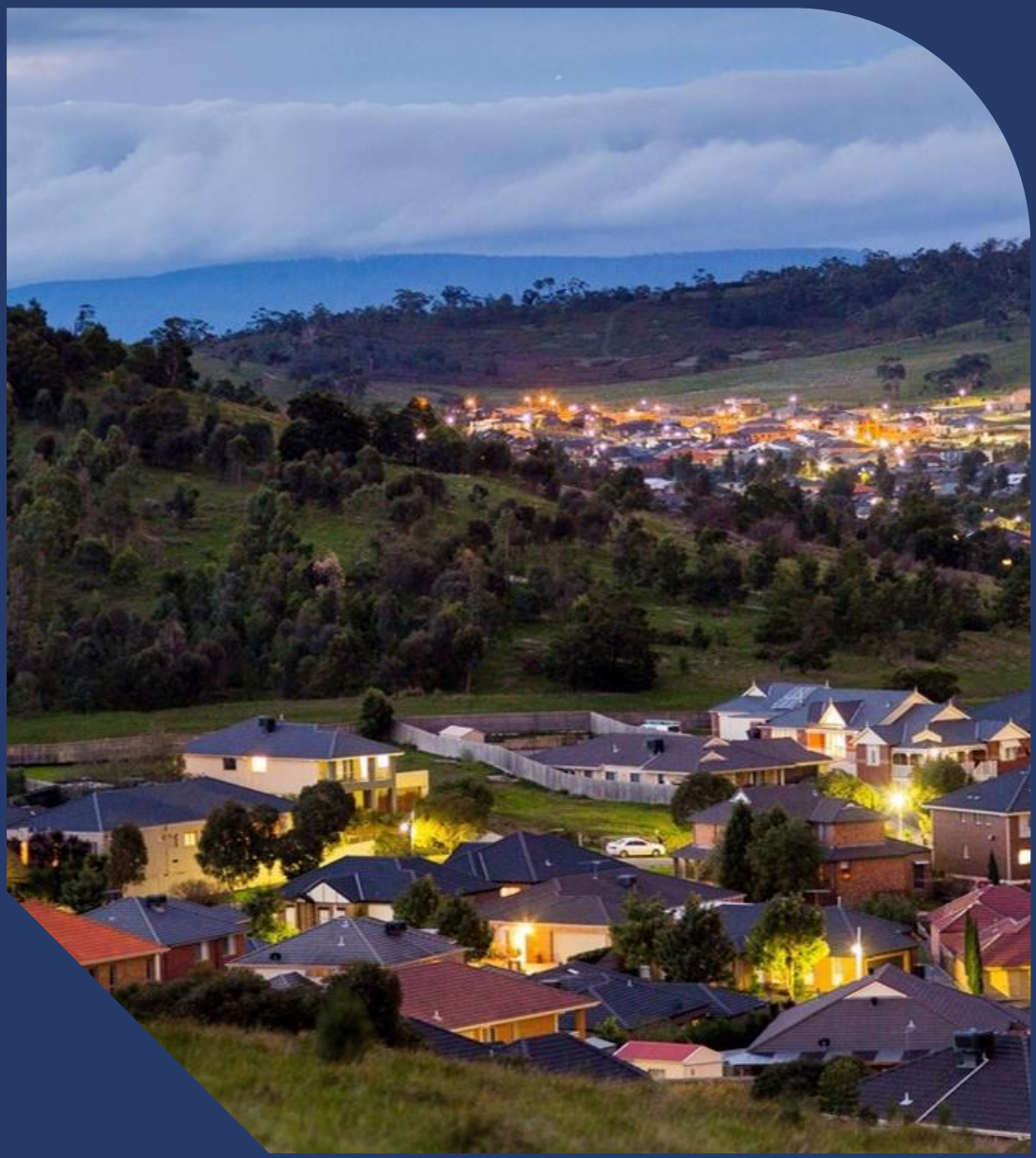
AusNet

Top-Down Adjustment

Electricity Distribution Price Review (EDPR) 2026-2031

Friday, 31 January 2025



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1. Purpose

This document describes and presents the results of the top-down review AusNet has applied to its forecast network capital expenditure (capex) for the upcoming regulatory period 2026-31. The outcome of the review represents a downward adjustment to AusNet's total forecast capex in its regulatory proposal for its electricity distribution business.

2. Scope

The scope of this document is to assess the network capex forecast for the regulatory period 2026-31 across network and non-network projects and programs. This document directs should also be read with other documents that are relevant to the forecast such as asset strategies, planning reports and project descriptions.

Values shown in this document are in real 2024 dollars.

3. Abbreviations and definitions

Term	Definition
ACR	Automatic Circuit Recloser
AUGEX	Augmentation Expenditure
CAPEX	Capital Expenditure
CB	Circuit Breaker
CT	Current Transformer
CVT	Capacitive Voltage Transformer
DT	Distribution Transformer
EDPR	Electricity Distribution Price Review
HV	High Voltage
LV	Low Voltage
NED	Neutral Earth Device
NER	Neutral Earth Resistor
REFCL	Rapid Earth Fault Current Limiter
RTU	Remote Terminal Unit
VRR	Voltage Regulator Relay
SAPS	Stand Alone Power Systems
ZSS	Zone substation

4. Background

AusNet has developed its capex forecast using a bottom-up approach across its programs and projects and incorporated extensive customer and external feedback. A series of projects and programs are proposed to address various drivers.

Across the network investment proposal, projects address issues at specific geographical locations and may require work on a range of different asset classes. Meanwhile, programs typically address one specific asset class where the individual assets are located across multiple locations.

Each project or program typically identifies a driver for expenditure and estimates the volume and cost of assets required. The identification of assets for some programs is based on asset or fleet specific information and may not initially consider inter-relationships with other works being proposed or conducted. There is therefore the potential for overlap and synergies between programs and projects where two or more bodies of work are undertaken at the same location or propose to replace the same assets.

In some cases, the replacement of one asset class may require the replacement of other physically or electrically connected assets. In other cases, it is economically efficient to bring forward non-essential replacements to coincide with required work. This top down and integrated approach has been kept in mind during the development of the regulatory proposal, however a further comprehensive analysis has been completed for the final regulatory proposal to remove any overlapping expenditure.

AusNet has therefore conducted a top-down assessment of its programs and projects to ensure any inter-relationship between elements of these are accounted for in the capex forecast for the 2026-31 regulatory period.

The inter-relationship between components of the program have been accounted for in two ways; by adjusting the forecast during the bottom-up build and by application of a top-down adjustment. This document identifies these methods and the relevant size of each adjustment.

5. Network investment

Network investment in AusNet's distribution network typically relates to replacement and refurbishment of existing assets, referred to as "repex", and investment in new assets known as augmentation expenditure or "augex."

Considering various asset classes, overall network investment typically relates to assets that can generally be classified as either "Station" or "Line" Assets. Station assets are located within the property boundary of a zone substation (e.g. transformers) while line assets are located outside the property boundary (e.g. conductors). It is uncommon that replacement of an asset in one classification relies upon or necessitates the replacement of an asset in the other classification.

In most cases, each project or program will only involve either station or line assets and in these cases, there are no synergies between work in stations and on lines. Two notable exceptions are the Rapid Earth Fault Current Limiting (REFCL) investments and new assets required from augex programs, which can involve a combination of both types of assets.

Further, AusNet has identified the opportunity to optimise delivery of its replacement program with five zone substation (ZSS) rebuild projects. Replacement of assets included in the scope of these ZSS rebuild projects have been removed from the overall replacement program.

5.1. Asset investment locations

Figure 1 shows a heat map of the dollar amount of repex investment in the next regulatory period. The bulk of the repex is concentrated in the central region, with the lighter spots of concentration focused on stations in the east and north. The remainder of the investment shows a variety of line assets.

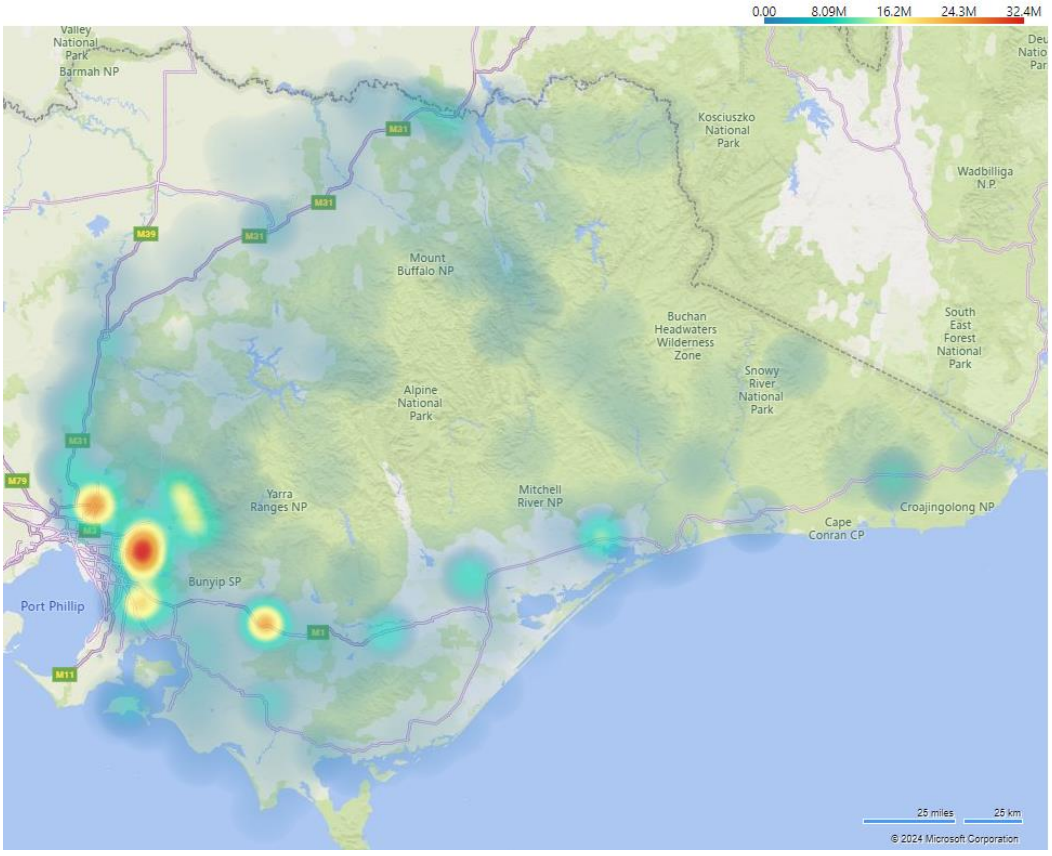

Figure 1: Repex investment heat map

Throughout the development of the regulatory proposal, repex has decreased based on a variety of factors including the removal of overlapped expenditure.

6. Line repex overlap

Line assets and the various categories of projects and programs related to line assets are shown in Figure 2 and there can be overlaps or potential overlaps between the categories. The majority of overlaps have already been removed from capex forecast prior to finalisation of the draft proposal and the final submission of the regulatory proposal.

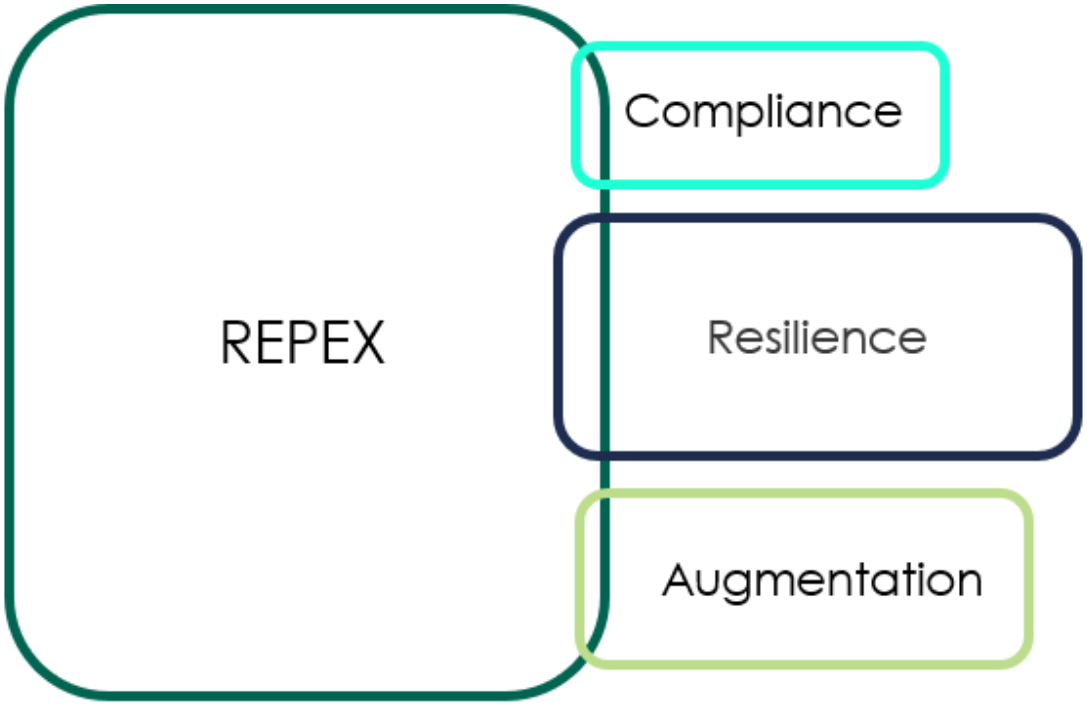

Figure 2: Network Assets Expenditure Overlap

Line asset REPEX consists of the following categories and the associated asset strategy documents are listed in Table 1.

Table 1: Line Assets

Line Assets	Document
Poles	AMS 20-70
Crossarms	AMS 20-57
Conductors	AMS 20-52
Cables	AMS 20-65
Distribution Substations	AMS 20-58
Services	AMS 20-76
Control Boxes and ACR's	AMS 20-60
MV Switches	AMS 20-60
Fuses	AMS 20-61
Line Surge Arresters	AMS 20-67
Line Voltage Regulators	AMS 20-68
Pole Top Capacitors	AMS 20-69
Insulators	AMS 20-66
Electrical Earths	AMS 20-59
Line Voltage Regulator Fences	AMS 20-14
Ground Type Substation Fences	AMS 20-14

From these line REPEX categories, projects proposed can be grouped into three categorie:

- Compliance;
- Resilience; and
- Augmentation.

The above categories mentioned largely detail the decommissioning of various line assets on a feeder or equipment level.

The overlap with repex therefore arises from the planned replacement of line assets that are also planned to be upgraded within the same period. Specific details of these overlaps and adjustments are outlined in Section 10.1

6.1. Resilience

Resilience is a new category of network investment proposed for AusNet's 2026-31 regulatory period.

Resilience projects strengthen the network's response to interruptions caused by storms or other natural disasters. While there is a comprehensive resilience program, overlaps with REPEX can be found in the

- Pole hardening program;
- Conductor undergrounding/ covering; and
- Stand Alone Power Systems (SAPS).

These programs detail replacements on a specific asset level, however the conductor, pole, pole top assets and distribution model used to evaluate expected REPEX used a volume based reactive approach.

Identifying the overlap of an asset specific list and volume-based replacement program is difficult to determine. AusNet will continually assess for any overlaps across projects and programs on a feeder/line basis and reallocate funds during the period to where there are no future planned upgrades if these are discovered.

6.2. Augmentation

Augmentation projects increase the capacity of the network by adding new lines, feeders or upgrading existing infrastructure such as transformers. While there is a comprehensive augmentation program, overlaps with REPEX can be found in the:

- MWTS-TGN Line upgrade project;
- MWTS-SLE-MFA Line upgrade project;
- East Gippsland 66kV loop project; and
- Electrification Step Change Project.

Similar to resilience projects, the augmentation programs proposed are based on an asset level and therefore any potential overlap caused by these projects will mean reallocation of funds to avoid any replacements along the proposed lines.

6.3. Compliance

Compliance projects address areas in AusNet's network that are at risk of falling below or above compliance levels. While there is a host of planned works related to augmentation, overlaps with REPEX can be found in the:

- Steady state voltage compliance program; and
- Reliability improvements for the top ten worst feeders.

Common to the other categories the compliance programs are planned on asset specific basis and therefore overlap in lines assets will cause reprioritisation of the proposed repex during the period.

7. Station repex overlap

Station asset capex categories and their associated asset strategy document are shown in the table below.

Table 2: Station Assets

Roofs, Doors and Windows	AMS 20-55
Power Transformers and Fall Arrest Systems	AMS 20-71
Circuit Breakers	AMS 20-54
Switchboards	AMS 20-56
CT's	AMS 20-63
CVT's	AMS 20-63
Capacitor Banks & Reactors	AMS 20-53
NER's & NED's	AMS 20-79
Station Surge Arresters	AMS 20-77
HV Switches, Earth Switches and Isolators	AMS 20-62
Buildings	AMS 20-55
Battery Rooms	AMS 20-55
Oil Control	AMS 20-55
Zone Substation Lighting	AMS 20-14
Mechanical Locks and Keys	AMS 20-14
Protection Relays	AMS 20-72
RTU's	AMS 20-72
Auxiliary Systems	AMS 20-80

The assets purchased or replaced as part the REPEX program do not overlap with each other. Similarly, they do not overlap with any of the Compliance, Resilience or Augmentation projects.

There are however five ZSS rebuild projects proposed for the 2026-31 regulatory period and this has resulted in a number of station assets being removed from the overall repex portfolio (outlined in section 10.2).

Details on the ZSS rebuild projects are outlined in their respective planning documents, however they are largely driven by aging assets being packaged as a singular piece of work to allow for delivery efficiencies.

The rebuild projects are at:

- Thomastown;
- Watsonia;
- Traralgon;
- Newmerella; and
- Kilmore South.

8. Non-Network Asset Overlap

Non-Network capex comprises the following categories:

- Property;
- Motor Vehicles and Fleet;
- Tools and Test Equipment; and
- General Equipment.

The assets purchased or replaced as part of these Non-Network programs do not overlap with each other. Similarly, they do not overlap with any of the Network asset projects or programs.

9. Digital Overlap

Digital and information communications technology (ICT) initiatives provide maintenance and upgrades to the current infrastructure, providing benefit in a wide variety of avenues.

The overlap for these digital initiatives against other programs and REPEX have been assessed on a quantified benefit analysis and namely how they:

- Allow for the delay of augmentation expenditure by increasing the efficiency and capacity of the network;
- Provide more insight during outages allowing for a more resilient and compliant network; and / or
- Increase the accuracy of risk-based modelling for asset management replacement expenditure.

9.1. Resilience

A large portion of the digital expenditure involves enhanced modelling and fault visualisation of the network. This allows for a greater storm response by removing large portions of unwanted information and gives field crews better visibility on locations and importance of faults.

Better fault response removes the need for some network hardening especially for that in built up areas. This is because crews can be mobilised far quicker, accurate and to higher priority jobs.

This however gives no material overlap that will cause reprioritisation or reduction of resilience programs.

9.2. Augmentation

Some digital programs such as:

- Data driven network modelling;
- Tariff trials, alternative energy and electrified customer support; and
- Flexible demand initiatives

increase the amount of visibility AusNet has, allowing for more flexible demand limits and reducing the need for demand driven AUGEX.

The overlap in benefits has been incorporated into the various financial models of the respective digital projects and is not outlined in this document

9.3. Compliance

There is no identified overlaps with compliance and digital initiatives for this submission.

9.4. REPEX

There is no identified overlaps with repex and digital initiatives for this submission. The digital repex initiative will not allow for delay of repex expenditure in the upcoming regulatory period.

10. Top-Down Adjustments

10.1. REPEX and future programs

The overlap with REPEX line assets and other network programs results in the reduced expenditure listed in Table 3. These numbers have been applied to the repex portfolio in the final submission.

Table 3: REPEX and future program adjustments

Asset Class	REPEX unit allocation	REPEX $ allocation	Project Allocation	Project $ allocation	Project Categories	Volume assets removed from REPEX	$ removed from REPEX
Poles	17,637	$212.72M	5,281	$62.95M	AUGEX, Resilience, Compliance	705	$8.5M
Insulators	4,200	$11.3M	1,971	$2.13M	AUGEX, Resilience, Compliance	418	$0.45M
Cross Arms	10,452	$59.72M	1,971	$11.26M	AUGEX, Resilience, Compliance	418	$2.39M
DTs	897	$13.9M	990	$16.1M	AUGEX, Resilience, Compliance	35	$0.56M
Conductors	24,055	$112.31M	2,637	$17,46M	AUGEX, Resilience, Compliance	477 units, 17.79 km	$2.12M
Service	10,050	$15.88M	148	$0.22M	AUGEX, Resilience, Compliance	84	$0.13M
Total							**$14.2M**

10.2. REPEX and Zone Substation rebuild projects

The overlap with REPEX station assets and other network programs results in the reduced expenditure listed in Table 4. These revisions downward have been applied to the repex portfolio in the final submission.

Table 4: Repex and zone substation rebuild adjustments

Zone Substation	REPEX unit allocation	REPEX $ allocation removed
Thomastown	22	$13.05M
Watsonia	5	$2.08M
Traralgon	7	$4.97M
Newmerella	3	$1.68M
Kilmore South	3	$2.27M
Total	40	$24.5M

10.3. LV Electrification upgrades

During the preparation of the LV Electrification business case, 102 sites originally planned for the current regulatory period had been identified as overlap and have been removed.

Further to that, 36 sites planned for upgrade in FY27 have also been deemed as in need of urgent replacement. AusNet has since decided to bring these DSS upgrades forward into the current period.

10.4. Combined adjustments

Table 5 shows the combined adjustments for the overlap identified between the different initiatives. This ultimately results in a $42M downward adjustment to AusNet's proposed capital investment for the 2026-31 regulatory period.

Table 5: Combined adjustments

Asset Class	REPEX/digital unit allocation	REPEX/digital $ allocation	Project Allocation	Project $ allocation	Project Categories	Assets removed from REPEX	$ removed from REPEX/AUGEX
Repex and future programs	67,291	$425.83M	$12,998	$110.12M	AUGEX, Resilience, Compliance	3545	$14.2M
Repex and zone substation	236	$154.71M	-	$88.1M	Zone Substation Rebuilds	40	$24.05
DSS Upgrades	-	-	-	$161.4M	AUGEX	-	$3.77M
Total							$42.02M

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