2022 Compliance Report

Legislated Bushfire Mitigation Programs

Contents

1 Overview

Section 120P of the *Electricity Safety Act 1998* (Vic)[1] (**the Act**) requires Major Electricity Companies (**MECs**), to submit an annual compliance report to Energy Safe Victoria **(ESV)** before 1 August each year, commencing 1 August 2018.

The MEC must include in the report, details of works completed over the previous reporting period and works planned for the next reporting period in relation to the following legislated bushfire mitigation programs:

- Installation of Rapid Earth Fault Current Limiter (**REFCL**) technology within twenty-two of AusNet Services' zone substations by 1 May 2023, (section 120M of the Act);
- Installation of insulated or covered high voltage (1kV-22kV) for any new or replacement of >3 consecutive spans of powerlines within 'electric line construction areas' (**ELCA**), (section 120N of the Act); and
- Installation of remote-controlled Automatic Circuit Reclosers (**ACRs**) on all Single Wire Earth Return (**SWER**) systems, (section 120O of the Act).

This Compliance Report contains the information and presentation in the form required by ESV's 'Specification for S120P Annual Compliance Reports'

AusNet Electricity Services Pty Ltd **(AusNet Services)**, the licence holder for the distribution network, is the MEC responsible for preparation and submission of this Compliance Report.

2 Reporting period

The reporting period means the year beginning 1 May and ending the following 30 April.

This compliance report covers the following reporting periods:

- Reporting period (actual works): 1 May 2021 to 30 April 2022; and
- Next reporting period (planned works): 1 May 2022 to 30 April 2023.

[1] Authorised version No. 081 (Authorised Version incorporating amendments as at 1 January 2021)

3 Rapid Earth Fault Current Limiters

3.1 Context

The *Electricity Safety (Bushfire Mitigation) Regulations 2013* (**Bushfire Mitigation Regulations**) prescribe the zone substations in which REFCL technology is to be implemented by 1 May 2023.

Schedule 2 of the Bushfire Mitigation Regulations assigns points to each of the selected zone substations.

At the commencement of the REFCL deployment, the Bushfire Mitigation Regulations required AusNet Services to ensure:

- at 1 May 2019, the points set out in Schedule 2 in relation to each zone substation upgraded, when totalled, are not less than 30;
- at 1 May 2021, the points set out in Schedule 2 in relation to each zone substation upgraded, when totalled, are not less than 55; and
- on and from 1 May 2023, each polyphase electric line originating from every AusNet Services zone substation specified in Schedule 2 has the required capacity.

Accordingly, the AusNet Services REFCL Program was structured into three separate tranches in order to achieve the 'points' requirement by the mandated dates.

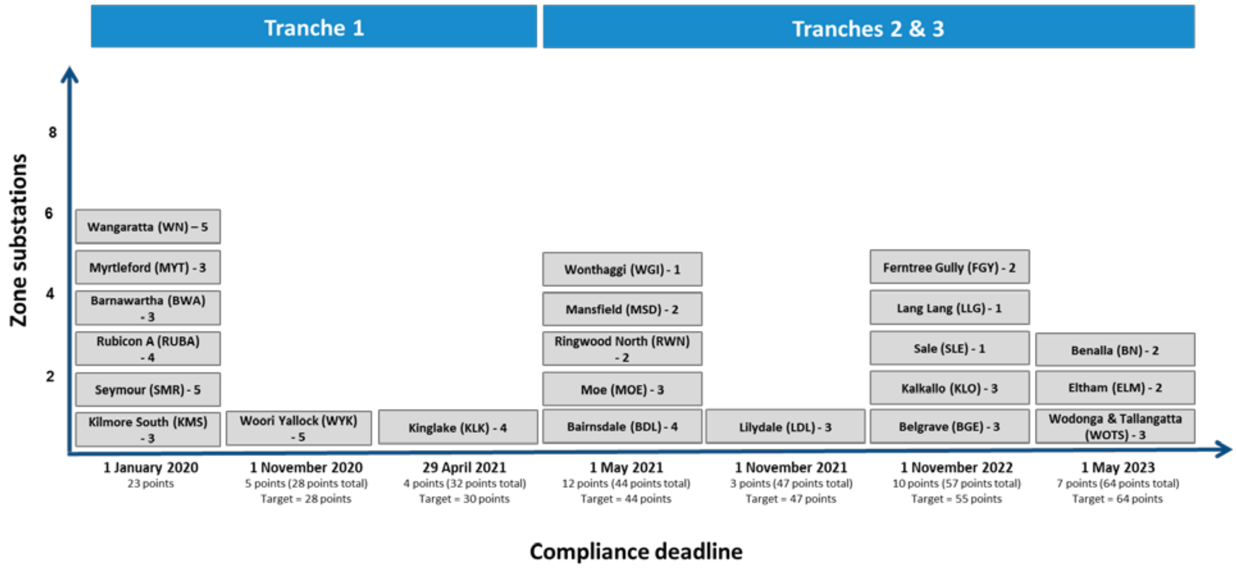
Subsequently, as a result of a number of extensions of time being granted by ESV[2] due to network characteristics and/or High Voltage Customer REFCL-readiness delays preventing compliance with the mandated performance criteria being demonstrated, the AusNet Services REFCL Program is being delivered to meet the following compliance deadlines:

- 1 January 2020 – 23 points
- 1 November 2020 – 28 points
- 29 April 2021 – 30 points
- 1 May 2021 – 44 points
- 1 November 2021 – 47 points
- 1 November 2022 – 55 points
- 1 May 2023 – 64 points

Figure 1 shows the specified zone substations by compliance deadline as at 30 April 2022.

[2] ESV granted an extension of time (EoT) in relation to the 'initial period' on 12 July 2019. This EoT was subsequently superseded by an EoT granted on 21 November 2019 which amended the commencement of the 'initial period' from 1 May 2019 to 29 April 2021. On 27 April 2021, the ESV Commission granted an EoT in relation to the 'intermediate period' which amended the commencement date from 1 May 2021 to 1 November 2022.

Figure 1: Overview of AusNet Services REFCL Program by Compliance Deadline



Source: AusNet Services

3.2 REFCL Program Status as at 30 April 2022

The tables below contain information, in the prescribed form, for the zone substations requiring REFCL implementation.

Note: The REFCL implementation at the following zone substations was completed prior to 30 April 2021 and hence the following 13 zone substations are not included in this report:

- Barnawartha (BWA)
- Kilmore South (KMS)
- Myrtleford (MYT)
- Rubicon A (RUBA)
- Seymour (SMR)
- Wangaratta (WN)
- Wonthaggi (WGI)
- Woori Yallock (WYK)
- Kinglake (KLK)
- Mansfield (MSD)
- Ringwood North (RWN)
- Moe (MOE)
- Bairnsdale (BDL)

Each of following tables below provides the on-going implementation status as at 30 April 2022 for remaining 9 zone substations.

3.2.1 Tranche 2: Wodonga and Tallangatta (WOTS)

WOTS REFCL Project Activities		Completion Date	Percentage Complete	Weighting
Initiate	Business Case commenced	24/08/2017	100%	10%
	Business Case approval	03/05/2018		
Design	Design commenced	15/07/2018	100%	15%
	Design complete	22/06/2020		
Procurement	Number of REFCL units required	2		
	REFCL order placed	21/06/2019	100%	10%
	REFCL delivered to site	08/07/2020		
Construction - Lines	Line works commenced	01/01/2019	100%	20%
	Line works complete	22/10/2020		
Construction - Stations	Station works commenced	23/08/2019	100%	20%
	Station works complete	30/09/2020		
Construction - Third Party	Number of affected HV Customer Connections	5		
	HV customer works commenced	01/07/2018	100%	10%
	HV customer works complete	24/08/2020		
Testing / Commissioning	REFCL testing / commissioning commenced	22/06/2020	75%	10%
	REFCL commissioned and operable			
Close Out	REFCL at "required capacity"		0%[3]	5%
Total Weighted Percentage Complete			93%	

This zone substation is located at -36°15439 latitude, 146°94682 longitude.

[3] ESV-observed compliance testing was completed on 10 February 2021. Compliance was not demonstrated on the WOTS24 feeder due to network characteristics which prevented the performance criteria being met. On 27 April 2021, the ESV Commission granted an extension of time to amend the 'Intermediate Period' commencement date from 1 May 2021 to 1 November 2022 resulting in the delivery of the remaining REFCL substations targeting either a 1 November 2022 or 1 May 2023 compliance deadline. Compliance at WOTS scheduled to be achieved by 1 May 2023, subject to the granting of a technical exemption request to isolate the WOTS24 feeder at Tallangatta which will result in no REFCL protection on the WOTS24 feeder downstream of Tallangatta.

3.2.2 Tranche 2: Lilydale (LDL) Zone Substation

LDL REFCL Project Activities		Completion Date	Percentage Complete	Weighting
Initiate	Business Case commenced	31/07/2017	100%	10%
	Business Case approval	26/02/2018		
Design	Design commenced	15/06/2018	100%	15%
	Design complete	19/02/2020		
Procurement	Number of REFCL units required	2		
	REFCL order placed	16/11/2018	100%	10%
	REFCL delivered to site	03/12/2019		
Construction - Lines	Line works commenced	01/01/2019	100%	20%
	Line works complete	30/11/2020		
Construction - Stations	Station works commenced	02/09/2019	100%	20%
	Station works complete	04/09/2020		
Construction - Third Party	Number of affected HV Customer Connections	5		
	HV customer works commenced	01/07/2018	100%	10%
	HV customer works complete	11/10/2021		
Testing / Commissioning	REFCL testing / commissioning commenced	01/04/2020	100%	10%
	REFCL commissioned and operable	19/12/2020		
Close Out	REFCL at "required capacity"	26/10/2021	100%	5%
Total Weighted Percentage Complete			100%	

This zone substation is located at -37°76339 latitude, 145°35840 longitude.

3.2.3 Tranche 2: Belgrave (BGE) Zone Substation

BGE REFCL Project Activities		Completion Date	Percentage Complete	Weighting
Initiate	Business Case commenced	01/08/2017	100%	10%
	Business Case approval	25/06/2018		
Design	Design commenced	01/09/2018	100%	15%
	Design complete	20/03/2020		
Procurement	Number of REFCL units required	2		
	REFCL order placed	16/11/2018	100%	10%
	REFCL delivered to site	05/02/2020		
Construction - Lines	Line works commenced	01/01/2019	100%	20%
	Line works complete	26/08/2020		
Construction - Stations	Station works commenced	02/09/2019	100%	20%
	Station works complete	17/09/2020		
Construction - Third Party	Number of affected HV Customer Connections	4		
	HV customer works commenced	01/07/2018	100%	10%
	HV customer works complete	19/03/2022		
Testing / Commissioning	REFCL testing / commissioning commenced	19/06/2020	100%	10%
	REFCL commissioned and operable	17/12/2020		
Close Out	REFCL at "required capacity"		0%[4]	5%
Total Weighted Percentage Complete			95%	

This zone substation is located at -37°93056 latitude, 145°36096 longitude.

4 There is one Metro Trains Melbourne (MTM) High Voltage (HV) connection on the Belgrave network. To commission the Belgrave REFCLs, the MTM HV connection was temporarily transferred to a non-REFCL network. On 27 April 2021, the ESV Commission granted an extension of time to amend the 'Intermediate Period' commencement date from 1 May 2021 to 1 November 2022. Once the MTM REFCL readiness activities have been completed, and remediation works completed to address earthing issues and to reduce network capacitance, ESV-observed compliance testing will be undertaken ahead of the 1 November 2022 compliance deadline.

3.2.4 Tranche 2: Eltham (ELM) Zone Substation

ELM REFCL Project Activities		Completion Date	Percentage Complete	Weighting
Initiate	Business Case commenced	01/08/2017	100%	10%
	Business Case approval	03/05/2018		
Design	Design commenced	01/09/2018	100%	15%
	Design complete	16/03/2020		
Procurement	Number of REFCL units required	2		
	REFCL order placed	21/06/2019	100%	10%
	REFCL delivered to site	22/01/2021		
Construction - Lines	Line works commenced	18/01/2019	66%	20%
	Line works complete			
Construction - Stations	Station works commenced	16/10/2019	100%	20%
	Station works complete	11/02/2021		
Construction - Third Party	Number of affected HV Customer Connections	3		
	HV customer works commenced	01/07/2018	46%	10%
	HV customer works complete			
Testing / Commissioning	REFCL testing / commissioning commenced	01/03/2021	30%	10%
	REFCL commissioned and operable			
Close Out	REFCL at "required capacity"		0%[5]	5%
Total Weighted Percentage Complete			76%	

This zone substation is located at -37°71675 latitude, 145°13881 longitude.

5 There are three Metro Trains Melbourne (MTM) High Voltage (HV) connections on the Eltham network. On 27 April 2021, the ESV Commission granted an extension of time to amend the 'Intermediate Period' commencement date from 1 May 2021 to 1 November 2022 resulting in the delivery of the remaining REFCL substations targeting either a 1 November 2022 or 1 May 2023 compliance deadline. Subsequently, MTM have advised AusNet that one of their HV connections will not be REFCL compatible until September 2023. Therefore, once MTM have completed their REFCL readiness activities at two of the three HV connections, ESV-observed compliance testing will be undertaken ahead of the 1 May 2023 compliance deadline with the non-REFCL compatible HV connection isolated from supply.

3.2.5 Tranche 3: Ferntree Gully (FGY) Zone Substation

FGY REFCL Project Activities		Completion Date	Percentage Complete	Weighting
Initiate	Business Case commenced	31/07/2017	100%	10%
	Business Case approval	03/05/2018		
Design	Design commenced	01/07/2018	100%	15%
	Design complete	08/09/2020		
Procurement	Number of REFCL units required	2		
	REFCL order placed	21/06/2019	100%	10%
	REFCL delivered to site	03/07/2020		
Construction - Lines	Line works commenced	01/01/2019	100%	20%
	Line works complete	29/04/2022		
Construction - Stations	Station works commenced	05/02/2020	100%	20%
	Station works complete	08/11/2021		
Construction - Third Party	Number of affected HV Customer Connections	4		
	HV customer works commenced	01/07/2018	100%	10%
	HV customer works complete	18/03/2022		
Testing / Commissioning	REFCL testing / commissioning commenced	09/08/2021	30%	10%
	REFCL commissioned and operable			
Close Out	REFCL at "required capacity"		0%	5%
Total Weighted Percentage Complete			88%[6]	

This zone substation is located at -37°89304 latitude, 145°29167 longitude.

[6] On 27 April 2021, the ESV Commission granted an extension of time to amend the 'Intermediate Period' commencement date from 1 May 2021 to 1 November 2022. Once the MTM REFCL readiness activities have been completed, ESV-observed compliance testing will be undertaken ahead of the 1 November 2022 compliance deadline.

3.2.6 Tranche 3: Lang Lang (LLG) Zone Substation

LLG REFCL Project Activities		Completion Date	Percentage Complete	Weighting
Initiate	Business Case commenced	16/11/2018	100%	10%
	Business Case approval	29/09/2020		
Design	Design commenced	30/10/2019	99%	15%
	Design complete			
Procurement	Number of REFCL units required	1		
	REFCL order placed	18/12/2020	100%	10%
	REFCL delivered to site	17/02/2022		
Construction - Lines	Line works commenced	01/04/2020	52%	20%
	Line works complete			
Construction - Stations	Station works commenced	03/05/2021	74%	20%
	Station works complete			
Construction - Third Party	Number of affected HV Customer Connections	1		
	HV customer works commenced	01/07/2018	80%	10%
	HV customer works complete			
Testing / Commissioning	REFCL testing / commissioning commenced		0%	10%
	REFCL commissioned and operable			
Close Out	REFCL at "required capacity"		0%	5%
Total Weighted Percentage Complete			68%	

This zone substation is located at -38°26605 latitude, 145°56266 longitude.

3.2.7 Tranche 3: Sale (SLE) Zone Substation

SLE REFCL Project Activities		Completion Date	Percentage Complete	Weighting
Initiate	Business Case commenced	16/11/2018	100%	10%
	Business Case approval	02/10/2020		
Design	Design commenced	09/07/2020	99%	15%
	Design complete			
Procurement	Number of REFCL units required	1		
	REFCL order placed	18/12/2020	80%	10%
	REFCL delivered to site			
Construction - Lines	Line works commenced	01/04/2020	30%	20%
	Line works complete			
Construction - Stations	Station works commenced	13/12/2021	47%	20%
	Station works complete			
Construction - Third Party	Number of affected HV Customer Connections	1		
	HV customer works commenced	01/07/2018	100%	10%
	HV customer works complete	31/05/2021		
Testing / Commissioning	REFCL testing / commissioning commenced		0%	10%
	REFCL commissioned and operable			
Close Out	REFCL at "required capacity"		0%	5%
Total Weighted Percentage Complete			58%	

This zone substation is located at -38°10364 latitude, 147°06972 longitude.

3.2.8 Tranche 3: Benalla (BN) Zone Substation

<table>
<tr><th colspan="2">BN REFCL Project Activities</th><th>Completion Date</th><th>Percentage Complete</th><th>Weighting</th></tr>
<tr><td rowspan="2">Initiate</td><td>Business Case commenced</td><td>16/11/2018</td><td rowspan="2">100%</td><td rowspan="2">10%</td></tr>
<tr><td>Business Case approval</td><td>25/08/2020</td></tr>
<tr><td rowspan="2">Design</td><td>Design commenced</td><td>03/02/2020</td><td rowspan="2">95%</td><td rowspan="2">15%</td></tr>
<tr><td>Design complete</td><td></td></tr>
<tr><td rowspan="3">Procurement</td><td>Number of REFCL units required</td><td colspan="3">1</td></tr>
<tr><td>REFCL order placed</td><td>18/12/2020</td><td rowspan="2">100%</td><td rowspan="2">10%</td></tr>
<tr><td>REFCL delivered to site</td><td>22/02/2022</td></tr>
<tr><td rowspan="2">Construction - Lines</td><td>Line works commenced</td><td>01/04/2020</td><td rowspan="2">44%</td><td rowspan="2">20%</td></tr>
<tr><td>Line works complete</td><td></td></tr>
<tr><td rowspan="2">Construction - Stations</td><td>Station works commenced</td><td>26/07/2021</td><td rowspan="2">54%</td><td rowspan="2">20%</td></tr>
<tr><td>Station works complete</td><td></td></tr>
<tr><td rowspan="3">Construction - Third Party</td><td>Number of affected HV Customer Connections</td><td colspan="3">2</td></tr>
<tr><td>HV customer works commenced</td><td>01/07/2018</td><td rowspan="2">68%</td><td rowspan="2">10%</td></tr>
<tr><td>HV customer works complete</td><td></td></tr>
<tr><td rowspan="2">Testing / Commissioning</td><td>REFCL testing / commissioning commenced</td><td></td><td rowspan="2">0%</td><td rowspan="2">10%</td></tr>
<tr><td>REFCL commissioned and operable</td><td></td></tr>
<tr><td>Close Out</td><td>REFCL at "required capacity"</td><td></td><td>0%</td><td>5%</td></tr>
<tr><td colspan="3">Total Weighted Percentage Complete</td><td colspan="2">61%</td></tr>
</table>

This zone substation is located at -36°55160 latitude, 145°98000 longitude.

3.2.9 Tranche 3: Kalkallo (KLO) Zone Substation

KLO REFCL Project Activities[7]		Completion Date	Percentage Complete	Weighting
Initiate	Business Case commenced	16/11/2018	100%	10%
	Business Case approval	23/02/2021		
Design	Design commenced	18/10/2019	100%	15%
	Design complete	04/04/2022		
Procurement	Number of REFCL units required	2		
	REFCL order placed	18/12/2020	80%	10%
	REFCL delivered to site			
Construction - Lines	Line works commenced	01/04/2020	47%	20%
	Line works complete			
Construction - Stations	Station works commenced	08/03/2022	6%	20%
	Station works complete			
Construction - Third Party	Number of affected HV Customer Connections	n/a		
	HV customer works commenced	n/a	100%	10%
	HV customer works complete	n/a		
Testing / Commissioning	REFCL testing / commissioning commenced		0%	10%
	REFCL commissioned and operable			
Close Out	REFCL at "required capacity"		0%	5%
Total Weighted Percentage Complete			44%	

This zone substation is located at -37°53833 latitude, 144°94140 longitude.

7 The solution for KLO involves the use of covered conductor, installation of remote REFCLs (REFCLs installed on the 22 kV feeders rather than within the zone substation) and the installation of isolating substations. This reporting template reflects the standard REFCL deployment within a zone substation.

3.3 Planned Program Status as at 30 April 2023

This section provides the forecast REFCL program status for the remaining 8 zone substations by 30 April 2023, noting that zone substations with no forecast activities post 30 April 2022 are not included in this section of the report.

3.3.1 Tranche 2: Wodonga Terminal Station (WOTS)

WOTS REFCL Project Activities		Completion Date	Percentage Complete	Weighting
Initiate	Business Case commenced	24/08/2017	100%	10%
	Business Case approval	03/05/2018		
Design	Design commenced	15/07/2018	100%	15%
	Design complete	22/06/2020		
Procurement	Number of REFCL units required	2		
	REFCL order placed	21/06/2019	100%	10%
	REFCL delivered to site	08/07/2020		
Construction - Lines	Line works commenced	01/01/2019	100%	20%
	Line works complete	22/10/2020		
Construction - Stations	Station works commenced	23/08/2019	100%	20%
	Station works complete	30/09/2020		
Construction - Third Party	Number of affected HV Customer Connections	5		
	HV customer works commenced	01/07/2018	100%	10%
	HV customer works complete	24/08/2020		
Testing / Commissioning	REFCL testing / commissioning commenced	22/06/2020	100%	10%
	REFCL commissioned and operable	29/04/2023		
Close Out	REFCL at "required capacity"	29/04/2023	100%	5%
Total Weighted Percentage Complete			100%	

This zone substation is located at -36°15439 latitude, 146°94682 longitude.

3.3.2 Tranche 2: Belgrave (BGE) Zone Substation

BGE REFCL Project Activities		Completion Date	Percentage Complete	Weighting
Initiate	Business Case commenced	01/08/2017	100%	10%
	Business Case approval	25/06/2018		
Design	Design commenced	01/09/2018	100%	15%
	Design complete	20/03/2020		
Procurement	Number of REFCL units required	2		
	REFCL order placed	16/11/2018	100%	10%
	REFCL delivered to site	05/02/2020		
Construction - Lines	Line works commenced	01/01/2019	100%	20%
	Line works complete	26/08/2020		
Construction - Stations	Station works commenced	02/09/2019	100%	20%
	Station works complete	17/09/2020		
Construction - Third Party	Number of affected HV Customer Connections	4		
	HV customer works commenced	01/07/2018	100%	10%
	HV customer works complete	19/03/2022		
Testing / Commissioning	REFCL testing / commissioning commenced	19/06/2020	100%	10%
	REFCL commissioned and operable	17/12/2020		
Close Out	REFCL at "required capacity"	27/10/2022	100%	5%
Total Weighted Percentage Complete			100%	

This zone substation is located at -37°93056 latitude, 145°36096 longitude.

3.3.3 Tranche 2: Eltham (ELM) Zone Substation

ELM REFCL Project Activities		Completion Date	Percentage Complete	Weighting
Initiate	Business Case commenced	01/08/2017	100%	10%
	Business Case approval	03/05/2018		
Design	Design commenced	01/09/2018	100%	15%
	Design complete	16/03/2020		
Procurement	Number of REFCL units required	2		
	REFCL order placed	21/06/2019	100%	10%
	REFCL delivered to site	22/01/2021		
Construction - Lines	Line works commenced	18/01/2019	100%	20%
	Line works complete	23/08/2022		
Construction - Stations	Station works commenced	16/10/2019	100%	20%
	Station works complete	11/02/2021		
Construction - Third Party	Number of affected HV Customer Connections	3		
	HV customer works commenced	01/07/2018	80%[8]	10%
	HV customer works complete	01/11/2023		
Testing / Commissioning	REFCL testing / commissioning commenced	01/03/2021	100%	10%
	REFCL commissioned and operable	21/10/2022		
Close Out	REFCL at "required capacity"	28/10/2022	100%	5%
Total Weighted Percentage Complete			98%	

This zone substation is located at -37°71675 latitude, 145°13881 longitude.

8 There are three Metro Trains Melbourne (MTM) High Voltage (HV) connections on the Eltham network. On 27 April 2021, the ESV Commission granted an extension of time to amend the 'Intermediate Period' commencement date from 1 May 2021 to 1 November 2022 resulting in the delivery of the remaining REFCL substations targeting either a 1 November 2022 or 1 May 2023 compliance deadline. Subsequently, MTM have advised AusNet that one of their HV connections will not be REFCL compatible until September 2023. Therefore, once MTM have completed their REFCL readiness activities at two of the three HV connections, ESV-observed compliance testing will be undertaken ahead of the 1 May 2023 compliance deadline with the non-REFCL compatible HV connection isolated from supply.

3.3.4 Tranche 3: Ferntree Gully (FGY) Zone Substation

FGY REFCL Project Activities		Completion Date	Percentage Complete	Weighting
Initiate	Business Case commenced	31/07/2017	100%	10%
	Business Case approval	03/05/2018		
Design	Design commenced	01/07/2018	100%	15%
	Design complete	08/09/2020		
Procurement	Number of REFCL units required	2		
	REFCL order placed	21/06/2019	100%	10%
	REFCL delivered to site	03/07/2020		
Construction - Lines	Line works commenced	01/01/2019	100%	20%
	Line works complete	29/04/2022		
Construction - Stations	Station works commenced	05/02/2020	100%	20%
	Station works complete	08/11/2021		
Construction - Third Party	Number of affected HV Customer Connections	4		
	HV customer works commenced	01/07/2018	100%	10%
	HV customer works complete	18/03/2022		
Testing / Commissioning	REFCL testing / commissioning commenced	09/08/2021	100%	10%
	REFCL commissioned and operable	15/07/2022		
Close Out	REFCL at "required capacity"	15/07/2022	100%	5%
Total Weighted Percentage Complete			100%	

This zone substation is located at -37°89304 latitude, 145°29167 longitude.

3.3.5 Tranche 3: Lang Lang (LLG) Zone Substation

LLG REFCL Project Activities		Completion Date	Percentage Complete	Weighting
Initiate	Business Case commenced	16/11/2018	100%	10%
	Business Case approval	29/09/2020		
Design	Design commenced	30/10/2019	100%	15%
	Design complete	06/05/2022		
Procurement	Number of REFCL units required	1		
	REFCL order placed	18/12/2020	100%	10%
	REFCL delivered to site	17/02/2022		
Construction - Lines	Line works commenced	01/04/2020	100%	20%
	Line works complete	09/08/2022		
Construction - Stations	Station works commenced	03/05/2021	100%	20%
	Station works complete	02/08/2022		
Construction - Third Party	Number of affected HV Customer Connections	1		
	HV customer works commenced	01/07/2018	100%	10%
	HV customer works complete	15/08/2022		
Testing / Commissioning	REFCL testing / commissioning commenced	29/07/2022	100%	10%
	REFCL commissioned and operable	02/09/2022		
Close Out	REFCL at "required capacity"	16/09/2022	100%	5%
Total Weighted Percentage Complete			100%	

This zone substation is located at -38°26605 latitude, 145°56266 longitude.

3.3.6 Tranche 3: Sale (SLE) Zone Substation

SLE REFCL Project Activities		Completion Date	Percentage Complete	Weighting
Initiate	Business Case commenced	16/11/2018	100%	10%
	Business Case approval	02/10/2020		
Design	Design commenced	09/07/2020	100%	15%
	Design complete	06/05/2022		
Procurement	Number of REFCL units required	1		
	REFCL order placed	18/12/2020	100%	10%
	REFCL delivered to site	01/07/2022		
Construction - Lines	Line works commenced	01/04/2020	100%	20%
	Line works complete	04/08/2022		
Construction - Stations	Station works commenced	13/12/2021	100%	20%
	Station works complete	27/07/2022		
Construction - Third Party	Number of affected HV Customer Connections	1		
	HV customer works commenced	01/07/2018	100%	10%
	HV customer works complete	31/05/2021		
Testing / Commissioning	REFCL testing / commissioning commenced	28/07/2022	100%	10%
	REFCL commissioned and operable	30/09/2022		
Close Out	REFCL at "required capacity"	22/09/2022	100%	5%
Total Weighted Percentage Complete			100%	

This zone substation is located at -38°10364 latitude, 147°06972 longitude.

3.3.7 Tranche 3: Benalla (BN) Zone Substation

BN REFCL Project Activities		Completion Date	Percentage Complete	Weighting
Initiate	Business Case commenced	16/11/2018	100%	10%
	Business Case approval	25/08/2020		
Design	Design commenced	03/02/2020	100%	15%
	Design complete	31/05/2022		
Procurement	Number of REFCL units required	1		
	REFCL order placed	18/12/2020	100%	10%
	REFCL delivered to site	22/02/2022		
Construction - Lines	Line works commenced	01/04/2020	100%	20%
	Line works complete	15/08/2022		
Construction - Stations	Station works commenced	26/07/2021	100%	20%
	Station works complete	10/08/2022		
Construction - Third Party	Number of affected HV Customer Connections	2		
	HV customer works commenced	01/07/2018	100%	10%
	HV customer works complete	25/09/2022		
Testing / Commissioning	REFCL testing / commissioning commenced	11/08/2022	100%	10%
	REFCL commissioned and operable	25/11/2022		
Close Out	REFCL at "required capacity"	25/11/2022	100%	5%
Total Weighted Percentage Complete			100%	

This zone substation is located at -36°55160 latitude, 145°98000 longitude.

3.3.8 Tranche 3: Kalkallo (KLO) Zone Substation

KLO REFCL Project Activities[9]		Completion Date	Percentage Complete	Weighting
Initiate	Business Case commenced	16/11/2018	100%	10%
	Business Case approval	23/02/2021		
Design	Design commenced	18/10/2019	100%	15%
	Design complete	04/04/2022		
Procurement	Number of REFCL units required	1		
	REFCL order placed	18/12/2020	100%	10%
	REFCL delivered to site	06/05/2022		
Construction - Lines	Line works commenced	01/04/2020	100%	20%
	Line works complete	10/10/2022		
Construction – Stations	Station works commenced	08/03/2022	100%	20%
	Station works complete	18/10/2022		
Construction - Third Party	Number of affected HV Customer Connections	0		
	HV customer works commenced	n/a	100%	10%
	HV customer works complete	n/a		
Testing / Commissioning	REFCL testing / commissioning commenced	26/09/2022	100%	10%
	REFCL commissioned and operable	07/10/2022		
Close Out	REFCL at "required capacity"	21/10/2022	100%	5%
Total Weighted Percentage Complete			100%	

This zone substation is located at -37°53833 latitude, 144°94140 longitude.

9 The solution for KLO involves the use of covered conductor, installation of remote REFCLs (REFCLs installed on the 22 kV feeders rather than within the zone substation) and the installation of isolating substations. This reporting template reflects the standard REFCL deployment within a zone substation.

4 Insulated Powerlines in Electric Line Construction Areas

This section reports the volume of high voltage bare wire and insulated powerlines within prescribed ‘electric line construction areas’.

The *Electricity Safety (Bushfire Mitigation) Regulations 2013* require all new and replacement (≥4 consecutive spans) powerlines be constructed with insulated or covered wire.

4.1 Program Status as at 30 April 2022

The table below indicates the change in volumes (km) of bare and insulated powerline between 1 May 2021 and 30 April 2022.

Total HV Electric Line Volumes	At 1 May 2021	At 30 April 2022	Progress over Reporting Period
Bare construction in ELCA	Route km	Route km	Route km
Polyphase	783.80	781.43	(2.37)
SWER	623.09	623.09	-
Covered or underground construction in ELCA	Route km	Route km	Route km
Polyphase	298.84	301.75	2.74
SWER	28.15	28.15	-

As at the 30 April 2022 the percentage of total route kilometres of all bare conductors remaining within Electric Line Construction Areas is 81%.

Information relating to changes to these powerlines over the reporting period is provided in the required form below.

Electric Line Construction Area	Feeder	Reason/Driver	Previous Construction	Previous Phasing	Length(km)	New Construction	New Phasing	Length(km)	Completion Date
LEGL./16-229	SFS1	New Electric Line				Overhead Covered	Polyphase	0.076	4/03/2022
LEGL./16-223	MDI1	New Electric Line				Overhead Covered	Polyphase	0.301	10/02/2022
LEGL./16-229	UWY1	New Electric Line				Overhead Covered	Polyphase	0.049	8/11/2021
LEGL./16-229	UWY1	New Electric Line				Overhead Covered	Polyphase	0.078	22/09/2021
LEGL./16-229	MDG1	New Electric Line				Overhead Covered	Polyphase	0.127	8/12/2021
LEGL./16-223	MDI1	New Electric Line				Overhead Covered	Polyphase	1.232	25/03/2022
LEGL./16-229	UWY1	New Electric Line				Overhead Covered	Polyphase	0.192	29/06/2021
LEGL./16-223	MDI1	New Electric Line				Overhead Covered	Polyphase	0.106	10/02/2022
LEGL./16-219	KMS12	New Electric Line				Overhead Covered	Polyphase	0.191	10/03/2022
LEGL./16-219	KMS12	New Electric Line				Overhead Covered	Polyphase	0.322	2/12/2021
LEGL./16-229	MDG1	New Electric Line				Underground Cable	Polyphase	0.423	3/07/2021
LEGL./16-223	MDI1	New Electric Line				Underground Cable	Polyphase	0.312	21/02/2022
LEGL./16-223	MDI1		Overhead Bare	Polyphase	0.223				1/01/1980
LEGL./16-223	MDI1		Overhead Covered	Polyphase	0.021				26/11/2018
LEGL./16-200	MOE13		Overhead Bare	Polyphase	0.022				1/01/1980
LEGL./16-229	UWY1		Overhead Covered	Polyphase	0.104				22/02/2016
LEGL./16-229	MDG1		Overhead Covered	Polyphase	0.354				1/01/1970
LEGL./16-223	MDI1		Overhead Bare	Polyphase	0.966				20/10/1999
LEGL./16-223	MDI-RUBA_KLK		Overhead Bare	Polyphase	1.155				1/01/1980
LEGL./16-200	MOE13		Overhead Bare	Polyphase	0.006				1/01/1980
LEGL./16-229	BGE13		Underground Cable	Polyphase	0.194				1/01/1970

4.2 Planned Program Works 1 May 2022 to 30 April 2023

The table below indicates the planned change in volumes (km) of bare and insulated powerline between 1 May 2022 and 30 April 2023.

Total HV Electric Line Volumes	At 1 May 2022	At 30 April 2023	Progress over Reporting Period
Bare construction in ELCA	Route km	Route km	Route km
Polyphase	781.43	771.84	(9.592)
SWER	623.09	623.09	-
Covered or underground construction in ELCA	Route km	Route km	Route km
Polyphase	301.75	306.42	4.672
SWER	28.15	28.15	-

The planned percentage of total route kilometres of bare conductor remaining within Electric Line Construction Areas as at 30 April 2023 is forecast to be 80.7%.

5 Automatic Circuit Reclosers on SWER Networks

AusNet Services completed the installation of Automatic Circuit Reclosers on all SWER networks in December 2015.

6 Board Approval

The Board of AusNet Electricity Services Pty Ltd has reviewed and approved this Compliance Report.

Tony Narvaez

Chief Executive Officer