# AUGMENTATION

## HV FEEDER UPGRADES

**PAL RRP BUS 3.3.04 – PUBLIC**
**2026–31 REVISED PROPOSAL**

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# 1. Overview

In our regulatory proposal we included expenditure to resolve demand-driven constraints on high-voltage (HV) feeders in western metropolitan Melbourne. New housing developments, industrial estates and a growing residential, commercial and industrial customer base is forecast to result in rapid load growth in the 2026–31 regulatory period. Augmentation on two HV feeders in Melton (MLN021) and Mount Cottrell (MTC011) were identified to resolve these constraints.

The AER accepted the HV feeder augmentation projects, noting that they are prudent and efficient investments that incorporated reasonable assumptions and undertook appropriate options analysis.

In line with AER's expectations, we have updated our demand forecasts for our revised proposal to incorporate more recent information. These updated demand forecasts have increased relative to our regulatory proposal, driven by a hotter FY25 summer that unearthed latent demand on our network, and the inclusion of electrification of gas. We have also used updated values of customer reliability released in December 2024.

We have re-tested all accepted HV feeder projects under the new forecasts and all projects remain the most economic option to mitigate energy at risk in their respective supply areas. Additionally, these increasing forecasts have led to the inclusion of a further five feeder projects that efficiently mitigate energy at risk, including:

- DDL023 from the Drysdale (DDL) zone substation
- GLE013 from the Geelong East (GLE) zone substation
- Mount Cottrell feeder 9, 10 and 12 from the Mount Cottrell (MTC) zone substation.

For the avoidance of doubt, our updated demand forecasts and VCRs identified more HV feeder works than those listed above, but we have taken a conservative approach and not sought to propose new feeders that are economic within the final two years of the regulatory period, or those where the cost of the preferred solution is below $900,000.

A summary of our revised HV feeder program is presented in table 1 below.

**TABLE 1 SUMMARY OF HV FEEDER PROGRAM ($M, 2026)**

| PROJECT | REGULATORY PROPOSAL | DRAFT DECISION | REVISED PROPOSAL |
|---|---:|---:|---:|
| HV feeders | 13.5 | 13.5 | 27.2 |

A summary of the HV feeder projects included within our revised proposal is also presented below in table 2. Each of these proposed investments is supported by our attached detailed economic modelling.

#### TABLE 2 SUMMARY OF REVISED PROPOSAL HV FEEDER PROGRAM ($M, 2026)

| PROJECTS | FY27 | FY28 | FY29 | FY30 | FY31 | TOTAL |
|---|---|---|---|---|---|---|
| Feeders: AER draft decision | 2.1 | 1.0 | 1.0 | 4.1 | 5.4 | 13.5 |
| DDL023 –feeder exit cable upgrade | - | 1.6 | - | - | - | 1.6 |
| GLE013 – split GLE013 to create a new feeder | 3.9 | - | - | - | - | 3.9 |
| Mount Cottrell feeder 9 – construct a new feeder from MTC | 1.8 | - | - | - | - | 1.8 |
| Mount Cottrell feeder 10 – construct a new feeder from MTC | - | 4.4 | - | - | - | 4.4 |
| Mount Cottrell feeder 12 – construct a new feeder from MTC | 2.0 | - | - | - | - | 2.0 |
| **Revised proposal** | **9.8** | **7.0** | **1.0** | **4.1** | **5.4** | **27.2** |

# 2. Drysdale feeder: DDL023

DDL023 is a high voltage feeder with a thermal capacity of 12MVA, connected to the Drysdale zone substation (DDL). This feeder provides electricity supply to residential and commercial customers in the Bellarine Peninsula.

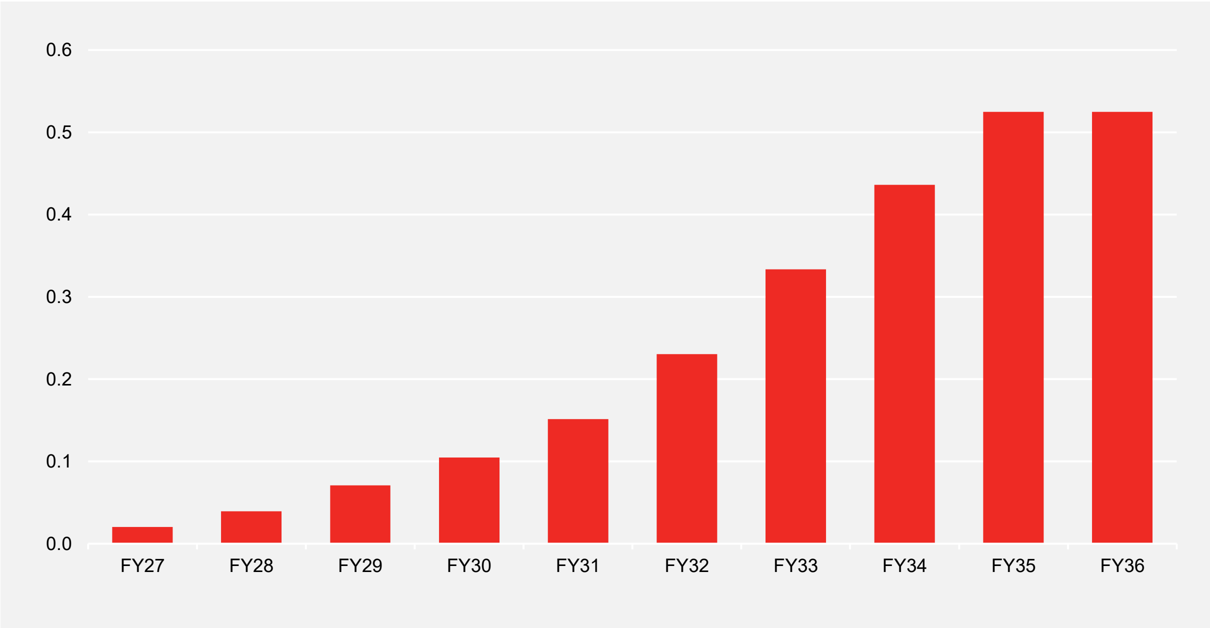
## 2.1 Identified need

The Drysdale supply area is growing, with forecast demand increasing across the 2026–31 regulatory period. Increased demand growth is being driven by electrification of transport and gas, customer growth and consumer energy resources (CER) integration that we now have visibility of following our recent summer.

These growth drivers, as well as the network being the most highly utilised distribution networks in Australia, are expected to drive significant demand growth that is expected to exceed the thermal capacity at DDL023 in 2027, resulting in deteriorating reliability of supply for our customers.

The corresponding total value of energy at risk supplied by DDL023 is shown in figure 1 below.

FIGURE 1 DDL023 VALUE OF EXPECTED UNSERVED ENERGY ($M, 2026)




## 2.2 Assessment of credible options

Several credible options were considered to meet the identified need, including upgrading the DDL023 feeder exit rating and building a new adjacent feeder to offload demand. A summary of the cost and net benefit of each credible option is described in table 3 below. Further detail is provided in our attached cost-benefit modelling.[1]

There are no load transfers available in the area, without further augmentation needed.

[1] See PAL RRP MOD 3.3.06 - Drysdale feeder - Dec2025 - Public

**TABLE 3 OPTIONS CONSIDERED AND BENEFIT SUMMARY ($M, 2026)**

| DESCRIPTION OF WORKS | ASSESSMENT | PV COST | NET BENEFIT |
|---|---|---|---|
| Option one (base case): no change to existing practices | The forecast loads on feeder DDL023 will result in maximum demand on the feeder exceeding its thermal rating in 2027. Option one fails to address the identified need to maintain reliability of supply to customers | - | - |
| Option two: DDL023, feeder exit cable upgrade | Option two uprates 8.1km of conductor and replaces 130m of feeder exit cable on DDL023, which will provide sufficient capacity to support demand growth and mitigate energy at risk. | -0.9 | 4.9 |
| Option three: WPD032 construct a new feeder | Option three builds a new 8km feeder from Waurn Ponds (WPD) which includes 500m of underground works and procurement of easements. The need feeder will provide sufficient capacity to transfer load from DDL023, supporting load growth and mitigate energy at risk. | -2.0 | 3.5 |

## 2.3 Preferred option

The preferred option to address the identified need is option two. It provides sufficient capacity to manage growing demand and results in the highest net economic benefit for customers.

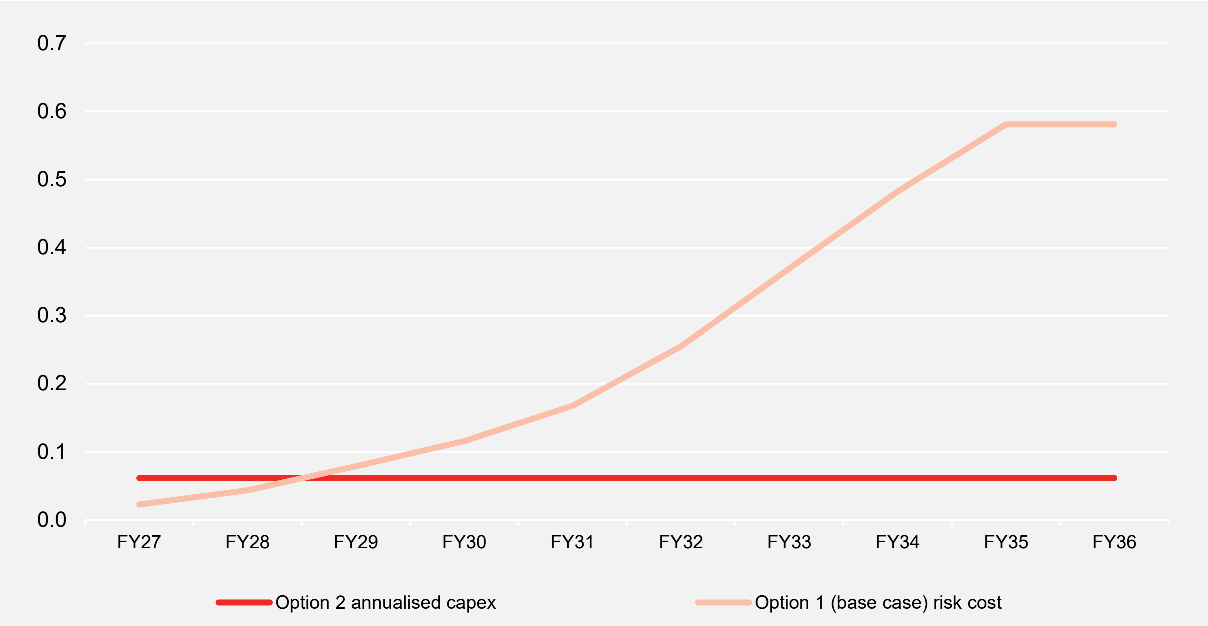
The forecast expenditure for option two is shown in table 4.

**TABLE 4 EXPENDITURE FORECASTS FOR PREFERRED OPTION ($M, 2026)**

| PROJECT | FY27 | FY28 | FY29 | FY30 | FY31 | TOTAL |
|---|---|---|---|---|---|---|
| DDL023 upgrade feeder exit cables | - | 1.6 | - | - | - | 1.6 |

Assessment of optimal timing found the economic benefits of option two are maximised if it is commissioned no later than FY28 as the value of energy at risk exceeds the annualised capex cost in FY29. This assessment is shown in figure 2.

FIGURE 2 TIMING OF PREFERRED OPTION ($M, 2026)




## 2.4 Sensitivity analysis

Sensitivity analysis was undertaken to understand the impact of increasing and decreasing both the cost and the value of energy at risk mitigated on the net economic benefits of each option in different scenarios. Option two provides the highest net economic benefit under all scenarios and remains the preferred option. Further information on our sensitivity analysis can be found in our attached cost benefit modelling.

# 3. Geelong feeder: GLE013

GLE013 is a high voltage feeder with a thermal capacity of 14.5MVA, connected to the Geelong zone substation (GLE). This feeder provides electricity supply to residential and commercial customers in the Armstrong Creek area.

## 3.1 Identified need

The Geelong supply area is growing, with forecast demand increasing across the 2026–31 regulatory period. Our revised proposal forecasts growth on GLE013 that is higher than our regulatory proposal, shown in table 5. The growth is driven predominantly by increased visibility of underlying load following a hotter FY25 summer.

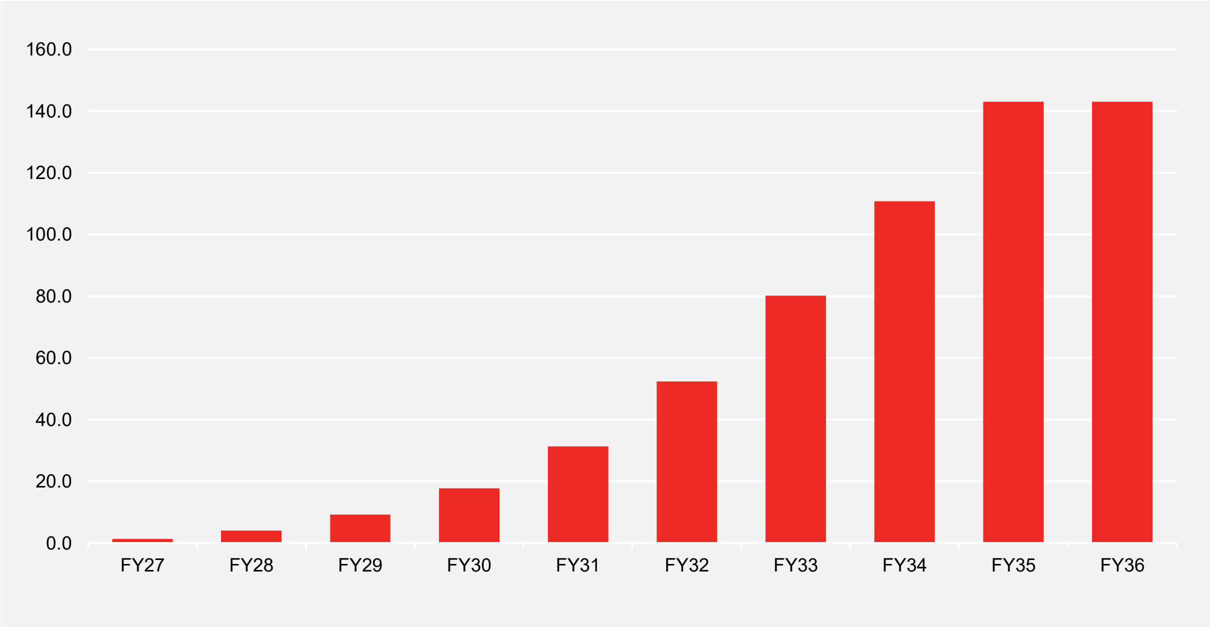
TABLE 5 COMPARISON OF DEMAND FORECAST ON GLE013 (MW)

| FEEDER | REGULATORY PROPOSAL | REVISED PROPOSAL |
| --- | --- | --- |
| GLE013 | 14.2 | 22.2 |

Increased demand growth is being driven by electrification of transport and gas, customer growth and consumer energy resources (CER) integration that we now have visibility of following our recent summer. These growth drivers, as well as the network being the most highly utilised distribution networks in Australia, are expected to drive significant demand growth that is expected to exceed the thermal capacity at GLE013 in 2027, resulting in deteriorating reliability of supply for our customers.

The corresponding total value of energy at risk supplied by GLE013 is shown in figure 3 below.

FIGURE 3 GLE013 VALUE OF EXPECTED UNSERVED ENERGY ($M, 2026)



## 3.2 Assessment of credible options

Several credible options were considered to meet the identified need, including building a new feeder from Geelong or Waurn Ponds substation. A summary of the cost and net benefit of each credible option is described in table 6 below. Further detail is provided in our attached cost-benefit modelling.[2]

There are no load transfers available in the area, without further augmentation needed.

**TABLE 6 OPTIONS CONSIDERED AND BENEFIT SUMMARY ($M, 2026)**

| DESCRIPTION OF WORKS | ASSESSMENT | PV COST | NET BENEFIT |
|---|---|---|---|
| Option one (base case): no change to existing practices | The forecast loads on feeder GLE013 will result in maximum demand on the feeder exceeding its thermal rating in the 2026–31 regulatory period. This option fails to address the identified need to maintain reliability of supply to customers | - | - |
| Option two: split GLE013 to create a new feeder to Armstrong Creek | Option two establishes a new feeder, connected to the GLE zone substation. The new feeder will maintain sufficient capacity to offload demand from the existing GLE013 feeder and share load across the feeders. This will create sufficient capacity to mitigate energy at risk and maintain a reliable supply of electricity to customers | -2.3 | 1,452.6 |
| Option three: construct a new feeder from WPD | Option three builds a new feeder from Waurn Ponds (WPD) zone substation to offload demand from existing GLE013. This will create sufficient capacity to mitigate energy at risk and maintain a reliable supply of electricity to customers | -4.1 | 1,450.7 |

## 3.3 Preferred option

The preferred option to address the identified need is option two. It provides sufficient capacity to manage growing demand and results in the highest net economic benefit for customers.

The forecast expenditure for option two is shown in table 7 below.

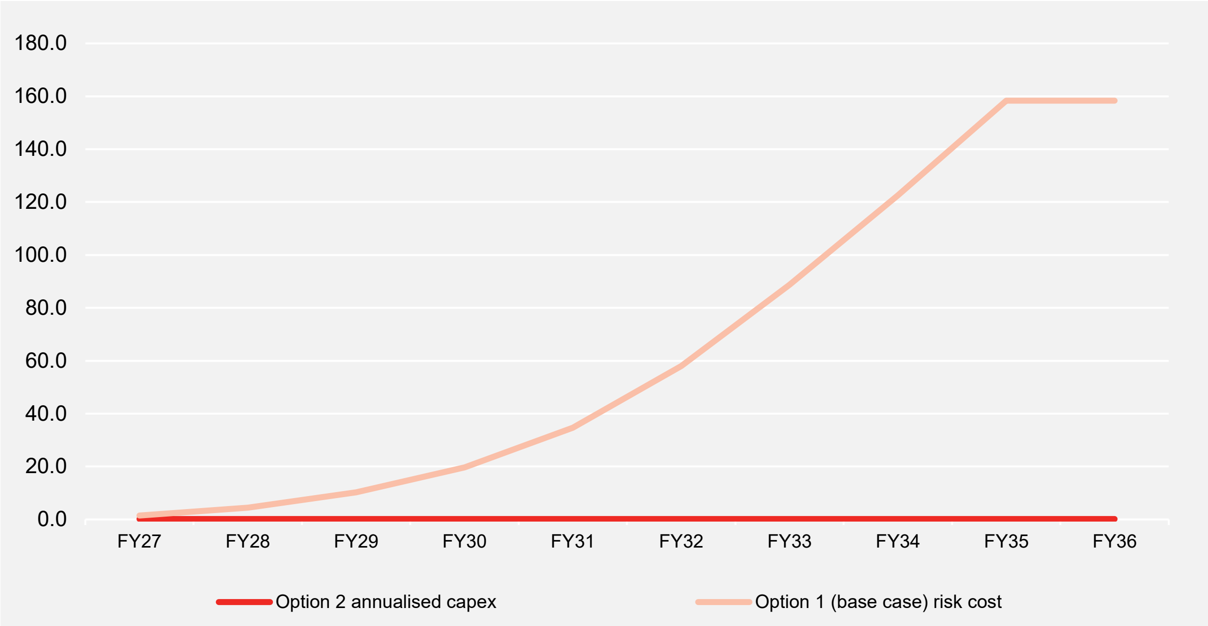
**TABLE 7 EXPENDITURE FORECASTS FOR PREFERRED OPTION ($M, 2026)**

| PROJECT | FY27 | FY28 | FY29 | FY30 | FY31 | TOTAL |
|---|---|---|---|---|---|---|
| Split GLE013 to create a new feeder | 3.9 | - | - | - | - | 3.9 |

2 See PAL RRP MOD 3.3.07 - Geelong feeder - Dec2025 - Public

Assessment of optimal timing found the economic benefits of option two are maximised if it is built in the FY27, when the value of energy at risk exceeds the annualised project cost. This assessment is shown in figure 4.

FIGURE 4 TIMING OF PREFERRED OPTION ($M, 2026)




## 3.4 Sensitivity analysis

Sensitivity analysis was undertaken to understand the impact of increasing and decreasing both the cost and the value of energy at risk mitigated on the net economic benefits of each option in different scenarios. Option two provides the highest net economic benefit under all scenarios and remains the preferred option. Further information on our sensitivity analysis can be found in our attached cost benefit modelling.

# 4. Mount Cottrell feeder 9

MLN021 and MLN031 are high voltage feeders, connected to the Melton zone substation (MLN). These feeders currently provide electricity supply to residential and commercial customers in Mount Cottrell.

## 4.1 Identified need

The Mount Cottrell supply area is growing, with forecast demand increasing across the 2026–31 regulatory period. Our revised proposal forecasts growth on MLN021 and MLN031 that is higher than in our regulatory proposal, shown in table 8.

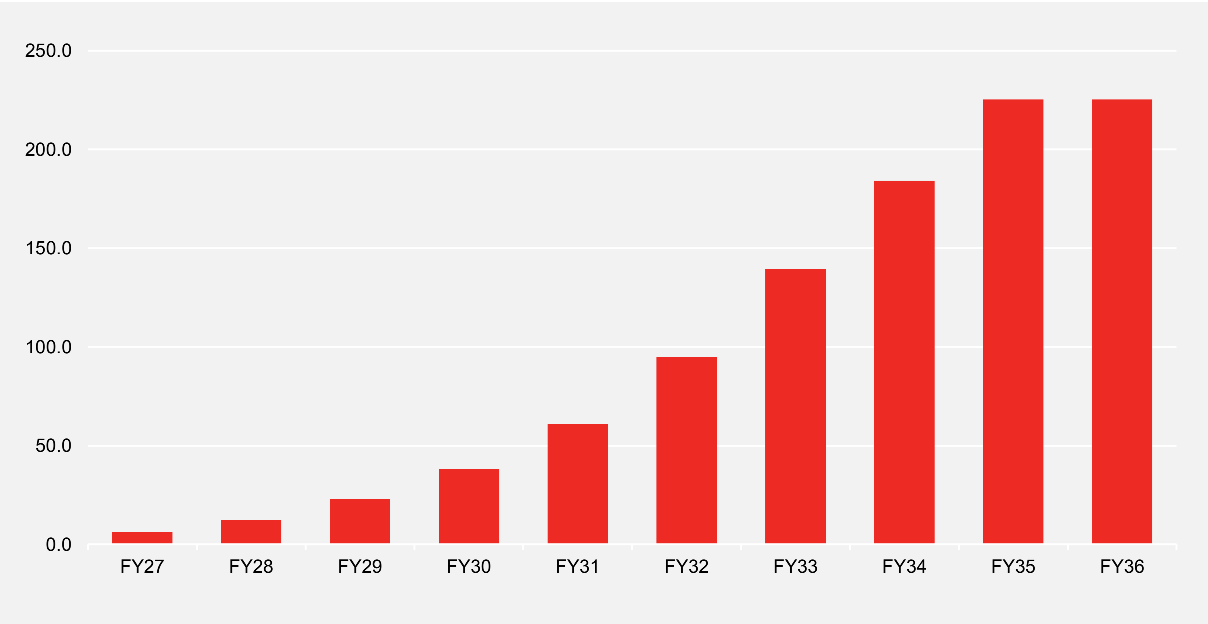
**TABLE 8 COMPARISON OF DEMAND FORECAST ON MLN021 & MLN031 (MW)**

| FEEDER | REGULATORY PROPOSAL | REVISED PROPOSAL |
|---|---|---|
| MLN021 & MLN031 | 36.0 | 51.4 |

Increased demand growth is being driven by electrification of transport and gas, customer growth and consumer energy resources (CER) integration that we now have visibility of following our recent summer. These growth drivers, as well as the network being the most highly utilised distribution networks in Australia, are expected to drive significant demand growth that is expected to exceed the thermal capacity at MLN021 and MLN031, resulting in deteriorating reliability of supply for our customers.

The corresponding total value of energy at risk on MLN021 and MLN031 is shown in figure 5 below.

**FIGURE 5 MLN021 AND MLN031 VALUE OF EXPECTED UNSERVED ENERGY ($M, 2026)**



## 4.2 Assessment of credible options

A summary of the cost and net benefit of the credible option is described in table 9 below. Further detail is provided in our attached cost-benefit modelling.[3]

There are no load transfers available in the area, without further augmentation needed.

### TABLE 9 OPTIONS CONSIDERED AND BENEFIT SUMMARY ($M, 2026)

| DESCRIPTION OF WORKS | ASSESSMENT | PV COST | NET BENEFIT |
|---|---|---|---|
| Option one (base case): no change to existing practices | The forecast loads on feeder MLN021 and MLN031 will result in maximum demand on the feeder exceeding its thermal rating in FY27. This option fails to address the identified need to maintain reliability of supply to customers | - | - |
| Option two: Mount Cottrell feeder 9, construct a new feeder from MTC | Option two establishes a new feeder, connected to the MTC zone substation that will be commissioned in 2025. The new feeder will provide capacity to offload demand from MLN021 and MLN031. This will create sufficient capacity to mitigate energy at risk and maintain a reliable supply of electricity to customers | -1.0 | 2,713.9 |

The existing zone substations and feeders surrounding this area do not have capacity to support the forecast load growth. The only other solution to address the MLN021 and MLN031 feeder constraints is to bring forward the zone substation planned for Rockbank East and build new feeders from that substation. We have not estimated this solution as it is not considered to be credible.

## 4.3 Preferred option

The preferred option to address the identified need is option two. It provides sufficient capacity to manage growing demand and results in the highest net economic benefit for customers.

The forecast expenditure for option two is shown in table 10 below.

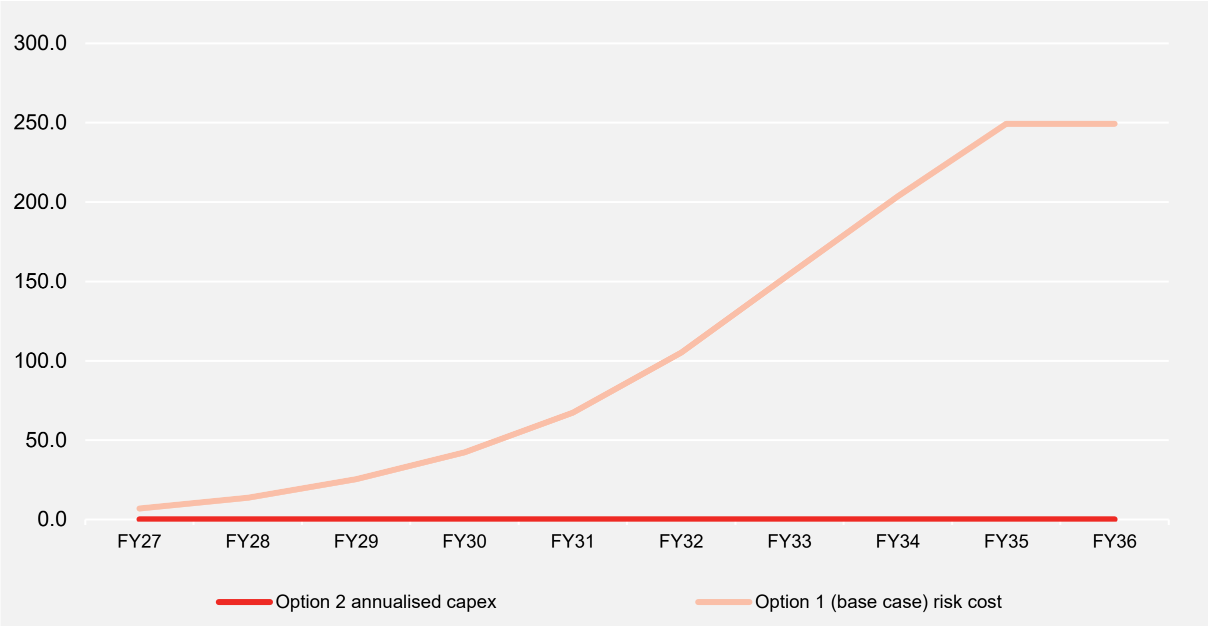
### TABLE 10 EXPENDITURE FORECASTS FOR PREFERRED OPTION ($M, 2026)

| PROJECT | FY27 | FY28 | FY29 | FY30 | FY31 | TOTAL |
|---|---|---|---|---|---|---|
| Mount Cottrell feeder 9 – construct a new feeder from MTC | 1.8 | - | - | - | - | 1.8 |

3 See PAL RRP MOD 3.3.08 - Mount Cottrell feeder 9 - Dec2025 - Public

Assessment of optimal timing found the economic benefits of option two are maximised if it is commissioned in FY27, when the value of energy at risk exceeds the annualised project cost. This assessment is shown in figure 6 below.

**FIGURE 6 TIMING OF PREFERRED OPTION ($M, 2026)**




## 4.4 Sensitivity analysis

Sensitivity analysis was undertaken to understand the impact of increasing and decreasing both the cost and the value of energy at risk mitigated on the net economic benefits of each option in different scenarios. Option two provides the highest net economic benefit under all scenarios and remains the preferred option. Further information on our sensitivity analysis can be found in our attached cost benefit modelling.

# 5. Mount Cottrell feeder 10

MTC012 and TNA023 are high voltage feeders connected to the Mount Cottrell (MTC) and Truganina (TNA) zone substations. These feeders supply electricity to residential and commercial customers in Mount Cottrell.

## 5.1 Identified need

The Mount Cottrell supply area is growing, with forecast demand increasing across the 2026–31 regulatory period. Our revised proposal forecasts growth on MTC012 and TNA023 that is higher than in our regulatory proposal, shown in table 11.

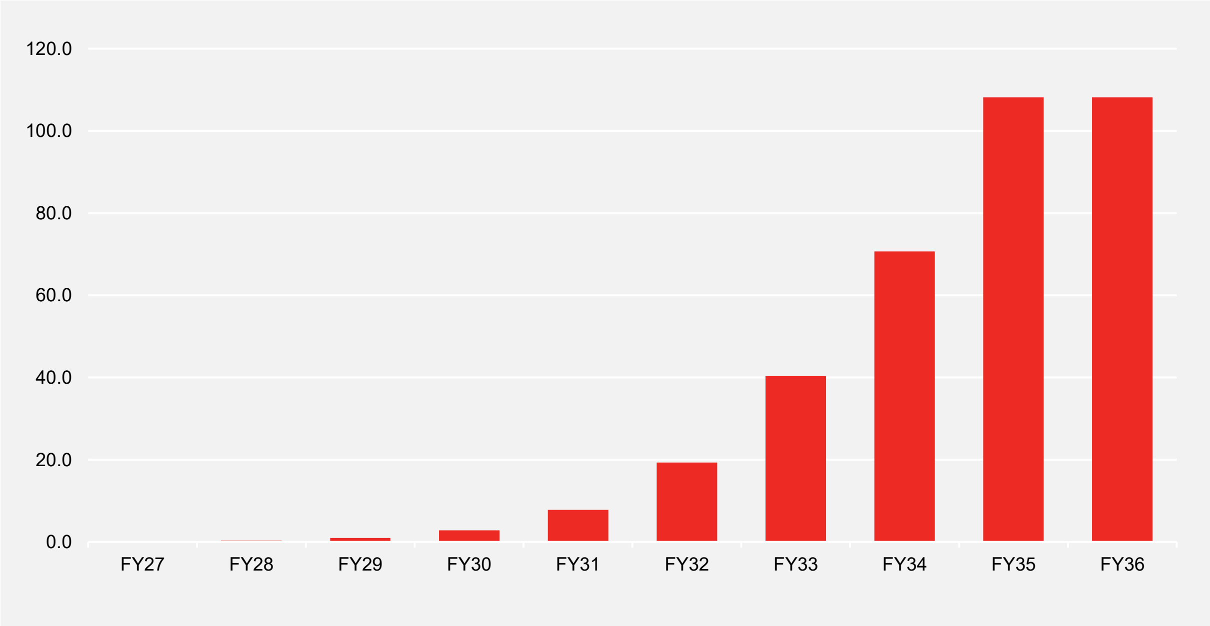
TABLE 11 COMPARISON OF DEMAND FORECAST ON MTC012 AND TNA023 (MW)

| FEEDER | REGULATORY PROPOSAL | REVISED PROPOSAL |
|---|---|---|
| MTC012 and TNA023 | 41.6 | 46.7 |

Increased demand growth is being driven by electrification of transport and gas, customer growth and consumer energy resources (CER) integration that we now have visibility of following our recent summer. These growth drivers, as well as the network being the most highly utilised distribution networks in Australia, are expected to drive significant demand growth that is expected to exceed the thermal capacity at MTC012 and TNA023, resulting in deteriorating reliability of supply for our customers.

The corresponding combined value of energy at risk supplied by MTC012 and TNA023 is shown in figure 7 below.

FIGURE 7 MTC012 AND TNA023 VALUE OF EXPECTED UNSERVED ENERGY ($M, 2026)



## 5.2 Assessment of credible options

Several credible options were considered to meet the identified need. A summary of the cost and net benefit of each credible option is described in table 12 below. Further detail is provided in our attached cost-benefit modelling.[4]

There are no load transfers available in the area, without further augmentation needed.

TABLE 12 OPTIONS CONSIDERED AND BENEFIT SUMMARY ($M, 2026)

| DESCRIPTION OF WORKS | ASSESSMENT | PV COST | NET BENEFIT |
|---|---|---|---|
| Option one (base case): no change to existing practices | The forecast loads on feeder MTC012 and TNA023 will result in maximum demand on the feeder exceeding its thermal rating in FY29. Option one fails to address the identified need to maintain reliability of supply to customers | - | - |
| Option two: Mount Cottrell feeder 10, construct a new feeder from MTC | Option two establishes a new feeder to provide an additional 18.5MVA in capacity to facilitate load transfer from MTC012 and TNA023. This option will create sufficient capacity to mitigate energy at risk and maintain a reliable supply to customers | -2.4 | 952.9 |

The existing zone substations and feeders surrounding this area do not have capacity to support the forecast load growth. The only other solution to address the MTC012 and TNA023 feeder constraints is to bring forward the zone substation planned for Rockbank East and build new feeders from that substation. We have not estimated this solution as it is not considered to be credible.

## 5.3 Preferred option

The preferred option to address the identified need is option two. It provides sufficient capacity to manage growing demand and results in the highest net economic benefit for customers.

The forecast expenditure for option two is shown in table 13.

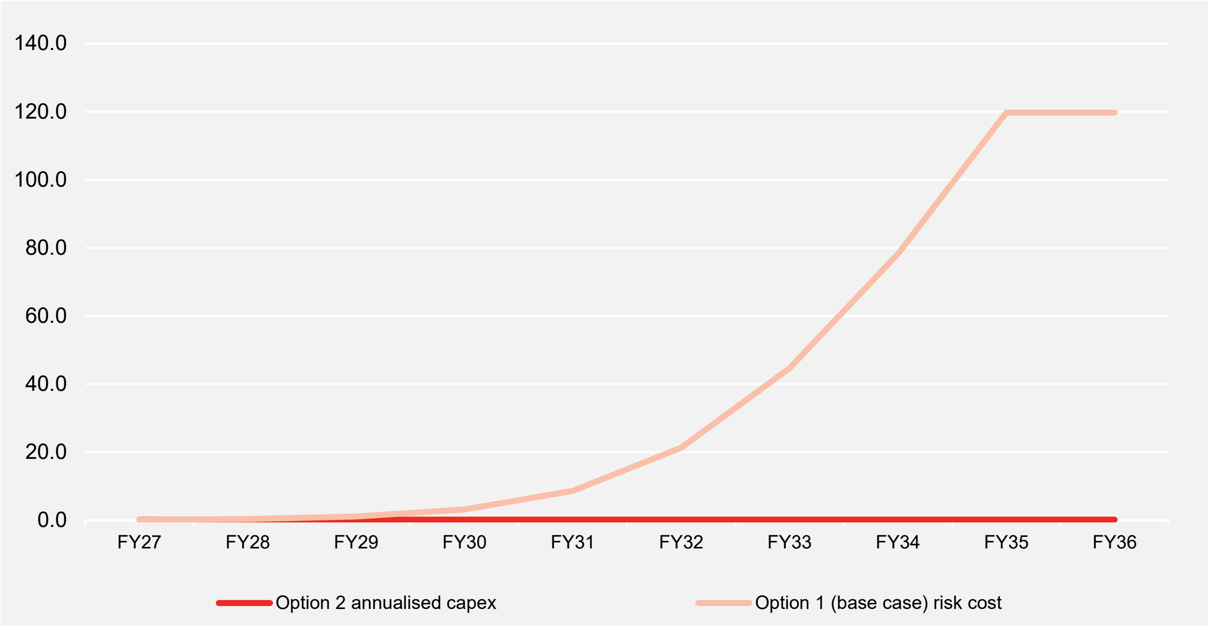
TABLE 13 EXPENDITURE FORECASTS FOR PREFERRED OPTION ($M, 2026)

| PROJECT | FY27 | FY28 | FY29 | FY30 | FY31 | TOTAL |
|---|---|---|---|---|---|---|
| Mount Cottrell feeder 10 – construct a new feeder from MTC | - | 4.4 | - | - | - | 4.4 |

[4] See PAL RRP MOD 3.3.09 - Mount Cottrell feeder 10 - Dec2025 - Public

Assessment of optimal timing found the economic benefits of option two are maximised if it is commissioned no later than FY28, when the value of energy at risk exceeds the annualised project cost. This assessment is shown in figure 8 below.

**FIGURE 8 TIMING OF PREFERRED OPTION ($M, 2026)**




## 5.4 Sensitivity analysis

Sensitivity analysis was undertaken to understand the impact of increasing and decreasing both the cost and the value of energy at risk mitigated on the net economic benefits of each option in different scenarios. Option two provides the highest net economic benefit under all scenarios and remains the preferred option. Further information on our sensitivity analysis can be found in our attached cost benefit modelling.

# 6. Mount Cottrell feeder 12

TNA011, TNA013 and TNA024 are high voltage feeders connected to the Truganina zone substation. These feeders supply electricity to residential and commercial customers in Truganina, Mount Cottrell, Mount Atkinson and Ravenhall.

## 6.1 Identified need

The Mount Cottrell supply area is growing, with forecast demand increasing across the 2026–31 regulatory period. Our revised proposal forecasts growth on TNA011, TNA013 and TNA024 is higher than our regulatory proposal, shown in table 14.

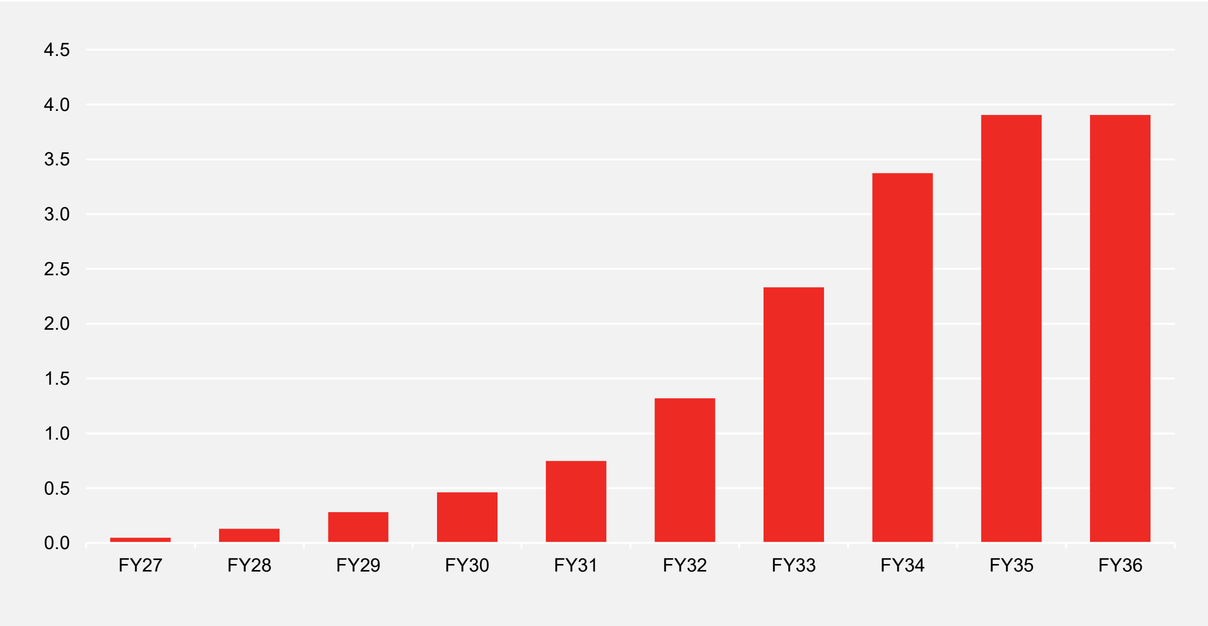
**TABLE 14 COMPARISON OF DEMAND FORECAST ON MTC012 (MW)**

| FEEDER | REGULATORY PROPOSAL | REVISED PROPOSAL |
|---|---|---|
| TNA011, TNA013 and TNA024 | 24.8 | 31.2 |

Increased demand growth is being driven by electrification of transport and gas, customer growth and consumer energy resources (CER) integration that we now have visibility of following our recent summer. These growth drivers, as well as the network being the most highly utilised distribution networks in Australia, are expected to drive significant demand growth that is expected to exceed the thermal capacity of these feeders in 2027, resulting in deteriorating reliability of supply for our customers.

The corresponding total value of energy at risk supplied by TNA011, TNA013 and TNA024 is shown in figure 9 below.

**FIGURE 9 TNA011, TNA013 AND TNA024 VALUE OF EXPECTED UNSERVED ENERGY ($M, 2026)**



## 6.2 Assessment of credible options

Several credible options were considered to meet the identified need. A summary of the cost and net benefit of each credible option are described in table 15 below. Further detail is provided in our attached cost-benefit modelling.[5]

Load transfer onto adjacent feeders is not available in the area.

**TABLE 15 OPTIONS CONSIDERED AND BENEFIT SUMMARY ($M, 2026)**

| DESCRIPTION OF WORKS | ASSESSMENT | PV COST | NET BENEFIT |
|---|---|---|---|
| Option one (base case): no change to existing practices | The forecast loads on feeders TNA011, TNA013 and TNA024 will result in maximum demand on the feeder exceeding its thermal rating in FY27. Option one fails to address the identified need to maintain reliability of supply to customers | - | - |
| Option two: Mount Cottrell feeder 12 – construct a new feeder from MTC | Option two establishes a new feeder to provide an additional 18.5MVA in capacity to facilitate load transfer from TNA011, TNA013 and TNA024. This option will create sufficient capacity to mitigate energy at risk and maintain a reliable supply to customers | -1.1 | 37.3 |

The existing zone substations and feeders surrounding this area do not have capacity to support the forecast load growth. The only other solution to address the TNA011, TNA013 and TNA024 feeder constraints is to bring forward the zone substation planned for Rockbank East and build new feeders from that substation. We have not estimated this solution as it is not considered to be credible.

## 6.3 Preferred option

The preferred option to address the identified need is option two. It provides sufficient capacity to manage growing demand and results in the highest net economic benefit for customers.

The forecast expenditure for option two is shown in table 16 below.

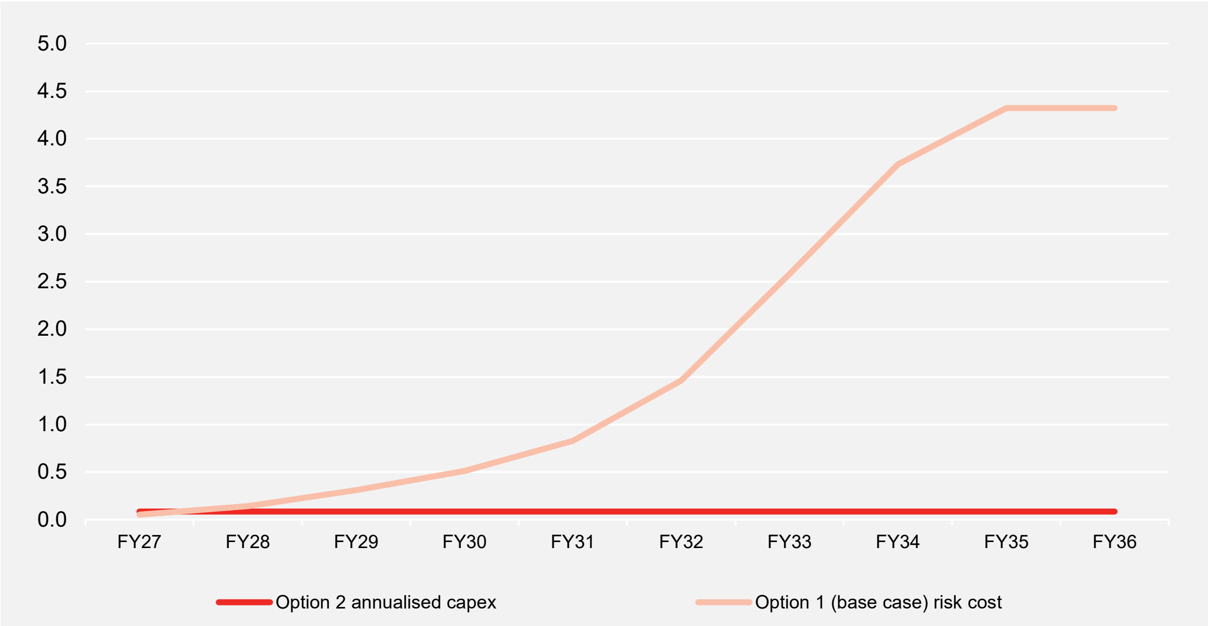
**TABLE 16 EXPENDITURE FORECASTS FOR PREFERRED OPTION ($M, 2026)**

| PROJECT | FY27 | FY28 | FY29 | FY30 | FY31 | TOTAL |
|---|---|---|---|---|---|---|
| Mount Cottrell feeder 12 – construct a new feeder from MTC | 2.0 | - | - | - | - | 2.0 |

Assessment of optimal timing found the economic benefits of option two are maximised if it is commissioned no later than FY27, as the value of energy at risk exceeds the annualised capex cost in FY28. This assessment is shown in figure 10.

5 See PAL RRP MOD 3.3.10 - Mount Cottrell feeder 12 - Dec2025 - Public

**FIGURE 10 TIMING OF PREFERRED OPTION ($M, 2026)**




## 6.4 Sensitivity analysis

Sensitivity analysis was undertaken to understand the impact of increasing and decreasing both the cost and the value of energy at risk mitigated on the net economic benefits of each option in different scenarios. Option two provides the highest net economic benefit under all scenarios and remains the preferred option. Further information on our sensitivity analysis can be found in our attached cost benefit modelling.

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