

OPERATING EXPENDITURE

VEGETATION MANAGEMENT

UE RRP BUS 4.01 – PUBLIC
2026–31 REVISED PROPOSAL



Table of contents

1. Overview	2
2. Background	3
2.1 Our regulatory proposal	3
2.2 AER draft decision	3
3. Our revised proposal	5
3.1 Response to AER draft decision	5
3.2 Revised proposal forecast	12

1. Overview

Since 2021, we have been on a journey towards reliance on light detection and ranging (LiDAR) technology to identify vegetation spans across our network that are or will become non-compliant without further intervention. The use of LiDAR has increased the standard of compliance possible under the Electricity Safety (Electric Line Clearance) Regulations (the Code), which governs how we inspect and manage vegetation.

In its draft decision, the AER recognised that the adoption of new technology had increased the standard of compliance which can be achieved, and that we need to be funded to meet all our compliance obligations. However, the AER questioned whether our estimates for vegetation management activities were prudent and efficient.

Its draft decision did not include any step change allowance.

We have carefully considered the AER's draft decision and made significant updates to our forecasts. These updates include incorporating additional data (now available) from CY24 and CY25, which reflect the achievement of material efficiencies through the management of our program over the past two years. We have also accepted areas where the AER considered the 'trend' component of its forecast methodology would provide sufficient funding.

As a result, our revised step change has materially reduced from our original proposal. Our revised step change, however, remains driven by changes in the type of cutting required to achieve compliance (e.g. the cutting of spans previously cut under span rates but to non-compliant timeframes, and urban liveline works).

We also note that our recent years of required cutting volumes, as identified by LiDAR, reflect comparatively benign weather conditions, with rainfall in CY24 being in the lowest 10 per cent of all years since 1900. To the extent that actual weather in the 2026–31 regulatory period varies from recent weather patterns, we will bear the risk of any outworkings on our actual vegetation management activities and associated costs incurred.

Our revised forecast vegetation management operating expenditure step change for the 2026–31 regulatory period is presented in table 1.1.

TABLE 1.1 REVISED PROPOSAL: VEGETATION MANAGEMENT STEP CHANGE (\$M, 2026)

FORECAST	REGULATORY PROPOSAL	UPDATED FORECAST ¹	DRAFT DECISION	REVISED PROPOSAL
Step change	72.3	76.8	-	44.2

¹ Updated per AER information request; see United Energy, *Response to AER IR014*, 22 April 2025

2. Background

This section provides an overview of our proposed vegetation management activities underpinning our original proposal, and a summary of the AER's draft decision.

2.1 Our regulatory proposal

In our original proposal, we set out how we are now using LiDAR to inspect our vegetation spans, and how that technology has identified the need for much greater levels of cutting to meet Code clearance requirements.² The forecast level of required cutting was based on data from CY23 and given resource capabilities at the time, assumed that we would not become fully compliant with the Code until FY29.

Our forecasts also included additional costs associated with changes in our hazard tree inspections and an increase in management oversight in proportion to the additional cutting activities.

In a subsequent information request from the AER, following onsite workshops with its technical consultant, EMCa, we provided an updated forecast based on additional data then available. As acknowledged later in this addendum, this updated forecast inadvertently double-counted some cutting volumes.

The updated forecast, however, did correctly reflect efficiency gains that we have achieved as our vegetation management program matured and the resource capabilities of the market expanded. Our updated step change forecast remained consistent with our original proposal though as our growing resource pool demonstrated that we would achieve compliance earlier than expected.

2.2 AER draft decision

In its draft decision, the AER recognised that the adoption of new technology had increased the standard of compliance which can be achieved, and that we need to be funded to meet all our compliance obligations. Specifically, the AER noted:³

... we are satisfied that United Energy must meet all the requirements of its plan. Accordingly, the forecast total opex we approve must be sufficient for United Energy to meet all the requirements in its approved management plan, as well as its regulatory obligations under the relevant Act, Regulations and Code of Practice.

However, the AER did not accept our proposed vegetation management operating expenditure step change and instead included an allowance for vegetation management based only on our revealed base year expenditure and the rate of change. The AER considered this provided sufficient operating expenditure for us to comply with our electric line clearance obligations in the 2026–31 period.

The AER also stated that EMCa's review supported its conclusions, including the following:⁴

- we have overestimated the uplift in cutting volumes we require
- there was a lack of justification for the proposed uplifts in contractor liaison and hazard trees costs

² UE ATT 9.02 – Vegetation management step change, January 2025, section 2.1

³ AER, *Draft decision: United Energy electricity distribution determination 1 July 2026 – 30 June 2031, Attachment 3 – Operating expenditure*, p. 20

⁴ AER, *Draft decision: United Energy electricity distribution determination 1 July 2026 – 30 June 2031, Attachment 3 – Operating expenditure*, p. 21

- our unit rates are amongst the highest in Victoria, and higher than revealed costs, without sufficient justification
- the relatively new application of LiDAR technology, which amongst other things will require several years to be refined including updating of the vegetation management systems to establish a stable vegetation management program. Once stabilised, this can be expected to enable efficiencies to be realised which are not currently included in the forecast of operating expenditure requirements. EMCa considered these efficiencies can be material.

3. Our revised proposal

In developing our revised proposal, we have considered the AER's draft decision and made significant updates to our forecasts. These updates include incorporating additional data (now available) from CY24 and CY25, which reflect the further maturation of our vegetation management program over the past two years. The corresponding revisions to our forecast methodology are set out in detail below.

As outlined in table 3.1, this has materially lowered our required step change. Our revised step change, however, remains driven by changes in the type of cutting required to achieve compliance (e.g. the cutting of spans previously cut under span rates but to non-compliant timeframes, and urban liveline works).

TABLE 3.1 REVISED PROPOSAL VEGETATION MANAGEMENT STEP CHANGE (\$M, 2026)

FORECAST	FY27	FY28	FY29	FY30	FY31	TOTAL
Regulatory proposal	7.1	10.8	17.8	18.1	18.4	72.3
Updated forecast ⁵	12.7	15.8	16.0	16.1	16.2	76.8
Draft determination	-	-	-	-	-	-
Revised proposal	9.4	9.1	8.9	8.6	8.3	44.2

It is also important to recognise that our cutting volumes in CY24 and CY25 reflect the comparatively benign weather conditions that have occurred through this period. For example, many areas within Victoria (including within our network) have been experiencing drought-like conditions, with rainfall in CY24 being in the lowest 10 per cent of all years since 1900.⁶

Given the above, the volumes of spans required to be cut in CY24 and CY25, as identified by LiDAR, were statistically low relative to more steady-state conditions. To the extent that actual weather in the 2026–31 regulatory period varies from CY24 and CY25 weather patterns, we will bear the risk of any outworkings on our actual vegetation management activities and associated costs incurred (including both from a vegetation growth perspective—where greater rainfall is correlated with faster growth—and from a unit rate perspective—where greater rainfall is correlated with slower cutting progress due to safety and/or access restrictions).

3.1 Response to AER draft decision

As set out in section 2.2, the AER and EMCa raised concerns about the level of our proposed vegetation management cutting volumes and costs. We have also updated our modelling approach in response to more consistent and recent input data.

We address each of these issues below.

⁵ Updated per AER information request; see United Energy, *Response to AER IR014*, 22 April 2025

⁶ Australian Bureau of Meteorology, *Annual Climate Summary for Victoria*, 23 January 2025

3.1.1 We have simplified our modelling approach and incorporated updated input data

In our original proposal, our forecast cutting volumes and unit rates were based on actual FY23 and FY24 RIN outputs, and assumptions regarding FY25 data and expected future cutting resources. This reflected the information available at the time, and recognised that this would ultimately be updated once our FY25 RIO data was finalised.

We have since confirmed two consistent years of LiDAR data—CY24 and CY25—and achieved significant resource growth and maturity in our management program that have provided a more robust framework to develop forecasts for the 2026–31 regulatory period.

This has supported the simplification of our modelling approach for our revised proposal, and underpins our lower step change requirements. In simplifying our approach, we have also corrected the basis of our forecast volumes, as reflected in the AER's concerns with our response to its information request during its draft determination process.

Our updated modelling approach and corresponding impacts are described in table 3.2.

TABLE 3.2 REVISED PROPOSAL MODELLING AMENDMENTS

MODEL AMENDMENT	IMPACT ON FORECAST
Incorporated CY24 and CY25 cutting data	CY24 (39,357 spans) and CY25 (40,457) cutting volumes both reflect mature LiDAR practices, with 97 and 99 per cent of total spans inspected using LiDAR in each year respectively. The consistency of this data provides confidence in the extent of our overall steady-state cutting envelope, and is further supported by statements from EMCa that 'the total cutting program is estimated as 39,368 spans... and reflects a reasonable estimate of the total spans to be cut'. ⁷
Incorporated CY24 and CY25 unit rate data	<p>Unit rates are derived from total cutting expenditure and corresponding cutting volumes for span and hourly rates. Compared to our original proposal, this has reduced overall unit rates (i.e. total cutting expenditure divided by total cutting volumes) by ~36 per cent.</p> <p>Our underlying cutting expenditure for these years also reflects the impact of long-term contracts with our panel of vegetation suppliers, which will span the 2026–31 regulatory period.</p>
Amended model to forecast volumes and unit rates based on a two-year average of CY24 and CY25	A two-year average ensures our forecasts are based on mature LiDAR data and captures the efficiencies in our cutting program that we have achieved recently. As noted previously, however, CY24 and CY25 represent statistically lower growth years due to abnormally low rainfall, which all else equal will under-represent required cutting volumes across 2026–31.

⁷ EMCa, *United Energy 2026 - 2031 Regulatory Proposal, Review of Aspects of Proposed Expenditure on Augex and Vegetation Management, Report prepared for: Australian Energy Regulatory (AER), August 2025, paragraph 275*

Revised liveline data	In our original proposal, liveline cutting data was forecast based on assumed proportions of priority vegetation spans. We have since updated these forecasts to reflect actual outstanding liveline works for CY25. This has materially reduced our liveline expenditure forecasts.
Applied a glidepath to transition toward compliant cutting timeframes	In CY25, we cut 1,679 spans in HBRA based on programmatic span rates that our LiDAR data indicated should have instead been rectified faster (e.g. on hourly rates) to comply with our ELCMP. We will cut the majority of these spans on hourly rates in the short-term, but modelled a transition towards a greater proportion on span rates over time (with a steady-state end-point based on the volume of fast-growth spans that are cut as a priority each year).
Assumed that our full steady-state cutting volumes will be achieved from CY26 onwards	In CY25, we expect to cut all HBRA and LBRA rural spans, with only liveline cutting not achieved. Given the rate of increase in resource availability, we expect to cut all required volumes from CY26 onwards (rather than FY29 in our original proposal) and have reflected this in our forecasts.
Amended our approach for forecasting the volume of hazard trees removed	We have a compliance obligation to assess hazard trees every three-years, but due to the lack of qualified resources, we only achieved these volumes in CY25. To account for this variability in historical assessment volumes, we have now forecast hazard tree removals based on CY25 assessment volumes and historical find rates.
Amended our modelling approach to account for the impact of the AER's rate of change	<p>In response to AER feedback, we have amended our modelling to account for the impact of the rate of change, with this reducing our forecast step change. For example, our step change is equal to total forecast expenditure over FY27–31, minus the forecast trend and our FY25 base year (for each year).</p> <p>We have also removed our forecast uplift in contractor management requirements, consistent with the AER's draft decision.</p>

3.1.2 Comparisons to AusNet's and Jemena's vegetation programs are not informative of our cutting needs

In its draft decision, the AER stated that we appear to be spending more on vegetation management than our Victorian peers, namely AusNet and Jemena.⁸

For the following reasons, we do not consider that comparisons of our vegetation management costs to AusNet or Jemena is meaningful:

- based on RIN data, AusNet's and Jemena's average number of trees per maintenance span is significantly lower than on our network
- our use of LiDAR provides the most accurate data available to identify vegetation management cutting needs, with comparisons to other networks using alternative approaches to vegetation

⁸ AER, *Draft decision: United Energy electricity distribution determination 1 July 2026 – 30 June 2031, Attachment 3 – Operating expenditure*, pp. 24–25.

management that have inspected a much smaller proportion of total spans each year not indicative of our cutting needs.

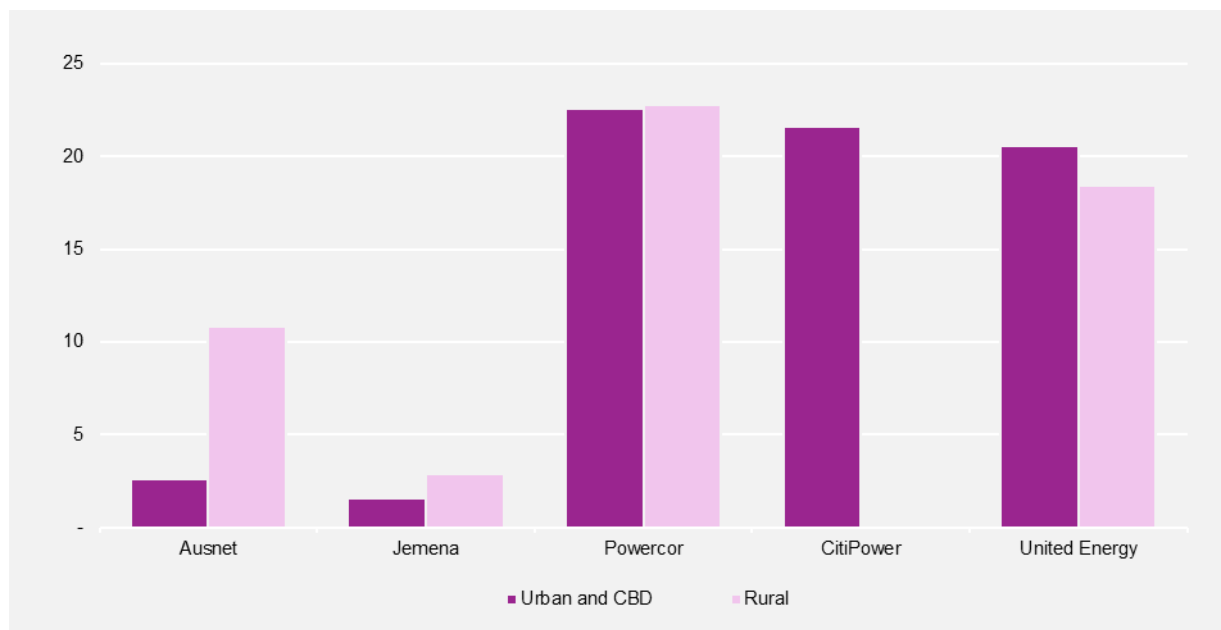
We discuss these two concerns below.

Average number of trees per maintenance span

Figure 3.1 shows the average number of trees per maintenance span across urban, CBD and rural areas, based on audited RIN data for FY24. This data indicates that our networks have a higher average number of trees per maintenance span than both AusNet and Jemena.

Given the number of trees per maintenance span significantly drives the number of trees to be cut, and hence vegetation management costs, it makes little sense to compare the vegetation management costs of Powercor, United Energy and CitiPower, with Ausnet or Jemena.

FIGURE 3.1 AVERAGE NUMBER OF TREES PER MAINTENANCE SPAN (FY24 RIN)



Note: (1) While only FY24 data is shown, the results are consistent for previous years as well
 (2) CitiPower spans reflect the greater proximity to residential properties/gardens due to space constraints in built-up environments

Use of LiDAR technology

As outlined in our original proposal, we have been using LiDAR as an in-house solution since 2021. Our journey towards reliance on LiDAR followed a major review of our vegetation clearance management and contract arrangements, where we introduced new technologies to provide faster and more accurate visibility of our network.

We consider our transition away from subjective ground-based inspection models where contractors, identify and determine their vegetation cutting program is at least a regulatory cycle ahead of other networks.⁹ That is, our understanding is that AusNet and Jemena both currently operate the inspection and contract model that our review identified as a poor predictor of required cutting volumes.

The introduction of LiDAR, and our advances in its application, have significantly improved our vegetation management practices such that we (and our customers) have a very high degree of confidence in the need or otherwise for vegetation management. In this context, we consider

⁹ For example, Jemena plans to introduce LiDAR over the 2026–31 regulatory period, Jemena, *Jemena Electricity Networks (Vic) Ltd IT Investment Brief – Digital Twin Non-recurrent*, 31 January 2025.

making inferences on our vegetation management needs based on AusNet or Jemena represents a very flawed approach.

3.1.3 Our forecast cutting volumes reflect efficiencies achieved through the maturity of our vegetation management program

Since submitting our regulatory proposal, our vegetation management program has continued to mature. This maturity is evident in the percentage of total vegetation spans now inspected by LiDAR and our progression towards compliance, as well as the already high proportion of spans that are cut on low-cost span rates today.

As shown in table 3.3 below, from CY23 we have continued to increase the coverage of our LiDAR program, with our CY24 and CY25 cutting envelope reaching what we consider to be steady-state volumes (albeit, with these two years reflecting drought or near-drought conditions across much of our network area).¹⁰

TABLE 3.3 INCREASING MATURITY OF OUR INSPECTION PROGRAM

DESCRIPTION	CY23	CY24	CY25
Total span population	189,172	188,525	188,233
Proportion of spans inspected by LiDAR	97%	98%	99%
Total cutting envelope identified	32,366	39,357	40,457
Proportion of spans not cut	18%	13%	2%
Cutting envelope as proportion of total spans	17%	21%	21%

We consider the reasonableness of these overall volumes is supported by the following:

- our cutting envelope represents a very low proportion of our total span population. For example, this proportion is equivalent to approximately a five-year cutting cycle for all spans, which we do not consider represents an inflated program
- our cutting envelope was supported by EMCa in its technical review, who stated that the forecast in our original proposal (i.e. 39,368 spans) reflected ‘a reasonable estimate of the total spans to be cut’¹¹
- across the 2026–31, approximately 90 per cent of our vegetation program will be cut based on lower-cost span rates. This is considered a very high proportion given the variability in tree growth and access limitations (e.g. due to customer liaison, safety and/or weather drivers) means that some spans will always be cut on hourly rates across a given year
- recent year cutting volumes reflect comparatively benign weather conditions, with rainfall in CY24 being in the lowest 10 per cent of all years since 1900. To the extent that actual weather in the 2026–31 regulatory period varies from recent weather patterns—for example, a return to more

¹⁰ Some year-on-year variability is naturally expected, as evident between FY24 and FY25

¹¹ EMCa, *United Energy 2026 - 2031 Regulatory Proposal, Review of Aspects of Proposed Expenditure on Augex and Vegetation Management, Report prepared for: Australian Energy Regulatory (AER), August 2025, paragraph 275*

regular rainfall patterns—we will bear the risk of any outworkings on our actual vegetation management activities and associated costs incurred.

3.1.4 Our LBRA cutting volumes are not impacted by any ‘backlog’

In its draft decision, the AER raised concern that our forecasting methodology for LBRA would likely overestimate the number of cuts that will be required once compliance is achieved, since they consider 2024 includes a ‘backlog’ of non-compliant spans.¹² The AER states that it tested this hypothesis by comparing the ratio of rectification cuts to maintenance cuts in LBRA compared to HBRA.¹³

The logic supporting the AER’s comparison, however, is unclear. That is, while the cutting approach—maintenance cutting (i.e. per span) or rectification cutting (i.e. per hour)—may be informative of the efficiency of our program, it does not impact the overall total volume of cutting required.

To illustrate the above, we replicated what we understand to be the AER’s assumptions for calculating total rectification cuts as a proportion of total maintenance cuts. As shown in table 3.4 below, while the proportion of rectification cuts was lower in 2023, this corresponded with higher total volumes.

TABLE 3.4 HBRA: CUTTING PROPORTIONS RELATIVE TO TOTAL CUTTING VOLUMES

CUTTING TYPE	2023	2024
Total rectification cuts	3,214	2,830
Total maintenance cuts	7,984	6,524
Rectification cuts as proportion of maintenance cuts	40%	43%
Total cutting volume	11,198	9,354

Further to the above, we note that our total forecast cutting volumes represent a small proportion of our overall population of LBRA spans—specifically, by 2031 we forecast to only cut 18 per cent of our LBRA spans in a given year. This is equivalent to approximately a six-year cycle of cutting. We consider these comparisons support the reasonableness of our cutting volumes, as reducing the forecast number of spans further would not allow us a reasonable opportunity to cut sufficiently across our network area to maintain compliance.

3.1.5 Our hazard tree costs will increase with more frequent assessments

In its draft decision, the AER stated that we provided no explanation for the proposed increase in our hazard tree forecasts, other than the need to carry out approximately double the hazard tree inspections per year to achieve compliance with our ELCMP. The AER also noted that increasing the inspection frequency will not change the number of hazard trees, only the timing of when they are identified.¹⁴

¹² AER, *Draft decision: United Energy electricity distribution determination 1 July 2026 – 30 June 2031, Attachment 3 – Operating expenditure*, p. 27

¹³ AER, *Draft decision: United Energy electricity distribution determination 1 July 2026 – 30 June 2031, Attachment 3 – Operating expenditure*, p. 25

¹⁴ AER, *Draft decision: United Energy electricity distribution determination 1 July 2026 – 30 June 2031, Attachment 3 – Operating expenditure*, p. 28

Our ELCMP requires that hazard trees are assessed based on a three-year inspection cycle. The rationale for the three-year cycle is to manage risk, recognising that hazard trees carry a greater risk of fire ignition from our assets.

Up until CY25, however, we were non-compliant with our ELCMP due to a lack of available resources in the market to complete three-yearly inspections. This has since been rectified with additional arborists. This has enabled us to step up our inspection of hazard trees to meet our ELCMP requirements in CY25. We have consequently forecast that we will maintain our CY25 hazard tree inspection program each year over the 2026-31 regulatory period.

To determine our corresponding hazard tree expenditure forecasts for the 2026–31 regulatory period, we have multiplied our tree inspection program by the average tree removal and unit rates over the 2022–2025 period. We have adopted this period to smooth out the variability of actual outcomes over each of the last four years, noting that tree removal rates per assessment undertaken has not been impacted by resource availability or LiDAR practices.

We also consider that while increasing inspection frequencies will not change the number of trees that are hazardous, more frequent inspections will identify hazardous trees earlier. As a simplified example, assume that every year there are 100 new hazard trees across our network:

- under a three-year cycle, we would inspect approximately 33 per cent of our network each year, and so we would expect to identify approximately 33 of these hazard trees annually
- under a five-year cycle, we would inspect approximately 20 per cent of our network each year, and so we would expect to identify approximately 20 of these hazard trees annually.
- across a five-year regulatory period, a three-year cycle would identify more hazard trees for removal (165 trees) versus a five-year cycle (100 trees).

The above example does not account for the vagaries of annual growth and other variable factors that drive vegetation proximity to our network, but it highlights why we expect to remove more hazard trees across the 2026–31 regulatory period, consistent with a material increase in inspections.

3.1.6 We have removed contractor liaison costs from our step change

Our regulatory proposal included additional contractor liaison costs associated with the need to manage an expanded cutting program, including audit and associated planning activities. The AER, however, stated that these costs should be funded through its rate of change calculation.

We consider the rate of change is intended to cover the increasing scale of our operations associated with new feeders and additional assets, as the size of our network grows. We consider our contract liaison costs are additional to this; that is, our network is growing from both new spans and increased activity on existing spans as a result of technological advancement.

Notwithstanding the above, we accept the AER's draft decision and have not included these additional contractor liaison costs in our revised vegetation management step change.

3.1.7 Sharing efficiency gains and losses symmetrically

In its draft decision, the AER raised whether our failure to maintain compliance with our vegetation management obligations constituted a non-recurrent efficiency gain.¹⁵ We do not consider this to be the case.

The change in available inspection technology to use LiDAR increased the required scale of compliance activity and thus the scope of activity needed to comply with an existing obligation. It

¹⁵ AER, *Draft decision: United Energy electricity distribution determination 1 July 2026 – 30 June 2031, Attachment 3 – Operating expenditure*, p. 29

cannot be in our customer's interests or a reasonable application of the efficiency incentive schemes for networks to be discouraged from adopting technological advancements as they become available (particularly advancements that provide significant safety and bushfire risk reduction benefits). Further, we have actively sought to meet our higher compliance standards as soon as we became aware of them (noting the constraint on achieving this in full has been resource availability in the external market).

For the reasons outlined previously, we also consider our cutting program will continue at the levels identified in CY24 and CY25 into the future. For example, it remains that our forecast vegetation management program will cut, on average, approximately 53 per cent of our HBRA spans and 18 per cent of our LBRA spans annually.¹⁶ This is not a level that we would typically associate with a non-recurrent cycle.

Therefore, we do not consider that reclassification of our current vegetation management operating expenditure to being non-recurrent in nature is justified, in our customers interests, or consistent with the intended incentive properties of the regulatory regime.

3.2 Revised proposal forecast

Our revised vegetation management operating expenditure step change is set out in table 3.5. This step change represents the increased costs necessary for ongoing compliance with the Code and our ELCMP.

As shown below, our incremental compliance costs are not captured in our base year expenditure and we have deducted the rate of change allowance from the base, step and trend approach to avoid any potential double counting of costs. This is further shown in our attached vegetation management step change model.¹⁷

TABLE 3.5 REVISED PROPOSAL: VEGETATION MANAGEMENT STEP CHANGE (\$M, 2026)

STEP CHANGE	FY27	FY28	FY29	FY30	FY31	TOTAL
Vegetation management: total	28.3	28.1	27.9	27.8	27.6	139.6
Less: base year expenditure	-18.7	-18.7	-18.7	-18.7	-18.7	-93.3
Less: annual rate of change	-0.3	-0.3	-0.4	-0.5	-0.6	-2.2
REVISED PROPOSAL	9.4	9.1	8.9	8.6	8.3	44.2

Note: Totals might not add due to rounding

¹⁶ For HBRA, this is consistent with cutting that targets two-years of growth

¹⁷ UE RRP MOD 4.01 - Vegetation management - Dec2025 - Confidential



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