CITIPOWER

AUGMENTATION

YARRA TRAMS POLE RELOCATION

CP BUS 3.11 – PUBLIC

2026–31 REGULATORY PROPOSAL

Table of contents

1. Overview

The Yarra Trams network consists of approximately 16,000 poles to support overhead tram assets. CitiPower assets are currently attached to 7,800 of those tramway poles, to minimise the need for replicative infrastructure and due to physical restrictions for electricity infrastructure in inner-city and suburban streets.

Yarra Trams has an ongoing pole renewal program that will continue through the 2026–31 regulatory period, where Yarra Trams replace their aging poles with new poles.

When Yarra Trams replaces one of their aging poles, we must relocate our assets to a suitable alternative location to ensure we continue to deliver a safe and reliable electricity supply for our customers. Site-specific options to relocate our assets are investigated, with the most efficient option typically being to relocate our assets to the new Yarra Trams pole.

Table 1 below outlines the forecast capital expenditure required in the 2026–31 regulatory period to relocate our assets as part of the Yarra Trams pole renewal program.

TABLE 1 EXPENDITURE FORECASTS FOR PREFERRED OPTION ($M, 2026)

EXPENDITURE FORCAST	FY27	FY28	FY29	FY30	FY31	TOTAL
Capital expenditure	3.9	3.9	3.9	3.9	3.9	19.7

2. Background

Yarra Trams maintains a network of electricity infrastructure across Melbourne to power their trams. The tram network consists of approximately 16,000 poles to support overhead tram assets.

Yarra Trams has been undertaking a pole renewal program, known as the Yarra Trams renewal program, to maintain the safety and reliability of their tram network since 2018. This program aims to replace end of life poles with new ones to maintain operation of its tram network.

To minimise the need for new electricity infrastructure, and due to physical limitations on where we can locate electricity infrastructure in the streets, we attach our assets, including cross-arms, low voltage conductors, underground terminations, service lines and public lights, to Yarra Trams poles where possible.

A large proportion of the Yarra Trams poles are located in our network. We have assets that are currently attached to 7,800 Yarra Trams poles.

Figure 1 below shows an example of where our assets are attached to Yarra Trams poles.

FIGURE 1 YARRA TRAMS POLE WITH OUR ASSETS

2.1 Current pole replacement process

During tram track renewal works, such as the refurbishment of tram stops or upgrading existing track sections, Yarra Trams often need to replace or relocate their poles to new locations. Yarra Trams may also need to upgrade their conductors to facilitate more modern trams that use more electricity, which also requires Yarra trams to replace or relocate their poles.

The process that has been followed to date to ensure the Yarra Trams pole renewal program does not impact electricity customers is as follows:

- Yarra Trams identifies end-of-life poles along a tram route
- Yarra trams installs another pole within three meters from the end-of-life pole as a replacement (i.e. poles are not replaced in-situ)

- Yarra Trams requests for us to remove distribution assets from their end-of-life poles, which will allow them to remove their assets from the tram network
- upon request, we remove our distribution assets from end-of-life Yarra Trams poles and replace them in a suitable alternative location. We have typically relocated our assets to the new Yarra Trams pole due to physical limitations in space-constrained inner-suburban areas, however other arrangements such as undergrounding can sometimes be necessary, for example due to safety reasons associated with the location of the new pole
- Yarra Trams then removes their end-of-life pole that are no longer required.

We are also required to adhere to safety clearance requirements under the Electricity Safety Regulations Act 2019 that specify we must place our poles a certain distance away from other structures.[1] Attaching our assets to Yarra Trams poles complies with our obligations under the Electricity Safety Regulations 2019 Act.

Figure 2 below shows an example of where our assets have been moved to a new Yarra Trams pole but the old Yarra Trams pole (with the blue roll-up cover) has not yet been removed.

FIGURE 2 NEW YARRA TRAMS POLE WITH OUR ASSETS AND OLD YARRA TRAMS POLE

[1] Electricity Safety (General) Regulations 2019, clause 611

3. Identified need

The identified need is to maintain a reliable and safe supply of electricity for customers supplied by electricity assets that will be impacted by the Yarra Trams pole replacement program.

As discussed in section 2, Yarra Trams has been undertaking a pole renewal program to maintain the safety and reliability of their tram network since 2018. This program will continue through the 2026–31 regulatory period.

When Yarra Trams replaces or relocates their poles that contain our assets, we are required to remove our assets from their poles and find a suitable alternative location to position our infrastructure. Without a suitable alternative location, we would not meet our obligations to maintain reliability or safety of electricity supply for our customers.

4. Options analysis

Several options were considered to maintain a reliable and safe supply of electricity to customers impacted by Yarra Trams' pole replacement program. These options have been considered on a least-cost technically feasible basis given that the benefits of each option are similar, which is to maintain a safe and reliable electricity supply.

Our existing approach to managing assets impacted by Yarra Trams' replacement program

When all Yarra Trams poles within a project area have been installed, we design and plan the most cost-effective options to remove our assets from the end-of-life Yarra trams poles.

We also complete a safety risk assessment during design as our existing assets are required to satisfy the regulatory clearance obligations outlined in section 2.

Most of the time, the least cost technically acceptable (LCTA) option is to relocate our assets to the newly installed pole. However, we may need to install a new distribution pole if attaching our assets to the new Yarra trams pole compromises other safety standards or the work required is not the LCTA option.

A summary of the costs of each option considered is described below and shown in table 2.

TABLE 2 OPTIONS SUMMARY ($M, 2026)

OPTION		COSTS
1	Maintain status quo	-
2	Maintain existing approach	19.7
3	Install new poles or move assets underground	59.2

A full description of the costs and optimal timing of the preferred option can be found in our detailed cost-benefit modelling.[2] For both option two and three

4.1 Option one: do not relocate assets

Option one assumes we remove our assets from Yarra Trams' poles that are being decommissioned and we do not relocate them to a new location. This option would result in permanent disconnection of customers that are currently supplied from our assets on Yarra Tram poles.

This option is not credible as it would result in us being non-compliant with our obligations to avoid disconnecting our customers.

[2] CP MOD 3.10 - Yarra Trams pole relocation - Jan2025 - Public

4.2 Option two: continue existing asset relocation approach

Under option two, we would deploy an efficient combination of the following three solutions to maintain a safe and reliable supply of electricity to impacted customers:

- relocate our assets to new or relocated Yarra Trams poles
- relocating our assets to a new distribution pole in the place of the old Yarra Trams pole
- relocating our assets underground when the former two solutions are not feasible.

The chosen option for each pole will be determined following scoping, design and planning to determine the most efficient solution. We typically scope, design and plan groups of co-located works to ensure that the most efficient solution is chosen for each set of relocations.

We have assumed an average cost per pole replacement based on historical actuals, which is a reasonable reflection of the costs we can expect to incur per pole replacement going forward.

Similarly, forecast replacement volumes are based on an average of the last three calendar years, recognising the ongoing nature of Yarra Trams program. These are shown in table 3.

TABLE 3 HISTORICAL AND FORECAST YARRA TRAMS POLE REPLACEMENTS

VOLUMES	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31
Number of poles	113	160	148	130	130	130	130	130	130

The required expenditure to deliver option two is described in table 4 below.

TABLE 4 OPTION 2: ESTIMATED CAPITAL EXPENDITURE ($M, 2026)

EXPENDITURE FORECAST	FY27	FY28	FY29	FY30	FY31	TOTAL
Continue existing asset relocation approach	3.9	3.9	3.9	3.9	3.9	19.7

Note: Total does not equal sum of 2026–31 expenditure due to rounding

4.3 Option three: install new poles or move assets underground

Under option three, we would prioritise the installation of our own assets independent of Yarra Trams' poles. This would allow us to own and operate the poles that hold our assets, or to hold our assets underground which could reduce the cost of asset relocation in the future.

This would include an efficient combination of the following two solutions:

- relocating our assets to a new distribution pole in the place of the old Yarra Trams pole
- relocating our assets underground where installing a new distribution pole is not feasible.

Our experience shows that the costs of undergrounding are roughly triple the costs of relocating to new Yarra Trams poles.

Moving assets underground would also include high cost for customers to install their own underground service connections to connect to our underground assets. Undergrounding assets provides some benefit to reliability, but this would be negligible due to our already high rate of reliability in Melbourne's CBD supply area.

The additional benefits of avoiding potential future Yarra Trams pole relocation works would also be negligible as our assets would likely not need to be relocated within their technical lifespan given the Yarra Trams poles they are being relocated to will be new.

The required expenditure to deliver option three is described in table 5 below.

TABLE 5 OPTION 3 ESTIMATED CAPITAL EXPENDITURE ($M, 2026)

EXPENDITURE FORECAST	FY27	FY28	FY29	FY30	FY31	TOTAL
Capital expenditure	11.8	11.8	11.8	11.8	11.8	59.2

Note: Total does not equal sum of 2026–31 expenditure due to rounding

5. Preferred option

The preferred option for the 2026–31 regulatory period is option two; undertaking a combination of relocating assets to new Yarra Trams poles and installing new distribution poles or undergrounding where required (consistent with our revealed history).

This option is preferred as it addresses the identified need at the lowest cost. It maximises our ability to maintain current assets and avoid replacement to minimise costs for customers, while we continue to maintain a safe and reliable electricity supply for customers.

The chosen option for each pole will be determined following scoping, design and planning to determine the most efficient solution.

Table 6 summarises the capital expenditure required to deliver option two.

TABLE 6 EXPENDITURE FORECASTS FOR PREFERRED OPTION ($M, 2026)

EXPENDITURE FORECAST	FY27	FY28	FY29	FY30	FY31	TOTAL
Continue existing asset relocation approach	3.9	3.9	3.9	3.9	3.9	19.7

Note: Total does not equal sum of 2026–31 expenditure due to rounding

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