



**ASSESSMENT BY
ENERGY SAFE
VICTORIA OF EDPR
SAFETY-RELATED
PROGRAMS**

14 September 2010

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1. INTRODUCTION

1.1 Background

As part of the EDPR process, the Director Energy Safety offered to meet with each of the DNSPs to assist in presenting a case to the AER in respect of safety-related programs not accepted by the AER in its Draft Determinations. A series of meetings were held with each of the distributors (with AER personnel present as observers at the initial meetings) and supporting information was provided by the distributors.

At a meeting between the AER and ESV, the AER indicated that they were likely to accept ESV's recommendation in regard to quantities, and that the AER's consultant will make recommendations in regard to unit rates.

This report presents ESV's assessment of the submissions made by the electricity distributors.

1.2 Basis of Assessments

In making its assessment of the distributors' submissions, ESV has considered two factors:

- The need for the program; and
- The proposed volume of work for the program.

ESV has not considered the unit rates or total costs, as these are matters for the AER to determine.

ESV has assessed the need for each program from the perspective of electricity safety. It is recognised that some programs have mixed drivers (eg. reliability and safety), and in such cases, ESV has based its assessment of need on the primary driver.

Each of the distributors provided detailed information to support their proposed work volumes, generally providing spreadsheets showing the assumptions made in arriving at their forecasts. Several rounds of discussions were held with each distributor to assist ESV's understanding of the material provided. ESV has based its assessments on the latest information provided to it by the distributors, provided in the period mid to the end of August 2010.

2. ELECTRICITY SAFETY (ELECTRIC LINE CLEARANCE) REGULATIONS

New Electricity Safety (Electric Line Clearance) Regulations 2010 came into effect on 29 June 2010, replacing the 2005 regulations. The new regulations changed the obligations placed upon the distributors, thus creating triggers for new expenditures by the distributors.

The key changes from the 2005 to the 2010 regulations are as follows:

- Environmentally or culturally significant (native) trees - Clause 2 of the 2010 regulations;
- Notification and consultation - clause 5 of the 2010 regulations;
- Reduced clearances for insulated conductor - omission in the 2010 Code of Practice for Electric Line Clearance (the Code) of clause 9 from the 2005 Code;
- HBRA clearance exemptions - discontinuance of existing ESV exemptions;

- LBRA clearance exceptions - omission in the 2010 Code of clauses 10(b) and 10(c) of the 2005 Code;
- 100m span clearances - Table 2 of 2010 Line Clearance Code;
- Hazard trees - clause 3 of the 2010 Code;
- Habitat trees - clause 4 of the 2010 Code; and
- Overhangs - clauses 11(4) and 12(4) of the 2010 Code.

Each of the distributors has claimed some additional expenditure as a result of the changes to the Electricity Safety (Electric Line Clearance) Regulations. In assessing the claims made by the distributors, ESV notes that in many cases the distributors are proposing transitional plans to achieve compliance over several years. ESV may require the distributors to achieve compliance over shorter time frames, which could result in the requirement for additional spending.

2.1 Environmentally or Culturally Significant (Native) Trees

Clause 2(3) of the Code of Practice for Electric Line Clearance (the Code) requires a responsible person, as far as practicable, to restrict cutting or removal of native trees or trees of cultural or environmental significance to the minimum extent necessary to ensure compliance with the Code.

The reference to “native” trees is new text but not a new requirement – it basically consolidates and restates the implicit obligation under the previous regulation as well as the existing obligations under the Planning and Environment Act and the conditions attached to DSE’s exemption from permit requirements if minimising cutting and complying with the Code. Clause 2(3) does not empower the removal of mature trees if the Code requirements can be met by pruning, and to that extent the clause could lead to additional cutting.

2.2 Notification and Consultation

The 2010 regulations require consultation only in situations where a tree that is to be cut or removed is within the boundary of a private property. Under the 2010 regulations, responsible persons can notify affected persons of cutting/removal of trees by placing notices in newspapers. In all, ESV considers that the changes to the regulations represent a small reduction in burden on the electricity distributors.

2.3 Reduced Clearances for Insulated Conductor

Clauses 9.2.1 of the 2005 regulations allowed small branches to grow into the clearance space around ABC or insulated cable, and clause 9.2.2 of those regulations allowed small branches and leaves to touch ABC or insulated cable, under certain conditions. Further, the 2005 regulations provided for reduced clearances, in certain circumstances, in relation to tree branches that exceed 130 mm diameter, if the branch is more than 300 mm from the ABC or insulated cable.

These provisions have been removed in the 2010 regulations, which will result in the need for additional cutting.

2.4 HBRA clearance exemptions

The distributors were granted an exemption from the requirement in the 2005 regulations to maintain the clearance space at all times, as long as the clearance space was maintained during the Proclaimed Fire Declaration Period. No such exemption is applicable under the 2010 regulations, resulting in the requirement for additional or more frequent cutting.

2.5 LBRA clearance exceptions

Clauses 10(b) and (c) of the 2005 Code provided for smaller clearances than would otherwise apply to powerlines of 22kV or less and 66kV powerlines in LBRA where the responsible person complied with clause 12 of the Code. These exceptions have not been included in the 2010 Code, resulting in a requirement for additional cutting.

2.6 100m Span Clearances

Table 2 of the 2010 Code requires larger clearances in LBRA for spans in excess of 100 m, than the clearances required by Table 10.1 of the 2005 Code, resulting in a requirement for additional cutting.

2.7 Hazard Trees

Clause 3 of the 2010 Code provides support for the cutting and removal of trees identified as likely to fall or otherwise come into contact with an electric line (“hazard trees”). Although the 2010 Code does not mandate the cutting or removal of hazard trees, ESV supports their cutting or removal as required to mitigate the risk of fire ignitions.

2.8 Habitat Trees

Clause 4 of the 2010 Code has introduced a new requirement for habitat trees to be cut or removed outside of the breeding season or the fauna translocated wherever practicable. ESV accepts that this will require additional resources in regard to records and administration.

2.9 Overhangs

Clauses 10(c) and 11.2 of the 2005 Code allowed vegetation to overhang 66kV powerlines in LBRA and powerlines of 22kV or less in HBRA, subject to certain conditions – these exceptions have not been included in the 2010 Code. This will result in additional pruning, tree removal and engineering solutions to remove the overhangs.

3. CITIPOWER

CitiPower has claimed additional expenditure due to three of the changes to the Electricity Safety (Electric Line Clearance) Regulations. ESV supports the need for additional work activity in each of these three areas.

CitiPower has provided details (including volumes of work) of its current work practices and the incremental work required to meet the changes in the regulations, including the assumptions made in forecasting the additional work. Discussions with CitiPower included

the Managing Director of Vemco, CitiPower’s vegetation management contractor. ESV has reviewed the material provided and has concluded that the work volumes appear to be reasonable.

3.1 Reduced Clearances for Insulated Conductor

The incremental work load claimed by CitiPower is shown in the following table:

	2011	2012	2013	2014	2015	2011-15
ABC Incremental Spans (All Areas)						
Annual Clearing	693	693	693	693	693	3,463
Biannual Clearing	231	231	231	231	231	1,154
Total	923	924	924	924	924	4,617
Service Lines Incremental Spans						
LBRA Annual Clearing	12,325	12,325	12,325	12,325	12,325	61,625
LBRA Biannual Clearing	1,233	1,233	1,233	1,233	1,233	6,165
Total	13,558	13,558	13,558	13,558	13,558	67,790

ESV has concluded that the work volumes appear reasonable.

3.2 Removal of LBRA Clearance Exceptions

The incremental work load claimed by CitiPower is shown in the following table:

	2011	2012	2013	2014	2015	2011-15
Establish New Clearances - Incremental Spans	3,000	0	0	0	0	3,000
Maintain New Clearances - Incremental Spans	0	1,800	1,800	1,800	1,800	7,200

ESV has concluded that the work volumes appear reasonable.

3.3 Environmentally or Culturally Significant (Native) Trees

The incremental work load claimed by CitiPower is shown in the following table:

	2011	2012	2013	2014	2015	2011-15
Incremental spans to clear	0	30	75	150	200	455

ESV has concluded that the work volumes appear reasonable.

4. POWERCOR

Powercor has claimed additional expenditure due to five of the changes to the Electricity Safety (Electric Line Clearance) Regulations. ESV supports the need for additional work activity in each of these five areas.

Powercor has provided details (including volumes of work) of its current work practices and the incremental work required to meet the changes in the regulations, including the assumptions made in forecasting the additional work. Discussions with Powercor included

the Managing Director of Vemco, Powercor's vegetation management contractor. ESV has reviewed the material provided and has concluded that the work volumes appear to be reasonable.

4.1 Removal of HBRA Exemptions

The incremental work load claimed by Powercor is shown in the following table:

	2011	2012	2013	2014	2015	2011-15
Cycle Spans	30,874	36,514	31,758	26,134	23,237	148,517
Pre summer Spans	16,862	4,437	539	66	8	21,912
Total Spans	47,736	40,951	32,297	26,200	23,245	170,429

ESV has concluded that the work volumes appear reasonable.

4.2 Reduced Clearances for Insulated Conductor

The incremental work load claimed by Powercor is shown in the following table:

	2011	2012	2013	2014	2015	2011-15
ABC Incremental Spans (All Areas)						
Annual Clearing	6,580	6,580	6,580	6,580	6,580	32,901
Biannual Clearing	2,193	2,193	2,193	2,193	2,193	10,967
Total	8,773	8,773	8,773	8,773	8,773	43,868
Service Lines Incremental Spans						
HBRA Annual Clearing	2,177	2,177	2,177	2,177	2,177	10,885
HBRA Biannual Clearing	218	218	218	218	218	1090
LBRA Annual Clearing	18,798	18,798	18,798	18,798	18,798	93,990
LBRA Biannual Clearing	1,880	1,880	1,880	1,880	1,880	9,400
Total	23,073	23,073	23,073	23,073	23,073	115,365

ESV has concluded that the work volumes appear reasonable.

4.3 Removal of LBRA Clearance Exceptions

The incremental work load claimed by Powercor is shown in the following table:

	2011	2012	2013	2014	2015	2011-15
Establish New Clearances - Incremental Spans	7,500	7,500	0	0	0	15,000
Maintain New Clearances - Incremental Spans	0	0	4,500	4,500	4,500	13,500

ESV has concluded that the work volumes appear reasonable.

4.4 100m Span Clearances

The incremental work load claimed by Powercor is shown in the following table:

	2011	2012	2013	2014	2015	2011-15
Establish New Clearances - Incremental Spans	2,500	2,500	2,500	2,500	2,500	12,500

ESV has concluded that the work volumes appear reasonable.

4.5 Environmentally or Culturally Significant (Native) Trees

The incremental work load claimed by Powercor is shown in the following table:

	2011	2012	2013	2014	2015	2011-15
Incremental spans to clear	0	1,350	1,800	3,600	4,500	11,250

ESV has concluded that the work volumes appear reasonable.

5. JEMENA ELECTRICITY NETWORKS (JEN)

[Text omitted]

6. UNITED ENERGY DISTRIBUTION

[Text omitted]

7. SP AUSNET

[Text omitted]

8. OTHER ISSUES

8.1 Reporting of Progress

To reduce the risk of the distributors not carrying out the work for which they have been funded, ESV intends to monitor and publish the distributors' progress against the annual volumes contained in their submissions. In order to do this, ESV will need to know the work volumes for programs accepted in the AER's Draft Determinations.

9. EXPLANATION OF TERMS

ABC	Aerial Bundled Cable
ACR	Automatic Circuit Recloser
AER	Australian Energy Regulator
AMP	Asset Management Plan
CT	Current Transformer
DNSP	Distribution Network Service Provider
EDO	Expulsion Drop Out
EDPR	Electricity Distribution Price Review
ESMS	Electricity Safety Management Scheme
ESV	Energy Safe Victoria
FTE	Full Time Equivalent
GFN	Ground Fault Neutraliser
HBRA	High Bushfire Risk Area
JEN	Jemena Electricity Networks
KPI	Key Performance Indicator
LBRA	Low Bushfire Risk Area
MEU	Municipal Electrical Undertaking
NST	Neutral Service Test
OCR	Oil Circuit Recloser
OH&S	Occupational Health & Safety
SCADA	Supervisory Control & Data Acquisition
SWER	Single Wire Earth Return
UED	United Energy Distribution
VT	Voltage Transformer
ZSS	Zone Substation