

# EVOENERGY DRAFT PROJECT ASSESSMENT REPORT FOR CURTIN FEEDER RIT-D

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

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### Note

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<sup>1</sup> <https://www.evoenergy.com.au/Your-Energy/Demand-Management/Engagement-opportunities>

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## EXECUTIVE SUMMARY

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### 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 Curtin 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.

Curtin is a predominately residential suburb located west of Parliament House, and north of the Woden Valley district of Canberra. Adjacent to Curtin are the suburbs of Deakin and Yarralumla, whilst similarly mostly residential suburbs, they do also contain a number of diplomatic embassies and missions. The Royal Australian Mint, and Government House are also located within these suburbs.

Electricity is distributed to Curtin and surrounding suburbs via the Woden Zone Substation (ZSS), located in the adjacent suburb of Lyons, just at the southern edge of Curtin. Two significant developments in the area are expected to increase the load demand with the development of a new diplomatic estate and the re-development of the Yarralumla brickworks site.

### Identified Need

Curtin and nearby suburbs are forecast to experience an increase in electricity demand due to a number of new connections from developments currently approved for construction or progressing through the approvals process. The two projects expected to contribute significant load increases in the area include the Curtin diplomatic estate development that will host up to 32 embassies or diplomatic missions, and the redevelopment of the Yarralumla brickworks site into a mixed residential and commercial precinct. Additional demand growth is also anticipated as a result of a commercial development in Deakin and a larger mixed development located nearby in the suburb of Weston. These developments further increase load forecasts on the feeders that support electricity distribution to the Curtin area. The developments and their subsequent load requirements are forecast to rise by 7.4 MVA between now and 2029.

Evoenergy has identified capacity limitations on two (2) 11 kV distribution feeders that supply Curtin and Yarralumla 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 demand growth of the new mixed developments will result in the 11 kV distribution network supplying Curtin and surrounds exceeding its thermal capacity during System Normal conditions and requiring a solution to be in place by winter of financial year (FY) 2028, with some breaches to be managed on a case-by-case basis by Evoenergy in FY2027. The identified need was published in Evoenergy's Annual Planning Report.<sup>2</sup>

### Preferred Network Option

The preferred network option to address these network limitations is the construction of a new 11 kV feeder from the Woden ZSS to a new switching station located between the Curtin diplomatic development and Yarralumla brickworks redevelopment sites. The new feeder will resolve the constraints and be capable of meeting the anticipated additional demand for Curtin and the surrounding area.

The scope of this project includes design, construction and commissioning of a new 11 kV underground feeder supplied from the Woden ZSS, and a new 11 kV Switching Station at the corner of Cotter Road and Dudley Street. This identified network option has an estimated capital cost of \$7.2M exceeding the \$7M threshold under the NER and the investment is therefore subject to a RIT-D.

### Summary of Non-Network Options

Evoenergy initially received one submission from a non-network option provider in response to the NNOR. This submission was subsequently withdrawn by the provider.

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

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<sup>2</sup> 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 Curtin, connected to the Woden 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. These upgrades will be completed and commissioned prior to April 2028.

The total project cost of this recommend option for Evoenergy is estimated to be \$7.2M 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](mailto:RIT@evoenergy.com.au)

Submissions must be received by 5pm, 27th of May 2026.

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	19 Dec 2025	Completed
Consultation period for non-network providers to provide submissions	19 Dec 2025 to 13 Mar 2026	Completed
Public briefing session during consultation period	04 Feb 2026	Completed
Evoenergy review of submissions received (non-network proposals)	Mar 2026	Completed
Publish Draft Project Assessment Report (DPAR)	15 Apr 2026	Completed
<b>Consultation period for DPAR</b>	<b>15 Apr 2026 to 27 May 2026</b>	<b>In progress</b>
Publish Final Project Assessment Report (FPAR)	Jun 2026	Planned
Preferred option operational	April 2028	Planned

# 1. INTRODUCTION

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## 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<sup>3</sup>.
- Ensure that the DPAR is published within 12 months of the end of the consultation period on the NNOR<sup>4</sup>.
- 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<sup>5</sup>,
- Notify persons registered on its industry demand side engagement register of the report's publication.
- 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<sup>6</sup>.

## 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).

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<sup>3</sup> As per NER clause 5.17.4(i)

<sup>4</sup> As per NER clause 5.17.4 (i)

<sup>5</sup> As per NER clause 5.17.4 (k)

<sup>6</sup> 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

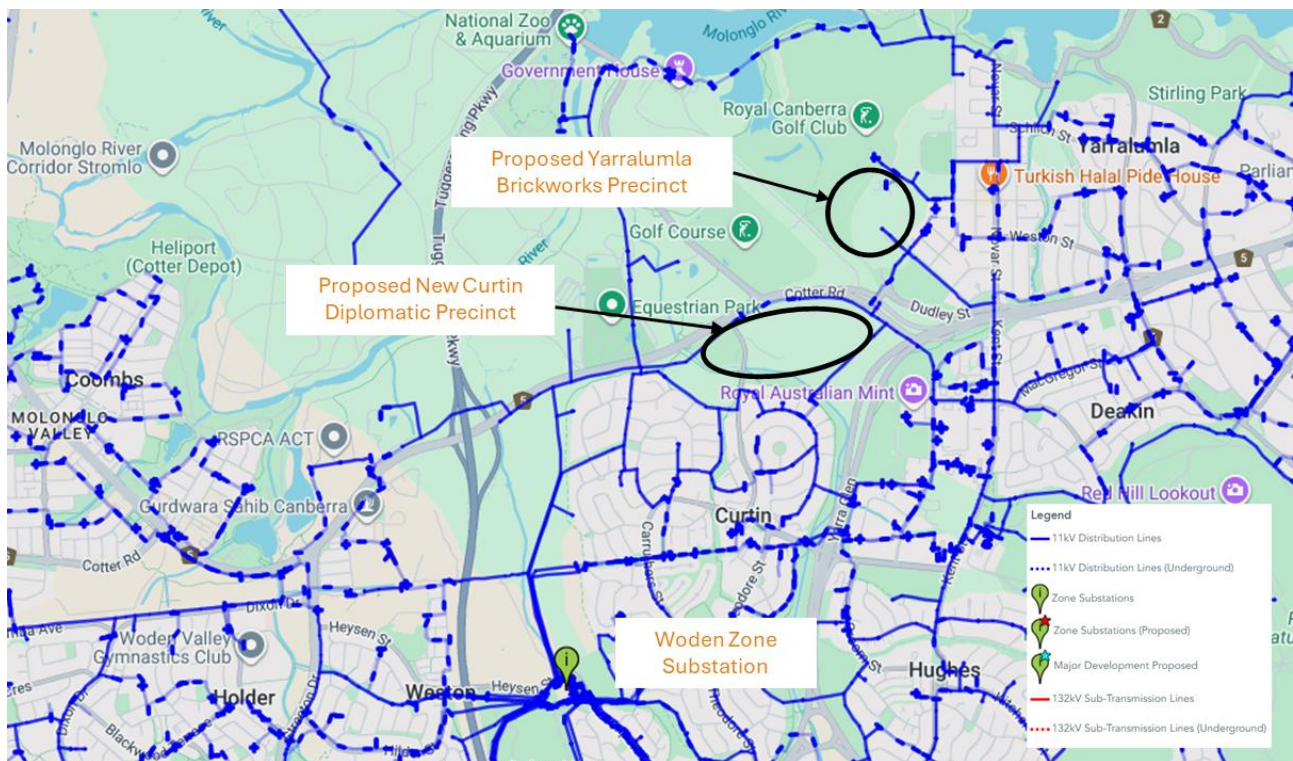
#### 2.1.1 Geographic Overview

Curtin is a predominately residential suburb located just to the west of Parliament House, and lies at the northern end of the Woden Valley district of Canberra. Adjacent to Curtin are the suburbs of Deakin and Yarralumla, whilst similarly predominately residential suburbs, also contain a number of diplomatic embassies and missions. The Royal Australian Mint, and Government House are also located within these suburbs.

Electricity is distributed to Curtin and surrounding suburbs via the Woden ZSS, located in the adjacent suburb of Lyons, just at the southern edge of Curtin. Two significant developments in the area are expected to increase the forecast load demand with the development of a new diplomatic estate and the re-development of the Yarralumla brickworks site

The Woden ZSS supplies the 11 kV network throughout the Woden Valley district, Weston Creek district and parts of Yarralumla and Deakin. The loads in the region are predominately residential with some commercial business loads. Two of the 11 kV feeders that supply parts of Yarralumla and Curtin are expected to become constrained due to the additional forecast growth in the area. There are a number of rooftop solar connections supported by these feeders, the LV connected solar generation supports daytime loads within the area.

A geographic diagram marking the location of the Woden ZSS and the commercial and diplomatic development sites driving demand growth is provided in **Figure 1**. The map of Evoenergy's ZSS locations is publicly accessible from Evoenergy's Rosetta Data Portal.<sup>7</sup>



**FIGURE 1:** OVERVIEW OF THE AREA, SHOWING THE WODEN ZSS AND NEW DEVELOPMENTS

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

## 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.

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.

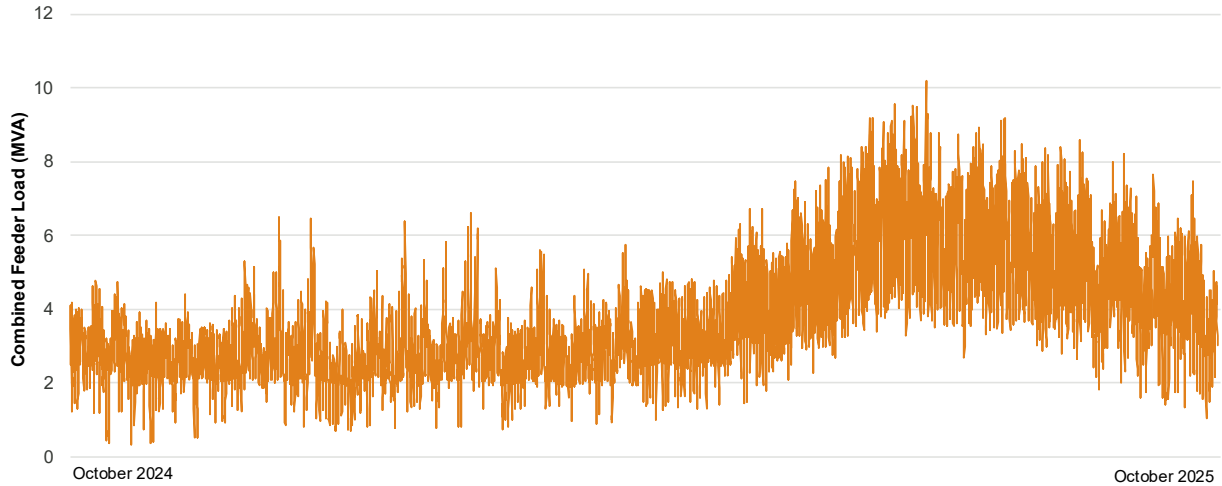
**TABLE 2: 11 KV FEEDER CAPACITY RATINGS AND HISTORICAL MAX DEMAND CHARACTERISTICS**

11 KV FEEDER	SUMMER RATING (MVA)		WINTER RATING (MVA)		PEAK DEMAND (MVA)	PEAK SEASON	PEAK DAY	TIME
	FIRM	THERMAL	FIRM	THERMAL				
Yarralumla	4.8	6.4	5.4	7.3	5.1	Winter	Weekday	18:00
Curtin north	4.5	6.0	5.5	7.3	5.6	Winter	Weekend	7:00

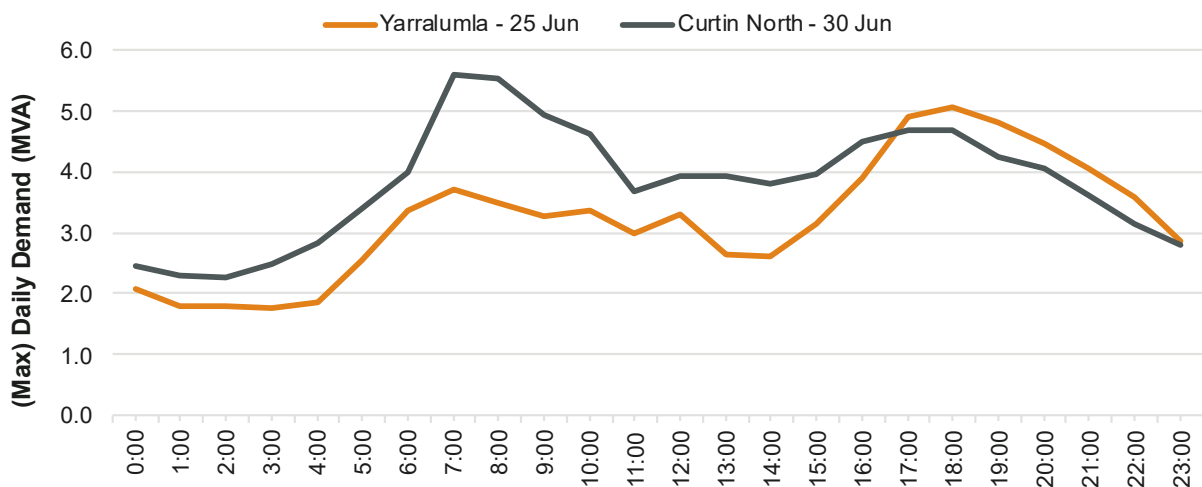
## 2.2 Load Profiles

### 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<sup>8</sup>. 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 OCT 2024 TO OCT 2025 LOAD PROFILE ACROSS 11 KV FEEDERS



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

### 2.2.2 Load Duration Curves

**Figure 4** shows the load duration curves for the two feeders supplying the study area over a 12 month period.

<sup>8</sup> Load profile details available at: <https://www.evoenergy.com.au/Your-Energy/Demand-Management/Engagement-opportunities>

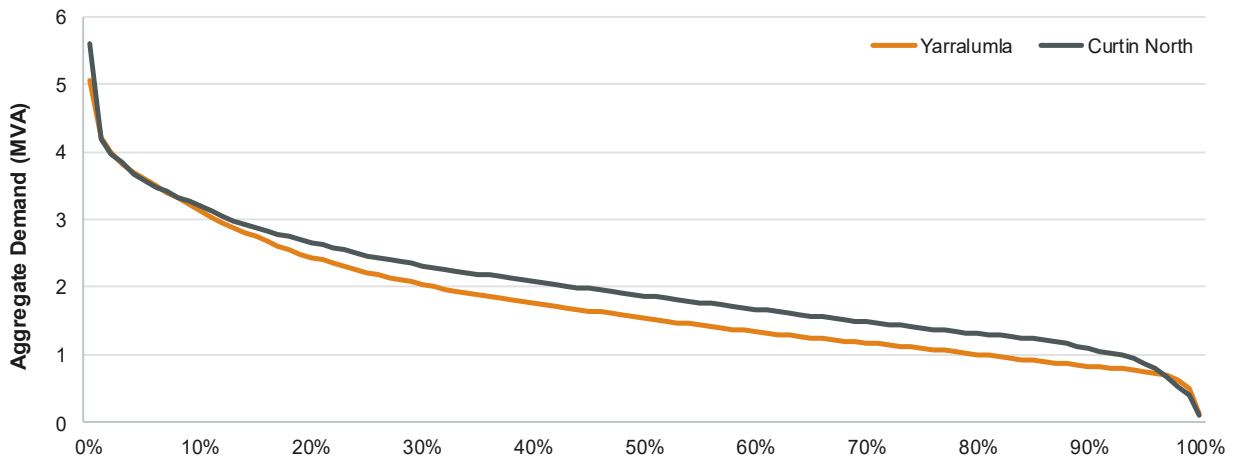


FIGURE 4: HISTORICAL 11 KV FEEDER LOAD DURATION CURVES

### 2.2.3 Yarralumla - Detailed

Figure 5 below shows the average daily summer and winter load profile for the Yarralumla Feeder, which is the feeder that is expected to breach its thermal limits the most of both feeders supporting Curtin area. Further below in Figure 6 is the annual load profile showing peak demand occurring in winter in calendar year 2025. Figure 7 details the load duration curve forecast, with increasing periods of firm and thermal limits being exceeded each year out to 2030.

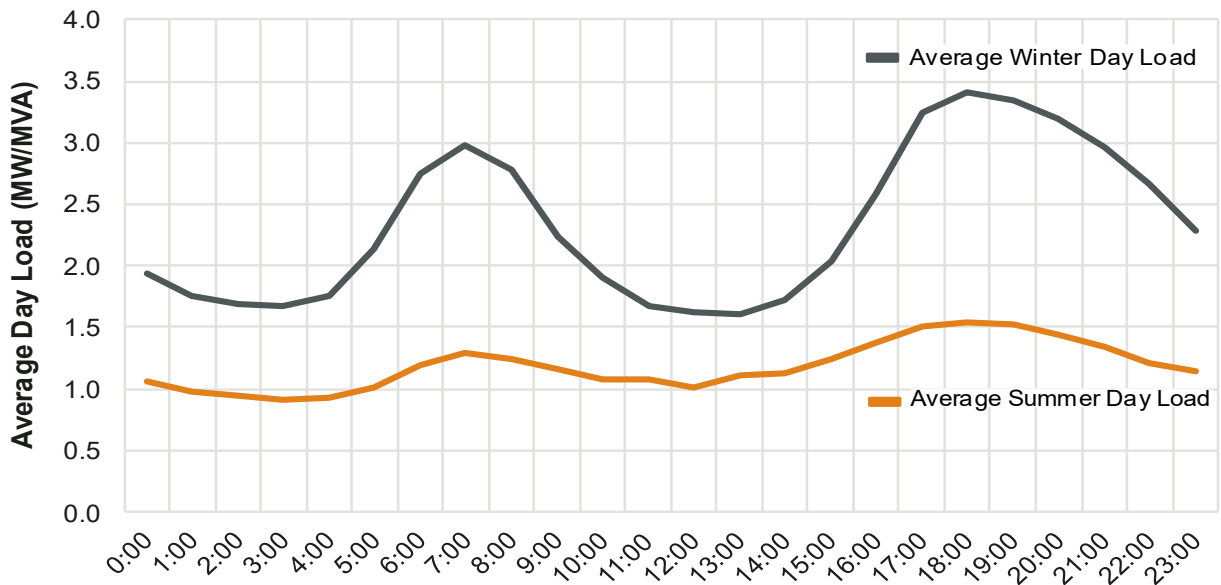


FIGURE 5: DAILY AVERAGE LOAD PROFILE OF WINTER AND SUMMER FOR YARRALUMLA FEEDER

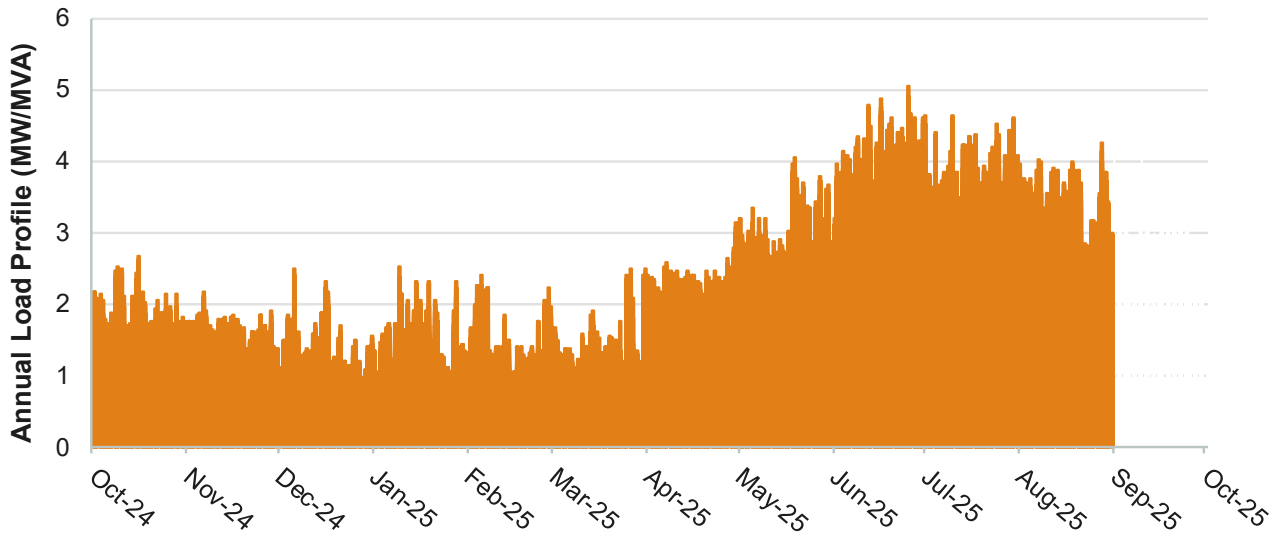


FIGURE 6: ANNUAL LOAD PROFILE OF THE YARRALUMLA FEEDER

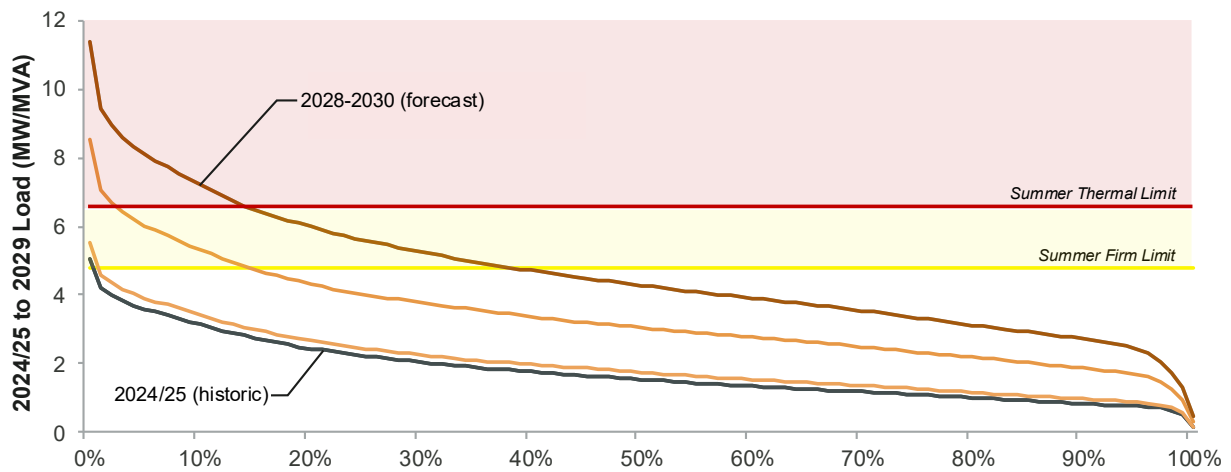


FIGURE 7: ANNUAL LOAD DURATION CURVE FORECASTS FOR YARRALUMLA FEEDER AT 50POE

Finally **Figure 8** below provides a snapshot of the 3 days before and after the peak demand occurs for the Yarralumla feeder in winter. This uses feeder data from October 2024 to October 2025 to identify peak winter demand that occurred in late June 2025, and the forecast demand growth changes out to 2029 for that week.

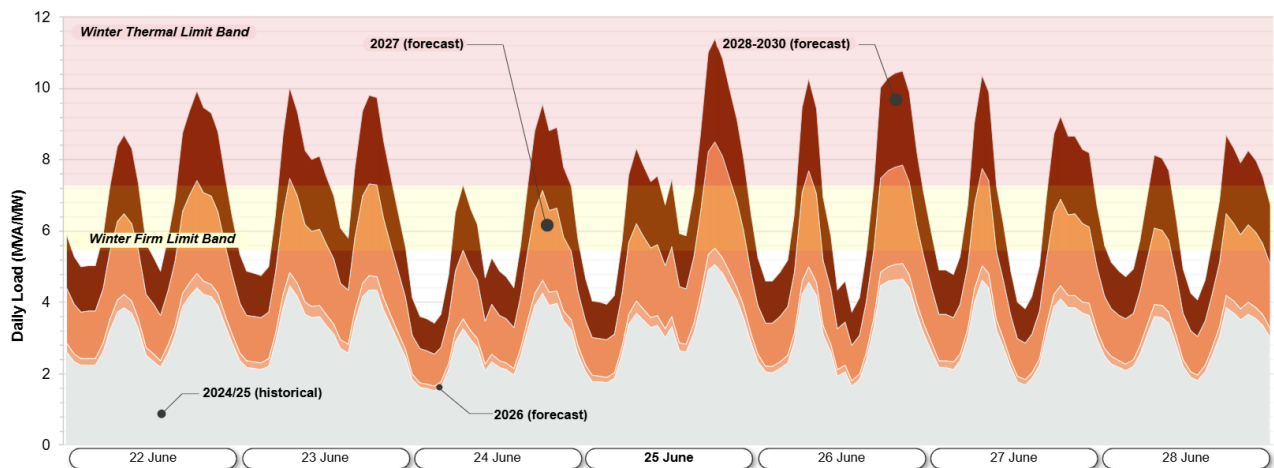
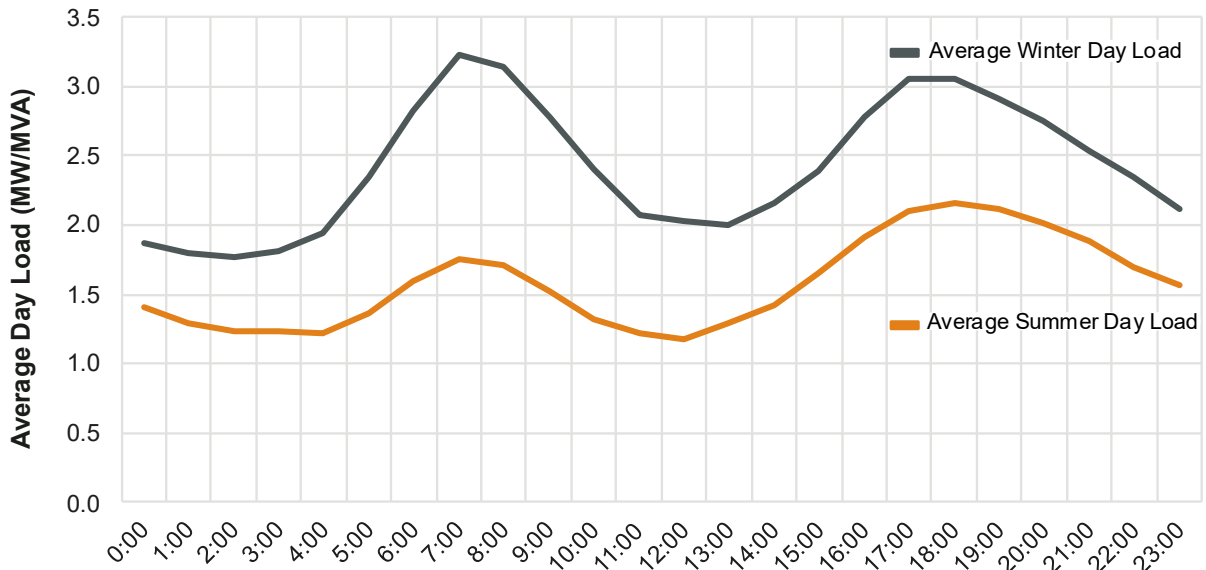


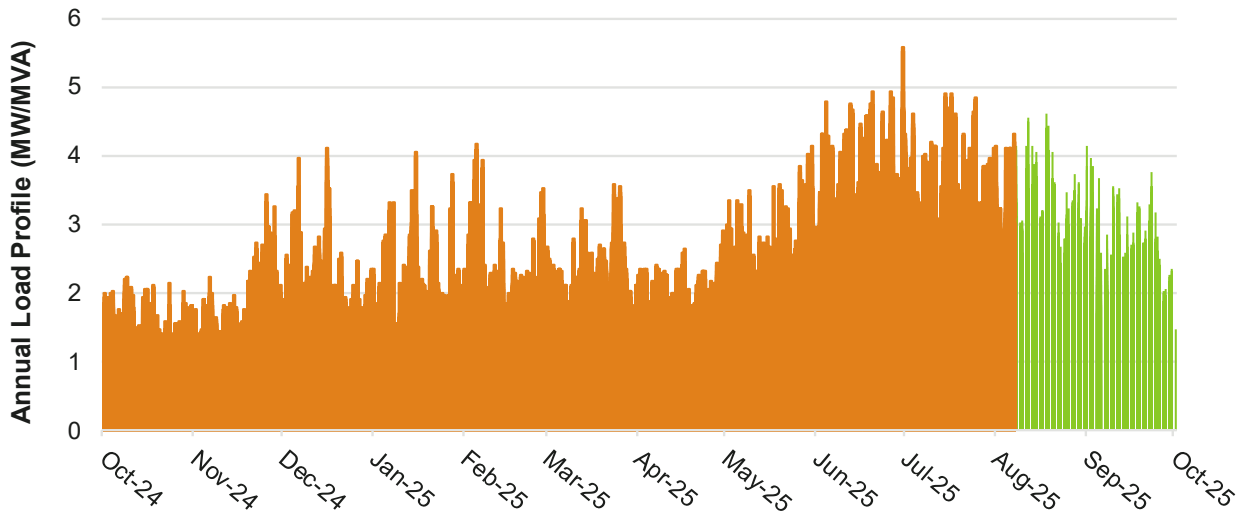
FIGURE 8: WEEK OF WINTER MAXIMUM DEMAND – YARRALUMLA FEEDER

## 2.2.4 Curtin North - Detailed

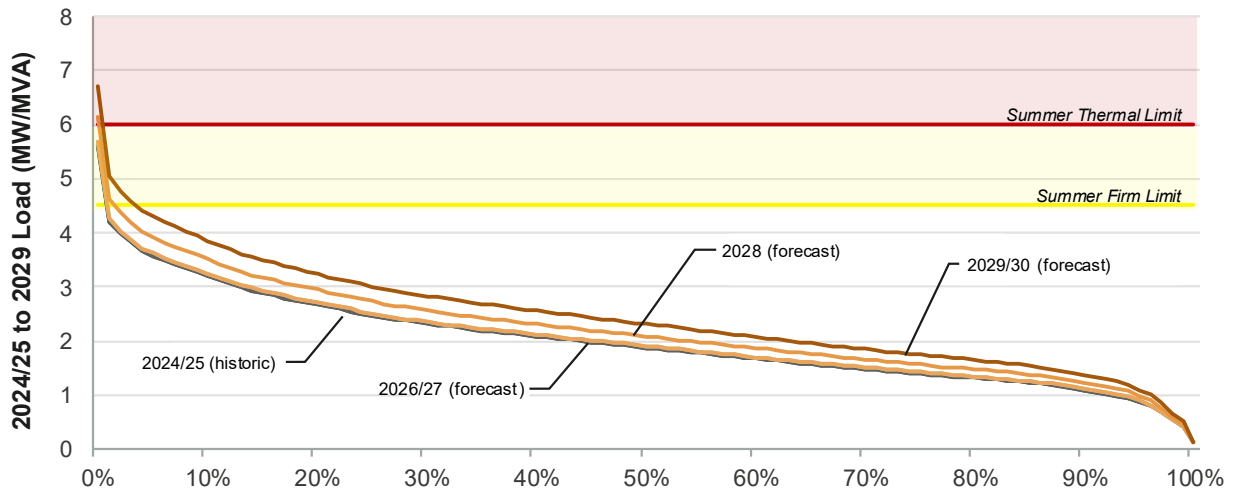
The figures below show the average load profiles for the Curtin North feeder. **Figure 9** shows the average daily load profile for the feeder in peak seasons, **Figure 10** shows the annual load profile, and **Figure 11** shows the annual demand duration curve. The annual demand duration curve for this feeder includes the different winter and summer limits, the forecast breaches to these limits are detailed in **Table 4** which show no thermal breaches expected for this feeder.



**FIGURE 9:** AVERAGE DAILY LOAD PROFILE FOR WINTER AND SUMMER FOR CURTIN NORTH FEEDER



**FIGURE 10:** ANNUAL LOAD PROFILE OF THE CURTIN NORTH FEEDER



**FIGURE 11:** ANNUAL LOAD DURATION CURVE FORECASTS FOR CURTIN NORTH FEEDER AT 50POE

### 3. IDENTIFIED NEED

#### 3.1 Overview

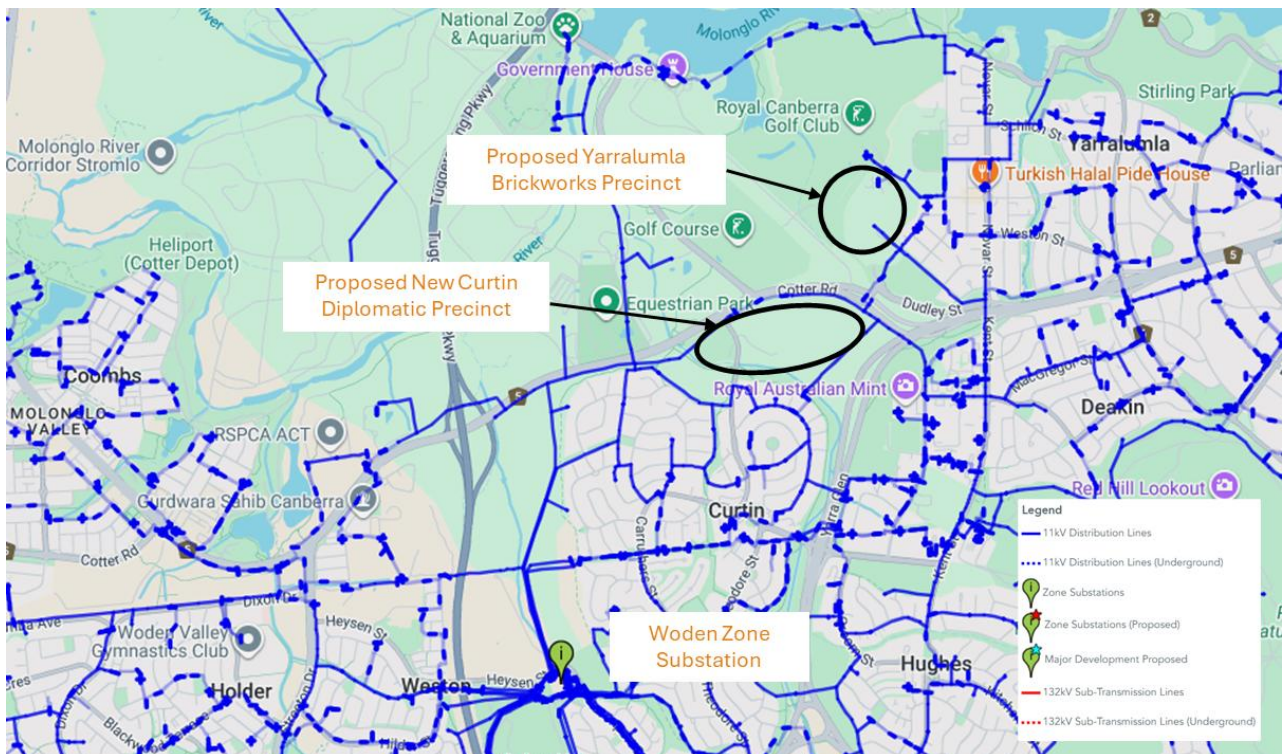
In the assessment of network needs for 11 kV feeders, Evoenergy employs probabilistic methods to analyse the risk cost to customers of capacity constraints and evaluate alternative solutions (options) to address the specific network needs.

Demand growth in the study area is forecast to exceed the firm capacity of two (2) of the existing 11 kV feeders that supply the Curtin 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 primarily present in the Yarralumla feeder.

#### 3.2 Geographic Overlay

The suburbs of Yarralumla and Curtin have two (2) new major developments that are anticipated to add significant demand once completed. There is also additional demand forecast that contributes to the identified need as a result of additional developments in the surrounding suburbs.

The geographic diagram in **Figure 12** shows the suburbs of Yarralumla and Curtin as well as the area where the two (2) new developments are to be built and the nearby existing 11 kV feeders.



**FIGURE 12:** OVERVIEW OF THE 11KV NETWORK AND PROPOSED DEVELOPMENT AREA IN CURTIN AND YARRALUMLA

#### 3.3 11 kV Feeder Groups

The Curtin area is currently supported by two (2) feeders that are supplied by the Woden ZSS, with no other inter-tied feeders with available capacity to support the additional loads forecast in the area.

The constraint is only being considered against the existing feeders that support the load demands of Curtin area, as shown in **Table 3**.

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

LOAD CENTRE	11 KV FEEDER	SUMMER LIMITS		WINTER LIMITS	
		Firm	Thermal	Firm	Thermal
Curtin	Yarralumla	4.8	6.4	5.4	7.3
	Curtin north	4.5	6.0	5.5	7.3

### 3.3.1 Demand Forecast and Capacity Limits

Evoenergy’s existing network supplying the area will be unable to service the expected demand 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 demand forecast is projected to exceed the existing feeder capacity from financial year 2027/2028 (FY2027) onwards as shown in **Table 4**. The maximum firm and thermal capacities of each feeder is shown for Summer and Winter, where:

- Yellow cells denote load above the firm rating, and
- Red cells denote load above the thermal rating.

While thermal constraints are forecasted to be exceeded as early as 2026 and thermal constraints in 2027, Evoenergy will manage these constraints on a case-by-case basis.

The preferred economic timing of the augmentation option is 2028. Sensitivity of timing ranges occurs exclusively during 2028, which falls within the 2024-2029 regulatory control period. Within a given regulatory control period, investment drivers are continuously reviewed, and investments proceed on the basis of the latest information about project need. Delivery of feeders typically takes two to three years.

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

CURTIN FEEDERS	2026		2027		2028		2029		2030	
	Summer	Winter	Summer	Winter	Summer	Winter	Summer	Winter	Summer	Winter
Yarralumla	3.1	5.5	6.1	8.5	9.0	11.4	9.0	11.4	9.0	11.4
Curtin north	4.3	5.7	4.3	5.7	4.7	6.1	5.3	6.7	5.3	6.7

ABOVE FIRM
ABOVE THERMAL

### 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)**

CURTIN FEEDERS	USE EXCEEDING	2026	2027	2028	2029	2030
Yarralumla	Firm	0.0	0.0	0.2	0.1	0.1
	Thermal	0.0	21.4	1,016.9	1,016.9	1,016.9
Curtin North	Firm	0.0	0.0	0.0	0.0	0.0
	Thermal	0.0	0.0	0.0	0.0	0.0
<b>Total USE</b>		<b>0.0</b>	<b>21.4</b>	<b>1,017.1</b>	<b>1,017.0</b>	<b>1,017.0</b>

USE is anticipated to increase significantly in FY2028 with significantly increased thermal breaches as a result of the identified developments being completed.

### 3.3.3 Minimum Energy Capacity Requirements

**Table 6** shows the minimum energy capacity (MWh) required to reduce the expected amount of unserved energy associated with capacity constraints on the forecast peak demand days, and have sufficient capacity for all other breaches in the forecast year.

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

CURTIN FEEDERS	2026	2027	2028	2029	2030
Yarralumla	0.00	3.34	19.39	19.39	19.39
Curtin North	0.00	0.00	0.00	0.00	0.00
<b>Feeder Capacity Required (MWh)</b>	<b>0.00</b>	<b>3.34</b>	<b>19.39</b>	<b>19.39</b>	<b>19.39</b>

### 3.3.4 Operating Profile

To support the Curtin demand growth area with reliable and secure supply, a non-network option would be required to provide network support 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 April 2028 prior to the Winter 2028 peak demand period if no credible non-network options are identified. 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 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 the study area would likely result in Evoenergy breaching its requirements under the mandatory minimum service standards. 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

<b>PARAMETER</b>	<b>SAIDI TARGET FOR UNPLANNED OUTAGES (MINUTES)</b>	<b>SAIFI TARGET FOR UNPLANNED OUTAGES (NUMBER)</b>	<b>EQUIVALENT SERVICE AVAILABILITY (% OF TIME)</b>
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 credible 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 2027. 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 Woden 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, with 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 April 2028, in advance of the winter peak. Evoenergy is managing the identified thermal constraints before April 2028 on a case-by-case basis in advance of the delivery of the preferred option. The total initial capital cost of this project is \$7.2M 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
New Feeder	Woden Zone Substation	Corner of Cotter Rd & Dudley St	5km	April 2028	\$7.24M	\$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 banks.

The feeder cable will be made up of several sections, comprising of different cable diameters and materials (aluminium and copper), depending on the requirements of each section. The feeder has been designed to support the existing network in the Curtin area, 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
New Feeder	Woden Zone Substation	Corner of Cotter Rd and Dudley St	5km	Aluminium and Copper Three-Core XLPE Cable	5km

#### 4.1.1.2 Construction timeframe

The new feeder upgrades will begin preliminary works in late 2027, with all works completed and the feeder commissioned by April 2028, in advance of the Winter demand peak.

#### 4.1.1.3 Costs

The total capex cost estimate for this option is \$7.2m 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 February 2026.

Evoenergy received one submission from non-network providers in response to the NNOR, which was subsequently withdrawn. The submission detailed a proposal to provide demand management services in exchange for a fee from a proposed BESS located within the study area. The proponent requested to withdraw this application during the non-network proposal review period.

### 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 the only non-network option submission was withdrawn, no non-network option can be considered as a credible option.

## 5. ECONOMIC ASSESSMENT OF CREDIBLE OPTIONS

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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 Curtin area 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 Curtin area. 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 demand 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 2030. 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 Curtin and the surrounding areas as well as continued demand 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.<sup>9</sup>

### 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 Curtin area incorporates all feasible load transfers to prevent exceeding power rating limits in the existing 11 kV network. Evoenergy will manage forecast thermal constraints on a case-by-case basis through operational

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<sup>9</sup> Available at: <https://www.evoenergy.com.au/Your-Energy/Demand-Management/Engagement-opportunities>

management. However, from Winter 2028 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 2028, 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  $\pm 30\%$ . 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%<sup>10</sup> 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.

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<sup>10</sup> <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	-\$0.3	<u>-\$7.4</u>	\$114.1	<u>\$106.7</u>

The network option to address the identified need has a net present cost (NPC) of \$7.4m. 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 \$106.7m. 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 Curtin area 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 Curtin area. The scope of work includes construction of conduit banks, bulk cable laying, and their connection to the Woden Zone Substation. The estimated construction timeline is provided in **Table 12** below, with the works required to be completed and commissioned prior to the Winter peak in 2028.

**TABLE 12:** EXPECTED CONSTRUCTION TIMELINE

Feeder	Activity	Date
New Feeder	• Design and Development	Nov 2027
	• Build and Execute	Apr 2028

This is the preferred network solution identified in the NNOR and meets the need to ensure stable and secure electricity supply to the Curtin area to accommodate expected demand growth. The total project cost of this recommended option for Evoenergy is estimated to be \$7.2M in FY24/25 dollar terms. Based on the economic assessment outcomes, the proposed preferred option (network option) satisfies the RIT-D.

## 7. SUBMISSIONS

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### 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](mailto:RIT@Evoenergy.com.au)**

**The period for additional information closes on 13 May 2026 at 5 pm**

**Submissions must be lodged by 27 May 2026 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**

<b>ACTIVITIES</b>	<b>DATES</b>	<b>STATUS</b>
Publish NNOR and request for submissions	19 Dec 2025	Completed
Consultation period for non-network providers to provide submissions	19 Dec 2025 to 13 Mar 2026	Completed
Public briefing session during consultation period	04 Feb 2026	Completed
Evoenergy review of submissions received (non-network proposals)	Mar 2026	Completed
Publish Draft Project Assessment Report (DPAR)	15 Apr 2026	Completed
Consultation period for DPAR	15 Apr 2026 to 27 May 2026	In progress
Publish Final Project Assessment Report (FPAR)	Jun 2026	Planned
Preferred option operational	Apr 2028	Planned

## APPENDIX A – DEFINITIONS AND ABBREVIATIONS

TABLE 14: DEFINITIONS

Term	Definition
<b>ACT government – Electrical Inspectorate</b>	The ACT Government Electrical Inspectorate is the inspecting authority in the ACT and is responsible for inspecting and approving the consumer's electrical installation
<b>Continuous rating</b>	Substation rating capable of continuous reliable operation (24/7)
<b>Demand response</b>	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
<b>Embedded generating system</b>	A system comprising of multiple embedded generating units (e.g. solar PV system with a battery storage system)
<b>Embedded generating unit</b>	A generating unit connected within a distribution network and not having direct access to the transmission network
<b>Emergency rating</b>	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
<b>Evoenergy</b>	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
<b>Feeder</b>	Typically, these are 11kV electricity distribution conductors / cables, for high voltage bulk electricity distribution within the network.
<b>Firm delivery capacity</b>	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 <sup>11</sup>
<b>Frequency control and ancillary services</b>	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
<b>High Voltage (HV)</b>	Any voltage greater than 1 kV AC
<b>Load centre</b>	Regions on the electricity distribution network close to load/centres of demand
<b>Low Voltage (LV)</b>	The mains voltages as most commonly used in any given network by domestic and light industrial and commercial consumers (typically 230 V)
<b>Network</b>	Evoenergy's distribution network
<b>Non-network provider</b>	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))
<b>RIT-D proponent</b>	The Network Service Provider applying the regulatory investment test for distribution to a RIT-D project to address an identified need <sup>12</sup>
<b>Thermal constraint</b>	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
<b>Utilities Technical Regulation Team</b>	The ACT Government team responsible for the technical administration of utility requirements and administration of the Utilities (Technical Regulation) Act 2014
<b>Value of Unserved Energy</b>	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
<b>Weighted average cost of capital</b>	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

<sup>11</sup> As per definition from National Electricity Rules for *firm delivery capacity*

<sup>12</sup> As per definition from National Electricity Rules for *RIT-D proponent*

**TABLE 15: ABBREVIATIONS**

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