CITIPOWER

AUGMENTATION

HV FEEDER UPGRADES

CP RRP BUS 3.3.04 – PUBLIC
2026–31 REVISED PROPOSAL

Table of contents

1. Overview

In our regulatory proposal, we included expenditure to resolve demand-driven constraints on high-voltage (HV) feeders in Melbourne's central business district (CBD) and inner suburbs. Forecast residential, commercial and industrial growth in these supply areas has created energy at risk in the 2026–31 regulatory period, with augmentation on three HV feeders in North Melbourne (BQ017), St Kilda (SK001) and West Brunswick (WB011) identified to resolve these constraints.

The AER accepted our proposal in its draft decision, noting that proposed upgrades were prudent and efficient investments that incorporated reasonable assumptions with 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 four HV feeder projects that efficiently mitigate energy at risk, including:

- AR010 from the Armadale (AR) zone substation
- BC013 from the Balaclava (BC) zone substation
- NR015 from the North Richmond (NR) zone substation
- WA023 from the Heffernan Lane (i.e. Celestial Avenue) 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 $1 million.

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 feeder upgrades	8.9	8.9	20.5

A summary of the additional HV feeder projects included within our revised proposal are 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	2.6	3.3	1.3	1.6	0.1	8.9
AR010 –feeder cable upgrade	-	-	-	3.0	-	3.0
BC013 – feeder exit and cable upgrade	-	-	-	2.1	-	2.1
NR015 – feeder cable upgrade	-	-	4.4	-	-	4.4
WA023 – replace paper lead cable	2.2	-	-	-	-	2.2
Revised proposal	**4.8**	**3.3**	**5.7**	**6.7**	**0.1**	**20.5**

2. Armadale feeder: AR010

AR010 is a high voltage feeder with a thermal capacity of 5.7MVA, connected to the Armadale zone substation (AR). This feeder supplies electricity to residential and commercial customers in the Balaclava and Armadale supply areas.

2.1 Identified need

The Armadale supply area is growing, with forecast demand increasing across the 2026–31 regulatory period. Our revised proposal forecasts growth on AR010 that is higher than our regulatory proposal, shown in table 3.

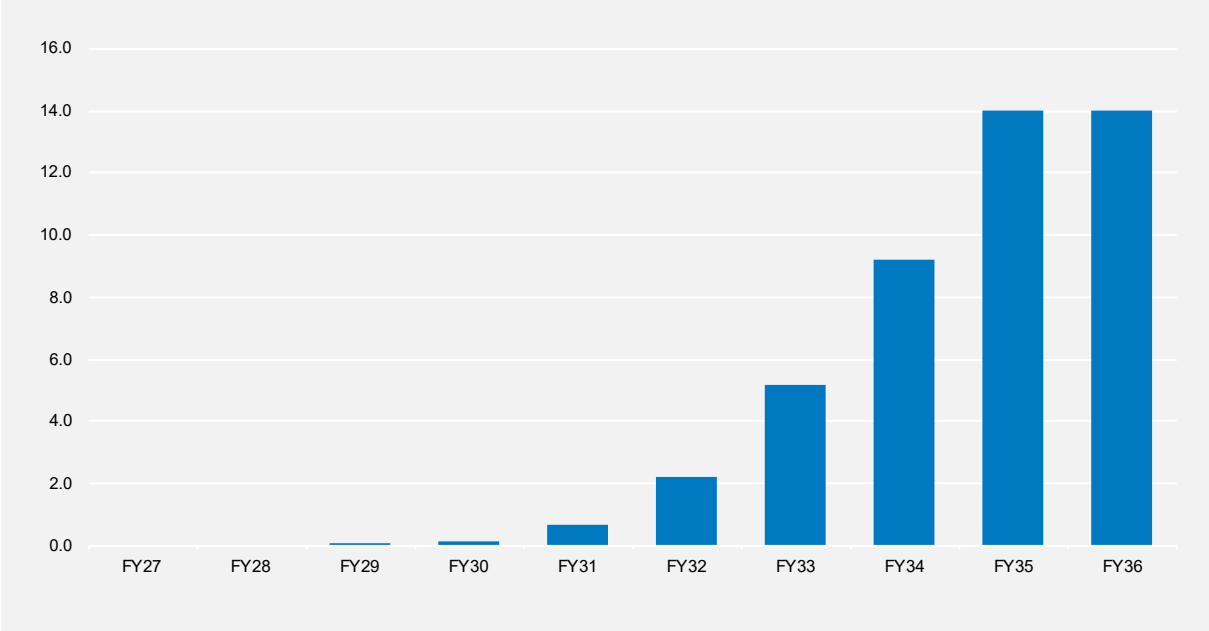
TABLE 3 COMPARISON OF DEMAND FORECAST ON AR010 (MW)

FEEDER	REGULATORY PROPOSAL	REVISED PROPOSAL
AR010	5.0	7.0

Increased demand growth is 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. Without intervention, demand growth is expected to exceed the thermal capacity at AR010 in 2029, resulting in deteriorating reliability of supply for our customers.

The total value of energy at risk supplied by AR010 is shown in figure 1 below.

FIGURE 1 AR010: 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 feeder from Armadale substation and upgrading adjacent feeders to transfer load onto. A summary of the

cost and net benefit of each credible option is described in table 4 below, with further detail provided in our attached cost-benefit modelling.[1]

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

TABLE 4 AR010: 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 AR010 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: upgrade BC012 feeder to transfer AR010 load	This option would upgrade our BC012 feeder, connected to the BC zone substation. The upgraded feeder will maintain sufficient capacity to offload demand from AR010 onto BC012. This will create sufficient capacity to mitigate energy at risk and maintain a reliable supply of electricity to customers	-0.7	124.0
Option three: AR010 feeder cable upgrade	This option would upgrade 600m of underground cable and 250m of overhead thermal upgrades on the AR010 feeder. This will create sufficient capacity to mitigate energy at risk and maintain a reliable supply of electricity to customers	-1.5	144.0

2.3 Preferred option

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

The forecast expenditure for option two is shown in table 5 below.

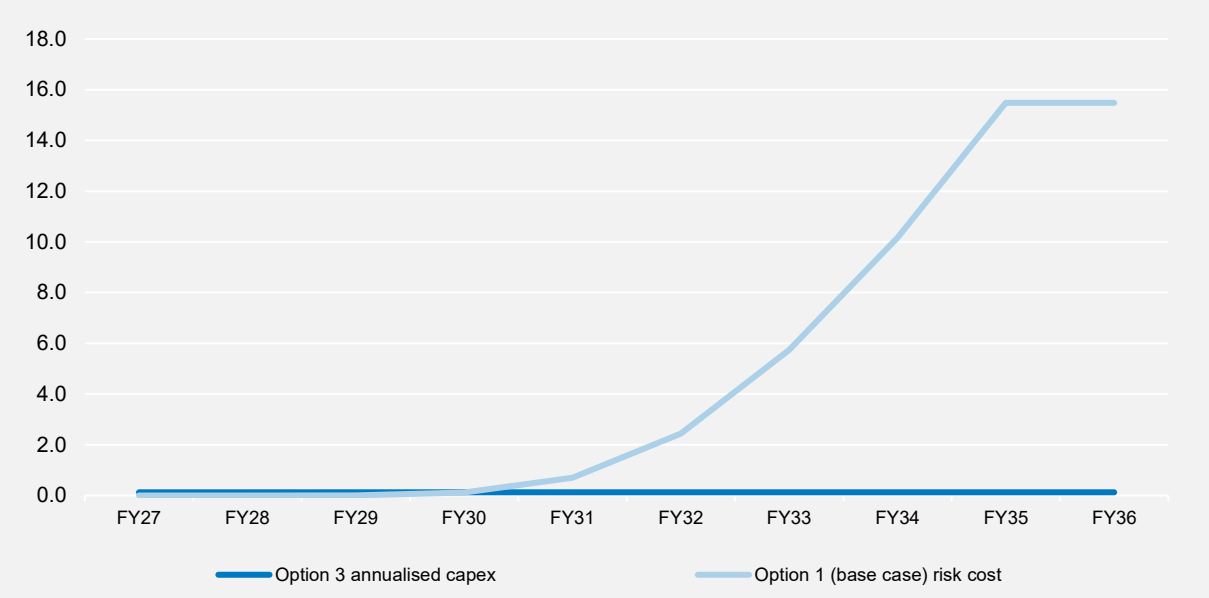
TABLE 5 AR010: EXPENDITURE FORECASTS FOR PREFERRED OPTION ($M, 2026)

PROJECT	FY27	FY28	FY29	FY30	FY31	TOTAL
AR010 feeder cable upgrade	-	-	-	3.0	-	3.0

Assessment of optimal timing found the economic benefits of option three are maximised if it is commissioned no later than FY30, prior to the value of energy at risk exceeding the annualised project cost in FY31. This assessment is shown in figure 2 below.

[1] See CP RRP MOD 3.3.04 - Armadale feeder - Dec2025 - Public

FIGURE 2 AR010: 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. Balaclava feeder: BC013

BC013 is a high voltage feeder with a thermal capacity of 5.0MVA, connected to the Balaclava zone substation (BC). This feeder supplies electricity to residential and commercial customers in the inner south of Melbourne.

3.1 Identified need

The Balaclava supply area is growing, with forecast demand increasing across the 2026–31 regulatory period. Our revised proposal forecasts growth on BC013 is higher than our regulatory proposal, predominantly by increased visibility of electrification, shown in table 6 .

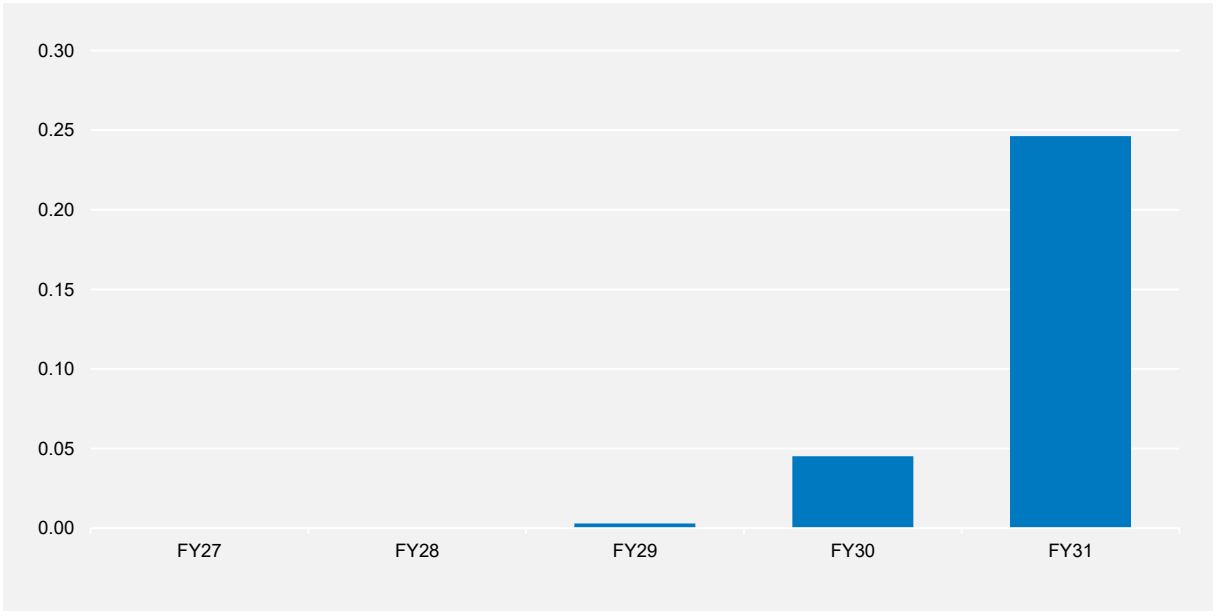
TABLE 6 COMPARISON OF DEMAND FORECAST ON BC013 (MW)

FEEDER	REGULATORY PROPOSAL	REVISED PROPOSAL
BC013	4.6	6.1

Increased demand growth is 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. Without intervention, demand growth is expected to exceed the thermal capacity at BC013 in 2030, resulting in deteriorating reliability of supply for our customers.

The total value of energy at risk supplied by BC013 is shown in figure 3 below.

FIGURE 3 BC013 VALUE OF EXPECTED UNSERVED ENERGY ($M, 2026)



3.2 Assessment of credible options

Several credible options were considered to meet the identified need, including upgrading the BC013 feeder and upgrading adjacent feeders to transfer load onto. A summary of the cost and net benefit of

each credible option are described in table 7 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 7 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 BC013 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: BC013 feeder exit and cable upgrade	This option would replace BC013 feeder exit cable and 470m of backbone with a larger cable and uprate 350m of conductor. This will ensure the feeder has sufficient thermal capacity to mitigate energy at risk.	-1.1	67.7
Option three: BC015 upgrade feeder	This option replaces 692m of underground cable and replaces 870m of conductors on the BC015 feeder. Maintaining sufficient capacity to offload demand from BC013 and share load across feeders, mitigating energy at risk and maintaining a reliable supply of electricity to customers.	-1.7	67.1

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 8 below.

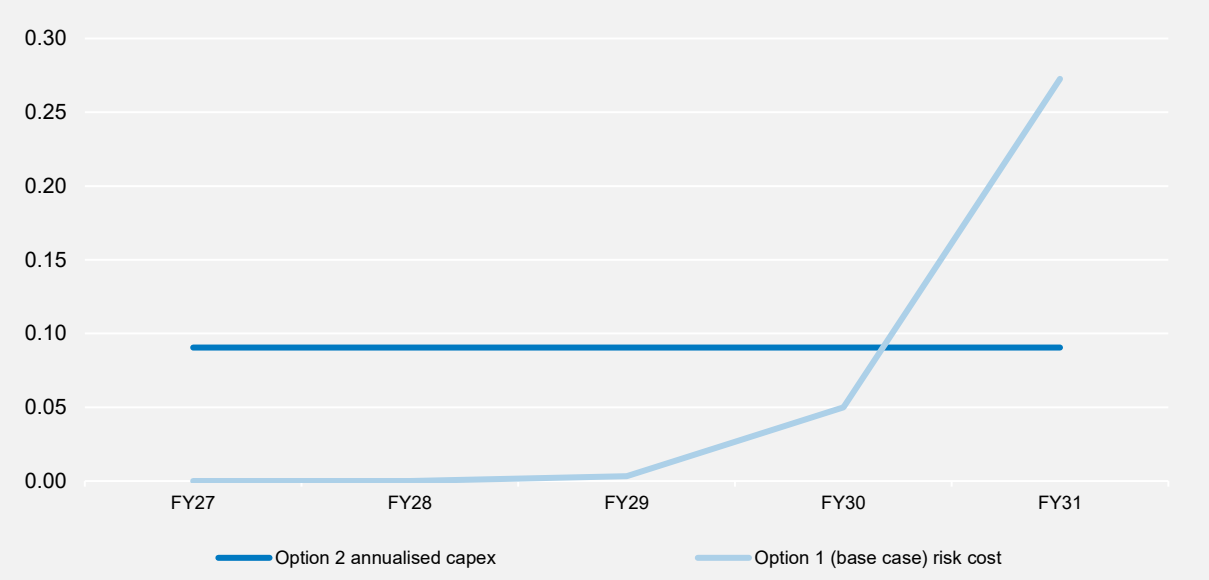
TABLE 8 EXPENDITURE FORECASTS FOR PREFERRED OPTION ($M, 2026)

PROJECT	FY27	FY28	FY29	FY30	FY31	TOTAL
BC013 feeder exit and cable upgrade	-	-	-	2.1	-	2.1

[2] See CP RRP MOD 3.3.05 - Balaclava feeder - Dec2025 - Public

Assessment of optimal timing found the economic benefits of option two are maximised if it is commissioned no later than FY30, when the value of energy at risk exceeds the annualised project cost. This assessment is shown in figure 4 below.

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. North Richmond feeder: NR015

NR015 is a high voltage feeder with a thermal capacity of 5.7MVA, connected to the North Richmond zone substation (NR). This feeder provides electricity supply to residential and commercial customers in the Richmond and Collingwood areas.

4.1 Identified need

The North Richmond supply area is growing, with forecast demand increasing across the 2026–31 regulatory period. Our revised proposal forecasts growth on NR015 that is higher than our regulatory proposal, shown in table 9.

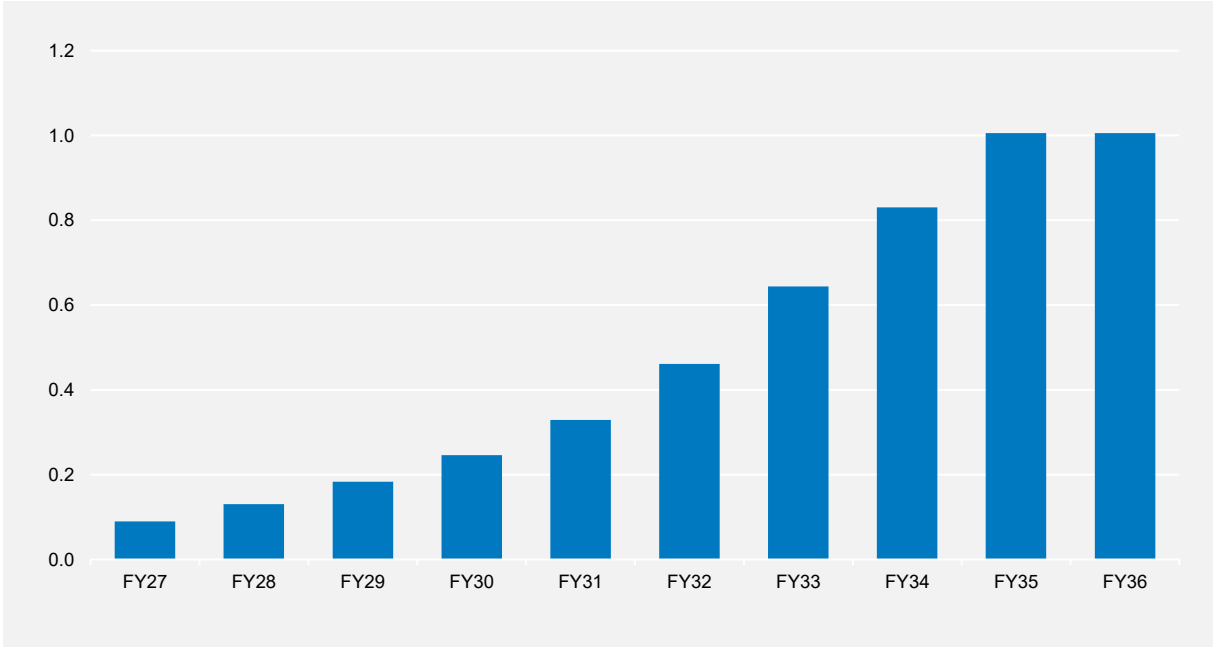
TABLE 9 COMPARISON OF DEMAND FORECAST ON NR015 (MW)

FEEDER	REGULATORY PROPOSAL	REVISED PROPOSAL
NR015	5.0	6.0

Increased demand growth is 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. Without intervention, demand growth is expected to exceed the thermal capacity at NR015 in 2029, resulting in deteriorating reliability of supply for our customers.

The corresponding total value of energy at risk supplied by NR015 is shown in figure 5 below.

FIGURE 5 NR015 VALUE OF EXPECTED UNSERVED ENERGY ($M, 2026)



4.2 Assessment of credible options

Several credible options were considered to meet the identified need, including upgrading a section of underground cable on feeder NR015 to remove some poorly rated cable, and an option to replace the feeder exit as well as upgrading the poorly rated cable. A summary of the cost and net benefit of each

credible option are described in table 10 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 10 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 NR015 will result in maximum demand on the feeder exceeding its thermal rating inFY27. Option one fails to address the identified need to maintain reliability of supply to customers		-
Option two: NR015 feeder cable upgrade	This option replaces 980m of existing cable sections on NR015, increasing the thermal rating to 5.7 MVA. This will ensure the feeder has sufficient thermal capacity to mitigate most of the forecast energy at risk.	-2.3	9.3
Option three: NR015 feeder cable and exit upgrade	This option is the same as option two with the addition of replacing 638m of feeder exit cable, on NR015, increasing the thermal rating to 6.0MVA. This will ensure the feeder has sufficient thermal capacity to mitigate most of the forecast energy at risk.	-3.4	8.0

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 11.

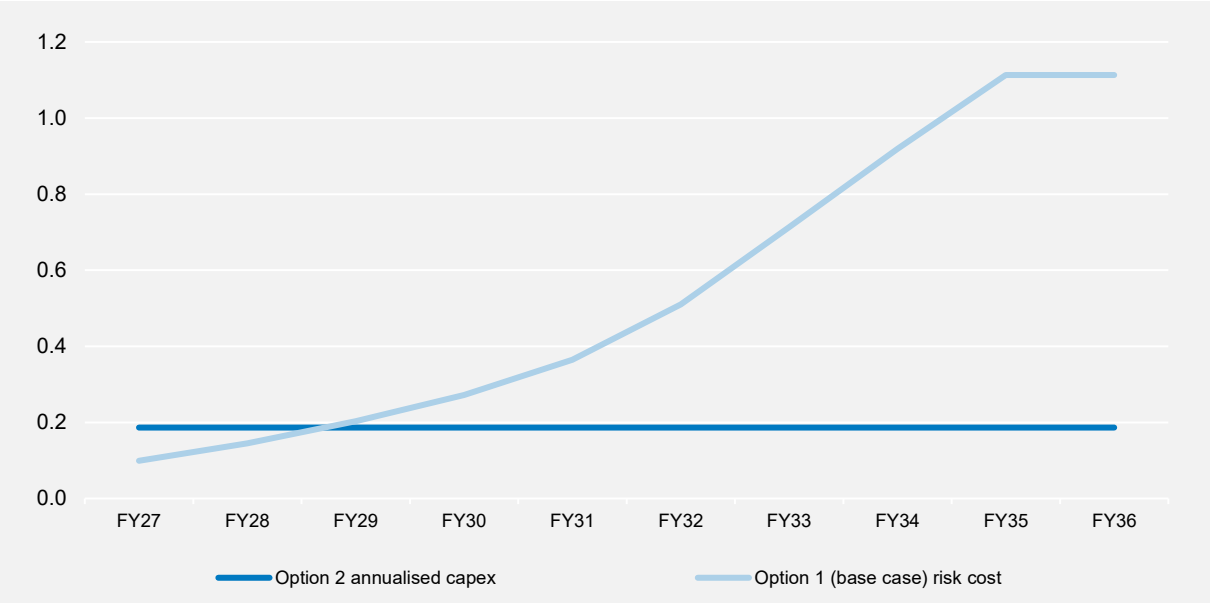
TABLE 11 EXPENDITURE FORECASTS FOR PREFERRED OPTION ($M, 2026)

PROJECT	FY27	FY28	FY29	FY30	FY31	TOTAL
NR015 feeder cable upgrade	-	-	4.4	-	-	4.4

Assessment of optimum timing found the economic benefits of option two are maximised if it is commissioned no later than FY29, when the value of energy at risk exceeds the annualised project cost. This assessment is shown in Figure 6 Timing of preferred option ($M, 2026)figure 6.

[3] See CP RRP MOD 3.3.06 - North Richmond feeder - Dec2025 - Public

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. Heffernan Lane feeder: WA023

WA023 is a high voltage feeder with a thermal capacity of 2.9MVA, connected to the Heffernan Lane zone substation (WA). This feeder supplies electricity to customers in the Melbourne CBD, specifically the landmark China town area.

5.1 Identified need

The Heffernan Lane supply area is growing, with forecast demand increasing across the 2026–31 regulatory period. Our revised proposal forecasts growth on WA023 is higher than our regulatory proposal, as seen in table 12 below.

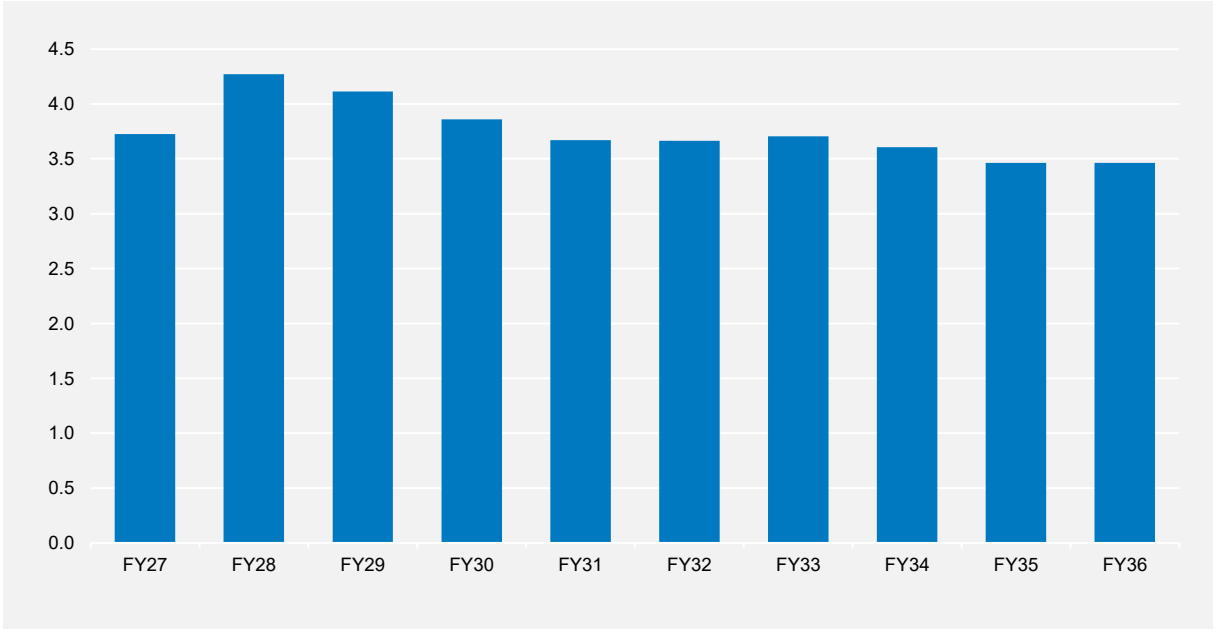
TABLE 12 COMPARISON OF DEMAND FORECAST ON WA023 (MW)

FEEDER	REGULATORY PROPOSAL	REVISED PROPOSAL
WA023	3.2	4.2

Increased demand growth is 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. Without intervention, demand growth is expected to exceed the thermal capacity at WA023 in 2027, resulting in deteriorating reliability of supply for our customers.

The corresponding total value of energy at risk supplied by WA023 is shown in figure 7 below.

FIGURE 7 WA023 VALUE OF EXPECTED UNSERVED ENERGY ($M, 2026)



5.2 Assessment of credible options

Several credible options were considered to meet the identified need, including upgrading more sections of the feeder to maintain the desired thermal rating and transferring load onto adjacent feeders, but these options were not credible. A summary of the cost and net benefit of each credible

option are described in table 13 below. Further detail is provided in our attached cost-benefit modelling.[4] Transfers are not possible due to feeder arrangement.

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

TABLE 13 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 WA023 will result in maximum demand on the feeder exceeding its thermal rating in the 2026–31 regulatory period. Option one fails to address the identified need to maintain reliability of supply to customers.	-	-
Option two: WA023 replace 100m of 0.1in Cu cable	This option upgrades a 100m section of WA023 feeder, achieving a new thermal rating of 3.6MVA. This will ensure the feeder has sufficient thermal capacity to mitigate most of the forecast energy at risk.	-0.3	49.8
Option three: WA023 replace paper lead cable	This option upgrades a 500m section of paper lead cable, on WA023 feeder achieving a new thermal rating of 5MVA in the first section. This will ensure the feeder has sufficient thermal capacity to mitigate energy at risk.	-1.3	53.0
Option four: WA023 replace imperial cable	This option upgrades a 650m section of imperial cable, on WA023 feeder achieving a new thermal rating of 6MVA. This will ensure the feeder has sufficient thermal capacity to mitigate energy at risk.	-2.0	52.2

5.3 Preferred option

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

The forecast expenditure for option three is shown in table 14 below.

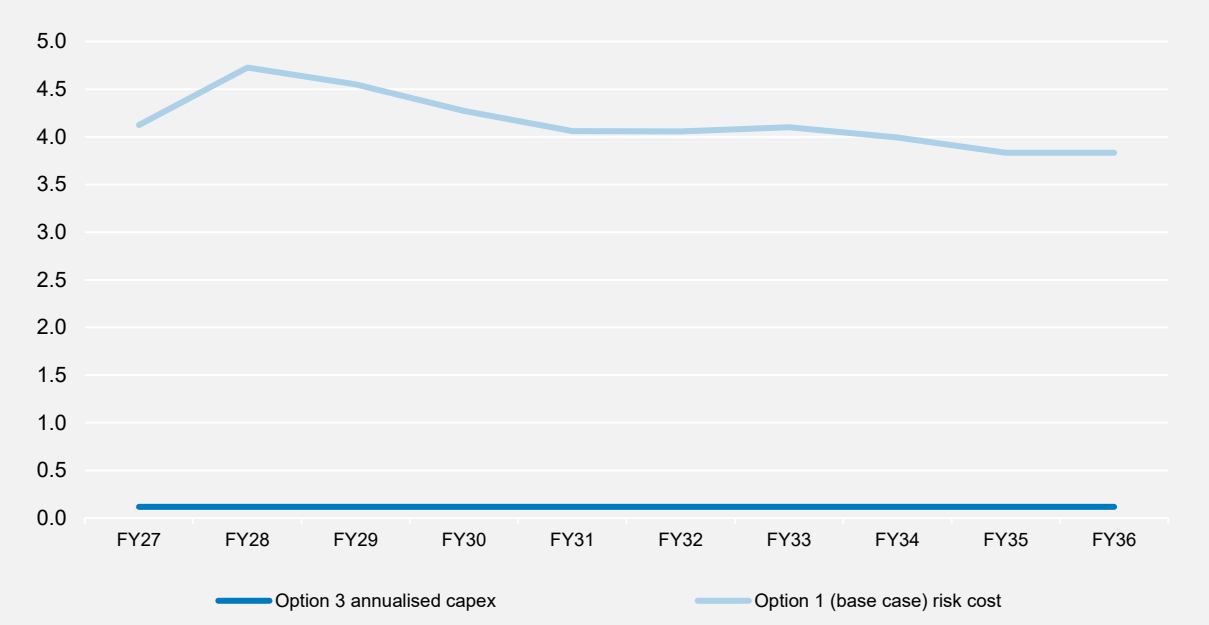
TABLE 14 EXPENDITURE FORECASTS FOR PREFERRED OPTION ($M, 2026)

PROJECT	FY27	FY28	FY29	FY30	FY31	TOTAL
WA023 replace paper lead cable	2.2	-	-	-	-	2.2

[4] See CP RRP MOD 3.3.07 - Heffernan Lane feeder - Dec2025 - Public

Assessment of optimal timing found the economic benefits of option three are maximised if it is commissioned no later than FY27, when the value of energy at risk exceeds the annualised project cost. This assessment is shown in figure 8.

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.

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