

POWERLINE BUSHFIRE SAFETY COMMITTEE

**MINUTES OF MEETING No. 06**

**Held: Tuesday 13 March 2018, at 10:00 am**

**Location: Level 5, Building 2, 4 Riverside Quay, Southbank**

<b>Attendees:</b>	Status	
David Harris	Member	Chairman
Gaye Francis	Member	Director, R2A Pty Ltd
Steve MacDonald	Member	General Manager Infrastructure, Orion NZ Ltd
Tony Marxsen	Member	Director, Marxsen Consulting Pty Ltd
Gail Moody	Member	Director, Wilmin Consulting
Claire Noone	Member	Principal, Nous Group
Gary Towns	Member	Director, Facio Pty Ltd
Paul Fearon	Observer	Director of Energy Safety, ESV
Ian Burgwin	Observer	General Manager Electrical Safety & Technical Regulation, ESV
Tom Hallam	Observer	General Manager Regulation and Network Strategy, AusNet Services
Mike Carter	Observer	Program Executive REFCL, AusNet Services
Steven Neave	Observer	General Manager Electricity Networks, CitiPower and Powercor
Andrew Bailey	Observer	REFCL Technical Director, Electricity Networks, CitiPower and Powercor
Lorna Mathieson	Observer	A/Project Director Energy Programs, Energy, Environment and Climate Change, DELWP
Robert Skene	Secretariat	Senior Technical Advisor, ESV
<b>Apologies:</b>	Status	
Georgie Foster	Observer	Acting Director, Energy Safety and Security, Energy, Environment and Climate Change, DELWP

**Agenda item Discussed:**

Item	Matter	
Part A	Committee Members and secretariat only	
1	Committee Discussion	David Harris
Part B	Committee Members and Observers	
2	Introduction	David Harris
3	DB progress to-date	Steve Neave/ Tom Hallam
4	Restructure of DELWP Energy Divisions	Lorna Mathieson
5	High voltage Customer Assistance Program	Lorna Mathieson
6	Discussion	David Harris
7	Future meetings	David Harris

## **Part A - Committee members and secretariat only**

### **1. Committee Discussion**

#### **1.1. Committee procedural**

The Chair advised that he would be travelling and unavailable for a period in late April to early May 2018 and in that period he has asked Gail Moody to act as the committee Chair were the need to arise.

The Chair also advised that as a result of the restructure within the energy section of DELWP that it has been decided to alter the committee charter to include both the Director of Energy Programs and the Director of Energy Safety and Security to be observers at the committee meetings as both sections relate to the bushfire legislation.

Members were requested to provide an update of their biography for inclusion in the revised charter.

**Action:** Members to provide an update of their biography for inclusion in the revised committee charter.

#### **1.2. Register of Engagements – Committee Members**

No further declarations of engagements were reported by Members.

**Standing Action:** Members to provide advice to the Secretariat by email on matters where there may be a perceived conflict of interest.

#### **1.3. Review of Victoria's Electricity and Gas Network Safety Framework**

The Chair noted that at the time of the meeting the government had not released the report titled Review of Victoria's Electricity and Gas Network Safety Framework.

The DoES provided some context and additional insights into the review from ESV's perspective.

#### **1.4. Exemptions to Bushfire Mitigation legislation**

There was a discussion regarding exemptions with the Chair noting that the time to consider and process such applications was becoming limited as the first legislative deadline for the Distribution Businesses' introduction of REFCLs of 1 May 2019 was fast approaching.

The Chair further noted the uncertainty of the timeline required by government to consider and/or grant an exemption following the receipt of a recommendation from ESV. It was also discussed that government might determine to grant only part of an exemption request.

The DoES confirmed the intention to request advice from the committee for the current exemptions which have been flagged by the Distribution Businesses to ESV. The DoES also confirmed that a lot of work has been undertaken by ESV on the subject matter which would assist the committee in its deliberations and it was the current intent to provide the committee with copies of ESV's evaluation of an exemption when seeking advice.

### 1.5. Other business

There was a discussion about a recent article in the Age newspaper regarding bushfire mitigation.

The DoES provided advice on a recent powerline inspection audit, and advised that a public version of the report had been issued.

The DoES also discussed and provided Members a copy of the weekly fire report sent to government during the summer season.

## **Part B - Committee Members and Observers**

### 2. Introduction

#### 2.1. Attendance and apologies

The Chair informed the meeting that Georgie Foster would not be attending the meeting.

#### 2.2. Previous meeting minutes

Minutes of the previous meeting were circulated out of session with comments received from Members or Observers

The Chair requested Members approve the minutes as a record of the meeting held on 12 December 2017.

**Committee decision:** Passed without dissent.

<b>Action</b> Secretariat to post the minutes on the ESV PBSC web page.
---

#### 2.3. Discussion on exemption timelines

The Chair noted that this was the sixth meeting of the committee and that whilst there has been much conversation about exemptions, no request for exception had progressed to a stage where the DoES had sought advice from the committee.

The Chair also reflected on the shortness of available time for considering and processing any exemption request through; ESV, the committee and government, noting that the first REFCL deployment deadline contained in the legislation was a little over a year away.

It was suggested that in lodging an exemption application that the businesses provide sufficient time to accommodate any potential variation which might be required by government.

Guidance from DELWP regarding their process was thought to be helpful in determining potential timelines to process the provision of advice requested by the Minister regarding exemptions.

**2.4. Outstanding actions from previous meetings**

Meeting date	Matter	Action	Status
13/06/2017	<b>2.3</b> Outstanding Actions	Members to consider the content of the process/protocol for the provision of advice to the DoES, when requested.	The process for the PBSC consideration is not yet settled and will be subject to the nature of the exemption and the form of the request for advice.
	<b>2.3</b> Outstanding Actions	The secretariat to produce an outline of the process/protocol for the provision of advice to the DoES, when requested.	The process for the PBSC consideration is not yet settled and will be subject to the nature of the exemption and the form of the request for advice.
12/12/2017	3.1 Electricity Distribution Business - progress to-date - Powercor	Powercor to provide further details of the circumstances requiring the GFN to be by-passed	Email sent by Powercor on 12/10/2017, explaining that there are two scenarios where the GFN is by-passed to an NER: <ol style="list-style-type: none"> <li>1. <i>If there's neutral voltage but the inverter is not operational, then we wait 13 seconds before by-passing the GFN and closing the NER.</i></li> <li>2. <i>If there's neutral voltage and the inverter is operational, we wait for 30 seconds for the REFCL to do its thing.</i></li> </ol>
12/12/2017	3.1 Electricity Distribution Business - progress to-date - Powercor	Copy of the Powercor's Power Point presentation to be distributed to Members and Observers and made available on the ESV PBSC web page.	Presentations emailed to Members and Observers and posted on ESV's PBSC web page

POWERLINE BUSHFIRE SAFETY COMMITTEE

Meeting date	Matter	Action	Status
12/12/2017	3.1 Electricity Distribution Business - progress to-date – AusNet Services	Copy of the AusNet's Power Point presentation to be distributed to Members and Observers and made available on the ESV PBSC web page.	Presentations emailed to Members and Observers and posted on ESV's PBSC web page
12/12/2017	4.1.2 REFCL operation	AusNet Services and Powercor to confirm out of session, in the next couple of weeks, that their current intended REFCL operation modes are specified in their respective bushfire mitigation plans.	Open
12/12/2017	4.1.2 REFCL operation	AusNet Services and Powercor to provide a narrative out of session, in the next couple of weeks, of their current intended REFCL operation modes contained in their respective bushfire mitigation plans.	Open
13/03/2018	2.4 Outstanding actions from previous meetings	AusNet services and Powercor to confirm the circumstances where and when they intend to bypass the GFN to use a Neutral Earthing Resistor for sustained faults.	Open
<b>Outcome legend</b>			Open
			Closed

**Standing Action:** Secretariat to provide Members a list of matters where the industry is likely to seek relief from requirements with each meeting agenda.

**Standing Action:** Presenters to send the Secretariat a copy of their presentation a clear two business days before the meeting for distribution to members.

### 3. Electricity Distribution Business - progress to-date

Tom Hallam and Steve Neave each separately provided updates on their businesses' progress in implementation of the requirements contained in the Electricity Safety (Bushfire Mitigation) Amendment Regulations.

#### 3.1. Powercor

A PowerPoint presentation was provided on Powercor's REFCL program.

- **REFCL Timetable**

A slide showing the current REFCL deployment plan, by tranche, was discussed. Members' attention was drawn to the intent to achieve a REFCL deployment point score of 35 points in the first tranche, compared to the minimum regulatory requirement of 30 points.

- **REFCL Implementation update**

Powercor advised that they were currently continuing to work on proposals for their testing protocol. Following acceptance of a test protocol by ESV, Powercor has undertaken to retest their Gisborne station in ESV's presence to confirm that it meets the specified capacity.

#### Gisborne zone substation

A slide of recent experiences of the station was discussed. One GFN operation on a TFB day was said to have been associated with a permanent fault (>20 seconds) of approximately 1.8 amps. Powercor drew Members attention to the difference between this low current figure compared to a maximum sensitivity of >9 amps for a traditional fault protection system. The feeder in question was isolated with a resultant loss of supply for some 7.5 hours whilst the feeder was patrolled to determine the nature of the fault. No fire or asset damage was found and the feeder was then successfully returned to service.

Powercor reported that overall they had not seen a detriment to the reliability for this station since the installation of the REFCL in January 2017.

- Woodend trial zone substation.

Powercor reported that this multi GFN ZSS has been operating over the 2017/18 summer with only one GFN in service at 1.0 amp sensitivity. The ZSS was said to have 12 feeders and ~1200 km of conductor, of which ~100km were said to be underground/covered conductors.

Powercor advised that this ZSS is yet to achieve the required capacity of 0.5 amps, with three significant technical challenges being the current focus of attention:

- A software flaw which prevents the successful operation of the two GFNs within the ZSS operating independently across an open bus tie.  
It was said that updated software to address this was expected from the supplier Swedish Neutral this week.
- One GFN influencing the operation of the other GFN on the adjacent and healthy bus via the common earth grid.  
Powercor advised that the proposed solution has been to revise the software to allow the GFN on the healthy bus to run at a lower performance and thus not be influenced by the second GFN which is managing a fault on the adjacent section of the network.

The net effect of this change will be that the GFN on the healthy bus will run at a lower sensitivity than that legislated for the period whilst the other GFN is managing the fault on its network.

It was said that Swedish Neutral have been asked to do further work on their algorithms to allow the two GFNs to work collaboratively.

- A current measurement accuracy problem with the existing healthy current transformers (CT) which are nominally to specification. The solution being trialed by Powercor for this problem is to replace the present CTs with set of whose performance is closely matched.

Powercor reported that there had been a discernible detrimental effect on network performance following the introduction of the REFCL at this ZSS.

- Tranche 1 & 2 deployment program.  
A slide depicting the time line for the distribution works each of the Tranche 1 & 2 zone substations was shown and discussed.
- REFCL Implementation Update.  
A further slide relating to progress at the Camperdown ZSS (CDN) was shown and discussed.
- **REFCL Tranche 1 - HV Customers**  
Powercor produced and discussed a slide showing each of the ZSSs in the Tranche 1 REFCL program and the related HV customer supply points. The slide showed the proposed alternate treatments for HV customers, including isolation, customer network hardening, LV conversion and in one case removing the potential supply for one HV customer from the Camperdown ZSS.
- **REFCL Exemption Requests.**  
A slide showing the status of exemptions was shown to the committee. The slide included reference to the initial draft exemption submitted to ESV, which was subsequently declined by ESV, and stated that Powercor were preparing to submit further applications for all of their Tranche 1 sites in the next few weeks.  
  
Powercor discussed the potential request for a time extension for Tranche 1 ZSSs as a result of HV customer connections, which included:
  - The adverse impact on a service date where an isolating substation was being installed on a HV customer site.
  - The impact from any delay in the ESC review of the electrical distribution code or where that review does not provide the changes Powercor considered necessary.
  - Where a HV customer hardening solution adversely impacts on a service date, irrespective of the works being funded by Powercor or through the DELWP HCAP.

The Powercor slide also referred to a potential future request for relief against the performance requirements remains a possibility. In this matter Powercor discussed their difficulties in achieving the required performance at their Woodend ZSS.

There was a general discussion associated with the various types of ZSSs, the need for an exemption associated with 'de-tuning' a second GFN where two GFNs are operating within a ZSS, the circumstances requiring exemptions and the level of knowledge which came from the REFCL

research. Challenge associated with achieving the required capacity at the Terminal ZSS where there was a common earth grid was also raised.

The Chair reflected that the first REFCL deployment deadline specified in legislation was only a little over a year away and that were business's intending to apply for exemptions that the time available for considering and processing any exemption request through; ESV, the committee and government, was rapidly decreasing.

The Chair suggested that in lodging an exemption application that the businesses provide sufficient time to accommodate any potential variation which might be required by government.

- **SWER ACR Deployment Status.**

No further update was provided.

- **Powerline Replacement – Electric Line Construction Areas.**

No further update was provided.

**Standing Action:** Powercor's presentation to include updates on SWER ACR deployment and powerline replacement in Electric Line Construction Areas.

**Action:** Copy of the Powercor's Power Point presentation to be distributed to Members and Observers and made available on the ESV PBSC web page.

### 3.2. AusNet Services

A PowerPoint presentation was provided by AusNet Services on their REFCL and other bushfire mitigation programs.

- **Woori Yallock zone substation – current status.**

AusNet Services advised that the Woori Yallock, with same two GFN configuration as that for Powercor's Woodend ZSS, operated reliably over the 2017/18 summer period. Because of the issues discussed at the last meeting the sensitivity obtained was around 3.2 amps, less sensitive than the specified sensitivity of 0.5 amps.

AusNet Services reported that the REFCL detected and operated on a number of occasions during the summer period, none of these operations were on Total Fire Ban days.

AusNet Services also reported that one small fire was initiated from the network whilst the REFCL was in operation at the 3.2 amp sensitivity. The fire was said to have been confined to the base of a single tree, and it was suggested that this demonstrated to them the importance of the achievement of the required higher sensitivity.

- **REFCL Installation activities overview**

- Kinglake zone substation (KLK)

A slide was shown by AusNet Services depicting the works associated with the re-build of the KLK ZSS to accommodate the REFCL. AusNet Services reported that whilst this re-build was undertaken in parallel to the REFCL program, it was being funded outside the REFCL contingent program.

- **Program Status**



AusNet Service provided and discussed a slide showing the current status of each REFCL ZSS

- **Program update & Schedule**

AusNet Services provided and discussed a slide depicting the schedule for each of the REFCL ZSSs in Tranche 1.

- **Tranche 1 Delivery Dashboard**

A new dashboard slide for Tranche 1 ZSSs was shown by AusNet Services. The slide contained the progress on significant aspects of the delivery program and included HV customers.

AusNet Services have identified a need to replace ~4 km of underground cable associated with the Wonthaggi ZSS. AusNet Services further advised that there may be a requirement to produce a cultural heritage management plan for these replacement works and if required the production and acceptance by affected parties could have an adverse impact on the timeline

Of significance it was noted that this underground cable which had failed partial discharge testing was relatively new and was associated with the supply to the Wonthaggi wind farm development.

- **Tranche 1 HV customer solutions**

A slide listing the HV customers associated with the Tranche 1 program was shown by AusNet Services and included the proposed agreed treatment solutions for each HV customer.

AusNet Services confirmed that since the last PBSC meeting agreement had been reached with AGL to harden their network and that the supply to Nation Paper Industries at Kilmore would be converted to an LV supply.

- **Tranche 2 HV customer solutions**

AusNet Services provided a list of HV customers associated with the Tranche 2 REFCL program and the proposed treatments for each HV customer. AusNet Services reported that they have no agreements to date and that HV customers were generally reluctant to engage, citing concerns including liability for cross-country faults.

To address the lack of data regarding the HV customers owned equipment at some sites, AusNet Services advised that they have been providing certain HV customers with both a list of consultants and an offer of financial assistance to assist to examine their network.

DELWP undertook to assist and facilitate discussions with government related businesses, and this offer was appreciated by the electricity distribution businesses.

○ **REFCL Exemption Requests.**

AusNet explained that where they were installing an isolating transformer that this commonly left a short section of REFCL unprotected AusNet Services owned underground cable. A diagram showing a typical arrangement of an isolating transformer was provided.

AusNet Services stated that the undergrounding of overhead network was the first choice for ignition reduction, with the installation of a REFCL being the second choice.

A list of the relevant HV customers associated with exemption applications was provided.

Consequently AusNet Services explained that they were preparing exemption applications under r.13 of the Electricity Safety (Bushfire Mitigation) Regulations 2013.

AusNet Services further stated that they saw no other technical alternatives in these cases in the even that an exemption was not granted.

○ **Other bushfire mitigation programs**

○ ACR Program

AusNet Services confirmed that they had completed their SWER replacement program in 2015.

○ Powerline Replacement

AusNet Services provided a slide showing the status of the conductor replacement associated with the government's Powerline Replacement Fund (PRF) contracts.

AusNet Services reported that there were approximately 16,680 km of conductor in the declared Electric Line Construction areas (ECLA) and that through the PRF they had to date replaced 106 km, with 82 km currently being replaced. AusNet Services stated that they understood that the program funding was scheduled close at the end of June 2019.

AusNet Services confirmed that they had no other projects in addition to the PRF to replace conductors in ELCAs at this time.

**Action:** Copy of the AusNet's Power Point presentation to be distributed to Members and Observers and made available on the ESV PBSC web page.

#### **4. Restructure of DELWP Energy Divisions**

DELWP outlined the new energy sections within DELWP, introduced to deliver the best outcomes associated for energy which included renewables, with energy said to be one of the high priority areas for the Minister.

Two divisions have been formed in DELWP;

- Energy Sector Reform, to give a greater focus around the regulatory and policy matters, and the
- Energy Commercial Projects & Programs, to focus on energy commercial programs, including; renewables, PBSP, new energy jobs programs, and micro grids.

DELWP advised that the policy function for PBSP would be in the energy programs section, with joint management meetings held to ensure that energy sections within DELWP “work as one”.

- **Energy Commercial Projects & Programs Division**

DELWP advised that recruitment was continuing to fill the current vacancies, with a modest increase in staff levels proposed, with PBSP currently having six staff with this increasing to eight.

With the PBSP in the wind down phase and program funding scheduled to end by July 2019, DELWP further advised that that most of the running of the program legislative aspects of the initiatives would be the responsibility of the regulator going forward.

DELWP advised that a study of the risk reduction over time rested within the Energy Commercial Projects & Programs Division and that work had commenced on benefit realization from the PBSP.

- **Energy Sector Reform Division**

No information regarding this division was provided by DELWP at this meeting.

There was no slide presentation provided by DELWP.

## **5. High voltage Customer Assistance Program (HCAP)**

DELWP advised that a review was being conducted to determine government’s role in the proposed \$10M HCAP program. The review was to examine how the government could support both HV customers as well as the electricity distribution businesses.

A workshop has been organized by DELWP for next week to assist the department in understanding the nature of the HV customer issue. Participants invited to the workshop include; representatives from the electricity distribution businesses, technical consultants, ESV and a wide range of PBSP staff. DELWP stated that to make sure it is investment is in the right place there was a need to decide who would be eligible for assistance.

It was suggested that were such a program to be considered that it would be consistent with the commitment given by government following the release of the Powerline Bushfire Safety Taskforce. This commitment was to assist affected persons potentially adversely affected by the introduction of the bushfire initiatives, the local infrastructure assistance fund

With time being of the essence, DELWP advised that as soon as they had a framework for the program that they intended to move on with the program quickly.

DELWP stated that they were there to help and to facilitate action on the REFCL program wherever the need was identified and that they would speak to other government entities involved in the program, including those which are HV customers as required.

## 6. Discussion

### 6.1. Committee Member raised matters

#### 6.1.1. Presentations

Members confirmed that the distribution of presentations prior to the meeting was most useful.

### 6.2. Electricity Distribution Code – ESCV update

The Secretariat provided an update for members on the review of the voltage requirements specified in the Electricity Distribution Code by the ESCV, having circulated the ESCV's project scope and timetable to members prior to this meeting.

The published ESCV's project timeline are:

- Initial consultation: March 2018
- Draft decision: May 2018
- Consultation on draft decision: May – June 2018
- Final decision: August 2018

The timing of both this ESCV review and the expected REFCL tranche 2 contingent project application submissions were discussed.

It was noted that whilst there had been a change in ESCV senior staff this was not expected to have an adverse effect on the project timing.

**Action:** Copy of the ESCV EDC project scope to be made available on the ESV PBSC web page.

### 6.3. Other matters

The committee discussed having access to ESV's principles and criteria which ESV intend to take into account when assessing exemptions.

ESV confirmed that it had deliberately not issued a "check list" associated with the assessment of the first exemptions as it intended to assess each exemption on its merits.

The members then discussed the framework and approach of assessing exemptions.

### 6.4. Referrals to the committee

There were no matters referred to the committee by ESV for advice.

The Chair confirmed that there may be a need to schedule an additional members-only meeting prior to the next scheduled 12 June 2018 meeting to provide advice to the Director of ESV on any exemptions referred to the PBSC.

## **7. Meetings**

### **7.1. Next meeting**

Meeting scheduled for 12 June 2018, starting at 10:00am and finish at 12:30pm, preceded by a "meet and greet" at 9:30 am.

### **7.2. Subsequent meetings**

Confirmation was given that subsequent meetings are scheduled for;

11 September 2018, 11 December 2018 and 12 March 2019.

The Chair thanked the presenters for interesting and informative papers, and the members and observers for their endeavors to ensure the meeting were productive.

The Chair then closed the meeting.

**Meeting closed at 12:40 pm.**

### **List of Attachments**

- A. Powercor presentation,
- B. AusNet Services presentation
- C. ESCV EDC project scope

Note: There was no slide presentation provided by DELWP