

ESV Ref: CM-7001

31 August 2017

Mr Paul Fearon
Director,
Energy Safe Victoria
PO Box 262,
Victoria. 8007

Dear Mr Fearon,

RE: HV CUSTOMERS AND REFCL PROTECTED NETWORKS

In response to your letter to our Managing Director, Mr Paul Adams dated 23 June 2017, I thank you for the opportunity to provide comments on a report by Marxsen Consulting Pty Ltd into factors that may create safety risks when high voltage (HV) customer sites are supplied by Rapid Earth Fault Current Limiter (REFCL) protected networks.

Jemena supports the findings of the report. It provides a good insight into the safety risks and technical aspects of assets contained within HV Customer sites affected by REFCL and proposes a number of risk mitigation measures. The report acknowledges that the REFCL hardening works by HV customers can be expected to involve:

“....significant times for design, procurement and commissioning of the required assets. Further, commissioning of any new assets may have to await suitable production halts”

The report, however, acknowledges that it did not consider matters outside the scope of the report.

“Specifically, it did not cover:

- Liability and regulatory considerations;*
- Economic and financial consequences of supply reliability factors;*
- Compliance with Victoria’s Electricity Distribution Code without any requirement for negotiation;*
- Specialised technical requirements; and*
- Alignment with REFCL rollout timelines”*

In addition to the above factors, based on our experience with the pilot REFCL installation at our Sydenham (SHM) zone substation so far, the report does omit the issue of loss of protection discrimination for some HV customer sites.

Loss of protection discrimination in HV customer networks on Total Fire Ban (TFB) days.

Some HV customers have rather extensive networks and their networks are divided into a number of sub-networks, each with a dedicated unit protection system. In REFCL protected zone substations, the earth fault current in our HV network, including the network of HV customers, will be too low for HV customers' unit protection schemes to operate and isolate the faulted sub-network. With REFCLs currently designed to isolate the entire faulted feeder from the zone substation on TFB days, loss of supply to the entire network of HV customers on such days will be unacceptable to many customers.

For the above reasons, Jemena has not been able to fully commission and test the REFCL at SHM since the REFCL was installed in Dec 2016.

We would be pleased to discuss this submission with you in more detail. Please feel free to contact our General Manager Asset Strategy Electrical, Mr Johan Esterhuizen on 03 9173 7854 should you have any questions.

Yours sincerely,



Alf Rapisarda
Executive General Manager Asset Management