



Attention: Energy Division

Essential Services Commission
Level 37, 2 Lonsdale Street
Melbourne
VIC 3000.

22 June 2018

Submission: **Electricity Distribution Code - Review of Voltage Standards for Bushfire mitigation 2018**

In response to the stakeholder invitation to provide submissions to the proposed changes Electricity Distribution Code voltage standards for bushfire mitigation we are pleased to provide the following comments. Metro Trains Melbourne is the largest HV Customer impacted by REFCL operations, MTM is currently supplied by five Distribution Authority Zone Substations mandated for Rapid Earth Fault Current Limiting (REFCL) technology installations and one REFCL pilot project initiated by Jemena.

Summary of issues:

1. MTM supports the introduction of technology that effectively mitigates public and property risk associated with a bushfires initiated by overhead at-risk lines.
2. Changes to Distribution Code voltage standards for bushfire mitigation, to support the introduction of REFCL protection voltage variation, places existing electrical assets at risk as noted in the Energy Safe Victoria Customer Assets directly connected to REFCL Networks: preliminary risk survey 2017, as identified in the following statements within the survey:
 - '90% of the assets reviewed, the risk of problems arising from the move to REFCL-protection appeared to be low to medium'.
 - 'However 10% of assets were assessed as clearly requiring replacement action, though additional replacement action maybe indicated when assets in the medium risk category are tested'.
 - 'The default approach to hardening of cables could be: Replace cables manufactured prior to 1980' this presents a significant cost and rail service risk for MTM operations.



3. REFCL asset 'hardening' expertise currently resides with /or is being developed within Electricity Distributors. REFCL fault identification and asset testing to assess REFCL compliance, example HV cables, is still in development.
4. Under standards enforced by safety regulators such as Energy Safe Victoria, network owners and customers who own high voltage assets must design, construct, maintain and operate these assets to mitigate safety risks from faults to a level that protects the safety of employees and the general public. It is expected that these customers (High voltage customers), will take appropriate action to fulfil these responsibilities, including under the bushfire mitigation regulations.
5. A potential consequence of changes to the Distribution Code voltage standards for bushfire mitigation– Distributors may not be obligated to take into account the effect of REFCL operation on high voltage customer assets.
6. Potential cost impost for HV Customers:
 - An identified technical solution, the installation of isolation transformer, will mitigate REFCL impact on MTM Rail Assets, however a site-fenced isolation transformer, is estimated to typically cost between one and three million dollars per site.
 - Traditional HV Customer electrical protection systems may not be compatible with REFCL protection.
 - REFCL asset damage leaves HV Customer services exposed to extended supply outages while damaged Distribution company assets are located.
7. Government HV Customer REFCL support options is unclear at this time: specifically the Government High Voltage Customer Assistance Program (HCAP) that includes assistance measures for affected high voltage customers

The Bushfires Royal Commission found, in its final report, that it “considers it inappropriate that electricity consumers bear the entire cost of implementing those recommendations.”

MTM would be please to discuss issues raised in this correspondence in more detail

Yours sincerely



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