

POWERLINE BUSHFIRE SAFETY PROGRAM

REFCL Program Fact Sheet

Fact Sheet
2

WORKING TOGETHER TO SAFELY IMPLEMENT AND OPERATE REFCLS

Background

On 1 May 2016, the Victorian Government introduced legislation mandating three electricity distribution businesses, including AusNet Services, deploy Rapid Earth Fault Current Limiter (REFCLS) at 45 zone substations located in hazardous bushfire risk areas (HBRA). AusNet Services must deploy REFCLS at 22 zone substations spread across three Tranches, each Tranche having a mandated compliance deadline.

Deadlines

Tranche 1	Tranche 2	Tranche 3
30 April 2019	30 April 2021	30 April 2023

Zone substations impacted by Tranche

Tranche 1	Tranche 2	Tranche 3
Woori Yallock	Ringwood North	Lang Lang
Barnawartha	Eltham	Sale
Rubicon A	Ferntree Gully	Mansfield
Kilmore South	Wodonga TS	Benalla
Kinglake	Moe	Kalkallo
Myrtleford	Belgrave	
Wangaratta	Lilydale	
Seymour	Bairnsdale	
Wonthaggi		



For further information, please refer to the REFCL Program Overview on fact sheet 1
<https://ausnetservices.com.au/Community/Powerline-Bushfire-Safety-Program/Rapid-Earth-Fault-Current-Limiters>

What does a REFCL do?

The Rapid Earth Fault Current Limiter (REFCL) reduces the risk of powerlines starting bushfires by rapidly limiting the current that is released in a phase to earth fault.

The REFCL will reduce the voltage on the faulted phase to a very low level within milliseconds of detecting the fault. The voltage on the remaining two healthy phases increases up to 1.9 times the nominal voltage, i.e. up to 24,200 Volts.

What does this mean to me?

The REFCL operates on the 22 kV electricity distribution network (network) which is the network you are supplied by as a HV Customer.

In the absence of you taking any action prior to REFCLS being put into service, it is possible that your HV electrical assets will fail, with consequent risks to the safety of your employees and interruption to your business operations.

If you have any questions, please contact us via our dedicated email address:
HVcustomers@ausnetservices.com.au

Electricity Distribution Code obligations

The Essential Services Commission published the updated Electricity Distribution Code (EDC) in August 2018, incorporating their final decision on their Review of Voltage Standards.

This revised EDC places the obligation on High Voltage (HV) Customers supplied by zone substations included in Tranche 2 or 3 to undertake works, at their own expense, to be able to withstand REFCL operations.

What do you need to do?

1. You need to determine which of the following solutions is most appropriate for you to implement to ensure your HV electrical assets can withstand REFCL operations:
 - > Conversion to Low Voltage (LV) supply
 - > Hardening of the High Voltage (HV) primary electrical assets
 - > Isolation from REFCL operations.

Refer to the HV customer solutions on fact sheet 3 for further information on these solutions

2. Apply for the Victorian Government's High Voltage Customer Assistance Program (HCAP), if eligible.

Refer to the joint DELWP/ESV letter to HV customers dated 13 July 2018

How do I determine which solution best suits me?

We recommend you undertake an independent asset assessment of your HV electrical assets. This assessment will determine if your HV electrical assets can withstand REFCL operations and, if not, provide the recommended solution and high level costs.

What do I do once I know which REFCL solution to implement?

1. Work with AusNet Services to determine the detailed solution, leveraging our experience from Tranche 1 particularly in the areas of technical specifications and procurement of equipment
2. Obtain detailed quotes for the required equipment and installation works
3. Commence works
4. Keep us informed of your progress and any questions you may have
5. Provide written confirmation you are able to withstand REFCL operations on or before the due date as advised by us
6. Talk to Energy Safe Victoria (ESV) about your obligations to prepare a Bushfire Mitigation Plan.

When do you need to do it by?

In August 2018, AusNet Services will notify each impacted HV customer of the date by which they need to have completed their works to enable their HV networks to withstand REFCL operations.

This date is based on our delivery schedules and is immediately prior to our planned date for commencing online commissioning testing of the REFCL at the zone substation which supplies your electricity.

What does online commissioning testing involve?

Commissioning testing involves insulation testing which will elevate phase-to-ground voltages up to 1.9 times nominal voltages for a minimum of 3 minutes per feeder. Where practical, and within limits of electrical assets, we may increase this duration. Calibration, tuning, primary earth fault tests and compliance tests will all result in voltage displacement however expected to be in intervals no greater than 1 minute.

How can we assist you?

We are committed to working closely with you to ensure you are able to withstand REFCL operations in the required timeframe.

We will reimburse you the cost of your independent asset assessment, subject to upfront agreement of the quote and provision of the final report.

If you are considering converting to an LV supply, **we will** provide a quote on a timely basis for the works required on the AusNet Services network such as installation of a kiosk transformer.

We will share our learnings* from Tranche 1 in relation to technical solutions, REFCL compatible equipment, procurement lead time and suppliers.

*Subject to confidentiality and liability requirements

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