

04.02.22

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Chairperson of Energy Safe Victoria
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REQUEST PURSUANT TO SECTION 109(1) OF THE ELECTRICITY SAFETY ACT 1998

I refer to your request pursuant to section 109(1) of the Electricity Safety Act 1998 dated 23 December 2021 requesting Powercor to submit a revised Bushfire Mitigation Plan (BMP) to replace the BMP that was provisionally accepted by ESV on 21 December 2021 (the **Request**).

In accordance with sections 109(3) and (4) of the Act, Powercor provides the following submission that the revision should be in different terms than the terms proposed in paragraph 10 of the Request.

Increasing pole interventions

Powercor has a track record of successfully delivering long term network safety improvement projects (for example the programs to install armour rods and vibration dampers, SWER ACRs, spacers and REFCLs), and we are absolutely committed to achieving the minimum 5 year intervention volumes specified in our BMP.

Our practical experience, however, is that a level of operational flexibility will help ensure the program is delivered as effectively and efficiently as possible, and that any long term program may experience variability in its delivery, often for reasons outside Powercor's control, such as pandemic impacts and the need to divert resources to respond to major weather events.

We propose to address the matters set out in the Request by

- Retaining the current clear and unqualified commitment to achieving the minimum 5 year intervention volumes specified in our BMP
- For each year of the plan, specifying the minimum annual pole intervention commitments, subject to a 10% allowance for operational flexibility, and potential further variance for factors outside Powercor's control
- Committing to update the minimum annual pole intervention commitments annually, to reflect actual progress and ensure the total minimum target volumes are met by the end of 2026.

This approach, of providing an unqualified 5 year commitment to minimum intervention volumes, coupled with qualified annual commitments, will ensure that the safety improvements we are both targeting will be met whilst giving Powercor greater operational flexibility and without creating the potential for Powercor to breach its BMP for factors outside of its control. We also note that ESV retains at all time the ability to request Powercor to make further changes to its BMP, if for example ESV was not satisfied with the progress that Powercor was making in delivering its 5 year plan.

We believe this approach is consistent with the Request, however if ESV disagrees we ask that the Request be amended to allow Powercor to adopt this approach.

If this approach is acceptable to ESV, and having regard to the discussions conducted with ESV staff, Powercor will update section 6.21 of its BMP by replacing the wording under the heading “Minimum Pole Intervention volumes” with the following:

Across the Powercor Network a minimum 34,650 wood pole intervention volumes are committed for delivery over the 1 January 2022 to 31 December 2026 period, to include a minimum of:

- 25,241 wood pole interventions in HBRA and/or BCA, with 13,614 of these to be replacements; and
- 3,519 reinforced wood poles replacements.

These minimum pole intervention volumes are split across the total Network by replacements and reinforcements as outlined in table 2 with an additional breakdown by intervention categories outlined in table 3.

TABLE 2 – POWERCOR INTERVENTION VOLUMES FOR PERIOD 2022 TO 2026

Pole Intervention (Volumes)	Plan (years)					
	2022	2023	2024	2025	2026	Total
Replacements	4,153	4,155	4,153	4,153	4,153	20,767
Reinforcements	2,777	2,775	2,777	2,777	2,777	13,883
Totals	6,930	6,930	6,930	6,930	6,930	34,650

TABLE 3 – POWERCOR INTERVENTION VOLUMES BY CATEGORIES FOR PERIOD 2022 TO 2026

Pole Intervention Categories (Volumes)	Plan (years)					
	2022	2023	2024	2025	2026	Total
Network Interventions	6,930	6,930	6,930	6,930	6,930	34,650
HBRA/BCA Interventions	5,100	5,100	5,100	5,100	5,100	25,500
HBRA/BCA Replacements	2,800	2,800	2,800	2,800	2,800	14,000
Network Reinforced Replacements	720	720	720	720	720	3,600
HBRA/BCA Reinforced Replacements	600	600	600	600	600	3,000

Powercor will deliver the minimum 5 year wood pole intervention volume as shown in the totals column in tables 2 and 3.

For each year during this period, Powercor will target a minimum wood pole intervention volume no lower than 90% of the yearly values shown in tables 2 and 3 and any subsequent updates to these tables.

A tolerance each year allows for any typical variability due to condition-driven find rates, inspection volumes as well as weather and access constraints. Unexpected circumstances beyond Powercor’s control may, however, arise resulting in further reducing the volume delivered in any one year. Should such circumstances arise ESV will be informed together with the associated impacts and recovery plans.

By the end of January each year a revised pole intervention plan will be resubmitted to ESV reflecting the recalculated remaining annual volumes to ensure the minimum 5-year target volume will be met. The plan will be amended taking into account the actual delivered interventions in the preceding year(s) to ensure the total minimum target volumes are met by the end of 2026.

Currency of Documentation

Powercor acknowledges ESV's need for certainty about which documents form part of Powercor's BMP and which documents do not, and Powercor agrees to revise its BMP in the manner specified by ESV.

We will do this by updating Appendix G of the BMP to clearly specify which documents are *incorporated* into the BMP, and which documents, whilst referred to in the BMP, in the context of explaining the policies and processes that Powercor has established to help it comply with the BMP, are not themselves incorporated into the BMP. Revision numbers and approval dates will be provided, as will copies of the incorporated documents with the submission of the BMP.

In doing so, we propose to incorporate into the BMP the policy and procedure documents whose primary purpose is to manage bushfire risk. The current Appendix G contains a large suite of management system documents relating to the broader organisational and operational functions such as asset management, asset performance, workforce management, emergency response and enterprise risk management, which collectively amount to thousands of pages of policies and procedures. We propose that we continue to refer to these documents, so that we continue to be transparent about the policies and processes that we have created to help us comply with the BMP, but that they are not incorporated into the BMP.

This approach recognises that each time an incorporated BMP document is revised by Powercor, ESV will need to be engaged to review and accept any changes, irrespective of the impact on bushfire risk. Powercor estimates that at least 40 document updates occur per annum across our suite of related management system documents. These updates are predominantly introduced as continuous improvement opportunities to reduce our risk profile. Some updates are administrative in their nature and not specifically related to bushfire mitigation. The implication of having a large number of documents incorporated into the BMP is an unmanageable increase in administration for both Powercor and ESV for no material value. Powercor is also concerned that the implementation of continuous improvement and risk reduction opportunities would be unnecessarily delayed as a result.

This approach also take into account that outside of the BMP review and acceptance process, ESV continues to have extensive oversight and understanding of the Powercor management systems, policies and processes. ESV are continually undertaking detailed system audits, works practices observations, incident investigations, asset inspection audits and vegetation management audits on the Powercor network. There is also a number of periodic operational working groups and forums held between ESV and Powercor where procedures, practices and policies are discussed. It is not uncommon for Powercor to provide ESV the same management system documentation on multiple occasions in the same year in response to these interactions and assurance activities undertaken by ESV.

Further, if the same approach were applied to Electricity Safety Management Schemes which have a broader scope, the consequences would be similar and substantially larger. We would approach a situation where revision of most documents in our network management system would require ESV approval. This requirement would be further exacerbated for ESV when overseeing BMPs and ESMSs from multiple MECs.

In this context, Powercor requests that ESV consider preparing draft guidelines and consult with industry about what content ESV would like to see included in future BMPs, before requesting that existing operational documents be incorporated into a BMP (or ESMS).

Conductor Clearances

Powercor believes our development and application of aerial-captured LiDAR is industry-leading and will result in a step-change in the way conductor clearances are managed within the industry.

It should be noted that the adoption of LiDAR, when fully implemented, will become our primary method of managing conductor clearances due to it being a far more effective and comprehensive method. This means that we will become less reliant on asset inspectors identifying clearance issues.

We also acknowledge that much of the detail in this part of the Request arises directly out of the circumstances that led to the Terang fire.

The Terang fire was an extremely regrettable incident, and we do not resile from our failure to prevent it. The root cause of the fire was that a pole leaned towards a T-on structure, resulting in reduced clearances at the T-on structure. The reduced clearance, which occurred over a number of years, was not detected in part because of the difficulty of asset inspectors identifying clearance deficiencies, and in part because Powercor's asset inspection systems did not require an inspection of clearances at a T-on structure if a pole was leaning towards that structure at less than 10 degrees.

The risk of a similar incident occurring in future has already been minimised as far as practicable on the Powercor network, pending the significant improvements offered by LiDAR inspection, by taking actions that are both simpler and more effective than those set out in the Request. It is not practicable for inspectors to complete the engineering calculations in relation to the required clearances in the same manner as qualified engineers do at the time of preparing construction designs.

We would willingly present to ESV about this in more detail, but most relevantly, the practical steps taken include having:

- Inspected all of Powercor's T-on structures (of which there are less than 300) and ensuring clearances are appropriate (noting again that the lack of clearance at Terang developed over a number of years) and
- Amendments made to our asset inspection manual, to address the specific deficiencies identified following the Terang fire.

In this context, we seek ESV's support to refocus the Request on our work to develop a LiDAR based approach to conductor clearance management, with all of the benefits this offers not just to Powercor but industry wide. To the extent ESV seeks further specific and practicable changes to our approach of minimizing the risk of conductors clashing, we suggest that additional changes to our Asset Inspection Manual would be the most appropriate way of addressing such a requirement.

Powercor proposes that it update the BMP in accordance with items (iii) and items (iv)(1), (2) (in relation to construction but not maintenance), (6) and (8) of the Request.

Powercor asks that the remaining paragraphs of item (iv) not be included in the revised BMP:

Item (iv)(2) – our approach to maintaining clearances between conductors after construction primarily involves asset inspectors assessing poles and cross-arms, whilst also noting any clearances that appear out of the ordinary. With the sole exception of the Terang fire, this approach has been successful.

Item (iv) (3) & (4) – The risk assessment of conductors clashing or the measurement between conductor clearances at the pole top structure or in span is not part of the current asset inspection process. However, a visual assessment is undertaken to identify reduced clearances for T-On, T-Off and Two-Way T-Off structures as well as evidence of conductor clashing in accordance with our Asset Inspection Manual. These requirements will be addressed through the implementation of our LiDAR solution.

Item (iv) (5) – The method by which asset inspectors determine whether to report a potential lack of clearances on the same or different circuits is described in our Asset Inspection Manual for T-on, T-Off and two-way T-Off structures.

Item (iv) (7) – Asset Inspectors do not measure in span conductor to conductor clearances, and it would not be practicable for them to do so. Our Asset Inspection Manual does however include the time period to rectify defects at pole structures for T-on, T-Off and two-way T-Off structures.

Item (iv) (9) – Asset Inspectors are required to physically measure one in every five spans however the Asset Inspection Manual does not state which spans are to be measured, and we would need to develop such criteria. This requirement, however, will be more thoroughly addressed through the implementation of our LiDAR solution.

Item (iv) (10) - There is no additional process or procedure specific to conductor clearance inspections noting that we have a requirement that asset inspection can only be undertaken by a trained, qualified and authorised Asset Inspector.

Item (iv) (11) – We do not currently have any means of systematically and practicably determining the effectiveness of conductor clearance assessments undertaken by Asset Inspectors, other than by monitoring lagging indicators, such as preventable conductor clashing incidents, and (as noted by Item (iv)(12) below) by auditing their work. Once our LiDAR solution is implemented, however, we will have an effective method for pro-actively monitoring and auditing noting that we will become less reliant on Asset Inspectors performing these activities in the future.

Item (iv) (12) – We do not have a targeted audit regime specifically designed around conductor clearances. However, our asset inspection contractor Omexom does undertake quality audits of their Asset Inspectors. In addition Powercor undertakes auditing (using UAM) of Asset Inspectors' adherence to the requirements of the Asset Inspection Manual which includes conductor clearances.

Summary

Powercor proposes that it submit a revised BMP on or before 21 February 2022 that addresses the majority of requirements within the ESV request dated 23 December 2021, and we ask that ESV vary the Request in the manner explained in this submission.

Powercor will be seeking non-provisional ESV acceptance of the revised BMP to avoid further and ongoing extended timelines associated with this BMP revision. For context, the current BMP revision commenced in December 2020 and has subsequently been through a number of iterations in consultation with ESV to address feedback. This includes two formal submissions to ESV on 31 May 2021 and 12 November 2021.

Should ESV seek any further amendments to our upcoming BMP submission pertaining to Currency of Documentation and/or Conductor Clearances, Powercor requests that the submitted BMP revision is accepted by ESV and any further suggestions are evaluated and progressed as part of the next BMP submission.

Powercor also recognizes that ESV can at any time request amendments to the BMP. Powercor also understands that ESV intends to develop a BMP guideline in 2022 which will involve consultation with affected MECs. Powercor welcomes that initiative and looks forward to participating in this process.

Should you require further information on this matter, please contact [REDACTED]

Yours sincerely,

[REDACTED]

Mark Clarke
General Manager Electricity Networks