



Draft Decision

**APPLICATIONS FOR EXCLUSION FROM THE  
VICTORIAN SERVICE INCENTIVES FOR  
SUPPLY RELIABILITY**

**SUPPLY INTERRUPTION EVENTS  
July–December 2010**

22 March 2011

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# Request for submissions

Interested parties are invited to make written submissions to the Australian Energy Regulator (AER) regarding this paper by the close of business Friday 22 April 2011.

Submissions can be sent electronically to: [aer inquiry@ aer.gov.au](mailto:aer inquiry@ aer.gov.au)

Alternatively, submissions can be sent to:

Mr Chris Pattas  
General Manager  
Australian Energy Regulator  
GPO Box 520  
Melbourne VIC 3001

The AER prefers that all submissions be publicly available to facilitate an informed and transparent consultative process. Submissions will be treated as public documents unless otherwise requested. Parties wishing to submit confidential information are requested to:

- clearly identify the information that is the subject of the confidentiality claim
- provide a non-confidential version of the submission in a form suitable for publication.

All non-confidential submissions will be placed on the AER's website at <http://www.aer.gov.au>. For further information regarding the AER's use and disclosure of information provided to it, see the *ACCC/AER Information Policy*, October 2008 available on the AER's website.

Enquires about this paper, or about lodging submissions, should be directed to the Network Regulation South branch of the AER on (03) 9290 1444.

# 1 Introduction

SP AusNet applied to the AER to exclude one supply interruption event that occurred between July and December 2010 from the supply reliability service incentive scheme under the Essential Services Commission of Victoria's (ESCV) *Electricity Distribution Price Review 2006–10* (Price Review). This paper presents the draft decisions on SP AusNet's application.

No other distribution businesses sought exemptions for supply interruption events for the July-December 2010 period.

## 1.1 The role of the AER

As part of the transition to national regulation of energy markets, the AER is exercising certain powers and functions previously undertaken by the ESCV. The new responsibilities are conferred on the AER by the operation of the *National Electricity (Victoria) Act 2005* (NEVA) in accordance with the *Trade Practices Act 1974* and the Australian Energy Market Agreement. The NEVA specifically confers economic regulatory functions, powers and duties on the AER.

The AER is making this draft decision under the ESCV's 2006–10 Price Review and *Electricity Distribution Code* provisions for approving exclusions from the calculation of the S factor and the obligation to make supply reliability guaranteed service level (GSL) payments respectively.

## 1.2 The ESCV's service (reliability) incentive scheme

The ESCV incorporated a service incentive scheme in the 2006–10 Price Review. The incentives of the scheme are in the form of:

- A service term (S factor) in the price control formula, giving it the form of  $(1+CPI)(1-X)S$

If a distributor provides an average level of reliability above the target levels, then its distribution tariffs will rise in subsequent years. If reliability is worse than the target levels, the tariffs will fall.

- Guaranteed service level payments to customers for low reliability.

Customers are entitled to receive a credit if they experience more than the specified number of sustained or momentary interruptions<sup>1</sup> in a calendar year, or if they experience a cumulative supply interruption time longer than the specified number of hours.

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<sup>1</sup> Supply interruptions shorter than one minute are classified as momentary interruptions.

Further information on the service incentive scheme is contained in the 2006–10 Price Review final decision papers available from the ESCV’s website.<sup>2</sup>

### 1.3 Exclusion from the service incentive scheme

On application by distributors, the AER may approve exclusions from the calculation of the S factor and from the requirement to make certain GSL payments for supply interruptions due to the following events:

- supply interruptions made at the request of the affected distribution customer
- load shedding due to a shortfall in generation, but not a shortfall in embedded generation that has been contracted to provide network support except where prior approval has been obtained from the ESCV or AER, where relevant
- supply interruptions caused by a failure of the shared transmission network
- supply interruptions caused by a failure of transmission connection assets, to the extent that the interruptions were not due to inadequate planning of transmission connections
- where prior written approval has been obtained from the ESCV or AER, load shedding due to a shortfall from demand side response initiatives
- exceptional supply interruption events where the level of supply interruptions exceeds the threshold for exclusion set by the ESCV, as specified in Table 2.1 of the Price Review – *Volume 2 Price Determination*

The Price Review requires that distributors apply to the AER for such exclusions within 30 business days of an event occurring, identifying:

- the relevant event
- the impact of the event on the distribution business’s reliability performance
- the proposed extent of the exclusions
- reasons for the exclusions.

The Price Review also requires the AER to provide a statement of reasons on whether it proposes to approve the applications by the distributors, and to consult with stakeholders before making a final decision.

There are no specific time requirements for approval of the applications. The AER prefers to process straight forward (clear-cut) events in batches for administrative efficiency.

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<sup>2</sup> At <http://www.esc.vic.gov.au/public/Energy/Regulation+and+Compliance/Decisions+and+Determinations/Electricity+Distribution+Price+Review+2006-10/Electricity+Distribution+Price+Review+2006-10.htm>.

## 2 Application by SP AusNet regarding an outage event at Morwell Terminal Station on 28 November 2010

SP AusNet (application received 12 January 2011) applied to have the outage event at Morwell Terminal Station (MWTS) on 28 November 2010, due to the incorrect setup of protection equipment of the terminal station, excluded from:

- the calculation of the S factor
- the obligation to make low reliability GSL payments.

The applications were made on the grounds that the supply interruptions were caused by a failure of a transmission connection asset. The applications were received within 30 business days of the supply interruption event.

### 2.1 Description of the event

SP AusNet advised that:

At 7:33 pm on 28 November 2010, seven 22 kV feeders from Bairnsdale (BDL), three from Cann River (CNR), six from Maffra (MFA), eight from Moe (MOE), three from Newmerella (NLA), four from Sale (SLE) and eight from Warragul (WGL) distribution zone substations experienced a momentary interruption. These seven zone substations are supplied by three 66 kV loop feeders from 66 kV Bus No.1 of MWTS:

- MFA-BDSS-BDL-NLA-CNR
- MFA-SLE-LFD
- MOE-WGL.

There was a fault along 66kV MWTS-FTR/TWF line (supplied from the 66 kV No. 2 Bus). Protection at FTR operated and the circuit breaker opened in 100 ms. However, protection at MWTS did not operate in primary protection time leaving the line fault un-cleared for an extended duration. During this time 66 kV No.1 Bus at MWTS was tripped by X bus protection. Off-loading of No.1 66 kV Bus together with the tripping of other lines in the Gippsland area during this period resulted in momentary black of the above mentioned 66 kV loops for approximately 15 seconds to 74,729 customers. The total MAIFI impact was 0.118.

The fault started as white phase to ground fault along the 66 kV MWTS-FTR/TWF line. This was detected in zone-1 by distance protection at FTR end and the controlling circuit breaker was opened in 100 ms. The fault was not detected by X and Y protection relays at MWTS end. Investigation found that incorrect current transformer (CT) polarities have been applied to the X and Y

protection relays, resulting in both X and Y distance relays unable to detect this fault. The fault was finally cleared by sensitive earth leakage relay.

Before the fault was cleared, it was also detected as zone 3 fault by several distance protection relays in the YPS-MOE-WGL loop and the TGN-MFA-SLE loop. The zone 3 elements eventually timed out and initiated circuit breaker tripping. The X protection on No 1 66kV Bus at MWTS also operated during this incident caused the Bus to be de-energised.

Investigation found that an incorrect CT ratio was applied to the blue phase CT of 11/66KV Transformer No 1. This error caused the protection malfunction at MWTS. The following changes have since been made at MWTS:

- The correct CT ratio 1600/5 was applied on blue phase CT of 11/66 KV Transformer No.1 at MWTS.
- The CT polarity of FTR/TWF feeder X and Y line protection relays at MWTS have been corrected.

## 2.2 AER's analysis

The criterion by which SP AusNet sought exclusion relates to:

*Supply interruptions caused by a failure of transmission connection assets, to the extent that the interruptions were not due to inadequate planning of transmission connections.*

In previous decisions the AER has established that:

The transmission connection assets can be considered to have failed if the connections do not have sufficient capacity to meet the demand for electricity. In assessing whether a supply interruption event is qualified for exclusion under this exclusion criterion, the following matters should be taken into consideration:

- The cause of the loss of transmission system capacity — the event should not be excluded if the primary cause was due to any act or omission by the distributor
- Whether there should have been sufficient built in capacity redundancy to enable supply interruptions to be avoided.

The AER has examined the information provided by SP AusNet and considers that:

- The supply interruptions were caused by incorrect setup of protection equipment at MWTS, which forms part of the transmission connection assets at the terminal station.



- The event was outside the control of SP AusNet.
- The 66 kV sub-transmission network arrangement of the area is consistent with industry standard practice in Victoria.
- The incident was not due to inadequate capacity of the connection assets at MWTS.

The AER concludes that the supply interruptions were caused by a failure of the transmission connection assets and that these supply interruptions were not due to inadequate planning of the transmission connection assets at MWTS.

### **2.3 Draft decision**

The AER proposes to approve the application by SP AusNet for the supply interruptions at Morwell Terminal Station, due to incorrect setup of protection equipment on 28 November 2010 at this terminal station, to be excluded from the calculation of the S factor and the obligation to make low reliability GSL payments.