other information shows that, between October 2012 and March 2013, United Energy also considered a number of other initiatives. The distributor sought to improve the rate of its rollout using the existing installer under the joint program. United Energy also considered renegotiating the joint program arrangements and taking direct management control of its own rollout program. In March 2013, United Energy's Board approved setting up a specific team with its own director, still within the joint project, solely to manage the rollout to United Energy sites. United Energy also received advice at this time which indicated that it needed to improve its processes, structures and skills in order to directly manage the rollout. United Energy then made preparations to take control of its rollout program.

3. The other information noted that United Energy took over management of the rollout program from June 2013 to address outstanding issues and minimise the exposure to regulatory non-compliance. United Energy forecast that without a significant acceleration to the installation rate they would not achieve practical completion until December 2015. United Energy engaged four more service providers and doubled the rate of installations in the period to 31 December 2013.

### **BEST ENDEAVOURS ASSESSMENT**

The Commission notes that the auditor reported that United Energy was generally compliant in all areas of the audit scope. However, as stated in section 3.1, this does not necessarily mean that the distributor met all criteria of 'best endeavours'. The Commission's major concern is the extent to which United Energy's AMI rollout was behind the target at 31 December 2013.

The Commission also notes the other information provided, especially the expert report. The Commission has accepted the additional information for the purpose of clarifying facts already confirmed and reported by the auditor.

**Functionality requirements:** the Commission notes the audit found that the technology selected met 100 per cent of the Minimum AMI Functionality Specification.

**Service level requirements:** the Commission notes that the auditor did not raise significant adverse findings in this area. Remote disconnections/reconnections and remote reading functions were operable. Measured performance did not fully meet the requirements of the Minimum AMI Service Levels for delivery of actual meter reads on time. However, United Energy management undertook assessments of issues impacting the service levels and took action to improve performance. The auditor identified an improvement opportunity to assist United Energy monitor compliance with this obligation.

**AMI rollout target:** as at 31 December 2013, United Energy had installed functioning AMI meters at 83 per cent of prescribed customers' sites and had visited 88 per cent of them. United Energy attributed some of the shortfall to delays caused by the policy change (on time-of-use tariffs) requiring different AMI meters. The auditor reported that United Energy recorded higher than average customer opposition to AMI meter installation. The distributor also referred to a shortage of trained meter installers and lower productivity than expected.

The Commission also notes that the auditor referred to success factors in United Energy's AMI rollout, including Board involvement, robust project management and thorough risk management, which were considered as part of the AMI rollout target obligation. The auditor considered that United Energy was generally compliant in this area; however, the Commission notes the 83 per cent achieved was well short of the target.

The other information provided to the Commission indicates that United Energy entered into the joint program with the reasonable expectation of gaining productivity and reliability benefits. Not all those benefits were realised and the installation rate fell short of that required. United Energy management was actively engaged in attempting to improve installation rates from mid-2012. United Energy was assessing options including taking direct control of its rollout program. The information provided to the Commission shows that United Energy sought expert advice on the appropriate time to take over direct control of its program. When United Energy took over management of its program it achieved significantly improved results.

## **COMMISSION'S CONCLUSIONS**

On the basis of the assessment above, which takes into account the other information that United Energy provided to clarify aspects of its rollout program, the Commission has reached the following conclusions.

### **Functionality requirements**

The Commission has considered the auditor's findings: that United Energy's AMI systems met the Minimum AMI Functionality Specification in full, and that United Energy undertook appropriate independent and internal assessments in a timely manner in achieving and confirming this outcome.

The Commission therefore concludes that United Energy has used its best endeavours and complied with clause 3(a) of the AMI Specifications Order.

### **Service level requirements**

The Commission has considered the auditor's findings: that, in terms of performance, United Energy's AMI systems delivered remote meter readings within 1.9 to 6.8 per cent of the required levels required by the Minimum AMI Service Levels Specification, and that failures to meet the two-hour time limit for remote disconnection and reconnection were not the fault of United Energy. The Commission also considered that, although the auditor found United Energy could improve its performance monitoring, United Energy undertook appropriate independent and internal assessments in a timely manner in achieving this outcome.

The Commission therefore concludes that United Energy has used its best endeavours to operate the AMI system in accordance with the Service Levels Specification as required, and complied with clause 4(a) of the AMI Specifications Order.

### **AMI rollout target**

The Commission has considered the auditor's findings that United Energy's AMI rollout program achieved 83 per cent of the required target. The Commission has considered in some detail the process that United Energy followed to achieve this result, including matters clarified in the other information that United Energy provided.

The Commission has considered the information that was available to United Energy at relevant times. The Commission also considered whether the actions that United Energy then took, or omitted to take, failed to mitigate or actually increased the risk of not reaching the rollout target.

Several matters that significantly delayed United Energy's rollout – such as the time-of-use tariff moratorium and low productivity of installers – also affected other distributors. But United Energy was more affected than other distributors by access refusals.

In the Commission's view, some actions taken by the joint program management, including the decisions in May 2012 to engage – and then in October 2012 not to engage – a second installer, were not as effective as United Energy's situation required. Nevertheless, in light of the information then available, such as the impact on workforce numbers and a minimal improvement in installation rates, the decisions appear reasonable.

When United Energy did take over management of its own rollout program, it engaged more installers and so doubled the installation rate. The Commission has therefore considered whether this action was taken soon enough.

United Energy was contractually bound in the joint program and, through this, also bound to the single third-party installer. For practical and contractual reasons, United Energy could not readily withdraw from either arrangement without risking its rollout program.

From late 2012 to early 2013, United Energy made preparations to change those arrangements and accelerate the rollout. However, its expert's advice at the time was that United Energy lacked the essential resources needed to manage the project directly. United Energy accepted the expert's advice and improved its internal capability to directly manage the project. It brought the project in-house from June 2013 and the benefits were seen in a doubling of the rate of meter installations.

The Commission considers that, in light of the information available to United Energy at the time, it was reasonable for United Energy to take over direct management at the time it did.

The Commission concludes that United Energy has demonstrated that, to the extent practicable and acting on the basis of the information then available, it used best

endeavours to meet the AMI rollout target. Consequently, United Energy has complied as required with clause 14.1 of the AMI Cost Recovery Order. It has also complied as required with clause 14A.1 of the AMI Cost Recovery Order.

### **3.6 SP AUSNET**

SP AusNet did not meet any of the quantifiable criteria in Stream 1 of the Commission's framework for assessing best endeavours. The Commission therefore considered SP AusNet's performance with respect to the other criteria in Stream 2.

To inform its assessment of SP AusNet's compliance, the Commission has relied on the findings from the independent audit conducted in accordance with Guideline 22. The Commission has also considered the other information presented by SP AusNet. This information included a limited scope review that did not assess the effectiveness of processes and controls. The Commission's assessment of best endeavours follows.

#### **RESULTS OF AUDIT AND OTHER INFORMATION PROVIDED**

The audit in many instances could not confirm the reported AMI rollout statistics. SP AusNet had not retained the source data to support the reported figures. In some cases the distributor could not repeat the previous data extraction process to provide figures that could be reconciled to the reported figures. The auditor could not identify adequate documentation for the reporting processes.

The auditor assessed that, in the three areas of Functionality, Service Levels, and AMI rollout target and risk management, SP AusNet was only partially compliant. The term 'partially compliant' signifies that the auditor considered some adverse findings in the area were significant and would require substantial effort to correct.

See Appendix 5 for further details of the results of the audit.

#### **Functionality requirements**

The quantifiable criterion for functionality is that 100 per cent of the AMI meter functionality should be delivered.

The auditor reported that four of the specified functions were not implemented by 31 December 2013: the Interface to Home Area Network; Supply Capacity Control; Quality of Supply & Other Event Recording; Meter Loss of Supply Detection and Outage Detection.

The Commission has therefore considered in more detail whether the other criteria were met in attempting to deliver the required functions.

To assess whether SP Ausnet had processes in place to meet the **functionality** requirements (e.g. remote reading and remote reconnection), the auditor sought evidence of independent reviews or internal assessments at appropriate phases of the program, that confirmed the adequacy of SP AusNet's AMI system. The auditor found that the independent reviews conducted did not specifically assess whether the proposal would meet the functionality specification. However, an internal review during development in 2011 did make such an assessment. The auditor reported that, through these reviews, SP AusNet had identified matters needing remedial action. The distributor recorded them in registers of risks and actions, and monitored them monthly.

SP AusNet provided other information regarding its initial technology selection, identifying several documents related to the process that it followed. The auditor confirmed the existence of these documents, dating from 2008 and 2009, that show SP AusNet 'undertook a process with respect to the selection of WiMAX technology', including an analysis of alternatives and technical review of the chosen solution. The documents included outlines of trials that had been undertaken and a status report.

SP AusNet also provided other information relating to management of the functionality concerns that it identified. The distributor provided records from the risk register and issues register. Included with these records were documents such as presentations given to senior management, and outlines of initiatives and targets, relating to the corrective actions. The auditor confirmed the existence of these records and noted that they identified the 'owners' of risks or issues, controls, dates for remediation and other details. The matters that were confirmed to this extent included: interfacing to home area networks; tamper detection functionality; disconnection and reconnection functionality.

The scope of the auditor's review of the other information was limited. It did not detail the concerns that SP AusNet had raised in establishing its AMI infrastructure, or

assess the effectiveness of related processes and controls, or to what extent remedial action had been attempted.

### **Service level requirements**

The quantifiable criteria for service levels are that 100 per cent of the AMI service level functionality (i.e. remote reading and remote disconnection and reconnection) should be delivered. In addition, 95 per cent of actual meter data remotely read should be delivered to market by 0600 hours; 99 per cent delivered within 24 hours afterwards; 99.9 per cent within ten days.

The auditor reported that, at 31 December 2013:

- no meters could be remotely disconnected and reconnected, as this function was not enabled;
- remote reading was functional, although only 56 per cent of data was delivered by 0600 hours; 86.5 per cent within 24 hours; 97.4 per cent within ten days.

The Commission has considered in more detail whether the other criteria were met in attempting to deliver the required functions.

To give assurance that the AMI systems would meet the service level requirements (e.g. operational performance in remote meter reading), the distributor was expected to obtain independent or internal assessments of service levels. The auditor found that a number of independent reviews were conducted. One review, in 2009 noted at a high level that the architecture was sound and had the components required. None of the other independent reviews assessed in detail whether the proposal would meet the service level specification. Several internal reviews during development also assessed performance against the specification. The auditor reported that, through these reviews, SP AusNet had identified some matters needing remedial action and had recorded them in registers of risks and actions, and monitored them monthly.

The distributor provided other information that included records in the risk and issues registers. The auditor confirmed the existence of relevant records, included several risks related to meeting minimum service levels for routine remote reading. The scope of the auditor's review was again limited and the auditor did not assess the effectiveness of related processes and controls or assess any remedial action.



The auditor also found that SP AusNet did not have an established process to monitor its service level performance against requirements until May 2013, when it started to manually extract market (meter-reading) data from the Australian Energy Market Operator (AEMO), and match it to SP AusNet's own records, to identify which meters were successfully delivering data on time. In December 2013 SP AusNet developed internal IT systems to read the data directly for monitoring service levels.

The auditor sought to establish the number of meters in SP AusNet's system that delivered the required percentages of actual meter reads within certain time limits, according to the service level obligation.<sup>4</sup> SP AusNet had full meter data available for only a quarter of the days the auditor requested as a sample. The auditor's tests produced results that fell short of the specifications: 56 per cent of data delivered by 0600 hours (the required service level being 95 per cent), 86.5 per cent delivered within 24 hours (required to be 99 per cent) and 97.4 per cent within ten days (required level to be 99.9 per cent). But the auditor reported that the results were of unknown reliability and accuracy because of the limited availability of data. The auditor found limitations in the process documentation.

### **AMI rollout target**

The quantifiable criterion for **AMI rollout** is that functioning AMI meters should be installed and operating as required for 90 per cent of the prescribed customers.

The auditor reported achieving 58 per cent of its **AMI rollout target**, expressed as customers whose meters are recognised in the market as being remotely read, by the expected end of the AMI program at 31 December 2013. However, the distributor had not retained the original data extract on which the report was based. SP AusNet repeated the previous data extract for the auditor, who confirmed that the reported number was within the acceptable error rate, although the auditor noted deficiencies in the process and in the way that SP AusNet had documented it.

As at 31 December 2013, SP AusNet reported that only 2 per cent of its prescribed customers' sites still had not been visited. Supporting data extracts had not been retained, the system which contained this data could not run reports retrospectively, and the auditor was unable to confirm the number. However, the auditor found that the

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<sup>4</sup> SP AusNet did not provide this number, noting that it was not reported at meter level.

number of unvisited sites, as recorded at April 2014, was significantly lower than the 2 per cent reported earlier.

SP AusNet provided other information on delivering the AMI program. The auditor again confirmed that SP AusNet had commissioned an independent review of its IT capabilities and the proposed architecture in 2011, and engaged a third party as master integrator of the program. The distributor also provided other information on AMI Implementation, Delivery of Remote Services and Independent Monitoring Mechanisms: the auditor confirmed that the results of the 2011 independent review were presented to senior management with status updates and options in that year and, later, high-level plans from mid-2012 to early 2014. The scope of the auditor's review of this information was again limited and did not assess the effectiveness of related processes and controls.

SP AusNet provided other information related to its Corporate **Risk Management** Policy and Framework, and its Program Risk Management And Governance.

The auditor confirmed the existence of documents supporting both management processes. Records showed that risks related to failure of the AMI program had been identified and periodically reviewed. Other material confirmed that SP AusNet had conducted four AMI-related internal audits between 2009 and 2014, and had commissioned an independent review of its risk management in 2012. There were records showing that risk management workshops relating to the AMI program had been conducted.

**Particular circumstances:** SP AusNet referred to political uncertainty, customer hostility, demanding timeframes and complex systems and interfaces as particular circumstances relating to its rollout.

## **BEST ENDEAVOURS ASSESSMENT**

The Commission notes the auditor reported that SP AusNet was only partially compliant in each of the three areas (Functionality, Service Levels and AMI rollout target). According to Guideline 22 – Regulatory Audits of Energy Businesses, which governs the conduct of the Commission's regulatory audits, the significance of such an assessment is:

*Key requirements of the condition have been met but only minor achievements in compliance have been demonstrated. Findings noted are considered significant and require substantial effort to correct.*

The audit found that SP AusNet's AMI installation at 31 December 2013 could not deliver four of the required remote functions. Although remote disconnection and reconnection could be performed in trials, the functions were not enabled in normal operation. Only 58 per cent of the AMI meters were logically converted for normal operational remote reading. None of the three required service levels were reached.

In assessing the auditor's findings that SP AusNet was partially compliant, the Commission would require assurance that any 'best endeavours' supporting material be audited to a reasonable assurance level that assesses the effectiveness of processes and controls, as required by Guideline 22. The information would need to show, to that level of assurance, that SP AusNet's reviews, processes and controls were effective in ensuring detection of issues, and taking timely and appropriate remedial action. SP AusNet's other information has not been audited to that standard.

**Functionality requirements:** SP AusNet has not shown that its process for evaluating the proposed AMI technology was sufficiently rigorous to ensure that the AMI installation would meet the functionality requirements. An initial independent review in 2009 of SP AusNet's proposal did not map each specification to the proposed design. The Commission notes that the AMI program requires deployment of new technology and that, in the circumstances, such a review would have been appropriate and consistent with standard industry practice. Further, all the distributors except SP AusNet did conduct such an independent assessment against the requirements of the Minimum Functionality Specifications.

Other internal reviews were undertaken and issues were found and recorded for later action. But SP AusNet has not provided information to demonstrate the effectiveness of reviews, processes and controls that these actions may have represented. The Commission notes that four of the required functions were not operable.

**Service level requirements:** SP AusNet did not have established processes to monitor its compliance with service level requirements until mid-2013, at which time the distributor started to monitor AEMO meter-reading data through manual extraction and matching to SP AusNet's meter records. SP AusNet did not set up its own internal

processes and system to read and analyse market data until December 2013. By then, just more than half the AMI meters in SP AusNet's system could be remotely read. Compliance was not demonstrated with the requirement to deliver 95 per cent, 99 per cent or 99.9 per cent of actual reads by certain deadlines. In addition, actual performance could not be calculated with the required confidence, due to a lack of data. Remote disconnection and reconnection was not enabled. Further, the audit also found that SP AusNet's quality assurance processes limited the independence of reviews that were performed. The staff who extracted and analysed the data, also performed the quality assurance reviews.

The Commission notes that other distributors had internal checking systems to monitor the quality of data they provided to the market; SP AusNet relied on AEMO's systems and data for this essential control. On the basis of the information before it, the Commission considers that SP AusNet has not demonstrated that it used best endeavours to comply with clause 4(a) of the AMI Specifications Order; it has not provided data that could have confirmed its compliance.

**AMI rollout target:** at 31 December 2013, the expected end of the AMI program, SP AusNet reported that it had visited the premises of 98 per cent of prescribed customers to install an AMI meter. While this number could not be confirmed directly, data as at April 2014 showed better than 99 per cent. However, only 58 per cent of premises had a meter installed that complied with the AMI Functionality Specification and had been logically converted in the market to be treated in AEMO's Market Settlement and Transfer Solution (MSATS) system as AMI meters.

The Commission notes that SP AusNet's audit was the only one in which the auditor found that SP AusNet's information reporting was unreliable through lack of adequate procedures or work instructions. Some reported statistics were supported by an audit trail but could not be reconciled to it, and other statistics could not be reconciled to source documentation because it had not been retained and the relevant source system could not run reports retrospectively.

The audit and other information provided confirms that SP AusNet recorded in its registers several risks to completing its rollout obligation, presented issues to senior management and identified actions that could address these risks. However, no information has been submitted that provides the Commission with the necessary

assurance that SP AusNet took the appropriate decisions and actions to meet its rollout obligations.

**Particular circumstances:** The Commission notes that SP AusNet has referred to political uncertainty, customer hostility, demanding timeframes and complex systems and interfaces as particular circumstances impeding its rollout. The audits of the other distributors have reported similar issues and SP AusNet provided no evidence that it was disproportionately affected when compared to other distributors. These issues alone cannot account for an installation rollout of 58 per cent by 31 December 2013. The Commission considered that particular circumstances that surrounded SP AusNet's program arose from the distributor's own management and implementation processes.

## **COMMISSION'S CONCLUSIONS**

On the basis of the assessment above, which takes into account the other information that SP AusNet provided to clarify aspects of its AMI program, the Commission has reached the following conclusions.

### **Functionality requirements**

The Commission has considered the auditor's findings, that SP AusNet's AMI systems at 31 December 2013 did not reliably provide the required functionality, and that it did not undertake an independent review that compared the proposed functionality with the requirements. The Commission recognises that SP AusNet has documented deficiencies in the functionality, but also notes that SP AusNet has not demonstrated that it had effective internal processes and controls for review and remediation.

The Commission therefore concludes that SP AusNet has not demonstrated that it used its best endeavours and complied with clause 3(a) of the AMI Specifications Order.

### **Service level requirements**

The Commission has considered the auditor's findings, that SP AusNet's AMI systems at 31 December 2013 did not provide remote meter reading to the required performance level, or remote disconnection and reconnection at all in normal operation. The Commission has also considered the audit findings that SP AusNet did not start

monitoring the performance of its remote meter reading consistent with standard industry practice, until June 2013, to ensure that the systems would perform as required. The Commission also notes the auditor's findings that SP AusNet had no internal systems or processes for performance monitoring until December 2013, and that quality assurance functions performed by staff on data have not been independent of the functions that extract and analyse it.

The Commission concludes for the reasons above that SP AusNet has not demonstrated that it used its best endeavours to comply with clause 4(a) of the AMI Specifications Order.

### **AMI rollout target**

The Commission notes that while SP AusNet had visited 98 per cent of prescribed customer sites by 31 December 2013, only 58 per cent of meters installed at these sites had the required AMI functionality.

The Commission also notes that SP AusNet did not meet the required level of compliant meters due to failures of its selected systems to provide the required functions and service levels.

The Commission has considered the information that has been provided in the Protiviti audit report that indicates SP AusNet was partially compliant in meeting its rollout obligation. The Commission has also considered the other information provided by SP AusNet that shows the project management activities it carried out to rectify the system issues.

Both sources of information raise concerns; notably that a finding of partial compliance indicates findings are significant and require substantial effort to correct. The other information presented does not provide evidence that the activities led to appropriate decisions and actions.

The Commission considers the information presented does not provide it with the level of assurance that SP AusNet made the appropriate decisions and undertook the required actions to meet its rollout obligations.

The Commission therefore concludes that SP AusNet has not demonstrated that it used best endeavours, to the extent practicable, to meet the AMI rollout target, and has

not demonstrated that it maintained an effective strategy to identify and manage risks. Hence SP AusNet is not compliant with clauses 14.1 and 14A.1 of the AMI Cost Recovery Order.

## 4. NEXT STEPS

This chapter identifies changes to the AMI regulatory requirements and outlines the progress reported by distributors in the AMI rollout since the 31 December 2013 date for compliance that was relevant to the audit. The chapter concludes by setting out the manner in which the Commission will respond to the audit results, its assessments of best endeavours and its conclusions in relation to each distributor's best endeavours.

### CHANGES TO REGULATORY REQUIREMENTS

On 1 January 2014, an Order in Council amended the existing AMI Cost Recovery Order. Its effect was to insert a new clause 14AA which, among other things:

- continued the rollout period beyond 31 December 2013, and the obligation to use, to the extent practicable, best endeavours to install AMI meters at the premises of prescribed customers for which a distributor was already responsible;
- added an obligation to use best endeavours to install AMI meters for customers consuming less than 160 MWh of electricity per annum at new premises for which the distributor becomes responsible after 31 December 2013; and
- required distributors to maintain details of installations still not complete and report their number as required.

On 8 February 2014, a new Ministerial Order revoked the previous Order gazetted on 13 June 2013. The effect of the new Order was to provide that the new clause 14AA of the AMI Cost Recovery Order is an ESC enforceable regulatory requirement.

On 5 August 2014, an Order in Council further amended the AMI Cost Recovery Order. The Order provides for distributors to pay rebates to customers, where the distributor has failed to attempt to install an AMI meter at the customers' premises by 30 June



2014, and the supply address is not a non-economic site.<sup>1</sup> The Order also provides for a fee that a distributor may charge the customer after 31 March 2015 where there is no AMI meter installed because the customer has essentially refused the meter. Also from 5 August 2014, the Order replaced the best endeavours obligation on distributors to install AMI meters with an ongoing 'must' obligation to install AMI meters as part of their normal business operations.

A new Ministerial Order on 18 September 2014 added relevant obligations to the ESC enforceable regulatory requirements. None of the new Orders affect the audits reported here, which considered only the distributors' regulatory obligations up to 31 December 2013. However, the changes are relevant to the next steps that the Commission proposes to take.

## 4.1 COMMISSION FURTHER ACTION

During 2014, the Commission has received monthly reports from all distributors on their progress to install AMI meters. These reports indicate that, to 30 June 2014, all distributors have improved their compliance with AMI obligations.

In accordance with the changes to regulatory requirements identified above, the Commission expects to undertake further reviews or independent audits, to verify the distributors' compliance with the ongoing ESC enforceable regulatory requirements.

The following sections discuss the further action the Commission may take, accounting for the audit findings, Commission conclusions, and distributor progress since 31 December 2013.

## 4.2 SP AUSNET

SP AusNet has undertaken a technical review of its AMI systems to address the technology issues it has identified. SP AusNet advised the Australian Stock Exchange ('ASX') on 24 September 2014 that the review was complete. SP AusNet stated in its

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<sup>1</sup> Non-economic sites are sites where remote communication is not available at a reasonable cost. The relevant criteria are expected to be specified in a future Ministerial Order.

ASX Release that it will not replace the core systems, but will deploy another communication technology to reach customers that are beyond the range of the present network, and will invest further in systems and infrastructure for the remaining 300,000 meters not currently being read remotely. SP AusNet indicated that full completion and implementation of the AMI program is estimated to be achieved by the end of 2016.

The Commission remains concerned with SP AusNet's progress in meeting the AMI regulatory obligations. The most recent (unaudited) information provided by SP AusNet indicates that approximately 59 per cent of AMI meters are remotely delivering daily data.

The Commission will continue to monitor SP AusNet's progress and will require it to provide regular progress reports. The Commission will also consider enforcement options that may include ongoing independent audits of the accuracy and reliability of its progress reports (as well as its compliance with new obligations arising from the amended Cost Recovery Order in Council), and enforceable undertakings to ensure compliance.

### 4.3 JEMENA

The auditor of Jemena made minor adverse findings that were not significant enough to affect the overall assessment that the distributor was generally compliant in all the areas of the audit scope.

The Commission notes that some of the concerns identified by the auditor may be relevant to completing the AMI program or continuing to monitor service levels in normal operations. Such concerns could include the need to retain documentation showing that the business complies with an obligation, to document procedures for following up 'No Access' customers, and to resolve batch-processing problems.

The Commission will therefore seek progress reports on the distributor's remedial action in response to these concerns and will consider a future audit of Jemena's compliance with relevant AMI obligations.

#### **4.4 UNITED ENERGY**

The Commission notes that United Energy accelerated the rollout during 2013–14. United Energy recently advised that it had met 98 per cent (unaudited) of the rollout target compared to the 83 per cent reported at 31 December 2013.

The Commission will consider further independent audits of the distributor's compliance with ongoing AMI obligations.

#### **4.5 POWERCOR AND CITIPOWER**

The Commission is satisfied with the progress reported by Powercor and CitiPower. The Commission will however consider future audits of both the distributors' compliance with ongoing AMI obligations.



## APPENDIX 1 POWERCOR AUDIT – EXECUTIVE SUMMARY





# Essential Services Commission, Victoria

## Audit of AMI Regulatory Obligations for Distributors: Powercor Australia Ltd

**20 May 2014**

Liability limited by a scheme approved under Professional Standards Legislation.

Member of Deloitte Touche Tohmatsu

Ms Jayanthi Iswaran  
Project Manager – Energy Audits  
Essential Services Commission, Victoria  
Level 37, 2 Lonsdale Street  
Melbourne VIC 3000

20 May 2014

Dear Jayanthi

**Re: Audit of AMI regulatory obligations for distributors**

We attach our report from the recently concluded audit of compliance with selected AMI regulatory obligations for distributors.

The purpose of the audit was to assess Powercor Australia Ltd's ("Powercor") compliance with relevant Advanced Metering Infrastructure ("AMI") regulatory obligations including the AMI Cost Recovery Order, AMI Specifications Order and selected clauses of the Electricity Distribution Code. The audit test period was from 1 January 2010 to 31 December 2013.

Because of the inherent limitations of any compliance procedure, it is possible that fraud, error or non-compliance may occur and not be detected. A reasonable assurance engagement is not designed to detect all instances of non-compliance with the regulatory obligation as advised in the Minimum Audit Scope, as the engagement is not performed continuously throughout the period and the procedures performed in respect of compliance with the regulatory obligation as advised in the Minimum Audit Scope are undertaken on a test basis.

The key findings set out below, reflect in all material respects, the professional opinion of the auditor to the level of confidence specified by the Essential Services Commission, Victoria and consistent with the audit approach and methodology described in this report.

Overall, we conclude that Powercor have implemented an array of strong governance controls and processes that facilitate the ongoing compliance and success of the AMI delivery program. An overall 'general compliance' rating has been assigned to Powercor's compliance with the AMI regulatory obligations.

We would like to take this opportunity to thank management at Powercor for the co-operation we have received in performing this audit.

Should you have any questions or wish to discuss anything further, please contact me on (03) 9671 7812.

Yours sincerely,

  
Samuel Vorwerg  
Engagement Partner  
Deloitte Touche Tohmatsu



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# 1 Executive Summary

## 1.1 Introduction

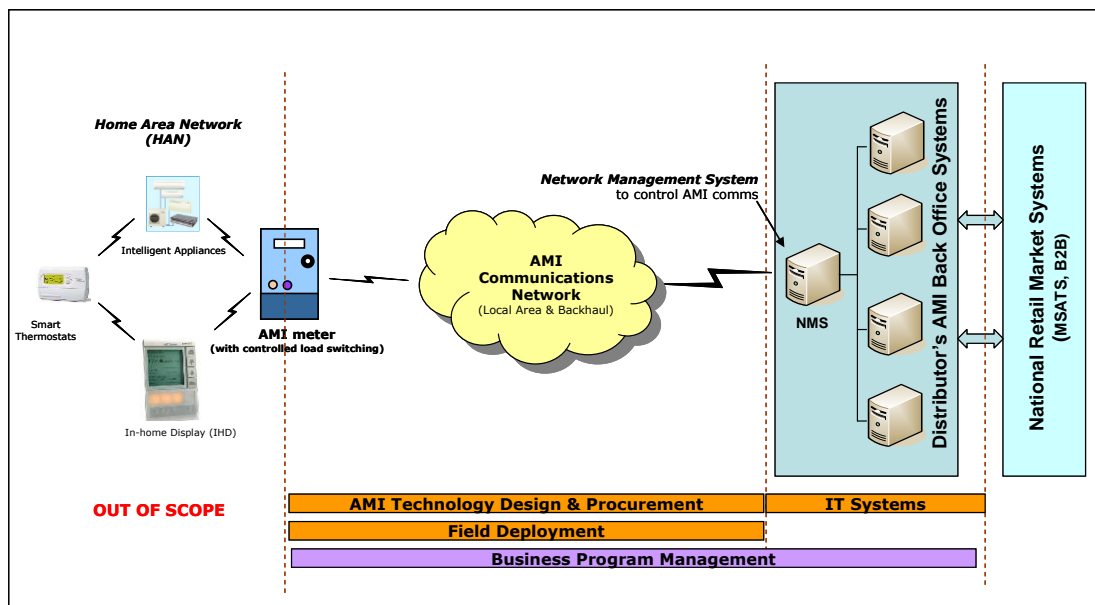
The Essential Services Commission (“ESC”) is charged under the Victorian Government’s Advanced Metering Infrastructure (“AMI”) Program to ensure that electricity distributors comply with their AMI regulatory obligations. Deloitte Touche Tohmatsu (“Deloitte”) has been engaged to assess the compliance of licenced energy distributor Powercor Australia Ltd’s (“Powercor”) compliance with those obligations.

## 1.2 Background

In 2009, the Victorian Government authorised Advanced Metering Infrastructure (AMI) be rolled out to all customers consuming less than 160MWh of electricity per annum.

Under the AMI Program, some 2.9 million new “smart” meters were to be installed over a four year period (over 690,000 Prescribed Powercor Customers with a remotely read AMI meters). The technical capabilities of AMI meters and service levels obligations applicable to distributors and retailers with regard to the operation of AMI are defined in the Department of Primary Industries (DPI’s) Minimum AMI Functionality Specification (Release 1.2) and Minimum AMI Service Levels Specification (Release 1.1), which were approved by the Minister for Energy and Resources in September 2013 and September 2008, respectively.

The following diagram illustrates the scope of the AMI installation in the context of major systems for communicating data between electricity distributors, retailers and the National Electricity Market.



The AMI program is one of the largest projects to be delivered by Powercor. The program's implementation and deployment was split into 3 program phases:

- Planning, Mobilisation and Pre-deployment (2008-2009): This phase included the establishment of program charters, business plans, program communications strategy and deployment plans.
- Deployment and Operations (2009-2013): The Deployment and Operations phase included the purchase, testing and implementation of 12 model AMI meter types and Powercor's Mesh Radio Communications System. Rigorous system and laboratory testing of the AMI technology was performed, and the deployment of AMI meters to Prescribed Customers commenced.
- Leverage and Transition (2012-2015): During the Leverage and Transition phase, ongoing transition and deployment of AMI smart meters to Prescribed Customers was performed. Powercor also developed additional solutions and customer strategies during this phase, including a functional smart meter outage management solution to reduce customer 'minutes off' supply and updates to technology to enable greater efficiencies with meter data communications.

From 2009 to 31 December 2013, Powercor deployed 690,486 AMI meters to Prescribed Customers, which represents 93.57% of Powercor's total Prescribed Customers. As at 31 December 2013, of the total National Meter Identifiers ("NMI"s) for Prescribed Customers with an AMI Meter, 96.70% can be remotely read and remotely re-energised/de-energised subject to safety considerations.

Due to the magnitude of organisational change and regulatory compliance requirements inherent in the nature and size of the AMI program, a need for strong governance structures and processes were critical to enable the successful delivery of the AMI program.

We highlight below the key success factors implemented by Powercor across the AMI program:

#### **1. Strong project governance practices:**

A robust and thorough governance structure was applied throughout the business to support the delivery of the AMI program and manage the associated risks. This governance structure included ultimate accountability for the AMI program, strategic direction, project sponsorship and project management. The governance structure included:

- A program charter that defined the AMI program scope, deliverables, governance and overall approach and provided the reference point for planning, quality management, program management and risk management for the life of the AMI program.
- The AMI Steering Committee was established as an oversight governance body and was responsible for the overall strategic direction and management of the program. Regular reporting to the Board of Directors (Quarterly), Executive management (Weekly/Monthly) and other key stakeholders was a critical activity for this Committee.
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#### **2. A strategic approach to procurement:**

The tendering and procurement strategy was critical to the success of the AMI program, with tendering and procurement processes managed by an external consulting group to ensure strong governance and independence across the selection and evaluation of communications, metering and backhaul vendors. To facilitate this process, a procurement strategy was developed and vendors were independently evaluated against set criteria relating to:

- Technology specifications – Assessment of compliance with functionality specification requirements, system security features and other technology specific requirements

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The objectives of the procurement strategy were to ensure:

- Value – A solution that delivered the most cost effective outcome
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### **3. Leveraging existing IT systems and systems integration:**

The AMI program represented a major change to the existing business IT architecture. Where practical, the core IT strategy was to leverage off, and re-use, existing IT systems with new systems only introduced where modifications to existing systems were not possible or would be more expensive than introducing new systems. The AMI program required significantly greater functionality and services including:

- Increased server capacity to cater for new and upgraded applications with high transaction throughput requirements
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The IT solution was also applied to the rollout of meters with the introduction of an automated field mobility solution to enable the efficient management of field installation activities and the updating of customer and metering systems.

### **4. A whole of business customer service strategy**

Managing customers to achieve an appropriate balance between customer satisfaction, cost to serve and rollout efficiency was a key risk to the AMI Program. To mitigate this, the business developed the AMI Customer Management Strategy which:

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- Developed a series of project proposals designed to provide a level of detail of the scope, resource and work packages required to ramp up to the necessary level of operational customer service capability.

### **5. Robust AMI technology testing processes:**

The Company invested in robust meter testing processes including:

- The establishment of a purpose built laboratory and training centre to facilitate acceptance testing across all aspects of the integrated technology solution in line with each of the minimum functional specifications.
- The establishment of a purpose built Field Activity Centre for Training to train all field based employees/contractors engaged to install smart meters. In addition to this, a leading scientific approach to audit was adopted to ensure the quality of workmanship and safety as well as ensuring less re-work, revisits, deployment schedule adherence, and minimising costs and customer disruption.
- Deployment of AMI meters were staggered across 9 designated regions. For each deployed region, rigorous testing and reporting was completed in line with regulatory obligations. To support testing, a suite of testing plans and reports were developed and reported to designated personnel within the AMI business unit. Powercor also established processes to remediate any issues or non-compliances associated with regional roll out testing.

## 1.3 Scope

The ESC is charged under the Victorian Government's Advanced Metering Infrastructure Program to ensure that all electricity distributors are complying with their AMI regulatory obligations.

The scope and objective of the audit is to assess if the distributor has:

- To the extent practicable, used its best endeavours to install a remotely read interval meter (which is operational as a remotely read interval meter in accordance with the Specifications) for all metering installations for Prescribed Customers<sup>1</sup>; specifications include the Minimum AMI Functionality Specification<sup>2</sup>, Minimum AMI Service Levels Specification<sup>3</sup>; and
- Has complied with selected clauses in the Electricity Distribution Code<sup>4</sup>.

The obligations included in this minimum scope have been selected because compliance with them is critical to the success of the AMI rollout. The areas to be reviewed are the following:

- **Compliance monitoring and reporting:** The Commission places considerable reliance on the distributor's ability to monitor compliance with their regulatory obligations and report breaches as required, in order to extend the interval between independent regulatory audits
- **AMI rollout, functions and services:** Installing and operating AMI metering infrastructure; remote readings of AMI meters, disconnections or reconnections of AMI meters.

Our audit examined the following AMI obligations:

- Selected AMI related obligations in the Electricity Distribution Code;
- Minimum AMI Functionality Specification;
- Minimum AMI Service Levels Specification; and
- Clauses 14.1, 14.2 and 14A of the AMI Cost Recovery Order in Council.

The scope of the audit also includes the general obligation on distributors to report information to the Commission as required as a condition of their licences, and the accuracy and reliability of the AMI Rollout Statistics so reported.

The following general compliance aspects were assessed for each area of coverage noted above.

For the AMI Rollout Statistics, the generic compliance issues are:

- Is the data collected and reported in accordance with documented policies, practices and procedures?
- Are the policies, practices and procedures fully understood by relevant staff?
- How accurately do those procedures, and the reported data, reflect the established definitions for the AMI Rollout Statistics?
- Is the reported data based on sound information systems and records?

For other obligations, the generic compliance issues are:

- Is the obligation reflected in documented procedures?
- Is it fully understood by staff?
- Has it been delivered as specified?
- Is it the subject of effective compliance monitoring (e.g. - records of service delivery) and quality control (e.g. - complaints feedback)?

For a detailed summary of the scope areas subject to the audit please refer to Appendix C.

<sup>1</sup> "Prescribed Customers" as used in this scope means a person who buys electricity from a retailer and has an annual electricity consumption of 160MWh or less for which it is the responsible person on 31 December 2013.





<sup>2</sup> Minimum AMI Functionality Specification Release 1.2 (September 2013).

<sup>3</sup> Minimum AMI Service Level Specification Release 1.1 (September 2008).







<sup>4</sup> Electricity Distribution Code (May 2012).

## 1.4 Summary of findings

An overview of the number of compliance directions examined by scope area is provided below.

Compliance Requirement	Compliance Rating <sup>5</sup>	Audit Findings
<b>A. Energy Licence-Compliance</b>		
<b>Generic Compliance Requirements: Energy Licence Compliance</b>		No findings noted.
<b>Specific Compliance Requirements: CI.22 Compliance with Orders, Codes, Guidelines</b> The licensee is to comply with designated regulatory instruments, monitor its compliance and report material breaches as soon as possible.		No findings noted.
<b>B. AMI Cost Recovery Order</b>		
<b>Generic Compliance Requirements: AMI Cost Recovery Order</b>		No findings noted.
<b>Specific Compliance Requirements: CI.14.1 Rollout Period</b> CI 14.1 (a) To the extent practicable, each distributor must use its best endeavours to install a remotely read interval meter (which is operational as a remotely read interval meter in accordance with the Specifications) for all of the metering installations for Prescribed Customers by 31 December 2013. CI 14.1(b) If a distributor has not installed a remotely read interval meter for all of the metering installations for Prescribed Customers by 31 December 2013, then, for the purpose of considering whether the distributor has used its best endeavours to do so, the Commission must take into account: (i) the distributor's actions in relation to the risk of failing to install the relevant meters, including whether the distributor has failed to take any action that could reasonably have been taken to mitigate that risk and whether the distributor has taken or omitted to take any action which has increased that risk; (ii) the distributor's decisions and actions relevant to meeting the requirements of clause 14.1(a) in light of the information that was available to the distributor at the time those decisions and actions were taken; and (iii) any other factors the Commission considers relevant.  14A.1 A distributor must have and must keep up to date to 31 December 2015 a risk management strategy ('risk management strategy') to: (a) identify, address and mitigate technological or other risks of and in connection with the provision, installation, maintenance and operation of advanced metering infrastructure and associated services and systems; and (b) manage expenditure increases arising from those risks.		No findings noted.


<sup>5</sup> Refer to Appendix B for compliance rating definitions

Compliance Requirement	Compliance Rating <sup>5</sup>	Audit Findings
<b>C. AMI Specifications Order – Functionality Specifications</b>		
<b>Generic Compliance Requirements: Functionality Specifications</b>		No findings noted.
<b>Specific Compliance Requirements: ASO Cl.3(a) Functionality Specifications</b> Distributor must use its best endeavours to ensure the AMI system complies with the Minimum AMI Functionality Specification (Victoria) September 2013.		No findings noted.
<b>Generic Compliance Requirements: Service Level Specifications</b>		No findings noted.
<b>Specific Compliance Requirements: ASO Clause 4(a) Service Levels Specification</b> Distributor must use its best endeavours to ensure the AMI system complies with the Minimum AMI Service Levels Specification (Victoria) September 2008.		No findings noted.
<b>Generic Compliance Requirements: EDC Disconnections &amp; Reconnections</b>		No findings noted.
<b>Specific Compliance Requirements: EDC Retailer's/Customer's request for disconnection Clause 12.3, 12.4</b> Where the distributor can safely disconnect supply remotely, it must use its best endeavours to disconnect supply to the customer's supply address within 2 hours of a request being made in the instance of a retailer, and within 2 hours of the request being validated by the distributor in the instance of a customer.		Minor findings noted - Refer to Detailed findings in section 1.5
<b>EDC Clause 13.1.2 Reconnection of Supply</b> Deals with reconnection after and/or before 3 pm and special requests made before 9 pm.		

An overview of our observations in relation to all obligations examined is included in section 2.

## 1.5 Audit Findings and Management Compliance Plans

### 1.5.1 Non-compliant reporting of remote energisations against applicable clauses of the Electricity Distribution Code is not completed.

Obligation	Observation	Compliance Rating
<p>Section 6.2 : General Compliance Issues</p> <p>Is it the subject of effective compliance monitoring (e.g. - records of service delivery) and quality control (e.g. - complaints feedback)?</p>	<p>Reports in relation to remote energisation figures are generated on a regular basis, usually two to three times a week. The purpose of these reports are to track and monitor the volumes of energisations and instances where the General Service Level has not been complied with, namely clause 6.2 Failure to Supply as there are particular financial ramifications associated with non-compliance in this respect.</p> <p>We note that this reporting does not specifically flag requests that have not met the standards prescribed by clause 12.3 / 12.4, namely processing of the de-energisation within 2 hours of the request and re-energisation in accordance with 13.1.2 resulting in the potential that non-compliance events are not identified, managed or remediated in a timely manner.</p> <p>Further, we identified that the report was not generated and filed on a periodic and defined basis (e.g. monthly), nor were details of the exceptions noted maintained on file with the report and signed off by the reviewing manager. Since March 2014, we were advised that the energisation reporting is now run on a monthly basis at the end of the month, saved and maintained on file for audit purposes</p>	

#### Suggestions for improvement

The current BI report parameters should be extended to include remote energisations that are non-compliant with Clause 12.3, 12.4 and 13.1.2 of the Electricity Distribution Code (EDC).

These reports at a minimum should be generated on a monthly basis and reviewed by the Field Activities and Contract Manager. Evidence of the review should be maintained on file along with an explanation of any exceptions that have been identified.

#### Management response and action plans

Powercor management agrees with the observations noted above. The following actions will be implemented:

Action Plan	Action owner	Date for Completion
<p>Amend the current BI reporting parameters of the Field Activities and Time Analysis Report to include monthly reporting on remote energisations to meet the standards prescribed by EDC c12.3 &amp; c12.4, (the processing of de-energisation within 2 hours of the request and re-energisation in accordance with c13.1.2.</p> <p>Reports to be reviewed by the Field Activities and Contract Manager on a monthly basis and evidence of the review to be maintained on file along with an explanation of any exceptions that have been identified.</p>	David Turnour (Manager Connection Services)	Quarter 3 2014

## 1.6 Acknowledgement

We wish to place on record our appreciation of the assistance received from the management and staff of Powercor Australia Ltd during the course of this project.

**Deloitte:** Audit of AMI Regulatory Obligations for Distributors

This report is intended solely for the information of the Essential Services Commission Victoria and Powercor Australia Ltd, and should not be used or relied upon by any other person or entity.



## **Assurance Report of the Independent Auditor to the Directors of Powercor Australia Ltd**

### **Scope**

We have been engaged to conduct a reasonable assurance engagement relating to Powercor Australia Ltd's compliance with the Victorian Government's Advanced Metering Infrastructure ("AMI") Program regulatory obligations as documented in Minimum Audit Scope Audit of AMI Regulatory Obligations for Distributors (December 2013) ("Minimum Audit Scope") and as measured by the compliance grading framework defined per clause 7 in Guideline No. 22 Regulatory Audits of Energy Businesses (January 2014) ("Compliance Grading Framework") for the period from 1 January 2010 to 31 December 2013.

### **Management's Responsibility for compliance with the regulatory obligations**

Management is responsible for compliance with the regulatory obligations as documented in the Minimum Audit Scope. This responsibility includes establishing and maintaining internal control relevant to comply with the regulatory obligations as documented in the Minimum Audit Scope.

### **Our Responsibility**

Our responsibility is to express a conclusion on the entity's compliance with the regulatory obligations as documented in the Minimum Audit Scope, based on our procedures. Our engagement has been conducted in accordance with applicable Australian Standards on Assurance Engagements ASAE 3100 *Compliance Engagements*, issued by the Australian Auditing and Assurance Standards Board, in order to state whether, in all material respects, Powercor Australia Ltd has complied with the regulatory obligations as documented in the Minimum Audit Scope and measured by the Compliance Grading Framework for the period from 1 January 2010 to 31 December 2013. ASAE 3100 also requires us to comply with the relevant ethical requirements of the Australian professional accounting bodies.

Our procedures were performed to obtain evidence to support our conclusion and included examination, on a test basis, of evidence supporting the entity's compliance with the requirements of the regulatory obligations as documented in the Minimum Audit Scope.

### **Inherent Limitations**

Because of the inherent limitations of any compliance procedure, it is possible that fraud, error or non-compliance may occur and not be detected. A reasonable assurance engagement is not designed to detect all instances of non-compliance with the regulatory obligations as documented in the Minimum Audit Scope, as the engagement is not performed continuously throughout the period and the procedures performed in respect of compliance with the regulatory obligations as documented in the Minimum Audit Scope are undertaken on a test basis.

The conclusion expressed in this report has been formed on the above basis.

### **Auditor's Statement**

In our opinion, Guideline No. 22 Regulatory Audits of Energy Businesses (January 2014) and the Tripartite Audit Deed dated 24 March 2014 between the Commission, Powercor Australia Ltd and Deloitte (the "Deed") have been complied with in all material and relevant respects, in conducting the agreed procedures, making findings and preparing the report.

The key findings set out in our report reflect our professional opinion to the level of confidence specified by the Essential Service Commission of Victoria in all material respects and is consistent with the audit approach and methodology described in this report (specifically the Standard on Assurance Engagements ASAE 3100 *Compliance Engagements*).

### **Conclusion**

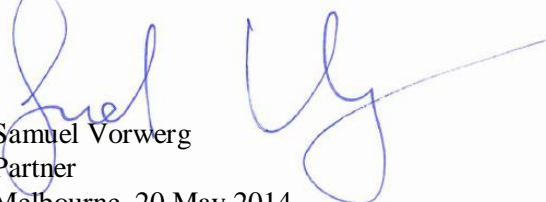
In our opinion, Powercor Australia Ltd has complied, in all material respects, with the regulatory obligations as documented in the Minimum Audit Scope as measured by the Compliance Grading Framework for the period from 1 January 2010 to 31 December 2013.

### **Limitation on Use**

This report has been prepared for management and the directors of Powercor Australia Ltd and the Essential Services Commission of Victoria in accordance with the requirements of Guideline No. 22 Regulatory Audits of Energy Businesses (January 2014) and the Deed. We disclaim any assumption of responsibility for any reliance on this report to any persons or users other than Powercor Australia Ltd or the Essential Services Commission, or for any purpose other than that for which it was prepared.

DELOITTE TOUCHE TOHMATSU

DELOITTE TOUCHE TOHMATSU



Samuel Vorwerg  
Partner

Melbourne, 20 May 2014

In addition, to the issuance of this unqualified assurance report on Powercor Australia's compliance, in all material respects, with the regulatory obligations as documented in the Minimum Audit Scope as measured by the Compliance Grading Framework, a detailed report of AMI Observations has been provided to the Essential Services Commission, Victoria. The executive summary of that detailed report is included with this assurance report. The remainder of the detailed report provided to the Essential Services Commission, Victoria is confidential and accordingly, cannot be disclosed.

## APPENDIX 2 CITIPOWER AUDIT – EXECUTIVE SUMMARY





# Essential Services Commission, Victoria

## Audit of AMI Regulatory Obligations for Distributors: CitiPower Pty

**20 May 2014**

Liability limited by a scheme approved under Professional Standards Legislation.

Member of Deloitte Touche Tohmatsu

Ms Jayanthi Iswaran  
Project Manager – Energy Audits  
Essential Services Commission, Victoria  
Level 37, 2 Lonsdale Street  
Melbourne VIC 3000

20 May 2014

Dear Jayanthi

**Re: Audit of AMI regulatory obligations for distributors**

We attach our report from the recently concluded audit of compliance with selected AMI regulatory obligations for distributors.

The purpose of the audit was to assess CitiPower Pty's ("CitiPower") compliance with relevant Advanced Metering Infrastructure ("AMI") regulatory obligations including the AMI Cost Recovery Order, AMI Specifications Order and selected clauses of the Electricity Distribution Code. The audit test period was from 1 January 2010 to 31 December 2013.

Because of the inherent limitations of any compliance procedure, it is possible that fraud, error or non-compliance may occur and not be detected. A reasonable assurance engagement is not designed to detect all instances of non-compliance with the regulatory obligation as advised in the Minimum Audit Scope, as the engagement is not performed continuously throughout the period and the procedures performed in respect of compliance with the regulatory obligation as advised in the Minimum Audit Scope are undertaken on a test basis.

The key findings set out below, reflect in all material respects, the professional opinion of the auditor to the level of confidence specified by the Essential Services Commission, Victoria and consistent with the audit approach and methodology described in this report.

Overall, we conclude that CitiPower have implemented an array of strong governance controls and processes that facilitate the ongoing compliance and success of the AMI delivery program. An overall 'general compliance' rating has been assigned to CitiPower's compliance with the AMI regulatory obligations.

We would like to take this opportunity to thank management at CitiPower for the co-operation we have received in performing this audit.

Should you have any questions or wish to discuss anything further, please contact me on (03) 9671 7812.

Yours sincerely,

  
Samuel Vorwerg  
Engagement Partner  
Deloitte Touche Tohmatsu

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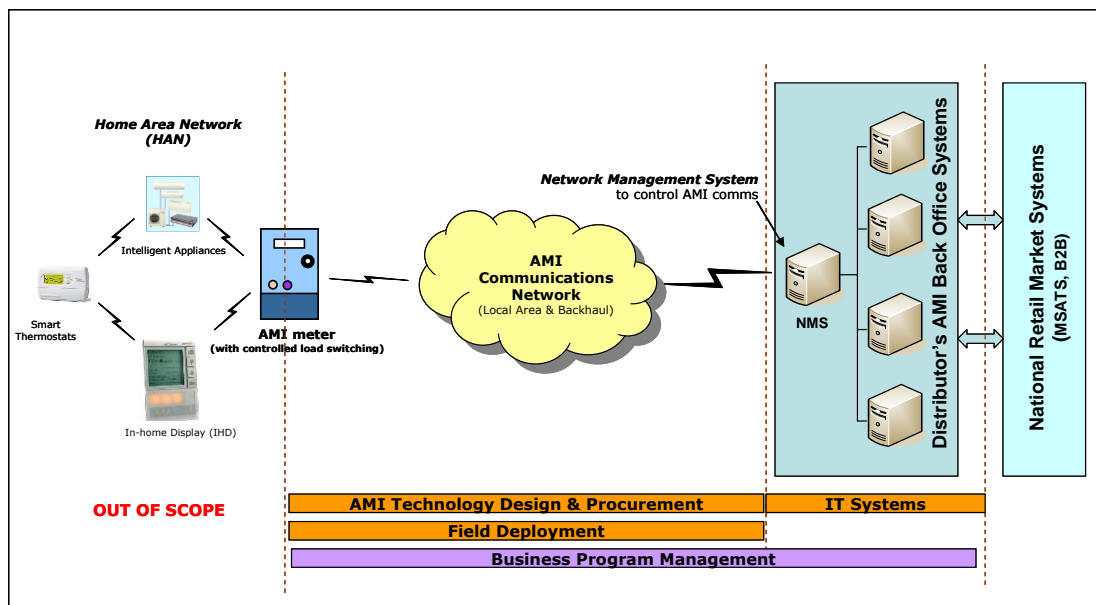
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- Deployment of AMI meters were staggered across 9 designated regions for the CitiPower and Powercor Distribution Networks. For each deployed region, rigorous testing and reporting was completed in line with regulatory obligations. To support testing, a suite of testing plans and reports were developed and reported to designated personnel within the AMI business

unit. CitiPower also established processes to remediate any issues or non-compliances associated with regional roll out testing.

### 1.3 Scope

The ESC is charged under the Victorian Government's Advanced Metering Infrastructure Program to ensure that all electricity distributors are complying with their AMI regulatory obligations.

The scope and objective of the audit is to assess if the distributor has:

- To the extent practicable, used its best endeavours to install a remotely read interval meter (which is operational as a remotely read interval meter in accordance with the Specifications) for all metering installations for Prescribed Customers<sup>1</sup>; specifications include the Minimum AMI Functionality Specification<sup>2</sup>, Minimum AMI Service Levels Specification<sup>3</sup>; and
- Has complied with selected clauses in the Electricity Distribution Code<sup>4</sup>.

The obligations included in this minimum scope have been selected because compliance with them is critical to the success of the AMI rollout. The areas to be reviewed are the following:

- **Compliance monitoring and reporting:** The Commission places considerable reliance on the distributor's ability to monitor compliance with their regulatory obligations and report breaches as required, in order to extend the interval between independent regulatory audits
- **AMI rollout, functions and services:** Installing and operating AMI metering infrastructure; remote readings of AMI meters, disconnections or reconnections of AMI meters.

Our audit examined the following AMI obligations:

- Selected AMI related obligations in the Electricity Distribution Code;
- Minimum AMI Functionality Specification;
- Minimum AMI Service Levels Specification; and
- Clauses 14.1, 14.2 and 14A of the AMI Cost Recovery Order in Council.

The scope of the audit also includes the general obligation on distributors to report information to the Commission as required as a condition of their licences, and the accuracy and reliability of the AMI Rollout Statistics so reported.

The following general compliance aspects were assessed for each area of coverage noted above.

For the AMI Rollout Statistics, the generic compliance issues are:

- Is the data collected and reported in accordance with documented policies, practices and procedures?
- Are the policies, practices and procedures fully understood by relevant staff?
- How accurately do those procedures, and the reported data, reflect the established definitions for the AMI Rollout Statistics?
- Is the reported data based on sound information systems and records?

For other obligations, the generic compliance issues are:

- Is the obligation reflected in documented procedures?
- Is it fully understood by staff?
- Has it been delivered as specified?
- Is it the subject of effective compliance monitoring (e.g. - records of service delivery) and quality control (e.g. - complaints feedback)?

For a detailed summary of the scope areas subject to the audit please refer to Appendix C.

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1 "Prescribed Customers" as used in this scope means a person who buys electricity from a retailer and has an annual electricity consumption of 160MWh or less for which it is the responsible person on 31 December 2013.





2 Minimum AMI Functionality Specification Release 1.2 (September 2013).

3 Minimum AMI Service Level Specification Release 1.1 (September 2008).







4 Electricity Distribution Code (May 2012).

## 1.4 Summary of findings

An overview of the number of compliance directions examined by scope area is provided below.

Compliance Requirement	Compliance Rating <sup>5</sup>	Audit Findings
<b>A. Energy Licence-Compliance</b>		
<b>Generic Compliance Requirements: Energy Licence Compliance</b>		No findings noted.
<b>Specific Compliance Requirements: CI.22 Compliance with Orders, Codes, Guidelines</b> The licensee is to comply with designated regulatory instruments, monitor its compliance and report material breaches as soon as possible.		No findings noted.
<b>B. AMI Cost Recovery Order</b>		
<b>Generic Compliance Requirements: AMI Cost Recovery Order</b>		No findings noted.
<b>Specific Compliance Requirements: CI.14.1 Rollout Period</b> CI 14.1 (a) To the extent practicable, each distributor must use its best endeavours to install a remotely read interval meter (which is operational as a remotely read interval meter in accordance with the Specifications) for all of the metering installations for Prescribed Customers by 31 December 2013. CI 14.1(b) If a distributor has not installed a remotely read interval meter for all of the metering installations for Prescribed Customers by 31 December 2013, then, for the purpose of considering whether the distributor has used its best endeavours to do so, the Commission must take into account: (i) the distributor's actions in relation to the risk of failing to install the relevant meters, including whether the distributor has failed to take any action that could reasonably have been taken to mitigate that risk and whether the distributor has taken or omitted to take any action which has increased that risk; (ii) the distributor's decisions and actions relevant to meeting the requirements of clause 14.1(a) in light of the information that was available to the distributor at the time those decisions and actions were taken; and (iii) any other factors the Commission considers relevant.  14A.1 A distributor must have and must keep up to date to 31 December 2015 a risk management strategy ('risk management strategy') to: (a) identify, address and mitigate technological or other risks of and in connection with the provision, installation, maintenance and operation of advanced metering infrastructure and associated services and systems; and (b) manage expenditure increases arising from those risks.		No findings noted.


<sup>5</sup> Refer to Appendix B for compliance rating definitions

Compliance Requirement	Compliance Rating <sup>5</sup>	Audit Findings
<b>C. AMI Specifications Order – Functionality Specifications</b>		
<b>Generic Compliance Requirements: Functionality Specifications</b>		No findings noted.
<b>Specific Compliance Requirements: ASO Cl.3(a) Functionality Specifications</b> Distributor must use its best endeavours to ensure the AMI system complies with the Minimum AMI Functionality Specification (Victoria) September 2013.		No findings noted.
<b>Generic Compliance Requirements: Service Level Specifications</b>		No findings noted.
<b>Specific Compliance Requirements: ASO Clause 4(a) Service Levels Specification</b> Distributor must use its best endeavours to ensure the AMI system complies with the Minimum AMI Service Levels Specification (Victoria) September 2008.		No findings noted.
<b>Generic Compliance Requirements: EDC Disconnections &amp; Reconnections</b>		No findings noted.
<b>Specific Compliance Requirements: EDC Retailer's/Customer's request for disconnection Clause 12.3, 12.4</b> Where the distributor can safely disconnect supply remotely, it must use its best endeavours to disconnect supply to the customer's supply address within 2 hours of a request being made in the instance of a retailer, and within 2 hours of the request being validated by the distributor in the instance of a customer. <b>EDC Clause 13.1.2 Reconnection of Supply</b> Deals with reconnection after and/or before 3 pm and special requests made before 9 pm.		Minor findings noted - Refer to Detailed findings in section 1.5

An overview of our observations in relation to all obligations examined is included in section 2.

## 1.5 Audit Findings and Management Compliance Plans

### 1.5.1 Non-compliant reporting of remote energisations against applicable clauses of the Electricity Distribution Code is not completed.

Obligation	Observation	Compliance Rating
<p>Section 6.2 : General Compliance Issues</p> <p>Is it the subject of effective compliance monitoring (e.g. - records of service delivery) and quality control (e.g. - complaints feedback)?</p>	<p>Reports in relation to remote energisation figures are generated on a regular basis, usually two to three times a week. The purpose of these reports are to track and monitor the volumes of energisations and instances where the General Service Level has not been complied with, namely clause 6.2 Failure to Supply as there are particular financial ramifications associated with non-compliance in this respect.</p> <p>We note that this reporting does not specifically flag requests that have not met the standards prescribed by clause 12.3 / 12.4, namely processing of the de-energisation within 2 hours of the request and re-energisation in accordance with 13.1.2 resulting in the potential that non-compliance events are not identified, managed or remediated in a timely manner.</p> <p>Further, we identified that the report was not generated and filed on a periodic and defined basis (e.g. monthly), nor were details of the exceptions noted maintained on file with the report and signed off by the reviewing manager. Since March 2014, we were advised that the energisation reporting is now run on a monthly basis at the end of the month, saved and maintained on file for audit purposes</p>	

#### Suggestions for improvement

- The current BI report parameters should be extended to include remote energisations that are non-compliant with Clause 12.3, 12.4 and 13.1.2 of the Electricity Distribution Code (EDC).

These reports at a minimum should be generated on a monthly basis and reviewed by the Field Activities and Contract Manager. Evidence of the review should be maintained on file along with an explanation of any exceptions that have been identified.

#### Management response and action plans

CitiPower management agrees with the observations noted above. The following actions will be implemented:

Action Plan	Action owner	Date for Completion
<p>Amend the current BI reporting parameters of the Field Activities and Time Analysis Report to include monthly reporting on remote energisations to meet the standards prescribed by EDC c12.3 &amp; c12.4, (the processing of de-energisation within 2 hours of the request and re-energisation in accordance with c13.1.2.</p> <p>Reports to be reviewed by the Field Activities and Contract Manager on a monthly basis and evidence of the review to be maintained on file along with an explanation of any exceptions that have been identified.</p>	David Turnour (Manager Connection Services)	Quarter 3 2014

## 1.6 Acknowledgement

We wish to place on record our appreciation of the assistance received from management and staff of CitiPower Pty during the course of this project.

## **Assurance Report of the Independent Auditor to the Directors of CitiPower Pty**

### **Scope**

We have been engaged to conduct a reasonable assurance engagement relating to CitiPower Pty's compliance with the Victorian Government's Advanced Metering Infrastructure ("AMI") Program regulatory obligations as documented in Minimum Audit Scope Audit of AMI Regulatory Obligations for Distributors (December 2013) ("Minimum Audit Scope") and as measured by the compliance grading framework defined per clause 7 in Guideline No. 22 Regulatory Audits of Energy Businesses (January 2014) ("Compliance Grading Framework") for the period from 1 January 2010 to 31 December 2013.

### **Management's Responsibility for compliance with the regulatory obligations**

Management is responsible for compliance with the regulatory obligations as documented in the Minimum Audit Scope. This responsibility includes establishing and maintaining internal control relevant to comply with the regulatory obligations as documented in the Minimum Audit Scope.

### **Our Responsibility**

Our responsibility is to express a conclusion on the entity's compliance with the regulatory obligations as documented in the Minimum Audit Scope, based on our procedures. Our engagement has been conducted in accordance with applicable Australian Standards on Assurance Engagements ASAE 3100 *Compliance Engagements*, issued by the Australian Auditing and Assurance Standards Board, in order to state whether, in all material respects, CitiPower Pty has complied with the regulatory obligations as documented in the Minimum Audit Scope and measured by the Compliance Grading Framework for the period from 1 January 2010 to 31 December 2013. ASAE 3100 also requires us to comply with the relevant ethical requirements of the Australian professional accounting bodies.

Our procedures were performed to obtain evidence to support our conclusion and included examination, on a test basis, of evidence supporting the entity's compliance with the requirements of the regulatory obligations as documented in the Minimum Audit Scope.

### **Inherent Limitations**

Because of the inherent limitations of any compliance procedure, it is possible that fraud, error or non-compliance may occur and not be detected. A reasonable assurance engagement is not designed to detect all instances of non-compliance with the regulatory obligations as documented in the Minimum Audit Scope, as the engagement is not performed continuously throughout the period and the procedures performed in respect of compliance with the regulatory obligations as documented in the Minimum Audit Scope are undertaken on a test basis.

The conclusion expressed in this report has been formed on the above basis.

### **Auditor's Statement**

In our opinion, Guideline No. 22 Regulatory Audits of Energy Businesses (January 2014) and the Tripartite Audit Deed dated 24 March 2014 between the Commission, CitiPower Pty and Deloitte (the "Deed") have been complied with in all material and relevant respects, in conducting the agreed procedures, making findings and preparing the report.

The key findings set out in our report reflect our professional opinion to the level of confidence specified by the Essential Service Commission of Victoria in all material respects and is consistent with the audit approach and methodology described in this report (specifically the Standard on Assurance Engagements ASAE 3100 *Compliance Engagements*).

### **Conclusion**

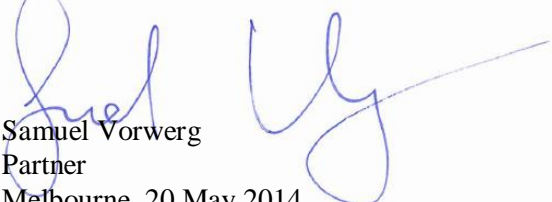
In our opinion, CitiPower Pty has complied, in all material respects, with the regulatory obligations as documented in the Minimum Audit Scope as measured by the Compliance Grading Framework for the period from 1 January 2010 to 31 December 2013.

### **Limitation on Use**

This report has been prepared for management and the directors of CitiPower Pty and the Essential Services Commission of Victoria in accordance with the requirements of Guideline No. 22 Regulatory Audits of Energy Businesses (January 2014) and the Deed. We disclaim any assumption of responsibility for any reliance on this report to any persons or users other than CitiPower Pty or the Essential Services Commission, or for any purpose other than that for which it was prepared.

DELOITTE TOUCHE TOHMATSU

DELOITTE TOUCHE TOHMATSU

  
Samuel Vorwerg  
Partner

Melbourne, 20 May 2014

In addition, to the issuance of this unqualified assurance report on CitiPower Pty's compliance, in all material respects, with the regulatory obligations as documented in the Minimum Audit Scope as measured by the Compliance Grading Framework, a detailed report of AMI Observations has been provided to the Essential Services Commission, Victoria. The executive summary of that detailed report is included with this assurance report. The remainder of the detailed report provided to the Essential Services Commission, Victoria is confidential and accordingly, cannot be disclosed.



## APPENDIX 3 JEMENA AUDIT – EXECUTIVE SUMMARY





Jemena Electricity Networks Ltd /  
Essential Services Commission of Victoria

Audit of AMI Regulatory Obligations

4 August 2014



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# 1. Executive Summary

## 1.1 Background

The Essential Services Commission Victoria (the “Commission”) is required to ensure that electricity distributors comply with their regulatory obligations under the Victorian Government’s Advanced Metering Infrastructure (“AMI”) Program. These regulatory obligations are outlined in a number of Orders in Council including the AMI Cost Recovery Order and the AMI Specifications Order.

The Commission has issued a Minimum Audit Scope titled “Audit of AMI Regulatory Obligations for Distributors” (the “Audit Scope”) which requires licenced energy distributors to undertake an independent audit of their compliance with certain AMI regulatory obligations in accordance with the Electricity and Gas Industries Guideline No. 22 Regulatory Audits of Energy Businesses (“EGI 22”).

This audit has been undertaken in accordance with EGI 22, the Audit Scope and the terms and conditions of our tri-partite agreement between Jemena Electricity Networks Ltd (“Jemena”) and the Commission dated 13 March 2014. These terms and conditions have not been restated in this report, but it is acknowledged that they are applicable to this engagement.

## 1.2 Scope

This report has been prepared for the purpose of assessing Jemena’s compliance with the specific obligations as set out by the Commission in the Audit Scope.

The areas that have been identified for audit are:

- ▶ AMI related compliance monitoring and reporting;
- ▶ AMI rollout, functions and services relating to operating AMI metering infrastructure, remote readings of AMI meters, disconnections and reconnections; and
- ▶ Certain general obligations to report information as required as a condition of Jemena’s distribution licences and the accuracy and reliability of the AMI Rollout Statistics reported.

The Audit Scope also required Jemena to complete the AMI Rollout Statistics table provided in Appendix A of the Audit Scope and lodge a copy with the Commission by 31 January 2014.

The Commission has requested an audit of certain sub-clauses of obligations under each of the areas identified above for the period 1 January 2010 to 31 December 2013, and accuracy of the AMI rollout statistics provided in Appendix A of the Audit Scope as at 31 December 2013.

## 1.3 Approach

Our audit has been conducted in accordance with Australian Auditing Standard ASAE 3100 *Compliance Engagements*. Our procedures included examination, on a test basis, of the areas subject to audit as set out above.

This report has been prepared in accordance with the requirements of EGI 22 and the Minimum Scope, as specified by the Commission.

Jemena’s management is responsible for establishing and maintaining an effective internal control system, record keeping, management, decision-making and other management functions. An effective internal control system reduces the likelihood that errors, irregularities and instances of non-compliances will occur and remain undetected; however, it does not eliminate that possibility.

Our audit does not guarantee that errors, irregularities or instances of non-compliance will not occur and may not detect all errors, irregularities or instances of non-compliance will not occur and may not detect all

errors, irregularities or instances of non-compliance should they occur. Further, the internal control structure within which the control procedures that we have reviewed operate has not been subject to audit, and no opinion is expressed on its effectiveness. Our audit was not designed to detect all weaknesses in the system of internal control because it was not performed continuously during the period subject to audit, and tests performed are on a sample basis.

Jemena's management has been fully and solely responsible for applying independent business judgement with respect to the services and work product provided to us, to make implementation decisions, if any, and to determine further courses of action with respect to any matters addressed in any advice, recommendations, services, reports or other work product or deliverables produced as a result of our audit.

The findings and gradings expressed in this report have been formed on the above basis.

Any projection of the gradings and findings regarding the internal control system to future periods is subject to the risk that the internal control procedures may become inadequate or that the degree of compliance with them may deteriorate, and therefore should not be undertaken.

## 1.4 Period subject to audit

The period subject to audit was 1 January 2010 to 31 December 2013. AMI rollout statistics audited were reported as at 31 December 2013. Our fieldwork was conducted during the period March-April 2014.

## 1.5 Methodology

The methodology and approach applied by us to the conduct of regulatory audits is detailed below and is consistent with EGI 22. Specifically, to the extent considered appropriate, we:

1. Analysed documented procedures to assess whether they are consistent with the regulatory definition of the relevant performance indicator or other obligation. Documented procedures include documents which guide staff in complying with the performance indicator or other obligation, for example, training manuals, customer service manuals, and procedures for generating, entering and reporting regulatory information.
2. Interviewed responsible staff to assess whether they understood (and where possible, complied with) the documented procedures.
3. Analysed information systems to assess the extent to which they produced information that complied with regulatory definitions. Where available, this required an examination of the design of certain queries and calculation formulae which are used to generate regulatory information (although as stated in this report we have not undertaken a complete review of the IT systems in place at Jemena).
4. Analysed quality controls (where implemented) to identify whether non-compliance was detected and fed back to appropriate personnel for remediation/corrective action.
5. Identified changes in systems and documented procedures which may indicate that data accuracy or reliability had varied significantly over the audit time frame and which may lead to the conclusion that the current compliance level is not representative of compliance over the entire period.
6. Analysed a sample of cases or data, to assess the accuracy of the reported data. Our approach to conducting sample testing is set out below.

The importance of the above steps has varied according to the nature of the sub-clause of the obligation. We have undertaken a critical but co-operative examination of the possible causes of non-compliance. This was undertaken through the audit of both obligation specific and generic compliance questions.

The performance of our procedures has necessarily involved obtaining information and explanations from Jemena personnel. In certain circumstances, in the absence of supporting evidence, we have relied upon and used this information in the performance of our procedures.

In reviewing the report, consideration should be given to:

- ▶ The inherent limitations (described in section 1.7 below); and
- ▶ The Audit Scope (NB: both general obligations and specific compliance issues have been addressed by us.).

This methodology has been consistently applied.

## 1.6 Audit Findings and Management Compliance Plans

As at 31 December 2013, Jemena achieved a rollout statistic of 89.79% of Prescribed Customers with an AMI meter that is remotely read and can be remotely re-energised and de-energised subject to safety considerations. Jemena believe that to the extent practicable, best endeavours have been followed to meet the rollout targets. There are three significant factors identified by Jemena as having impacted their ability to meet the rollout target by 31 December 2013.

### Underperformance of installation vendor

Jemena selected a single installation vendor at the commencement of the AMI Rollout Program. Jemena advised that from Q1 2011 it became apparent that the vendor was retaining and engaging a lower than expected number of installers and achieving a lower number of installations per installer. Initiatives undertaken by Jemena to mitigate this included:

- ▶ Contract management resulting in variations to the contract regarding performance between Q1 and Q3 2011.
- ▶ Ongoing performance management meetings with the vendor through the newly established productivity committee.
- ▶ In Q3 2012, Jemena commenced Request For Tender process to appoint additional contractors. Following subsequent expressions of interest and assessment Jemena appointed multiple additional contractors in Q1 to Q2 2013.

### Negative societal perception of the AMI program

Jemena advised that changes in Government policies regarding customer's ability to refuse installation until the outcome of the Government review led to increased negative community sentiment towards the program. This resulted in reduced daily attendance of vendor's installers and inability to retain installers at required levels as well as redeployment of resources away from installations to remediating sabotaged AMI meters. Initiatives undertaken by Jemena to mitigate this included (but were not limited to):

- ▶ An ongoing community awareness campaign engaging directly with State MPs and local Councils attending information sessions with Neighbourhood Watch and the Maribyrnong Council Sustainability Expo and presenting the benefits of the AMI program at these forums.
- ▶ Development of Jemena's Electricity Outlook web portal which allowed customers to log in and track their consumption patterns (launched June 2012).
- ▶ Implementation of specific installer training such as *Aggressive Customer Training* modules delivered in conjunction with Kildonan Uniting Care.
- ▶ Increased rates to incentivise attendance and retention of vendor's installers in 2013.


Time of Use (ToU) moratorium and the introduction of optional ToU tariffs (ORDER No. S 216 19/06/13)

This Government policy change resulted in the inability to consolidate multiple meters at a site to a single element meter in line with the original Jemena AMI solution design, hence Jemena was required to develop, test and release a new two-element meter which delayed the commencement of AMI rollout to complex meter installations until May 2013. This affected the postcode-by-postcode approach of the rollout reducing the overall efficiency of installations. Initiatives undertaken by Jemena to mitigate this included:

- ▶ Completion of the complex metering solution including the 2 Element Metering Project relating to the development and testing of these meters which took place in 2012. Additional installers were appointed in early 2013 to increase the installation rates once complex AMI meters were available for installation.

All areas of the Audit Scope that were assessed achieved an overall compliance grading of General Compliance or B2 and above. These are defined by EGI 22 as follows:

### General Obligations

Grade	Description	Definition
	General Compliance	Most requirements of the condition have been met with some minor failures or breaches. Findings noted are considered minor and require routine efforts to correct in the normal course of business.




### AMI Rollout Statistics

Grade	Reliability
A	All data is based on robust information systems that support the compliance program, and documented policies, practices and procedures, which are: <ul style="list-style-type: none"> <li>• updated as required and endorsed by the licensee's management;</li> <li>• consistent with the Commission's information specifications;</li> <li>• communicated and readily available to all staff; and</li> <li>• fully understood and followed by staff to support compliance outcomes and acted upon at all levels of the organisation, including the Board and senior executive management.</li> </ul>
B	Most data conforms with Grade A. Data integrity is compromised due to minor compliance failures and inadequate controls over information systems. For example, a minority of data may be based on: <ul style="list-style-type: none"> <li>• information specifications that are different to those published by or reported to the Commission;</li> <li>• outdated policies and procedures;</li> <li>• inconsistent compliance practices;</li> <li>• minor deviations from documented operating policies and procedures;</li> <li>• policies and procedures that are not properly communicated or that are misunderstood by staff;</li> <li>• system upgrades and changes that have resulted in loss of data; or</li> <li>• estimation or extrapolation of data that conforms with Grade A.</li> </ul>

Grade	Accuracy
1	± 1% Where a performance indicator is relevant to operations in principle but no data exists and none is reported in the audit period, this should be graded 1.
2	± 5%

For more details on the use of compliance gradings, harvey ball and traffic light indicators, please refer to sections 7.4 and 7.5 of EGI 22.


An overview of the number of compliance directions examined by Audit Scope area is provided below.

Key area / obligation	Specific compliance issue	Grading	Audit Findings
<p>A. Energy Licence Compliance</p> <p>Specific Compliance Requirements: CI.22 Compliance with Orders, Codes, Guidelines The licensee is to comply with designated regulatory instruments, monitor its compliance and report material breaches as soon as possible.</p>	<p>A1: Does the licensee have in place an effective process:</p> <ul style="list-style-type: none"> <li>- To review proposed changes to business systems and procedures for continuing compliance and check that relevant proposed compliance changes have been implemented</li> <li>- To identify and report compliance breaches; and</li> <li>- To monitor remedial action until compliant</li> </ul> <p>A2: Is the licensee's compliance framework consistent with AS3806-2006</p> <p>A.3: Is the process/framework being effectively followed (ie. are they doing what they said they would do)?</p>	 <b>General Compliance</b>	No findings noted.
<p>B. AMI Cost Recovery Order CI14.1 Rollout Period CI 14.1(a) To the extent practicable, each distributor must use its best endeavours to install a remotely read interval meter (which is operational as a remotely read interval meter in accordance with the Specifications) for all of the metering installations for Prescribed Customers by 31 December 2013. CI14.1(b) If a distributor has not installed a remotely read interval meter for all of the metering installations for Prescribed Customers by 31 December 2013, then, for the purpose of considering whether the distributor has used its best endeavours to do so, the Commission must take into account: (i) The distributor's actions in relation to the risk of failing to install the relevant meters, including whether the distributor has failed to take any action that could reasonably have been taken to mitigate that risk and whether the distributor has taken or omitted to take any action which has increased that risk; (ii) The distributor's decisions and actions relevant to meeting the requirements of clause 14.1(a) in light of the information that was available to the distributor at the time those decisions and actions were taken; and (iii) Any other factors the commission considers relevant 14A.1 A distributor must have and must keep up to date to 31 December 2015 a risk management strategy to: (a) identify, address and mitigate technological or other risks of and in connection with the provision, installation, maintenance and operation of advanced metering infrastructure and associated services and systems; and b) manage expenditure increases arising from those risks</p>	<p>B.1: Are the AMI Rollout Statistics accurately reported in Appendix A by the licensee? (statistical sampling to be used)</p>	<b>A1 to B2</b>	Minor findings noted in relation to some processes to ± 5%.
	<p>B.2: For the licensee's Prescribed Customers who do not have an AMI meter that is remotely read, consider if, to the "extent practicable", "best endeavours" have been followed by performing the following tests:</p> <p>a) If Steps 1-3 as detailed below occurred; detail the number and percentage of customers step 1 occurred for and, the number and percentage of customers and NMIs step 2 occurred for;</p> <p>b) If Steps 1-3 did not occur, and the issue related to the Customer No Access or Customer Refused Access issues determine if Step 4 occurred;</p> <p>c) If Steps 1-3 did not occur, and the issue related to the Customer No Access or Customer Refused Access issues, assess if the licensee's customer management protocols are consistent with or surpass the Protocol Customer Issues Management for Smart Metering Technology Rollout (November 2012); and</p> <p>d) If Steps 1-3 did not occur, and the issues relate to technology issues (eg. AMI meter communication issues) or resource issues (e.g. availability of meters or related equipment or installers), determine if Step 5 occurred.</p> <p>(Statistical sampling to be used).</p> <p>B.3: If Steps 1-3 (below) did not occur, detail each matter identified by the licensee as a significant reason; when the matter was identified; when proposed actions and time frames were established to address them; whether this was reflected in the risk management strategy; and whether the Licensee maintained a risk management strategy that was up to date. Assess whether the Licensee failed to take any reasonably required action or took any action that increased the risk of not reaching step 3.</p> <p>(Note: The Commission will make the assessment of compliance with clause 14.1 and 14A of the AMI Cost Recovery Order)</p> <p>Customer Management and Installation Steps</p> <p>Step 1 - Licensee has visited the site at least once. Step 2 - Licensee has installed an AMI meter at the site. Step 3 - Licensee is remotely reading the meter. Step 4 - Licensee had suitable customer management protocols that it followed. Step 5 - Licensee had suitable AMI technology implementation and operational protocols that it followed.</p>	 <b>General Compliance</b>	Minor findings noted in relation to formally documented policies and systems.
<p>C. AMI Specifications Order (ASO) and Electricity Distribution Code (EDC) ASO CI.3(a) Functionality Specifications</p> <p>Distributor must use its best endeavours to ensure the AMI system complies with the Minimum AMI Functionality Specification (Victoria) September 2013.</p>	<p>C.1 Consider if "best endeavours" have been used by determining if:</p> <p>a) an independent review by an appropriately qualified person was performed to assess if the technology, as proposed, met the Minimum AMI Functionality Level Specification (Victoria);</p> <p>b) an internal assessment was performed to determine if the technology, as implemented, met the Minimum AMI Functionality Level Specification (Victoria);</p> <p>c) an independent review by an appropriately qualified person was performed to assess if the technology, as implemented, meets the Minimum AMI Functionality Level Specification (Victoria).</p> <p>For parts a) to c), detail any areas of non-compliance that have been identified by the licensee, when the non-compliance was identified, and proposed actions and time frames to address them. This may be detailed in the risk management strategy.</p> <p>(Note: The Commission will make the assessment of compliance with ASO CI,3(a))</p>	 <b>General Compliance</b>	No findings noted.





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Key area / obligation	Specific compliance issue	Grading	Audit Findings
ASO Clause 4(a) Service Levels Specification Distributor must use its best endeavours to ensure the AMI system complies with the Minimum AMI Service Levels Specification (Victoria) September 2008.	<p>C.2 Consider if "best endeavours" have been used by determining if:</p> <p>a) an independent audit was performed by an appropriately qualified person to assess if the technology, as proposed, met the Minimum AMI Service Levels Specification (Victoria);</p> <p>b) the licensee has activated the functionality required to meet the Minimum AMI Service Levels Specification (Victoria);</p> <p>c) an internal assessment was performed to determine if the technology, as implemented meets the Minimum AMI Service Levels Specification (Victoria); and</p> <p>d) an independent audit by an appropriately qualified person, was performed, to assess if the technology, as implemented, meets the Minimum AMI Service Levels Specification (Victoria).</p> <p>For parts a) to d), detail any areas of non-compliance with the service levels that have been identified by the licensee, when it was identified and proposed actions and time frames to address them.</p> <p>This may be detailed in the risk management strategy.</p> <p>(Note: The Commission will make the assessment of compliance with ASO Cl,4(a))</p>	 General Compliance	Minor findings noted in relation to independent audit, training for service level monitoring and systems / maintenance.
<p><b>EDC Retailer's/Customer's request for disconnection Clause 12.3, 12.4</b></p> <p>Where the distributor can safely disconnect supply remotely, it must use its best endeavours to disconnect supply to the customer's supply address within 2 hours of a request being made in the instance of a retailer, and within 2 hours of the request being validated by the distributor in the instance of a customer.</p> <p><b>EDC Clause 13.1.2 Reconnection of Supply</b></p> <p>Deals with reconnection after and/or before 3 pm and special requests made before 9 pm.</p>	<p>C.3 Does the licensee comply with the Minimum AMI Service Levels Specifications for Routine Read-Remote, from 1 January 2013 to 31 December 2013:</p> <p>a) no less than 95% being actual data from meter (with the remainder substituted), to be available by 6 am the following day;</p> <p>b) no less than 99% of actual data within 24 hours of the time in previous point; and</p> <p>c) no less than 99.9% of actual data within 10 business days from day the consumption occurred; and</p> <p>d) detail the number and percentage of AMI meters that meet C.3c) (statistical sampling to be used for a to c)</p> <p>C.4 For customers with an annual electricity consumption of less than 160MWh and who had remote de-energisation(s), does the licensee comply with the de-energisation requirements:</p> <p>a) within 2 hours of a valid request being made by the customer's retailer or a customer's request being validated; and</p> <p>b) where part a) did not occur determine if the retailer used its best endeavours to achieve part a) (eg. Distributor and customer agreed later times to apply).</p> <p>C.5 For customers sampled above who had a subsequent remote re-energisation as a result of a request made by the customer or the customer's retailer where the distributor is able to reconnect the customer by re-energising the customer's supply address remotely, subject to paragraphs (a) or (b) of clause 13.1.2 of the Electricity Distribution Code, determine if the distributor used its best endeavours to reconnect the customer within 2 hours of a reconnection request being validated by the distributor.</p>	A1	Minor findings noted to ± 1%.

## 1.7 Limitations

Where considered appropriate, we performed procedures on a sample basis in order to assist us to reach a determination of the gradings for certain sub-clauses of obligations. In undertaking our procedures, we considered each obligation and determined whether a sampling approach was appropriate. Our approach to sampling is in accordance with the requirements of EGI 22 and the Audit Scope issued by the Commission.

Selection of the sample itself involved a random or judgemental selection from a population of items provided by Jemena personnel. We then selected an appropriate sample based on those populations. We have been informed by Jemena personnel that these populations represent all items relevant to the period of our audit, however due to the nature of the information subject to audit, there were certain instances where we were unable to corroborate the completeness of populations of data presented to us.

When undertaking certain aspects of sample testing we have sought to verify sample items to the Jemena Meter Data Management System (“MDMS”) and the Australian Energy Market Operator (“AEMO”) Market Settlements and Transactions System (“MSATS”). We have not undertaken a full review of these systems and have sought to rely on the information they produce. This is consistent with the fact that we do not test the internal control environment nor undertake an audit of the underlying systems and processes used to generate data.

Finally, consistent with other audits of this nature, the fieldwork and testing was undertaken during the period March 2014 to April 2014 and not continuously throughout the audit period.

## 1.8 Other matters

This report is for the use of Jemena management and the Commission. We disclaim any assumption of responsibility for any reliance on this report, to any party other than Jemena or the Commission for any purpose other than that for which it was prepared.

### 3. Conclusion

#### Scope

Reference should be made to Section 1 which states that this is a reasonable assurance engagement performed in accordance with ASAE 3100 Compliance Engagements as well as Background, Scope, Approach, Period Subject to Audit, Methodology, Audit Findings and Management Compliance Plans, Limitations and Other Matters. Our opinion has been formed on this basis.

#### Auditor Statement

In our opinion, GL No. 22 - Regulatory Audits of Energy Businesses and the Tripartite Audit Deed dated 13 March 2014 between Ernst & Young, Jemena Electricity Networks Ltd and the Essential Services Commission of Victoria have been complied with in all material and relevant respects, in conducting the agreed procedures, making findings and preparing the report.

The key findings set out above reflect in all material respects the professional opinion of the auditor to the level of confidence specified by the Essential Services Commission of Victoria and consistent with the audit approach and methodology described in this report (specifically the Standard on Assurance Engagements ASAE 3100 Compliance Engagements).



Ernst & Young  
Melbourne  
4 August 2014

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## APPENDIX 4 UNITED ENERGY AUDIT – EXECUTIVE SUMMARY



# Audit of AMI Regulatory Obligations for Distributors

United Energy Distribution Pty Ltd



Building a better  
working world

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## 1. Executive summary

### 1.1 AMI program background

The Victorian state government approved the Advanced Metering Infrastructure (“AMI”) Program in February 2006. The AMI Program endorsed the deployment of AMI meters to all Victorian electricity consumers taking supply of less than 160 MWh per annum. With growing energy demand and rising electricity prices, the Government identified a need to give consumers greater control over their energy consumption. The regulatory arrangements relating to the roll out are set out in a November 2008 Order in Council “OIC” made under the Electricity Industry Act 2000 (Vic). The OIC prescribes the timeframe for the roll out, as well as the new regulatory framework.

United Energy Distribution Pty Ltd’s (“UE”) AMI Program commenced as a joint project in 2007 with Jemena Electricity Networks (“Jemena”). The program was originally managed by Jemena via the Customer and Market Services Agreement between Jemena and UE. In November 2012, United Energy undertook a review of the AMI Program to consider various options to improve the performance of the program. Following the review, United Energy’s management recommended that the AMI Program be brought in-house. This decision was approved UE’s board in June 2013, and as a result, United Energy established an in-house capability to deliver the AMI Program.

### 1.2 Audit context

The Essential Services Commission Victoria (the “Commission”) is required to ensure that electricity distributors comply with their regulatory obligations under the Victorian Government’s AMI Program. These regulatory obligations are outlined in a number of Orders in Council including the AMI Cost Recovery Order, the AMI Specifications Order, the Electricity Distribution Code, and the Energy Licence Compliance.

The Commission has issued a Minimum Audit Scope titled “Audit of AMI Regulatory Obligations for Distributions” (the “Audit Scope”) which requires licenced energy distributors to undertake an independent audit of their compliance with certain AMI regulatory obligations in accordance with Guideline No. 22 Regulatory Audits of Energy Businesses (“Guideline 22”).

This audit has been undertaken in accordance with Guideline 22 and the Audit Scope. This report has been prepared in accordance with the terms and conditions of our tri-partite agreement between UE and the Commission dated 13 March 2014. These terms and conditions have not been restated in this report, but it is acknowledged that they are applicable to this engagement.

### 1.3 Scope

This report has been prepared for distribution to UE and the Commission for the purpose of assessing United Energy’s compliance with the specific obligations as set out by the Commission in the Audit Scope.

The areas that have been identified for audit are:

- ▶ Compliance monitoring and reporting;
- ▶ AMI rollout, functions and services relating to operating AMI metering infrastructure, remote readings of AMI meters, disconnections and reconnections; and
- ▶ Certain general obligations to report information as required as a condition of United Energy’s distribution licences and the accuracy and reliability of the AMI Rollout Statistics reported. The Audit Scope also required United Energy to complete the AMI Rollout Statistics table provided in Appendix A of the Audit Scope and to have provided a copy to the Commission by 31 January 2014. This information will form the basis of a significant portion of our work.

The Commission has requested an audit of certain sub-clauses of obligations under each of the areas identified above for the period 1 January 2010 to 31 December 2013, and accuracy of the AMI rollout statistics provided in Appendix A of the Audit Scope as at 31 December 2013.

## 1.4 Methodology

The methodology and approach applied by us to the conduct of regulatory audits is detailed below and is consistent with Guideline 22. Specifically, to the extent considered appropriate, we:

1. Analysed documented procedures to assess whether they are consistent with the regulatory definition of the relevant performance indicator or other obligation. Documented procedures include documents which guide staff in complying with the performance indicator or other obligation, for example, training manuals, customer service manuals, and procedures for generating, entering and reporting regulatory information.
2. Interviewed responsible staff to assess whether they understood (and where possible, complied with) the documented procedures.
3. Analysed information systems to assess the extent to which they produced information that complied with regulatory definitions. Where available, this required an examination of the design of certain queries and calculation formulae which are used to generate regulatory information (although as stated in this report we have not undertaken a complete review of the IT systems in place at UE).
4. Analysed quality controls (where implemented) to identify whether non-compliance was detected and fed back to appropriate personnel for remediation/corrective action.
5. Analysed changes in systems and documented procedures which may indicate that data accuracy or reliability had varied significantly over the audit time-frame and which may lead to the conclusion that the current compliance level is not representative of compliance over the entire period.
6. Analysed a sample of cases or data, to assess the accuracy of the reported data. Our approach to conducting sample testing is set out below.

## 1.5 Period subject to audit

The period subject to audit was 1 January 2010 to 31 December 2013. Our fieldwork was conducted during the period March-April 2014. Where applicable we have tested certain remedial actions (as noted in this report) subsequent to the period subject to audit.

## 1.6 Limitation of use

This report is for the use of United Energy's management and the Commission. We disclaim any assumption of responsibility for any reliance on this report, to any party other than United Energy or the Commission for any purpose other than that for which it was prepared.





## 1.7 Audit findings and management compliance plans






We performed audit procedures over the accuracy and reliability of the AMI rollout Statistics, in addition to each of the eleven specific compliance obligations in the Audit Scope which we assessed against the five control areas below:

- ▶ Policies / procedures
- ▶ Skills / training
- ▶ Systems / maintenance
- ▶ Monitoring / feedback
- ▶ Culture / practices

Our audit did not identify any instances of partial or non-compliance, or rollout statistics graded B2 or below. We identified nine of fifty five control areas where an opportunity for improvement did exist, however, these did not result in partial or non-compliance as the findings were not significant and have not had a significant impact on the roll out. For more details on the compliance gradings, Harvey ball and traffic light indicators, please refer to sections 7.4 and 7.5 of the Energy Industry Guideline 22 (Draft revision dated 04 April 2013).

An overview of the number of compliance directions examined by scope area is provided below:

Compliance Requirement	Compliance Rating	Audit Findings
<b>A. Energy Licence - Compliance</b>		
<b>Generic Compliance Requirements: Energy Licence</b>		Minor findings noted in relation to formally documented processes.
<b>Specific Compliance Requirements: CI.22 Compliance with Orders, Codes, Guidelines</b> The licensee is to comply with designated regulatory instruments, monitor its compliance and report material breaches as soon as possible.		No findings noted.
<b>B. AMI Cost Recovery Order</b>		
<b>Generic Compliance Requirements: AMI Cost Recovery Order</b>		No findings noted.
<b>Specific Compliance Requirements: CI.14.1 Rollout Period</b> CI 14.1 (a) To the extent practicable, each distributor must use its best endeavours to install a remotely read interval meter (which is operational as a remotely read interval meter in accordance with the Specifications) for all of the metering installations for Prescribed Customers by 31 December 2013.  CI 14.1(b) If a distributor has not installed a remotely read interval meter for all of the metering installations for Prescribed Customers by 31 December 2013, then, for the purpose of considering whether the distributor has used its best endeavours to do so, the Commission must take into account: (i) the distributor's actions in relation to the risk of failing to install the relevant meters, including whether the distributor has failed to take any action that could reasonably have been taken to mitigate that risk and whether the distributor has taken or omitted to take any action which has increased that risk; (ii) the distributor's decisions and actions relevant to meeting the requirements of clause 14.1(a) in light of the information that was available to the distributor at the time those decisions and actions were taken: and (iii) any other factors the Commission considers relevant.  14A.1 A distributor must have and must keep up to date to 31 December 2015 a risk management strategy ('risk management strategy') to: (a) identify, address and mitigate technological or other risks of and in connection with the provision, installation, maintenance and operation of advanced metering infrastructure and associated services and systems; and (b) manage expenditure increases arising from those risks.		No findings noted.

Compliance Requirement	Compliance Rating	Audit Findings
<b>C. AMI Specifications Order &amp; Electricity Distribution Order</b>		
<b>Generic Compliance Requirements: Functionality Specifications</b>		No finding noted.
<b>Specific Compliance Requirements: ASO Cl.3(a) Functionality Specifications</b> Distributor must use its best endeavours to ensure the AMI system complies with the Minimum AMI Functionality Specification (Victoria) September 2013.		No findings noted.
<b>Generic Compliance Requirements: Service Level Specifications</b>		Minor findings noted in relation to the conduct of an independent audit of service levels as implemented.
<b>Specific Compliance Requirements: ASO Clause 4(a) Service Levels Specification</b> Distributor must use its best endeavours to ensure the AMI system complies with the Minimum AMI Service Levels Specification (Victoria) September 2008.		Minor findings noted in relation to the conduct of an independent audit of service levels as implemented.
<b>Generic Compliance Requirements: EDC Disconnections &amp; Reconnections</b>		No findings noted.
<b>Specific Compliance Requirements:</b> Minimum AMI Service Level Specification Release 1.1 (September 2008) requires performance against service levels (and associated compliance and reporting) to be measured over a calendar year: a) no less than 95% being actual data from meter (with the remainder substituted), to be available by 6 am the following day; b) no less than 99% of actual data within 24 hours of the time in previous point; and c) no less than 99.9% of actual data within 10 business days from day the consumption occurred.  <b>EDC Retailer's/Customer's request for disconnection Clause 12.3, 12.4</b> Where the distributor can safely disconnect supply remotely, it must use its best endeavours to disconnect supply to the customer's supply address within 2 hours of a request being made in the instance of a retailer, and within 2 hours of the request being validated by the distributor in the instance of a customer. <b>EDC Clause 13.1.2 Reconnection of Supply</b> Deals with reconnection after and/or before 3 pm and special requests made before 9 pm.	C.3 Routine Read Remote. Grade B1	<b>Compliance</b> Findings noted. Actual result was within 2.1% of the service levels specification for Routine Read Remote.
	C.4 Remote de-energisation. Grade B1	<b>Compliance</b> No findings noted.
	C.5 Remote re-energisation. Grade B1	<b>Compliance</b> No findings noted.

The table below outlines the results of our statistical testing on the following rollout statistics:

Rollout statistic	Reported Figure	Audited Figure	Grade	Findings
Percentage of NMIs for Prescribed Customers with a remotely read AMI meter.	83%	83%	A1	No findings noted.

Rollout statistic	Reported Figure	Audited Figure	Grade	Findings
Percentage of NMI's for Prescribed Customers with an AMI meter that can be remotely re-energised and de-energised subject to safety considerations.	79%	79%	A1	No findings noted.

Our audit procedures identified several key success factors in relation to the AMI program. There has been significant board and senior management focus on the AMI Program from the outset. This has been underpinned by robust and regular project management and a thoroughly implemented risk management strategy.

Our audit procedures demonstrate UE's commitment to delivering the AMI Program to time, scope, and within budget, whilst providing a safe operating environment for staff, service providers and the general public. There has been a commitment to selecting technology that meets the functional and service performance specifications under the Victorian model, whilst also selecting technology that will evolve in terms of lifespan, price and risk.

These factors have combined to achieve a good result, albeit with further effort required in the period leading up to 30 June 2014.

## Auditor statement

### Scope

Reference should be made to Section 1 which states that this is a reasonable assurance engagement performed in accordance with ASAE 3100 Compliance Engagements as well as Background, Scope, Approach, Period Subject to Audit, Methodology, Audit Findings and Management Compliance Plans, Limitations and Other Matters. Our opinion has been formed on this basis.

### Auditor Statement

In our opinion, GL No. 22 - Regulatory Audits of Energy Businesses and the Tripartite Audit Deed dated 13 March 2014 between Ernst & Young, United Energy Distribution Pty Ltd and the Essential Services Commission of Victoria have been complied with in all material and relevant respects, in conducting the agreed procedures, making findings and preparing the report.

The key findings set out above reflect in all material respects the professional opinion of the auditor to the level of confidence specified by the Essential Services Commission of Victoria and consistent with the audit approach and methodology described in this report (specifically the Standard on Assurance Engagements ASAE 3100 Compliance Engagements).



Ernst & Young

Melbourne  
4 August 2014

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## APPENDIX 5 SP AUSNET AUDIT – EXECUTIVE SUMMARY



# **Audit of AMI Regulatory Obligations for Distributors - SP AusNet**

On behalf of the  
**Essential Services Commission**

**July 2014  
FINAL**

*This document has been prepared for SP AusNet for the purposes of reviewing compliance with the provisions of various Codes and Guidelines, as detailed in the Minimum Audit Scope specified by the Essential Services Commission (ESC). Protiviti takes no responsibility for any reliance placed upon this report by any external party. This version is an excerpt of the complete report and only contains the executive summary.*

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# Executive Summary

## Background

The Essential Services Commission (the Commission) has a role under the Victorian Government's Advanced Metering Infrastructure (AMI) Program to ensure that electricity distributors are complying with their AMI regulatory obligations. These regulatory obligations are contained in a number of Orders in Council including the AMI Cost Recovery Order and the AMI Specifications Order. The Commission's role in relation to AMI compliance and enforcement was clarified in a Ministerial Order that was gazetted on 13 June 2013.

The Essential Services Commission requires licensed energy distributors to periodically undertake independent audits of their compliance with regulatory obligations in accordance with Guideline No. 22 Regulatory Audits of Energy Businesses (Guideline 22). Our audit has been conducted in accordance with Guideline 22 which was finalised on 31 January 2014. This Guideline details both the procedures that should be undertaken by the auditor to conduct their work and the assessment criteria to be applied when reporting on the level of compliance for each area outlined in the Minimum Audit Scope, which is set out in Appendix A of the complete document.

Protiviti has been engaged by SP AusNet to conduct an audit covering the areas detailed in the Minimum Audit Scope. This review was performed under the Tripartite Deed signed by Protiviti, SP AusNet and the Essential Services Commission.

Our complete report is structured as follows, noting only the executive summary is provided in this version:

1. Section A of the complete report details our findings in relation to Energy Licence Compliance Clause 22 – Compliance with Orders, Codes and Guidelines (Minimum Audit Scope Section A);
2. Section B of the complete report details our findings in relation to Clause 14 of the AMI Cost Recovery Order (Minimum Audit Scope Section B);
3. Section C of the complete report details our findings in relation to Minimum AMI Functionality and Service Levels Specifications as well as selected AMI related obligations in the Electricity Distribution Code;
4. Appendix A of the complete report further details the Minimum Audit Scope for the audit of AMI regulatory obligations for distributors;
5. Appendix B of the complete report further details the audit methodology; and
6. Appendix C of the complete report further details our assessment of SP AusNet's compliance framework against the principles of *AS3806-2006: Compliance Programs*.

## Scope

The areas subject to review during the course of our audit are contained in the ESC's Minimum Audit Scope. This document is included in Appendix A to the complete document, and at a high level the areas identified for review are:

- Selected AMI Related obligations in the Electricity Distribution Code
- Minimum AMI Functionality Specification
- Minimum AMI Service Levels Specification
- Clauses 14.1, 14.2 and 14A of the AMI Cost Recovery Order in Council

The audit period subject to this review is from 1 January 2010 to 31 December 2013 unless otherwise specified.

As required by the ESC, our audit has been based on the general principles stated in *Standard on Assurance Engagements ASAE 3100 Compliance Engagements*. Our work does not guarantee that errors, irregularities or instances of non-compliance will not occur and may not detect errors, irregularities or instances of non-compliance should they occur. Furthermore, the internal control structure within which the reviewed procedures operate in has not been assessed, and no opinion is

expressed on its effectiveness. Our work is not designed to detect all weaknesses in the system of internal control because it is not performed continuously during the period subject to review, and the tests performed are on a sample basis.

SP AusNet management is fully and solely responsible for applying independent business judgement with respect to the contents of this report, to make implementation decisions, if any, and to determine further courses of action with respect to any matters addressed in any advice, recommendations, services, reports or other work products or deliverables produced as a result of our review.

The gradings and findings expressed in this report have been formed on the above basis. Any projection of the gradings and findings regarding the internal control system to future periods is subject to the risk that the internal control procedures may change, or that the degree of compliance with them may also change.

## Observations and Conclusions

Our summary observations and conclusions are presented below and are aligned to the audit areas in the Minimum Audit Scope. Please refer to the tables below for a summary of gradings provided for each section of the Minimum Audit Scope. Further detail of our gradings and answers to specific compliance issues identified in the Minimum Audit Scope are presented in Sections A-C of the complete document.

### A. Energy Licence - Compliance

SP AusNet has demonstrated it has a compliance framework that is designed to meet the general compliance requirements outlined in the Minimum Audit Scope. We have further benchmarked the compliance framework against principles outlined in AS3806-2006, and noted the framework is designed in accordance with the Standard. Of the 12 key principles in the Standard, we noted general compliance with 11 principles and partial compliance with one principle.

We noted partial compliance with Principle 5: *Compliance obligations are identified and assessed*. The database used to manage compliance obligations is unable to track changes, including changes made to obligations, Responsible Persons and Line Managers. In addition, we noted three compliance obligations without an assigned Line Manager. Further, changes to non-prescribed obligation risk ratings are not retained within the database. Despite these limitations the business has demonstrated suitable alternative processes, and these limitations do not affect our ability to assess the framework as General Compliance using the ESC grading methodology.

### B. AMI Cost Recovery Order

We have assessed the AMI Rollout Statistics as reported for year-end 31 December 2013. Some statistics were supported by an audit trail, however were unable to be reconciled to the reported statistics. Further, a number statistics could not be supported by source documentation or audit trail as it was not retained by the business. Further re-production of these statistics using the same systems and parameters required for the year-end 31 December 2013 statistics noted variances in some instances. During sample testing of these statistics, we also noted instances of inaccuracies. The data extraction, collation and reporting of these figures are unsupported by documented procedures or work instructions and is highly manual. This limited the ability of SP AusNet to achieve an "A" or "B" rating for reliability in many instances as defined by the ESC methodology.

As at 31 December 2013, SP AusNet had 57.8% of NMIs for Prescribed Customers with a remotely read AMI meter. Further, as at 31 December 2013, it was noted that SP AusNet did not perform remote de-energisations or re-energisations for customers with an annual electricity consumption of less than 160MWh.

### C. AMI Specifications Order (ASO) and Electricity Distribution Code (EDC)

Our testing of Minimum Service Levels Specifications noted that for a portion of the testing period, SP AusNet was unable to provide remote read data. In addition, the data that was available for testing identified SP AusNet's challenges to meet the Minimum AMI Service Levels Specifications; however it is noted that the program has yet to be completed.

The Minimum Audit Scope also outlines a number of specific compliance issues to be addressed. We have reviewed independent and internal AMI assessments through the audit period to consider if these reviews were in line with the Minimum Audit Scope. It is noted that an external independent review was performed by KEMA in 2009 to conduct due diligence of the proposed end-to-end IT solution in response to the Victorian Government and Regulator mandates. In particular, the review noted "At a

high level, the IT solution architecture is sound and has the components required to meet the DPI's AMI Minimum Service Levels Specification".

With respect to the Minimum Functionality Specification, the KEMA review considered aspects of the functionality specifications but did not map each specification to the proposed design.

SP AusNet completed an internal review in May 2011 that assessed the progress of its AMI Program against the key specifications outlined in the AMI Minimum Specification documents. Specifically, whether the technology and functionality implemented as designed would meet Functionality and Service Levels Specifications.

Owing to the program not been completed, there has not yet been an independent reviews performed to assess if the technology as implemented meets either the Minimum AMI Functionality Level Specification or the Minimum Service Levels Specifications.

During the period outlined in the minimum audit scope, SP AusNet did not perform any remote de-energisations or re-energisations for customers with an annual electricity consumption of less than 160MWh.

In some instances, the assurance reviews identified above noted areas of non-compliance. In such instances, we have not been able to obtain auditable information as to what key aspects did not meet the specification, whether action was taken to rectify it, and whether the action was successful.

SP AusNet has provided management responses to a number of the non-compliances identified in the assurance reviews identified above. Further, they have provided additional context around the operational issues identified in the trial of remote de-energisations and re-energisations. These responses have been included in Appendix D of the complete document.

Protiviti has not audited the statements included at Appendix D of the complete report. Source data to validate these statements were unable to be audited during the audit period.

### Compliance Gradings – Obligations

We reviewed and assessed compliance with the Obligation as outlined in Section 8 of the Minimum Audit Scope. The results of our assessment of compliance are detailed in the table below:

Obligations	Harvey Ball Grade	Overall Grade
<b>A Energy Licence – Compliance</b>		
1. Policies / Procedures		
2. Skills / Training		
3. Systems / Maintenance		
4. Monitoring / Feedback		
5. Culture / Practices		
<b>B2 – B3 AMI Cost Recovery Order – Prescribed Customers Without an AMI Meter</b>		
1. Policies / Procedures		
2. Skills / Training		
3. Systems / Maintenance		
4. Monitoring / Feedback		
5. Culture / Practices		
<b>C1 AMI Specifications Order &amp; Electricity Distribution Code – AMI Functionality Specifications</b>		
1. Policies / Procedures		
2. Skills / Training		
3. Systems / Maintenance		
4. Monitoring / Feedback		
5. Culture / Practices		
<b>C2 AMI Specifications Order &amp; Electricity Distribution Code – AMI Service Levels Specifications</b>		
1. Policies / Procedures		
2. Skills / Training		
3. Systems / Maintenance		
4. Monitoring / Feedback		
5. Culture / Practices		
<b>C3 AMI Specifications Order &amp; Electricity Distribution Code – Routine Read-Remote</b>		
A. Actual data from meter available by 6am the following day	N/A <sup>1</sup>	DX
B. Actual data from meter within 24 hours of time in previous point		DX
C. Actual data within 10 business days from day consumption occurred		DX
<b>C4 EDC Retailer's/Customers Request for Disconnection – Remote De-Energisation</b>		No Basis <sup>2</sup>
<b>C5 EDC Reconnection of Supply – Remote Re-Energisation</b>		No Basis <sup>2</sup>

Please refer to Sections A-C of the complete report for detailed discussion of our results and findings.

<sup>1</sup> Harvey Ball Grade not required per the Minimum Audit Scope.

<sup>2</sup> There is no basis to assess compliance as the functionality had not been activated by SP Ausnet during the audit period.



## Compliance Gradings – AMI Rollout Statistics

The results of our assessment of the reliability and accuracy of these statistics are detailed in the table below:

Categories	Performance Indicator
1. Total Prescribed Customers	C1
2. Total NMIs for Prescribed Customers	C1
3. Total Prescribed Customers with a remotely read AMI meter.	C2
4. Percentage of Prescribed Customers with a remotely read AMI meter.	C2
5. Total NMIs for Prescribed Customers with a remotely read AMI meter.	C1
6. Percentage of NMIs for Prescribed Customers with a remotely read AMI meter.	C1
7. Total Prescribed Customers with an AMI meter that can be remotely re-energised and de-energised subject to safety considerations.	No Basis <sup>1</sup>
8. Percentage of Prescribed Customers with an AMI meter that can be remotely re-energised and de-energised subject to safety considerations.	No Basis <sup>1</sup>
9. Total NMIs for Prescribed Customers with an AMI meter that can be remotely re-energised and de-energised subject to safety considerations.	No Basis <sup>1</sup>
10. Percentage of NMIs for Prescribed Customers with an AMI meter that can be remotely re-energised and de-energised subject to safety considerations.	No Basis <sup>1</sup>
11. Total Prescribed Customers that do not have an AMI meter.	C2
12. Percentage of Prescribed Customers that do not have an AMI meter.	C3
13. Total NMIs for Prescribed Customers that do not have an AMI meter.	C2
14. Percentage of NMIs for Prescribed Customers that do not have an AMI meter.	C3
15. Total Prescribed Customers that do not have an AMI meter due to No Access reasons.	C5 <sup>2</sup>
16. Total Prescribed Customers that do not have an AMI meter due to Refused Access.	C5 <sup>2</sup>
17. Total Prescribed Customers that do not have an AMI Meter due to customer technical No Access reasons (eg. no AMI meter due to switchboard defects or inaccessible connection point for fuse removal). (Subset of AMI Rollout Statistic 15.)	D4 <sup>2</sup>
18. Total Prescribed Customers that do not have an AMI Meter due to site issues (eg. proposed for demolition/abolishment). (Subset of AMI Rollout Statistic 15).	C1
19. Total Prescribed Customers that do not have an AMI Meter as the licensee has not visited their site yet.	C6 <sup>2</sup>
20. Detail the number of AMI meters that meet C.3c) from the Audit Areas (Section 8).	DX
21. Detail the percentage of AMI meters that meet C.3c) from the Audit Areas (Section 8).	DX

Please refer to Section B of the complete report for detailed discussion of our results and findings.

<sup>1</sup>




*There is no basis to assess compliance as the functionality had not been activated by SP Ausnet during the audit period.*

<sup>2</sup>

*The AMI Rollout Statistics are reported as at 31 December 2013. SP AusNet did not retain the original source system extracts, and so a system extract run on 8 April 2014 was used. The source system that provides the data cannot run reports retrospectively.*

### Management Compliance Plans

For those areas in the Minimum Audit Scope that were rated as either “Partial Compliance” or “Non-Compliance”, we have noted them in the table directly below. SP AusNet has provided management comments in Appendix D of the complete document. Source data to validate these statements were unable to be audited during the audit period.

Scope Area	Overall Grade
<b>B2 – B3 AMI Cost Recovery Order – Prescribed Customers Without an AMI Meter</b>	
<ul style="list-style-type: none"> <li>• AMI Rollout Statistics could not be supported by an audit trail in all instances</li> <li>• Inadequate supporting policies and procedures surrounding data extraction, collation and reporting</li> <li>• As at 31 December 2013, SP AusNet had 57.8% of NMIs for Prescribed Customers with a remotely read AMI meter.</li> <li>• As at 31 December 2013, it was noted that SP AusNet did not currently perform remote de-energisations or re-energisations for customers with an annual electricity consumption of less than 160MWh.</li> <li>• Significant time elapsed between when SP AusNet first visited (unsuccessful installation) and next visited to install the AMI meter in order to progress other installations.</li> </ul>	
<b>C1 AMI Specifications Order &amp; Electricity Distribution Code – AMI Functionality Specifications</b>	
<ul style="list-style-type: none"> <li>• Lack of independent assessments during the audit test period that reviewed the technology as proposed, and later, as implemented met the minimum specifications.</li> </ul>	
<b>C2 AMI Specifications Order &amp; Electricity Distribution Code – AMI Service Levels Specifications</b>	
<ul style="list-style-type: none"> <li>• For a portion of the testing period, SP AusNet was unable to provide remote read data to evidence compliance with AMI Service Levels Specifications</li> <li>• Lack of independent assessments during the audit test period that reviewed the technology as proposed, and later, as implemented met the minimum specifications.</li> </ul>	

### Auditor Statement

In our opinion, GL No. 22 – Regulatory Audits of Energy Businesses and the Tripartite Audit Deed dated 28 March 2014 between Protiviti, SP AusNet and the Essential Services Commission of Victoria have been complied with in all material and relevant respects, in conducting the agreed procedures, making findings and preparing the report.

The key findings set out above reflect in all material respects the professional opinion of the auditor to the level of confidence specified by the Essential Services Commission of Victoria and consistent with the audit approach and methodology described in this report (specifically the Standard on Assurance Engagements ASAE 3100 Compliance Engagements) to provide a reasonable level of assurance.



Garran Duncan, Managing Director, Protiviti  
 Level 17, 140 William Street, Melbourne VIC 3000  
 9 July 2014

## APPENDIX 6 ESC ENFORCEABLE REGULATORY REQUIREMENTS

The AMI regulatory obligations which formed the basis of the audits and the Commission's assessment of compliance are extracted below.

### **National Electricity (Victoria) Act 2005 MINISTERIAL ORDER UNDER SECTION 22A**

I, Nicholas Kotsiras, Minister for Energy and Resources and Minister responsible for administering the **National Electricity (Victoria) Act 2005**, specify pursuant to section 22A of that Act, the following provisions of a relevant regulatory law or instrument as an ESC enforceable regulatory requirement....

#### **3. Specification of provisions of a code or guideline as an ESC enforceable regulatory requirement**

The following provisions of a code or guideline made by the Essential Services Commission are specified as an ESC enforceable regulatory requirement:

- (a) Chapter 4 of the Electricity Distribution Code; and
- (b) Clause 5.6 of the Electricity Distribution Code.

#### **4. Specification of provisions of an AMI Order or other Order made by the Governor in Council under the Electricity Industry Act 2000 as an ESC enforceable regulatory requirement**

The following provisions of an AMI Order or other Order made by the Governor in Council (other than an AMI Order) under the **Electricity Industry Act 2000** are specified as an ESC enforceable regulatory requirement:

- (a) Clauses 14.1, 14.2 and 14A of the AMI Cost Recovery Order; and
- (b) Clauses 3(a) and 4(a) of the AMI Specifications Order.

Dated 4 June 2013

### **AMI COST RECOVERY ORDER Electricity Industry Act 2000 ORDER UNDER SECTION 15A AND SECTION 46D Order in Council**

The Governor in Council, under section 15A and section 46D of the **Electricity Industry Act 2000**, on the recommendation of the Minister, makes the following Order...

#### **14. Remotely read interval meter rollout**

##### **14.1 Rollout period**

- (a) Subject to clause 14.3 and to the extent practicable, each distributor must use its best endeavours to install a remotely read interval meter (which is operational as a remotely read interval meter in accordance with the Specifications) for all of the metering installations for customers with annual electricity consumption of 160MWh or less for which it is the responsible person on 31 December 2013 by that date.
- (b) If a distributor has not installed a remotely read interval meter for all of the metering installations for customers with annual electricity consumption of 160MWh or less for which it is the responsible person by 31 December 2013, then, for the purpose of considering whether the distributor has used its best endeavours to do so, the Commission must take into account:
  - (i) the distributor's actions in relation to the risk of failing to install the relevant meters, including whether the distributor has failed to take any action that could reasonably have been taken to mitigate that risk and whether the distributor has taken or omitted to take any action which has increased that risk;

- (ii) the distributor's decisions and actions relevant to meeting the requirements of clause 14.1(a) in light of the information that was available to the distributor at the time those decisions and actions were taken; and
- (iii) any other factors the Commission considers relevant.

**14.2 Rollout schedule**

- (a) By the commencement of each year, each distributor must forecast the number of metering installations for customers with annual electricity consumption of 160MWh or less for which it will be the responsible person on 31 December 2013, and provide this forecast to the Commission and the Minister.
- (b) Each distributor must:
  - (i) by the commencement of a year, provide to the Commission and the Minister a forecast of the number of remotely read interval meters (which are operational as a remotely read interval meter in accordance with the Specifications) that it proposes to install in that year for metering installations of customers with annual electricity consumption of 160MWh or less;
  - (ii) use its best endeavours to install by the end of that year that number of remotely read interval meters; and
  - (iii) at the end of the year provide a report to the Commission and the Minister as to how it performed in that year in terms of its forecast and the actual number of remotely read interval meters installed.

...

**14A. Risk Management Strategy**

14A.1 A distributor must have and must keep up to date to the End Date a risk management strategy ('**risk management strategy**') to:

- (a) identify, address and mitigate technological or other risks of and in connection with the provision, installation, maintenance and operation of advanced metering infrastructure and associated services and systems; and
- (b) manage expenditure increases arising from those risks.

14A.2 The documents that set out the risk management strategy must be provided to the Minister if he so requests in writing.

**[AMI SPECIFICATIONS ORDER]**

**Electricity Industry Act 2000**  
ORDER UNDER SECTIONS 15A AND 46D  
Order in Council

The Governor in Council, under sections 15A and 46D of the **Electricity Industry Act 2000**, on the recommendation of the Minister, makes the following Order:...

**"Functionality Specification"** means the minimum State-wide functionality requirements and performance levels set out in sections 3 and 4, respectively, of the document entitled "Minimum AMI Functionality Specification (Victoria)" approved by the Minister and published on the Department's website on 18 October 2007, as amended in accordance with clause 6 from time to time...

**"Service Levels Specification"** means the services and minimum service levels set out in section 4 of the document entitled "Minimum AMI Service Levels Specification (Victoria)" approved by the Minister and published on the Department's website on 18 October 2007, as amended in accordance with clause 6 from time to time.

**3. Functionality**

- (a) Each relevant licensee that is required to install an AMI metering installation under the Cost Recovery Order must use its best endeavours to ensure that the related AMI system complies with the Functionality Specification.

...

**4. Service levels**

- (a) Each relevant licensee that is required to install an AMI metering installation under the Cost Recovery Order must use its best endeavours to operate the related AMI system in accordance with the Service Levels Specification.

...