EVOENERGY DRAFT PROJECT ASSESSMENT REPORT FOR FAIRBAIRN FEEDER RIT-D

DRAFT PROJECT ASSESSMENT REPORT FOR THE FAIRBAIRN FEEDER UNDER THE REGULATORY INVESTMENT TEST-DISTRIBUTION (RIT-D)

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Note

Printed versions of this document are “uncontrolled copies” - the latest version is available on the Evoenergy Website[1]

[1] https://www.evoenergy.com.au/Your-Energy/Demand-Management/Engagement-opportunities

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EXECUTIVE SUMMARY

Background

This Draft Project Assessment Report (DPAR) has been prepared to provide a cost-benefit analysis of submissions received from non-network providers to deliver services to defer or avoid the network augmentation project identified through the Fairbairn feeder capacity Non-Network Options Report (NNOR). The National Electricity Rules (NER) requires a Regulatory Investment Test for Distribution (RIT-D) be completed for capex projects with a value greater than $7 million. The RIT-D requires a DPAR where Evoenergy wishes to proceed with a RIT-D project following the publication of the NNOR and consultation, having regard to the non-network option submission received on the NNOR that may defer or avoid the augmentation project being considered by the RIT-D.

Fairbairn, a small commercial precinct located adjacent to the Canberra airport, is a growing business park currently comprising office buildings and aviation support services, with few residential properties. The precinct also hosts an operational data centre.

Electricity is distributed to Fairbairn via the East Lake Zone Substation (ZSS) located in the suburb of Fyshwick. The forecast load growth is expected to increase in the Fairbairn precinct predominantly due to new commercial developments that are seeking to connect in the coming years.

Identified Need

The commercial precinct of Fairbairn, located to the east of the Canberra Airport is expected to experience significant growth in electricity demand due to a number of new commercial building developments currently in construction or recently approved for construction. Additional load growth is also anticipated from recently finished commercial developments as they are progressively occupied and the existing data centre located in Fairbairn, as it continues to build out its internal infrastructure (servers etc). In addition to this, Majura Park, a commercial development located near Fairbairn, to the west of the airport, is increasingly being occupied and will result in a further increase in load on the feeders that also distribute electricity to Fairbairn. These developments and subsequent loads are forecast to rise by 6 MVA between now and 2029.

Evoenergy has identified capacity limitations on two (2) 11 kV distribution feeders into Fairbairn with firm and thermal ratings forecasted to be exceeded in the coming years based on a 50% Probability of Exceedance (50POE) probabilistic assessment. The forecasted load growth of the new commercial developments will result in the 11 kV distribution network supplying Fairbairn exceeding its thermal capacity during System Normal conditions by 2027. Evoenergy will manage breaches on a case-by-case basis in 2025 and 2026. The identified need was published in Evoenergy's Annual Planning Report.[2]

Preferred Network Option

The preferred network option to address these network limitations is the construction of a new 11 kV feeder from the East Lake ZSS to a new switching station in the Fairbairn precinct. The new feeder will ease the constraints and be capable of meeting the anticipated additional demand for Fairbairn and the surrounding area.

The scope of this project includes constructing a new 11 kV underground feeder supplied from the East Lake ZSS, and installing the New Switching Station (hereafter referred to as 'New SWS') at the corner of Scherger Dr and Pialligo Ave, before finally terminating at Substation 11503 near Tindal Ln. This will involve the laying of cable for the feeder and required work within the substations and switch station to establish the new feeder connection. This identified network option has an estimated capital cost exceeding the $7 million threshold under the NER and the proposed investment is therefore subject to a RIT-D.

Summary of Non-Network Options

Evoenergy received no submissions from non-network option providers in response to the NNOR.

Hence, no non-network option submissions are considered to be credible to meet the identified need.

[2] Evoenergy Annual Planning Report 2023: Annual-Planning-Report-2023.pdf

Recommended Option

The recommended option is to proceed with the preferred network option, which is to install and commission the additional new 11kV feeder to supply the Fairbairn precinct, connected via the 132/11kV East Lake ZSS.

The scope of works includes construction of a conduit bank, the bulk laying of feeder cable and commissioning switches and modifications required at the ZSS to support the update. These upgrades will be completed and commissioned prior to November 2026.

The total project cost of this recommend option for Evoenergy is estimated to be $7.4m in FY24/25 dollar terms.

Next Steps

Evoenergy is seeking submissions on matters set out in this DPAR including the proposed preferred option from registered participants, AEMO, non-network providers and interested parties.

Submissions can be lodged via email to: RIT@evoenergy.com.au

Submissions must be received by 5pm, 30th of December 2025.

Evoenergy will review each submission and may seek further information to better understand the comments received.

An overview of the timeline, from the publication of this DPAR to when the preferred option is required to be operational, is provided in **Table 1**.

TABLE 1: TIMELINE FROM DPAR PUBLICATION

ACTIVITIES	DATES	STATUS
Publish NNOR and request for submissions	25 Aug 2025	Completed
Consultation period for non-network providers to provide submissions	25 Aug 2025 to 17 Nov 2025	Completed
Public briefing session during consultation period	26 Aug 2025	Completed
Evoenergy review of submissions received (non-network proposals)	Nov 2025	Completed
Publish Draft Project Assessment Report (DPAR)	18 Nov 2025	Completed
Consultation period for DPAR	**18 Nov 2025 to 30 Dec 2025**	**In progress**
Publish Final Project Assessment Report (FPAR)	Jan 2025	Planned
Preferred option operational	Nov 2026	Planned

1. INTRODUCTION

1.1 Scope and Purpose

This document is a Draft Project Assessment Report (DPAR) which outlines the need for the proposed investment, a description of any submissions received to the NNOR and requests stakeholders' submissions on the matters set out in the DPAR, including the identified preferred option. Under the Regulatory Investment Test for Distribution (RIT-D) process, Evoenergy is required to consider all credible network and non-network options to meet future electricity demand. The RIT-D process involves the following key stages:

Stage 1: Screen for non-network options and publish a NNOR

Stage 2: Undertake consultation on non-network options

Stage 3: Assess credible options

Stage 4: Publish draft project assessment (this report) and undertake consultation on the preferred option

Stage 5: Publish the final project assessment report.

This report is the fourth stage of the consultation process. The report includes background information about the limitations in this area, highlights the identified need, details any submissions received from the NNOR and the assessment of the preferred option. The information contained in this report should be sufficient to support informed stakeholder submissions on the non-network solutions identified to defer the required investment.

Evoenergy has developed this DPAR in accordance with the requirements of Clause 5.17.4 of the National Electricity Rules (NER).

1.2 Evoenergy's Obligations

Under Clause 5.17.4 of the NER, Evoenergy has obligations relating to this DPAR, including:

- Ensure that the DPAR gives regard to any submissions received on the NNOR[3].
- Ensure that the DPAR is published within 12 months of the end of the consultation period on the NNOR[4].
- Ensure the DPAR contains details and analysis of the preferred option and submitted options
- Publish a request for submissions on the matters set out in the DPAR[5],
- Notify persons registered on its industry demand side engagement register of the report's publication[5].
- Provide Registered Participants, the Australian Energy Market Operator (AEMO), interested parties, non-network providers and persons registered on Evoenergy's demand side engagement register at least six weeks in which to make submissions on the DPAR from the date that the RIT-D proponent publishes the report[6].

1.3 Further Information

Further information to assist interested parties wishing to respond to this DPAR and provide a submission, including details of how to submit a submission for consideration by Evoenergy, is provided towards the end of this DPAR (Section 7).

[3] As per NER clause 5.17.4(i)
[4] As per NER clause 5.17.4 (i)
[5] As per NER clause 5.17.4 (k)
[6] As per NER clause 5.17.4 (m)

1.4 Structure of Report

The rest of this DPAR is structured into the following sections:

Section 2: Provides background information on the network location and the associated infrastructure.
Section 3: Describes the identified need that is to be addressed, and applicable service standards.
Section 4: Provides the analysis of the credible options reviewed as part of this DPAR.
Section 5: Summarises the planning methodology and assumptions used in Evoenergy's assessment.
Section 6: Details recommendations on the preferred option.
Section 7: Provides guidance on next steps.

2. BACKGROUND

2.1 Existing Network

2.1.1 Geographic Overview

Fairbairn located near Canberra Airport, is a growing business park currently containing a mix of office buildings and aviation support services, with a few residential properties. The precinct is also home to a fully constructed data centre that was energised in 2020. Fairbairn is also in close proximity to Majura Park and Brindabella Business Park, similar but larger business parks that host office and retail spaces.

Electricity is distributed to Fairbairn from the 132/11 kV East Lake ZSS.

The ZSS supplies the 11 kV network throughout the industrial suburb of Fyshwick, as well as Fairbairn and nearby commercial areas predominantly via underground electricity network. The loads are typically commercial in nature and connected at Low Voltage (LV). Two (2) 11 kV feeders supply loads that are relevant to growth the Fairbairn area. There are some rooftop photovoltaic (PV) systems connected in the Fairbairn precinct, but due to the high-density nature of the area and typical commercial load profiles, local generation is either all self-consumed behind the meter or supports load within the precinct.

A geographic diagram marking the location of the East Lake ZSS and the commercial precincts driving load growth is provided in **Figure 1**. The map of Evoenergy's ZSS locations is publicly accessible from Evoenergy's Rosetta Data Portal.[7]

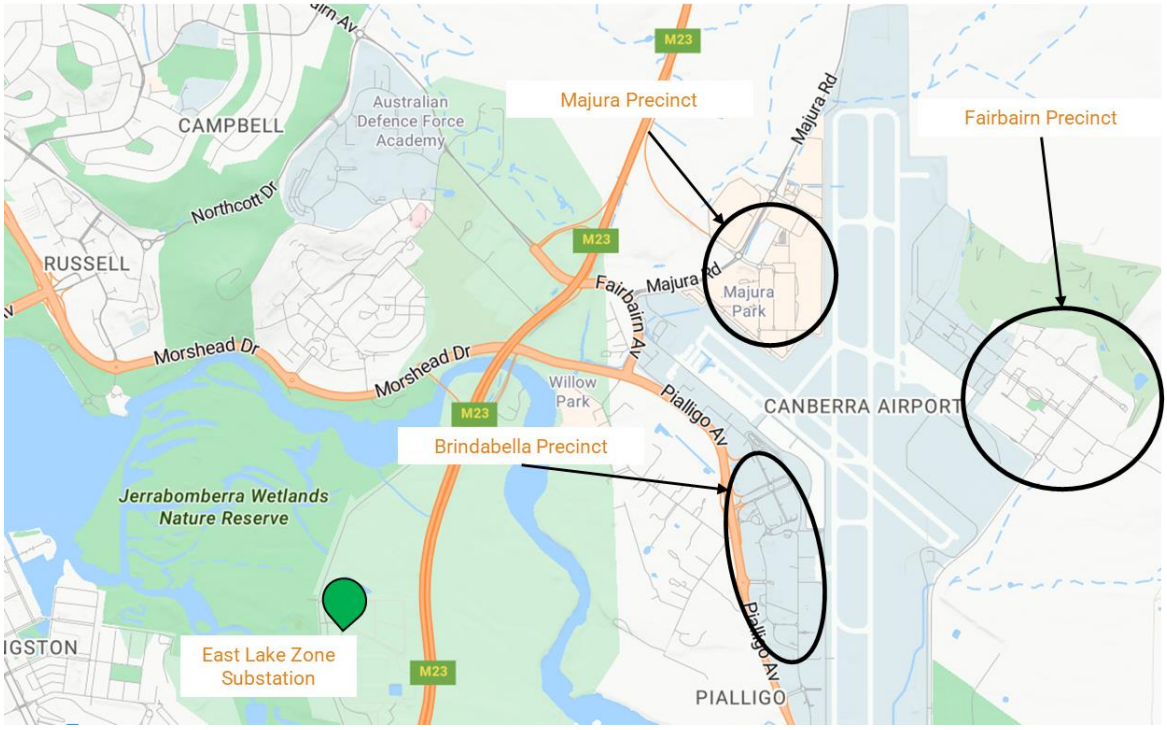

FIGURE 1: OVERVIEW OF THE AREA, SHOWING THE EAST LAKE ZSS AND FAIRBAIRN PRECINCT

2.1.2 11 kV Feeders

Evoenergy's 11 kV feeders are typically interconnected through multiple normally open ties. Under contingency conditions, selected open points are closed to enable load transfers and supply restoration.

Each 11 kV feeder in Evoenergy's network is assigned a thermal rating and a firm rating. The ratings are assigned for Summer and Winter operating conditions. The thermal rating accounts for the feeder installation method (e.g. directly buried, or overhead), cable configuration, conductor type and thermal capacity.

[7] Evoenergy's Rosetta Data Portal is available from the following weblink: https://apr.evoenergy.com.au/

The firm capacity depends on feeder grouping and configuration including feeder ties. The typical firm rating assumes one feeder of a group of four feeders is out of service. The feeder firm capacity is based on the ability to restore supply through switching after a credible contingency event.

The 11 kV feeders included in the RIT-D study are presented in **Table 2** along with the Summer and Winter firm and thermal rating, and recent peak demand characteristics.

TABLE 2: 11 KV FEEDER CAPACITY RATINGS AND HISTORICAL MAX DEMAND CHARACTERISTICS

11 KV FEEDER	SUMMER RATING (MVA)		WINTER RATING (MVA)		PEAK DEMAND (MVA)	PEAK SEASON	PEAK DAY	TIME
	FIRM	THERMAL	FIRM	THERMAL				
Dairy North[8]	2.6	3.5	2.6	3.5	3.4	Summer	Weekday	2:00:00 PM
Aero Park	5.0	6.7	5.6	7.5	6.0	Winter	Weekend	11:00:00 AM

[8] Ratings stated here are for the Fairbairn 'branch' of the Dairy North 11kV feeder, which has a lower limiting rating than the overall feeder head rating.

2.2 Load Profiles

2.2.1 Annual Load Profiles

The aggregated load profile for the two feeders is shown in **Figure 2**. The aggregated load profile is shown for illustration purposes only as solutions for network constraints need to be solved on an individual feeder basis[9]. The demand profile plotted for each individual feeder is plotted in **Figure 3** for the day when the maximum demand occurred (the chart legend shows the feeder's name and day of maximum demand).

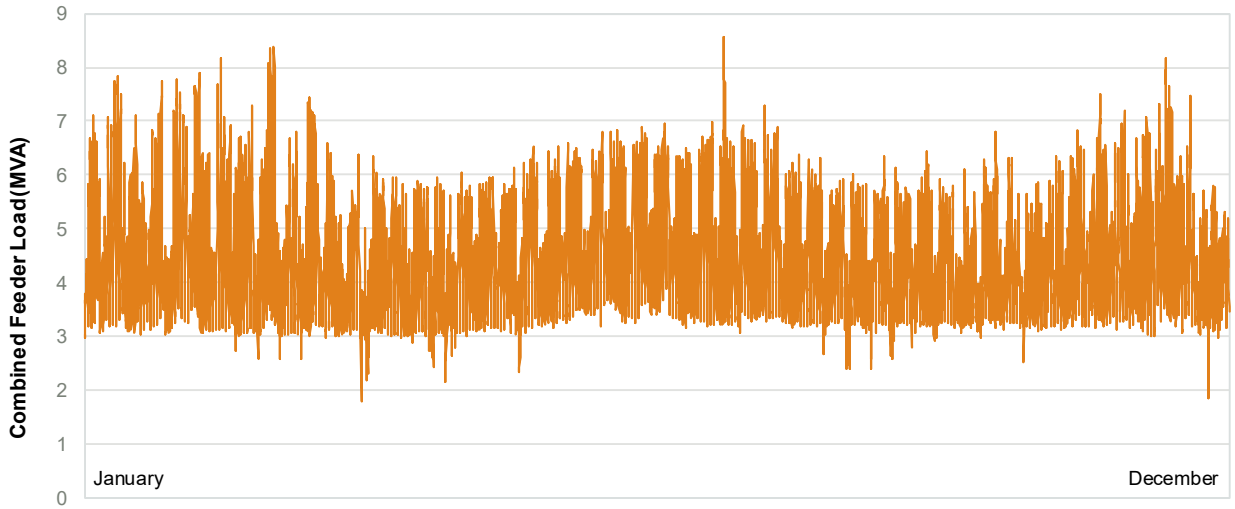

FIGURE 2: AGGREGATED 2024 LOAD PROFILE ACROSS 11 KV FEEDERS

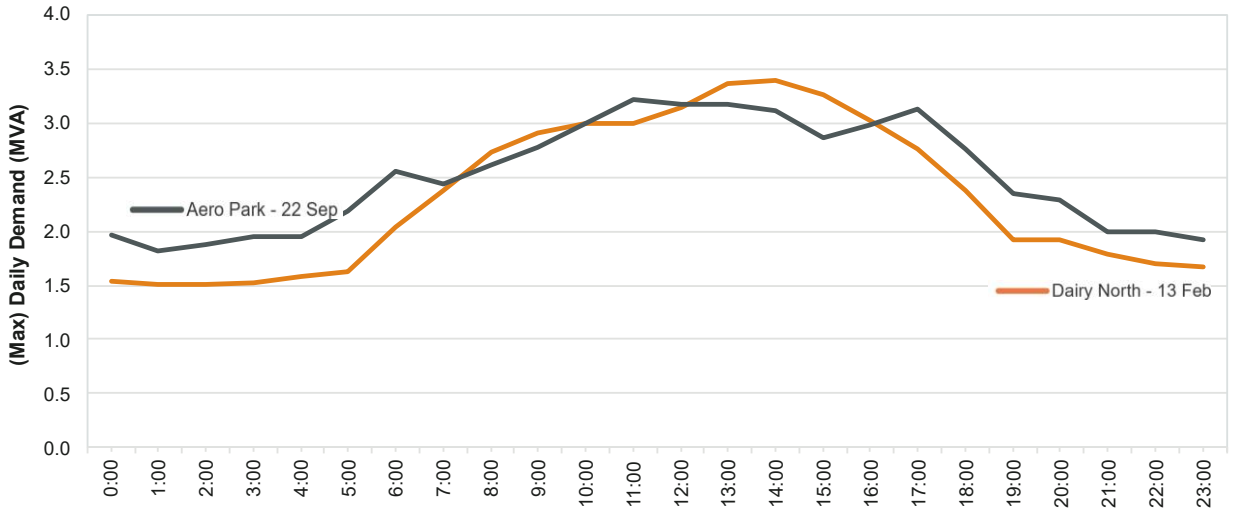

FIGURE 3: DEMAND PROFILE FOR EACH 11 KV FEEDER ON DAY-MONTH OF MAXIMUM DEMAND OCCURANCE

2.2.2 Load Duration Curves

Figure 4 shows the load duration curves for the two feeders supplying the Fairbairn precinct over a 12 month period.

[9] Load profile details available at: https://www.evoenergy.com.au/Your-Energy/Demand-Management/Engagement-opportunities

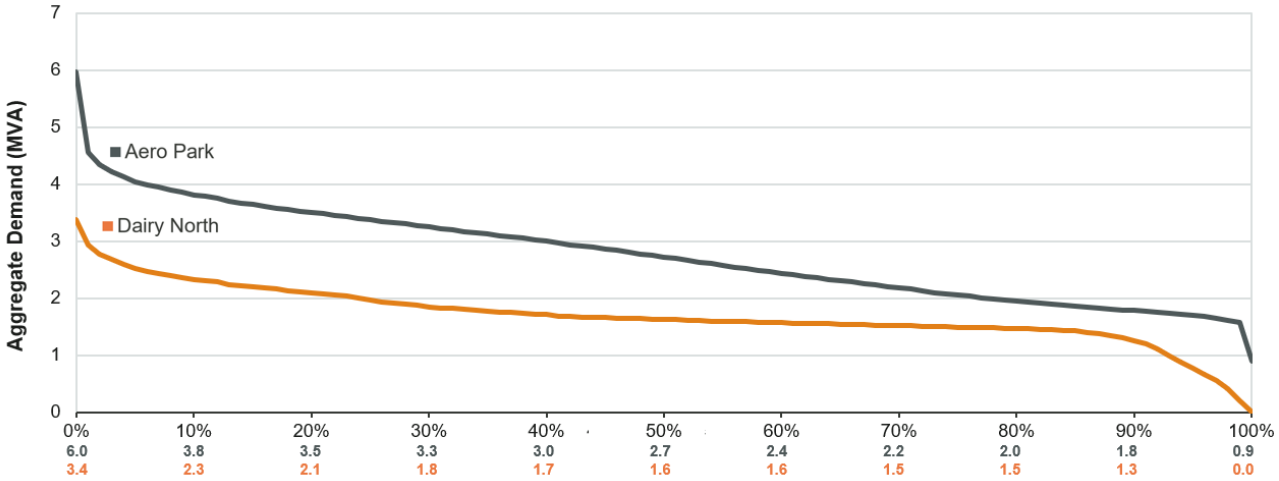

FIGURE 4: HISTORICAL 11 KV FEEDER LOAD DURATION CURVES

2.2.3 Dairy North - Detailed

Figure 5 below shows the average daily summer and winter load profile for the Dairy North Feeder, which is the feeder that is expected to breach its thermal limits the most of both feeders supporting Fairbairn. Further below in Figure 6 is the annual load profile showing peak demand occurring in summer in calendar year 2024. Figure 7 details the load duration curve forecast, with increasing periods of firm and thermal limits being exceeded each year out to 2028.

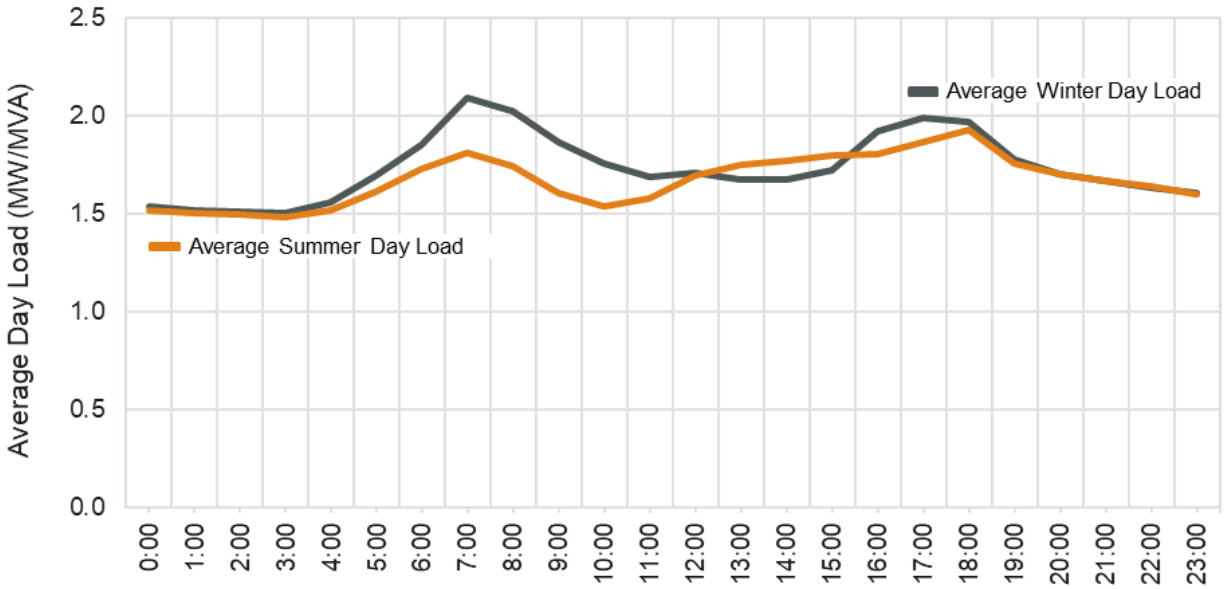

FIGURE 5: DAILY AVERAGE LOAD PROFILE OF WINTER AND SUMMER FOR DAIRY NORTH FEEDER

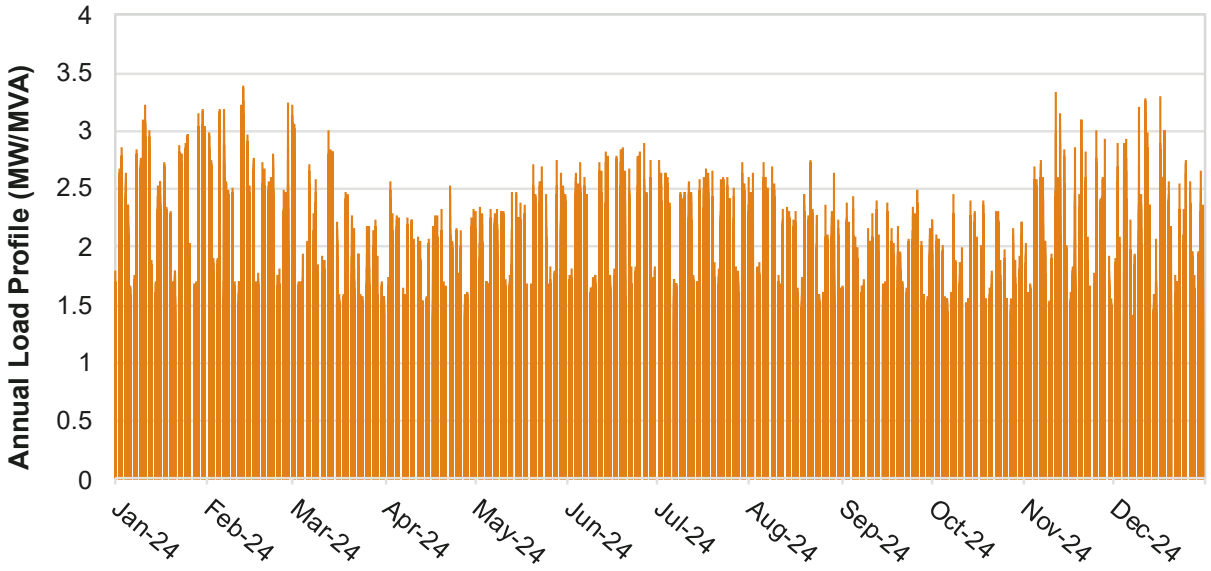

FIGURE 6: ANNUAL LOAD PROFILE OF THE DAIRY NORTH FEEDER

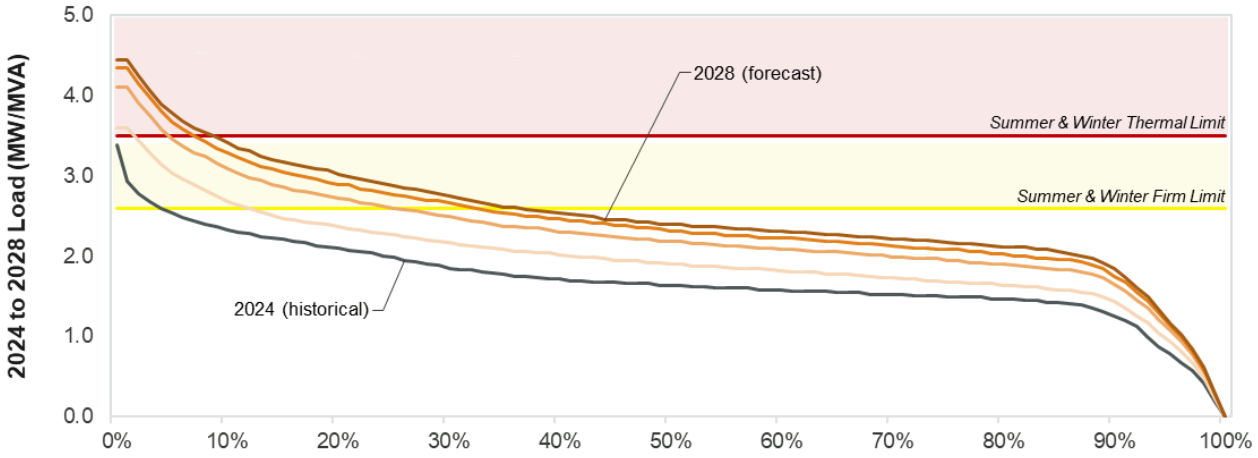

FIGURE 7: ANNUAL LOAD DURATION CURVE FORECASTS FOR DAIRY NORTH FEEDER AT 50POE

Finally **Figure 8** below provides a snapshot of the 3 days before and after the peak demand occurs for the Dairy North feeder in summer. This uses feeder data from calendar year 2024 to identify peak summer demand, and the forecast load growth changes out to 2028 to predict expected demand in the future for that week.

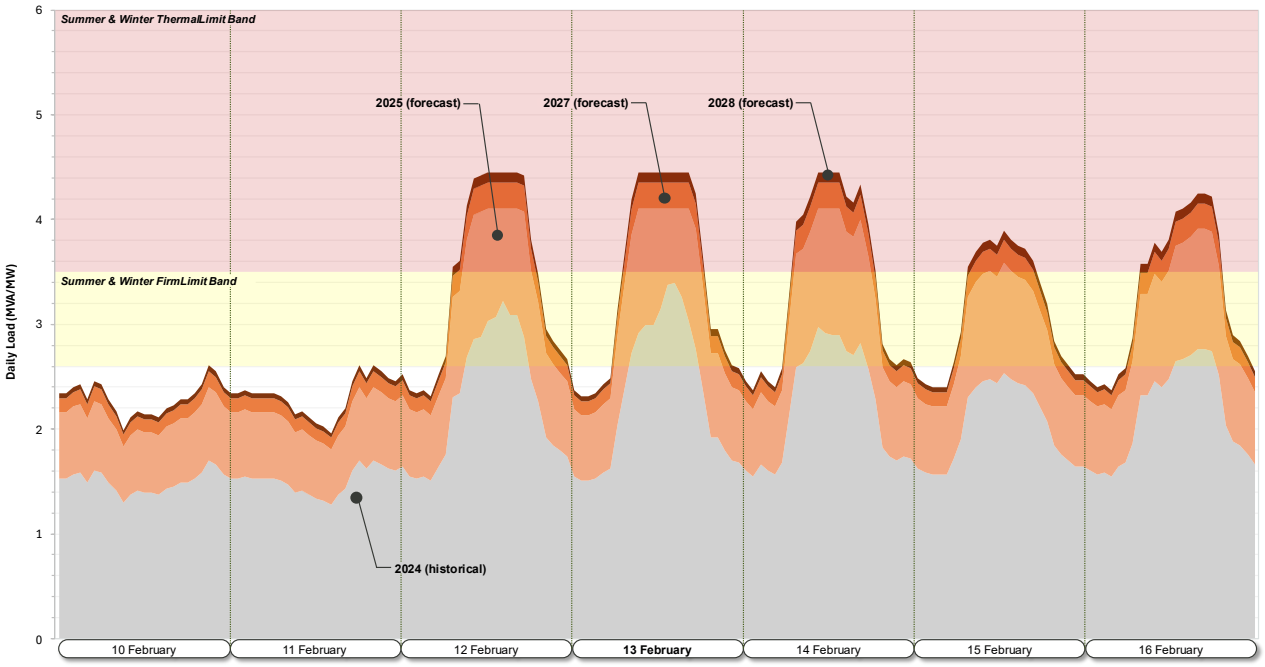

FIGURE 8: WEEK OF SUMMER MAXIMUM DEMAND – DAIRY NORTH FEEDER

2.2.4 Aero Park - Detailed

The figures below show the average load profiles for the Aero Park feeder that supports Dairy North feeder via a tie-in to supply electricity to the Fairbairn precinct. Figure 9 shows the average daily load profile for the feeder in peak seasons, Figure 10 shows the annual load profile, and Figure 11 shows the annual demand duration curve. The annual demand duration curve for this feeder includes the different winter and summer limits, the forecast breaches to these limits are detailed in Figure 9, which show no thermal breaches expected for this feeder.

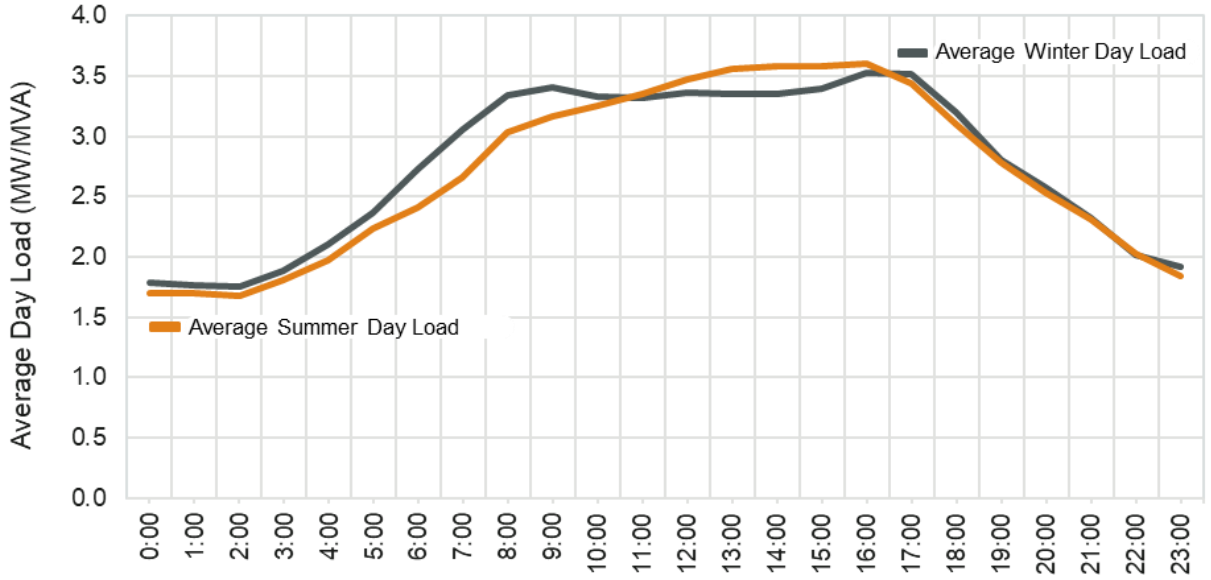

FIGURE 9: AVERAGE DAILY LOAD PROFILE FOR WINTER AND SUMMER FOR AERO PARK FEEDER

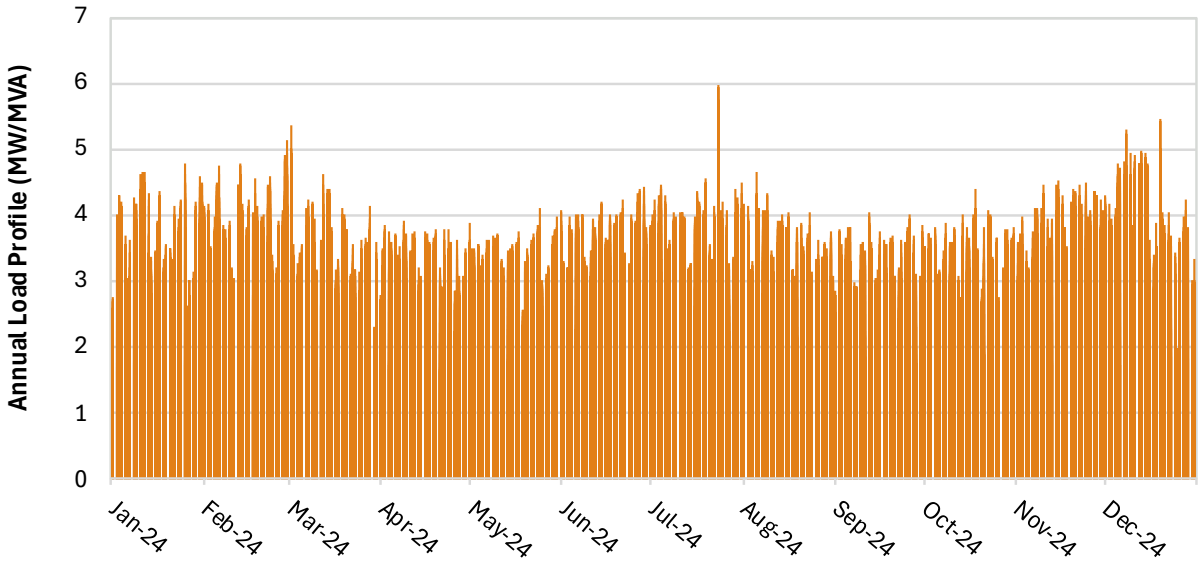

FIGURE 10: ANNUAL LOAD PROFILE OF THE AERO PARK FEEDER

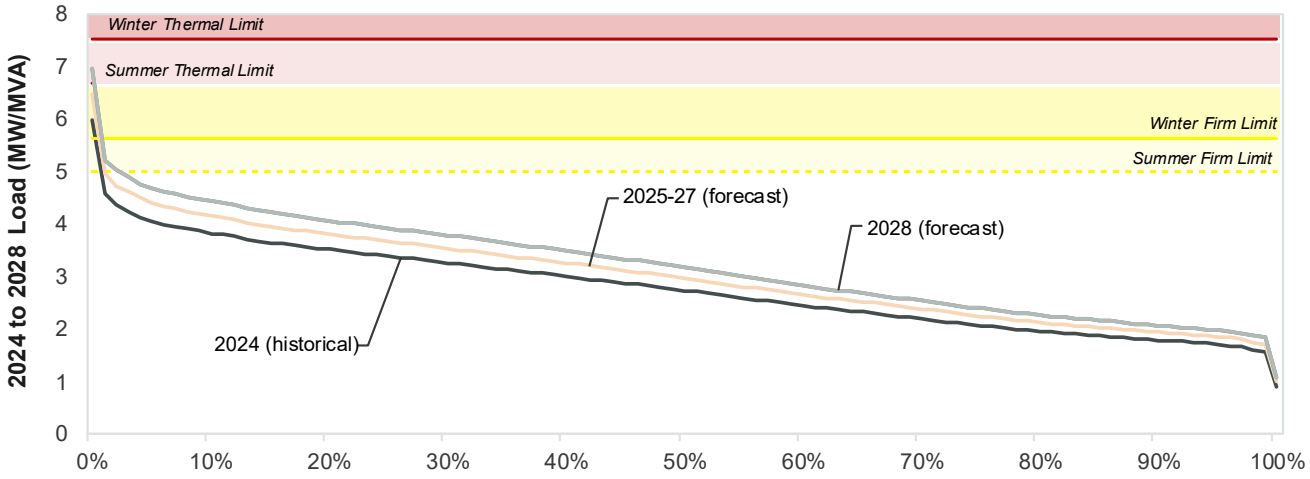

FIGURE 11: ANNUAL LOAD DURATION CURVE FORECASTS FOR AERO PARK FEEDER AT 50POE

3. IDENTIFIED NEED

3.1 Overview

In the assessment of network needs for 11 kV feeders, Evoenergy employs probabilistic methods to analyse the risk cost to customers of capacity constraints and evaluate alternative solutions (options) to address the specific network need.

Demand growth in the study area is forecast to exceed the firm capacity of 2 of the existing 11 kV feeders that supply the Fairbairn area with increasing occurrence of exceedance in both Summer and Winter. The dominant thermal constraint identified by the 50POE assessment driving the identified need is only present in the Dairy North feeder.

3.2 Geographic Overlay

The Fairbairn commercial precinct has two new major developments that are anticipated to add significant demand once fully occupied. There is also additional demand forecast that contributes to the identified need as a result of the commercial premises in nearby Majura Park increasingly becoming occupied. **Figure 12** shows the Fairbairn precinct where the new commercial developments are expected.

The 11kV feeders supplying Fairbairn are also tied in with feeders supplying Majura Park, and Brindabella Park, namely the Aero Park Feeder. As a result of increasing demand growth from those nearby locations the ability for load shifting to support Fairbairn through the Dairy North Feeder tie in is limited.

A new 11kV feeder is scheduled for energisation in 2026 to supply Brindabella Park, which will enable additional limited load transfers away from Dairy North Feeder.

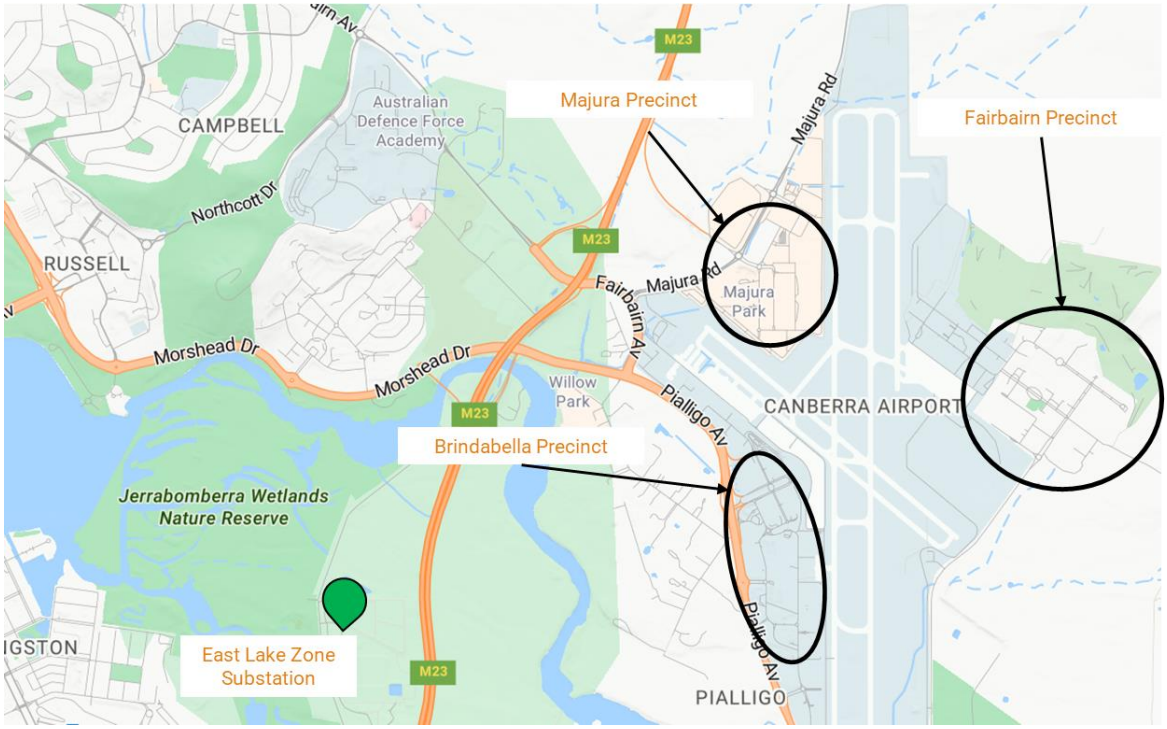

FIGURE 12: GEOGRAPHIC LOCATION OF EAST LAKE ZONE SUBSTATION AND FAIRBAIRN PRECINCT

3.3 11 kV Feeder Groups

The Fairbairn area is currently supported by only two (2) feeders that are supplied by the East Lake Zone Substation, with no other inter-tied feeders to support loads in the area. The new Brindabella feeder, expected to finish construction in 2026, will support supply into the Brindabella business park, and allow for limited load transfers to support the two existing feeders suppling Fairbairn (reflected in the FY2026 forecast). The constraint is only being considered against the existing feeders that support the load demands of Fairbairn, as shown in **Table 3.**

TABLE 3: FAIRBAIRN LOAD CENTRE 11 KV FEEDER LIMITS (MVA)

LOAD CENTRE	11 KV FEEDER	SUMMER LIMITS		WINTER LIMITS	
		Firm	Thermal	Firm	Thermal
Fairbairn	Dairy North[10]	2.6	3.5	2.6	3.5
	Aero Park	5.0	6.7	5.6	7.5

3.3.1 Demand Forecast and Capacity Limits

Evoenergy's existing network supplying the area will be unable to service the expected load growth during the 2024-29 regulatory period, even with optimised load allocations among the existing 11 kV feeder network. If no action is taken, the gap between the demand forecast and existing feeder capacity is expected to grow from 2025 as shown in **Table 4**. The maximum firm and thermal capacities of each feeder is shown for Summer and Winter. Capacity limits are expected to be breached without intervention:

- Yellow denotes load above the firm rating
- Red denotes load above the thermal rating

While thermal constraints are forecasted to occur as early as 2025, Evoenergy will manage these constraints on a case-by-case basis, including with the delivery of the Brindabella feeder in 2026, as part of operations in advance of the delivery of the preferred option which will need to be available no later than November 2026.

TABLE 4: FORECAST DEMAND FOR AFFECTED 11 KV FEEDERS DUE TO NEW MAJOR CUSTOMER LOADS (MW)

FAIRBAIRN FEEDERS	FY2025		FY2026		FY2027		FY2028		FY2029	
	Summer	Winter	Summer	Winter	Summer	Winter	Summer	Winter	Summer	Winter
Dairy North	4.1	3.6	3.6	3.1	4.4	3.9	4.5	4.1	4.6	4.3
Aero Park	5.8	6.5	6.3	7.0	6.3	7.0	6.3	7.0	6.3	7.0

Above Firm
Above Thermal

[10] Ratings stated here are for the Fairbairn 'branch' of the Dairy North 11kV feeder, which has a lower limiting rating than the overall feeder head rating.

3.3.2 Unserved Energy

Unserved Energy (USE) provides an economic indicator of the reliability impact associated with network constraints, helping to optimise and prioritise investment in feeder augmentation. Augmentation decisions consider the economic cost of USE compared to the cost of augmentation. A cost-benefit analysis ensures investments are economically justified and proportional to the economic impact of unreliability.

Table 5 provides the expected amount and value of USE based on all energy above thermal ratings, and a proportion of energy above firm ratings utilising assumed feeder outage statistics (i.e., probability of unavailability). This represents all energy at risk after all possible load transfers under system intact conditions. All USE must be met by the network or non-network solution to be considered credible. As noted previously, Evoenergy is managing forecast thermal constraints and resulting USE on a case-by-case basis in advance of the delivery of the preferred option.

TABLE 5: ANNUAL UNSERVED ENERGY (MWH)

FAIRBAIRN FEEDERS	USE EXCEEDING	FY2025	FY2026	FY2027	FY2028	FY2029
Dairy North	Firm	0.1	0.0	0.1	0.1	0.1
	Thermal	135.6	9.5	247.3	312.7	400.2
Aero Park	Firm	0.0	0.0	0.0	0.0	0.0
	Thermal	0.0	0.0	0.0	0.0	0.0
Total USE (MWh)		**135.7**	**9.5**	**247.4**	**312.8**	**400.3**

USE is anticipated to reduce significantly in FY2026 with reduced thermal breaches compared with forecasts for FY2025 and FY2027. The reduced thermal breaches are a result of additional feeder tie ins available in 2026 following the delivery of the Brindabella feeder to support loads in the nearby Brindabella business park. However, after FY2026, the anticipated load growth in Fairbairn will result in a higher USE in the following years

3.3.3 Minimum Energy Capacity Requirements

Table 6 shows the minimum energy capacity (MWh) required each day that the constraints occur to reduce the expected amount of unserved energy associated with capacity constraints.

TABLE 6: ENERGY CAPACITY REQUIRED TO DEFER NETWORK OPTION (MWH)

FAIRBAIRN FEEDERS	FY2025	FY2026	FY2027	FY2028	FY2029
Dairy North	5.94	0.71	8.87	10.13	13.11
Aero Park	0.00	0.00	0.00	0.00	0.00
Feeder Capacity Required (MWh)	**5.94**	**0.71**	**8.87**	**10.13**	**13.11**

3.3.4 Operating Profile

To support the Fairbairn demand growth area with reliable and secure supply, a non-network option would be required to provide network support from November 2026 at the latest during peak demand days when thermal limitations are reached, or during a contingency event such as loss of a feeder. The identified network option will be in place by the November 2026 summer peak demand period if selected as the preferred option. The typical load profiles of each feeder can be found in section 2.2.3 and 2.2.4

3.4 Applicable Service Standards

3.4.1 Overview

Evoenergy is obligated to provide a high level of supply certainty to our customers, these obligations are stipulated through mandated codes and standards. To meet these standards, Evoenergy continually reviews future network requirements and anticipated customer needs, to ensure that all expected electricity demand can be supplied within the stipulated requirements for safety, reliability, and quality. A failure to meet any or some of these standards would result in negative impacts for customers and fines payable by Evoenergy.

As described in the identified need, without action to support the anticipated growth in electricity demand in Fairbairn would likely result in Evoenergy breaching its requirements under the service standards it must meet. The identified preferred option is required to ensure that Evoenergy does not breach any of the standards. Service standards applicable to the identified need as per this DPAR include the following:

Utilities Act 2000 (ACT):

- General obligation to provide safe, reliable, efficient services to all parts of the Evoenergy supply network.
- Compliance with other relevant industry and technical codes, e.g.: Consumer Protection Code

Evoenergy's Utility License (Under the Utilities Act 2000):

- Minimise network losses (Schedule 1, Clause 2)
- Adherence to planning and operating requirements for transmission services (66 kV and above)
- Incorporate reliability requirements for the transmission-distribution interface (e.g. 132 kV substations)

Electricity Distribution (Supply Standards) Code:

- Performance standards for nominal voltages, voltage variations and normal operating conditions, voltage fluctuations and flicker, harmonic voltage distortion, voltage unbalance and maximum allowable voltage dips per year.
- Reliability targets for Evoenergy's overall network are as per the Electricity Distribution Supply Standards Code and are targets over the entirety of Evoenergy's network (see below).

3.4.2 Contribution To Power System Reliability

Any proposed services must be capable of reliably meeting electricity demand under a range of conditions and must meet all the relevant NER requirements related to grid connection (if that is required as part of the solution).

Evoenergy has obligations under the NER, the Electricity Distributions (supply standards) Code and connection agreements to ensure supply reliability is maintained to customers as per **Table 7**. Failure to meet these obligations may give rise to liability. Proponents of non-network solutions must also be willing to accept any liability that may arise from its contribution to a reliability of supply failure.

TABLE 7: ELECTRICITY DISTRIBUTION STANDARDS CODE ANNUAL RELIABILITY TARGETS

PARAMETER	TARGET	UNITS
Average outage duration (SAIDI)	91.0	Minutes
Average outage frequency (SAIFI)	1.2	Number
Average outage time (CAIDI)	74.6	Minutes

Service Target Performance Incentive Scheme (STPIS) targets set by the AER incentivise performance relating to unplanned interruptions. Evoenergy's STPIS targets for the current regulatory control period are provided in **Table 8** for different network supply categories. Non-network options should have adequate availability levels to contribute to maintaining reliability performance within these target requirements.

TABLE 8: AER 2024-29 STPIS TARGETS FOR RELIABILITY

PARAMETER	SAIDI TARGET FOR UNPLANNED OUTAGES (MINUTES)	SAIFI TARGET FOR UNPLANED OUTAGES (NUMBER)	EQUIVALENT SERVICE AVAILABILITY (% OF TIME)
Urban	34.398	0.57	99.9938%
Short Rural	52.141	0.59	99.9933%
Whole Network (weighted average)	37.691	0.57	99.9936%

4. OPTIONS ANALYSIS

In accordance with the RIT-D process outlined in section 5.17.4(j) of the NER, a description of each option including the types of non-network solution submissions received in response to the NNOR consultation, must be provided within the DPAR. As there were no submissions received for non-network solutions, only the network solutions will be discussed in this section.

Network options explored in the NNOR included:

- Utilising existing network capacity (not credible)
- Constructing a new 11kV feeder (preferred option)

The first of these options was not considered a credible option due to demand still exceeding both firm and thermal limits in 2026 following 11 kV transfers and network configuration. Hence, constructing a new 11kV feeder is the preferred network option.

4.1 Network option

4.1.1 The Preferred Option

The preferred option for the purpose of the DPAR is the network option identified in the NNOR. The preferred option will install and commission one new underground 11 kV feeder, from the East Lake ZSS and transfer loads to the new feeders to alleviate network constraints. The new feeder details are described in **Table 9**.

On completion of this work, the forecast constraints on the existing 11 kV network will have been resolved for the duration of the planning window, and sufficient capacity provided to enable planned development, and future demand growth. The preferred option is expected to provide the greatest reliability and benefit for customers and ensure Evoenergy meets its reliability obligations and targets.

The new 11 kV feeder for construction is further detailed in **Table 10**. The new feeder is expected to be completed and commissioned by November 2026, in advance of the summer peak. Evoenergy is managing the identified thermal constraints before November 2026 on a case-by-case basis in advance of the delivery of the preferred option. The total initial capital cost of this project is $7.4m in FY24/25 dollar terms.

TABLE 9: NEW 11 KV FEEDER AS PART OF THE PREFERRED NETWORK OPTION

FEEDER	FROM	TO	FEEDER CABLE LENGTH	COMPLETED BY	INITIAL CAPITAL COST	OPERATING COST
Scherger Feeder	East Lake Zone Substation	Corner of Scherger Dr & Tindal Lane	5.9km	November 2026	$7.4m	$0.07m/yr

4.1.1.1 Technical Characteristics

The feeder upgrades comprise of works to construct and install new conduits along the proposed feeder route, and the bulk cable laying of feeder lines via the new conduit bank. As the project is being delivered it will allow for the construction of the new conduit banks to support future projects, and provide additional availability for future 11kV upgrades should they become necessary.

The feeder cable will be made up of 2 or 3 sections, comprising of different cable diameters and materials (aluminium and coper), depending on the requirements of each section. The feeder has been designed to support the existing network in the Fairbairn precinct, to fully alleviate the forecast constraints and meet future anticipated demand growth.

TABLE 10: TECHNICAL CHARACTERISTICS OF FEEDERS

FEEDER	FROM	TO	FEEDER CABLE LENGTH	CABLE TYPE	ADDITIONAL CONDUIT
Scherger Feeder	East Lake Zone Substation	Corner of Scherger Dr and Tindal Lane	5.9km	Aluminium and Copper Three-Core XLPE Cable	2.6km

4.1.1.2 Construction timeframe

The new feeder upgrades will begin preliminary works in early 2026, with all works completed and new the feeder commissioned by November 2026, in advance of the summer demand peak.

4.1.1.3 Costs

The total capex cost estimate for this option is $7.4m in FY24/25 dollars, exclusive of contingency and GST.

4.2 Non Network options:

4.2.1 Summary of Submissions Received on the NNOR

As part of the RIT-D process, Evoenergy issued a request for non-network solution submissions on the NNOR. Evoenergy engaged with the registered parties in the demand register and coordinated consultation including a public briefing session with potential non-network options providers that was held virtually in August 2025.

Evoenergy received no submissions from non-network providers in response to the NNOR.

4.2.2 Credible Non-Network Options

In order to be considered a credible option, the non-network option must meet the following criteria:

1. The option is able to meet the identified network need.
2. The costs are well defined such that the option can be compared to the network option.
3. The option does not present any material or commercial or technical risks that cannot be managed.

Given that there were no non-network options submitted, no non-network option can be considered as a credible option.

5. ECONOMIC ASSESSMENT OF CREDIBLE OPTIONS

This section outlines the methodology and assumptions used by Evoenergy to complete the economic assessment of all credible options that address the identified need. This will include where applicable; the approach to estimating project costs, market benefits, and modelling scenarios to address uncertainty.

5.1 Methodology

Evoenergy applies a probabilistic planning methodology where the costs and benefits for each credible option is measured against a "no investment" base case.

As outlined in the NNOR and this DPAR, Evoenergy has shown that the preferred network option to build an additional feeder to support load growth in the Fairbairn precinct has a higher NPV than the 'no investment' base case. The "do nothing" option breaches Evoenergy's obligations under the ACT Electricity Transmission Supply Code 201623, section 4.1.2: *continue to allow electricity supply at maximum demand immediately and automatically after a credible contingency event and the potential unserved energy risk. In addition to this, in a contingency event the 'do nothing' option results in thermal limits of existing network assets being breached and the potential for large amounts of involuntary load-shedding, which drives large unserved energy costs that will be borne by customers (and Evoenergy through the Service Target Performance Incentive Scheme (STPIS) mechanism).*

The NNOR outlined a methodology to assess non-network options against to meet the demand growth forecast expected in the Fairbairn precinct. Under this methodology the costs and risks (predominantly the risk of unserved energy) are calculated for each scenario and weighted by the probability assigned to the scenario.

5.2 Economic Assessment Timeframe

Evoenergy's planning considers scheduled new customer connections and forecast commercial load growth for 2024–2029. Due to the uncertainty in long-term forecasts for new point loads, a 5-year horizon is used using the period out until 2029. Non-network options that defer network investments may also delay future stages, however Evoenergy cannot commit to upfront costs for uncertain future deferral benefits.

5.3 Electrical Demand

The following summarises Evoenergy's planning assumptions relating to electrical demand and details how the identified need is defined.

5.3.1 Scenarios

Evoenergy plans its distribution network with 50% Probability of Exceedance (POE) demand forecasts. Maximum demand forecasts include new block loads from annual developments, using approved and pending developer applications to estimate new connections in Fairbairn and the surrounding areas as well as continued load growth from established developments nearby.

5.3.2 Load Profile

When evaluating the financial costs and USE implications of non-network submissions, Evoenergy will use historical feeder load profiles. These profiles reflect customer electricity usage in the area and are reasonable for forecasting, as new developments are expected to mirror existing load patterns. Details of the feeder load profiles for the proposed network options are provided as an additional attachment found on Evoenergy's website.[11]

5.4 Load Transfer Capability and Supply Restoration

A number of feeders were assessed to address the identified constraints, with varying capabilities for load transfer and restoration following network failures. The maximum demand forecast for the Fairbairn precinct incorporates all feasible load transfers to prevent exceeding power rating limits in the existing 11 kV network. Evoenergy will manage thermal constraints forecast for 2026 on a case-by-case basis through operational

[11] Available at: https://www.evoenergy.com.au/Your-Energy/Demand-Management/Engagement-opportunities

management. However, from summer 2026 onwards thermal constraints peak, and the supporting feeders are projected to exceed their thermal limits with large USE costs associated with those limits being exceeded.

Given the existing constraints and the lack of additional load transfer options beyond 2026, additional capacity or significant demand reduction will be required.

5.5 Value of Customer Reliability

Evoenergy applied a blended Value of Customer Reliability (VCR) of USE. This value has been chosen to stay consistent with the figures provided in the NNOR which are based on the AER's 2024 VCR Annual Adjustment Summary, using the following:

- ACT residential VCR of $50.70/kWh ($2024) and commercial VCR of $34.39/kWh ($2024).
- Evoenergy has used a blended rate to assess the VCR

This aligns with Evoenergy's Risk Value Framework and the regional characteristics.

As Evoenergy's assessment is in real terms, VCR values remain constant over the assessment period.

5.6 Cost Estimates

Evoenergy estimated capital costs for the preferred network option has an accuracy of ±30%. Operating costs for new distribution assets were assumed as 1% of capital costs. Non-network providers are to include their own operating cost estimates in their submissions.

5.6.1 Market Benefits

In the absence of a credible non-network option to assess, Evoenergy has determined that there are no relevant market benefits to include in the assessment. As the primary consideration for the identified need is unserved energy cost, additional market benefit considerations, such as avoided emissions is considered negligible when compared with the cost of unserved energy.

5.6.2 Discount Rate

A discount rate of 5.85%[12] has been applied in the initial assessment of options considered in this report. This corresponds to the rate in Evoenergy's 2024-2029 regulatory approval from the AER. This is the regulated (nominal vanilla) WACC and all values discounted using this rate are in nominal FY24/25 dollar terms.

[12] https://www.aer.gov.au/system/files/2024-04/AER%20-%20Final%20Decision%20-%20Overview%20-%20Evoenergy%20-%202024-29%20Distribution%20revenue%20proposal%20-%20April%202024.pdf

5.6.3 Results of Net Present Value Analysis

Table 11 below, shows the summary of results of the net present value analysis for the preferred option in real terms. The net present value of only the network option is summarised as it is the only option considered in this report.

TABLE 11: NET PRESENT VALUE RESULTS SUMMARY

Credible Option	PV - Capex	PV - Opex	NPC	PV – Benefits	NPV
Network option – Feeder upgrade ($m)	-$7.1	-$0.2	**-$7.3**	$36.9	**$29.6**

The preferred option to address the identified need has an net present cost (NPC) of $7.3m, as the solution will be constructed in calendar year 2026 covering the 2026 and 2027 financial years this option provides the lowest NPC option. The assessment considered the value of relevant network benefits, including the value of avoided unserved energy as a result of the investment including benefits that accrue after the solution has been implemented and post the potential deferral period, and has an NPV of $29.6m, this is the option with the greatest NPV and lowest NPC that was assessed and delivers the required reliability improvements.

6. RECOMMENDATION ON PREFERRED OPTION

Evoenergy has identified the network option to address the identified need in Fairbairn district as described below.

6.1 Option 1: Construct New 11 kV Feeders (Preferred Option)

The recommended option is to proceed with the preferred network option to install and commission an additional 11kV feeder to supply additional load in the Fairbairn district. The scope of work includes construction of conduit banks, bulk cable laying and the connection to the East Lake Zone Substation. The estimated construction timeline is provided in Table 12 below, with the works required to be completed and commissioned prior to summer peak 2026.

TABLE 12: EXPECTED CONSTRUCTION TIMELINE

Feeder	Activity	Date
Scherger	• Design and Development	Feb 2026
	• Build and Execute	Nov 2026

This is the preferred network solution identified in the NNOR and meets the need to ensure stable and secure electricity supply to the Fairbairn district in order to accommodate expected demand growth. The total project cost of this recommended option for Evoenergy is estimated to be $7.4M in FY24/25 dollar terms. Based on the economic assessment outcomes, the proposed preferred option (network option) satisfies the RIT-D.

7. SUBMISSIONS

7.1 Submissions

This section provides stakeholders with an invitation for submissions, guidance on how to make submissions, and supporting information. Submissions are intended to provide Registered Participants, AEMO, non-network providers and interested parties with an opportunity to comment on the matters set out within this DPAR, including the proposed preferred option.

7.1.1 Invitation for Submissions

Evoenergy is seeking submission from interested parties to gather input on the DPAR that may inform the development of the final project assessment report (FPAR).

Submissions may include comments on any matters set out within this DPAR, for example, clarifications required or areas of the report that require further elaboration. We are not requesting further proposals from non-network providers (other than on the matters described) and at this stage intend to proceed with the preferred option based on the proposal(s) already received.

All requests for additional information and lodgement of submissions should be directed to:

Email: RIT@Evoenergy.com.au

The period for additional information closes on 12 Dec 2025 at 5 pm

Submissions must be lodged by 30 Dec 2025 at 5 pm

All submissions will be published on the Evoenergy website unless otherwise requested. Please indicate if you do not wish to have your submission published in part or in full.

Evoenergy will review each submission and may seek further information to better understand the comments received.

7.2 Next Steps

Following the publication of the DPAR, stakeholders will have a period of 6 weeks to collate the information required and provide submissions to Evoenergy on the matters set out within this DPAR, including the proposed preferred option.

The RIT-D process from this point involves the following upcoming activities:

1. A draft project assessment report is released for public consultation.
2. Consultation with the preferred option provider(s) is undertaken (where applicable)
3. Submissions close for consultation on this DPAR
4. A final project assessment report is published and issued to the AER.
5. Contracts with non-network provider(s) are confirmed (where applicable), or a network option is progressed.

Evoenergy strongly recommends that non-network providers also commence engaging in the connection process early, to optimise alignment of timing with the identified need as well as with processing times.

7.3 Timeline

An overview of the timeline, from the publication of this DPAR to when the preferred option is required to be operational, is provided in **Table 13** below.

TABLE 13: TIMELINE FROM DPAR PUBLICATION

ACTIVITIES	DATES	STATUS
Publish NNOR and request for submissions	25 Aug 2025	Completed
Consultation period for non-network providers to provide submissions	25 Aug 2025 to 17 Nov 2025	Completed
Public briefing session during consultation period (details to be confirmed)	26 Aug 2025	Completed
Evoenergy review of submissions received (non-network proposals)	Nov 2025	Completed
Publish Draft Project Assessment Report (DPAR)	18 Nov 2025	Completed
Consultation period for DPAR	18 Nov 2025 to 30 Dec 2025	In progress
Publish Final Project Assessment Report (FPAR)	Jan 2025	Planned
Preferred option operational	Nov 2026	Planned

APPENDIX A – DEFINITIONS AND ABBREVIATIONS

TABLE 14: DEFINITIONS

Term	Definition
ACT government – Electrical Inspectorate	The ACT Government Electrical Inspectorate is the inspecting authority in the ACT and is responsible for inspecting and approving the consumer's electrical installation
Continuous rating	Substation rating capable of continuous reliable operation (24/7)
Demand response	A change from normal mode of load operation induced by a signal triggered by a network constraint or other constraint, to reduce demand for energy or market ancillary services within a region
Embedded generating system	A system comprising of multiple embedded generating units (e.g. solar PV system with a battery storage system)
Embedded generating unit	A generating unit connected within a distribution network and not having direct access to the transmission network
Emergency rating	Substation rating above nameplate ratings capable of reliable operation for short duration. Operating assets at this rating accelerates loss of asset life thus exposure to these conditions is limited
Evoenergy	Evoenergy is the ACT's principal Distribution Network Service Provider (DNSP) and is responsible for the distribution of electricity to all customers within the ACT
Feeder	Typically, these are 11kV electricity distribution conductors / cables, for high voltage bulk electricity distribution within the network.
Firm delivery capacity	Maximum allowable output or load of a network or facility under single contingency conditions, including any short-term overload capacity having regard to external factors that may affect the capacity of the network or facility[13]
Frequency control and ancillary services	Services used by the energy market operator to maintain the frequency of the system within the normal operating band, which functions to provide a fast injection or reduction of energy to manage supply and demand, respectively
High Voltage (HV)	Any voltage greater than 1 kV AC
Load centre	Regions on the electricity distribution network close to load/centres of demand
Low Voltage (LV)	The mains voltages as most commonly used in any given network by domestic and light industrial and commercial consumers (typically 230 V)
Network	Evoenergy's distribution network
Non-network provider	A person who provides non-network solutions; proposing to become a generator (the relevant owner, operator or controller of the generating unit (or their agent))
RIT-D proponent	The Network Service Provider applying the regulatory investment test for distribution to a RIT-D project to address an identified need[14]
Thermal constraint	A thermal limitation on the capability of a network, load or generating unit such that it is unacceptable to either transfer, consume or generate the level of electrical power that would occur if the limitation was removed
Utilities Technical Regulation Team	The ACT Government team responsible for the technical administration of utility requirements and administration of the Utilities (Technical Regulation) Act 2014
Value of Unserved Energy	A quantified measure of the resource availability to continuously serve all loads at all delivery points while satisfying all planning criteria, results involve analysing all hours of a particular year and calculations are presented as units of currency
Weighted average cost of capital	Relevant weighted average cost of capital for a network service provider for a regulatory control period, being the return on capital for that network service provider for that regulatory control period calculated in accordance with National Electricity Rules

[13] As per definition from National Electricity Rules for *firm delivery capacity*
[14] As per definition from National Electricity Rules *for RIT-D proponent*

TABLE 15: ABBREVIATIONS

AC	Alternating Current
ACT	Australian Capital Territory
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
AS	Australian Standard
AS/NZS	A jointly developed Australian and New Zealand Standard
CAIDI	Customer Average Interruption Duration Index
CBD	Central Business District
CEC	Clean Energy Council
CPI	Consumer Price Index
DER	Distributed Energy Resource
DNSP	Distribution Network Service Provider
DSE-RIP	Demand Side Engagement Register of Interested Parties
EV	Electric Vehicle
FCAS	Frequency Control Ancillary Services
FAQ	Frequently Asked Question
FY	Financial Year
HV	High Voltage
LV	Low Voltage
MW	Megawatt
NEM	National Electricity Market
NER	National Electricity Rules
NNOR	Non-network options report
NPC	Net Present Cost
ODAF	Oil Directed, Air Forced
ODAN	Oil Directed, Air Natural
ONAN	Oil Natural, Air Natural
PoE	Probability of Exceedance
PV	Photovoltaics
RIT-D	Regulatory Investment Test for Distribution
SAIDI	System Average Interruption Duration Index
SAIFI	System Average Interruption Frequency Index
STPIS	Service Target Performance Incentive Scheme
USE	Unserved Energy
UTR	Utilities Technical Regulator
V	Volt
VA	Volt-Ampere
VAr	Volt-ampere-reactive
VCR	Value of Customer Reliability
W	Watt
WACC	Weighted Average Cost of Capital
ZSS	Zone Substation