



*Ministry for the*  
**Environment**  
*Manatū Mō Te Taiao*

# **National Policy Statement on Electricity Transmission**

**Implementation Guidance for Local Authorities**

# Acknowledgements

Thank you to Local Government New Zealand, Transpower New Zealand Ltd, Boffa Miskell, Manukau City Council, Auckland City Council, Kapiti Coast District Council and Tasman District Council for your contribution to this document.

This report may be cited as:

Ministry for the Environment. 2010. *National Policy Statement on Electricity Transmission: Implementation Guidance for Local Authorities*. Wellington: Ministry for the Environment.

Published in January 2010 by the  
Ministry for the Environment  
Manatū Mō Te Taiao  
PO Box 10362, Wellington 6143, New Zealand

ISBN: 978-0-478-33257-5 (print)  
978-0-478-33258-2 (electronic)

Publication number: ME 988

Other publications in this series include: *National Policy Statement on Electricity Transmission: Further Guidance on Risks of Development near High-voltage Transmission Lines*

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# 1 Introduction

## 1.1 Purpose

This guidance provides local authorities with direction on how the National Policy Statement on Electricity Transmission (NPSET), which came into effect on 10 April 2008, can best be incorporated into regional and district planning instruments.

The NPSET requires local authorities to give effect to its provisions in plans made under the Resource Management Act 1991 (RMA) by initiating a plan change or review within four years of its approval: that is, by 10 April 2012. Over this period it is expected that many of the first generation of regional policy statements and regional and district plans prepared under the RMA will be reviewed. Indeed, a number of local authorities are already well advanced in developing or notifying their second-generation plans.

## 1.2 Focus and approach

This guidance recognises the differing circumstances of local authorities around New Zealand, particularly in relation to the nature of their existing regional and district policies and provisions, and current trends in policy-making at the regional and district levels.

At a regional level, although this framework focuses on responses made through the regional policy statement, regional plans are also expected to give effect to the NPSET where they have direct application to transmission activities, such as in regard to earthworks, air quality and activities in the coastal marine area.

The guidance has been designed so local authorities can adapt rather than adopt the examples provided to suit the particular format and structure of their planning instruments, or as part of addressing the specific resource management issues of their region or district.

## 1.3 Key messages

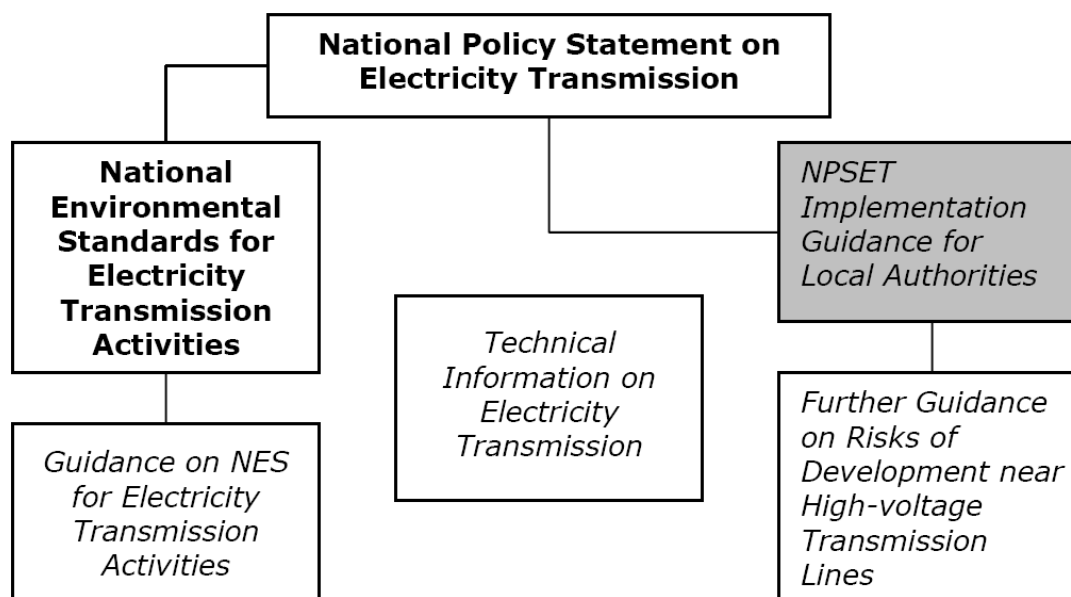
Following is a summary of the key messages of this guidance.

- The NPSET requires a proactive response to give effect to its objective and policies.
- The NPSET imposes obligations on both Transpower New Zealand Limited (Transpower) and local authorities.
- In developing regional and district policies in response to the NPSET, early consultation with Transpower is encouraged, particularly in relation to Transpower's development planning for that particular region or district.
- Conversely, Transpower will need to work with councils to provide relevant information in policy development and resource consent process.

## 1.4 Other associated documents

Figure 1 below shows the relationship between the NPSET, the National Environmental Standard for Electricity Transmission Activities and the associated guidance documents.

**Figure 1: Relationship of this guidance with other associated documents**



### 1.4.1 National Environmental Standard for Electricity Transmission Activities

The National Environmental Standard for Electricity Transmission Activities (NESTA) will provide national consistency in how electricity transmission activities are managed, thereby helping councils to implement the NPSET. The Ministry for the Environment will prepare detailed guidance on the NESTA for councils and the public.

### 1.4.2 Further Guidance on Risks of Development near High-voltage Transmission Lines

This guidance has been developed by Transpower New Zealand Ltd to provide further information on the risks of development and activities on the transmission network. The information is intended to help in the preparation of the section 32 evaluation with respect to implementing NPSET Policies 10 and 11.

### 1.4.3 Technical Information on Electricity Transmission

This guidance will provide information on the technical aspects of electricity transmission, particularly the form and function of the national grid and the issues associated with planning for its long-term development, as well as ongoing maintenance and upgrading requirements. For example, information will be provided on common operational and maintenance activities

(including the constraints involved), such as the hows and whys of raising tower heights. This detailed guidance will be released as part of the guidance package for the NESTA. In the meantime, a glossary of relevant terms used in the NPSET has been prepared, and can be found under ‘Terminology’ on page 5 of this guidance.

## 1.5 Structure

This guidance is structured as follows.

- Section 2 provides background information on some key aspects of the NPSET and its relevance to resource consent applications.
- Section 3 provides an analysis of the one objective and 14 policies contained within the NPSET, in terms of how regional and territorial authorities need to respond in their policy statements and plans.
- Section 4 gives examples of a range of regional policy statement and district plan provisions to give effect to the NPSET. These are intended as a guide only.

## **2 Background to the National Policy Statement on Electricity Transmission**

### **2.1 Reasons for the NPSET**

The NPSET seeks to ensure that, in providing for the transmission of electricity within a region or district and in managing the effects of the transmission network on the environment, the operational and long-term development requirements of the network are appropriately considered and its status as a linear cross-boundary network is fully recognised.

The main reason for introducing the NPSET is to resolve the inconsistencies and problems resulting from the highly variable provision for transmission activities in first-generation RMA plans and policy statements. Despite the fact that the national grid is largely the same from one end of the country to the other, all district plans deal with the national grid differently, and there are considerable variations in policy frameworks.

It is therefore necessary to promote a more standardised and consistent approach throughout New Zealand, while recognising that local authorities need to respond to their differing environmental circumstances. Although the NPSET does not require that a common approach be adopted in all aspects, particularly in terms of responding to the various local or regional environmental contexts, best practice would be to promote consistency and standardisation where possible.

Regional and territorial local authorities need to respond proactively to this NPSET before 10 April 2012. It is not just a matter of repeating or paraphrasing the policies contained within the NPSET: the focus should be on providing meaningful implementation at the regional and district level.

As with other policy instruments under the RMA (such as the New Zealand Coastal Policy Statement), there are some inherent tensions between various policies and also some competing requirements. Some of the key areas of tension are cross-referenced in this guidance. Regional or district-level policies may be able to address a number of these tensions, but competing requirements can often only be addressed on a case-by-case basis by decision-makers in relation to specific resource consent applications or notices of requirement.

## 2.2 Relevance to decision-making on consents and designations

Although this guidance focuses on the policy responses required by regional councils and territorial authorities under Part 5 of the RMA, decision-makers are also required to apply the NPSET more broadly, as stated in the preamble to the NPSET:

The national policy statement is to be applied by decision-makers under the Act. The objective and policies are intended to guide decision-makers in drafting plan rules, in making decisions on the notification of the resource consents and in the determination of resource consent applications, and in considering notices of requirement for designations for transmission activities.

For the last two circumstances:

- when considering an application for a resource consent, the consent authority must have regard to any relevant provisions of a national policy statement (section 104[1][b][iii] of the RMA)
- when considering a notice of requirement, a territorial authority must have particular regard to any relevant provisions of a national policy statement, in accordance with section 171(1)(a)(i) of the RMA.

Therefore, this guidance should assist with the implementation of the NPSET when considering resource consents and designations.

## 2.3 Terminology

The NPSET uses a range of terms and phrases in relation to the facilities owned and operated by Transpower. However, many terms have not been defined in the NPSET. The interpretation of these terms in this guidance is not necessarily the only way these terms can be defined.

For the purpose of clarity and consistency, in this guidance the relevant terms are used as follows.

- *Transmission network* refers to the national grid in its entirety.
- *Transmission infrastructure* refers to high-voltage transmission lines, substations and any other associated facilities and equipment.
- *Transmission activities* refers to those activities undertaken by Transpower in operating, maintaining, upgrading and developing the transmission network.
- *Transmission corridor* refers to the area of land on either side of a transmission line within which reverse sensitivity issues may arise.
- *Transmission corridor management* refers to the corridor management approach, a management method commonly applied (explicitly or not) to roads and railway lines. The purpose of a transmission corridor is to ensure that only activities compatible with the safe and efficient operation and development of high-voltage transmission lines occur within the immediate vicinity of the transmission network.
- *Upgrades* – the NPSET refers to ‘upgrades’ of transmission infrastructure. Upgrades to existing infrastructure are a means of meeting increased capacity needs on the network and

can delay or forego the need for investment in a new transmission line. Increased capacity may be provided for on any particular existing line through:

- tower extensions and related measures to allow increases in carrying capacity, while maintaining minimum safe clearance distances between conductors and the ground (see Section 3, Policy 5)
- adding circuits
- adding sub-conductors or re-conductoring.

The NPSET uses various descriptive terms when referring to upgrading, including *minor* upgrades, *major* upgrades and *substantial* upgrades. These terms are not defined in the NPSET, nor are they used or defined within the electricity sector. It is not clear, for example, whether these terms should be applied to the potential environmental effects, the capacity change afforded by the upgrade, or the extent/cost of the physical work undertaken; there is no direct correlation between these three aspects. However, within the RMA context of the NPSET, the most appropriate focus for defining levels of upgrading should be potential environmental effects.

# 3 Analysis of the National Policy Statement on Electricity Transmission

The following tables examine the objective and policies contained in the NPSET and discuss possible regional or district policy responses to each policy. It is recommended that councils work with Transpower when reviewing policies on the relevant aspects of NPSET.

## 3.1 Objective

| <p><b>To recognise the national significance of the electricity transmission network by facilitating the operation, maintenance and upgrade of the existing transmission network and the establishment of new transmission resources to meet the needs of present and future generations, while:</b></p> <ul style="list-style-type: none"><li>• <b>managing the adverse environmental effects of the network; and</b></li><li>• <b>managing the adverse effects of other activities on the network.</b></li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>At some point before 10 April 2012 councils will need to review their current policies and provisions to determine whether they are adequately giving effect to the NPSET. This review needs to do more than determine whether any provision is <i>not inconsistent with</i> the NPSET. Provisions must be evaluated to determine whether they are <i>giving effect</i> to the NPSET. 'Giving effect' is a proactive term, indicating that some form of response is required to ensure that priority is given to the transmission network as a nationally significant resource.</p> <p>The word 'facilitating' in the objective also implies a proactive response, by requiring local authorities to determine ways to aid or assist in the "operation, maintenance and upgrade of the existing transmission network and the establishment of new transmission resources", while managing adverse effects <i>of</i> and <i>on</i> the network.</p> |                                                                                                                                                                                                                                                                                                                                                                  |
| Regional response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Territorial response                                                                                                                                                                                                                                                                                                                                             |
| Regional councils must provide some form of specific recognition and provision for the transmission network in their regional policy statements and relevant regional plans. If this response is part of a suite of provisions on infrastructure or network utilities, the transmission network should be specifically provided for.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Territorial local authorities must provide some form of specific recognition and provision for the transmission network in their district plan objectives, policies, methods and rules (if appropriate). If this response is part of a suite of provisions on infrastructure or network utilities, the transmission network should be specifically provided for. |

## 3.2 Recognition of the national benefits of transmission

### Policy 1

In achieving the purpose of the Act, decision-makers must recognise and provide for the national, regional and local benefits of sustainable, secure and efficient electricity transmission. The benefits relevant to any particular project or development of the electricity transmission network may include:

- i) maintained or improved security of supply of electricity; or
- ii) efficient transfer of energy through a reduction of transmission losses; or
- iii) the facilitation of the use and development of new electricity generation, including renewable generation which assists in the management of the effects of climate change; or
- iv) enhanced supply of electricity through the removal of points of congestion.

The above list of benefits is not intended to be exhaustive and a particular policy, plan, project or development may have or recognise other benefits.

All regions and districts in New Zealand (other than the Chatham Islands) contain part of the electricity transmission network, so the benefits of these assets apply across the country and should be recognised and provided for by all regional policy statements and district plans, and when considering resource consent applications. The term 'provide for' in Policy 1 is a proactive one requiring an active and enabling response by both regional councils and territorial authorities. The form, function and environmental context of transmission assets varies considerably across the country; for example, some regions/districts contain only spur lines for supplying the local area, while others contain critical components of the national supply of electricity. However, all of the benefits identified in Policy 1 are relevant to all parts of the network, and thus to all regions and districts.

In addition to the benefits identified in the NPSET, projects will also have specific benefits. For significant upgrading work or proposed new lines, these benefits will be identified by Transpower when seeking statutory approvals under the RMA.

*Note: Supporting information on the benefits of the grid is provided in the Technical Information on Electricity Transmission.*

| Regional response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Territorial response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Review regional policy statement objectives, policies and methods relating to significant infrastructure and/or energy, providing direction on regional plan responses.</b></p> <p>Increasingly, regional policy statements contain policies on "regionally significant infrastructure" such as airports, ports, gas pipelines, and public wastewater treatment plants. While such policies provide an obvious place to give effect to NPSET Policy 1, such an approach must not confuse national benefits with regional benefits, because the transmission network provides a scale of national benefits not afforded by many regional facilities.</p> | <p><b>Review district plan objectives, policies, methods and rules for network utilities, infrastructure and/or energy.</b></p> <p>Increasingly, district plans include provisions on significant district infrastructure or, more commonly, network utilities and energy. While such provisions provide an obvious place to give effect to Policy 1 of the NPSET and to give explicit recognition of the benefits of electricity transmission, such an approach must not confuse national benefits with district benefits, because the transmission network provides a scale of national benefits not afforded by many district facilities.</p> |
| Example policy response reference (Part 4)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Example policy response reference (Part 4)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Refer to all Objective, Policy and Method examples.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Refer to all Objective, Policy and Method examples.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

### 3.3 Managing the environmental effects of transmission

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
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| <p><b>Policy 2</b></p> <p><b>In achieving the purpose of the Act, decision-makers must recognise and provide for the effective operation, maintenance, upgrading and development of the electricity transmission network.</b></p> <p>Giving effect to this policy is a critical part of responding to the NPSET and should also be part of responding to NPSET Policy 1.</p> <p>This policy is an overarching one, relating to both provision for the ongoing operation, maintenance and minor upgrading of transmission infrastructure (NPSET Policies 3 and 5) and to the long-term planning and development of the transmission network (NPSET Policies 4, 6, 7, 8, 13 and 14). Implementing this policy requires a balanced approach, recognising the importance and benefits of electricity transmission while managing the use and development of the transmission network and its effects. In particular, it requires a proactive approach to identify opportunities for providing for the use and development of the transmission network, in accordance with the principles of sustainable management.</p> <p>The term 'recognise' implies some form of explicit identification of the transmission network within a region. The term 'provide for' is also a proactive one, requiring an active and enabling response by councils.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <p><b>Regional response</b></p> <p><b>Review regional policy statement objectives, policies and methods on significant infrastructure and/or energy.</b></p> <p>An important facet of this policy is that regional councils must be satisfied they have duly recognised and provided for the transmission network as part of their functions under the Act. This policy relates to the regional council's function under section 30(1)(gb) of the RMA to integrate infrastructure with land-use planning.</p> <p>In responding to this policy, a regional policy statement should contain policies to protect the grid from the adverse effects of third parties putting constraints on the effective operation, maintenance, upgrading and development of the network (refer to NPSET Policies 10 and 11).</p> <p>It should also promote the corridor management approach (see 'Transmission corridor' in the Terminology section), providing for the ongoing operation, maintenance and minor upgrading of the transmission network. This approach recognises the need to provide for common transmission line activities, focusing policy frameworks on the potentially more significant effects associated with new line and major upgrading.</p> <p>The regional policy statement can provide direction on the need for the development of the transmission network within a region, using the consent process to ensure a robust assessment of a proposed new line or major upgrading in which positive and negative effects are considered, and opportunities to avoid, remedy or mitigate adverse effects are identified.</p> <p>Another important role of regional policy statements in this respect is to address the cross-boundary issues associated with managing the electricity transmission network within a region to ensure a consistent approach by the constituent districts, particularly in relation to cross-boundary transmission upgrades and development.</p> | <p><b>Territorial response</b></p> <p><b>Review district plan objectives, policies and rules (if appropriate) on network utilities, infrastructure and/or energy.</b></p> <p>The "effective operation, maintenance, and minor upgrading" aspects of this policy would be largely implemented through the National Environmental Standard on Transmission Activities (NESTA). The NESTA provides for the operation, maintenance and upgrading of the existing transmission network, making provision for such work through various performance standards and activity classifications, based on the scale and type of environmental effects. However, the NESTA does not cover new line development.</p> <p>Another important part of the response to this policy would be district plan provisions (rules where appropriate) for managing the adverse effects of third parties; for example, in making decisions on land development proposals that may adversely affect the long-term use and development of transmission infrastructure. This example emphasises the role the NPSET has in guiding decision-making on consents.</p> <p>Such policies can be provided through a corridor management approach, within which sensitive land-use activities should be managed to reduce safety issues and to limit the constraints imposed by the proximity of structures and land uses on the ongoing operation and maintenance of the transmission infrastructure. Another element of a corridor management approach is to provide for performance and development standards for transmission activities that allow for the operation, maintenance and minor upgrading of transmission infrastructure.</p> <p>Even where a transmission line traverses areas of high value, it is important to ensure the reasonable operation, maintenance and minor upgrading of transmission infrastructure. Potential effects stemming from transmission activities could be addressed through the resource consent process (ie, through consent conditions.)</p> |
| <p><b>Example policy response reference (Part 4)</b></p> <p>Refer to all Objective, Policy and Method examples.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <p><b>Example policy response reference (Part 4)</b></p> <p>Refer to all Objective, Policy and Method examples.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

### Policy 3

**When considering measures to avoid, remedy or mitigate adverse environmental effects of transmission activities, decision-makers must consider the constraints imposed on achieving those measures by the technical and operational requirements of the network.**

This policy seeks to ensure that conditions of resource consents or designations recognise the underlying technical and operational requirements of the network. The adverse effects of such facilities cannot always be avoided without unreasonable cost or constraints on the operation and use of transmission infrastructure. There is an onus on Transpower to consider and propose measures to avoid, remedy or mitigate the adverse environmental effects of transmission activities.

It is recommended that an effective approach would be to apply the best practicable option principle in considering measures to avoid, remedy or mitigate adverse effects, which would take into account the practicality, costs and technical and operational constraints involved with alternative methods. For example, undergrounding high-voltage transmission lines entails not only technical constraints and significant costs, but also imposes significant constraints on the use of the land above the line.

Policy 3 needs to be considered in the context of the planning and development of the transmission network, particularly NPSET Policies 7 and 8. For existing transmission lines this policy is largely covered by the NESTA.

*Note: A discussion on the constraints imposed on achieving measures to avoid, remedy or mitigate adverse environmental effects and alternative transmission methods is provided in the Technical Information on Electricity Transmission.*

| Regional response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Territorial response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
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| <p><b>Include provisions to manage the adverse environmental effects of transmission activities.</b></p> <p>Regional policy statements could address this policy as part of the provisions for recognising the technical and operational requirements of the network.</p> <p>A regional policy statement should provide explicit direction on dealing with a new line or major upgrading on a holistic basis, recognising that transmission lines usually traverse many districts. In considering how to avoid, remedy or mitigate adverse effects, a regional policy statement could require councils to adopt a 'whole-of-line' approach, recognising the differing values of alternative methods to avoid, remedy or mitigate adverse effects at differing scales. For example, the benefits of imposing any route changes, or of requiring the provision of offsets, should be measured against the entire route.</p> | <p><b>Include provisions to manage the adverse environmental effects of transmission activities.</b></p> <p>District plan policies for the electricity transmission network could address this matter as part of their provisions for recognising the technical and operational requirements of the network (eg, in directing flexible approaches to condition setting, such as the use of outline development plans and management plans for designations).</p> <p>When developing rules for environments traversed by the national grid, decision-makers should ensure the grid is not unduly constrained by those provisions that fail to recognise the technical and operational requirements of the network, such as a lack of provision for:</p> <ul style="list-style-type: none"> <li>• changes in the height of conductors, including provision for swing and sag</li> <li>• achieving safe clearance distances</li> <li>• achieving a connection between electricity supply sources and substations or points of direct distribution</li> <li>• following a reasonably direct route between connection points</li> <li>• other design and engineering constraints.</li> </ul> <p>Policy 3 has direct significance for decision-making on resource consent applications and notices of requirement.</p> <p>This limitation imposes an obligation on Transpower to ensure the specific constraints relating to any particular project or transmission asset are adequately identified in any application.</p> <p>Refer to the technical information on the NPSET and NESTA for further detail on these matters.</p> |
| Example policy response reference (Part 4)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Example policy response reference (Part 4)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <p>Objectives R1.2 and R1.3</p> <p>Policies R2.1, R2.2, R2.4, R2.8 and R2.10</p> <p>Method R3.2 and R3.3</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <p>Objectives D1.1 and D1.2</p> <p>Policies D2.2 and D2.5</p> <p>Methods D3.1 and D3.2</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

## Policy 4

**When considering the environmental effects of new transmission infrastructure or major upgrades of existing transmission infrastructure, decision-makers must have regard to the extent to which any adverse effects have been avoided, remedied or mitigated by the route, site and method selection.**

The application of the concept of *net environmental benefits* would be appropriate in terms of determining the overall preferred route, taking all matters – costs and benefits – into account. The application of net environmental benefits has to be undertaken on a case-by-case basis, taking into account the specific context and circumstances of particular proposals.

Policy 4 has direct significance for decision-making on resource consent applications and notices of requirement. In applying Policy 4, regard must also be given to the direction under NPSET Policy 3 to recognise the constraints imposed on avoiding, remedying or mitigating adverse effects by the technical and operational requirements of the network.

The Electricity Commission currently has a role in assessing and agreeing to any specific proposal for new electricity infrastructure, including the costs of both the works and any of the measures to avoid, remedy or mitigate effects.

*Note: Information on the planning processes involved with the transmission network, including the ACRE model for route, site and method selection, is provided in the Technical Information on Electricity Transmission.*

| Regional response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Territorial response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Provide a direction to district plans as part of a broader policy on managing the adverse environmental effects of transmission activities.</b></p> <p>The regional policy statement could address this matter as part of a policy on managing the effects of nationally significant infrastructure within a region, with regard to ensuring a consistent approach to new or upgraded lines across districts within the region. In particular, a policy could require specific recognition in the decision-making process of what reduction in effects has been achieved through site/route selection.</p> <p>As with NPSET Policy 3, the regional policy statement should direct a 'whole-of-line' approach to considering how to avoid, remedy or mitigate the adverse effects of major transmission line projects.</p> | <p><b>Include provisions to manage the adverse environmental effects of transmission activities.</b></p> <p>In responding to NPSET Policy 3, some provision could be included within a policy on managing the effects of new/upgraded infrastructure and network utilities. In particular, specific recognition of the reduction in effects achieved through site/route selection should be made in consenting projects (eg, the benefits achieved by avoiding significant adverse effects on landscape through route selection, and alternative alignments within a route).</p> |
| Example policy response reference (Part 4)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Example policy response reference (Part 4)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Objectives R1.2 and R1.3<br>Policies R2.1, R2.2, R2.4 and R2.9<br>Methods R3.2 and R3.3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Objectives D1.1 and D1.2<br>Policies D2.2, D2.3, D2.4 and D2.8<br>Methods D3.1, D3.2 and D3.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

## Policy 5

**When considering the environmental effects of transmission activities associated with transmission assets, decision-makers must enable the reasonable operational, maintenance and minor upgrade requirements of established electricity transmission assets.**

The response to this policy should recognise that, in assessing the effects of minor upgrading, the effects of the existing transmission infrastructure provide a baseline, and that the effects of any proposed changes should be considered as additional to those baseline effects.

Addressing this policy therefore requires identifying and assessing the marginal effects of proposed works with regard to the operational, maintenance and minor upgrade requirements of established assets. It also places an onus on Transpower to ensure these requirements are described clearly.

Transpower should supply information on its assets to councils when applying for certificates of compliance for permitted activities or consent for maintenance and upgrading. This is particularly relevant where there is potential for 'creep' (eg, of tower height). This information will provide local authorities with baseline data on specific assets.

| Regional response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Territorial response                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
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| <p><b>Address through policy on regionally significant infrastructure or other relevant policies (as for NPSET Policy 2).</b></p> <p>This is a relevant policy for decision-makers giving effect to the NESTA for transmission line proposals requiring resource consent under the NESTA. Policy 5 would direct that any conditions imposed on transmission projects should not unreasonably constrain the operational, maintenance and minor upgrade requirements of established electricity transmission assets.</p> | <p><b>Address through a district plan policy giving effect to NPSET Policy 2.</b></p> <p>This is a relevant policy for decision-makers giving effect to the NESTA for transmission line proposals requiring resource consent under the NESTA. Policy 5 would direct that any conditions imposed on transmission projects should not unreasonably constrain the operational, maintenance and minor upgrade requirements of established electricity transmission assets.</p> |
| Example policy response reference (Part 4)                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Example policy response reference (Part 4)                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <p>Objective R1.3<br/>Policies R2.1, R2.2 and R2.3<br/>Method R3.1</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <p>Objective D1.1<br/>Policies D2.4 and D2.8<br/>Method D3.3</p>                                                                                                                                                                                                                                                                                                                                                                                                           |

## Policy 6

**Substantial upgrades of transmission infrastructure should be used as an opportunity to reduce existing adverse effects of transmission including such effects on sensitive activities where appropriate.**

Much of the onus of responding to Policy 6 is on Transpower, which, when preparing notices of requirement or applications for consent, is under an obligation to demonstrate that it has examined opportunities and alternatives when proposing substantial upgrades of transmission infrastructure. The policy indicates that upgrades can provide an opportunity to reduce existing effects in some cases.

'Upgrade' refers to making changes to existing transmission lines, usually to provide either for increased security in transmission or increased capacity to transmit electricity. The options for upgrading an existing line are therefore different to those that might be considered for a new line (refer to the *Technical Information on Electricity Transmission*).

'Substantial' is not defined, but in the context of this policy it clearly relates to an upgrade of an existing line that is beyond minor. Policy 6 indicates that a substantial upgrade project should provide opportunities to achieve environmental enhancements.

This policy must be read in conjunction with Policy 3, in that there may be technical and operational requirements of the network that constrain the ability to reduce existing effects. Undergrounding transmission lines is commonly suggested as a method for reducing existing effects, but there are some significant constraints involved with this method that limit its appropriateness and feasibility (refer to the *Technical Information on Electricity Transmission* for further discussion on undergrounding lines).

When considering upgrade options for transmission infrastructure, the scale and extent of existing adverse effects and the effects of alternatives need to be taken into account.

*Note: In the NPSET a 'sensitive activity' "includes schools, residential buildings and hospitals". The NPSET does not explain the sensitivity, but it is likely to be based on environmental effects (such as amenity values) and relative risks to safety and health. While some matters can be scientifically quantified, many of the 'effects' associated with reverse sensitivity issues are related to matters of perception and subjectivity, and are difficult to quantify.*

| Regional response                                                                                                                                                                           | Territorial response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
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| It may be appropriate to consider Policy 6 in developing regional policies on significant infrastructure within a region, particularly in reference to policies on existing infrastructure. | <p><b>Policy 6 may have some relevance for district plan policy-making. At a broad level, this aspect should also be addressed in response to NPSET Policy 4.</b></p> <p>It may be appropriate to consider Policy 6 in developing district plan provisions on significant infrastructure within a district, particularly where there is a significant resource management issue in which the presence of existing transmission line(s) is relevant (eg, in developing policies on residential areas). In such circumstances, there should be some policy guidance on how to respond to such issues, particularly where there are significant constraints involved in making major changes to routes or transmission methods.</p> |
| Example policy response reference (Part 4)                                                                                                                                                  | Example policy response reference (Part 4)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Policy R2.2                                                                                                                                                                                 | Policy D2.2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

## Policy 7

**Planning and development of the transmission system should minimise adverse effects on urban amenity and avoid adverse effects on town centres and areas of high recreational value or amenity and existing sensitive activities.**

Policy 7 is most relevant for decision-makers when considering notices of requirement or applications for resource consent. Much of the onus of responding to this policy is on Transpower, which is under an obligation to demonstrate that it has examined opportunities and alternatives for minimising adverse effects when planning and developing transmission infrastructure.

There may be significant operational and technical constraints involved with alternative methods. In this regard, the best practicable option principle is a potentially useful tool (see commentary on NPSET Policy 3). In regard to 'substantial upgrades' of existing lines in urban areas, the response to Policy 6 is relevant.

It should be emphasised that where possible Transpower should seek to avoid urban areas when planning new lines. There is a presumption that high-value areas are identified in plans. Policy 7 has an urban focus, and is therefore the counterpart to Policy 8, which has a rural focus.

*Note: Information on the planning processes involved with the transmission network, including the ACRE model for route, site and method selection, is provided in the Technical Information on Electricity Transmission.*

| Regional response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Territorial response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
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| <p><b>Address through provisions to manage the adverse effects of transmission activities.</b></p> <p>At a regional level, direction should be given on appropriate locations for future transmission assets. In particular, this policy should be reflected in growth strategies and in any regional policies to protect urban amenity and sensitive areas and activities.</p> <p>Policy 7 may have some relevance for regional policy-making on any of the matters specified in Policy 7, or, more broadly, on managing the effects of regionally significant infrastructure.</p> | <p><b>May have some relevance for district plan policies on specific issues relating to urban amenity values, town centres and reverse sensitivity.</b></p> <p>A district plan may have a particular resource management issue for which this policy is relevant, such as managing residential areas in which there is an existing transmission line. In developing such policies, district plans should contain clear explanations of the values to which provisions on these issues relate (eg, any areas identified as having "high recreation values").</p> <p>Councils should be cautious in introducing policies and provisions such as blanket urban amenity protection that would effectively prevent Transpower from considering alternative methods to respond to Policy 7. Preferably, policies should provide guidance on the appropriate ways to minimise adverse effects or, at the very least, recognise the technical and operational constraints involved with the use of alternative methods (refer NPSET Policy 5).</p> |
| Example policy response reference (Part 4)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Example policy response reference (Part 4)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <p>Objective R1.3</p> <p>Policy R2.4</p> <p>Methods R3.1 and R3.6</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <p>Policies D2.2, D2.3, D2.7 and D2.8</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

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| <p><b>Policy 8</b></p> <p><b>In rural environments, planning and development of the transmission system should seek to avoid adverse effects on outstanding natural landscapes, areas of high natural character and areas of high recreation value and amenity and existing sensitive activities.</b></p> <p>Policy 8 is most relevant to decision-making on resource consent applications and responding to notices of requirement. The onus of responding to Policy 8 is largely on Transpower, which is under an obligation to demonstrate that it has examined opportunities and alternatives for avoiding adverse effects when planning and developing transmission infrastructure. The critical aspect of Policy 8 is the phrase “should seek to avoid”, which emphasises a proactive and constructive approach to the selection of routes and the assessment of effects. In this regard, the concept of best practicable option is a useful tool (see commentary on NPSET Policy 3).</p> <p>This policy falls within the broader ambit of NPSET Policy 4 in regard to managing the effects of the development of transmission infrastructure. This could include a requirement for an analysis of alternative routes, sites and methods, and could include criteria or matters to consider in that process. In regard to any substantial upgrades of existing lines in rural areas, the response to Policy 6 is relevant.</p> <p>There is a presumption that high-value areas are identified in plans. The rural focus of Policy 8 is the counterpart to the urban focus of Policy 7.</p> <p><i>Note: Information on the planning processes involved with the transmission network, including the ACRE model for route, site and method selection, is provided in the Technical Information on Electricity Transmission.</i></p> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <p><b>Regional response</b></p> <p><b>Address through provisions to manage the adverse effects of transmission activities.</b></p> <p>To respond to this policy, a regional policy statement could:</p> <ul style="list-style-type: none"> <li>include policies to encourage and enable project developments that avoid areas of high value</li> <li>encourage councils to use conditions to avoid adverse effects on areas of high value</li> <li>include criteria for determining appropriateness, particularly in relation to outstanding landscapes (a section 6[a] matter) and areas of high natural character, such as avoidance of ridgelines.</li> </ul> <p>Alternatively this policy could, in part, be responded to through other regional policy statement policies (eg, on outstanding landscapes).</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <p><b>Territorial response</b></p> <p><b>May have some relevance for district plan policies on specific issues.</b></p> <p>A district plan could include policies to proactively identify opportunities for identifying best practicable options for avoiding adverse effects for areas that may come within the scope of NPSET Policy 8. In particular, landscape policies should include proactive provisions for finding measures that would avoid adverse effects on outstanding landscapes and natural features, areas with high natural character, and, if relevant, areas of high recreation and high amenity values.</p> |
| <p><b>Example policy response reference (Part 4)</b></p> <p>Objective R1.3<br/>Policy R2.4<br/>Methods R3.1 and R3.6</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <p><b>Example policy response reference (Part 4)</b></p> <p>Policies D2.2, D2.7 and D2.8</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

## Policy 9

Provisions dealing with electric and magnetic fields associated with the electricity transmission network must be based on the 'International Commission on Non-ionising Radiation protection guidelines' for limiting exposure to time varying electric magnetic fields (up to 300 GHz) (*Health Physics*, 1998, 74(4): 494-522) and recommendations from the World Health Organization monograph *Environment Health Criteria* (No 238, June 2007) or revisions thereof and any applicable New Zealand standards or national environmental standards.

For existing transmission lines, this policy is largely implemented through the NESTA. New lines referring to International Commission on Non-ionising Radiation (ICNIRP) guidelines may be appropriate. It is important to highlight the fact that Policy 9 does not require councils to deal with electromagnetic fields (EMF). Transpower monitors its high-voltage electricity transmission network to ensure that it meets the ICNIRP guidelines.

See the *Technical Information on Electricity Transmission* (and in particular the EMF reference materials identified in the guidance) or visit <http://www.transpower.co.nz/emf-commitment> for more information.

| Regional response                              | Territorial response                                                                                                                                                                                                                                                                                                                                                                                       |
|------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Not necessary.                                 | A district plan policy on managing new lines or major upgrades referring to the ICNIRP guidelines may be appropriate, supported by a specific permitted activity standard on EMF that mirrors that within the NESTA. For new lines it is also appropriate to consider the application of prudent avoidance or very low cost precautionary measures in line with World Health Organization recommendations. |
| Example policy response reference (Part 4)     | Example policy response reference (Part 4)                                                                                                                                                                                                                                                                                                                                                                 |
| Objective R1.3<br>Policies R2.5, R2.6 and R2.8 | Policies D2.1 and D2.2<br>Methods D3.1 and D3.4                                                                                                                                                                                                                                                                                                                                                            |

## 3.4 Managing the adverse effects of third parties on the transmission network

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| <p><b>Policy 10</b></p> <p><b>In achieving the purpose of the Act, decision-makers must to the extent reasonably possible manage activities to avoid reverse sensitivity effects on the electricity transmission network and to ensure that operation, maintenance, upgrading, and development of the electricity transmission network is not compromised.</b></p> <p>Policy 10 requires councils to manage both third-party activities that are sensitive to the effects of the electricity transmission network <i>and</i> third-party activities that would compromise the operation, maintenance, upgrading and development of the electricity transmission network.</p> <p>The phrase 'reasonably possible' reflects the fact that it may not be reasonable or practicable to avoid all adverse effects, both because of the operational and technical constraints of Transpower, and also because of the potential impositions on property owners that controls could have on their ability to reasonably use their land.</p> <p>Policy 11 is relevant to responding to Policy 10, particularly in terms of the identification and use of buffer corridors. In identifying corridors, the emphasis should be on managing development and activities that pose a risk to, or are at risk from, the efficient operation of the transmission network.</p> <p>There is a large degree of subjectivity involved in assessing amenity effects as they relate to reverse sensitivity. Amenity concerns can often be managed by good design of subdivision and/or developments and mitigation options. Policy 10 is also relevant for decision-making on resource consent applications.</p> <p><i>Note: Refer to Further Guidance on Risks of Development near High-voltage Transmission Lines for further information on the risks of development and activities on the transmission network.</i></p> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <p><b>Regional response</b></p> <p><b>Address through a policy that avoids compromising the electricity transmission network, including reverse sensitivity issues.</b></p> <p>No specific policy is needed other than through policy on regionally significant infrastructure (possibly as part of a policy in response to Policy 1 and 2). A policy to require a corridor management approach could be appropriate, either separately or as part of a policy on the consistent cross-boundary management of the electricity transmission network within a region. Such a policy would require a consistent minimum width of corridor to be applied throughout the districts, although wider corridors may be applied if required.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <p><b>Territorial response</b></p> <p><b>Address through policies, methods and rules that provide a corridor management approach.</b></p> <p>District plans should include a policy to apply a corridor management approach within which appropriate controls are imposed. Such controls should provide an envelope of effects to allow for both ongoing operation, maintenance and minor upgrading of the transmission infrastructure, and should seek to prevent development and activities that may endanger people or property by being too close to transmission lines.</p> <p>This would be supported by district plan policies on providing for transmission infrastructure and its operation, maintenance and minor upgrading.</p> <p>There is a need for a minimum corridor width to be consistently applied within a district, although wider corridors may be applied if required.</p> |
| <p><b>Example policy response reference (Part 4)</b></p> <p>Objectives R1.2 and R1.3</p> <p>Policies R2.1, R2.2, R2.4, R2.5, R2.6, R2.7, R2.8, R2.9 and R2.10</p> <p>Methods R3.1, R3.2, R3.3, R3.4 and R3.5</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <p><b>Example policy response reference (Part 4)</b></p> <p>Policies D2.2, D2.5 and D2.6</p> <p>Methods D3.1, D3.4, D3.5 and D3.6</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

## Policy 11

**Local authorities must consult with the operator of the national grid, to identify an appropriate buffer corridor within which it can be expected that sensitive activities will generally not be provided for in plans and/or given resource consent. To assist local authorities to identify these corridors, they may request the operator of the national grid to provide local authorities with its medium to long-term plans for the alteration or upgrading of each affected section of the national grid (so as to facilitate the long-term strategic planning of the grid).**

Early dialogue with Transpower about its long-term planning is a critical part of responding to Policy 11. Transpower will assist by providing its annual plan, which gives information about the capabilities of the existing national grid, the ability of the national grid to meet future demand and generation needs (including renewable generation), and investment in the national grid that may be required to meet future needs for the next 10 years and beyond. However, it must be emphasised that such planning is dynamic over time and will change as requirements, pressures and resources change.

The creation of buffer corridors would not result in 'sterilised' land-use corridors. A range of land use can still occur within such corridors with little or minimal risks of adverse effects on the operational and maintenance requirements of Transpower. Also, the resource consent process for some developments and activities within the buffer corridor would ensure that appropriate design and performance controls could be imposed without unduly impeding land use.

*Note: In the NPSET a 'sensitive activity' "includes schools, residential buildings and hospitals". The NPSET does not define sensitivity, but it is likely to be based on environmental effects (such as amenity values) and relative risks to safety and health. The supporting publication Further Guidance on Risks of Development near High-voltage Transmission Lines provides further information on the risks of development and activities on the transmission network.*

| Regional response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Territorial response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Address through policies on the strategic integration of infrastructure with land use.</b><br>Under section 30(1)(gb) of the RMA, regional authorities are responsible for the strategic integration of infrastructure (which includes transmission lines) with land use through objectives, policies and methods. Such integration is particularly important when developing any policies on urban growth management in terms of providing for regionally significant infrastructure, including transmission corridors. | <b>Address through policies, methods and rules on providing a corridor management approach.</b><br>This policy can be addressed through the application of the corridor management approach, with appropriate controls that provide for the ongoing operation, maintenance and minor upgrading of transmission infrastructure. This would be supported by district plan policy on providing for transmission infrastructure.<br>A district plan could also include a method to have a council work with Transpower. |
| Example policy response reference (Part 4)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Example policy response reference (Part 4)                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Objective R1.2<br>Policies R2.1, R2.2, R2.4, R2.5, R2.6, R2.7, R2.8, R2.9 and R2.10<br>Methods R3.1, R3.2, R3.3, R3.4 and R3.5                                                                                                                                                                                                                                                                                                                                                                                              | Policies D2.1, D2.2, D2.5 and D2.6<br>Method D3.1, D3.2, D3.4, D3.5 and D3.6                                                                                                                                                                                                                                                                                                                                                                                                                                        |

## Policy 12

**Territorial authorities must identify the electricity transmission network on their relevant planning maps whether or not the network is designated.**

Transpower will continue to supply all local authorities with GIS information on the location of existing transmission assets.

| Regional response                                                                                                                                                                                                                                                                                                                                                                                 | Territorial response                                                                                                                                                                                                                                                                                                                           |
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| <b>Regional policy statement maps where reference to the presence of a transmission line would be appropriate/useful (eg, regional growth strategies).</b><br>Regional policy statements could require that a consistent approach to identifying the electricity transmission network be adopted by district plans.<br>Identify transmission lines on maps within regional plans, if appropriate. | <b>The transmission network must be identified on planning maps, with buffer corridors identified where the map scale permits.</b><br>Preferably, again as scale permits, the location of specific towers, lines and substations should be shown on maps, particularly in urban areas where the specific location of towers is most important. |
| Example policy response reference (Part 4)                                                                                                                                                                                                                                                                                                                                                        | Example policy response reference (Part 4)                                                                                                                                                                                                                                                                                                     |
| Policies R2.8 and R2.9<br>Methods R3.1, R3.2, R3.3 and R3.5                                                                                                                                                                                                                                                                                                                                       | Policies D2.1, D2.5 and D2.6<br>Methods D3.5 and D3.6                                                                                                                                                                                                                                                                                          |

## 3.5 Long-term strategic planning for transmission assets

| <p><b>Policy 13</b></p> <p><b>Decision-makers must recognise that the designation process can facilitate long-term planning for the development, operation and maintenance of electricity transmission infrastructure.</b></p> <p>Regional policy statements and district plans can facilitate long-term planning for transmission infrastructure. In achieving this, designations for existing and future corridors could provide for the ongoing operation and maintenance and minor upgrading of the network.</p> <p><i>Note: Information on the planning processes involved with the transmission network, including route, site and method selection, is provided in the Technical Information on Electricity Transmission.</i></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
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| Regional response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Territorial response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <p><b>Develop a specific regional policy statement policy on designations.</b></p> <p>In making provision for the planning and development of the electricity transmission network, a regional policy statement should contain a policy to provide for a long-term corridor management approach that includes the use of designations when sought by Transpower.</p> <p>In particular, a regional policy should recognise the long-term and dynamic nature of network planning and development by encouraging flexibility through the use of outline plans (section 176A of the RMA) and management plan conditions of designations. Such conditions could provide for an 'envelope of effects' that allows for the ongoing operation, maintenance and minor upgrading of a new or upgraded line); for example, flexibility in the choice of technology (such as thermal rating) where the effects differ slightly from the existing situation.</p> <p>In responding to NPSET Policy 4, a regional policy statement should ensure consistency in approach between districts on cross-boundary projects (ie, consistency in the duration of and conditions on corridor designations). This could refer to the ability of Transpower to use designations as a mechanism for providing flexibility and long-term planning of transmission corridors.</p> | <p><b>Develop specific district plan policy and methods.</b></p> <p>District plan policies on providing for infrastructure should include reference to the use of the designation process by Transpower, and the need to ensure any such conditions provide some flexibility in allowing for the ongoing operation, maintenance and minor upgrading of the new or upgraded transmission line, such as the use of outline plans and management plan conditions.</p> <p>Such conditions could provide for an 'envelope of effects' that allows for the ongoing operation, maintenance and minor upgrading of a new or upgraded line.</p> <p>The appropriate information required for such conditions could be specified in the information requirements for notices of requirement.</p> |
| Example policy response reference (Part 4)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Example policy response reference (Part 4)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <p>Objective R1.1</p> <p>Policies R2.3 and R2.8</p> <p>Methods R3.1, R3.4 and R3.5</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <p>Policies D2.4, D2.5 and D2.8</p> <p>Methods D3.1, D3.2 and D3.5</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

## Policy 14

**Regional councils must include objectives, policies and methods to facilitate long-term planning for investment in transmission infrastructure and its integration with land uses.**

Responding to this policy is connected with the response to Policy 13, particularly in terms of the need to provide flexibility in the long-term development of transmission corridors.

Councils should proactively consult Transpower when undertaking longer term planning exercises in areas where there are existing or planned transmission lines. It should be emphasised that the planning for the development of the transmission network is a dynamic process. For example, the provision of new electricity generation facilities within an area will shape Transpower's planning as to where new transmission lines are required.

*Note: Information on the planning processes involved with the transmission network, including route, site and method selection, is provided in the Technical Information on Electricity Transmission.*

| Regional response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Territorial response                                                                                                                                                                                                                                                                                                                                                      |
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| <p><b>Develop regional policy statement policy on integrated land-use planning for transmission corridor management, and through the provisions of regional plans.</b></p> <p>Responding to this policy falls under the function of regional councils to provide the strategic integration of infrastructure with land use in section 30(1)(gb) of the RMA. The regional policy statement response should be either as part of provisions relating to urban growth or, if none, as part of the statement's policies on regionally significant infrastructure. Regional policy statement policies should cover:</p> <ul style="list-style-type: none"><li>• urban growth and structure planning, to take into account existing corridors and designations</li><li>• consultation with Transpower when developing structure plans, urban growth strategies, plan changes, and reviews.</li></ul> <p>It may also be appropriate to address this policy through the provisions of regional coastal plans and other regional plans.</p> | <p><b>Possible additions through policies for the significant infrastructure.</b></p> <p>Although not specifically required under the NPSET, it may be appropriate for district plans to include a policy on recognising and providing for significant infrastructure in their growth management policies and/or in any policies on managing district infrastructure.</p> |
| Example policy response reference (Part 4)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Example policy response reference (Part 4)                                                                                                                                                                                                                                                                                                                                |
| Objectives R1.1, R1.2 and R1.3<br>Policies R2.8 and R2.9<br>Methods R3.1, R3.5 and R3.6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Policies D2.2, D2.3 and D2.4<br>Method D3.1                                                                                                                                                                                                                                                                                                                               |

## 4 Suggested examples of regional and district policy responses

This section suggests responses that could be made in regional policy statements and district plans to reflect the NPSET. The suggested responses seek to adopt the simplest, most coordinated approach by addressing all of the relevant NPSET policies and integrating them as appropriate. The responses have also been developed to have regard to the types of issues currently addressed under regional policy statements and district plans.

At a regional level, although this framework focuses on responses through the regional policy statement, it must be emphasised that regional plans are also expected to give effect to the NPSET where such plans have direct application to transmission activities, such as in regard to earthworks, air quality and activities within the coastal marine area.

The following examples are provided as guidance only and should be adapted to local circumstances.

| <b>GIVING EFFECT TO THE NATIONAL POLICY STATEMENT ON ELECTRICITY TRANSMISSION</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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| <b>REGIONAL POLICY STATEMENT OBJECTIVE(S)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <p><b>OBJECTIVE UNDER SECTION ON ENERGY OR REGIONALLY SIGNIFICANT INFRASTRUCTURE</b></p> <ul style="list-style-type: none"> <li>• <b>Objective R1.1</b> – To recognise and provide for the sustainable, secure and efficient transmission of electricity within and throughout the region by safeguarding the operational, maintenance and upgrading requirements of existing transmission infrastructure and by facilitating the long-term planning, development and use of transmission infrastructure on a consistent basis within the region.</li> </ul> <p>If a regional policy statement contains specific provisions for identifying and managing regionally significant infrastructure, then the transmission network within the region should be a key element of such provisions, provided the national benefits of the transmission network are not confused with other regionally significant infrastructure (ie, other infrastructure without a comparable level of national benefits).</p> <p><b>OBJECTIVE UNDER SECTION ON URBAN GROWTH (GENERALLY OR SPECIFIC TO AN AREA)</b></p> <p>Appropriate references to transmission corridors should be incorporated in any provisions within a regional policy statement relating to the management of urban growth/form. An appropriate objective could be as follows:</p> <ul style="list-style-type: none"> <li>• <b>Objective R1.2</b> – To ensure that land use, urban growth and other forms of land development avoid adverse effects on the operation, maintenance, upgrading and long-term development of electricity transmission corridors.</li> </ul> <p>Such an objective could more broadly refer to regionally significant infrastructure, where that term would include the transmission network. This objective would also apply to land uses controlled by regional plans (eg, earthworks).</p> <p>The term ‘corridor’ recognises that the most appropriate method to manage the long-term use and development of the transmission network is by identifying an appropriate linear area of land within which transmission lines and other assets are located. The term refers to an identified area of land and airspace surrounding transmission lines (including areas designated for transmission lines) in which activities that pose a potential risk to the safe and efficient use of the line itself, to the safety of the persons undertaking such activities, and to public safety are controlled to avoid such effects.</p> <ul style="list-style-type: none"> <li>• <b>Objective R1.3</b> – To minimise adverse effects from transmission activities on urban amenity and avoid adverse effects on town centres, outstanding natural landscapes, areas of high natural character and high recreation value or amenity, and existing sensitive uses while recognising the technical and operational requirements and constraints of the transmission network, and the need to promote a consistent and ‘whole-of-line’ approach.</li> </ul> |

## GIVING EFFECT TO THE NATIONAL POLICY STATEMENT ON ELECTRICITY TRANSMISSION

### REGIONAL POLICY STATEMENT POLICIES

Policies for achieving the objective(s) for energy and/or regionally significant infrastructure should address a number of requirements under the NPSET, to manage both the effects of transmission activities and the effects of third parties on the transmission network. Such policies should also address the enabling of short-term regular operational and minor upgrading activities for the transmission network, as well as the long-term planning and development requirements of the transmission network within the region.

The purpose of such policies is not only to guide decision-making at a regional level (eg, for regional consents and permits), but, just as importantly, to ensure a consistent and coordinated response to the management of electricity transmission within the region among the constituent territorial authorities. In managing the effects of transmission activities, a regional policy statement could include the following policies:

- **Policy R2.1** – In managing the effects of existing transmission activities, territorial authorities shall take into account the benefits of the transmission infrastructure and the constraints imposed by the technical and operational requirements of the transmission network, and shall apply a consistent and coordinated approach to the provision for the operation, maintenance and upgrades to a transmission corridor that traverses local authority boundaries.
- **Policy R2.2** – When new transmission lines or major upgrades to existing transmission infrastructure within the region are proposed, including proposals that may extend beyond the region, local authorities shall assess the affected transmission corridor in its entirety, having regard to the benefits of the work and the extent to which adverse effects have been avoided, remedied or mitigated within or beyond the region, including reducing adverse effects.
- **Policy R2.3** – When considering resource consent applications or proposed notices of requirement from Transpower in respect of the national grid, including transmission corridors, territorial authorities within and across regional boundaries shall work together in a consistent and coordinated manner and shall focus on the potential effects of the establishment, operation and maintenance of the facility over time, as well as the detailed design of the project.
- **Policy R2.4** – In managing areas of urban amenity, town centres, outstanding natural landscapes, areas of high natural character and high recreational value or amenity and sensitive activities, territorial authorities shall take into account the development, operation and maintenance of transmission infrastructure in these areas.

In terms of the adverse effects of third parties, policies could include the following:

- **Policy R2.5** – To avoid, remedy or mitigate reverse sensitivity effects on the region's electricity transmission network, territorial authorities shall apply consistent policies to manage the location, design or form of potentially sensitive activities or development in close proximity to the transmission network in such a way that it does not adversely affect the continued safe and efficient operation and development of the network.
- **Policy R2.6** – Local authorities within the region shall identify and protect (existing) transmission corridors by ensuring that development within these corridors does not generate adverse effects on the national grid, including constraining its operation, maintenance and upgrading, generating reverse sensitivity effects and/or effects on public safety, and reducing visual amenity.
- **Policy R2.7** – To ensure that potential risks to safety from the operation of the transmission network are minimised as far as practicable, and to provide for the efficient operation and maintenance of transmission lines, territorial authorities shall apply an appropriate and consistent separation distance between the transmission infrastructure and activities that involve or have the potential to involve the congregation of people or involve structures or other obstacles that could interfere with the safe and efficient operation of the transmission network.
- **Policy R2.8** – In planning for changes in land use, including urban development and intensification, territorial authorities shall seek to achieve a pattern, form and design of land use that does not adversely affect the efficient operation, use and upgrading of transmission corridors (including corridors defined by designations) by accommodating growth and development in such a way that it:
  - does not adversely affect the secure supply of electricity
  - does not give rise to potential adverse health and safety effects
  - does not compromise physical access to the transmission network for the purposes of inspection, maintenance and upgrading
  - does not compromise the range of potential options for upgrading or redeveloping transmission assets within the transmission corridor.

## GIVING EFFECT TO THE NATIONAL POLICY STATEMENT ON ELECTRICITY TRANSMISSION

This latter policy could be relevant to urban growth policies within a regional policy statement (see following 'Methods' section).

- **Policy R2.9** – In planning for changes in land use, including urban development and intensification, territorial authorities shall seek to ensure that the rate, location and form of development is integrated with the provision and location of transmission corridors [or 'strategic infrastructure'], and, in doing so, shall consult with Transpower when developing structure plans, urban growth strategies, plan changes and reviews.
- **Policy R2.10** – In facilitating the long-term planning of the development, operation and maintenance of transmission infrastructure, territorial authorities shall recognise the dynamic nature of transmission corridors by addressing and controlling, to the extent necessary, the broad effects likely to be generated, together with the detailed design.

### METHODS

The following methods would be ways to implement the above policies:

- **Method R3.1** – District plans shall include objectives, policies and methods (including rules) to recognise transmission corridors within their district, to identify transmission lines on planning maps, and to provide controls on subdivision and land use as necessary to ensure that the operation, maintenance, upgrading and development of transmission infrastructure is not compromised as a result of the adverse effects of incompatible land uses (including structures).
- **Method R3.2** – Transpower shall be notified when resource consent applications may have adverse effects on the operation, maintenance and minor upgrading of existing transmission assets.
- **Method R3.3** – In consultation with Transpower, growth and development strategies, including structure plans and comprehensive development plans, shall identify transmission corridors within the subject area (including designations), and shall contain provisions designed to recognise the benefits of, and protect the long-term operation, maintenance and development of, such corridors.
- **Method R3.4** – Local authorities shall consult with Transpower about proposed development works, subdivision, land uses, discharges or other activities with the potential to adversely affect transmission corridors (including designations).
- **Method R3.5** – The location of transmission corridors (including designations for future corridors) shall be included in councils' property information systems (including GIS).
- **Method R3.6** – District plans shall recognise the presence of existing transmission infrastructure in areas of outstanding natural landscapes, areas of high natural character and areas of high recreation value and amenity.

### USE OF MAPS WITHIN A REGIONAL POLICY STATEMENT

The location of any high-voltage transmission lines (including substations) should be shown on any map(s) within a regional policy statement where its presence would be a relevant matter.

## GIVING EFFECT TO THE NATIONAL POLICY STATEMENT ON ELECTRICITY TRANSMISSION

Most district plans contain specific objectives and policies for network utilities, which include the electricity transmission network. Some of these plans also cover broader energy matters in conjunction with their provisions for network utilities. In future, district plans could adopt the regional approach of providing for electricity transmission under a broader 'significant infrastructure' policy framework.

The recommended responses have been written independently of these different approaches, focusing on providing a direct response to the directions under the NPSET. Some territorial authorities may seek to provide an integrated approach to managing the effects of all network utilities/significant infrastructure within their districts, and accordingly seek to develop policies that address electricity transmission within broader provisions. If this integrated approach is taken, it will be essential that the key elements required to respond to the NPSET are not lost.

### DISTRICT PLAN OBJECTIVE(S)

#### OBJECTIVE

General overall objectives could be:

- **Objective D1.1** – To provide for the sustainable, secure and efficient use and development of the electricity transmission network within the district/city while seeking to avoid, remedy or mitigate adverse effects on the environment to the extent practicable, and while recognising the technical and operational requirements and constraints of the network.
- **Objective D1.2** – To recognise the importance of the national grid to the district's, region's and nation's social and economic well-being.

To recognise and provide for the benefits of electricity transmission within each district/city, a number of policies may be required to address the key relevant policies of the NPSET. Such policies could include the following:

## GIVING EFFECT TO THE NATIONAL POLICY STATEMENT ON ELECTRICITY TRANSMISSION

### DISTRICT PLAN POLICIES

#### POLICIES

- **Policy D2.1** – The reverse sensitivity effects generated by subdivision and land development within electricity transmission corridors shall be managed in order to avoid, remedy or mitigate the adverse effects on both the safe, secure and efficient use and development of the transmission network and the safety and amenity values of the community.

Note: Any explanation attached to this policy should define 'corridor management' as setting minimum buffer distances from the transmission line and other assets to manage activities both in the immediate proximity of and adjacent to the line.

- **Policy D2.2** – The continued operation and/or redevelopment of existing transmission infrastructure, and provision for new transmission infrastructure, shall be enabled by:
  - permitting the operation, maintenance, upgrading and development of existing transmission corridors, where such works can be carried out without significantly changing the adverse effects associated with the existing corridor
  - avoiding, remedying or mitigating adverse effects to the extent practicable, having regard to the benefits of the works, together with technical and operational requirements and constraints.

Note: This is a generic policy, and could be used on a more refined basis for policies on specific rural and urban zones, such as by specifically addressing policies 7 and 8. In other words, it is trying to promote a broadly constructive approach (to 'identify opportunities') in avoiding adverse effects.

- **Policy D2.3** – Existing and future transmission corridors shall be recognised and provided for when identifying and managing areas of new urban development (including urban intensification, peri-urban/rural-residential development) to ensure the safe and efficient use and development of the transmission network.
- **Policy D2.4** – The long-term planning of the development, operation and maintenance of transmission infrastructure within the district/city shall be facilitated by the provision of flexibility in the use of designations or land-use controls.

In addition, there could be policy support for methods relating to the management of development and activities within the transmission corridor that have significant potential to adversely affect the safety and operational requirements of the grid (ie, buildings, structures, earthworks and vegetation). The supporting publication, *Further Guidance on Risks of Development near High-voltage Transmission Lines*, provides more information on the risks of development and activities on the transmission network.

- **Policy D2.5** – Buildings, structures and vegetation within close proximity to existing transmission corridors shall be controlled to avoid, remedy or mitigate any adverse effects on the safe and efficient development, operation and maintenance of transmission infrastructure.
- **Policy D2.6** – Locating buildings, structures, earthworks and tall vegetation under, or within immediate proximity to, a transmission line shall be generally avoided.

#### PROVISIONS FOR OUTSTANDING LANDSCAPES AND AREAS OF HIGH LANDSCAPE, RECREATION AND AMENITY VALUES

In developing policies for a district's outstanding landscapes and natural features, as well as areas of high landscape amenity, some recognition and provision for transmission lines should be made, particularly where such areas are already traversed by transmission lines or have a reasonably foreseeable potential to be traversed. It may be appropriate for a district plan to specifically address provision for transmission lines in these areas, if particularly relevant, or at least be explicit about the values that make these areas significant.

- **Policy D2.7** – Existing transmission lines within outstanding natural landscapes, and within areas of high natural character, high recreation value and amenity, shall be recognised.
- **Policy D2.8** – New transmission infrastructure shall only traverse [defined areas] where the infrastructure is subject to a significant functional constraint, or where there is no feasible practicable alternative route and/or when significant adverse effects are outweighed by the overall benefits of the proposal.

## GIVING EFFECT TO THE NATIONAL POLICY STATEMENT ON ELECTRICITY TRANSMISSION

### METHODS

The following methods would be ways to implement the above policies.

- **Method D3.1** – Transpower shall be consulted when applying policies relating to the transmission network within the district/city, including the development of structure plans, development strategies and plan changes and reviews, and about proposed development works, subdivision or land uses with the potential to adversely affect transmission assets (including designations).
- **Method D3.2** – Designations for the transmission network that provide for the long-term planning for the development, operation and maintenance of transmission infrastructure within the identified corridor shall be used, and flexibility shall be provided through the use of outline plans and management plan conditions.
- **Method D3.3** – Rules shall be developed to provide for the operation, maintenance and upgrading and development of the transmission network outside the requirements of the National Environmental Standards on Transmission Activities.
- **Method D3.4** – Rules shall be developed to control buildings, structures, earthworks and vegetation within a determined buffer corridor either side of the centreline of transmission lines.
- **Method D3.5** – Growth and development strategies, including structure plans and comprehensive development plans to identify transmission corridors within the subject area (including designations), shall be required, which shall contain provisions designed to recognise and protect the long-term operation, maintenance, and development of such corridors.
- **Method D3.6** – Information shall be provided on the location of transmission corridors (including designations for future corridors) on the planning maps and within the council's property information systems (including GIS).

Note: In providing rules relating to the national grid, the most effective approach is to provide separate 'district-wide' rules for the transmission network rather than zone-based rules, because the latter approach leads to differing standards and conditions for transmission lines that traverse different zones. A district-wide approach promotes the use of consistent standards within a district plan.

### PLANNING MAPS

These should show the location of all high-voltage transmission lines (including substations).