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Dear Mr Feather,

### **Transition to Metering Competition in Victoria - Option Paper**

I refer to the *Transition to Metering Competition in Victoria Option Paper (Options Paper)* issued by the Department of Environment, Land, Water and Planning (the **Department**). Jemena Electricity Networks (Vic) Ltd (**JEN**) welcomes the opportunity to make a submission on how best to transition metering competition for residential and small business customers in Victoria.

Under the Australian Energy Market Commission (**AEMC**) final rule change determination on *expanding competition in metering and related services*, electricity retailers will become the party responsible for providing metering services to residential and small business customers by engaging a metering coordinator. The transfer of metering responsibilities from distributors to retailers is a significant change requiring detailed consideration; fundamental to these considerations is consumer protections for Victorian customers and preservation of AMI benefits .

### **Options Paper**

The Options Paper notes that Victoria is in a unique position relative to other Australian jurisdictions where smart meters for residential and small businesses customers have not been installed on a widespread basis. We agree, about 2.8 million AMI smart meters have been rolled out in Victoria to approximately 98% of small customers.

The Victorian Auditor-General's Office (**VAGO**) undertook a review of the smart meter program in 2015. VAGO's report recommended:

*"the Department ,identifies and implements actions to protect Victorian consumers from additional costs associated with the pending rollout of new competitive metering processes, and ensures that essential Advanced Metering Infrastructure program benefits are preserved."*<sup>1</sup>; and

*"...that Government should have "two priorities" regarding metering competition:*

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<sup>1</sup> Transition to Metering competition in Victoria – Option Paper, p 8.

- **protecting consumers** - *by ensuring that appropriate consumer protections are in place so that they understand the implications of accepting a new smart meter and are not worse off by doing so. Increasing understanding among consumers will reduce the risk of exploitation; and*

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- **preserving AMI benefits** - *by monitoring the AEMC's proposal and engaging with the Australian Energy Regulator (AER) to introduce metering competition in a way that the benefits of competition can be realised with minimal impact on the ability of electricity distributors, and ultimately consumers, to realise network efficiency benefits."*<sup>2</sup>

The Government's objective is to ensure that the timing and approach Victoria adopts in transitioning to the national competitive metering framework must be in the best interests of Victorian residential and small businesses customers.<sup>3</sup>

We believe the AMI meters installed in Victoria are capable of a broad range of functions and capabilities when compared to the meters considered under the national minimum services specification. Whilst the national metering competition framework adequately covers metrology services (i.e. interval metering, remote meter reconfiguration and meter data collection) and remote energisation / de-energisation services, it does not provide a pathway for electricity distributors in Victoria to preserve the shared network benefits currently available and will inhibit realisation of future network benefits.

For example, AMI meters currently enable distributors to control and switch dedicated loads for efficient network operation and management during peak network periods and during emergencies. The loss of load control by distributors that occur due to meters being replaced by retailer-appointed metering coordinators is a significant setback to efficient utilisation, operation and management of the distribution network.

To facilitate consideration of these issues and determine how best to transition metering competition in Victoria, the Department canvassed four policy options:

- Option 1: Full adoption of the national framework for all customers using the national minimum services specification
- Option 2: Adoption of metering competition for all customers using the *Victorian meter specification*<sup>4</sup>
- Option 3: Adoption of metering competition for new connections using the *Victorian meter specification*
- Option 4: Defer adoption of metering competition for now.

JEN considers that deferring the adoption of metering competition in Victoria (option 4) is the best option to achieve VAGO's recommendations and to meet the Government's objectives.

In deciding which approach to adopt, there are a number of issues to be considered—namely customer protections, AMI network benefits preservation, and other network operation and management issues (discussed under option 4).

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<sup>2</sup> Ibid, p 8

<sup>3</sup> Ibid p15

<sup>4</sup> Victorian Minimum Advanced Metering Infrastructure (AMI) Functionality Specification v1.2

JEN considers Victorian electricity customers will not be disadvantaged if metering competition is delayed, rather, Victorian customers will benefit by more carefully managing the complex and material change to metering competition.

Our analysis of the various options and the reasons for supporting option 4 are set out in **Attachment 1**.

Our responses to the specific questions outlined in the Options Paper are set out in **Attachment 2**.

Energy Safe Victoria's acknowledgement of the advances Victorian distributors have made since the deployment of smart meter which should not be lost—an extract from the 2016 Safety Performance report is presented in **Attachment 3**.

If you have questions in relation to the submission, please contact me on (03) 9173 8231 or at [matthew.serpell@jemen.com.au](mailto:matthew.serpell@jemen.com.au).

Yours sincerely

**Matthew Serpell**  
Manager Asset Regulation & Strategy

## **Attachment 1**

### **Analysis of the various options and the reasons for supporting option 4**

#### **Option 1: Full adoption of the national framework for all customers using the national minimum services specification**

##### **Impact on network benefits**

JEN considers option 1 would constrain distributors' ability to realise additional AMI network benefits and puts AMI network benefits already realised at risk as AMI meters are replaced with meters that conform to the national minimum services specification.

The 2.8 million AMI smart meters—which have been rolled out in Victoria by the Victorian electricity distributors—together with the *Victorian minimum AMI Service Level specifications* have broader functionalities than the meters expected to be installed to meet the performance levels specified in the national minimum services specification.

Metering coordinators appointed by retailers are not obliged to offer services above those specified in the national minimum services specification (which are primarily focused on metrology (interval metering, remote meter reconfiguration and meter data collection) remote energisation / de-energisation services). The national metering competition framework does not provide a plausible pathway for electricity distributors in Victoria to preserve the shared network benefits currently secured and constrains the realisation of additional network benefits from AMI meters. AEMO has publicly stated that its B2B e-hub for B2B communications provides a starting point for parties to interact within industry. They cover the minimum range of activities necessary for the industry to function.

##### **Impact on consumer protections**

Customer protections relating to interruption of the supply of electricity to a customer's premises for the purposes of installing, maintaining, repairing or replacing metering equipment currently rests with distributors through the Electricity Distribution Code. This obligation does not extend to metering coordinators appointed by retailers.

Smart metering obligations in Victorian instruments are limited to Victorian AMI meter. Meters installed under the national competitive metering framework are either type 4 or 4A. Unless the relevant Victorian instruments are updated to include type 4 or 4A meters, the consumer protections that currently accorded to Victorian customers will not extend to customers with new third party provided meters. Examples include:

- The Energy Retail Code requires index reads to be included on customers' bills for Victorian AMI meters, these obligations do not cover type 4 or 4A meters to the same customer segment
- Victorian AMI meter customers are able to access validated actual meter data from distributor portals the next day, however the minimum metering data requirements are much lower in the under national arrangements.

Given the above issues, JEN considers option 1 is unlikely to meet VAGO's recommendations.

## **Option 2: Adoption of metering competition for all customers using the Victorian meter specification**

Retention of the *Victorian meter specification*<sup>5</sup> appears to provide an appropriate transition path to full metering competition from 1 December 2017, whilst preserving the AMI benefits. In our view, however, option 2 is unlikely to deliver the AMI shared network benefits currently available because metering coordinators, appointed by retailers, are not compelled by the National Electricity Rules to offer services above those specified in the national minimum services specification.

Moreover, metering coordinators may be unwilling to offer network data services to distributors until they exceed a minimum threshold penetration to get economies of scale. We expect the market will be small initially—approximately 70,000 new connections per annum in Victoria and predominantly shared between three metering coordinators. The cost to setup head-end systems is likely to be in the order of millions of dollars per metering coordinator to route network data in real-time to distributors to support smart network services enabled—for example, 'last gasp', meter outage notification, and detection of broken neutrals<sup>6</sup>—by AMI meters.

In the 2016 Safety Performance report on Victorian Electricity Networks, Energy Safe Victoria acknowledged the advances Victorian distributors have made since the deployment of smart meter. (We have provided an extract of the report in Attachment 3).

Under the national arrangements, access to network data is subject to commercial agreement between meter coordinators and distributors. Despite the intended design, distributors may be unable or unwilling to negotiate arrangements with meter coordinators to access network data, for reasons including that:

- the cost to purchase network data from meter coordinators would most likely to be cost prohibitive due to the initial low market penetration (discussed above)
- at present, distributors' regulatory allowances do not factor in the cost to purchase network data
- future cost recovery uncertainty
- there is no long term certainty of network data delivery from meter coordinators; a requirement for long term network management.
- data from meter coordinators may not be of sufficient quality for use to support currently available network services enabled by AMI meter—i.e. distributors require real-time data, 1-minute series data, etc)
- the *Victorian meter specification* does not specify 1-minute time series data, which is essential for the monitoring and identification of broken neutrals.

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<sup>5</sup> The Option Paper defines the Victorian meter specification to only include *Victorian Minimum Advanced Metering Infrastructure (AMI) Functionality Specification v1.2*. It does not include the *Victorian Minimum AMI Service Levels Specification*.

<sup>6</sup> Power flows in and out of customers' premises from our distribution network—entering via the active cable and leaving via the neutral cable. If there is a break in the neutral, customers may suffer serious electric shocks if they touch something where electricity is present.

The Department—anticipating issues distributors may face accessing network data for the preservation and realisation of shared network benefits enabled by the AMI meters—asks whether an access regime is required to ensure distributors have access to the requisite network data.

JEN considers an access regime will increase costs to customer because it will be complex, expensive to implement and is unlikely to be implemented before 1 December 2017 is not sufficient time.

Notwithstanding the above, if option 2 is ultimately adopted by the Government, JEN submits that the *Victorian meter specification* must be updated to include 1-minute time series data; an industry data format agreed data format; and the *Victorian meter specification* must be enduring.

### **Alternative to a data access regime**

If option 2 is adopted, we believe the Department should consider alternative ways to ensure distributors have access to the requisite network data to secure shared network benefits—for example, installation of low cost network devices. Such a technically driven approach would:

- provide a long term solution for the preservation and realisation of additional network benefits
- not interfere with the national metering competition implementation program
- may cost less than an ‘access regime’ to implement
- meet VAGO’s recommendation and Government’s objective of preserving AMI benefits
- break the nexus between retail benefits and network benefits currently delivered through common metering equipment—that is, the solution that resolves the split benefit / costs driver that contributes to the regulatory failure that prevents market development.

If a technically driven approach to acquiring network data to support smart grids is preferred for adoption (instead of an access regime), JEN suggests the Victorian Government provide regulatory certainty through an appropriate regulatory mechanism requiring distributors to preserve currently available benefits and realise those additional network benefits anticipated under the mandated AMI rollout as AMI meters are replaced over time, as was the case under the former AMI order in council.

### **Option 3: Adoption of metering competition for new connections using the Victorian meter specification**

JEN considers the actual difference between options 2 and 3 is slight.

Option 2 proposes adoption of full competition for (a) new connections, (b) replacement of meters due to failures, and (c) existing sites where there is a change of metering coordinator. Option 3 proposes adoption of competition for new connections only. Both options propose adoption the *Victorian meter specification*.

It is unlikely a retailer would appoint a new metering coordinator at an existing site due to the size of the AMI exit fees; and meter family failures are equally unlikely given the AMI meters have a 15-year asset life and were rolled out between 2010

and 2015. Option 3 would mean distributors would have to maintain meter replacement capability and hold meter stock for a small number of meter failures.

JEN considers option 3 is suboptimal because of the additional regulatory costs and complexity of split regimes.

#### **Option 4: Defer adoption of metering competition for now**

Option 4 preserves the shared network benefits currently available to all residential and small business customers from the AMI rollout at least cost. Deferring meter competition until the end of the current regulatory period (31 December 2020) would provide time to further develop smart grid services. Considerations to be taken into account include:

- We consider the time frame between the Victorian Government making a decision on the options (expected to be in March 2017) and 1 December 2017 metering contestability commencement date is inadequate to scope, design, test and implement an access regime. Deferring metering competition would allow a realistic timeframe to implement an 'access regime' contemplated under option 2 or explore alternatives to an 'access regime'—for example, installation of network devices/sensors.
- It will reduce risks by allowing time for distributors to consider alternative low cost technologies (as an alternative to an access regime) to acquire the requisite network data for preserving and extending the network benefits anticipated under the mandated AMI rollout.
- It provides an opportunity to observe the outcomes (successes and failures) of the retailer-led smart meter rollout in other jurisdictions and implement customer protections to mitigate against the risk of unanticipated consequences in Victoria.
- It allows competitive meter providers and meter data providers to bed down their processes and IT systems, before Victorian customers are exposed to metering competition.
- It provides Victorian distributors the opportunity to align the Victorian Government's plans to transition metering competition with the next regulatory price reset proposal.

#### **Load control**

AMI meters currently enable distributors to control and switch dedicated loads for efficient network operation and management during peak network times and during emergencies. The loss of load control by distributors that occur due to meters being replaced by retailer-appointed metering coordinators is a significant setback to efficient utilisation, operation and management of the distribution network.. This setback could potentially result in network augmentation. JEN suggests the Department considers this issue and determine whether Government policy is needed to ensure distributors retain control over switching of dedicated loads.

#### **Innovations in new product and service offerings**

Victorian customers are enjoying the benefits from the AMI rollout at lower cost including remote energisation and de-energisation and special meter reads and

customers are able to switch retailers faster through remote energisation/de-energisation services. Meter reconfigurations are performed remotely without an expensive field visit for customer installing photo-voltaic solar panels. Daily read smart interval meters enable retailers to offer more innovative pricing, services and products and meter reconfigurations are performed remotely without an expensive field visit for customer installing photo-voltaic solar panels. These services, delivered via the distributors' AMI systems, are initiated by retailers. As a consequence, JEN does not see that retailer ownership of meters is necessary for the development of innovative products and services; such industry progress is occurring already under a distributor smart meter ownership model.

Except for one major retailer, no others have approached JEN to leverage the functionalities of the AMI smart meter beyond those that are specified in the Victorian Minimum AMI Services Levels Specification. That one retailer successfully negotiated access to AMI meter functionality that enabled the retailer to provide in-home display units to their retail customers.

JEN is open to negotiating with retailers—individually or collectively—and third party energy service companies to enable them to access AMI meters functionalities to provide customers with new and innovative products and services.

### **Consultation with consumer advocates**

JEN has consulted with a number of consumer advocates on the options presented by the Department to transition to metering competition in Victoria. They all consider there are a number of consumer protection issues to be resolved and there is a real risk to the shared network benefits currently enabled by AMI meters. These issues are significant and need thorough consultation prior to introducing metering competition to Victorian residential and small business customers.

We consider consumers—and importantly their advocates—are best placed to represent themselves when deciding on the products and services they wish to receive. We encourage the Department and Victorian Government to listen to this voice and debate, given it is the customer who will ultimately bear the costs and long term consequences of the decisions being made.

## Attachment 2

### Responses to questions in the Options Paper

Topic	Options Paper questions and JEN responses
<b>Option 2 – Full adoption with the Victorian metering specification</b>	<p><b>Question 1: Do you support implementing metering competition in Victoria so that the current Victorian meter specification and/or the minimum service levels are retained?</b></p> <p>Refer to discussions in Attachment 1</p> <p><b>Question 2: Should other considerations about the respective capabilities of the meters and service levels be taken into account?</b></p> <p>The Victorian meter specification does not specify 1-minute time series data, which is vital for the monitoring and identification of broken neutrals. If option 2 is adopted, the Victorian meter specification must be updated to include 1-minute time series data and an agreed format and communication protocol for the delivery of data from retailers to distributors.</p> <p>To maintain the levels of service delivery that Victorian customers have enjoyed since the roll out of AMI meters, the Victorian Minimum AMI Services Levels specification must also be adopted for all meter installations, irrespective of who provides the meter - this is in keeping with the VAGO principle to protect customers.</p>
<b>The alternative options to transition</b>	<p><b>Question 3: Do you have any comments or views on Options 1, 3 or 4?</b></p> <p>The national minimum services specification is intentionally set at a lower level to minimise barriers to market entry and promote metering competition, these objectives do not necessarily align to the principles and objectives outlined in VAGO's report.</p> <p>Option 1 does not ensure distributor access to real-time network data which is essential to realising the shared network benefits—for example, network planning, improvement to quality of supply, safety monitoring—including neutral integrity at a customer's premises—and quicker supply restoration after a network faults.</p> <p>Under the national competitive metering framework metering coordinators are not compelled to offer network data services to distributors. Even if they were prepared to supply network</p>

Topic	Options Paper questions and JEN responses
	<p>data services, AEMO's B2B e-hub for B2B communications is not designed to support delivery of the network data currently enabled by the Victorian AMI meters.</p> <p>We believe that individual negotiations and development of bespoke communication systems between a distribution business and each metering coordinators would be prohibitively expensive and most likely render the shared network services economically inefficient.</p> <p>Another matter the Government needs to be aware of is that option 1 would initially create two classes of customers—those with AMI smart meters and those without. Customers with AMI smart meters would have a higher level of supply reliability, quality of supply and safety monitoring (eg. identification of broken neutral connections at customers' premises) compared to those without AMI meters, on the basis that distributors will not be able to access the necessary network data.</p> <p>Option 4 is to defer adoption of metering competition, potentially to coincide with the next distribution pricing reset (commencing 2021). It is an attractive option as it would preserve the status quo benefits, including allowing electricity distributors to continue to realise shared network benefits, until an access regime or an alternative approach (eg. installation of network deviser/sensors) is implemented in Victoria. Further details on option 4 are presented in Attachment 1.</p>
<p><b>Implementation safety and accreditation issues</b></p>	<p><b>Question 4: Under Option 2, what additional measures should Victoria take in relation to meter installation and wiring safety, the safety associated with the use of the remote reconnection services enabled by smart meters, and community safety?</b></p> <p>Remote disconnection and reconnection is a key feature of Victorian smart meters. The Victorian meter specification requires smart meters to have an “auto-disconnect” – a safety feature that automatically disconnects supply when attempting a remote reconnection. The national minimum metering services specification does not mandate auto-disconnect functionality. This shortcoming of the national specification is an important consideration for supporting option 2, in that it has important safety consideration that are built into the respective AMI systems of each distributor. To give up this capability in favour of the national meter specification would go against the principle of customer protection.</p> <p>The installation of smart meters in Victoria has provided a</p>

Topic	Options Paper questions and JEN responses
	<p>number of community safety improvements. A notable benefit is the reduction in electric shocks by using smart meter data analytics to identify and prevent shocks from failed neutral connections; and identification of unsafe and unauthorised network connections. Identification of failed neutrals require 1-minute series data which we believe is cost prohibitive to route meter data from third party meter data providers to distributors. These safety improvements provide valued community safety. Refer to Attachment 3 of the types of hazards that are now able to be detected remotely via AMI meters.</p>
<p><b>Consumer engagement</b></p>	<p><b>Question 5: Under Option 2, which party or parties should be responsible for communicating the changes to metering arrangements to consumers, and should there be any communication role for the Victorian government?</b></p> <p>JEN considers that Governments can play an important role in educating customers on the potential benefits of metering competition and the broader Power of Choice program. Government is perceived as credible by residential and small business customers when providing authoritative supporting information so that customers understand their choices.</p>
<p><b>Realising the expected AMI societal benefits and access regime</b></p>	<p><b>Question 6: Under Option 2, would the introduction of access regulation for metering services in Victoria provide greater benefits than costs to Victorian households and small business?</b></p> <p>JEN considers that an access regime will increase costs to customer because it will be complex and cost prohibitive to implement and is unlikely to be implemented before 1 December 2017. JEN has proposed an alternative approach to an access regime. Refer to discussions under option 2 in Attachment 1.</p> <p><b>Question 7: Under Option 2, will the introduction of access regulation for metering services in Victoria assist in preserving unrealised projected benefits attributed to the Victorian smart meter rollout (please quantify any benefits)?</b></p> <p>An access regime would assist in preserving projected benefits of the Victorian smart meter rollout. However, we believe an access regime will be cost prohibitive, complex and potentially unworkable. We believe an alternative approach (discussed in under option 2 in Attachment 1) will preserve shared network benefits currently available and facilitating other shared network benefits into the future more</p>

Topic	Options Paper questions and JEN responses
	<p>efficiently.</p> <p><b>Question 8: Under Option 2, are there services that Metering Coordinators will not be able to provide that are currently being provided by electricity distributors? If so, what information and/or services will the electricity distributors need to obtain from Metering Coordinators in order to continue to realise these benefits?</b></p> <p>Under option 2, metering coordinators will be able to largely provide the following services:</p> <ul style="list-style-type: none"> <li>a) remote metering reading;</li> <li>b) remote meter energisation and re-energisation;</li> <li>c) remote meter reconfiguration metrology services; and</li> <li>d) provision of only basic network data<sup>7</sup> at a premises level.</li> </ul> <p>However, to retain the performance levels of services currently being provided by Victorian electricity distributors we suggest adoption of the Victorian Minimum AMI Service Levels Specification in addition to the <i>Victorian meter specification</i>. For example, the national specification does not specify performance levels required for the daily collection of the previous trading:</p> <ul style="list-style-type: none"> <li>• all data from 99% of meters within 4 hours after midnight; and</li> <li>• all data from 99.9% of meters within 24 hours after midnight.</li> </ul> <p>Under Option 2, metering data providers would be able to provide basic network data including alarms and network data (voltage, current and power factor) measured at a connection point, but not in real-time. Real-time network data is critical for reliability services enabled by 'last gasp' and 1-minute series data is essential for identification of broken neutrals. AEMO has publicly stated<sup>8</sup> that its B2B e-hub for B2B communications provide a starting point for parties to interact within industry. It covers minimum range of activities necessary for the industry to function.</p> <p>Without significant expenditure across the industry, metering coordinators will not be able to provide distributors real-time access to network data at a premise level to realise 'last gasp' reliability benefits, and a series of network data (voltage, current and power factor) in 1-minute intervals to support quality of supply, monitoring neutral integrity of connections, and many other safety related benefits enabled</p>

<sup>7</sup> AEMC, National Electricity Amendment (Expanding competition in metering and related services) Rule 2015 No. 12, Table S7.5.1.1 Minimum Services Specification – services and access parties.

<sup>8</sup> Information Exchange Committee B2B Industry Workshop, 8 November 2016

Topic	Options Paper questions and JEN responses
	<p>by the AMI meters. (Refer to Attachment 3 for details of the types of hazards that can be detected by AMI meters).</p> <p><b>Question 9: If an access regime is introduced, who would be the responsible regulator and how should it be funded?</b></p> <p>JEN considers the AER is better placed than the ESC to be the regulator to develop an access regime, should it be introduced. The AER already have staff who are familiar with AMI metering services on offer and understand the importance of network data necessary for to the efficient network operation and management.</p> <p>Distributors' opex and capex related to an access regime should be funded through the regulatory price reset proposals, given they are for shared network benefits. Likewise, retailers should bear their costs.</p> <p><b>Question 10: What is the role for the Victorian Government in ensuring that the potential and benefits of energy data are unlocked through this process, including ensuring electricity distributors have appropriate access? Are there other mechanisms, other than the 'traditional' access regime model, that could be utilised?</b></p> <p>Refer to our discussion under option 2 in Attachment 1.</p>
Mandatory or opt-out	<p><b>Question 11: Should Victoria vary its current policy position that smart meters are mandatory and households and small business to opt-out of having a communicating smart meter?</b></p> <p>About 2 % of JEN's customers have steadfastly refused a communicating AMI smart meter. We consider customers should be able to opt out of having a communicating smart meter. The opt-out policy would be consistent with the national metering competition framework and reflects the customers' interests.</p>
The "small customer" threshold	<p><b>Question 12: Do you support setting the small customer threshold at 160 MWh rather than 40 MWh as suggested by the AEMC? If not, please provide a reason.</b></p> <p>We support retaining the threshold at 160 MWh. Currently customers consuming between 40 and 160 MWh have AMI meters. They receive the benefits of the AMI rollout program. Distributors also benefit from having access to the network</p>

Topic	Options Paper questions and JEN responses
	usage profile of these customers, which is important for network planning.
Regulatory changes for implementation	<p data-bbox="539 371 1345 472"><b>Question 6: What regulatory changes would be needed to implement Option 2, and what considerations attach to these changes?</b></p> <p data-bbox="539 521 1331 723">If option 2 is adopted by the Victorian Government, the Victorian meter specification must be updated to include 1-minute time series data; an industry data format agreed data format and related delivery protocol (including the timing of delivery); and the Victorian meter specification must be enduring.</p> <p data-bbox="539 772 1326 938">If the 1-minute time series data is not included in the specification, some of the advances Victorian distributors have made would be at risk. Refer to Attachment 3 (an extract from the Energy Safe Victoria report) for the types of hazards that are now able to be remotely detected.</p> <p data-bbox="539 987 1334 1122"><b>Question 14: With metering competition commencing on 1 December 2017, what timing issues does the Victorian Government need to be aware of, and how might these be managed?</b></p> <p data-bbox="539 1171 1347 1509">The Victorian Government's decision on the transition option in expected in March 2017, which is after the finalisation by AEMO of the B2B procedures for national metering competition. JEN is about to commence the build phase before the end of December to meet the 1 December 2017 date for which new obligations commence. It is noteworthy, option 1 is currently JEN's critical path—that is, JEN will continue to prepare for metering competition and will only stop this activity when and if the Government decides to defer transitioning metering competition in Victoria to a later date.</p> <p data-bbox="539 1559 1289 1825">We consider the time frame between the Government decision on the transition option in March 2017 and 1 December 2017 is challenging to implement an access regime. Deferring metering competition would also allow realistic time to implementing an 'access regime' contemplated under option 2 or explore alternatives to an 'access regime'—for example, installation of network devices/sensors.</p> <p data-bbox="539 1874 1300 1975"><b>Question 15: Are there any other factors or conditions that should be considered to successfully implement metering competition in Victoria?</b></p>

Topic	Options Paper questions and JEN responses
	<p data-bbox="539 248 1315 409">It is important that a decision is made and that decision is made as early as possible and communicated quickly. The current timetable puts significant risk onto customers by adding a new (and fundamental) change to the scope of activities.</p> <p data-bbox="539 465 1342 595">Consistent with the VAGO principles, customer protections impacted by delays in the delivery of the metering competition can be addressed by completing the consultation and reporting phases as quickly as possible.</p>

## Attachment 3

### 5.5 Connections failures : a good news story

In 1999, an Order in Council was issued requiring that the integrity of earthing systems be tested every ten years. At that time, such testing would require physically undertaking a neutral supply test on individual systems located at each electricity customer's premises.

Between 2009 and 2014, the distribution businesses installed smart meters at the premises of all residential and small commercial customers across Victoria. As part of the roll-out, a neutral supply test was conducted at every installation leading to rectification of a number of existing hazards.

Since the deployment of smart meters, the distribution businesses have been investigating and developing metrics that allow imminent safety hazards to be identified prior to them impacting the community. The types of hazards now able to be detected remotely include:

- › Mains degradation due to bad connections and insulation breakdown<sup>11,12</sup>
- › Broken conductors and live HV wire down events<sup>11,12</sup>
- › Canded fuses<sup>12</sup>
- › Incorrect meter wiring<sup>11</sup>
- › Meter bypass events<sup>11,12,13</sup>
- › Over-voltage events<sup>12</sup>
- › Overload events<sup>12</sup>
- › Non-compliant solar installations.<sup>12</sup>

By using remote monitoring and combining this with increased levels of automated analysis, smart meters are already allowing the distribution businesses to more efficiently and effectively reduce the number of network incidents that could impact on community safety.

These reductions are already tangible, with observed reductions in connection and fuse failures (see Figure 11) being attributable (at least in part) to the improved monitoring made possible by the smart meter program.

In addition, the information provided by smart meters is allowing the distribution businesses to better monitor loads across the networks to a level and detail previously not possible. This will allow improved network planning and subsequently improved reliability of supply to all customers, including network management as solar PV and battery storage technologies become more prevalent.

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<sup>11</sup> Potential for shock or electrocution.

<sup>12</sup> Potential to result in fires at the premises or in surrounding vegetation.

<sup>13</sup> A common occurrence at premises being used to illegally grow marijuana.