

15 April 2024

Ms. Leanne Hughson
Chief Executive Officer
Energy Safe Victoria
Level 5 4 Riverside Quay
Southbank VIC 3006

Dear Ms. Hughson,

Rapid earth fault current limiters (REFCL) operations – consultation paper

Thank you for the opportunity to provide feedback on Energy Safe Victoria's (ESV) preliminary views on how electricity distribution businesses should operate REFCLs as outlined in the REFCL operations consultation paper (the consultation paper) dated January 2024.

Summary

- Of the five REFCL operational commitments proposed by ESV, all but one are mostly consistent with Powercor's accepted Bushfire Mitigation Plan (BMP).
- Due to the increased negative reliability impacts, we do not support ESV's proposal to not allow REFCLs to be bypassed or disabled when a sustained or permanent fault occurs. The continuation of operation of REFCL devices in bypass mode outside of bushfire season remains appropriate with consideration for bushfire risk mitigation and customer experience. Our response to the consultation paper is focused on this commitment.
- We may support this commitment in the future for legislated REFCLs, once technology solutions have been developed and fully implemented to restore reliability performance to pre-REFCL levels.
- Further, it is unclear if ESV's proposals are intended to be mandated for non-legislated REFCLs such as those installed on the United Energy network. If ESV's intent is to do so, the adverse reliability performance impacts for United Energy customers will be even greater.
- We do not support any change to the operating mode for United Energy REFCLs.

Background

Powercor

Powercor's 22 legislated REFCLs are in service all year round with an average availability of 99%, enhancing levels of bushfire risk mitigation across the most vulnerable areas of the network.

Powercor's BMP describes the application of REFCL operating modes in detail. In short, we apply two modes:

- Fire risk mode – applied during the declared fire danger period and switched into its most sensitive settings on Total Fire Ban days.
- Bypass mode – applied outside the declared fire danger period. This mode provides improved reliability performance albeit with reduced safety benefit relative to fire risk mode.

Our operational protocols also provide the flexibility to use bypass mode or to disable the REFCL to facilitate complex fault finding at any time of the year under extenuating circumstances.

The consultation paper states *“REFCLs will not be bypassed or disabled when a sustained or permanent fault is confirmed to reduce adverse supply reliability impacts. REFCLs that are bypassed or disabled do not mitigate bushfires or reduce the risks of electrocution”*. Our interpretation of this is:

- REFCLs will be operated in fire mode all year round, regardless of the level of fire risk.
- Customers on REFCL feeders are likely to experience adverse reliability impacts all year round and this in turn could lead to negative safety outcomes due to loss of supply.
- Finding complex faults such as that experienced in Trentham in early 2022 will be exacerbated.

The first Powercor REFCL was commissioned in late 2016 and the final unit in March 2023. While these devices are providing critical safety improvements, since 2016 customers supplied by REFCL-protected networks have experienced a reduction in supply reliability due to traditional protection devices no longer being capable of operating effectively on REFCL networks.

We maintain that the way we currently operate our REFCLs delivers the right balance between mitigating bushfire risks and keeping communities safe, while reducing the impact on reliability as much as possible when the fire risk is not as high. For example, the fire risk in the middle of winter after extensive rainfalls is far less than during the middle of summer. Therefore, operating legislated REFCLs in bypass mode during non-fire season allows us to reduce reliability impacts on communities.

While we acknowledge that REFCLs do provide other electricity safety benefits, these need to be considered against the risk and negative impacts of increased power outages to customers.

To date, we have consulted customers in the Ballarat region in relation to how we operate REFCLs. Their feedback was that our existing operating modes provide a reasonable balance between safety and reliability and that ESV's proposed commitment could result in a reduction in power reliability.

To improve the customer experience, Powercor has developed REFCL compatible Automatic Circuit Reclosers (ACRs), that when fully rolled out by December 2028, will improve reliability performance by approximately 50%. Further development on other network protection devices is required to bridge the balance.

We would encourage ESV to defer this proposal until technology solutions have been developed and fully implemented to restore reliability performance to pre-REFCL levels.

United Energy

United Energy has three 'non legislated' REFCLs on the network that operate in fire risk mode on TFB days only and in bypass mode at all other times.

It is unclear if ESV's proposed commitments will be mandated for non-legislated REFCLs. If ESV's intent is to do so, the reliability performance impacts for United Energy customers will be even greater.

We do not support any change to the operating mode for non-legislated REFCLs.

Recommendation

REFCLs are delivering critical safety benefits to our communities by reducing the risk of fire starts during summer. As an industry, we need to make sure we are operating and maintaining safe power networks without delivering unintended consequences such as adversely impacting supply reliability to homes and businesses.

As such, we would encourage that any changes take into consideration both the safety and reliability risks.

We contend that by operating legislated REFCLs in the following operating modes, we can deliver the intended safety benefits for our communities while still providing the flexibility to disable at any time of the year to facilitate complex fault finding to optimise bushfire safety risk and customer outcomes:

- Fire risk mode – applied during the declared fire danger period.
- Bypass mode – applied outside the declared fire danger period.

Operating REFCLs in fire risk mode at all times should not be adopted until technology solutions have been developed and fully implemented to restore reliability performance to pre-REFCL levels,

For non-legislated REFCLs, we propose to operate REFCLs in fire risk mode on Total Fire Ban days only and in bypass mode at all other times with the flexibility to disable at any time of the year to facilitate complex fault finding to avoid a reduction in reliability.

We will provide further detailed responses to ESV's questions in the consultation paper within the specified consultation period.

Kind regards,



Glen Thomson
General Manager Electricity Networks