MINISTRY OF BUSINESS, INNOVATION & EMPLOYMENT
HĪKINA WHAKATUTUKI

COVERSHEET

Minister	Hon Simon Watts	**Portfolio**	Energy
Title of Cabinet paper	A Secure Network: Amendments to the Electricity (Hazards from Trees) Regulations 2003	**Date to be published**	29 May 2025

List of documents that have been proactively released		
Date	**Title**	**Author**
April 2025	A Secure Network: Amendments to the Electricity (Hazards from Trees) Regulations 2003	Office of the Minister for Energy
8 April 2025	A Secure Network: Amendments to the Electricity (Hazards from Trees) Regulations 2003 EXP-25-MIN-0043 Minute	Cabinet Office
28 March 2025	Regulatory Impact Statement: Amendments to the Electricity (Hazards from Trees) Regulations 2003	MBIE

Information redacted **YES** / ~~**NO**~~ *(please select)*

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Some information has been withheld for the reason of Confidential advice to Government.

Regulatory Impact Statement: Amendments to the Electricity (Hazards from Trees) Regulations 2003

Coversheet

Purpose of Document	
Decision sought:	Cabinet agreement to amend the Electricity (Hazards from Trees) Regulations 2003 to improve the security of electricity supply and public safety.
Advising agencies:	The Ministry of Business, Innovation and Employment
Proposing Ministers:	Minister for Energy
Date finalised:	

Problem Definition

The Electricity (Hazards from Trees) Regulations 2003 (the Regulations) deal with risks to electricity supply and public safety posed by trees and vegetation encroaching on electricity lines. The Regulations create a non-encroachment zone around lines (the Growth Limit Zone or GLZ).

The Regulations do not address the risk from trees outside of the GLZ falling on lines, especially in adverse weather. This is already a significant risk, which is likely to get worse with changing weather and land use patterns and have a bigger impact because of increased reliance on electricity.

Without a change to the Regulations, there will be increasing costs for affected parties such works owners and ultimately electricity consumers, to whom these costs are passed on. The costs arise from repairing direct damage to lines, investing in strengthening infrastructure to be resilient to treefall, loss of economic activity from interruptions to supply, and safety risks to persons and property.

There is a secondary problem, which is that any extension of the current regime will impose costs – for example to remove trees - which must be met by somebody. All stakeholders are reluctant to pick up these costs. This means that even if the change contributes to safety and security of supply, and reduces costs in the long term, the decision as to who bears these costs will be the most controversial element of any proposal for reform.

Executive Summary

The current regime: works owners cannot manage risks from trees outside the GLZ

The Regulations deal with risks to electricity supply and public safety posed by trees and vegetation encroaching on electricity lines. The Regulations create rules for a non-encroachment zone around lines (the Growth Limit Zone or GLZ), and a regime for the allocation of costs and responsibility for managing trees within and near this zone. The

perimeter of the GLZ is dependent on the voltage and length of the line's span however, following recent amendments it extends indefinitely upwards for lines over 11kV with spans less than 150m.

Works owners (Transpower and electricity distribution businesses) must notify tree owners when a tree is growing into the GLZ and needs to be cut or trimmed. A tree owner who is notified must cause the tree to be cut or trimmed.

Works owners have no regulatory power to require a tree outside the GLZ to be cut, trimmed or felled because there is a risk of the tree falling on their lines. The risks must be managed through commercial negotiation or litigation.

Transpower and most electricity distribution businesses (EDBs) manage their expenditure on vegetation management within their allowed revenue under the price/quality regime in Part 4 of the Commerce Act 1986.

The status quo is likely to impose increasing costs

Changes in land use and weather patterns are increasing risks to the security of electricity supply and causing more outages and jeopardising public safety. A significant proportion of outages in recent severe weather (e.g. Cyclone Gabrielle) occurred because of trees falling on lines from outside of the GLZ.

The current scope of the Regulations is too narrow to effectively address risks from outside of the GLZ, while non-regulatory solutions (litigation and commercial negotiation) are also ineffective.

Following two rounds of consultation we have identified a preferred solution which improves security of supply and public safety while limiting adverse impacts on electricity consumers, works owners, landowners, tree owners and the general public.

Scope of options for the policy problem: to lower the risk of trees falling on lines

The consultation process confirmed that the main shortcoming of the Regulations is their failure to address trees at risk of falling on lines, but outside of the regulated GLZ. Therefore, the options we have developed are aimed at addressing this gap.

Cabinet has already agreed to minor changes to the Regulations which address other issues. Further work is underway on other outstanding issues.

Preferred option for addressing the policy problem: a risk based assessment of trees, with costs met by works owners

Our preferred option would require tree owners to remove a tree within 24m of either side of the GLZ, if it is found to be a treefall hazard by the works owner, following an assessment of**:**

- the **likelihood** of the tree falling, and
- the **likely impact** of the treefall on security of supply or public safety.

The works owner would have discretion as to which of these trees were assessed, and when. The Regulations would specify the factors that a works owner had to consider when making the assessment.

If a relevant hazard threshold is met following the assessment, the works owner would have to issue a notice to the tree owner requiring the tree to be removed. The thresholds would be specified in the Regulations.

We propose that works owners meet the cost of removing trees under this proposal, including the costs of undertaking the risk assessment, and associated costs such as removing debris.

This proposal would:

- extend the scope of the regulations to cover trees outside the GLZ
- deal with the highest risk trees, and protect the most strategic or vulnerable lines, in a clear and predictable way
- allocate the additional costs of implementation to the party that benefits the most from the change and is best able to manage them (the works owners)
- impose discipline on works owners to avoid unnecessary felling of trees, and associated deforestation or imposition of costs on tree owners
- leave some risk with tree owners to deter irresponsible tree planting (common law remedies would remain open to works owners).

This option best addresses the risks that would otherwise remain under the status quo and should reduce costs to relevant parties.

Limitations and Constraints on Analysis

Further challenges to managing risks from trees remain – we are taking a staged approach to the broader policy problem

In this Regulatory Impact Statement (RIS) we have only considered options to address out-of-zone trees within fall distance of lines. These constraints reflect a Ministerial direction for a staged approach to reform, to allow more tractable problems to be solved first, and to defer other reforms which would take longer to implement. Some options may require changes to primary legislation, compared with the areas analysed in this RIS, which can be changed through amendments to Regulations.

Our analysis excludes consideration of options for addressing the following areas of the broader policy problem.

Areas excluded for this RIS:

- Risks to lines from new forestry planting
- Difficulties for works owners accessing land to carry out tree-related work
- Distinctions between different classes of tree owner (e.g. residential and commercial)
- Parts of the Regulations that we consider to be operating adequately under the status quo.

Limited data available for analysis

Our analysis in this RIS is also limited by the data that we have been able to use.

Vegetation management data

Data about the costs of vegetation management and the causes of outages has been obtained from submissions, from regulatory data collected by the Commerce Commission

(Commission) under Part 4 of the Commerce Act 1986, from the EDBs' Asset Management Plans, and directly from stakeholders.

Data on tree fall impact

There is limited data on the impact of treefall on low voltage networks. The Commission collects information on unplanned outages, but this information focusses on higher voltage lines.

There is also limited data on the contribution of tree fall from outside of the GLZ to outages during severe weather events. Some submitters have submitted that this lack of data undermines the case for change to the Regulations.

We have placed some reliance on the Electricity Distribution Sector Cyclone Gabrielle Review prepared by Energia Ltd for Electricity Networks Aotearoa (ENA). The report was commissioned by ENA and is designed to assess the appropriateness of the electricity distribution sector's risk reduction, readiness and response to Cyclone Gabrielle.

Data on administrative costs to tree owners

Forestry owners pointed out a wide variety of costs that they face because electricity lines run through their land, such as weeding and administrative costs from arranging access to the lines on their land for works owners. We have been unable to obtain sufficiently detailed data to properly quantify these costs. However, we consider that the overall scale of these numbers will not be sufficient to offset the benefits of improved security of supply and public safety.

Interaction with Part 4 of the Commerce Act

Our expectation is that the regulatory regime under Part 4 of the Commerce Act will provide a discipline on Transpower and EDBs. The regime does not simply permit a "pass through" of operational expenditure, but provides regulatory scrutiny of forecast expenditure, and incentives to reduce costs.

Responsible Manager(s) (completed by relevant manager)

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Quality Assurance (completed by QA panel)

Reviewing Agency:	Ministry of Business, Innovation and Employment
Panel Assessment & Comment:	The MBIE Quality Assurance Panel has reviewed the Regulatory Impact Statement prepared by the MBIE Electricity, Generation, Infrastructure and Markets Policy team, and consider that the information and analysis summarised in the Regulatory Impact Statement meets the Quality Assurance criteria.

Section 1: Diagnosing the policy problem

Background – Trees near electricity lines pose a risk to security of supply and to safety

Electricity lines are needed to convey electricity, but often pass near trees

New Zealand's electricity system relies on electricity lines to convey electricity from generation sources (e.g., hydro, wind, geothermal, and gas/coal power stations) to end consumers. The electricity lines include:

- high voltage transmission lines (making up the national grid and operated by Transpower), and
- mid to lower voltage distribution lines operated by EDBs, that cover specific regions and which are the main suppliers of electricity to end consumers.

Transpower and the EDBs that manage these lines are referred to in this paper as "works owners" and are responsible for the safe and reliable operation of lines.

Thousands of electricity lines cover the country, and many pass through or near trees and other vegetation (for the purpose of this paper we refer simply to 'trees' as inclusive of all relevant vegetation).

Failure to properly manage risk from trees imposes costs on society

If these trees are not appropriately managed, they can encroach on lines or fall on them in bad weather. This can:

- impose increased costs on consumers (via lines charges), from works owners remedying tree-caused damage to lines
- cause economic damage resulting from loss of electricity supply where lines are downed (i.e., economic activity paused or affected due to interruptions in supply)
- harm land, property and people where trees cause safety issues (e.g., fire, loss of supply).

The effectiveness of the current regime in managing risks varies across different circumstances

Electricity Networks Aotearoa, the peak body for EDBs, has stated that its principal concerns related to the workability of the existing Regulations is where they are applied to plantation forestry, as:

> mechanisms that work passably well on tree risks that arise occasionally and by exception, break down entirely when applied to a situation with ongoing dense planting and re-planting of vegetation near powerlines.

Some owners are also concerned about shelterbelt trees and trees owned by Councils. Generally residential tree owners are seen as much less of a concern.

Regions of the country have varied penetrations of commercial forestry. For example, Unison, an EDB in the Central North Island, has about 14% of their 11kV or greater lines within commercial forestry. On the other hand, Westpower, operating on the West Coast of the South Island, has about 1% of their 11kV or greater lines within commercial forestry.

Different voltages of lines also alter the risk that trees present. Outages of high voltage lines typically have a much greater impact than outages for low voltage lines.

Surrounding Regulatory Framework

One of the key measures for addressing risks caused by electricity lines near trees are the Regulations, which create rules for a non-encroachment zone around lines (the Growth Limit Zone or GLZ), and a regime for allocating costs and responsibility for managing trees within and near this zone.

A number of other laws and instruments also impact the management of trees near lines, including:

- the NZ Electrical Code of Practice for Electrical Safe Distances (NZECP 34), which affects who and how (including distances) trees near lines are cut or trimmed
- Part 4 of the Commerce Act 1986, which impacts what price-quality regulated works owners (Transpower and most EDBs) can spend on vegetation management
- the Emissions Trading Scheme (ETS), for which forestry owners can earn and trade units reflecting the emissions abatement impact of trees.

The Electricity (Hazards from Trees) Regulations 2003

The Regulations are one of the key regulatory measures addressing the risks from trees falling on or encroaching into electricity lines.

The Regulations are made under section 169 of the Electricity Act 1992 (Act), which allows regulations to be made for the purpose of "securing the protection of persons and property from injury or damage caused through electricity…" by managing vegetation near electrical installations (including lines).

How the Regulations work to address risks from trees

Currently the Regulations, among other things:

- create a non-encroachment zone (GLZ) around electricity lines. Works owners must notify tree owners that a tree is encroaching on the GLZ and it must be cut or trimmed. Works owners may also notify tree owners that a tree is close to encroaching the GLZ.
- set rules about who is responsible for cutting or trimming trees that grow into the GLZ
- assign liability if rules are breached
- provide a system to resolve disputes about the operation of the regulations.

The primary goal of the Regulations is to manage trees in, or encroaching on, the GLZ. The perimeter of the GLZ is dependent on the voltage and length of the line's span.

For those lines with spans less than or equal to 150m, (a category making up the large majority of lines),[1] the maximum GLZ distance is four metres either side of a line (however it extends indefinitely upwards for lines over 11kV with spans less than 150m). The

[1] For example, data shared by Unison Networks from the Hawkes Bay region indicates that its average line span is 74m.

Regulations also create some wider GLZ distances for lines with longer spans, affecting a much smaller number of lines.[2]

The Regulations aim to balance costs and responsibilities across parties

The Regulations seek to balance costs and responsibilities for managing risks from trees to those parties seen as most appropriate to bear these. For example:

- ***First cut and trim costs borne by works owners**:* When a tree first begins to encroach on the GLZ, the works owner must notify the tree owner of this, after which the tree owner is responsible for the 'first cut and trim' of the tree. However, the works owner must bear the costs of this first cut and trim.

- ***Subsequent cut and trim costs borne by tree owners**:* After the works owner has first identified an encroaching tree, and paid for the first cut and trim, the tree owner then bears the cost of subsequent cut and trims of that tree.

- ***Land owner or occupier can claim "no interest" in tree*:** Land owners can avoid the costs of managing a tree encroaching near the GLZ by claiming that they have no interest in the tree. Some trees may naturally grow near the GLZ (without being planted), and land owners may not commercially benefit from these, making it more appropriate for the works owner to manage this risk (potentially by removing the tree altogether).

- ***Dispensations may be available***: Tree owners can seek dispensation from the default obligations to trim their tree (for example, because the tree is unlikely to pose a serious hazard) and can go to arbitration if this is disputed.

- ***Parties can negotiate for bespoke arrangements***: Although the Regulations create default rules for managing risks from trees, including who bears what costs, works owners and tree owners remain free to negotiate binding arrangements that supersede the regime set out in the Regulations. In principle, parties can seek out an allocation of responsibility that best meets their needs.

The Regulations also make tree owners explicitly liable to works owners for the costs of remedying damage to lines caused by a tree owner's failure to comply with the Regulations.

Both tree owners and works owners will commit offences for failures to perform certain obligations without reasonable excuse.

Part 4 of the Commerce Act 1986

Electricity works owners are geographical monopoly businesses that are regulated under Part 4 of the Commerce Act 1986 (Part 4).

Under Part 4, the Commerce Commission determines the revenue that 'price-quality' regulated EDBs (also known as 'non-exempt' EDBs) and Transpower can earn from consumers during set regulatory periods (known as price paths). The Regulations are relevant to revenue under Part 4 because, before the start of each new price path, the Commission will look at the spend that works owners think will be needed to manage vegetation. The Commission will take this into account in setting what works owners can

[2] Categories are defined depending on whether lines are between 150 – 300m, 301 – 500m, 501 – 700m, and greater than 701m. At their widest point (in the middle part of these lines), the respective horizontal distances of the GLZ extend out to 8m, 15m, 30m and 50m either side of the line.

earn from consumers during that period. For EDBs, this will reflect averaged forecast costs across all price-quality regulated EDBs.

While price paths do not limit what can be spent on vegetation management, they do limit the overall revenue recovered from customers during the regulatory period. This means that works owners will need to absorb a portion of any spend on vegetation that is higher than expected, with the rest recovered from consumers over time. This incentivises these regulated works owners to look for efficiencies in managing risks to lines from trees.

The Commission is currently consulting with Transpower and price-quality regulated EDBs on the price paths that will apply to them in the coming regulatory period, starting on 1 April 2025. The Commission is due to decide the price paths by 30 November 2024.

The Emissions Trading Scheme (ETS)

The ETS is relevant to management of trees near lines, as forestry owners can gain 'New Zealand Units' (ETS Units) that reflect the abatement impact of their forests, and which can have significant value. Vegetation management near lines can cost tree owners and potentially affect emissions abatement, where the deforestation impact is significant enough.

The ETS is a key domestic scheme towards meeting our domestic and international climate change targets, including the 2050 target set by the Climate Change Response Act 2002. The ETS is a pricing mechanism for domestic greenhouse gas emissions and is based on the allocation and trading of ETS Units.

In particular, those responsible for greenhouse gas emissions in certain sectors must surrender ETS Units reflecting their emissions to the Crown. They either surrender ETS Units they have, or they must buy ETS units from the market to surrender.

Participants who undertake a carbon removal activity (such as forestry owners) receive ETS Units for the greenhouse gases removed from the atmosphere. As a forest grows, it absorbs carbon dioxide from the air, and post-1989 forests are a key removal activity overall. Deforestation results in ETS liability and units gained from these trees must be surrendered.

What non-regulatory measures impact tree management near lines

In addition to the regulatory framework discussed above, vegetation near trees is managed through non-regulatory tools. Principally these are:

- negotiation of voluntary binding agreements between tree/land owners and works owners, and
- litigation in the courts to establish liability for damage to lines after events such as storms.

How well are risks from trees to lines currently managed, and how is this status quo expected to develop?

The Regulations in their current form are failing to adequately manage the risks and costs from trees falling on or encroaching into lines.

Specifically, the Regulations currently:

- do not adequately manage the risks and costs of damage from '**out of zone trees**' outside of the existing non-encroachment zones (GLZ), that are at risk of falling on lines, especially in adverse weather.

This lack of adequate management is likely to get worse with changing weather, changing land use and increased reliance on electricity.

Moreover, non-regulatory measures do not currently provide a reliable or efficient tool for managing risk from trees and appropriately allocating costs and are unlikely to be able to 'fill the gap' left by existing issues with the Regulations.

Costs and risks to works owners, consumers and others that already arise under the status quo are expected to increase in scale into the future, if the status quo is kept.

These issues are discussed in more detail below. The analysis has been informed by consultation undertaken with stakeholders during 2023 (on possible issues with, and options for, updating the Regulations) and 2024 (on possible options for addressing out of zone tree fall risks).

Out of zone trees can cause a significant proportion of outages, and these impacts can present in different ways

For some EDBs, out-of-zone trees can cause a significant proportion of outages. For example:

- Firstlight Network attributed 50 per cent of outages for 2023 to trees and 73 per cent of those tree-related outages to out-of-zone trees.
- Unison and Centralines[3] both attributed 87 per cent of tree-related outages to out-of-zone trees in the financial year of 2022/23.
- The Lines Company attributed 90 per cent of tree-related outages to out-of-zone trees.

This suggests that, although the Regulations currently focus on management of risk from tree fall within the GLZ, a large outstanding risk remains outside of this zone.

The risks from failure to manage out of zone trees can also fall in different ways on different kinds of groups.

For example, rural communities predominantly served by lines passing through forestry and/or which have less redundancy of electricity supply in the event of outages, are more likely to be adversely affected when out of zone trees fall on lines. This includes communities such as those on the east coast of the North Island, that were significantly impacted during Cyclone Gabrielle.

On the other hand, the risk of impacts from out of zone trees is likely to be proportionally less for larger urban centres with greater redundancy and/or communities served by lines that do not frequently pass through trees.

Out of zone trees can cause a large proportion of outages during severe weather events

The Report of the Government Inquiry into the Response to the North Island Severe Weather Events noted that:

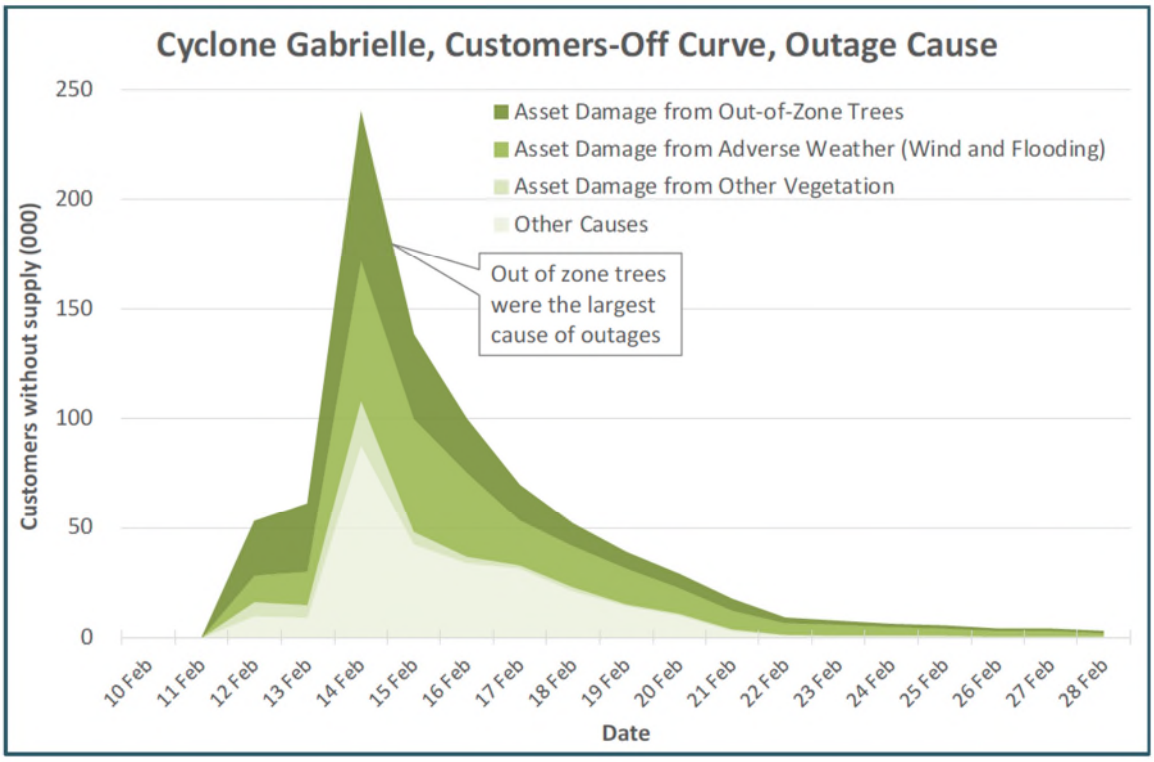
> many power outages were caused by trees falling on power lines, particularly in Tairāwhiti and Northland during Cyclone Gabrielle. Trees planted too close to

[3] Unison and Centralines said the remaining 13 per cent of tree related outages were caused by trees within the GLZ, the hazard warning notice zone, and outside of fall distance zone (usually bark).

powerlines increases the risk of outages. The Inquiry suggests strengthening the Electricity (Hazards from Trees) Regulations 2003.

The ENA-commissioned Cyclone Gabrielle Review stated that the largest cause of outages for Electricity Distribution Business (EDBs) was damage from out-of-zone trees falling on overhead lines.[4] In the report, it was estimated that out-of-zone tree outages interrupted supply to 68,000 customers at the cyclone's peak. The 'value of lost load' during Cyclone Gabrielle was $474 million over two weeks. The *value of lost load* is the cost to customers associated with an interruption of electricity supply.

Figure 1: The material cause of customer outages



The Review concluded that:

> *Trees are a significant hazard to lines, particularly in strong winds. Current rules constrain the ability of EDBs to manage trees that present a fall-risk to lines. This presents a material constraint to resilience. Only 16% of customer outages were caused by in-zone trees. Our analysis indicates that EDBs are likely doing a reasonable job of managing trees within the rules available to them.*

EDBs have invested in resilience and are not relying purely on changes to the Regulations. The Review notes that parts of the network performed better than others. Outages on the sub-transmission network and zone substations accounted for only four per centof outages. The Review noted that this shows the benefit of prior investment in security and network hardening.

[4] Report to Electricity Networks Aotearoa, 'Electricity Distribution Sector Cyclone Gabrielle Review', 2023.

The Review made the following trees-related recommendations:

Table 3: Primary learnings and improvements

Learnings	Strategy	Action
Out-of-zone trees were the largest cause of customer outages and could not be mitigated prior due to the narrow focus of the current tree regs	Risk reduction	**1. Mitigation of out-zone tree risk** (a) The ENA should work with MBIE on the review of the Electricity Hazards from Trees Regulations to widen the corridor where vegetation can be controlled and to make the control regime more effective. (b) The ENA should work with the Commerce Commission on a process to allow additional vegetation management opex required to fund the extra costs of widening the line corridor. This may require a pass-through cost mechanism (or other method) depending on the timing of the tree reg amendments.

Out of zone trees are causing a risk to public safety

Working with and around electricity lines, and especially higher voltage lines, is extremely dangerous. Without an awareness of overhead lines or underground cables, there a real risk of electrocution, explosion, flashover or fire. The need to maintain the GLZ and repair any lines that are downed by trees exposes arborists and maintenance workers to these risks.

The outages caused by out of zone trees pose risks to public safety in and of themselves. Outages may result in limited availability of medical equipment and limited communication capabilities in an emergency or heating and food storage over the longer term.

Currently works owners rely on commercial negotiation or litigation to manage the risk of trees outside the GLZ falling on their lines

The Regulations do not include measures specifically addressing the risk of tree fall from outside of the existing GLZ. Although the Regulations do allow for a works owner to notify tree owners of trees within a metre of the GLZ that risk encroaching it, this notification power cannot compel the tree owner to address the risk before encroachment. Moreover, it only applies to trees within one metre of the GLZ – while many instances of tree fall relate to trees many more metres away from the GLZ.

Negotiated agreements to address out of zone trees

Transpower places very little reliance on the notice regime in the Regulations, but instead relies on commercial negotiations for tree removal. Some, but not all, EDBs report in their Asset Management Plans that they are pro-actively managing the risks from trees outside of the GLZ through commercial negotiations.

Litigation to address out of zone trees

Some EDBs have also used litigation to resolve issues associated with tree management.

For example, one recent case has shown that a tree owner can have a duty to manage the risk of "nuisance" caused by trees falling on lines from outside of the GLZ:

- In *Nottingham Forest Trustee Ltd (NFT) v Unison Networks Ltd*,[5] NFT owned land on which it had planted a commercial forest. Between December 2010 to August 2016 pine trees growing in the forest, which had been planted years earlier, fell onto electricity lines owned and operated by Unison Networks. Unison's customers

[5] *Nottingham Forest Trustee Ltd v Unison Networks Ltd* [2021] NZCA 227 (3 June 2021).

experienced power outages while repairs were carried out, and Unison incurred costs as it repaired the damage.

- Unison sued NFT both in negligence and in nuisance and sought damages to cover the cost of repairs and an injunction to prevent future falls of trees. NFT argued that it had no obligation under the Regulations, and that the trees were falling due to bad weather over which it had no control.
- The High Court found that NFT had a strict liability in relation to the interference caused by its trees.[6] It held that the recurring tree falls caused ongoing, substantial, and unreasonable damage to Unison's property which constituted an actionable nuisance.
- The Court of Appeal upheld the High Court decision on the nuisance claim. Given the high chance of tree falls following bad weather conditions it was unreasonable for NFT to grow the trees to a height at which they would cause physical damage to Unison's line if they fell. NFT was liable to pay damages, as the type of harm that was caused by the tree falls was found to be plainly foreseeable.

However, litigation can be very expensive and uncertain, and by nature tends to occur 'after the fact'. Despite the success of Unison in the *Nottingham Forest* case, any duty to manage trees outside of the GLZ is also likely to be fact-specific to the parties, and so does not provide sufficient certainty.

Commercial negotiations and litigation are unlikely to provide an effective option now and in future

Evidence (described above) suggests that relying on commercial negotiations and litigation to deal with out of zone trees does not currently manage this risk effectively. This was demonstrated during Cyclone Gabrielle last year, which led to New Zealanders facing significant outages for long periods. It is unlikely to deal with this risk any better in future.

Tree management limited by parties' incentives

The effectiveness of the negotiations is limited by:

- lack of responsiveness from some tree owners
- disputes about who should meet the costs of trimming, felling and removal of debris, and about compensation for lost revenue or ETS liabilities.

The Court decisions[7] outlined above have made tree owners more sensitive to the risk of trees falling on lines, and more likely to agree to remove out-of-zone trees at their own cost. However, the tree owner can't be compelled under the Regulations to remove out-of-zone trees which works owners consider to be at risk of falling on their lines.[8]

Consultation with trees owners suggests many are prepared to have trees trimmed or felled to contribute to security of supply if the works owner (or other parties) pays any associated expenses, including compensation for lost revenue and/or ETS deforestation liabilities. However, while some works owners may entertain compensation covering ETS liabilities, most are reluctant to do so. Neither is it clear whether paying this kind of compensation is an efficient or appropriate outcome for consumers that are ultimately charged for costs incurred by works owners.

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[6] *Unison Networks Ltd v Nottingham Forest Trustee Ltd [2019] NZHC 2280 (11 September 2019).*

[7] *Unison Networks Ltd v Nottingham Forest Trustee Ltd [2019] NZHC 2280 (11 September 2019); and Nottingham Forest Trustee Ltd v Unison Networks Ltd [2021] NZCA 227 (3 June 2021).*

[8] In its submission on the Discussion Paper, Unison noted that despite the strength of Unison's case in the Nottingham proceeding the High Court did not order the removal of the trees posing a risk to the lines.

Revenue under Part 4 of the Commerce Act 1986 impacts some works owners' approach to out of zone trees

Negotiated agreements to manage out of zone trees is also limited by most works owners' revenue under Part 4 of the Commerce Act 1986.

Non-exempt EDBs do not have dedicated funding for vegetation management or service interruptions and emergencies, tailored to their circumstances, under default price-path regulation. They must balance their expenditure to best respond to the incentives in price-quality regulation. As a result, they cannot routinely fund the cost of tree removal and compensation because they will not necessarily be 'made whole' under the regulatory regime.

Transpower does operate under a regulatory framework that is tailored to its circumstances. However, Transpower also operates under an incentive regime which provides strong incentives to control operational expenditure such as vegetation management, so it remains concerned about the cost and impacts.

The Commission can change these settings in response to regulatory changes which impose obligations on works owners, (for example, requiring them to seek the removal of trees and pay for the removal). Additional funding can be made available in such cases.

While lines companies' expenditure on vegetation management has grown, it is unlikely this is driven by out of zone hazards

The Commission has reported on some trends in local lines companies' expenditure on vegetation management (although the impact of tree hazards will also be reflected in expenditure on service interruptions and emergencies).

In its publication *Trends in Local Lines Companies' Performance*, the Commission observes that expenditure on vegetation management increased by around $38 million or 185 percent between 2013 and 2023 (however they did note the 2013 figure seemed to be artificially low). The Commission assessed that the major driver of this higher spending is likely to be that local lines companies have been engaging in more comprehensive management of trees in the vicinity of existing lines, and thus devoting more resources toward it.

The above increased spending may reflect an effort by works owners to more effectively manage the problems of trees encroaching or falling onto lines and causing outages, assuming this spend is net efficient for consumers. The largest cost of vegetation management is when vegetation damages electricity lines infrastructure and the cost of restoring electricity.

There is no data on the degree to which the growth in expenditure is driven by treefall from outside the GLZ – as opposed to management within the existing GLZ. However, given the limited discussion in the Asset Management Plans of the EDBs, we consider it unlikely that the growth in expenditure is driven by managing out-of-zone tree risk.

Figure 1: Breakdown of EDB operating expenditure, 2008-2023

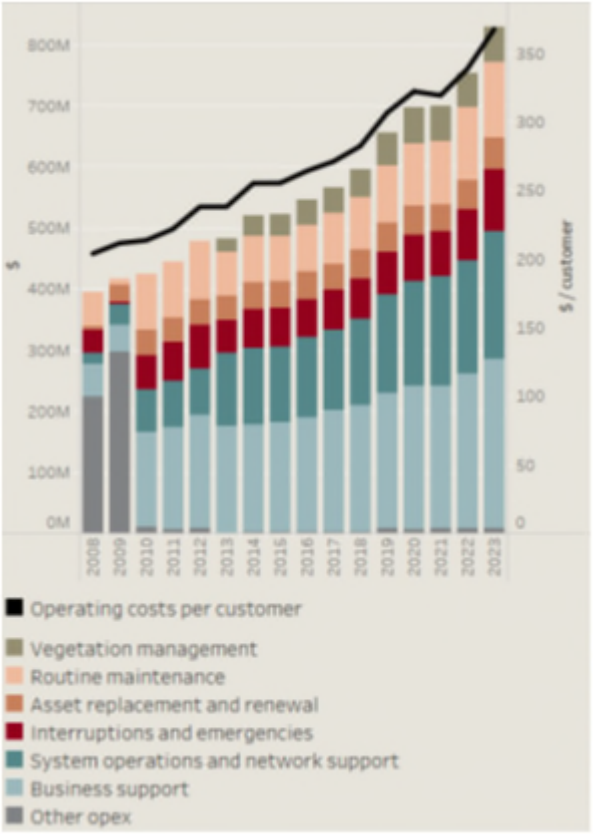
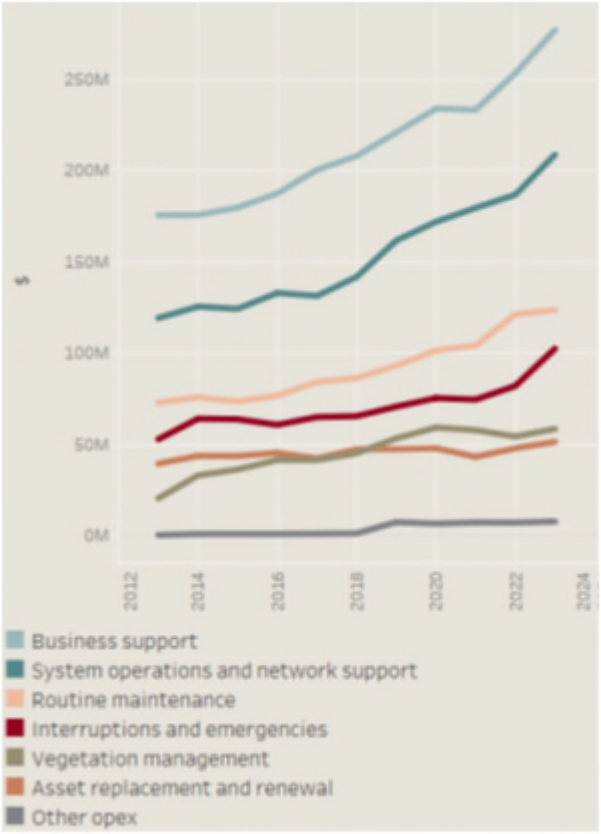


Figure 2: Components of operating expenditure and trends, 2013-2023



In the future, treefall risk is likely to increase, and outages are likely to have a greater impact

Severe weather events such as Cyclone Gabrielle are expected to become more common due to climate change. As a result, the risks of tree fall on electricity lines are also likely to increase, creating more likelihood of harm if these risks are not adequately managed.

Severe weather is likely to become more common

The Ministry for the Environment recently summarised the latest research into the impacts of climate change on severe weather in New Zealand[9]. Results included:

- **More flooding:** the Intergovernmental Panel on Climate Change (IPCC) released its Sixth Assessment Report in 2021. In it, a global panel of climate scientists projected that floods across the world will continue to become more frequent between now and 2050.
- **More extreme storms**: it is also projected that severe convective storms (thunderstorms) will carry more rain in a warming world.
- **Larger rain showers**: the National Institute of Water and Atmospheric Research (NIWA) produces regional climate projections for New Zealand based on the IPCC's data. NIWA has estimated that in New Zealand, one degree of warming translates to

[9] https://environment.govt.nz/news/the-science-linking-extreme-weather-and-climate-change/

a median 13.5 per cent increase in rainfall per hour in a one-in-50-year event of one hour duration.

- **More cyclones**: NIWA also projects more intense regional cyclonic storms in the southern hemisphere by 2100, and an increase in the frequency and extent of 'atmospheric rivers', which could bring more rain. Atmospheric rivers are plumes of moisture in the air that move from the tropics to the mid-latitudes and are closely related to extratropical cyclones. They are projected to become more frequent with increased atmospheric warming.
- **More drought**: the National Climate Change Risk Assessment report for New Zealand estimated that by 2090, annual rainfall is expected to be 50mm less for much of the North Island. The strongest changes are expected over the northern and eastern regions, and in the northeastern and central South Island east of the main divide, indicating long-term drying of these regions.

The impacts of interruptions caused by tree fall on lines are likely to also be greater as we electrify our homes and economy

Electricity is expected to be increasingly essential to the economy as it becomes a key enabler of a wider range of activities (e.g. transport) and we move to higher levels of electrification.

As a part of the Government's 100 Day Plan, the Government said it will begin efforts to double electricity generation in the country, including a National Policy Statement (NPS) on renewable electricity generation.

Land use in New Zealand is evolving

Successive governments have encouraged the planting of new forests (afforestation) to support improved environmental and economic outcomes for Aotearoa New Zealand over the decades. The Ministry for Primary Industries has said that:

> *Close to 1 million hectares could be planted between 2022 and 2050[10]. In the last 10 years Emission Trading Scheme (ETS) the number of hectares of registered post-1989 forest land has increased from 261,162 to at least 560,000 ha.*
>
> *1.76 million ha is the estimated net stocked plantation forest area as at 1 April 2022[11]. This is an increase in the plantation forest area of approximately 20,000 ha from 1 April 2021.*
>
> *Increasing canopy coverage within urban areas is also an ambition for councils. Auckland's Urban Ngahere (Forest) Strategy has a goal of increasing tree canopy cover across the Auckland region from 18 per cent to 30 per cent.*

The increase in severe weather events and in afforestation increase the risks of trees which grow outside of the GLZ falling on electricity lines and causing outages. For example, we understand from conversations with stakeholders that ETS forests are harvested less often than traditional forestry assets, which can increase the risk of treefall. The wider range of activities which rely on electricity mean that the impact of outages will be much greater than it is now.

[10] National direction for plantation and exotic carbon afforestation - Discussion paper (mpi.govt.nz)

[11] National Exotic Forest Description, April 2022 (mpi.govt.nz)

If the status quo is kept, the risks and costs from out of zone trees falling will get worse

Changes in land use and weather patterns are increasing risks to the security of electricity supply and causing more outages (particularly through trees falling onto lines) and jeopardising public safety.

The current scope of the Regulations is too narrow to effectively address these risks, while non-regulatory solutions are also ineffective. If the status quo is retained, in future this is likely to lead to increased costs and potential hazards that could be avoided by better vegetation management around lines.

A range of parties are likely to bear these costs including:

- **works owners** (EDBs and Transpower) are likely to need to spend more on remedying damage to lines, and seeking negotiated processes for managing out of zone trees, which may not be efficient or effective

- **consumers** are likely to bear the brunt of costs, in the form of increased lines charges from works owners, increased interruption to supply affecting wellbeing and economic activity

- **land owners and members of the public near lines** may face increased costs where failure to manage risks to lines from trees poses risks to their personal safety and property (e.g., risks of fire and electrocution from live wires).

Summary: what is the policy problem or opportunity? Lowering the risk posed by trees to security of supply and safety

The Regulations and broader non-regulatory measures are failing to adequately manage risks to electricity lines from trees.

Without changes to the Regulations and/or other regulatory interventions, continuing with the status quo is likely to lead to increased costs from **out of zone trees** outside of the existing non-encroachment zones falling on lines, especially in adverse weather.

These costs will take the form of:

- imposing increased costs on consumers (via lines charges), from works owners remedying tree-caused damage to lines

- economic damage resulting from loss of electricity supply where lines are downed (i.e., economic activity paused or affected due to interruptions in supply)

- harm to land, property and people where trees cause safety issues (e.g., fire, loss of supply).

A range of parties are likely to bear these costs:

- **works owners** (EDBs and Transpower) are likely to need to spend more on remedying damage to lines and seeking negotiated processes for managing out of zone trees, which may not be efficient or effective

- **consumers** are likely to bear the brunt of costs, in the form of increased lines charges from works owners, increased interruption to supply affecting wellbeing and economic activity

- **land owners and members of the public near lines** may face increased costs where failure to manage risks to lines from trees poses risks to their personal safety and property (e.g., risks of fire and electrocution from live wires)

- **tree owners** face existing costs under the status quo (e.g., to keep trees from out of the GLZ after the “first cut or trim”). Keeping the status quo into the future is unlikely to impose significant additional costs on tree owners, although tree owners may face additional costs from increased treefall on lines which impacts the safety of tree owners’ workers, property and/or forestry interests.

What objectives are sought in relation to the policy problem?

The objectives sought to address the above policy problem are:

- to promote improved security of electricity supply and public safety from appropriate management of trees and vegetation near electricity lines, including in response to increased frequency of extreme weather events

- to achieve these outcomes while limiting and balancing any adverse impacts on electricity consumers, works owners, landowners, tree owners and the general public.

Section 2: Deciding upon an option to address the policy problem

What criteria will be used to compare options to the status quo?

The following criteria were set forward in MBIE's 2023 and 2024 Discussion Documents.

1. **Effectiveness** – To what extent does this option deliver security of electricity supply and public safety?

   Security of electricity supply and public safety are interrelated as improved security of supply means fewer outages which in turn leads to improved public safety. This is because fewer outages mean reduced risks to communities associated with loss of power, reduced fire risk in forests and reduced frequency of workers dealing with downed power lines.

2. **Efficiency** – To what extent are the administration and compliance costs proportional to the expected benefits, and to what degree are costs allocated to the party best placed to manage them?

   This criterion considers whether the options will cause increased costs to EDBs, consumers (via electricity prices), and/or land/tree owners.

3. **Regulatory certainty** – How well does this option provide predictable regulatory outcomes?

We have used these criteria for the purpose of assessing options, and to give effect to the objectives.

What scope will options be considered within?

International approaches

MBIE has considered international approaches when determining the options for amending the Regulations, as set out in the March 2023 discussion document[12] published as part of consultation with stakeholders. Remaining in line with international jurisdictions MBIE considers that:

- additional costs related to amendments to the Regulations should largely be allocated to the party that benefits from increased security of supply, the works owners (and ultimately, electricity consumers)
- risk allocation should continue to be shared in a manner consistent with international jurisdictions
- level of prescription is closely linked to the different circumstances of each jurisdiction and therefore is not a constraining factor when developing options to amend the Regulations.

The impact of (and so the final proposed design of) the options has been informed by consultation

Work's owners have highlighted that the main short coming of the Regulations is their failure to address risky trees within fall distance of lines. The options we have developed are aimed

[12] https://www.mbie.govt.nz/dmsdocument/26235-discussion-document-review-of-the-electricity-hazards-from-trees-regulation-2003

at addressing these trees. The 2024 consultation set out these options to address out of zone trees within fall distance of lines.

The three options were to introduce a:

1. **risk-based notice power (likelihood AND impact).** This would give works owners the ability to require tree owners to remove a tree if it is a treefall hazard, based on an assessment of **both the likelihood of the tree falling and the likely impact** of the treefall on security of supply or public safety. *(MBIE recommended option)*
2. **risk-based notice power (likelihood OR impact).** This would give works owners the ability to ask tree owners to remove a tree if it is a treefall hazard, based on an assessment of **either the likelihood of a tree falling or the likely impact** of the treefall on security of supply or public safety.
3. **mandatory assessment zone** for all trees within 24-metres either side of the GLZ around that line that could be a treefall hazard.

Analysis of the submissions showed that submitters generally preferred MBIE's recommended option (likelihood AND impact), provided that a range of concerns were properly addressed. These concerns include factors such as cost allocation, liability, scope of the changes (i.e. application to residential tree owners) and others that will be discussed further below.

Scope in terms of the problem definition

Wider alternative options could capture more trees and reduce risk further, but we consider these options have significant downsides. Creating wider corridors on the scale proposed by some submitters would have significant potential for deforestation, with flow-on consequences for meeting emissions targets, and imposing unreasonable costs on forestry owners. This is discussed further on page 34.

Preferred options for addressing the policy problem

Our preferred option to address the policy problem, following assessment of options against the criteria is:

- the introduction of a **risk-based notice power**, giving works owners the ability to require tree owners to remove a tree if it is a treefall hazard, based on an assessment of **both the likelihood of the tree falling and the likely impact** of the treefall on security of supply or public safety.

Analysis suggests this option best addresses the risks expected to develop with the status quo and should over time reduce costs to relevant parties expected to otherwise arise.

To align allocation of costs with the Regulations as they currently stand as well as limiting and balancing the impacts across relevant parties, we propose that works owners meet the cost of removing trees under this proposal, including the costs of undertaking the risk assessment, and associated costs such as removing debris.

Common factors across the proposals need addressing

These factors have been raised in the most recent round of consultation.

Cost allocation

From the outset of the review of the Regulations, a major concern of stakeholders has been that in fixing the policy problem of treefall risks from out of zone trees, new costs would arise which would have to be allocated to a set of stakeholders.

We propose that works owners meet the cost of removing trees under our proposals (this would include monitoring and assessment). For works owners subject to price-quality regulation, vegetation management costs arising from the Regulations are currently recovered from consumers through the regulatory regime under Part 4 of the Commerce Act 1986. We consider that it is appropriate that additional costs which arise from an extension to the scope of the Regulations should be dealt with in the same way.

It means that ultimately the costs are borne by electricity consumers. They will ultimately be the beneficiaries of lower spend on restoring and reinforcing networks and avoiding outages. This is consistent with international practice.

We note that the commercial forestry sector, by contrast, would have to absorb these costs as they are price takers in international markets.

The regulatory regime for works owners also provides incentives to contain costs and use the risk assessment process efficiently. The Part 4 regime, as currently administered by the Commission, allows regulated works owners under a price-quality path to recover expenditure that is forecast in five-year blocks. It provides incentives to contain costs, and to balance operational expenditure like vegetation management and capital expenditure like strengthening network resilience to withstand severe weather events. This is because the regulated works owners will make financial gains by spending less than forecast while still being allowed to recover the forecast level of expenditure. The savings from any reduction in expenditure is shared between the regulated works owner and their consumers.

These regulatory checks and balances are an important element of our proposal, as with incentives to minimise expenditure, works owners will focus on dealing with the highest risk, highest impact trees. This provides an automatic discipline on indiscriminate removal of trees, which could otherwise lead to deforestation, with significant ETS surrender consequences for tree owners and potentially for emissions targets.

Where trees are removed, tree owners would only have the same rights to compensation as currently apply under the Electricity Act 1992:

> compensation, to be assessed in the manner prescribed by the Public Works Act 1981, shall be payable if the tree or vegetation was growing on the land before the construction of the works or electrical installation but **not in any other case**.

Liability

Works Owners

Concerns have been raised to us by works owners that giving them a power to address risky trees that are currently outside the scope of the Regulations will mean that they will be liable for any damage arising from out of zone trees falling on to their line if they do not exercise their new powers.

Whether or not a works owner could be held liable if they fail to exercise their new powers will depend on the facts of a particular case. In some cases, it may be appropriate for a works owner to be liable if they did not use their powers.

Tree Owners

We do not intend to amend Regulation 40 which states "These regulations do not affect any other claims that a works owner may have against a tree owner in respect of any damage caused to works by a tree owner."

The works owner can only require the removal of a tree if it meets both limbs of the assessment (likelihood of treefall and impact). This means that the works owner does not have an unfettered ability to remove trees, and that there is still a role for common law remedies. The ability to make common law claims is preserved by Regulation 40 so it remains open for the works owner to take legal action against a tree owner for damage to lines caused by treefall. This also means that tree owners still have incentives to manage their trees responsibly.

Assessment criteria

To assess both the likelihood and the impact, the works owner would need to consider a specified list of relevant factors. We consider that this assessment should be carried out by a qualified arborist. The below table proposes factors that should be considered and reflects suggestions provided by stakeholders during the 2023 Review. We would add to this table based on discussion with arborists and works owners.

Impact factors to consider (where relevant)
the number of consumers that could be affected in an outage
the nature of, and extent of direct impacts on, consumers and services served by the line (e.g., impact on key services such as first responders, telecommunications, water supply, hospitals / medical providers, and schools
broader impacts that could be caused by outages (e.g., potential lost economic activity, and any broader impacts on the electricity system)
the potential impacts on safety of persons and property (e.g., risks of loss to life and property from fire and/or electrocution in vicinity of lines; potential safety issues from non-availability of electricity; and costs of remediating infrastructure and land)
the level of redundancy (e.g., whether other lines are reasonably able to serve end consumers, and for how long bearing in mind system reliability and security)
how long any outage may last in the circumstances.
some lines (such as transmission lines may be deemed to be high impact lines).
Likelihood factors to consider (where relevant)
the tree's species and its readily known attributes (e.g., likelihood of branches falling or roots failing, or the fire risk posed by a tree species)
the tree's age and apparent health
the tree's structural soundness (including any potential points of weakness with the tree)

the topography and nature of the land and soil (e.g., if it is on a floodplain or prone to erosion) and any nearby water courses at the tree's site the climate and weather of the site where the tree is located (e.g., type and extent of rainfall, snow, and/or winds typically experienced) the potential risk posed by other trees or structures at the site in cases where removal cost is exceptionally high, and it would be more efficient to prioritise other trees this could also be considered

We propose that these factors would be included in the Regulations and be compulsory for the works owner to consider to the extent relevant in the circumstances. The works owner can determine that some of the factors are not relevant to the assessment of each tree hazard. The works owner would also have discretion as to the weight to place on each factor.

A more prescriptive methodology could impose significant additional compliance cost and difficulty, fail to allow appropriate adjustments for local conditions, and fail to keep up with improvements in best practice assessment of risk.

Similarly, assessment of any relevant likelihood or impact factors would be based on the information that the works owner can readily obtain – we do not propose that works owners would need to go to extreme lengths to gather information to assess risk.

Disputes over whether a tree is a treefall hazard could be referred to arbitration, in a manner similar to the existing process following a tree owner receiving a cut and trim notice, where the tree owner disagreed that the tree met the requirements to be a high or moderate treefall hazard. However, tree owners would have no right to apply for dispensation (except under circumstances mentioned in the distributional impacts section).

Works vs Conductors

A submitter raised that the Regulations should apply to all works (for example including sub stations etc) instead of just conductors (the lines themselves). However, this concern was not widespread among works owners, and we are not considering this for the purposes of this RIS. However, we may look to investigate this option further in the next phase of our work.

Options for addressing out of zone trees within fall distance

Status quo

As set out in an earlier section, the Regulations do not include measures specifically addressing the risk of tree fall from outside of the existing GLZ. Currently the two options for works owners to address out of zone fall distance trees are:

- commercial negotiations for tree removal and
- litigation to resolve issues associated with tree management.

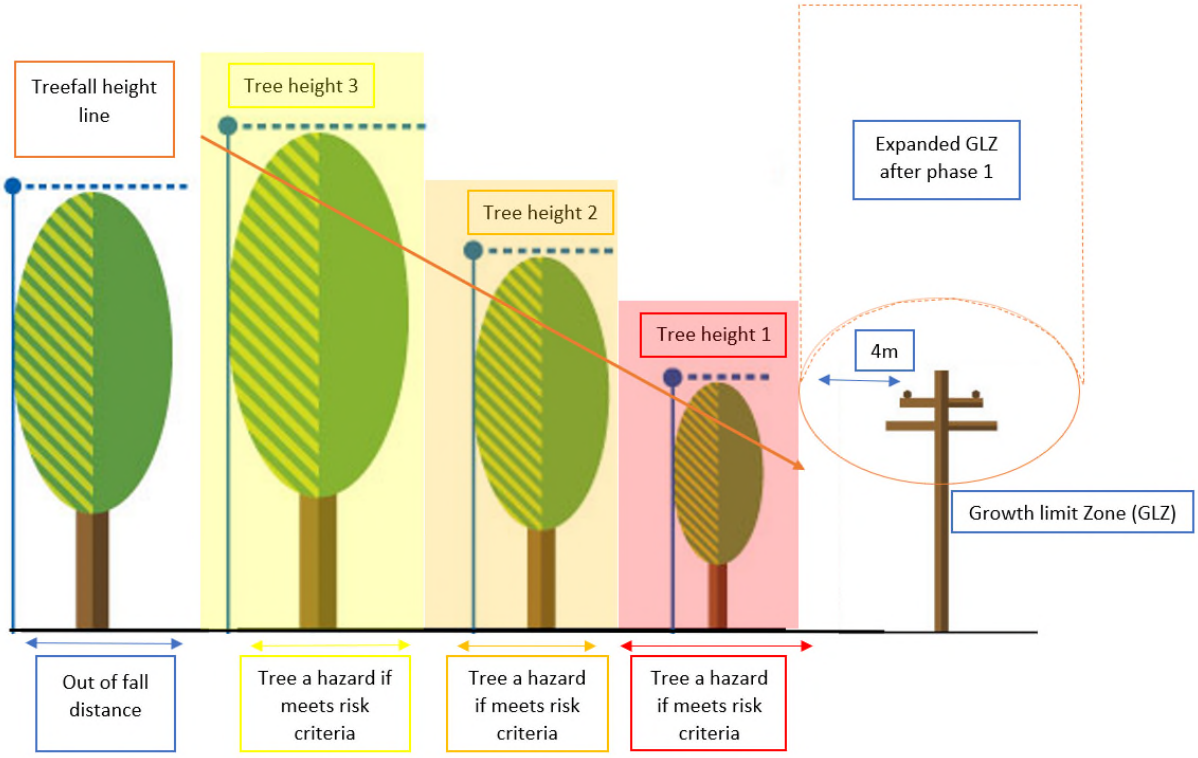
Submitters on the discussion documents have raised that commercial negotiation can carry considerable difficulties, creating inefficiencies through a power imbalance stemming from lack of regulatory backing. Litigation can also be very expensive and uncertain, and by nature tends to occur 'after the fact'.

Evidence suggests that relying on commercial negotiations and litigation to deal with out of zone trees does not currently manage this risk effectively. This was demonstrated during Cyclone Gabrielle last year, which led to New Zealanders facing significant outages for long periods. It is unlikely to deal with this risk any better in future.

Trees in scope of the proposals

We propose a model for managing trees whose height present a potential treefall risk to lines. Under all options, highlighted trees could be assessed, and if they met the risk criteria, would trigger the issuing of a notice to the tree owner requiring removal of the trees.

The trigger for a notice is what changes across the options.

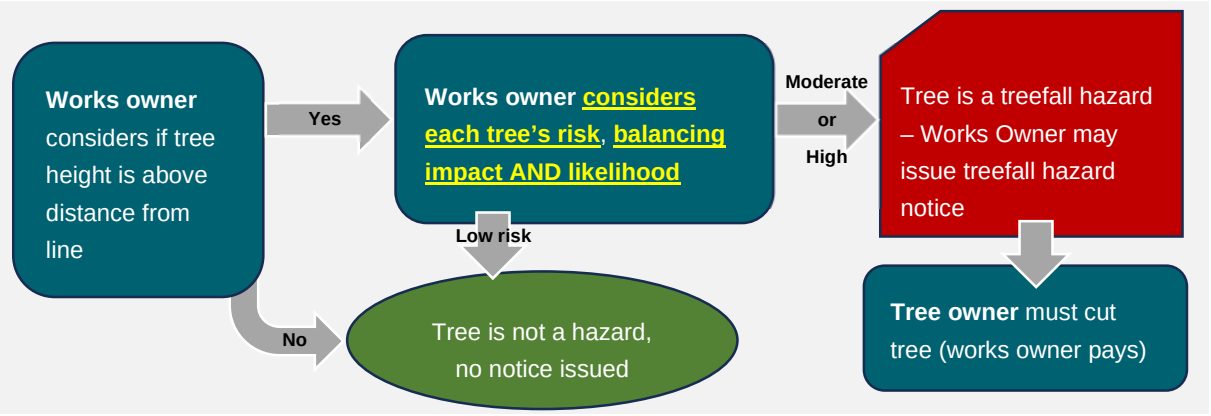


Option 1 (preferred)– A risk-based notice power (likelihood AND impact)

A risk-based notice power is consistent with the preferred proposal described in the 2023 Review, which received relatively high support. This option would allow works owners to give tree owners notice to remove a tree, where the tree is within 24 metres of either side of the GLZ and is assessed as a high or moderate treefall hazard risk.

PROPOSAL: A RISK-BASED TREEFALL HAZARD NOTICE POWER (LIKELIHOOD AND IMPACT)	
Applies to	All lines
Trigger for a Notice	A tree above treefall height and within 24m of the GLZ is assessed as a high or moderate treefall hazard risk, where the assessment is balancing: 1. **Impact:** the potential effect on electricity security of supply or public safety, considering listed factors (impact), AND 2. **Likelihood:** that tree would fall on the line in poor weather, based on the condition of the tree, in its environment, considering listed factors.
Risk assessment by	Works owner
Works owner's obligations	If, following a risk assessment, a treefall hazard is identified, they may serve notice on the tree owner Meet reasonable costs of removing the treefall hazard
Tree owner's obligations	Remove trees within specified timeframe
Disputes & mitigation	Arbitration available if tree owner wants to dispute the assessment.

A summary of how the process would work is:



In simple terms, the balancing exercise a works owner undertakes to consider impact and likelihood would look something like the following:

	Low impact	Moderate impact	High impact
High likelihood	Not a hazard	**Moderate treefall hazard**	**High treefall hazard**
Moderate likelihood	Not a hazard	Low treefall hazard	**Moderate treefall hazard**
Low likelihood	Not a hazard	Not a hazard	Low treefall hazard

A works owner will have operational discretion as to when and where to carry out a tree hazard assessment, and over which trees. The assessment must be carried out by an appropriately qualified arborist. The works owner may issue a treefall hazard notice if the tree presents a moderate or high treefall hazard.

Works owners will also have the initial step of assessing which trees to focus on, and this may make it less likely that urban or suburban trees of this sort are assessed, compared with other areas (e.g., corridors with many tall trees).

The main potential benefits of this proposal are that it:

- targets highest risk trees in a proportional way, based on clear criteria involving likelihood of treefall and impact
- ensures that local factors and conditions can be taken into account as appropriate
- best balances costs between tree owners and works owners
- creates an incentive for works owners to use their budget wisely by focusing on trees that improve security of supply and public safety to the greatest extent (and so proportionally at least cost)
- most benefits consumers who will receive improved security of supply and safety, but at a cost (by way of lines charges) that is relatively efficient and aligned with existing regulatory incentives[13]
- allows for industry to develop best practice to meet the treefall 'high and moderate' hazard criteria – rather than a highly prescriptive mandatory methodology, which could be difficult to update if set in the Regulations (e.g., in light of new evidence or best practice) and an extra barrier to the effective use of the notice power.

The potential downsides of this proposal are that it:

- may not provide works owners with the full range of tools needed to manage treefall risk (as even healthy trees can fall in poor weather - tree health and condition are not necessarily determinative of treefall likelihood)
- creates an administrative burden for works owners (the impact and likelihood assessment)
- includes an inherent level of subjectivity in the works owner's assessment of impact and likelihood, and how these factors are balanced, which may reduce certainty of regulatory outcomes for tree owners.

These drawbacks are common to most options considered for the amendments, and tree owners will be able to access arbitration where material concerns arise.

Consultation on the proposal

Works owners – typically liked the proposal in principle however had disagreements about several factors which are discussed in the previous section such as cost allocation and liability risks.

Tree owners – typically supportive of the proposal in principle however, similar to works owners, had workability and implementation factors that they were concerned about and wanted addressed.

[13] For example, EDBs that are price-quality regulated under the Commerce Act 1984 would be incentivised to balance cost with the level of tree management needed for them to meet regulated performance measures, while exempt EDBs have obligations to manage costs to the satisfaction of their community.

Affected groups	Comment	Impact	Evidence Certainty
Additional costs of the preferred option compared to taking no action			
Consumers	Flow on from EDBs/Transpower as costs are passed through – so expect to match.	Low	High (impact is relative to the other two proposals and given their nature we can be sure of their relative cost scale).
EDBs/Transpower	Removal costs relatively low as trees must meet likelihood and impact thresholds.	Low	As above.
Forestry sector	Trees will be removed losing harvest revenue; however, these will be trees that present a risk to lines and are likely to fall anyway.	Low	As above.
Non-monetised costs		***Low***	***High***
Additional benefits of the preferred option compared to taking no action			
Consumers	Reduced outages as a result of high-risk tree removal.	High	Medium (removing the highest risk trees will logically reduce tree fall related outages; however, we do not have solid data on the proportion of outages that these trees currently cause).
EDBs/Transpower	The highest risk trees will be addressed, and outages reduced as a result.	High	As above.
Tree owners	Small benefits from reduced fire risk and not having to pay for the removal of structurally unsound trees that may present a liability risk. Could benefit from reduced insurance premiums.	Low	High (we do not have data on the scale of the impact but can be sure that it will be limited).
Non-monetised benefits		**High**	***Medium***

Risks/Uncertainties

Te Uru Rākau - New Zealand Forest Service within MPI undertake regulatory functions for forestry within the Emission Trading Scheme. It has advised that this proposal is not expected to have a significant impact on Emissions Trading Scheme (ETS) liabilities for forest owners. However, there could be some small impact at the margins.

We cannot precisely determine the impact this proposal will have on ETS liabilities because we do not have precise data on the areas of land that may be affected. The ETS impact of these proposals is also not precisely known because forest land can be comprised differently and how lines intersect the land is variable. For instance, ETS impacts will be different depending on whether the lines run through the forest or are at the boundaries of the forest or extend internal gaps. These impacts will again vary based on the layout of the forest. See the ETS and limitations sections for further detail.

Overall

MBIE considers that the increased security of supply and benefits stemming from this new power will outweigh the costs.

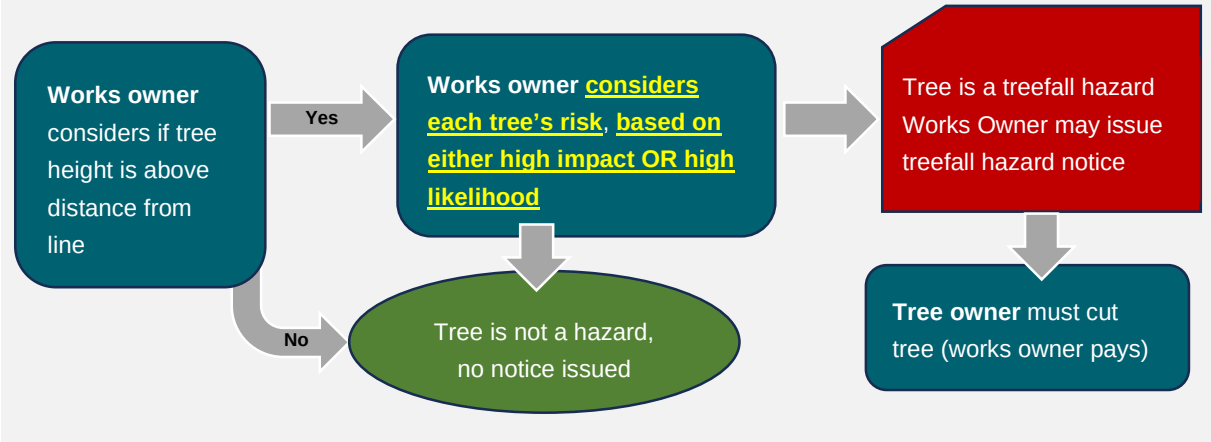
Option 2 – A risk-based notice power (likelihood OR impact)

An alternative that we have considered but do not propose involves dual grounds for giving notice. In this case, a works owner could give a treefall hazard notice to a tree owner based on either likelihood or impact.

Under this option, a tree owner would be able to apply for a dispensation where the works owner gave a notice on the basis of high impact alone. Dispensation would be available where the tree owner could show that there are reasonable grounds to believe the tree does not pose a material risk of falling (for example, by bringing evidence from a qualified arborist).

ALTERNATIVE: A RISK-BASED TREEFALL HAZARD NOTICE POWER (LIKELIHOOD OR IMPACT)	
Applies to	All lines
Trigger for a Notice	A tree above treefall height and within 24m of the GLZ meets the threshold for one of two reasons (or both): 1. **High impact**: likely a high impact on electricity security of supply or safety of the public if the line near the tree went down, OR 2. **High likelihood**: Likely the tree would fall in poor weather, based on the tree's condition and the environment in which it is situated
Risk assessment by	Works owner
Works owner's obligations	If, following a risk assessment, a treefall hazard is identified, they may serve notice on the tree owner Meet reasonable costs of removing the treefall hazard
Tree owner's obligations	Remove trees within specified timeframe
Disputes & mitigation	Arbitration is available if the tree owner wants to dispute the works owner's assessment If a notice is served under the 'high impact' reason, a tree owner can also apply for dispensation if they have proof the tree is low risk of falling, for example with an expert arborist's evidence showing reasonable grounds to believe the tree does not pose a material risk of falling

A summary of how the process would work is:



This option would use the same factors to assess impact or likelihood, as the proposed option above. Like our preferred proposal, this alternative option places the costs of removing a tree on the works owners and has the same benefits in terms of cost allocation and alignment.

Potential benefits of this proposal are that it:

- provides works owners with a greater ability to address the risk of a tree within fall distance of lines that are strategically important, even when the tree has no outward issues that could predispose it to fall – and so to manage even healthy trees that can fall in bad weather
- places less administrative burden on works owners when targeting trees on priority lines (i.e., which if they fell could lead to a 'high impact'). Tree owners would need to consider the potential impact on the line, and the height of trees, but would not need to undertake a close analysis of the characteristics of each tree in order to give a notice
- puts a presumption in favour of protection of security of supply and public safety for lines where treefall could have significant consequences, by requiring tree owners to provide evidence a tree is unlikely to fall before allowing for any exceptions
- allows trees that are not adjacent to strategically important lines, but nevertheless pose a clear risk of falling, to be addressed via the 'high likelihood' ground.

The main downsides of this proposal are that it:

- could lead to works owners undertaking overly broad cutting. This is because most trees over treefall height near strategically important lines could end up qualifying as a 'treefall hazard'. This is the key reason this option is not preferred – we consider the balance would tip towards too many trees being removed, impacting emissions targets and raising costs to consumers (as trimming costs are passed on in lines charges). These additional costs are unlikely to be proportional to the benefits in terms of increased security of supply and public safety. In effect, it could have the same downsides as widening the GLZ on priority lines.
- could have a very different impact on some tree owners compared to others: some tree owners could face high costs, purely because their trees were planted near lines with significance to security of supply or public safety.

Consultation on the proposal

Works owners – Several works owners did prefer this option to our preferred option as it gives them more discretion. However, several others agreed with MBIE's assessment and thought this power would be too inconsistently applied across works owners and was not appropriate.

Tree owners – There were split opinions from tree owners regarding this proposal. With some agreeing and others disagreeing with MBIE's assessment, but typically tree owners preferred our recommended option.

Affected groups	Comment	Impact	Evidence Certainty
Additional costs of the preferred option compared to taking no action			
Consumers	Flow on from EDBs/Transpower as costs are passed through – so expect to match.	Medium	High (impact is relative to the other two proposals and given their nature we can be sure of their relative costs scale).
EDBs/Transpower	Cost borne by works owners should drive proportionate application, however more trees in scope will raise the costs and more lines in scope will raise administrative costs.	Medium	As above.
Forestry sector	More trees are in scope and a chance the tree removed may be healthy, leading to larger losses in harvest revenue.	Medium	As above.
Non-monetised costs		Medium	***High***
Additional benefits of the preferred option compared to taking no action			
Consumers	Reduced outages as a result of high-risk tree removal.	High	Medium (removing the highest risk trees will logically reduce tree fall related outages; however, we do not have solid data on the proportion of outages that these trees currently cause).
EDBs/Transpower	The highest risk trees will be addressed, and outages reduced as a result.	High	As above.
Tree owners	Small benefits from reduced fire risk and not having to pay for the removal of structurally unsound trees that may present a liability risk. Could benefit from reduced insurance premiums.	Low	High (we do not have data on the scale of the impact but can be sure that it will be limited).
Non-monetised benefits		High	***Medium***

Overall

MBIE considers that the increased security of supply and benefits stemming from this new power will outweigh the costs. However, we do also believe that the wider scope of this proposal may result in more inefficiency and higher costs than our preferred option.

Option 3 – A mandatory assessment zone

An alternative that we have considered but do not propose would create a mandatory obligation on a works owner to regularly assess all trees by high priority lines (i.e., those where a tree falling on them would lead to high impact), and to remove these where there is a high risk of them falling.

Unlike the above two proposals, this would not involve works owners having some scope to determine which trees they choose to assess against the treefall hazard criteria. Instead, once the works owner decided that there would be a high impact if a tree fell on a particular line (i.e., that it is a priority line), the works owner would have to assess all trees within 24-metres either side of the GLZ around that line that could be a treefall hazard.

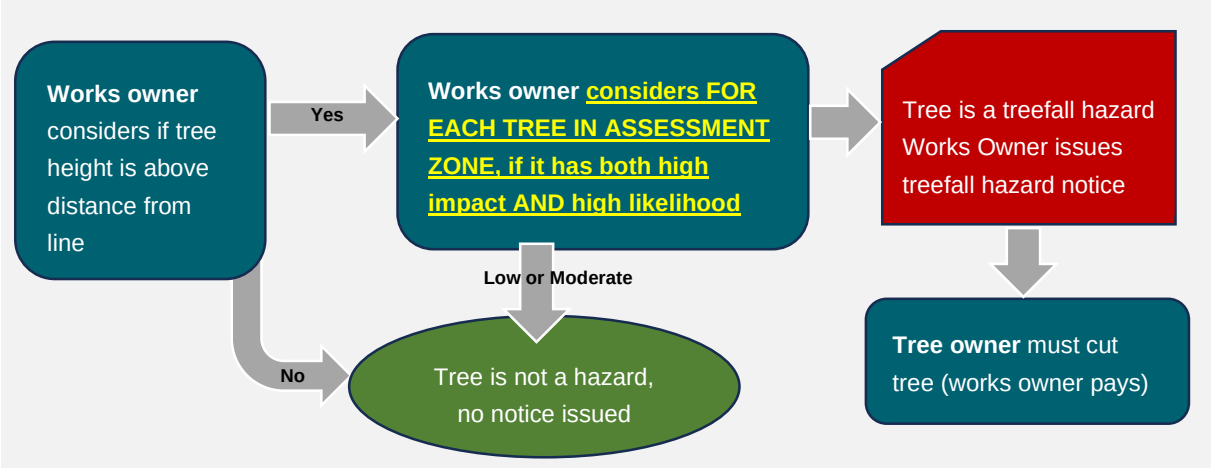
To ensure some level of proportionality, and avoid creating a significantly widened GLZ by proxy, the threshold for a tree to be treefall hazard would be high: a tree high enough to be within treefall distance and which met the requirements for both 'high impact' and 'high likelihood' described above.

Unlike the other options, this approach would use a prescriptive methodology set out in the Regulations to determine when a tree is a treefall hazard.

In addition to the offences discussed for the other options under this option a works owner would commit an offence if it failed to undertake regular assessments of potential treefall hazards to the line in question.

ALTERNATIVE: A MANDATORY ASSESSMENT ZONE	
Applies to	All lines assessed by works owner as likely to result in a 'high impact' where a tree falls on them (i.e., priority lines)
Trigger for a Notice	A tree above treefall height and within 24m of the GLZ meets the threshold for both: 1. **High impact**: likely a high impact on electricity security of supply or safety of the public if the line near the tree went down, AND 2. **High likelihood**: Likely the tree would fall in poor weather, based on the tree's condition and the environment in which it is situated.
Risk assessment by	Works owner, following a prescriptive methodology
Works owner's obligations	Carry out assessment of all trees in the assessment zone, regularly (e.g., annually) Serve notice on the tree owner Repay tree owner for reasonable cutting costs
Tree owner's obligations	Remove trees within specified timeframe
Disputes & mitigation	Arbitration is available if the tree owner wants to dispute the works owner's assessment.

A summary of how the process would work is:



The potential benefit of this proposal is that it would create a high degree of regulatory certainty. Whether a tree is a treefall hazard would be less of a subjective assessment, and trees meeting this threshold would be subject to uniform treatment irrespective of the works owners' budget or approach to managing treefall risk.

The relatively narrow nature of the treefall hazard criteria would also ensure that it is focused on high-risk trees, near priority lines that could pose the biggest risks to security of supply and public safety. However, this option is likely to impose a very significant compliance burden – works owners would need to regularly assess risks for each tree within 24m of the GLZ around a priority line. This would be burdensome and costly. Tree owners would face a mandatory imposition of costs through the cutting of trees (e.g., ETS liabilities, loss of harvest value, and administrative and compliance costs), even if works owners may not in other circumstances have chosen to incur costs to cut trees based on the perceived benefit to security of supply or public safety.

Consultation on the proposal

Works owners – Works owners typically agreed with MBIE's assessment of this proposal and thought it would be too burdensome. In particular they stressed, unreasonably onerous costs for no significant additional benefit in risk mitigation, and difficulties identifying 'strategically important lines'. They said that works owners would need some degree of flexibility to assess risks within the context of their own networks.

Tree owners – Tree owners typically agreed with MBIE's assessment of this proposal and thought it would be too burdensome.

Affected groups	Comment	Impact	Evidence Certainty
Additional costs of the preferred option compared to taking no action			
Consumers	Flow on from EDBs/Transpower as costs are passed through – so expect to match.	High	High (impact is relative to the other two proposals and given their nature we can be sure of their relative costs scale).
EDBs/Transpower	Large scale of removal and mandatory removal even when other trees would be better prioritised will raise costs.	High	As above.

Forestry sector	More trees assessed and removed than the other proposals. High administrative costs and loss of harvest revenue.	High	As above.
Non-monetised costs		High	***High***
Additional benefits of the preferred option compared to taking no action			
Consumers	Reduced outages as a result of high-risk tree removal.	High	Medium (removing the highest risk trees will logically reduce tree fall related outages; however, we do not have solid data on the proportion of outages that these trees currently cause).
EDBs/Transpower	The highest risk trees will be addressed, and outages reduced as a result.	High	As above.
Tree owners	Small benefits from reduced fire risk and not having to pay for the removal of structurally unsound trees that may present a liability risk. Could benefit from reduced insurance premiums.	Low	High (we do not have data on the scale of the impact but can be sure that it will be limited).
Non-monetised benefits		High	***Medium***

Overall

MBIE considers that the increased security of supply and benefits stemming from this new power will outweigh the costs. However, we do also believe that the mandatory nature of this proposal may result in more inefficiency and higher costs than our preferred option.

Comparison to the status quo/counterfactual for issue 2: Efficiency and workability of regulatory regime

The key to the table is:

- Not as good as SQ **0** Same as SQ **+** A little better than SQ **++** A lot better than SQ

	Status Quo (SQ)	**Option 1 *(preferred)* – A risk-based notice power (likelihood AND impact)**	**Option 2 – A risk-based notice power (likelihood OR impact)**	**Option 3 – Mandatory assessment zone**
Effectiveness	**0**	**++** Wide power for works owners addresses highest risk from treefall	**++** Wide power for works owners addresses highest risk from treefall	**++** All high impact trees addressed
Efficiency (double weighted)	**0**	**++** Cost borne by works owners should drive proportionate application	**+** Cost borne by works owners should drive proportionate application, however more trees in scope and administrative costs higher	**-** Large scale of removal and mandatory removal even when other trees would be better prioritised
Regulatory certainty	**0**	**+** Provides and clearly sets out regime with some discretion	**0** Provides and sets out regime with a lot of discretion	**++** Provides and clearly sets out regime without discretion
Overall assessment	**0**	**7**	**4**	**2**

*Efficiency is double weighted to ensure outcomes are appropriately balanced and that the options do not lead to perverse policy outcomes.

Excluded options

Creating wider growth limit zones to prevent trees being near lines

Wider alternative options could capture more trees and reduce risk further, but we consider these options have significant downsides. Creating wider corridors on the scale proposed by some submitters would have significant potential for deforestation, with flow-on consequences for meeting emissions targets, and imposing unreasonable costs on forestry owners.

There will be significant ETS liabilities incurred even in scenarios targeting a subset of lines (and potential lost revenue from loss of productive land). For example, focusing on securing supply by requiring wider clearance corridors lines where no alternative supply route is available in the network would have this impact. This option would provide greater security to lines where there is no back up in the network to service communities and areas if they are damaged.

Through the ENA, we received data from 17 EDB networks on how much of their network is in commercial forest and would be considered as 'at risk'. The data provided in the table below gives a high-level estimate of the impact of extending the GLZ to 24 metres either side of the line and if all the forest is registered under the ETS scheme. Achieving full accuracy would require mapping the location of the 'at risk' lines against the type of forest.

The table below also assumes:

- all the forest is plantation forest
- an ETS liability of $60,000 per ha (rounded to the nearest $1,000) which is based on the 32-year-old Pre-1990 *Pinus radiata* forest in the Gisborne region, and a carbon price of $65
- carbon sequestration forgone per harvest assumes a 32-year-old Pre-1990 *Pinus radiata* forest in the Gisborne region (916 tonnes sequestered per ha).

EDB electricity line voltage	Distance of 'at risk' line	Area of deforestation (ha)	ETS carbon liability ($)	Carbon sequestration forgone (tCO2 per harvest)
All 'at risk' lines	5232 km	20,928	$1,255,680,000	19,170,048

**Note these numbers are rough estimates only and are meant to indicate scale*

Restrict the re-planting distance of commercial forests once harvested

This proposal in essence would achieve the same result of extending the GLZ for the lines it was applied to but would be achieved at a much slower pace. Some species of vegetation could take over 30 years for a tree to reach full maturity and before it is harvested. This would not address security of supply risk quickly.

The proposal would also have similar financial and environmental consequences as the proposals above – this is because the ETS works based on forested land and not on a tree-by-tree basis. Therefore this would still be classified as deforestation and would incur the same penalties as widening the GLZ directly.

Options out of line with the Regulations

We have also ruled out options that would be strongly misaligned with the current regime, and which provide no added value to our preferred option. We have ruled out a new regime that completely discards the GLZ and introduces a new standard for identifying risk.

Easements

Tree owners considered the best option to deal with the risks of treefall from outside the zone was to require works owners to negotiate easements for all of their lines, including those lines installed under previous regimes, which did not require easements. While we agree that this should continue to be the case for new lines we do not consider it to be efficient to relitigate arrangements for existing works given that the 1992 regime is settled and has been in place for some time now. We do not think commercial easement negotiations give enough certainty about addressing the risks, and do not think it would address out of zone risks consistently and effectively.

Changes to Primary legislation

Cabinet has already agreed to minor changes to the Regulations which address other issues. Further work is underway on other outstanding issues.

However, as part of this phase we have also not considered options that would support or augment our preferred option, but which would require changes to the Electricity Act 1992 to implement (such as changes to access arrangements). Addressing out-of-zone trees is a priority for stakeholders, and amending primary legislation to smooth the process and provide a complete solution would delay the primary reform too much.

Distributional Impacts

Māori own $4.3 billion of assets in forestry and have ownership of more than 30 per cent of land under plantation forestry and large areas of indigenous forest. MBIE undertook consultation with Māori interests over the course of the Review, particularly with the most significant Māori investors in forestry (either directly or through leasing land to forestry companies). Officials conducted further engagement, after submissions were received, which had limited uptake. Officials also engaged with members of Ngati Porou who raised the impact Cyclone Gabrielle had on their communities.

Submissions from Māori with forestry interests were concerned about costs imposed by existing lines and proposed that commercial easements should be sought to reduce risks for works owners and provide fairness to landowners. They emphasised that long term solutions (such as undergrounding) should be preferred. They also proposed broader compensation arrangements, including in relation to land returned to Māori through Treaty settlements.

In general, the design of the new regulatory scheme limits the scope for works owners to impose significant costs on tree or landowners. Works owners bear the costs of tree removal and are not guaranteed funding to do so. The regulatory regime administered by the Commerce Commission also encourages works owners to balance short term solutions such as tree trimming or removal against long term solutions such as undergrounding of strengthening of lines.

The new notice power can only be exercised if a two-limbed test is met, taking likelihood and impact of treefall into consideration.

This targeted, proportionate approach will minimise concerns about impacts on landowners, while giving more scope for works owners to address treefall risk. This will also reduce the risks of lengthy electricity outages to remote Māori communities.

Based on these factors, MBIE does not foresee significant Treaty risks from the recommended actions.

Section 3: Delivering the proposed amendments

How will the new arrangements be implemented?

The changes would be made through amendments to the Regulations, following final Cabinet agreement. They will come into force 28 days after gazettal.

We propose to contact stakeholders once the proposal is gazetted to give them additional information around their roles and responsibilities under the new proposal.

Implementation of the changes is expected to take some time. A transition period will need to be put in place to:

- allow Transpower and EDBs to survey the wider zone for fall zone risk trees
- allow Councils to make the necessary adjustments
- train arborists to undertake tree risk assessments
- develop a collaborative approach between works owners and tree owners.

We expect a transitional period of 2 years will be sufficient for this work to be carried out, however we will raise this with key stakeholders in our targeted consultation of the draft amendments.

We expect this period to be important for the works owners to get a full picture of the risks presented to their lines before they start actioning and prioritising the removal highest risk trees. We expect liability to remain with the tree owner during this period.

How will the new arrangements be monitored, evaluated, and reviewed?

This transitional period will give stakeholders a proper idea of scale and allow them time to report back and discuss any workability issues. We propose to monitor implementation to explore any workability issues.

Many stakeholders have recommended regular reviews of the Regulations. We propose to informally review their operation one year after the transition period. Given the different incentives of stakeholders (tree owners and works owners specifically), we expect that any breaches would be reported, and appropriate penalties enforced. Any disagreements over this process could be settled by arbitration.

MBIE also carries out regular discussions with key stakeholders and would expect updates on the workability of the new regime. Given the Commerce Commissions role administering default price-quality pathways we expect them to provide useful insights on any challenges in funding the works owners to administer the Regulations. We expect that stakeholders would keep us updated on the impacts of the regime to ensure it is working as it is intended and having a material impact on security of supply.

Annex to Regulatory Impact Statement:
Planting restrictions around electricity lines

Coversheet

Purpose of Document	
Decision sought:	This supplementary analysis has been produced to support Cabinet's consideration of a proposal to restrict planting new trees and vegetation (trees) close to electricity lines, by amending the Electricity (Hazards from Trees) Regulations 2003 (the Regulations). The proposal described here is intended to be the final in this series of amendments to the Regulations. This material is supplementary to the *Regulatory Impact Statement: Amendments to the Electricity (Hazards from Trees) Regulations 2003* (substantive RIS) which explains the other Phase 2 amendments that aim to reduce the risks posed to electricity lines by existing trees. This analysis is separate because it had previously been understood that a new restriction on planting would require an amendment to the Electricity Act 1992. Since December 2024, we now understand a planting restriction can be created through the Regulations, hence the late addition of this proposal in the Cabinet paper supported by this analysis.
Advising agencies:	Ministry of Business, Innovation and Employment
Proposing Ministers:	Minister for Energy
Date finalised:	

Problem Definition
Trees falling on power lines are a frequent reason for power outages, as seen extensively in the severe weather events of 2023. It is estimated that outages from damaged electricity lines impacted supply to 68,000 customers and caused lost revenue of approximately $474 million. Please refer to the substantive RIS for a full description of the risks posed by trees to electricity lines. A Growth Limit Zone (GLZ) exists either side of a tree (and clear to the sky): landowners must trim trees to outside the GLZ. However, many lines outages are caused by trees falling from outside of the Growth Limit Zone (GLZ). The Phase 2 amendments proposed in the substantive RIS would create a regime for lines owners to assess treefall risk for (using a risk-based assessment) trees 24 metres either side of the GLZ and notify landowners about trees they consider pose a moderate or high risk to lines, which landowners must then remove. The proposed risk-based approach does not preclude planting new trees close to lines. Yet newly planted trees can create future risks that lines owners and landowners would then have to manage (under the risk-based assessment).

To minimise outage risks and lower compliance costs of the regime overall, the proposal explained in this analysis would lower the risk caused by **new trees** planted after the amendments take effect.

Executive Summary

Trees within a Growth Limit Zone (GLZ) must be trimmed. The wider Phase 2 amendments to the Electricity (Hazards from Trees) Regulations 2003 (the Regulations), described in the substantive RIS, create a framework to manage hazardous trees outside of the GLZ (but within 24 metres of the GLZ) through a risk-based assessment of their 'treefall hazard'. In essence, the wider Phase 2 regulations aim to reduce the risk to electricity lines posed by **already established trees and forests.**

This supplementary analysis supports Cabinet's consideration of a proposal to also **restrict new tree planting** close to electricity lines, alongside the wider 'Phase 2' reforms.

The preferred option: restrict planting to trees that will have an expected mature height lower than their distance from the adjacent line

This proposal aims to reduce future risk from **new trees** that could be planted close to electricity lines. The proposal would create a new Low Height Planting Zone (LHPZ) 24m either side of the line and restrict the planting of new trees within this area that are expected to grow taller the fall-distance to the line. This proposal would not restrict all planting: trees expected to grow to a height that is less than the distance of the tree from the line (so pose no treefall hazard) could still be planted.

We have assessed the likely impacts and risks of the proposed restriction, and any mitigations that may be needed to address them. This option is expected to best mitigate the risk to electricity lines posed by future planting, while limiting the restrictions and costs placed on landowners.[14] The potential positive outcomes are likely to be:

- Effective reduction in the risk of outages: no new planting of trees that could be expected to pose a hazard to lines within 24 metres either side of the line.
- Consistency: the concept of a treefall hazard (a tree height lower than the distance of the tree to the line) is consistent with an element of the risk-based assessment of existing trees under the wider phase 2 proposal, but with a clear prohibition on trees taller at maturity than their distance from the lines (up to 24 metres from the line).
- Flexibility: planting of trees that are expected to be shorter than the distance from tree to line are permitted, and as tree growth varies across geography and climate there can be regional differences in what trees can be planted.
- Least Cost: as the restriction is not a full prohibition on planting there will be a lesser reduction in the value of land within 24 metres of an electricity line.

Feedback from consultation in August 2024 highlighted a strong view from electricity distribution businesses (EDBs) and the lines industry association Electricity Networks Aotearoa (ENA) that the regulations should disincentivise or control the planting of new trees within a specified zone.

Two main options were assessed against the counterfactual (no change) in this analysis. The alternative would apply to an area 24 metres either side of the GLZ rather than 24

[14] MBIE has referred to both landowners and tree owners throughout the document depending on the appropriate context.

metres either side of the conductor. This approach is not recommended because it creates a far wider corridor than needed and so fails to balance the objectives sought in addressing the policy problem. It would have a greater impact on the property rights of landowners while not delivering substantial gains in addressing the risk posed by newly planted trees.

Limitations and Constraints on Analysis

Constraints leading to supplementary analysis: This supplementary analysis explaining a proposed restriction for new planting is separate to the proposal to restrict hazards posed by existing trees explained in the substantive RIS, because it had previously been understood that a new restriction on planting would require an amendment to the Electricity Act 1992. After further analysis MBIE considers that planting restrictions can be achieved through the Regulations.

Limited data available for analysis: In consultation on the phase 2 amendments affecting existing trees, several stakeholders raised the risk posed by replanting or new planting occurring too close to electricity lines. These submissions (and subsequent discussions with stakeholders) are the basis of view and evidence that substantiate our analysis of the risk posed to lines from new planting and potential impacts of the proposed restriction**.**

There are limitations to assessing the broad costs of this proposal due to:

- The difficulty of assessing the reduction in the value of land if planting tall trees or vegetation is restricted close to electricity lines.
- The difficulty of estimating expected future planting around electricity lines, particularly conversions of pastoral land to forestry, following the 4 December 2024 announcement of a moratorium on exotic forestry registrations in the ETS.[15]

The benefits of the proposed restriction on new planting are largely intangible: we expect less frequent outages if planting new tall trees is restricted. The benefits of less frequent outages may be realised by comparing the cost and frequency of treefall incidents in the future with those in the past through a survey of EDBs.

Findings of the annual afforestation and deforestation intention survey carried out by Professor Bruce Manley at the University of Canterbury's School of Forestry have been relied on. However, the survey provides general afforestation intention data only. Granular data that might indicate the level of afforestation specifically occurring close to electricity lines is not recorded.

Limited consultation: Our analysis is sufficiently informed by existing submissions made in response to the 2023 and 2024 consultations on proposed amendments to the regulations. This proposal will also undergo some targeted consultation by sharing an exposure draft with affected stakeholders in 2025.

Responsible Manager(s) (completed by relevant manager)

[15] https://www.beehive.govt.nz/release/protecting-nz-food-production-and-ets-credibility

Tamara Linnhoff Manager Electricity Generation, Infrastructure and Markets Policy Ministry of Business, Innovation and Employment

Quality Assurance (completed by QA panel)	
Reviewing Agency:	Ministry of Business, Innovation and Employment
Panel Assessment & Comment:	A Quality Assurance panel from MBIE has reviewed the Annex to the regulatory impact statement on planting restrictions around electricity lines. The panel considers the statement **meets** the RIS criteria.

Section 1: Diagnosing the policy problem

Trees are continuing to be planted close to electricity lines

The existing regulatory framework does not sufficiently address the risk to lines posed by new trees

1. Trees falling on power lines are a frequent reason for power outages, as seen extensively in the severe weather events of 2023. It is estimated that outages from damaged electricity lines impacted supply to 68,000 customers and caused lost revenue of approximately $474 million.

2. A Growth Limit Zone (GLZ) exists around electricity lines (and clear to the sky): landowners must trim trees to outside the GLZ. However, many lines outages are caused by trees falling from outside of the Growth Limit Zone (GLZ).

3. The existing regulatory framework is not set-up to comprehensively guard against the risk of trees falling on electricity lines. The growth limit zone (GLZ) determines the minimum clearances for vegetation around electricity lines, these vary widely depending on voltage and line span from 0.5 metres at the low end, to 50 metres at the high end.

4. Smaller GLZs do not mitigate the risk of out-of-zone trees falling on electricity lines, that was highlighted extensively during the severe weather events of 2023. The Report of the Government Inquiry into the Response to the North Island Severe Weather

Events recommended strengthening the Electricity (Hazards from Trees) Regulations 2003 to address the risk of out-of-zone trees falling on lines.[16]

Figure 1. Uprooted trees damaged power utilities in Pouto, Northland. Source: Northpower

Consultation has revealed a concern among EDBs and Transpower about new planting around lines

5. In 2023 the Ministry of Business, Innovation and Employment (MBIE) consulted on proposals to improve the resilience of New Zealand's electricity network. We received feedback from Electricity Distribution Businesses (EDBs) and Transpower (collectively referred to as 'lines owners') on the growing risk posed by new planting around electricity lines.

6. During consultation on proposals to manage existing trees, Transpower also proposed a restriction on new planting:

> *These risks [of trees near lines] will increase with increased carbon forests near transmission lines. A large volume of carbon forests have been, and continue to be, planted near our lines. By way of example, in Northern Hawke's Bay a large volume of forestry has been planted within 10-15m of our line. We expect to see a significant increase in tree fall issues in the next 20-30 years as these trees mature.*
>
> *Permanent forests will likely grow to increased heights compared to plantations for harvest. The additional height, and age of the trees, will increase the tree fall risk. Further, permanent forests are unlikely to be subject to the same maintenance regimes as plantation forests (for example, pruning, and the removal of dead stock).*

[16] The Report of the Government Inquiry into the Response to the North Island Severe Weather Events, page 25.

Transpower is also concerned that there is nothing preventing poorly located forests being registered in the ETS. The ETS provides an incentive for forestry planting, without consideration of the risks, or nuisance that planting creates.

7. Electricity Networks Aotearoa (ENA) also submitted in favour of planting restrictions:

One of the first steps in addressing tree-related outages is to stop anything that worsens the situation in the future. Preventing new trees being planted in places where they will foreseeably grow to interfere with or otherwise threaten electricity lines is an obvious and necessary step to prevent the issue persisting into the future.

8. Newly planted trees can create future risks that lines owners and landowners would then have to manage (under the risk-based assessment). More analysis of this is included at paragraph 30-32 (our explanation of the counterfactual). To minimise outage risks and lower compliance costs of the regime overall, the options presented in this supplementary analysis would lower the risk (to a greater or lesser extent) caused by new trees planted after the amendments take effect.

The rate of planned planting around electricity lines is difficult to determine

9. The most recent 'Afforestation and Deforestation Intentions Survey' by Professor Bruce Manley suggested that: "total afforestation for exotic species is intended to be 51,800 hectares in 2024 with 88% intended for production and 12% intended for permanent forest."[17] Actual afforestation will not be confirmed until the next survey is published although some uncertainty was already signalled beyond 2024 in the 2023 survey:

…the survey found that there is even greater uncertainty, with some respondents not stating their intentions; it was found that these respondents are focusing on the logistics of implementing 2024 afforestation intentions before turning their attention to subsequent years. Afforestation intentions are dynamic with many respondents waiting to see what happens in terms of land use restrictions, ETS settings and carbon price.

10. The data presented in this survey does not have the granularity to specify the proportion of afforestation occurring around electricity lines. The analysis here has taken place in that context.

The proposed restriction on new planting is consistent with the forthcoming ETS restrictions for exotic forestry are consistent with

11. While large scale planting will be lessened by restrictions announced by the Government on registering exotic forestry in the Emissions Trading Scheme (ETS),[18] the ETS-related restrictions have limited or no application to hill country. It is electricity lines in these areas that will still be at risk under the counterfactual should the planting restrictions not proceed.

Other legislative developments may reduce the rate of new planting

12. On 4 December 2024 Minister McClay and Minister Watts announced a moratorium on exotic forestry registrations in the New Zealand Emissions Trading Scheme (ETS) on

[17] Manley B. 2024. *Afforestation and Deforestation Intentions Survey 2023*. MPI Technical Paper No: 2024/14

[18] https://www.beehive.govt.nz/release/protecting-nz-food-production-and-ets-credibility

Land Use Classification (LUC) 1-5 actively farmed land. There will also be a 15,000-hectare nationwide cap on LUC 6 land, which has limited viability for farming.

13. No restrictions are proposed on LUC 7 and 8, which is non-arable land.

14. It is expected that these restrictions will have a chilling effect on planting around electricity lines where these are located on LUC 1-6 land. While planting will not be unlawful under the proposed moratorium, ETS registration will be, which removes a significant driver of afforestation in New Zealand.

What is the policy opportunity?

New planting around lines is not currently addressed by regulations

15. Neither existing trees nor planting outside of the GLZ are regulated under the current electricity regulations. There are two avenues whereby lines owners can enforce their interest outside of the GLZ, neither are sufficient to address the risk posed by out-of-zone trees:

    - **Negotiated easements** – Lines owners may negotiate easements with landowners to agree tree and vegetation setbacks for **new works**.
    - **Reliance on tort law** – Where out-of-zone trees have become a nuisance and caused damages lines owners may be able to claim damages against the tree owner.

16. The severe weather events of 2023 have exposed a regulatory gap in the treatment of trees outside of the GLZ: both existing and potential future trees. The negotiation of an easement is subject to a successful negotiation between a lines owner and a landowner.

17. Pursuing litigation to recover damages causes by out-of-zone trees is also fact dependent, uncertain, and typically expensive. If the severe weather events of 2023 are repeated, relying on lines owners to pursue claims against tree owners is costly, and an inefficient use of Court time.

18. Barrister, Martin Dillon, has estimated that a 5-day high-court trial of average complexity may incur around $117,453 in costs. Not all of these costs are recoverable by the successful party.

19. An effective policy intervention will provide a dispute resolution pathway to stakeholders that does not require the level of expenditure needed to secure a judgement through the common law.

There are trade-offs associated with restricting planting

20. Restricting new planting around electricity lines will cause a proportionate reduction in property rights for landowners, who will be restricted to planting low-growing trees and vegetation around electricity lines. This will primarily restrict commercial and permanent ETS forestry, two uses that have driven an increase in land prices. Land prices may be negatively impacted following the introduction of any planting restrictions, particularly those with electricity lines running across them.

21. Under the proposed restrictions landowners will have a transitional period of one-year, throughout which they may decide to plant 24 metres either side of the lines, or GLZ, to preserve their entitlement to undertake commercial forestry or permanent ETS forestry.

After this transitional period ends, the restriction on planting will begin to halt new planting of tall trees and vegetation around electricity lines.

22. The potential for landowners to pursue unrestrained planting around lines during the transition period, to preserve their entitlement to undertake commercial forestry, will be limited by three factors:

    - The finite supply of seedings in nurseries.
    - The cost of establishing plantation forest, on average $1,400 per hectare (Manley, 2021).[19]
    - The chilling effect on forest establishment that is likely to follow restrictions on registering exotic forest in the ETS.

What objectives are sought in relation to the policy problem?

23. The objectives sought to address the above policy problem are:

    - to promote improved security of electricity supply and public safety from appropriate management of trees and vegetation near electricity lines, including in response to increased frequency of extreme weather events
    - to achieve these outcomes while limiting and balancing any adverse impacts on electricity consumers, lines owners, landowners, tree owners and the general public.

24. To achieve these objectives, the proposal aims to achieve an effective reduction in the expected risk of outages, and ensure landowners retain flexibility on the use of land (so permitting trees that are expected to grow to a height below that which creates a treefall hazard), with a minimum impact overall to the landowner. MBIE have identified two options that can be realistically assessed as broadly aligning with the objectives.

25. In relation to the proposal discussed in this supplementary analysis the objectives represent a property rights trade-off, primarily between lines owners and landowners. Regulating to reduce the potential nuisance and damage caused by out-of-zone trees will cause a corresponding reduction in flexibility (and therefore property rights) for the landowner. This is unavoidable, which is why an objective dedicated to balancing

[19] Manley B. 2021. Afforestation Economic Modelling. MPI Technical Paper No: 2022/02. Page 11.

adverse impacts on various stakeholders has been carried over into this supplementary analysis from the substantive RIS.

26. To lower compliance costs for all parties, the proposal for lowering the risk posed by new trees also aims to ensure consistency (as far as appropriate) with the proposal for how to address the risk posed by existing trees (covered in the substantive RIS).

Section 2: Deciding upon an option to address the policy problem

What criteria will be used to compare options to the status quo?

27. The following criteria were proposed in the MBIEs 2023 and 2024 Discussion Documents and are consistent across both this supplementary analysis and the substantive RIS.

- **Effectiveness** – To what extent does this option deliver security of electricity supply and public safety?

  Security of electricity supply and public safety are interrelated as improved security of supply means fewer outages which in turn leads to improved public safety. This is because fewer outages mean reduced risks to communities associated with loss of power, reduced fire risk in forests and reduced frequency of workers dealing with downed power lines.

- **Efficiency** – To what extent are the administration and compliance costs proportional to the expected benefits, and to what degree are costs allocated to the party best placed to manage them?

  This criterion considers whether the options will cause increased costs to EDBs, consumers (via electricity prices), and/or land/tree owners. Efficiency has been double weighted to ensure that options analysis does not deliver a solution that substantially increases costs for lines owners, landowners, tree owners, consumers, and the general public.

- **Regulatory certainty** – How well does this option provide predictable regulatory outcomes?

What scope will options be considered within?

28. The scope of options assessed in this supplementary analysis are those that can achieve the objectives and criteria listed at paragraphs 23-27.

What options are being considered?

29. Restrictions on planting has been consulted on in MBIE's 2023 consultation on amendments to the regulations. Transpower, the ENA, and EDBs submitted in support of restrictions on planting, noting risks to their networks posed by ongoing planting.

Counterfactual

30. The status quo has been treated as the counterfactual in this analysis. This is because without policy intervention the risk to electricity lines will become worse without regulation.

31. Without the proposed restriction on planting around lines owners will have to rely on the existing regulatory framework, and the treefall hazard notice power also proposed as part of phase 2. This would mean any new planting could take place, and once trees became tall enough to potentially pose a hazard a lines owner could identify a tree, carry out a risk-based assessment and serve a Notice.

32. By relying on just the risk-based assessment the counterfactual has the potential to burden lines owners with growing compliance costs, in the form of many more necessary risk assessments, if planting accelerates, or simply continues to occur, around lines.

The options have considered restricting replanting in existing forests and whether urban areas should be regulated

33. The proposal (and all options considered and rejected):

- does not create restrictions on re-planting already established forests. This is because preventing the replanting of already established forests is likely to cause landowners substantial financial losses arising from deforestation liabilities under the ETS. Tree owners may replant their forest without restriction under this proposal, however if the replanted trees become hazardous in the future, then the lines owner may undertake a risk assessment under the phase 2 proposals.
- only apply outside urban areas. The proposal excludes new planting in urban areas. This is because converting pastoral land to forest is likely to be rare in urban areas, and trees in urban areas are monitored and managed more intensively. Due to the density of lines in urban areas, failing to scope out urban areas will have the effect of creating a prohibition on new planting in New Zealand towns and cities. This will have a detrimental impact on greenspaces and amenity.

Option 1A (recommended) – Restrict new planting to trees that will have an expected mature height lower than their distance from the adjacent line

34. The proposed Option 1A would:

    a. preclude new planting 24 metres either side of the conductor where the tree's expected height at maturity will exceed its distance from the line (LHPZ)

    b. preserve land use flexibility for the landowner, compared to a complete prohibition on planting vegetation, while reducing treefall risk

    c. leave the landowner free to:

    i. stabilise erodible land by planting erosion-controlling trees

ii. plant orchard species to produce fruit or nut crops

iii. introduce other silviculture regimes that do not require tall trees.

35. 24 metres is proposed as the distance from the line within which the new planting restriction applies as 24 meters is the average height of New Zealand's most numerous plantation forest species, *Pinus radiata*, at the average tree age of 16 years.[20]

36. Option 1A will best deliver the policy objectives described above. By limiting the restricted area to 24 metres either side of the conductor the highest risk corridor will be regulated without imposing unnecessary restrictions on landowners. This differs from option 1B which would restrict an area 24 metres either side of the GLZ, and encompass a much wider area in some cases.

37. This option will have no immediate impacts as it does not retrospectively regulate trees and vegetation situated in the fall zone around electricity lines.

38. The restriction will begin to impact landowners following the transitional period. Once in effect the restriction on new planting may marginally lower the value of land that is within 24 metres of lines as landowners lose the future option to plant tall trees near lines.

39. There may be a distributional cost to Māori who have received marginal land (LUC 6-8) through the Treaty settlement process and are prevented from planting profitable commercial or permanent ETS forest within 24 metres of the lines. MBIE has balanced the loss of flexibility with the benefit of increased security of supply, both for Māori, and wider New Zealand. MBIE considers that security of supply should take precedence over other factors.

Option 1B – Restrict new planting to low-growing trees and vegetation 24 metres either side of the GLZ

40. An alternative considered, option 1B, would:

- preclude new planting 24 metres either side of the GLZ where the tree's expected height at maturity will exceed its distance from the line
- preserve land use flexibility for the landowner, compared to a complete prohibition on planting vegetation, while reducing treefall risk
- leave the landowner free to:

  i. stabilise erodible land by planting erosion-controlling trees

  ii. plant orchard species to produce fruit or nut crops

  iii. introduce other silviculture regimes that do not require tall trees.

41. This option will have wider impact that option 1A. This is because while some GLZs are narrow, many are wider. The widest horizontal GLZ is 50 metres, and so adding 24 metres either side of this GLZ will create a 74-metre area either side of the lines (148 metre wide in total) that would be limited to lower growing trees and vegetation. In New

[20] Mason EG, Woollons & Manley B. 2024. Carbon accounting: Forest growth rates and changing climates. MAF Technical Paper No: 2011/28. Page 13.

Zealand only *Eucalyptus regnans* (Mountain ash) and *Sequoia sempervirens* (Redwood) have grown to 74 metres.[21]

42. While the option could be varied to exclude the widest GLZs doing so would likely add further operational and drafting complexity to the proposal. Option 1B is not recommended because it does not balance the relative impacts on landowners and lines owners and targets risks that are remote and unlikely.

43. Option 1B also has the potential to add complexity to the regulation of tree and vegetation clearances around electricity lines. In addition to the loss of land use flexibility, landowners will need to determine the voltage of the lines on their property, and the span of the lines to determine the appropriate tree and vegetation clearances. In contrast, option 1A will set out a clear and definitive 24 metre corridor around all lines.

44. Option 1B does not deliver the objectives sought in addressing the policy problem. It also has a wider distributional impact than option 1A, including on remote land that may have been subject to the Treaty settlement process. While Māori will benefit from security of supply benefits, Option 1B does not strike the appropriate balance on land use flexibility.

45. No additional offences or penalties are proposed for either option, however both option 1A and 1B will assign liability to tree owners should restrictions be ignored, and unlawfully planted trees subsequently fall over onto and damage lines.

46. There is no proposal to constrain common law remedies.

Stakeholder views

47. Limited consultation has been carried out on the specifics of the proposal to restrict new planting, also a question specifically on planting restrictions around lines was put forward in the 2023 discussion document. Our analysis is sufficiently informed by submissions made in response to the 2023 and 2024 MBIE consultations on proposed amendments to the regulations.

48. This proposal will also undergo some more targeted consultation by sharing an exposure draft with affected stakeholders in 2025. We do expect some views on the proposal to be submitted by both some forestry stakeholders. The New Zealand Forest Owners Association has previously submitted that replanting restrictions should be mutually agreed between parties, and not set through regulation:

> *Afforestation and/or tree planting location should be managed through negotiation with the landowner such that ongoing management of the affected land could be covered. In effect, the use of the land by an electricity line is a public work and the regulations could set out the process for negotiation. Restricted replanting for what is in effect a public work, is a taking of land without compensation. Any restrictions on replanting should be by way of negotiation.*

49. Large landowners also provided feedback during the 2023 and 2024 consultations. Central North Island Iwi Management Ltd (CNI), representing eight central North Island iwi, submitted in 2023 opposing any planting restrictions, stating that landowners

[21] https://www.monumentaltrees.com/en/heightrecords/nzl/

should already be aware of the risk of tree encroachment on the existing GLZ and avoid it.

50. Opposition to planting restrictions are likely to be lessened as the proposal scopes out any restriction on replanting already established forests, and expressly permits the planting of trees that will not be within fall distance of the lines at maturity. This will limit the opportunity cost of landowners being restricted from establishing **new** plantation forest. Wider vegetation free setbacks have been previously ruled out due to the adverse impacts on landowners and New Zealand's ability to meet emissions targets.

51. Lines owners have taken a more restrictive view on whether landowners are permitted to plant close to lines. The Lines Company submitted to MBIE that the planting of exotic trees within 24 metres of a priority line should be prohibited, but that lower growing species like Manuka could be planted closer. This aligns well with the options presented in this analysis.

52. The ENA and Transpower also favour restrictions on planting around lines. Their views have been canvassed earlier in the document on page 6.

53. The potential downside of both options 1A and 1B (lower land value if planting tall trees is no longer possible once the new restriction takes effect) will be reduced by the separate restrictions on the registration of exotic forestry in the ETS that was announced by Minister McClay and Minister Watts in December 2024. This is because these ETS-related restrictions will significantly lower landowners' incentives to plant forestry on LUC 1-6 land, including the area around electricity lines.

54. None of the options considered include a proposal to regulate new planting in urban areas. Converting pastoral land to forest land is likely to be rare in urban areas. Trees in urban areas are also monitored and managed more intensively than those outside of urban areas. Including urban areas is also likely to prohibit planting tall trees altogether due to the density of lines, negatively impacting green spaces and amenity.

55. Further consultation will occur through the release of an exposure draft to a limited number of impacted stakeholders.

How do the options compare to the counterfactual?

Key: ++ much better than the counterfactual + better than the counterfactual

0 about the same as the counterfactual

\- worse than the counterfactual - - much worse than the counterfactual

		Assessment of option (compared to counterfactual)	
Criteria	***Counterfactual***	**Option 1A – Restrict 24 metres either side of the conductor**	**Option 1B – Restrict 24 metres either side of the GLZ**
Effectiveness	0	+ This option will have wide reach in limiting the height of trees adjoining lines, preserving the security of supply.	++ Widest reach as the horizontal GLZ can vary significantly leading to a regulated area much wider than 24 metres.

Efficiency (double weighted)[22]	0	**0** There are no immediate administrative or compliance costs Ongoing costs are also negligible as future planting is hypothetical	**0** There are no immediate administrative or compliance costs Ongoing costs are also negligible as future planting is hypothetical
Regulatory certainty	0	**+** More regulatory certainty as the landowner will only need to determine 24 metres from the electricity line, not the GLZ	**-** The GLZ around lines can vary depending on the span. This places a burden on the landowner to determine the voltage and span of the lines on their property
Overall assessment	0	**2**	**1**

Options that have not been progressed

56. Some options have been discarded as they are considered to fall outside of the scope of the above objectives:

    - **A full prohibition on all new planting** – a full prohibition on planting all new trees and vegetation 24 metres either side of electricity lines.
    - **A 'clear to the ground' GLZ** – trees may be planted underneath the GLZ, and must be trimmed before entering the GLZ, which must be free of vegetation. A clear to the ground GLZ would remove all vegetation underneath the GLZ.

57. A full prohibition on planting all new trees and vegetation 24 metres either side of electricity lines was also rejected. Despite being a certain way to ensure no treefall hazard from new planting, this impact of this option on land value was considered too high. Prohibition would remove substantial flexibility from landowners while not achieving a corresponding reduction in the risk to electricity lines from the additional prohibition. Prohibition falls short of the objective of limiting and balancing impacts on landowners and tree owners.

58. A clear to the ground GLZ would not benefit the electricity lines most vulnerable to damage by trees outside of the GLZ. This is because smaller lines have smaller GLZs, particularly where the span of the lines does not exceed 150 metres. This option would not prevent trees outside of the GLZ falling on electricity lines as presented in Figure 1, and therefore does not address the objective bolstering security of supply.

59. The options considered in this supplementary analysis have favoured retaining land uses that pose a low, or no risk to the lines. Prohibition does not balance the interests

[22] Efficiency is double weighted to ensure outcomes are appropriately balanced and that the options do not lead to perverse policy outcomes.

and rights of landowners and lines owners whereas the options considered achieve this balance.

What are the marginal costs and benefits of the proposed option?

Affected groups	Comment	Impact	Evidence Certainty
Additional costs of the preferred option compared to taking no action			
Electricity consumers	N/A	None	N/A
EDBs/Transpower	N/A	None	N/A
Landowners	**Ongoing** – some loss of land-use flexibility, silvicultural regimes that utilise tall trees will be restricted around lines.	Medium	**Low certainty** – difficult to determine what level of new planting will occur around lines.
Non-monetised costs		Medium	**Low**
Additional benefits of the preferred option compared to taking no action			
Electricity consumers	**Ongoing** – some benefits passed onto consumers, fewer outages.	Medium	**Medium certainty** – damage to lines from out-of-zone trees was well documented during the severe weather events of 2023.
EDBs/Transpower	**Ongoing** – benefit as damage to lines is limited, fewer outages.	Medium	**Medium certainty** – damage to lines from out-of-zone trees was well documented during the severe weather events of 2023.
Landowners	**Ongoing** – removing the risk around lines, lower chance of outages from out-of-zone trees leading to litigation and damages awarded against landowners.	Low	**Medium certainty** – There is one example of successful litigation against a tree owner.[23]
Non-monetised benefits		**Medium**	**Medium**

Section 3: Delivering the proposed option

How will the new arrangements be implemented?

60. No new administrative or compliance procedures will be necessary. Landowners will expose themselves to liability under the Regulations if they wilfully contravene any planting restriction.

61. Implementation will be supported by educational information published by lines owners on the internet, this publication requirement is proposed and included in the phase 2

[23] *Nottingham Forest Trustee Ltd v Unison Networks Ltd* [2021] NZCA 227.

package. As administrator and steward of the proposal, MBIE will also publish information about what the new requirements are when the proposals are enacted.

62. All options considered, including the preferred option, include a requirement for lines owners to update the extent and scope of regulatory information that must be published on the internet. This will take the form of a ‘requirement to notify consumers’ transitional provision in amendment regulations drafted to give effect to this proposal.

63. The ‘requirement to notify consumers’ will mirror the implementation of phase 1, which required lines owners to update their consumers about the changed regulatory requirements.

64. All amendments are expected to be gazetted and enacted by the end of 2025; the transition period will begin following commencement.

How will the new arrangements be monitored, evaluated, and reviewed?

65. A one-year transitional period is proposed for any planting restrictions. This transitional period will allow landowners to continue planting where the decision to plant has already been taken. Interrupting the planting season may cause significant loss to landowners without a transitional period.

66. Along with the substantive proposals discussed in the RIA, MBIE will assess the impact of the Regulations one-year following their implementation through an informal review. Due to the different implementation periods the planting restrictions will be reviewed

before the other proposals. The other phase 2 proposal will be reviewed one year after the planting restriction proposal as the transitional period is two years instead of one.

67. This review(s) will progress as below:

- **Actions** – assess the performance of the new amendment regulations and recommend refinements and amendments.
- **Decision maker** – initially the Manager (Electricity Markets) will accept or reject any recommendations before deciding to progress recommendations to the Minister for Energy.
- **Milestones** – these will include:
    i. A report on implementation beginning one year after the effective implementation date of each proposal.
    ii. An evaluation report to inform further development, and refinement of the Regulations.
- **Challenges** – these may include:
    i. Differing views on how effective the amendments have been among lines owners, landowners, tree owners, and electricity consumers.
    ii. The risk that the impacts (positive or negative) of the amendments have not been realised at the time of the review.
- **Data sources** – these will include:
    i. Lines owner's expenditure on vegetation management.
    ii. Reported clearing or deforestation caused directly by the amendments.

68. The above plan may change, it is based on current knowledge and is dependent on agency resources when the review is due to be initiated.