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15 August 2012

Australian Energy Market Commission  
PO Box A2449  
Sydney South NSW 1235

Dear Sir

**Issues Paper – National Workstream: Review of distribution reliability outcomes and standards**

Thank-you for the opportunity to provide input to the Issues Paper, *Review of distribution reliability outcomes and standards*, released on 28 June 2012.

Aurora Energy Pty Ltd, ABN 85 082 464 622 (Aurora) is an incorporated, State Government owned fully integrated energy and network business, with complementary activities in telecommunications and energy-related technologies. Aurora provides electricity generation, retail and distribution services to more than 270,000 customers in the Tasmanian jurisdiction. In this document, reference to Aurora should be taken as reference to Aurora in its capacity as the provider of distribution network services licensed by the Regulator under the Electricity Supply Industry Act 1995.

Aurora understands that the main issues under consideration in the Issues Paper surround national consistency in expression of reliability standards, national consistency in reporting of reliability standards, and national consistency in setting reliability standards. Aurora notes that the first and second issues are covered in AER reporting requirements. Aurora observes that the AER has undertaken a significant amount of investigation into many of the aspects touched upon within this consultation, especially in relation to the first two issues, and suggests that this existing comprehensive body of work may be a valuable resource for the AEMC to draw upon in reaching its conclusion.

In relation to the third issue, Aurora is not supportive of a move to set reliability standards at a national level given the geographical, topological and other differences between jurisdictions. Tasmania's reliability standards were set by the jurisdictional Regulator in 2007 following an investigation into reliability standards and associated expenditure by joint working group comprising members of the Regulator's office, the State Government and Aurora. Aurora notes that one of the fundamental principles adopted by the joint working group and recognised by the Regulator in setting revenues for the 2008-2012 regulatory control period was that reliability in Tasmania was generally at an appropriate level.

The attachment to this letter provides Aurora's answers to the questions posed in the Issues Paper, and also contains discussion on other aspects of the Consultation Paper that were not the subject of direct questions by the AEMC but which Aurora considers to be relevant to the overall review.

If you have any questions, please address them to the contact noted above.

Yours faithfully

A handwritten signature in black ink, appearing to read "AVoss", written over a white background.

Anton Voss

General Manager Commercial, Regulatory and Strategy  
Distribution Business  
Aurora Energy

## ATTACHMENT TO AURORA SUBMISSION TO EPR0031

This attachment to Aurora's response to consultation EPR0031 provides Aurora's answers to the questions posed by the Australian Energy Market Commission (AEMC) in their Issues Paper, *Review of distribution reliability outcomes and standards*, released on 28 June 2012 (the Consultation Paper). This attachment also contains discussion on other aspects of the Consultation Paper that were not the subject of direct questions by the AEMC but which Aurora considers to be relevant to the overall review.

In this document, reference to Aurora should be taken as reference to Aurora Energy Pty Ltd, ABN 85 082 464 622 in its capacity as the provider of distribution network services on mainland Tasmania, licensed by the Regulator under the Electricity Supply Industry Act 1995.

Terms used in this attachment are contained within the appendix to this attachment.

### Background Information

The most commonly encountered aspect of reliability is the outcome. Irrespective of the causes, the effects of reliability are measured, reported and regulated using a variety of indices. The Consultation Paper is based upon the simplifying assumption that reliability is purely the result of network design issues. Implicit in this is that there are no factors affecting reliability outside of the control of the network, because all may be addressed by appropriate network design. While this notion is conceptually valid, expenditure on physical networks across Australia has been restricted by economic considerations. In consequence, while it is conceivable to build a "bullet-proof" network, political and economic considerations and, more recently, regulatory economic considerations have prevented this from occurring and perfect reliability is compromised. This disparity between the theoretical and actual constructs means that the analysis in the Consultation Paper, whilst perfectly valid in its own metric, does not transfer well. Further, the questions asked in the Consultation Paper, whilst valid in the terms of the theoretical metric, will not necessarily result in acquisition of data to support practical policy outcomes. This section aims to provide background discussion to give a context for Aurora's responses to the questions in the Consultation Paper and to provide more information about the causes of reliability so that the AEMC may make informed decisions.

#### Measuring Reliability

In concept, "reliability" is the ability of a system to perform its function adequately for the period of time intended, under the operating conditions encountered. In the context of a distribution network, the reliability relates to the ability of the network to provide a continuous supply of electricity to parties connected to the network. The document IEEE 1366 defines a number of indices designed to measure aspects of network reliability,<sup>1</sup> including those commonly used in the NEM such as SAIDI, SAIFI, CAIDI

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<sup>1</sup> A little perversely, the indices are generally measures of "unreliability"; that is, aspects of interruptions to the continuous supply of electricity which leads to a rather pessimistic view of network performance. Given that there are 8,760 hours in a (non-leap) year, even 12 hours of cumulative outages in a year is an availability of 99.86%.

and MAIFI. These indices are all measures of outcomes, and do not consider inputs to create reliability.

### Engineering for Reliability

From an engineering point of view, distribution network reliability is achieved by meeting criteria addressing the “adequacy” and “security” of the network. Adequacy is the capability of the network to meet accessibility expectations and to supply the electrical demand whilst remaining within network element capacities (ratings) and quality of supply limits. Implicit assumptions are that all network components are operating in a satisfactory state and that the network loading and configuration allows for demand management, such as controlled and contracted interruptible loads, and embedded generation. Security is the ability of the system to cope with incidents without the uncontrolled loss of load. Both adequacy and security are necessary aspects of distribution network planning to provide a reliable supply, and may be mandated through network planning standards.

### Planning for Reliability

Planning criteria relating to adequacy are concerned with such topics as network element standardisation and the establishment of asset planning and operational capacities.

Planning criteria relating to security consider supply “survivability”; that is, the ability of the network to cope with incidents without an uncontrolled loss of load. Survivability may be considered to have three elements: “susceptibility”, “vulnerability” and “recoverability” (or, more memorably, “prevent”, “minimise”, and “respond”, respectively). Susceptibility refers to the ability of the network to “avoid” incidents. Vulnerability refers to ability of the network to withstand incidents or to minimise the effects of incidents. Recoverability refers to the ability to restore supply in the event of an incident causing an interruption.

Network planning criteria really only cover vulnerability and part of recoverability: the other part of recoverability is a resourcing issue, and susceptibility is a function of network element design.

### Network Planning Approaches

There are two general approaches to network planning: probabilistic and deterministic. Probabilistic planning involves a direct application of economic principles and should result in network augmentation only if the present value of the cost to network users exceeds the present value of the cost to increase adequacy or either reduce the vulnerability or improve recoverability. Deterministic planning involves a set of technical criteria, based on economic principles, which result in network augmentation in the event that given adequacy, vulnerability or recoverability criteria are forecast to be breached. Planning criteria of the form “n”, “n – 1”, etc., are deterministic planning criteria.

Aurora considers that planning criteria are not standards, they are approaches to assessing the economic viability of an asset construction project to address a reliability issue. Both commonly used approaches use economic inputs: the probabilistic approach

explicitly considers an economic value at the time of the assessment; the deterministic approach splits the process into two parts, the first using economic considerations in setting the “n-1”-type criteria and the second in applying these criteria to a given point or area load.

### Supply Outages

Supply outages, the interruption to a continuous supply of electricity, may be planned or unplanned, with unplanned outages caused by factors either within or without the control of the network operator. Factors within the control of the network operator include in-service asset failure and vegetation inside the legislated maintenance zone. Factors without the control of the network operator include transmission outages, third-party interactions such as vandalism or “car hit pole”, wildlife, and vegetation from outside of the legislated maintenance zone.

## **Responses to Questions**

This section of the attachment to Aurora’s submission to consultation EPR0031 provides Aurora’s answers to the questions posed by the Australian Energy Market Commission (AEMC) in their Issues Paper, *Review of distribution reliability outcomes and standards*, released on 28 June 2012 (the Consultation Paper).

For ease of identification, the questions posed by the AEMC are presented in boxed text.

### Question 1. Analysis of NEM jurisdictional approaches to reliability

Should the AEMC consider any other aspects of existing NEM jurisdictional approaches to distribution reliability?
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Aurora expects that the AEMC’s consideration of the seven aspects listed in section 2.1.1 of the Consultation Paper will provide a good foundation for meeting the MCE’s Terms of Reference for this review of distribution reliability standards.

Aurora notes, however, that the issue of network reliability is complex, with many interacting aspects. Aurora recommends that, to undertake a comprehensive analysis of the issues surrounding reliability, the following should be considered:

- the impact of planning standards, design standards and reliability standards on each of the aspects of network reliability discussed above (susceptibility, vulnerability and recoverability);
- impacts of such factors as vegetation management requirements; and

- the effect of network segmentation<sup>2</sup> on the ability of reliability indices to provide an accurate summary of network performance.

Aurora further recommends that the distinction between the following pairs of related issues should be considered:

- “security of supply” and “reliability of supply”;
- reliability standards set for the purposes of achieving jurisdictional preferences and reliability standards set to ensure that an incentive scheme operates as designed; and
- reporting actual reliability outcomes and reporting “incentivised” reliability outcomes.

Aurora provides the following discussion points around the terms used above:

- Planning standards are the same as the planning criteria referred to in the Consultation Paper. They are usually set by the jurisdiction, and relate to high-level desired outcomes in relation to adequacy and security of supply.
- Design standards are the standards to which the distribution business build their infrastructure. The standards may be internally developed, or may be externally imposed by regulation. For example, Aurora is required to build its network to the higher of the two standards AS 3000 and AS 7000, provided that these standards apply to the work.
- Reliability standards set the desired reliability of supply. They are the familiar SAIDI and SAIFI.
- Susceptibility refers to the ability of the network to “avoid” incidents. Susceptibility is not affected by planning standards, but is affected by design standards and vegetation management practices.
- Vulnerability refers to ability of the network to withstand incidents or to minimise the effects of incidents. Vulnerability is affected by both planning standards and design standards.
- Recoverability refers to the ability to restore supply in the event of an incident causing an interruption. Recoverability is affected by planning standards, but also by resourcing (that is, having the necessary staff and equipment to effect a repair).
- Security of supply is a measure of the vulnerability and recoverability of the network, and is affected by planning standards.
- Reliability of supply is the end product of all inputs to the network. Security of supply is one factor in reliability of supply. The converse does not hold: reliability of supply is not a factor in security of supply.
- Reliability standards set for the purposes of achieving jurisdictional preferences are those reliability standards set by the jurisdiction and codified. In Tasmania, these were set by the jurisdictional regulator following an investigation by a joint

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<sup>2</sup> whether on a regional or asset class basis

working group comprising representatives of the distributor, the State Government and OTTER. These standards were designed to provide an efficient and affordable electricity supply.<sup>3</sup>

- The STPIS used by the AER uses reliability standards as an input to calculate an incentive rate. In the Tasmanian context, at least, the AER set its STPIS reliability standards based upon its own methodology, having regard for the jurisdictional reliability standards only in the final stages of the process.<sup>4</sup>
- Reporting reliability outcomes is simply the act of reporting the performance of a distributor and potentially comparing the performance against a set of standards. In the interests of transparency to allow customers to understand their reliability, Aurora considers that the effects of all outages should be reported, with no exclusions.
- Reporting “incentivised” reliability outcomes relates to reporting the reliability inputs (actual SAIDI, SAIFI, etc.) to a performance incentive scheme. In applying an incentive scheme it is appropriate to exclude categories of outages from consideration: the cause of the outages may be beyond the control of the distributor (for example, transmission outages), or the regulator may consider that certain categories of outage do not warrant having an incentive attached. Comparing the reliability of the distributor as calculated using the subset of all outages, against the incentive standards which have been calculated using the same subset provides an input to the reliability scheme. Reporting upon the performance of the distributor using the subset of all outages is, however, misleading unless the report is solely to add transparency around the application of the performance scheme.
- Network segmentation involves breaking up the network into smaller parts for the purposes of reporting. The ultimate level of segmentation is the individual customer/NMI level. The next highest is at distribution transformer level. Then onto feeder segment, feeder, zone substation, transmission injection point, and whole network. Alternatively, the areas fed by the distribution network may be considered, as in the community-based approach taken in Tasmania. Irrespective of the method of segmentation, the larger the segment, the greater the summarisation of the reliability; but the greater the summarisation, the more information is lost and outliers are obscured. The degree of transparency obtained by fine-scale segmentation should be balanced against the cost and complexity of monitoring and managing that segmentation.
- Adequacy is the capability of the network to meet accessibility expectations and to supply the electrical demand whilst remaining within network element capacities (ratings) and quality of supply limits.

Aurora acknowledges the AEMC’s comments in the Consultation Paper,

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<sup>3</sup> See the Joint Working Group Final Report, Volume 1 for more details.

<sup>4</sup> 2011 Final Determination Attachments, page 177

As a result, parts of what would normally be considered to be the distribution network in other jurisdictions is treated as transmission in Tasmania, and is subject to transmission reliability standards.<sup>5</sup>

*Question 2. Approach to the national workstream*

Should the AEMC consider any other aspects in its approach to the national workstream?

Aurora understands that the AEMC will consider the merits of having a common framework for “expressing”, “delivering” and “reporting” reliability, with the AEMC defining these terms as follows:<sup>6</sup>

- 'expressing' refers to the types of reliability standards or outcomes that are used (including issues related to probabilistic or deterministic approaches, and input or output standards) and how the relevant standards and outcomes are defined and measured;
- 'delivering' refers to the governance arrangements in place to regulate the setting and enforcement of the required standards or outcomes, including the methodology employed to determine the level at which to set the required standards or outcomes and incentive schemes to incentivise delivery of the required outcomes;
- 'reporting' refers to the publication of reliability outcomes and other reliability related reporting by DNSPs, governments or regulators.

Aurora expects that consideration of these aspects will be sufficient to develop the high-level understanding sought by the AEMC in this stage of the investigation.

*Comments on Definitions*

With regards to the definitions, Aurora would like to make the following observations.

Expressing

Aurora agrees with the definition for this aspect. Aurora recommends that the AEMC considers the discussion paper *National regulatory reporting for electricity distribution and retailing businesses* published by the Utility Regulators Forum in March 2002, the standard IEEE 1366, and the AER’s deliberations in both creating the STPIS and reporting against distribution determinations. These documents all consider aspects of the issues surrounding (nationally) consistent reporting regimes, which may reduce the need for the AEMC to “reinvent the wheel”.

Delivering

Aurora agrees that governance is an essential input to discussions of “delivering” reliability.

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<sup>5</sup> Consultation Paper, page 79

<sup>6</sup> Consultation Paper, page 7

Aurora considers that the AEMC will need to carefully distinguish between “standards” and “outcomes” and, within the topic of standards, “planning standards”, “design standards” and “reliability standards”. In this context,

- outcomes are the reliability results (measured by SAIDI, SAIFI, etc.) achieved by the distributor to whom the standards apply;
- reliability standards are the externally applied levels of reliability (measured by SAIDI, SAIFI, etc.) deemed to be appropriate by a certain regulatory body;
- planning standards, whether probabilistic or deterministic, affect outcomes;
- design standards affect outcomes.

The different forms of standards are discussed in Aurora’s response to question 1.

A well-designed incentive scheme will direct a distributor’s attention towards meeting the reliability standards. Planning standards that are not aligned with the incentive scheme, however, may prevent the appropriate outcome: that is, the reliability standard being met.

Aurora also observes that the delivery of reliability outcomes has (at least) three components:

- planning and design standards;
- operational and maintenance practices; and
- fault response practices.

The Consultation Paper does not mention the latter two components, which is part of the “recoverability” aspect of network reliability discussed above. From the experience gained through running a network, Aurora understands that these aspects have a major effect on a distributor’s ability to meet reliability standards. Inappropriate operational and maintenance practices may lead to an unacceptable number of asset-related faults. While the planning and design standards can determine the ability of a distribution network to withstand incidents, once supply is lost the fault response practices determine the overall effects of the outage.

### Reporting

Aurora agrees with the definition for this aspect. Again, Aurora recommends that the AEMC considers the papers referred to above in response to the “expressing” section.

### Question 3. Reliability planning

a) What are the most appropriate administration arrangements for distribution reliability planning?

Aurora considers that the administration of distribution reliability planning should lie with the distributor. The following contains a more detailed description of Aurora's position on the appropriate administration of the various aspects of distribution network reliability.

### *Planning standards*

Aurora considers that the appropriate administrators for planning standards are, in general, the AER working under policy direction of the SCER / MCE. Given that the AER is responsible for the economic regulation of the distributors, the AER should be well-placed to develop an economic framework for planning standards that will affect the expenditures of the entities under its regulation. The jurisdiction, however, should retain the ability to prescribe a degree of reliability above that resulting from the general approach, in which case the AER should be obliged to give regard to that prescription in expenditure approval process.

For clarification, the Consultation Paper implies that reliability planning is through either deterministic or probabilistic approaches and subsequently discusses system security planning criteria.<sup>7</sup> As noted above, while system security is an input to reliability outcomes, reliability is also affected by issues that are not addressed by the system security planning. As discussed in the "Background" section, Aurora considers that planning criteria are not standards, they are an approach to assessing the economic viability of an asset construction project to address a reliability issue. Aurora suggests that to achieve the outcome desired by the AEMC, the AEMC may wish to investigate the possibility of obtaining consistency in setting the inputs to these approaches rather than determining that one approach is superior to the other(s).

### *Design Standards*

Aurora considers that the appropriate administrators for design standards are the jurisdictional and national safety regulators and the distributors themselves. Through various instruments the safety regulators dictate certain aspects of network design that the distributors must accommodate into their networks. These safety obligations are, in general, not negotiable meaning that reliability outcomes may be compromised; for the avoidance of doubt, Aurora supports this prioritisation. The distributors, who are responsible for the overall safe, reliable and efficient day-to-day operation of the network, are best placed to set the design criteria that meet all of the obligations placed upon them while meeting their specific safety obligations.

### *Reliability Standards*

Aurora recognises that there are two categories of reliability standards: jurisdictional and economic. Jurisdictional reliability standard are those standards that the

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<sup>7</sup> See, for example, section 3.1.1 & 3.2.2

jurisdictional government considers are appropriate. Economic reliability standards are those standards determined by an economic regulator as inputs to a service incentive scheme. There is no particular reason as to why the two sets of standards need be equal. The jurisdictional government, in setting jurisdictional standards, is not restricted to considering only the economic model of the NEM, and so considers all economic and political aspects of the jurisdiction. The economic regulator will set their reliability standards to ensure that the distributor receives a mandated incentive to give regard to reliability outcomes.

Accordingly, Aurora considers that the appropriate administrator for jurisdictional reliability standards is the jurisdiction in which the distribution network operates, and that the appropriate administrator for economic reliability standards is the economic regulator of the distribution network. There are two underlying assumptions in this arrangement: that the economic regulator gives regard to the jurisdictional reliability requirements when approving expenditure; and that the economic reliability standards are not more stringent than the jurisdictional reliability standards.

#### *Expression of Reliability*

Aurora considers that the administration of the form of expression of reliability should be the party responsible for the administration of the reliability standards.

#### *Operational Standards*

Operational standards are those standards used in the day-to-day operation of the distribution network. They have an impact on reliability in that they dictate the approach to restoring supply in the event of an outage. In a similar fashion to design standards (see above), given the safety implications surrounding electricity network operations, Aurora considers that the appropriate parties to administer the operational standards are the jurisdictional and national safety regulators in conjunction with the distributors.

b) What are the different approaches that could be adopted for distribution reliability planning and how could these approaches employ a proper analysis that incorporates an estimate of the value of customer reliability or willingness to pay?

Aurora considers that the best approach to reliability planning is to specify the outcomes required and to leave the distributor to plan and manage its network within its regulatory constraints. While from a pure economic position the consideration of the value of customer reliability or willingness to pay are desirable, Aurora notes that the dichotomy between the two values creates difficulty in effecting customer desires. Aurora further notes that neither approach incorporates consideration of the value placed upon reliability by government with responsibility for the jurisdiction.

Question 4. Reliability standards

a) What are the expected costs and benefits associated with consistency in expressing reliability standards and how can locational differences between jurisdictions be accommodated?

Aurora expects that the costs associated with consistency in expressing reliability standard will be commensurate with the (IT) systems necessary to implement reporting against those standards. The costs, in each case, will vary according to the difference between the data and analysis required to report on existing standards and that required to report on newly defined standards. Compounding this will be any duplication of reporting requirements for jurisdictional entities.

Aurora considers that there will be negligible practical benefits associated with consistency in the expression of reliability standards.

To accommodate locational differences, the reliability indices must apply to (as close as possible to) identical network segments. The greater the differences between network segments being measured by any given index, the less relevant is the comparison between those segments using that index.

b) Is there merit in having one entity regulating both reliability standards and investments and what are the possible alternatives to this approach?

Aurora can see no merit in having a single entity regulating both reliability standard and investments provided the economic regulator is required to consider reliability standards when approving capital expenditure for distributors.

The status quo is one alternative to having one entity regulating both reliability standards and investments.

c) What are the important elements of distribution reliability reporting and is there value in a nationally consistent approach?

Aurora considers that the most important element of distribution reliability reporting is that the aspects reported are of use in the day-to-day operations of the business. Any other reporting is an unnecessary regulatory burden the costs of which are ultimately borne by the consumers of distribution services.

Aurora suggests that there is no value in having a nationally consistent approach to reliability reporting<sup>8</sup> given that each of the distributors serves a geographically distinct

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<sup>8</sup> as opposed to “expressing”

and topologically different area and there is no possibility of overlap in the current NEM framework.

*Question 5. Incentives*

a) What are the expected costs and benefits associated with existing jurisdictional incentive schemes for distribution reliability performance and the movement towards a more consistent approach across the NEM?

The expected costs and benefits associated with existing jurisdictional incentive schemes have been discussed by the jurisdictional regulators when the schemes were implemented. The expected costs and benefits associated with the movement towards the more consistent national incentive scheme were discussed by the AER when the STPIS was being developed. Given that all economic regulation is now under the AER and that service incentive schemes are a part of economic regulation, it is unclear why there needs to be further discussion of this issue in this context.

b) How could a nationally consistent incentive scheme for distribution reliability performance accommodate worst served customers?

The STPIS created by the AER under 6.6.2 of the NER and applied through distribution determinations is a nationally consistent incentive scheme for distribution reliability performance. The GSL component of the AER's STPIS is intended to provide a financial recognition to the worst served customers that the service received by those customers is of a lesser standard than that which they should reasonably expect.<sup>9</sup>

With regard to non-financial incentives to accommodate worst-served customer, in particular, reporting performance against reliability targets, Aurora notes that the Tasmanian jurisdictional Regulator chose such an approach in the 2008-2012 regulatory control period, observing that,

...the Regulator recognised incentive theory which suggests that not providing a distributor with any incentive to maintain average performance exposes electricity consumers to the risk that the distributor may reduce network maintenance and diligence in network operations, putting customers at risk of deteriorating reliability, with consequential economic losses. This risk could be mitigated to some extent through publicly reporting on performance.<sup>10</sup>

This approach was strengthened by the introduction of the community-based reliability scheme, which limited the likelihood of obscuring poor community performance in state-wide or whole feeder performance indices.<sup>11</sup>

<sup>9</sup> STPIS Issues Paper, page 10

<sup>10</sup> 2007 Pricing Investigation Final Report, page 227

<sup>11</sup> See, for example, Joint Working Group Final Report, Volume 1, section 2.2.3

The AER has also indicated that they will be publicly reporting distributor performance against specified service standards.<sup>12</sup> Aurora understands that the first NEM-wide report on distribution performance will be for the 2012-13 financial year.<sup>13</sup>

c) What are the important considerations for GSL schemes and is there value in a nationally consistent approach?

Aurora considers that the important considerations for GSL schemes have been comprehensively discussed by each of the jurisdictional regulators and the AER when those parties developed their respective GSL schemes.

The AER's current approach to implementing a GSL scheme is a nationally (NEM) consistent approach in that it is applied to all distributors in all jurisdictions. The AER considers that a GSL scheme is a necessary component of a STPIS; accordingly, the AER has developed a default GSL scheme as part of the STPIS which is implemented in the event that there is no existing jurisdictional GSL scheme.<sup>14</sup> The jurisdictional GSL schemes are fundamentally similar to each other in that customers experiencing either a prolonged outage or a number of outages above a given threshold receive a GSL payment.

d) What are the expected costs and benefits associated with customer communications?

The NECF package was implemented in Tasmania on 1 July 2012. Notwithstanding the implementation of NECF, there was already an existing set of obligations upon Aurora to provide the customer communications mentioned in the Consultation Paper:

- 24-hour fault number – TEC 8.3.1 (a)(3);
- prior notice of planned outages – TEC clause 8.6.11(e); and
- information about unplanned faults – TEC clause 8.6.11.

In consequence, the NECF package introduced no incremental communications costs for Aurora in respect of these issues.

It is not possible to provide an adequate cost-benefit analysis for other customer communications requirements without such requirements being specified. All costs of implementing such communications will, however, be borne by the distributors, which costs will be passed on to consumers.

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<sup>12</sup> STPIS Final Decision, page 6; see also the NSP Performance Reporting Final Decision and the Networks Information Framework Information Paper.

<sup>13</sup> Networks Information Framework Information Paper, page 11

<sup>14</sup> STPIS Final Decision, section 5.3

*Question 6. The meaning of a nationally consistent framework*

- a) What should a nationally consistent framework mean, and what should it not mean?
- b) How should a "nationally consistent framework" be interpreted and what degree of consistency/harmonisation is appropriate?

Aurora considers that the scope of a nationally consistent framework should be restricted to the “expressing” and “reporting” as defined in the Consultation Paper<sup>15</sup>.

In relation to the “governance” aspect, standardisation of the incentive schemes is already in place, in the shape of the AER’s STPIS. The GSL schemes are fundamentally similar across jurisdictions in that customers experiencing outages of excessive duration or an excessive number of outages within a given year will receive recognition in the form a GSL payment, the details vary sufficiently across jurisdictions to render complete harmonisation a non-trivial task.

The degree of consistency/harmonisation should be sufficient to meet the actual, as opposed to perceived, requirements of governments and regulators provided that the cost to the distributors to achieve the consistency does not outweigh the benefits to the distributors.

- c) In the context of setting and enforcing regulatory requirements, is it appropriate for the same body (eg the AER, a jurisdictional regulator, or a jurisdictional minister) to be responsible for both setting and enforcing reliability standards and outcomes?

Aurora considers that good governance dictates a separation of the tasks of setting standards and enforcing standards.

*Question 7. Costs and benefits of a nationally consistent framework*

- What are the expected costs and benefits of moving to a nationally consistent framework?

The costs associated with moving to a nationally consistent framework will vary according to difference between the systems required to capture and analyse data to report against the current standards and the systems required to capture and analyse data to report against the harmonised standards.

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<sup>15</sup> Consultation Paper, page 7

As noted previously, Aurora considers that the benefits of moving to a nationally consistent framework are limited.

Aurora notes that the AER appears to have already initiated the move towards nationally consistent “expressing” and “reporting” of reliability through its STPIS, RIN and reporting obligations mentioned in response to question 5b.

Question 8. The National Electricity Objective

a) How would a nationally consistent framework be likely to contribute to the achievement of the NEO?

Aurora understands that the AER has considered this issue in creating the STPIS. Aurora recommends that the AEMC refers to the various AER publications and stakeholder submissions to the consultations run by the AER in respect of the STPIS.

b) How material are the current jurisdictional differences in reliability standards and outcomes to consumers? What impact do those differences have on consumers' locational decisions?

Aurora considers that the differences between jurisdictional reliability standards and outcomes has a much lesser materiality than the reliability outcomes being experienced by the customers in their present locations.

The Consultation Paper states:

In particular, transparent expression and reporting of reliability outcomes would allow customers to make more informed decisions about which jurisdiction to locate in.<sup>16</sup>

Aurora suggests that, except potentially in the case of customers with large industrial processing facilities, issues such as employment, property prices, environment, quality of life and potential market take precedence over jurisdictional reliability in customer decisions about where to live, work and run a business.

Aurora observes that the AEMC's statement of how it considers that a nationally consistent reliability framework meets the NEO<sup>17</sup> lacks supporting evidence.

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<sup>16</sup> Consultation Paper, page 45

<sup>17</sup> Consultation Paper, page 45

*Question 9. Implementation of a nationally consistent framework*

a) What are the important considerations in moving away from existing jurisdictional frameworks to an approach that is nationally consistent?

Aurora suggests that the following are aspects for consideration in moving from existing jurisdictional frameworks to a nationally consistent framework:

- whether such a move is necessary or because “consistency seems like a good idea”;
- the benefits, and who receives the benefit, and whether the benefit is tangible or intangible;
- the costs, and who bears them – costs for a move will be incremental to current costs borne by distributors, and costs upon distributors are recovered from customers;
- the mechanism for recovering the costs – whether it is through the distribution determination process or through some other approach;
- the timing for implementation of the move – reporting systems take time to develop;
- the interaction with the existing AER STPIS; and
- whether the AER is already undertaking this through its distribution determination processes.

b) What issues are likely to arise in the process of moving from existing jurisdictional frameworks to an approach that is nationally consistent and how could these best be managed or overcome?

Aurora has no comment on this issue at present.

c) What implementation costs would likely to be incurred in moving to a nationally consistent framework?

As noted above, Aurora considers that the bulk of the costs to distributors will result from changes required to systems to report to different standards; potential duplication of reporting to state and national bodies would be an incremental cost. In the event of mandated probabilistic evaluation of expenditure proposals for network augmentation cost will be incurred to develop expertise in the required modelling and the establishment of a VCR.

On the regulators' side, costs will be potentially reduced at the jurisdictional level. Costs will increase at a national level as this is a new set of tasks. There will also be costs associated with making changes to jurisdictional and national instruments.

## **Other Issues**

This section of the attachment to Aurora's submission to consultation EPR0031 provides Aurora's views on issues raised in the Consultation Paper that are not the subject of explicit questions.

### *Level of Financial Incentives in Reliability Targets*

The Consultation Paper states:

Consideration should be given to whether the incentives carry sufficient financial implications to motivate the DNSP to improve the network and whether the incentives are correctly targeted such that certain areas of the network are not improved at the expense of others.<sup>18</sup>

Aurora notes that the AER expends considerable effort in these areas when determining the application of the STPIS to distributors.

### *Reliability Compliance Obligations*

The Consultation Paper raises the issue that

...current compliance obligations under jurisdictional licences and codes may not provide a sufficiently clear incentive to DNSPs to provide an appropriate level of reliability<sup>19</sup>

based upon the observation that

it is not uncommon for DNSPs to fail to meet the reliability standards, and yet, in these cases, no enforcement action appears to have been taken.<sup>20</sup>

It appears that the AEMC is suggesting that a distributor that has not met reliability requirements should be penalised both under the STPIS and prosecuted under jurisdictional legislation, which seems excessive.

Aurora notes that a service incentive scheme, such as the STPIS, is also intended to provide the incentive to distributors to provide appropriate level of reliability. Also relevant to this issue is an AER comment concerning the Tasmanian jurisdictional service incentive scheme:

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<sup>18</sup> Consultation Paper, page 34

<sup>19</sup> Consultation Paper, page 35

<sup>20</sup> Consultation Paper, page 35

Although the TEC requires Aurora to use 'reasonable endeavours' to meet minimum GSL targets, the GSL compensation scheme exists because funding Aurora to meet its TEC reliability standards in every circumstance would be inefficient. Supply reliability is one of the many obligations Aurora must comply with as a DNSP and Aurora must manage its risk to balance these obligations. The 'reasonable endeavours' requirement and the GSL scheme provide Aurora with a balanced incentive to maintain reliability, but do not require Aurora to invest inefficiently in its network.<sup>21</sup>

Aurora also draws the AEMC's attention to the OTTER Compliance Enforcement Policy, which formalises the jurisdictional approach to compliance, in which OTTER indicates that prosecution is only one of the options available to enforce compliance; Aurora expects that other jurisdiction regulators would have similar documented approaches to compliance. At the national level, the AER has published their approach to compliance enforcement, which is similar to the Tasmanian jurisdictional approach in that prosecution is only one of a suite of measures to deal with non-compliances.<sup>22</sup>

### STPIS

The Consultation Paper states,

Currently, the AER is in the process of applying the STPIS to each of the NEM jurisdictions. The STPIS operates to provide financial incentives to maintain and improve service performance by assigning rewards or penalties to a DNSP, as a per cent of revenue, where performance is better or worse than the target performance level.

The STPIS establishes material financial incentives on DNSPs to perform to their set targets and, in this sense, differs from previous or existing jurisdictional arrangements.<sup>23</sup>

Aurora notes that it operated under a service target scheme with financial incentives that were considered sufficiently material by the jurisdictional regulator during the 2004-2007 regulatory control period<sup>24</sup>. During the 2008-2012 regulatory control period, the whole of the revenue at risk, which was again set to be sufficiently material to provide proper incentive, was redistributed in the form of GSL payments to the worst served customers rather than in the form of a negligible reduction in network charges to the whole customer base, many of whom did not see poor reliability.<sup>25</sup>

### GSL Schemes

The Consultation Paper states,

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<sup>21</sup> 2011 Draft Determination, page 136

<sup>22</sup> Compliance and Enforcement Statement of Approach, AER, December 2010

<sup>23</sup> Consultation Paper, page 33

<sup>24</sup> 2003 Pricing Investigation Final Report, page 119

<sup>25</sup> 2007 Pricing Investigation Final Report, section 12

GSL payments only act as incentives to DNSPs if the payments to customers are higher than the cost of improving reliability to avoid making those payments. The current levels of payments by DNSPs under GSL schemes in the NEM are low, and as noted in the draft report for the New South Wales workstream, GSL payments do not appear to have been taken into account by DNSPs in making decisions on reliability-related expenditure.<sup>26</sup>

While it may be true that GSLs do not drive investment decisions, the GSL scheme is not actually intended to perform this function, which is properly the province of the s-factor component of the STPIS or its equivalent. The aim of a GSL payment is recognition by the distributor that it has provided poor service to an individual customer<sup>27</sup>. If there are sufficient GSL payments in a given area, it may indicate that there is a reliability issue but, from an economic point of view, it may be cheaper to continue to make the GSL payments than to augment infrastructure (with associated price impacts) in that area. Additionally, if the area is not large enough to generate sufficient distribution revenue to cover the cost of the augmentation, the incremental cost is shared over the remainder of the customer base.

### Consistency in Cross-jurisdiction Standards

The Consultation Paper states,

Based on our initial analysis, the Commission's preliminary view is that a nationally consistent framework for expressing, delivering and reporting on reliability outcomes is likely to provide benefits if it is:

1. Expressed effectively and determined transparently so that proper comparison of reliability levels across jurisdictions can be made and a basis for changes to reliability levels can be justified;

with further exposition,

A move towards ensuring that reliability standards in separate jurisdictions are expressed transparently, predictably, and consistently is likely to allow for proper comparisons of performance to be made, leading to more efficient investment decisions and more robust justifications for expenditure on reliability.

Currently, different forms of reliability standards, and the variation of exclusions in calculating the standards, make it difficult for market participants to understand and forecast network performance between NEM jurisdictions.<sup>28</sup>

Aurora is unclear as to how consistent expression of reliability standards across jurisdictions will lead to "more efficient investment decisions" given that each distributor is confined to a given region within a jurisdiction and should meet the standards of that region. The expression of the standards is immaterial in this respect.

Similarly, Aurora is unclear as to how consistent expression of reliability standards across jurisdictions will lead to "more robust justifications for expenditure on reliability". From a distributor's point of view, modelling the effects of capital expenditure on reliability outcomes is unaffected by having cross-jurisdictional consistency in reliability standards. Further, given that the AER's current approach to

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<sup>26</sup> Consultation Paper, page 37

<sup>27</sup> 2003 Pricing Investigation Final Report, section 4.3.4.

<sup>28</sup> Consultation Paper, page 42

determining capex in the course of a distribution determination expressly excludes capex related to reliability improvements,<sup>29</sup> this reason no longer provides support for consistency. Also related to this is the AER's observation,

Service improvements that result in STPIS rewards do not constitute "gold plating." The reward for service improvement is reflective of the benefits gained by consumers for the improved performance. The STPIS provides Aurora with an incentive to invest in network performance improvements where the cost of the investment is equal to or less than the benefit gained by consumers. As such, the investment must be efficient as the cost of that investment is less than or equal to the benefit of that investment.<sup>30</sup>

## Appendix: Terms Used in This Document

Term	Meaning
2003 Pricing Investigation Final Report	<i>Investigation of Prices for Electricity Distribution Services and Retail Tariffs on Mainland Tasmania Final Report and Proposed Maximum Prices</i> , OTTER, September 2003
2007 Pricing Investigation Final Report	<i>Investigation of Prices for Electricity Distribution Services and Retail Tariffs on Mainland Tasmania Final Report and Proposed Maximum Prices</i> , OTTER, September 2007
2011 Draft Determination	<i>Draft Distribution Determination Aurora Energy Pty Ltd 2012–13 to 2016–17</i> , AER, November 2011
2011 Final Determination Attachments	<i>Final Distribution Determination Aurora Energy Pty Ltd 2012–13 to 2016–17 Attachments</i> , AER, April 2012
AEMC	Australian Energy Market Commission
AER	Australian Energy Regulator
AS 3000	<i>AS/NZS 3000:2007 Electrical installations (known as the Australian/New Zealand Wiring Rules)</i> published by Standards Australia
AS 7000	<i>AS/NZS 7000:2010 Overhead line design - Detailed procedures</i> , published by Standards Australia
Consultation Paper	<i>Issues Paper Review of distribution reliability outcomes and standards</i> , AEMC, 28 June 2012
GSL	Guaranteed Service Level
IEEE 1366	<i>The IEEE Standard 1366 IEEE Guide for Electric Power Distribution Reliability Indices</i>
Joint Working Group Final Report, Volume 1	<i>Joint Working Group Final Report: Distribution Network Reliability Standards, Volume I – Summary of Recommendations and Overview</i> , jointly published by the Office of the Tasmanian Energy Regulator, Aurora Energy and the Office of Energy Planning and Conservation in February 2007
Network Information Framework Information Paper	<i>Information Paper AER Networks Information Framework</i> , AER, June 2012

<sup>29</sup> See, for example, the 2011 Final Determination Attachment, section 6.3.4; and the 2011 Draft Determination sections 5.4.3 and 5.4.4.

<sup>30</sup> 2011 Draft Determination, page 274

<b>Term</b>	<b>Meaning</b>
NSP Performance Reporting Final Decision	<i>Final Decision Priorities and objectives of electricity network service provider performance reports</i> , published by the AER in April 2011
OTTER	Officer of the Tasmanian Economic Regulator
OTTER Compliance Enforcement Policy	<i>Compliance Enforcement Policy</i> , Version 1, OTTER, November 2010
STPIS	Service Target Performance Incentive Scheme
STPIS Final Decision	<i>Final decision Electricity distribution network service providers Service target performance incentive scheme</i> , published by the AER in June 2008
STPIS Issues Paper	<i>Issues Paper Electricity distribution network service providers Service target performance incentive scheme</i> , published by the AER in November 2007
VCR	Value of Customer Reliability