Ausnet Services' Asset Renewal Plan - 2023

This section outlines AusNet Services' asset management strategy and approach and lists the asset retirements and asset renewal projects planned for the next 10-year period. The asset renewal plan addresses asset failure risk based on asset condition and network performance. It also considers other operational factors that affect the economic service life of the electricity transmission assets.

1 ASSET MANAGEMENT APPROACH

1.1 Asset Management Framework

AusNet Services' asset management system contains an asset management policy statement, strategic asset management plan, asset management objectives and a detailed suite of asset management strategies and an asset management plan.

The asset management policy acknowledges the company's purpose and directs the content and implementation of asset management strategies, objectives, and plans.

In the development of asset management strategies, asset management decisions are informed by an assessment of the external business environment, the corporate business and financial plans and responses to stakeholder engagement, which incorporates customer, generator, regulator, shareholder, and government views.

AusNet Services' asset management framework is illustrated in Figure 1.

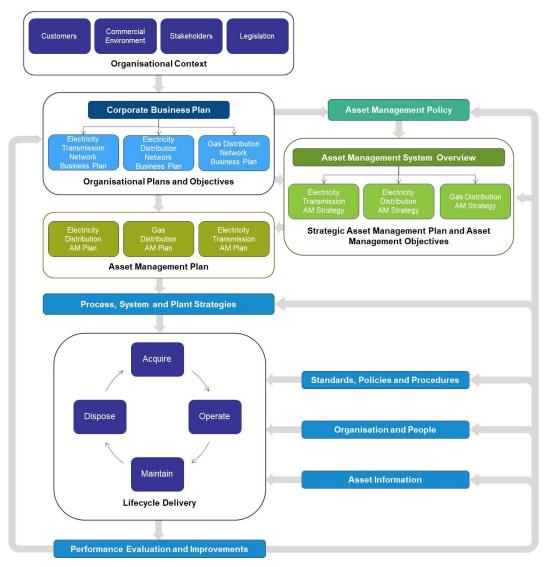


Figure 1: Asset Management Framework

AusNet Services uses a risk-based cost benefit analysis methodology to guide asset replacement decisions. The decision-making process considers the likelihood of failure (based on historic failure data and asset age and condition information) and the consequences of failure to value the risk of asset failure in monetary terms. Figure 2 shows the factors considered in the cost benefit analysis.

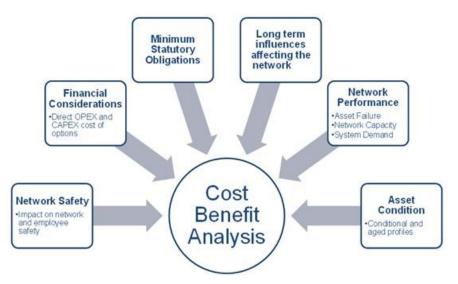


Figure 2: Cost Benefit Analysis Inputs

A range of options are considered as part of the cost benefit analysis including network reconfiguration, asset retirement, asset refurbishment, asset replacement and non-network alternatives.

The methodology assesses whether the overall economic value of expenditure is positive and ensures that risks are reduced as far as practicable, as required by the Electricity Safety Act 1998.

1.2 Further Information

Further information on AusNet Services' asset management strategy and methodology may be obtained by contacting <u>rittconsultations@ausnetservices.com.au</u>. In the subject field, please reference 'Asset Management Strategy'.

2 TEN-YEAR ASSET REPLACEMENT PLAN

The ten-year asset replacement plan (in calendar years) focuses on major transmission asset replacement projects. AusNet Services' asset renewal plan does not propose any network changes that will have a material inter-network impact and AusNet Services has liaised with AEMO to integrate the asset renewal plan with AEMO's transmission augmentation plan for Victoria as well as AEMO's Integrated System Plan (ISP).

AEMO has also been consulted to review and assess the asset renewal plan in relation to the most recent power system frequency risk review.

2.1 Asset Renewal Options

The following asset renewal options are considered in the asset renewal evaluation and project specification:

- Renewal by Asset Class is employed when a class of assets has either a higher than acceptable
 failure rate or exhibits a higher deterioration rate than its peers. This approach avoids
 widespread deterioration in network performance due to multiple, asset class-related failures.
- Selective or Staged Replacement.
- Renewal on a Bay-by-Bay (or Scheme/Network) basis is employed when it is economic to replace all primary plant and equipment within a specific bay or scheme. This strategy is often adopted for terminal station renewals and where planned outages are challenging.
- Replacement of Whole Station in Existing Location (Brownfield) is employed when it is
 economic to replace most assets as part of a single, coordinated project within the existing
 station (normally when station assets are approaching the end of their life and there are
 advantages in reconfiguring primary electrical circuits).

Replacement of Whole Station in New Location (Greenfield) is employed for the construction
of a replacement station on a new site. It is a more expensive strategy than works within an
existing station due to the need to procure new land, establish key infrastructure, and to relocate
lines. It is usually only economic when the existing infrastructure is inadequate and
replacement works cannot occur without a sustained supply disruption due to limitations at the
existing site.

Non-network options are considered in AusNet Services' asset renewal approach once an identified need has been determined and include options such as demand side response and embedded generation. Non-network solutions are considered in the RIT-T process to find the most economical technically feasible solution.

2.2 2023 Asset Renewal Plan

Some minor changes to scope, cost estimate and completion date have been made for some projects included in the 2022 Asset Renewal Plan compared with last year's plan. The completion dates of the projects that are not committed yet have been updated in this plan based on the latest asset failure risk analysis.

The cost estimates allow for the entire project cost including project management cost, overheads and finance cost.

Wherever possible, asset renewal works are planned at times that minimise the impact of circuit outages.

The plan is subject to change based on the results of further asset condition analysis, asset failures necessitating a reprioritisation of projects and regulatory revenue decisions.

No urgent or unforeseen network issues have been identified to date.

A description of the proposed asset replacements is given in Table 1.

Table 1: Ten-year asset replacement plan (cost estimate in 2023 dollars)

| Project Name | Location* | Total Cost (Real \$M) | Target Completion (December) | Network Assets to be Retired | Reasons for Retirement | Date of Retirement | Constraints | Proposed Replacement | Options Considered | Request for Proposal Date | Changes Compared with Last Plan |
|---------------------------------------------------------------------|---------------------------------------------------------------------------|--------------------------------|------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------------------------|----------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|------------------------------------------|
| LYPS and HWTS 500kV Circuit Breaker Replacement Stage 1 | Loy Yang Power Station Switchyard and Hazelwood Terminal Station | 29 | 2023 | Four 500kV circuit breakers, six 500kV current transformers and two 500kV voltage transformers | Condition and age of assets presenting a safety, supply, environmental and collateral damage risk in the event of an asset failure. | 2018 to 2023 | Switching/ generation constraints | Eight 500kV circuit breakers, six 500kV current transformers and two 500kV voltage transformers | Integrated replacement and staged replacement | A request for proposal will not be issued for this project as it is a committed project and is already in its build phase | Change to date |
| ERTS Redevelopment - Stage 1 | East Rowville Terminal Station | 20 | 2023 | One 150 MVA 220/66kV transformer, two 220kV circuit breakers and three 66kV Circuit Breakers | Condition and age of assets presenting a safety, supply, environmental and collateral damage risk in the event of an asset failure. | 2019 to 2023 | Load at risk | One 150 MVA 220/66kV transformer, two 220kV circuit breakers and three 66kV Circuit Breakers | Integrated replacement and staged replacement | A request for proposal will not be issued for this project as it is a committed project and is already in its build phase | Change to date and cost |
| HYTS 500kV switchgear replacement | Heywood Terminal Station | 19 | 2023 | 500 kV instrument transformers | Condition and age of assets presenting a safety, supply, environmental and collateral damage risk in the event of an asset failure. | 2019 to 2023 | Switching constraints | Two 500kV circuit breakers and associated equipment | Integrated replacement and staged replacement | A request for proposal will not be issued for this project as it is a committed project and is already in its build phase | Change to date and cost |
| RS Battery and Charger Replacements 1 | Several locations | 10 | 2023 | Selected obsolete communication and control batteries | End of Life replacement | 2019 to 2023 | Load at risk | Replace to same standard | Business as usual or asset replacement | A request for proposal will not be issued for this project as it is a committed project | Change to date |
| TSTS Transformer and 66kV Circuit Breaker Replacement | Templestowe Terminal Station | 43 | 2024 | Two 220/66kV transformers, two 66kV minimum oil Circuit Breakers and eleven 66kV bulk oil Circuit Breakers, and install new protection and control systems | Condition and age of assets presenting a safety, supply, environmental and collateral damage risk in the event of an asset failure. | 2023 to 2024 | Load at risk | Two 150 MVA 220/66kV transformer and thirteen 66kV Circuit Breakers | Integrated replacement, staged replacement, demand side management, embedded generation and retirement | RIT-T completed | No change |
| Communication and battery replacement in the South West Region Loop | South West Region | 26 | 2024 | Selected obsolete communication and control batteries | End of Life replacement | 2023 to 2024 | Market impact | Replace with current standard assets | Replace assets with new technology MPLS TP and install 5 more hops microwave to increase capacity required for new technology OR install underground fibre instead of microwave. | PSCR was published in May 2022 | No change |
| ERTS Redevelopment - Stage 2 | East Rowville Terminal Station | 24 | 2024 | Two 150MVA 220/66kV transformers and eight 66kV circuit breakers | Condition and age of assets presenting a safety, supply, environmental and collateral damage risk in the event of an asset failure. | 2022 to 2024 | Load at risk | Two 150MVA 220/66kV transformers and eight 66kV circuit breakers | Integrated replacement, staged replacement, asset retirement, demand side management and embedded generation | RIT-T completed | No change |
| Transmission Line Ground wire Replacement - Phase 1 | Various | 24 | 2024 | Selected ground wire & conductor sections | Condition and risk based replacement | 2023 to 2024 | Market impact | Replace with new ground wire & conductor | Defer the work, selected asset replacement | PSCR was published in April 2022 | Change to cost and completion date |
| BLTS 66kV Circuit Breaker Replacement | Brooklyn Terminal Station | 16 | 2024 | Fifteen 66kV circuit breakers | Condition and age of assets presenting a safety, supply, environmental and collateral damage risk in the event of an asset failure. | 2023 to 2024 | Load at risk | Fifteen 66kV circuit breakers | Integrated replacement, staged replacement, asset retirement, demand side management and embedded generation | RIT-T completed | No change |

| Project Name | Location* | Total Cost (Real \$M) | Target Completion (December) | Network Assets to be Retired | Reasons for Retirement | Date of Retirement | Constraints | Proposed Replacement | Options Considered | Request for Proposal Date | Changes Compared with Last Plan |
|---------------------------------------------------------------------|--------------------------------|--------------------------------|------------------------------------|-------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------|------------------|-------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|----------------------------------|-------------------------------------------------------|
| SYTS 500kV GIS Replacement | Sydenham Terminal Station | 81 | 2025 | 500kV GIS | Condition and age of assets presenting a safety, supply, environmental and collateral damage risk in the event of an asset failure. | 2023 to 2025 | Market impact | New 500kV outdoor station to replace the GIS | Business as usual, Integrated replacement, staged replacement and retirement | RIT-T completed | No change |
| HWTS A2, A3 and A4 Transformer Refurbishment | Hazelwood Terminal Station | 10 | 2025 | None | Condition and age of assets presenting a safety, supply, environmental and collateral damage risk in the event of an asset failure. | N/A | Market impact | None | Refurbishment | 2023 | New Project |
| SHTS Transformer and Circuit Breaker Replacement | Shepparton Terminal Station | 39 | 2026 | Two 150MVA 220/66kV transformers and twelve 66kV circuit breakers | Condition and age of assets presenting a safety, supply, environmental and collateral damage risk in the event of an asset failure. | 2023 to 2026 | Load at risk | Two 150MVA 220/66kV transformers and twelve 66kV circuit breakers | Integrated replacement, staged replacement, asset retirement, demand side management and embedded generation | RIT-T completed | No change |
| HYTS-APD T624 to T628B tower replacement | HYTS-APD line | 31 | 2026 | Selected towers, conductor and ground wire | Condition and age of assets presenting a safety, supply, environmental and collateral damage risk in the event of an asset failure. | 2023 to 2026 | Market impact | New towers, conductor and ground wire | Business as usual, Defer the work and asset replacement | 2023 | Change to cost, scope and completion date |
| MSS-DDTS Nos 1 and 2 tower upgrades | MSS-DDTS line | 22 | 2026 | Selected towers/ tower parts | Condition and age of assets presenting a safety, supply, environmental and collateral damage risk in the event of an asset failure. | 2023 to 2026 | Load at risk | New towers/ tower parts | Business as usual, Defer the work and asset replacement | PSCR was published in April 2022 | Change to cost and completion date |
| Communication and control batteries replacement - North East Region | North East Region | 17 | 2026 | Selected obsolete communication and control batteries | End of Life replacement | 2025 to 2026 | Market impact | Replace with current standard assets | Business as usual or asset replacement | 2023 | Change to cost and completion date |
| Transmission Line GW Replacement - Phase 2 | SYTS-MLTS | 9 | 2026 | Selected ground wire & conductor sections | Condition and risk based replacement | 2025 to 2026 | Market impact | Replace with new ground wire & conductor | Defer the work, selected asset replacement | 2023 | No change |
| RCTS Transformer Replacement | Red Cliffs Terminal Station | 45 | 2027 | Two 220/22kV transformers and two 220/66kV transformers | Condition and age of assets presenting a safety, supply, environmental and collateral damage risk in the event of an asset failure. | 2023 to 2027 | Load at risk | Two 66/22 kV transformers and two 150MVA 220/66kV transformers | Integrated replacement, staged replacement, demand side management, embedded generation and retirement | 2022 | Change to Scope, cost and completion date |

| Project Name | Location* | Total Cost (Real \$M) | Target Completion (December) | Network Assets to be Retired | Reasons for Retirement | Date of Retirement | Constraints | Proposed Replacement | Options Considered | Request for Proposal Date | Changes Compared with Last Plan |
|----------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|------------------------------------|--------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------|------------------|------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|------------------------------------------|
| Instrument Transformer replacements | Various | 9 | 2027 | Selected CVTs and VTs | Condition and risk based replacement | 2026 to 2027 | Market impact | New CVTs and VTs | Integrated replacement and staged replacement | 2024 | No change |
| Moorabool Terminal Station Circuit Breaker Replacement | Moorabool Terminal Station | 34 | 2027 | Eight 500kV circuit breakers and ten 220kV circuit breakers | Condition and age of assets presenting a safety, supply, environmental and collateral damage risk in the event of an asset failure. | 2023 to 2027 | Market impact | Eight 500kV circuit breakers and ten 220kV circuit breakers | Integrated replacement, staged replacement and retirement | PADR was published in August 2022 | Change to cost and completion date |
| Transmission line insulator replacement program | MLTS-TRTS1, MLTS-MOPS2, MOPS-HYTS2, TRTS-HYTS1, HYTS-APD 1 & 2 500kV lines; HYTS- SESS 275kV line | 23 | 2027 | Selected insulators | Condition and age of assets presenting a safety, supply, environmental and collateral damage risk in the event of an asset failure. | 2025 to 2027 | Market impact | New insulators | Business as usual, Defer the work and asset replacement | 2024 | No change |
| DC Supply Upgrade Stage 4 | ATS, BETS, DDTS, EPS, FVTS, GNTS, HOTS | 8 | 2027 | Selected DC supply assets | Replacement of obsolete systems. Compliance | 2024 to 2027 | Market impact | Replace obsolete secondary assets with current standard equipment | Integrated replacement and staged replacement | 2024 | No change |
| Transmission 330kV and 500kV line conductor and ground- wire replacement program | LYPS-HWTS, HWTS-CBTS, SMTS-SYTS and HWTS-ROTS, SMTS-SYTS, SYTS- KTS, SYTS-MLTS, MSS-DDTS 330KV and 500kV line | 8 | 2027 | Selected ground wire & conductor sections | Condition and age of assets presenting a safety, supply, environmental and collateral damage risk in the event of an asset failure. | 2025 to 2027 | Market impact | Replace with new ground wire & conductor sections | Business as usual, Defer the work and asset replacement | 2024 | No change |
| Transmission Line Insulator Replacement | Several locations | 8 | 2027 | Selected insulators | Condition and age of assets presenting a safety, supply, environmental and collateral damage risk in the event of an asset failure. | 2023 to 2027 | Market impact | New insulators | Business as usual, Defer the work and asset replacement | PSCR was published in June 2022 | Change to cost and completion date |
| KTS A4 500/220kV Transformer Replacement | Keilor Terminal Station | 71 | 2028 | One 750MVA 500/220kV transformer and one 500kV, one 220kV and two 66kV circuit breakers | Condition and age of assets presenting a safety, supply, environmental and collateral damage risk in the event of an asset failure. | 2026 to 2028 | Market impact | One 1000MVA 500/220kV transformer and one 500kV, one 220kV and two 66kV circuit breakers | Integrated replacement and staged replacement, replace with larger or smaller transformers, asset retirement, demand side management and embedded generation. | 2025 | Change to completion date |
| SMTS 500kV GIS Replacement - Stage 1 | South Morang Terminal Station | 18 | 2028 | Three 500kV GIS circuit breakers and associated equipment | Condition and age of assets presenting a safety, supply, environmental and collateral damage risk in the event of an asset failure. | 2026 to 2028 | Market impact | Three 500kV AIS circuit breakers and associated equipment | Business as usual, Integrated replacement, staged replacement and retirement | 2025 | Change to completion date |

| Project Name | Location* | Total Cost (Real \$M) | Target Completion (December) | Network Assets to be Retired | Reasons for Retirement | Date of Retirement | Constraints | Proposed Replacement | Options Considered | Request for Proposal Date | Changes Compared with Last Plan |
|------------------------------------------------------------------------------|---------------------------------------------------------------------------|--------------------------------|------------------------------------|--------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------|------------------|--------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|---------------------------|------------------------------------------|
| Communication and control battery replacement - Latrobe Valley Loop | Latrobe Valley | 20 | 2028 | Selected obsolete communication and control batteries | End of Life replacement | 2026 to 2028 | Market impact | Replace with current standard assets | Business as usual or asset replacement | 2028 | Change to cost and completion date |
| TTS Circuit Breaker Replacement | Thomastown Terminal Station | 19 | 2029 | One 220kV circuit breaker and fourteen 66kV circuit breakers | Condition and age of assets presenting a safety, supply, environmental and collateral damage risk in the event of an asset failure. | 2026 to 2028 | Load at risk | One 220kV circuit breaker and fourteen 66kV circuit breakers | Integrated replacement, staged replacement, asset retirement, demand side management and embedded generation | 2026 | No change |
| SMTS 330/220kV Transformer Replacement - Stage 2 | South Morang Terminal Station | 44 | 2029 | One 700 MVA 330/220 kV transformer | Condition and age of assets presenting a safety, supply, environmental and collateral damage risk in the event of an asset failure. | 2027 to 2029 | Market impact | One 700 MVA 330/220 kV transformer and a spare phase | Integrated replacement, staged replacement, asset retirement, demand side management, embedded generation and retirement | 2026 | Change to completion date |
| Comms Batteries replacement program | Various | 7 | 2029 | Selected obsolete communication and control batteries | End of Life replacement | 2027 to 2029 | Market impact | Replace with current standard assets | Business as usual or asset replacement | 2026 | Change to date |
| Communication and control batteries replacement - Metro Region phase 1 and 2 | Metro Region | 27 | 2030 | Selected obsolete communication and control batteries | End of Life replacement | 2028 to 2030 | Load at risk | Replace with current standard assets | Business as usual or asset replacement | 2026 | Change to date |
| Transmission line conductor and ground-wire replacement program | Various | 23 | 2030 | Selected ground wire & conductor sections | Condition and risk based replacement | 2028 to 2030 | Market impact | Replace with new ground wire & conductor | Defer the work, selected asset replacement | 2026 | No change |
| NPSD 220kV GIS | Newport Power Station Switchyard | 55 | 2030 | Six 220kV GIS switch bays | Condition and age of assets presenting a safety, supply, environmental and collateral damage risk in the event of an asset failure. | 2027 to 2029 | Market impact | Six 220kV GIS switch bays | Integrated replacement, staged replacement, asset retirement, demand side management, embedded generation and retirement | 2026 | Change to cost and completion date |
| LYPS and HWTS 500kV Circuit Breaker Replacement Stage 2 | Loy Yang Power Station Switchyard and Hazelwood Terminal Station | 60 | 2030 | Fourteen 500kV circuit breakers | Condition and age of assets presenting a safety, supply, environmental and collateral damage risk in the event of an asset failure. | 2028 to 2030 | Market impact | Fourteen 500kV circuit breakers | Integrated replacement, staged replacement and retirement | 2026 | Change to date |
| LY 66kV Circuit Breaker Replacement | Loy Yang 66kV Switch Yard | 14 | 2030 | Sixteen 66kV circuit breakers | Condition and age of assets presenting a safety, supply, environmental and collateral damage risk in the event of an asset failure. | 2028 to 2030 | Market impact | Sixteen 66kV circuit breakers | Integrated replacement, staged replacement, asset retirement, demand side management, embedded generation and retirement | 2026 | No change |

| Project Name | Location* | Total Cost (Real \$M) | Target Completion (December) | Network Assets to be Retired | Reasons for Retirement | Date of Retirement | Constraints | Proposed Replacement | Options Considered | Request for Proposal Date | Changes Compared with Last Plan |
|------------------------------------------------|-------------------------------|--------------------------------|------------------------------------|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|------------------|------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|------------------------------------------|
| ROTS 220kV Circuit Breaker Replacement | Rowville Terminal Station | 10 | 2030 | Five 220kV circuit breakers | Condition and age of assets presenting a safety, supply, environmental and collateral damage risk in the event of an asset failure. | 2028 to 2030 | Load at risk | Five 220kV circuit breakers | Integrated replacement, staged replacement and retirement | A request for proposal will not be issued for this project as no alternative non-network solution is envisaged. | No change |
| Transmission line insulator replacement | Various | 15 | 2030 | Selected insulators | Condition and age of assets presenting a safety, supply, environmental and collateral damage risk in the event of an asset failure. | 2028 to 2030 | Market impact | New insulators | Business as usual, Defer the work and asset replacement | 2026 | No change |
| MWTS 66kV Circuit Breaker Replacement | Morwell Terminal Station | 6 | 2030 | Thirteen 66kV circuit breakers | Condition and age of assets presenting a safety, supply, environmental and collateral damage risk in the event of an asset failure. | 2028 to 2030 | Load at risk | Thirteen 66kV circuit breakers | Integrated replacement, staged replacement, demand side management, embedded generation and retirement | 2026 | No change |
| HYTS-APD T623 to T603 tower replacement | Various | 72 | 2031 | Selected ground wire & conductor sections | Condition and risk based replacement | 2023 to 2024 | Market impact | Replace with new ground wire & conductor | Defer the work, selected asset replacement | PSCR was published in April 2022 | Change to cost and completion date |
| Radio Links replacement program | Various | 16 | 2031 | Selected radio links | End of Life replacement | 2029 to 2031 | Market impact | Replace with current standard assets | Business as usual, Defer the work and asset replacement | 2028 | Change to completion date |
| MWTS B3 Transformer Replacement | Morwell Terminal Station | 12 | 2031 | B3 220/66kV transformer | Selective replacement of assets based on condition. Project addresses supply, safety, environmental and collateral plant damage risk | 2029 to 2031 | Load at risk | One 220/66kV transformer | Integrated replacement, staged replacement, asset retirement, demand side management, embedded generation and retirement | 2028 | Change to completion date and c |
| BATS B2 220/66kV Transformer Replacement | Ballarat Terminal Station | 12 | 2031 | B2 220/66kV Transformer | Selective replacement of assets based on condition. Project addresses supply, safety, environmental and collateral plant damage risk | 2029 to 2031 | Load at risk | One 220/66kV transformer | Integrated replacement, staged replacement, asset retirement, demand side management, embedded generation and retirement | 2028 | New Project |
| GNTS B2 220/66kV Transformer Replacement | Glenrowan Terminal Station | 10 | 2031 | B2 220/66kV Transformer | Selective replacement of assets based on condition. Project addresses supply, safety, environmental and collateral plant damage risk | 2029 to 2031 | Load at risk | One 220/66kV transformer | Integrated replacement, staged replacement, asset retirement, demand side management, embedded generation and retirement | 2028 | Change to completion date |

| Project Name | Location* | Total Cost (Real \$M) | Target Completion (December) | Network Assets to be Retired | Reasons for Retirement | Date of Retirement | Constraints | Proposed Replacement | Options Considered | Request for Proposal Date | Changes Compared with Last Plan |
|------------------------------------------------------------------------------|--------------------------------------|--------------------------------|------------------------------------|-----------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|------------------|-----------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|------------------------------------------|
| DDTS H3 330/220kV Transformer and 330kV Circuit Breaker Replacement | Dederang Terminal Station | 28 | 2032 | One 340MVA 330/220kV transformer and two 330kV Circuit Breakers | Condition and age of assets presenting a safety, supply, environmental and collateral damage risk in the event of an asset failure. | 2030 - 2032 | Load at risk | One 340MVA 330/220kV transformer and two 330kV Circuit Breakers | Integrated replacement and staged replacement, replace with larger or smaller transformers, asset retirement, demand side management and embedded generation. | 2029 | New Project |
| GTS 220kV & 66kV Circuit Breaker Replacement | Geelong Terminal Station | 18 | 2032 | Six 66kV circuit breakers | Condition and age of assets presenting a safety, supply, environmental and collateral damage risk in the event of an asset failure. | 2030 - 2032 | Load at risk | Six 66kV circuit breakers | Integrated replacement, staged replacement, replacement with larger transformers, demand side management, embedded generation and retirement | 2029 | New Project |
| KGTS transformer and Switchgear Replacement | Kerang Terminal Station | 16 | 2032 | Two 37MVA 220/66kV transformers and two 22kV circuit breakers | Condition and age of assets presenting a safety, supply, environmental and collateral damage risk in the event of an asset failure. | 2030 - 2032 | Load at risk | Two 37MVA 220/66kV transformers and two 22kV circuit breakers | Integrated replacement, staged replacement, replacement with larger transformers, demand side management, embedded generation and retirement | 2029 | New Project |
| RWTS B3 Transformer Replacement | Ringwood Terminal Station | 12 | 2032 | One 150MVA 220/66kV transformer | Condition and age of assets presenting a safety, supply, environmental and collateral damage risk in the event of an asset failure. | 2030 - 2032 | Load at risk | One 150MVA 220/66kV transformer | Integrated replacement, staged replacement, asset retirement, demand side management, embedded generation and retirement | 2029 | No change |
| YPS 220kV Circuit Breaker Replacement Stage 2 | Yallourn Power Station Switchyard | 10 | 2032 | Four 220kV circuit breakers | Condition and age of assets presenting a safety, supply, environmental and collateral damage risk in the event of an asset failure. | 2030 to 2032 | Market impact | Four 220kV circuit breakers | Integrated replacement, staged replacement and retirement | 2029 | Change to date |
| TBTS 220kV and 66kV Circuit Breaker Replacement | Tyabb Terminal Station | 9 | 2032 | Four 220kV circuit breakers and five 66kV circuit breakers | Selective replacement of assets based on condition. Project addresses supply, safety, environmental and collateral plant damage risk | 20230to 2032 | Load at risk | Four 220kV circuit breakers and five 66kV circuit breakers | Integrated replacement, staged replacement, asset retirement, demand side management, embedded generation and retirement | 2029 | Change to date |

2.3 Regulatory Investment Test for Transmission (RIT-T) Schedule

Table 4 shows the asset renewal RIT-Ts that have been completed since January 2022. AusNet Services' RIT-T consultations can be found at: https://www.ausnetservices.com.au/About/Projects-and-Innovation/Regulatory-Investment-Test

Table 2: Completed RIT-T Projects

| Project Name | RIT-T Completed (PACR published) | Type of Project |
|-----------------------------------------------|----------------------------------|-----------------------------|
| MLTS Circuit Breaker Replacement | October 2022 | Circuit Breaker Replacement |
| HOTS SVC Replacement | October 2022 | SVC replacement |
| South West Network Communications Replacement | October 2022 | Communications Replacement |

Table 3 shows RIT-Ts that are in progress.

Table 3: RIT-T Projects that are being progressed

| Project Name | RIT-T Status | Type of Project |
|---------------------------------------------------------------------------------|------------------------------------|-------------------------------------|
| MSS-DDTS Nos 1 and 2 tower upgrades | PSCR published in April 2022 | Tower upgrade |
| Transmission Line Groundwire Replacement - Phase 1 | PSCR published in April 2022 | Transmission line asset replacement |
| Transmission Line Insulator Replacement | PSCR published in June 2022 | Transmission line asset replacement |
| Maintain reliable transmission network services from Redcliffs Terminal Station | PSCR published in December 2022 | Transformer replacement |

During 2023 AusNet Services plans to commence RIT-T assessments for the projects shown in Table 4.

Table 4: Planned RIT-T Projects to start during 2023

| Project Name | RIT-T Start Quarter | Type of Project |
|-------------------------------------------------|---------------------|-------------------------------------|
| HYTS-APD T627 to T628B tower replacement | Q3 2023 | Tower replacement |
| Keilor 500/220 kV transformer replacement | Q3 2023 | Transmission line asset replacement |
| North East Network Communication Replacement | Q3 2023 | Communication asset replacement |