



## Department of Primary Industries

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21 August 2012

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Mr John Pierce  
Chair  
Australian Energy Market Commission  
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Dear Mr Pierce

### **SUBMISSION TO AEMC REVIEW OF DISTRIBUTION RELIABILITY OUTCOMES AND STANDARDS – NATIONAL WORKSTREAM ISSUES PAPER**

The Victorian Department of Primary Industries, as the agency responsible for energy market development in Victoria, is pleased to comment on the questions raised by the Australian Energy Market Commission in its Issues Paper on the National Workstream of the Review of Distribution Reliability Outcomes and Standards.

If you or your staff would like to discuss the issues raised in this submission, please contact Raili Simojoki, Policy Officer, National Energy Development by email at [raili.simojoki@dpi.vic.gov.au](mailto:raili.simojoki@dpi.vic.gov.au) or by phone on (03) 9658 4738.

Yours sincerely

Mark Feather  
Executive Director  
Energy Sector Development Division



# **AEMC Review of Distribution Reliability Outcomes and Standards: National Workstream Issues Paper**

## **Submission – Victorian Department of Primary Industries**

The Department of Primary Industries (DPI) welcomes the opportunity to comment on the questions posed by the AEMC in its issues paper. Victoria's economic-value approach to reliability incentivises distribution businesses to make efficient trade-offs between capital expenditure and reliability outcomes, based on the economic value consumers place on reliability outcomes and the likelihood of unreliability occurring ('probabilistic planning'). This framework has achieved sustained reliability while keeping network costs relatively low in comparison to other jurisdictions. Further, the fact that in Victoria, one entity – the Australian Energy Regulator – determines both reliability incentives and price, enables a proper balancing of the two.

This is in contrast with the 'deterministic' approach, which involves specification of input standards, and fails to consider the value placed on a given reliability investment by its intended beneficiary – the consumer. The deterministic approach removes distribution businesses' power to determine the extent of investment necessary to achieve an economically efficient level of reliability, a decision that those businesses – not jurisdictions or regulators – are best-placed to make. Efficient investment is deterred by input standards that are prescriptive and may be unnecessarily high or low, with consumers ultimately paying the price.

Victoria looks forward to working with the AEMC and jurisdictions on developing a national approach to reliability frameworks, an issue of significant public importance given the consumer impact of increasing network costs.

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

*Should the AEMC consider any other aspects of existing NEM jurisdictional approaches to distribution reliability?*

The AEMC's analysis of existing National Electricity Market jurisdictional approaches may need to balance reliability standards not only with price, but with other aspects of the National Electricity Objective, including measures to address safety risks associated with electrocution and fire.

In December 2011, Victoria committed to the 10 year, \$750 million Power Line Bushfire Safety Program (PLBSP). One of PLBSP's initiatives is to change the settings on particular electricity distribution network safety devices (automatic circuit reclosers) on total fire ban and code red days. This marginally increases the likelihood that non-metro Victorian electricity consumers will lose supply on total fire ban and code red days, which generally occur between December and March, and average of six or seven days per year.

However, it will be difficult to attribute any given outage purely to PLBSP-induced network changes. This is because:

- electricity distribution businesses observed the practice of changing automatic circuit recloser settings on total fire ban and code red days before the PLBSP was implemented
- faults triggering outages during the periods of enhanced safety on total fire ban and code red days may also have triggered the outage on other days.

The PLBSP also includes the installation of new assets including:

- rapid earth fault current limiters, or REFCLs
- insulated conductor replacing certain uninsulated conductors in designated areas.

Installing new and replacement assets – while undertaken to reduce bushfire risk – is expected to increase consumer reliability. At this point, Victoria is not able to quantify these potential benefits. This will be considered as part of the program evaluation.

Victoria asks that the AEMC consider these issues in determining national network reliability frameworks.

## **2. Approach to the national workstream**

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

The AEMC will need to consider the appropriateness of the rules for the AER's Service Target Performance Incentive Scheme (STIPIS), to ensure the incentives are balanced and do not give rise to unwarranted rewards or penalties that may distort distributors' investment strategies.

When the AER assumed responsibility for setting the Service Target Performance Incentive Scheme (STIPIS) for 2011–15, it based targets on distribution businesses' average reliability performance over the last five years, rather than relative performance from year-to-year with incentives, which occurred under the previous model administered by the Essential Services Commission. This created the potential for Victorian distributors to make windfall gains and/or losses, as they could be rewarded for improvements already delivered and penalised for deteriorations previously penalised. It also created a perverse incentive for decreased performance toward the end of the 2006–10 period.

In Victoria, if methodologies change from one regulatory period to the other, there will be a risk of unintended impacts arising from the transition. Any change to STIPIS incentive methodologies will need to avoid the potential for windfall gains and losses, and avoid creating incentives that encourage game playing or reward performance decline. The AEMC should consider the potential for similar types of issues to arise in other jurisdictions if/when they adopt the STIPIS.

### 3. Reliability planning

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

As reflected in the Brattle Group report, Victoria's reliability incentive scheme has achieved reliability while keeping system costs relatively low.<sup>1</sup> The Brattle Group finds that except as a last report, reliability regulation should focus on output rather than input.<sup>2</sup> It notes that New South Wales (and utilities in Queensland) are unusual in imposing an input standard requiring a specified amount of redundancy in different parts of distribution systems.

Input standards tend to produce inflexible and inefficient outcomes in complex systems like distribution networks. Allowing governments to impose prescriptive requirements for investment may prevent businesses from innovating, and incentivise overinvestment or underinvestment. Distribution businesses are best placed to determine the investment necessary to reliability outcomes.

Further, it is more appropriate for a single regulator to regulate both reliability outcomes and investments. As the Brattle Group research clearly shows, this is the prevailing framework everywhere but some states of Australia where reliability standards are determined by governments. Having two separate entities responsible for determining prices and reliability precludes a holistic balancing exercise to determine where efficient trade-offs can be made between capital expenditure and reliability outcomes.

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?*

Victoria is the only jurisdiction where Value of Customer Reliability (VCR) estimates have been derived. Victoria's VCR levels were estimated by VENCORP in 2007 and the Australian Energy Market Operator (AEMO) provides updated estimates in its 2011 *Victorian Planning Report*.

Investment decisions should always involve weighing up the cost incurred, and subjective value derived, by the intended ultimate beneficiary of that investment – the consumer. Obtaining VCR levels is an effective way to do this.

It is noted that in its response to the AEMC's *Review of the Effectiveness of NEM Security and Reliability Arrangements in light of Extreme Weather Events*, the MCE stated that there was merit in AEMO estimating VCRs for other jurisdictions in the NEM. This will provide a basis for more economic approaches to reliability standard setting to be extended to other jurisdictions.

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<sup>1</sup> The Brattle Group 2012, *Approaches to setting electric distribution reliability standards and outcomes*, report to the AEMC review of distribution reliability standards and outcomes, Figure 4, p.48.

<sup>2</sup> As above, p.15.

#### 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?*

Expressing reliability outcomes consistently has significant potential benefits, not least in aiding comparability of outputs and prices between jurisdictions. Locational differences can be accommodated into the formation of reliability incentives, and do not preclude the comparison of distribution businesses in accordance with their achievement of those location-based incentive schemes.

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

As discussed under 3(a), it is more efficient for one entity to regulate both investment and reliability, given the trade-off between price and reliability. As noted in the Brattle Group report, arrangements in NEM jurisdictions, whereby the AER regulates network prices in most jurisdictions, but other regulators (or Governments) regulate reliability standards, are unique amongst the international examples examined in the report.

As the package of services delivered to consumers by distribution businesses embodies a price/reliability trade-off, splitting regulatory accountabilities this way prevents either body from taking responsibility for optimising the trade-off.

Having one entity regulating both reliability performance and price will facilitate a decision balancing reliability and price, which should ultimately reflect the value customers place on reliability. There may be a legitimate role for government in addressing the needs of worst served customers, but even this should be approached with regard to the costs and benefits of reliability.

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

A nationally consistent system of distribution reliability reporting is important to the effective working of the regulatory system. If, as indicated by the issues paper, there is an absence of comparable data on reliability performance between distribution businesses, the regulator's ability to benchmark performance and set challenging but achievable targets is compromised. Relevant data includes objective measures of reliability such as the System Average Interruption Duration Index and System Average Interruption Frequency Index, excluded events, and data around supply restoration times to provide transparency around such efforts. This data may need to be broken down further in relevant categories, such as by feeder type and customer class.

## 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?*

Basing reliability planning on deterministic planning standards tends to lead to perverse outcomes. The basis of a sound reliability framework is already present in the National Electricity Rules, but the ability for jurisdictions to set reliability standards independently from the Chapter 6 price determination process distorts this framework. An appropriately designed framework could increase accountability and performance pressures on distribution businesses and offer consumers a trade-off between price and reliability that is better aligned with their interests. Given the significant expenditure on investment for reliability each year, it is likely that moving towards a more consistent and incentive based approach will ensure that efficient trade-offs are made between investment and reliability, in the long-term interests of consumers.

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

To date, GSL payments have been the main way to accommodate worst served customers, an approach which appears to have community acceptance and works well. Nevertheless, it is important that the payments under this regime continue to provide an appropriate incentive for businesses to improve unreliable connections and an appropriate remedy for customer inconvenience.

A significant proportion of worst-served customers are understood to be at the fringes of rural networks, served by lengthy distribution lines. Serving these customers is inherently expensive, and alternative ‘off grid’ technologies are declining in price. There may be potential in future for more reliable and cost effective supply to be given to such customers by means other than a distribution network connection. The AEMC may need to consider the implications of these developments for the economic regulation of distribution networks.

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

As noted in the Issues paper, GSL payments will only act as incentives to distribution companies if the payments to customers are higher than the cost of improving reliability to avoid making these payments. Like other incentive schemes, GSL payments should reflect the value to the customer of the interruption that was experienced.

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

In Victoria, Citipower and Powercor have voluntarily adopted text message notifications for interruptions in supply. Further, the Essential Service Commission’s Electricity Distribution Code requires distribution companies to provide certain information via their websites and telephone, and to appoint a single industry spokesperson to ensure a unified message in case of outages and

emergencies. Further possible measures that may improve communications include establishment of a single portal that channels calls, text messages, emails and web site enquiries directly to the relevant distributor.

Given the pace at which communications technologies change, it is suggested that rules in this area focus upon objectives and service levels while being open as to the choice of delivery platform.

The provision of information concerning outages to other agencies, such as emergency services, health, and human services agencies should also be considered in this context. Up-to-date, readily available data on the extent and location of outages can help these agencies target their efforts during widespread outages.

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

- a) *What should a nationally consistent framework mean, and what should it not mean?*

In general, the AEMC's proposed scope of review seems appropriate. A nationally consistent framework should mean an incentive-based system that ensures networks make efficient investment decisions that balance price and reliability outcomes, and reflect the value that consumers place on reliability. It should not mean a deterministic set of planning standards applied to all businesses.

- b) *How should a "nationally consistent framework" be interpreted and what degree of consistency/harmonisation is appropriate?*

As noted above, it should not include deterministic standards. Further, it is possible to achieve a degree of consistency/harmonisation while still accommodating locational differences in achievable reliability (outputs) and in reporting and incentive setting methods (inputs).

- 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?*

Yes. Prices and quality are inextricably linked, and balancing the two is necessary for effective economic regulation of distribution reliability.

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

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

It is expected that the benefits of a consistent framework that achieves reliable electricity at an efficient price would outweigh the costs to distributors of collecting and reporting data about reliability performance and reliability-related costs.

## **8. The National Electricity Objective**

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

A nationally consistent framework could contribute to the NEO by enabling the performance of network businesses to be compared, providing greater accountability, and allowing the Australian Energy Regulator to make more informed decisions about the setting of incentive targets.

- 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?*

The current jurisdictional differences in reliability standards are material to consumers. For consumers, differences in jurisdictional reliability standards would most tangibly be reflected in prices. That said, it seems unlikely that price differences between jurisdictions affects consumers' decision to locate in one distribution area or another. In terms of reliability, the most differences are within jurisdictions, with consumers in rural and regional areas generally suffering the worst reliability.

## **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?*

Victoria has largely adopted national arrangements and is not expecting there will be a substantial difficulty in moving to a reviewed nationally consistent framework.

- 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?*

The design of a national reporting framework should take into account the ability to make use of jurisdictions' existing time series data.

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

Assuming the AEMC keeps to the approach indicated in the issues paper, administrative costs and potential network monitoring costs, should they exceed current costs, should be modest.