

POWERLINE BUSHFIRE SAFETY COMMITTEE

MINUTES OF MEETING No. 10

Held: Thursday 04 April 2019, at 10:00 am

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

Attendees:	Status	
David Harris	Member	Chairman
Gaye Francis	Member	Director, R2A Pty 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 Director 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	Project Director Energy Programs, Energy, Environment and Climate Change, DELWP
Felicity Sands	Observer	Manager, Energy Safety Policy, Energy Sector Reform, DELWP
Robert Skene	Secretariat	Senior Technical Advisor, ESV
Apologies:		
Steve MacDonald	Member	General Manager Infrastructure, Orion NZ Ltd
Georgie Foster	Observer	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	HV customers – DELWP update of T2 & T3 customer issues	Lorna Mathieson
5	Discussion	David Harris
6	Future meetings	David Harris

Part A - Committee Members, the Secretariat and the Director of Energy Safety.

1. Committee Discussion

1.1. Register of Engagements – Committee Members

Tony Marxsen advised the PBSC Chair of his appointment to the position of Chair of the Grid Innovation Hub at Monash University. The Hub comprises a group of companies that provide funds to Monash University for grid research. Tony advised that he has no pecuniary interest held as Chair of the Hub. The Chair requested that the Member's biography in the PBSC Charter be updated to reflect this appointment.

The Chair confirmed that where approaches were made to Members to assist in litigation proceeding related to Electricity Companies and that the Member needs to discuss those matters with the Chair before making commitments which could be seen as a conflict with PBSC membership.

The committee noted that two Members had advised that they were Members of a Technical Assistance Panel, which was established by DELWP to provide an independent review of HCAP applications according to eligibility criteria in the *PBSP – HCAP – Grant Application Guidelines*.

Action: Tony Marxsen to provide an updated biography for incorporation into the PBSC Charter.

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

1.2. Committee Charter

The Chair reflected on the role of the committee over the past two years, the Advice given to the DoES and future roles of the committee.

The DoES advised the Members that there has been communication with the Minister regarding recommendation 27 in the Grimes review Independent Review of Victoria's Electricity and Gas Safety Framework - Final Report, and the PBSC Charter.

There was a brief discussion regarding the circulated draft PBSC Charter which did not include requirements suggested in the Independent Review of Victoria's Electricity and Gas Safety Framework - Final Report, recommendation 27.

Other changes were discussed in the light of government published guidelines for boards and the need to reduce the size of the quorum by one Member.

The DoES requested that the last circulated version include updated biographies and that the Charter then be published.

Action: Secretariat to include updated biographies and publish the PBSC Charter on the committees ESV web page.

1.3. REFCL Program - Future exemption requests

See section 1.4 below.

1.4. Other business

The DoES provided Members with three pieces of correspondence relevant to the PBSC and these were discussed.

There was a brief discussion regarding the correspondence relating to potential future exemptions and requests for time extensions, with the DoES discussing ESV's position to-date regarding consideration of exemptions and time extensions. The Members supported the approach as articulated by the DoES.

The DoES advised the committee that ESV has been approached to assist DELWP in progressing certain initiatives. ESV has agreed to provide whatever assistance it could where this did not conflict with its regulatory function. In that context the DoES saw the PBSC having a long term role to play in providing assistance to government. This was further discussed at the conclusion of the meeting.

There was a brief discussion regarding ESV's role in assisting the department and HV customers connected to REFCL networks. The DoES supported the Members' role in the DELWP TAP (see section 1.1 above).

Part B - Committee Members and Observers

2. Introduction

2.1. Attendance and apologies

The Chair informed the meeting that the PBSC Member Steve MacDonald would not be attending the meeting, but that he had submitted comments relevant to the proceedings to the Secretariat.

The Chair also informed the meeting that the DELWP observer Georgie Foster would not be attending the meeting, and that he had accepted the attendance of Felicity Sands to represent that section of DELWP.

2.2. Previous meeting minutes

A draft copy of the Minutes of the previous meeting was circulated out of session. Following minor adjustments a revised copy of the minutes was distributed out of session.

The Chair requested Members approve the revised minutes as a record of the meeting held on 11 December 2018.

Committee decision: Passed without dissent.

Action: Secretariat to post the minutes of the 11 December 2018 PBSC meeting on the ESV PBSC web page.

2.3. Actions from previous meetings**Actions from the last meeting.**

Meeting date	Matter	Action	Status
11/12/2018	2.2 Previous meeting minutes	Secretariat to post the minutes of the September meeting on the ESV PBSC web page	Adjusted minutes have been emailed to Members & Observers Settled minutes posted.
	3.2 Powercor presentation	Copy of Powercor's Power Point presentation to be distributed to Members and Observers and made available on the ESV PBSC web page	Posted
	3.1 AusNet Services presentation	Copy of AusNet Services Power Point presentation to be distributed to Members and Observers and made available on the ESV PBSC web page	Posted
	4.1 DELWP presentation	DELWP to provide an update on the status of the HCAP/HV customer matters "out of session"; post the February 20, 2019 grant application closing date.	Update was not provided by DELWP "out of session". DELWP advised that the presentation to this meeting provides the update.
	6.1 Next meeting	Secretariat to canvas meeting attendees to determine the date of the next PBSC meeting. Secretariat to send a meeting invitation to meeting attendees with the new settled date.	Done
		Secretariat to forward a PBSC committee meeting invitation for the April 04, 2019 meeting to all meeting attendees.	Done
Outcome legend			Open
			Closed

Outstanding actions from previous meetings

Meeting date	Matter	Action	Status
11/09/2018	3.1.7 REFCL operating mode policy	AusNet Services to provide the logic used to derive the 2.5 amp sensitivity setting adopted in the operating modes policy.	AusNet Services confirmed their intention to write to ESV to provide the logic of the use of the 2.5 amp sensitivity, by Friday December 21, 2018.
			A paper titled "Background to REFCL operating modes", was received April 3, 2019 and distributed to Members on the day of receipt.
Outcome legend			Open
			Closed

The Chair requested the Secretariat convene a meeting for AusNet Services to discuss in detail the logic contained in their paper titled "Background to REFCL operating modes". The Chair further requested that invitations be extended to Tony Marxsen, Gary Towns, and the Secretariat as representatives of the PBSC. The Chair also suggested that Ian Burgwin (or one of his representatives) be invited to attend this meeting.

With the current work load in AusNet Services, the Chair suggested that the meeting be convened subsequent to matters associated with AusNet Services Tranche 1 REFCL deployment being finalised.

Action: PBSC Secretariat to convene a meeting for AusNet to discuss in detail the logic contained in their paper titled "Background to REFCL operating modes".

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

Both AusNet Services and Powercor provided the Secretariat copies of their update on progress in implementation of the requirements contained in the Electricity Safety (Bushfire Mitigation) Amendment Regulations prior to the meeting. Copies of these updates were made available to Members for their study prior to the meeting.

The updates were taken as read with a page turn not undertaken at this meeting and discussion limited to specific items.

3.1. Powercor

A PowerPoint presentation was provided on Powercor's REFCL and other bushfire mitigation programs.

3.1.1. REFCL Timetable

A slide showing the current REFCL deployment plan, by tranche, was presented and discussed.

Tranche 1

Powercor advised that they had received conditional approval from ESV for each of seven Tranche 1 zone substations which had been subject to compliance testing, yielding the required 30 points specified in legislation.

In regard to the Colac zone substation, which was initially included in Tranche 1, Powercor confirmed that whilst commissioning works were now complete that compliance testing was now expected to be undertaken later in 2019. As such the Colac zone substation will be part of the Tranche 2 deployment program. Powercor advised that the shift of Tranches for Colac was to provide time to focus on the current four technical issues being experienced in the deployment of REFCLs.

Tranche 3

Powercor drew Members' attention to the PowerPoint presentation which confirmed their previous advice regarding the reallocation of the Geelong zone substation from the Tranche 2 deployment into Tranche 3.

Powercor confirmed that moving the Geelong zone substation into the Tranche 3 deployment was to provide additional time to explore the construction of a new zone substation at Bannockburn in the Geelong area. It was said that the intention was that this new zone substation would acquire the highest bushfire risk feeders from both Geelong (two feeders) and Corio (one feeder) zone substations. Powercor believed that the building of this new zone substation would be the best outcome for customers, with it said that the Geelong and Corio zone substations have seven HV customers which would otherwise need to be REFCL ready. Powercor further advised they were in conversation with stakeholder on this proposal.

Powercor also discussed the construction of a new zone substation at Torquay to commence in 2021 to cater for the growth in the Waurm Ponds area. It is said that a GFN would be installed this new zone substation. Powercor confirmed that construction would only proceed following regulatory approval.

Powercor confirmed that load growth was a matter subject to more general conversation in the light of the prescriptive nature of the specification of REFCL deployment in the legislation.

3.1.2. REFCL implementation update

Powercor presented a slide summarising the four conditions specified by ESV in granting the conditional approval for the seven Tranche 1 zone substations.

Additional slides were presented detailing the technical nature of each of the four matters subject to the ESV conditional approval, and these matters were discussed.

Following conversations, Powercor offered to update their presentation prior to publication on the ESV PBSC web site.

Powercor expressed a view that they were hopeful of resolving these issues before the next fire season.

3.1.3. REFCL performance issues

At the request of Members, Powercor presented a slide detailing recent TFB performance on REFCL networks showing three permanent faults on the Eaglehawk and Camperdown networks.

A further slide was provided summarising information of a fault on the Eaglehawk zone substations network which was said to have demonstrated the effectiveness of a REFCL in detecting a fault not otherwise easily seen from the ground.

3.1.4. REFCL Tranche 2 - HV Customers.

Following conversations with the Minister who sought that HV customers be given until June 2020 to become REFCL ready, Powercor has agreed to move the “in service” dates for two Tranche 2 REFCL zone substations Ballarat North and Charlton, to allow additional time for the HV customers to become REFCL ready.

Powercor discussed some of the logistics associated with REFCL deployment including the eight to ten weeks for commissioning and testing. The constraint was said not to be a matter of cost but one associated with the limitation of personnel with the expertise necessary to undertake these works.

Powercor confirmed that they have provided their HV customers with substantial information regarding how they initially intend to operate their REFCL networks and how long they should stress test their assets.

Powercor also stated that at this time they did not propose to alter any of their connection agreements with HV customers. However Powercor advised it was their intention to have discussions with the ESC regarding the provisions in the EDC which permits a network operator to disconnect HV customers under certain conditions, so as to continue the REFCL deployment within the time specified in legislation.

3.1.5. SWER ACR status.

Powercor presented a slide showing they were on track to deliver the ACR rollout as committed to ESV.

3.1.6. Powerline Replacement – Electric Line Construction Areas.

Powercor advised the committee that their design standard for SWER hybrid underground design had been accepted by ESV for incorporation into their Powercor’s Bushfire Mitigation Plan, as required by legislation.

Powercor advised that they expect that the amount of the powerline replacement through the governments’ Powerline Replacement Program to now total 335 km, slightly lower than previously reported.

Powercor also advised that they have replaced an additional 200m of overhead powerline as part of their obligation in the Electric Line Construction Areas, and signaled that they intend to replace a further 100km of overhead line by the end of 2020.

Standing Action: Powercor's presentation to include updates on SWER ACR deployment and powerline replacement in Electric Line Construction Areas (both as part of the PRF and as a result of other obligations).

Action: Powercor to update their Power Point presentation prior to publication on the ESV PBSC web page, including further information regarding the permanent fault on the EHK031 (25 January 2019).

Action: Copy of Powercor's updated 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.

3.2.1. REFCL Program Overview

AusNet Services confirmed that their Wonthaggi zone substation had been moved from the Tranche 1 into the Tranche 2 deployment program, and that the Mansfield zone substation had been moved from their Tranche 3 to Tranche 2 deployment program.

3.2.2. REFCL Tranche 1 Compliance testing status

A slide was presented showing the status of the compliance testing for each of the AusNet Services Tranche 1 zone substations. AusNet Services stated they were expecting to receive conditional approval for all Tranche 1 zone substations, except Woori Yallock and at the time of this meeting were uncertain about Kinglake, which was currently under test.

A further slide was shown depicting the test results for the zone substations tested to date. AusNet Services explained that in the case of Woori Yallock it was the presence of harmonics which prevented the meeting of the voltage collapse, and the long length of two feeders (with an associated delta admittance problem) which prevented meeting the minimum energy requirement.

3.2.3. REFCL Tranche 1 conditional compliance and technical issues

AusNet Services advised that at the time of this meeting they had received conditional approval for one of the eight zone substations and presented a slide summarising the four conditions specified by ESV in granting that conditional approval.

Additional slides were presented detailing the technical nature of each of the four matters subject to the ESV conditional approval, and these were said to be similar to those experienced by Powercor.

AusNet Services produced a specific slide showing a relationship between the presence of harmonic voltage on the Woori Yallock network and Fire Danger Index (FDI). AusNet Service stated the slide indicated that as the FDI increased the harmonics present reduced. AusNet Service suggested as such the required capacity could be achieved at a time when they said it was most important, on a Total Fire Ban (TFB) day.

AusNet Services confirmed that there were a number of possible long term treatments to reduce network harmonics however raised the question as to whether the expense was justified, suggesting that inherent there must be reference to an economic/cost benefit concept when assessing the reasonableness the legislated requirements.

The committee discussed the use of a general FDI as a reliable risk indicator for fire starts and whether achieving the required capacity only on TFB days was the intent of the legislation. The Chair noted the AusNet Services concept of compliance being achieved transiently, when FDI was elevated, as a risk reduction strategy was one of substituting economics for regulatory compliance.

There was also a discussion on solutions to reducing harmonics present in networks.

AusNet Services stated that a more detailed paper had been produced and given to ESV.

The DoES requested that the AusNet Services paper on harmonics be given to the Members for their examination and indicated that he would seek the committee's view before forming any settled view on the matter of harmonics present in networks.

3.2.4. REFCL Tranche 1 Time Extension Request

AusNet Services stated that they were expecting to receive conditional approval for six of the eight Tranche 1 zone substations, and signaled their intention to apply for either; conditional approval for all zone substations, or a time extension to achieve compliance for their Woori Yallock and Kinglake zone substations.

3.2.5. REFCL Tranche 2 update.

AusNet Services provided a slide depicting time based milestones for each of their ten Tranche 2 zone substations. The milestones shown were: HV Customer Ready for insulation (Stress) and Primary/Earth testing, REFCL in service, and Compliance Demonstrated.

3.2.6. REFCL Tranche 2 HV Customer Issues.

AusNet Services provided a slide detailing the status and what they understood were the intentions of their Tranche 2 HV customers to be REFCL ready. AusNet Services advised that all HV customers had been formally advised of the need to be REFCL ready in August 2018, with specific dates given for each zone substation, of between March and July 2020. AusNet Services advised that there was a significant risk to meeting the legislated REFCL delivery dates if HV customers were unable to meet the requested dates.

AusNet Services identified in their slide that at this time two government owned HV customers, Metro Trains Melbourne and Melbourne Water, appeared to pose the highest risk to the on time delivery of their Tranche 2 deployment program. AusNet Service confirmed that they were continuing to work with these HV customers, however Metro Trains Melbourne had verbally advised they would be unable to meet the May 2020 AusNet Services specified deadline to be REFCL ready.

3.2.7. REFCL Tranche 2 exemptions.

AusNet Services stated that they were continuing to review network capacitance forecasts to identify opportunities to isolate underground cables from REFCL operations. By way of example AusNet Services produced a slide depicting certain underground residential estates which were part of the Ferntree Gully network. This network is believed to contain steam cured XLPE underground cable, which is known to be weak when exposed to elevated voltages. AusNet Services outlined how they might treat this area to minimise costs and disruptions to customers.

3.2.8. REFCL Tranche 3 update.

AusNet Services discussed their Tranche 3 REFCL deployment program comprising four zone substations, noting that Mansfield had been moved into Tranche 2.

AusNet Services advised that their Tranche 3 contingent project application was currently being prepared and is expected to be lodged with the Australia Economic Regulator in May 2019.

Of the zone substations which comprise the Tranche 3 program, AusNet Service advised that Kalkallo (KLO) was believed to be the most challenging substation with it supplying three Jemena feeders into a high growth area comprising largely underground estates. AusNet Service expressed the view that three GFNs will be required to deal with the level of capacitance in the network. Discussions with Jemena were said to be continuing to determine how to best manage the bushfire safety regulatory requirements going forward.

3.2.9. REFCLs – Network Capacitance forecasts

AusNet Services advised that a substantial number of additional GFNs would be needed in those REFCL networks to maintain the legislated “required Capacity where high growth was forecast, and that this would require significant ongoing expenditure. AusNet Services listed in their presentation a number of options they were currently evaluating to maintain REFCL performance.

3.2.10. REFCLs – in service for the 2018/19 summer

No presentation was provided, however AusNet Services advised that they were not aware of fire on a REFCL controlled network over the summer period.

3.2.11. Powerline Replacement – Electric Line Construction Areas.

No update was provided.

Standing Action: AusNet Services’ presentation to include updates on powerline replacement in Electric Line Construction Areas (both as part of the PRF and as a result of other obligations).

Action: PBSC Secretariat to send PBSC Members the AusNet Services paper on harmonics.

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

3.3. Discussion

There was a general conversation about the implementation of REFCLs into electrical distribution networks, with the committee signaling an interest in seeking additional information in the future.

4. HV customers – DELWP High Voltage Customer Assistance Program (HCAP) update

4.1. DELWP presentation

DELWP provided the Secretariat a copy of an update outlining the current status of the HCAP as both the agreed “out of session” and agreed presentation to the PBSC committee prior to the meeting. Copies of this update was not made available to Members for their study prior to the meeting with DELWP requesting that their presentation be not for publication or distribution.

As previously published, the HCAP consists of up to \$10M in grant funding on a co-contribution basis of up to 50% of actual costs of REFCL works, capped at \$250k, to assist HV customers connected to REFCL Tranche 1 & 2 networks to become REFCL ready.

DELWP advised they had 40 applications and included what they understood to be all of the eligible HV customers by the 20 February 2019 closing date. There were 39 applications which met the eligibility criteria and these had been referred to a Technical Assessment Panel, which had completed their initial assessment.

The DELWP presentation included a summary of the proposed solutions for the treatment to their network being; hardening, isolation, conversion to LV, or other. Application costs and an analysis of applicant by electricity business were also provided. DELWP gave general information on the applicants proposed costs ranges (**Chair’s Note:** Excluded from Minutes due to confidentiality). DELWP provided brief information of HV customer issues, as they understood them.

A brief outline of the next steps was provided by DELWP, with five applicants having been advised of the result of the assessment of their application, and the balance are to be advised shortly. At the date of this meeting no funding had been provided to HV customers.

There was a brief discussion regarding HV customers, costs and the implications associated with HV customers REFCL readiness for coming summer seasons.

DELWP requested that the presentation not be published or distributed.

Action: DELWP to provide an update, including graphical representations, to the next PBSC meeting, of HCAP/HV customer issues and processes presentations.

5. Discussion

5.1. Committee Member raised matters

None.

5.2. Other matters

DoES advised that the operation and assistance provided by the PBSC will be raised with government next week as part of a conversation regarding the prospect of the material need for future legislative change to the REFCL program.

DELWP advised that a restructure of the energy section is currently in process with an announcement likely to be made before the next PBSC meeting. The

Chair asked, and DELWP agreed, to provide a copy of their restructure to the committee Secretariat as soon as it is publically available.

Action: DELWP to provide to provide a copy of their restructure to the committee Secretariat as soon as it is publically available

Action: PBSC Secretariat to distribute to Members a copy of their restructure to the committee on receipt from DELWP.

6. Meetings

6.1. Next meeting

Meeting scheduled for 11 June 2019, starting at 10:00am and finish at 12:30pm, preceded by a “meet and greet” at 9:30 am.

6.2. Subsequent meetings

Confirmation was given that subsequent meetings are scheduled for;
10 September 2019, 10 December 2019, and 10 March 2020.

The Chair thanked the presenters for interesting and informative papers, and the Members and Observers for their endeavors to ensure the meeting was productive.

The Chair then closed the meeting.

Meeting closed at 12:55 pm.

List of Attachments

- A. Powercor presentation,
- B. AusNet Services presentation

Note: The DELWP presentation/”out of session” update has not be published or distributed at DELWP’s request.