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**MINISTRY OF BUSINESS,
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HĪKINA WHAKATUTUKI

Report of the Outcome Evaluation of the National Policy Statement for Renewable Electricity Generation

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Executive summary

The National Policy Statement for Renewable Electricity Generation (NPS-REG) came into effect on 13 May 2011. The Ministry for the Environment and the Ministry of Business, Innovation and Employment (MBIE) have jointly conducted an evaluation of the effects of the NPS-REG. This report presents the findings of that evaluation.

The NPS-REG was developed to provide statutory guidance on the benefits of renewable electricity generation, and to promote a more consistent approach to decision-making under the Resource Management Act 1991 (RMA) for renewable electricity generation (REG) projects. The NPS-REG supports the Government's target of 90 per cent of electricity from renewable sources by 2025, through:

- providing for REG activities in resource management policies and plans
- explicitly recognising the relevant benefits of REG, and the national significance of associated activities, in councils' policy development, council plans and consenting processes delivered under the RMA
- applying a more consistent national approach to RMA decision-making for REG projects within the resource management planning framework, providing greater investment certainty across regions and districts.

What impact has the NPS-REG had on RMA decision-making?

Regional policy statements, regional plans and district plans

Not all regional policy statement changes to give effect to the NPS-REG are operative at the time of evaluation, even if they were notified within required timeframes. Because of the staged implementation in the NPS-REG, at the time of this evaluation some district and regional plans were not yet required to give effect to the NPS-REG. This means that REG projects are being consented under planning regimes that have not yet been amended to implement the NPS-REG.

While most councils reviewed have made progress in giving effect to the NPS-REG, many councils are doing so through plan review processes already scheduled as part of their wider policy programme (either a full plan review or a revolving plan change). This often results in delayed implementation of national tools outside of the timeframes specified by the NPS-REG, but can result in cost savings for councils, as they don't have to initiate a separate plan change process solely to implement a national instrument.

A review of councils sampled shows that the introduction of the NPS-REG has not noticeably increased the consistency of REG planning provisions across regional policy statements or regional or district plans. District plan REG provisions are generally no more specific than the NPS-REG provisions.

Most district plans reviewed that have implemented the NPS-REG show objectives and policies that are reasonably enabling for REG projects. The permissiveness of the supporting rules, however, generally differs depending on the size of the REG projects. Most district plans only enabled small/community scale generation activities, usually under 20MW of output. Larger-scale projects, which have the most potential to make a significant contribution to the national

REG target, may also have larger potential adverse environmental effects. A council is unlikely to have enough information to explicitly enable this scale of project without an application before it. More restrictive plan provisions allow councils to take more comprehensive assessment through the resource consent application process when information is available.

The key challenges identified by stakeholders to implementing the NPS-REG into decision-making are:

- lack of detailed direction and guidance, making development of REG customised provisions more complicated than some consider it should be
- the complexities in balancing and resolving interactions between the NPS-REG, other national policy statements and other competing RMA Part 2 matters at a local level
- the nature and extent of the REG resources, and the competing pressures within a district/region that need to be assessed and balanced before REG provisions can be implemented, are delaying implementation timeframes.

Resource consents

A review of a small sample of REG projects shows that the NPS-REG alone does not appear to have had a significant impact on the way final decisions on the resource consents are made. Some of the matters covered by the NPS-REG were already included as matters that decision-makers had “particular regard” to under the RMA,¹ so were already being given due weight by decision-makers prior to the NPS-REG.² Some of the consents were granted after the NPS-REG came into effect, under plans that had not yet implemented the NPS-REG. Also, between 2008 and 2011, decision-makers were aware of the NPS-REG that was being proposed at the time.

The main change is the elevation of the legal weighting of the potential benefits of REG projects to a matter of national significance to be “recognised and provided for”, as opposed to a matter to which “particular regard” must be had.

The final decisions on REG projects still appear to be made on the balancing of positive and adverse effects at a national and local level, and the degree to which significant effects can be adequately mitigated. Key areas of contention (eg, noise and visual effects) do not appear to be handled differently because of the NPS-REG.

The NPS-REG does not appear to have had a major influence on the consent requirements for the sampled REG projects for timeframes, activity status, numbers and reasons for consent, amount of work required to prepare consent applications, or the need for notification. Generators consider that applications made after the NPS-REG came into effect still need to provide the same amount of information, engage similar specialists and put the same amount of time and effort into preparing the consent application package as they did before the NPS-REG.

The degree of certainty provided by the NPS-REG is limited by continued variation in planning provisions, despite plans “giving effect to” the NPS-REG, and the interaction of the NPS-REG with other matters of national importance (ie, other NPSs and Part 2 matters of the RMA).

¹ “The effects of climate change” and “the benefits to be derived from the use and development of renewable energy” under section 7(i) and (j) of the RMA considered as part of overall section 104 assessment.

² Through resource consent application assessments under section 104 of the RMA.

Is the NPS-REG achieving its objective?

From the sample consents reviewed and interviews with electricity generators, the NPS-REG does not appear to have resulted in noticeably more certainty for resource consent applicants for REG projects. The NPS-REG has not resulted in nationally consistent approaches to the drafting of regional and district plans, nor does it have any significant impact on the time and costs associated with obtaining resource consents for REG projects.

Since 2011, the level of risk to the security of electricity supply in New Zealand has remained largely benign, with market participants effectively managing actual and potential generation closures. REG capacity has increased by 5 per cent between the June 2011 quarter and the June 2015 quarter. While substantial new electricity generation capacity has already been consented, there has been little activity in obtaining resource consents for new major electricity generation projects since 2013. Growth in electricity demand has plateaued since about 2007, and there has been little new consenting activity for any form of generation.

Renewable energy contributed 80.7 per cent of New Zealand's electricity generation in the 2015 calendar year. This is the highest contribution from renewables since 1995. The share of renewable electricity generation has continued to increase since the introduction of the NPS-REG in 2011.

There are inherent difficulties in measuring the effectiveness of the NPS-REG in contributing to New Zealand's renewable electricity generation objective, however. This is because the NPS-REG is only one of many factors influencing investment in REG. Due to the dominance of other influencing factors, such as favourable economics of REG relative to thermal options, the impact the NPS-REG has had on New Zealand's progress towards the 90 per cent renewable electricity generation target should not be overstated. The NPS-REG can only contribute in a relatively small way to achieving more renewable electricity generation and meeting targets: the NPS-REG can only influence planning and consenting decisions, while the remainder of the decisions to construct (or decommission) electricity infrastructure are market driven.

Does the NPS-REG remain appropriate?

The objective of the NPS-REG remains in line with the Government's strategic direction to continue New Zealand's transition towards a low-carbon economy, and to promote the use of renewable energy. The NPS-REG also does not appear to have any technical error creating a barrier to implementation or uptake of renewable technologies.

The lack of growth in the electricity demand, and the fact that not all local policies and plans had given effect to the NPS-REG at the time of this evaluation, show that it is quite early for an evaluation to determine the effectiveness of the NPS-REG.

There are questions, however, about whether and how the NPS-REG, and more broadly the planning and consenting framework under the RMA, can or should better provide for the continuing development and maintenance of REG activities.

The results of this evaluation will be considered in line with other Government work underway, including:

- the evaluation of the effectiveness of the National Policy Statement on Electricity Transmission and the National Environmental Standard for Electricity Transmission Activities being conducted in 2016 by the Ministry for the Environment and MBIE
- updating the list of priorities that will be addressed nationally using RMA legislative tools.

1 Introduction

1.1 Purpose

This report presents the findings of the Ministry for the Environment and the Ministry of Business, Innovation and Employment's (MBIE) evaluation of the outcomes of the National Policy Statement for Renewable Electricity Generation (NPS-REG). The purpose of this evaluation is to gain a greater understanding of the impacts of the NPS-REG, and determine whether the NPS-REG is on track to meet its objective.

The NPS-REG came into force on 13 May 2011. It sets out an objective and policies to enable the sustainable management of renewable electricity generation under the Resource Management Act 1991 (RMA). The NPS-REG required that an evaluation of the effects of the NPS-REG is to be conducted within five years of its taking effect.

The implementation progress of the NPS-REG by councils has been monitored through the NPS-REG Implementation Review 2012, the biennial RMA Survey of Local Authorities 2012/13,³ and the National Monitoring System.⁴

1.2 Key evaluation questions and objectives

1.2.1 Key evaluation questions

The evaluation investigated whether the NPS-REG is achieving its intended purpose in terms of the stated objective and policy objectives. The key questions guiding this evaluation are:

- 1 What impact has the NPS-REG had on RMA decision-making?
 - a. What impact has the NPS-REG had on regional policy statements, regional plans and district plans?
 - b. What impact has the NPS-REG had on resource consent decision-making?
- 2 To what extent is the NPS-REG achieving its objective?
- 3 Does the NPS-REG remain appropriate in the light of government and sectoral developments?

1.2.2 Evaluation objectives

This evaluation also, where possible:

- 1 determines councils' progress on implementing the NPS-REG
- 2 assesses the effect of the NPS-REG on relevant regional policy statements, regional plans, district plans, resource consents and other decision-making tools

³ Ministry for the Environment, 2014.

⁴ Ministry for the Environment, 2015.

- 3 provides a robust evidence base to inform effective policy decisions for continuous improvement, and identify transferable learnings for other NPSs and NESs developed under the RMA
- 4 assesses whether the NPS-REG is able to keep pace with any developments in relation to renewable electricity generation
- 5 assesses whether there are any technical errors in the NPS-REG
- 6 identifies issues in interactions between national direction tools under the RMA
- 7 enables the Minister for the Environment to comply with statutory expectations⁵ and good practice in relation to reviewing the NPS-REG, and provides the Minister for the Environment and the Minister of Energy and Resources with a report on the conclusions on the NPS-REG evaluation.

1.3 Introduction to the NPS-REG

The NPS-REG recognises the national significance of the benefits of renewable electricity generation, and provides guidance to local authorities on how renewable electricity generation should be dealt with in RMA planning documents. These documents include regional policy statements, regional plans and district plans.

1.3.1 What is a national policy statement?

A national policy statement (NPS) is an instrument issued under section 52(2) of the RMA, and states the objectives and policies for matters of national significance. All councils must amend their regional policy statements and regional and district plans to give effect to a national policy statement. RMA decision-makers must also “have regard” to a relevant NPS as part of their decision-making processes for resource consent applications, requirements for designations, heritage orders and water conservation orders.

NPSs sit alongside national environmental standards (NESs) and section 360 regulations as one of three regulatory tools that the Government can use under the RMA to influence local government decisions, either directly or through planning instruments.

When councils “give effect to” an NPS through a plan change, they are required to make actual provision for the objectives and policies in their policy statements and plans. They will need to determine how it should be applied to their district or region, and draft their plan provisions accordingly.

National policy statements must be directed toward achieving the purpose of the Act, which is to promote the sustainable management of natural and physical resources.

⁵ The NPS-REG states that the Minister for the Environment should assess the effect of this national policy statement on relevant regional policy statements and regional or district plans, resource consents and other decision-making within five years of its taking effect.

1.3.2 NPS-REG objectives

The objective of the NPS-REG is:⁶

“To recognise the national significance of renewable electricity generation activities by providing for the development, operation, maintenance and upgrading of new and existing renewable electricity generation activities, such that the proportion of New Zealand’s electricity generated from renewable energy sources increases to a level that meets or exceeds the New Zealand Government’s national target for renewable electricity generation.

The policy objectives for the NPS-REG are to:⁷

- Strengthen central government policy direction into the planning framework for REG activities under the RMA.
- Ensure consistent recognition of the following matters of national significance of REG activities in decision-making processes under the RMA:
 - the need to develop, operate, maintain and upgrade renewable electricity generation activities throughout New Zealand; and
 - the benefits of renewable electricity generation.
- Supporting the achievement of the Government’s current target of 90% of electricity generation to be from renewable energy sources by 2025 by facilitating the development of new REG activities.

Whether these objectives have been met forms the basis of this evaluation. See Appendix 1 for the evaluation framework.

1.3.3 What does the NPS-REG do?

The NPS-REG introduced further direction, and a stronger mandate for decision-makers,⁸ on the benefits of renewable electricity generation. The NPS-REG supports the Government’s target of 90 per cent of electricity from renewable sources by 2025, through:

- providing for REG activities in resource management policies and plans
- explicitly recognising the relevant benefits of renewable electricity generation (REG), and the national significance of associated activities, in councils’ policy development, council plans and consenting processes delivered under the RMA
- applying a more consistent national approach to RMA decision-making for REG projects within the resource management planning framework, providing greater investment certainty across regions and districts.

⁶ New Zealand Government, 2011.

⁷ Ministry for the Environment, 2011b.

⁸ Since 2004, under the RMA (section 7) decision-makers are required to “have particular regard to” the benefits of renewable energy in achieving the purpose of the RMA, which indicates that it may not necessarily be reflected directly in an RMA plan (however, it would be good practice to have documentation that can demonstrate that it was considered as part of the plan development process). The introduction of the NPS-REG requires decision-makers to also now “recognise and provide for” both the need for and the benefits of REG, which indicates actual provision is to be made for these matters (Quality Planning, no date).

Under the NPS-REG, the development, operation, maintenance and upgrading of new and existing REG activities throughout New Zealand, and the associated benefits of REG, are matters of national significance. This includes:

- small and community-scale renewable generation activities
- systems to convey electricity to the distribution network and/or the national grid
- electricity storage technologies associated with renewable electricity storage.

The NPS covers all REG types – including hydroelectricity, wind, geothermal, solar, biomass, and marine – along with associated investigation activities. The NPS-REG confirms that REG, regardless of scale, makes a crucial contribution to the well-being of New Zealand, its people and the environment, and any reductions in existing REG will compromise achieving the Government’s target of 90 per cent of electricity from renewable sources by 2025.

The NPS-REG provides policies on:

- A. recognising the benefits of renewable electricity generation activities
- B. acknowledging the practical implications of achieving New Zealand’s target for electricity generation from renewable resources
- C. acknowledging the practical constraints associated with the development, operation, maintenance and upgrading of new and existing renewable electricity generation activities
- D. managing reverse sensitivity effects on renewable electricity generation activities
- E. incorporating provisions for renewable electricity generation activities into regional policy statements and regional and district plans
- F. incorporating provisions for small and community-scale renewable electricity generation activities into regional policy statements and regional and district plans
- G. enabling identification of renewable electricity generation possibilities
- H. time within which implementation is required.

See Appendix 3 for the complete text of the NPS-REG.

The NPS-REG policies are not drafted in a particularly directive manner, and so do not have a binding effect. Instead, they are weighed up alongside other RMA matters (such as other national policy statements) during RMA decision-making, such as on a resource consent decision.

Councils have a large degree of discretion in implementing the NPS-REG, which allows that they apply their experience and judgement to the decisions they are required to make. Those decisions are made in the context of a very complex physical system subject to competing values and interests (ie, the environment), and a legal regime consisting of numerous intersecting powers, duties, functions, and tools.

The NPS-REG does not resolve all the potential resource management policy tensions that can occur between REG activities and other activities or interests. Tensions may still arise, for example, between REG activities and activities that are the subject of other national policy statements, or between REG activities and other matters requiring consideration under Part 2 of the RMA (see Appendix 4 for Part 2 of the RMA).

The NPS-REG provided a staged implementation period for councils to “give effect” to the NPS-REG in regional policy statements, regional plans and district plans. Regional councils were first

required to ensure that their regional policy statement gave effect to the NPS-REG. Following the relevant amended regional policy statement becoming operative, regional councils and territorial authorities are then required to make changes to regional plans and district plans to give effect to the NPS-REG.

The Ministry for the Environment produced an implementation guide⁹ in 2011 that provided commentary and examples to help councils in giving effect to the NPS. In 2013 the Energy Efficiency and Conservation Authority (EECA) produced a supporting technical guide,¹⁰ which explains technical terms and concepts used in the NPS-REG and was written for local government decision-makers.

1.3.4 History of developing the NPS-REG

The NPS-REG was created in response to increasing expectation from both the Government and the public that New Zealand needs to make a transition to a low-carbon economy.

Two principal reasons underlay the development of the NPS-REG:

- First, a significant increase in the proportion of electricity generated from renewable resources will be required to achieve the Government's target of 90 per cent of electricity from renewable sources by 2025, and to maintain security of supply.¹¹
- Second, a view that renewable electricity generation (REG) might be unduly impeded by variable provisions in local authority policies and plans and changing attitudes to the environmental effects of developments associated with REG activities.¹²

There was also a background of inadequate policy guidance in the regulatory planning framework in relation to the benefits of renewable electricity generation. In 2004, section 7 of the RMA was amended to add "the benefits to be derived from the use and development of renewable energy" as a matter that RMA decision-makers must "have particular regard to". These benefits were not adequately recognised in decision-making under the RMA, however, which provides the regulatory planning framework in New Zealand.

With an aim to address the inconsistency and barriers posed by the regulatory planning framework, the Minister for the Environment proposed a national policy statement for renewable electricity generation in 2008, and set up a Board of Inquiry to investigate and report on the proposed NPS-REG. The Board of Inquiry presented its recommendations to the Minister for the Environment in 2010, and the NPS-REG came into effect on 13 May 2011.

⁹ Ministry for the Environment, 2011a.

¹⁰ Energy Efficiency and Conservation Authority, 2013.

¹¹ In 2011, electricity generated from hydroelectric, geothermal and wind resources accounted for approximately 70 per cent of the national total. Ministry of Economic Development (2011a).

¹² CBC (11) 17 and CBC Min (11) 5/4.

2 Context

This section outlines the wider environment in which the National Policy Statement for Renewable Electricity Generation (NPS-REG) operates:

- Section 2.1 outlines the position of a national policy statement (NPS) in the hierarchy of the wider resource management framework.
- Section 2.2 outlines the Government's wider energy priorities, and how the NPS-REG aligns with these.
- Section 2.3 outlines developments in New Zealand's energy sector since the introduction of the NPS-REG that may impact on the effectiveness of the policy statement.

2.1 Resource management framework

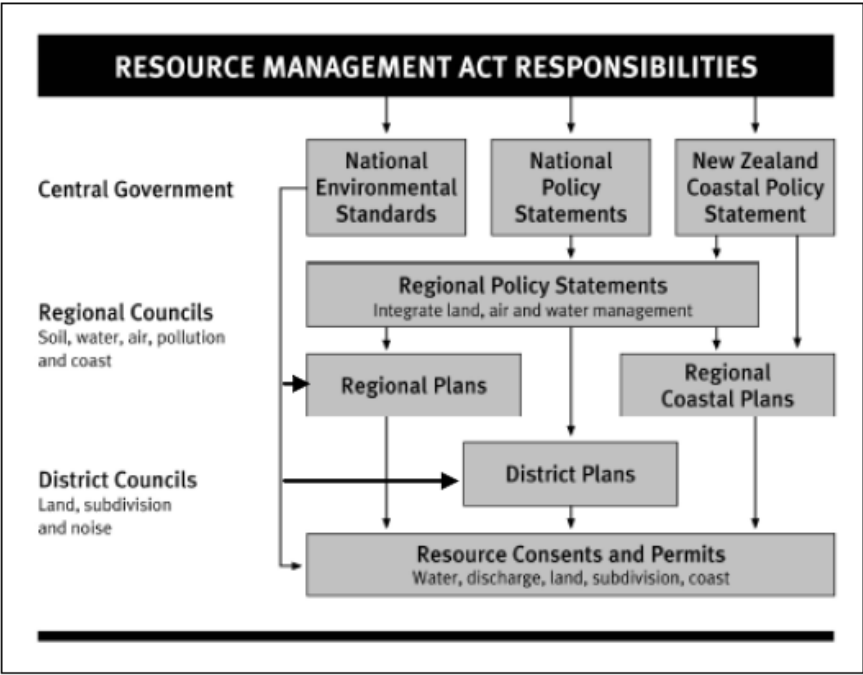
2.1.1 National direction under the Resource Management Act 1991

Under the Resource Management Act 1991 (RMA), there are a range of legislative tools that can be developed to set a consistent direction on topics of national importance. These legislative tools for national direction include national policy statements, the New Zealand Coastal Policy Statement, national environmental standards (NES) and regulations. An NPS states the objectives and policies for a matter of national significance, while an NES prescribes technical standards, methods or other requirements for environmental matters. Figure 1 shows the hierarchy of NPSs in the resource management framework.

There are other legislative tools outside of the resource management framework that interact directly with NPSs. An example of one of these is the Vision and Strategy for the Waikato River, which prevails over any inconsistent provisions in an NPS or a New Zealand Coastal Policy Statement (NZCPS),¹³ but applies to the Waikato and Waipa river catchments only.

¹³ Section 12 of the Waikato-Tainui Raupatu Claims (Waikato River) Settlement Act 2010 and section 13 of the Ngati Tuwharetoa, Raukawa, and Te Arawa River Iwi Waikato River Act 2010.

Figure 1: Hierarchy of national direction legislative tools in the resource management framework



National policy statements that interact with the NPS-REG

National Policy Statement for Freshwater Management

The National Policy Statement for Freshwater Management (NPS-FM), introduced after the NPS-REG in May 2011 and then significantly amended in 2014, has affected how the NPS-REG is considered in RMA decision-making processes.

The NPS-FM directs regional councils to establish objectives and set limits for fresh water in their regional plans based on community values. The 2014 amendments to the NPS give regional councils specific direction on how this should be done. Some of the key requirements of the NPS-FM are to:

- safeguard the life-supporting capacity of fresh water, and the health of people and communities as affected by fresh water
- maintain or improve the overall quality of fresh water within a region
- follow a process (called the National Objective Framework) to identify the values tangata whenua and communities have to their fresh water, and then set freshwater objectives for the measurable characteristics that support those values (called attributes)
- set freshwater objectives for the compulsory values of ecosystem health and human health for recreation using (at least) a menu of defined attributes
- consider a menu of nationally described values when setting freshwater objectives, including hydro-electric power generation
- set all freshwater objectives at or above defined national bottom lines, unless an exception applies
- set limits on resource use (eg, how much water can be taken or how much of a contaminant can be discharged while still meeting freshwater objectives)
- take an integrated approach to managing land use, fresh water, and coastal water.

New Zealand Coastal Policy Statement (NZCPS)

The NZCPS, published in 2010, guides councils in their management of the coastal environment. Councils must give effect to relevant provisions of the NZCPS in planning documents, and resource consent authorities must “have regard” to relevant provisions when considering consent applications.

The NZCPS identifies seven objectives and 29 related policies that provide national direction and priorities for coastal management in New Zealand under the RMA. Some of the provisions are worded to give decision-makers more flexibility, and others are stated in such directive terms that the decision-maker has no option but to implement them.

The 2014 Supreme Court’s decision in *SC 82/2013 Environmental Defence Society Inc v The New Zealand King Salmon Co Ltd* [2014] set a significant precedent to clarify the implementation of the NZCPS and by implication, NPSs more broadly. The key implications from this decision for NPS-REG is that the NZCPS, NPSs and NESs are at the same level in the RMA hierarchy; however, less weight might now be given to less directive provisions in these documents in resource management decision-making.

The NPS-REG is an activity-based NPS that is considered not to contain any absolute policies – it focuses on the weight to be given to REG in decision-making, rather than outcomes.

The NPS-FM and NZCPS do use very directive language in some circumstances (ie, “avoid”), and more moderate in other circumstances (ie, “to avoid, remedy or mitigate”). The NZCPS has a hierarchy of issues that are important and cascades its direction accordingly.

2.2 Wider government energy and climate priorities

2.2.1 Government’s energy strategy

The NPS-REG continues to be in line with the Government’s strategic direction for the energy sector, which has remained broadly the same since 2011. The New Zealand Energy Strategy 2007–11¹⁴ specified a target of 90 per cent of electricity generation from renewable energy sources by 2025, and this target was retained in the current Energy Strategy for 2011–21.¹⁵

The New Zealand Energy Efficiency and Conservation Strategy 2011–16 (NZECS) continues to focus on encouraging renewable energy.¹⁶ In addition, one of key focus areas of the Government’s Business Growth Agenda 2015¹⁷ is to “improve energy efficiency and use of renewable energy to raise productivity, reduce carbon emissions and promote consumer choice”.

¹⁴ Ministry of Economic Development, 2007.

¹⁵ Ministry of Economic Development, 2011b.

¹⁶ Work on a new draft strategy is under way. The draft strategy will be publicly notified and public submissions sought in late 2016.

¹⁷ The Business Growth Agenda (Ministry for Business, Innovation and Employment, 2016) is the Government’s policy agenda that aims to build a stronger economy by creating conditions for firms to be more productive and internationally competitive. It is published on the web page, www.mbie.govt.nz/info-services/business/business-growth-agenda.

2.2.2 Climate change policy

The NPS-REG continues to be in line with New Zealand's climate change policy. The NPS-REG was created with the increasing expectation from both the Government and the public that New Zealand needs to make a transition to a low-carbon economy (see section 1.3.4). The NPS-REG was introduced to facilitate this transition, by providing national direction on planning and consenting for REG activities.

In the years leading up to the introduction of the NPS-REG, New Zealand made international commitments to reduce emissions. In 1992, New Zealand joined the United Nations Framework Convention on Climate Change, which provides a framework for international cooperation to combat climate change. Since adopting the Kyoto Protocol in 1997, the Government has also set emission reduction targets. New Zealand became a signatory to the Paris Agreement on 22 April 2016.

A range of domestic measures were introduced to support New Zealand's international climate change commitments. In 2004, section 7 (Part 2) of the RMA was amended to add "the effects of climate change" and "the benefits to be derived from the use and development of renewable energy" as matters that RMA decision-makers must "have particular regard to". In 2008, the Government introduced the New Zealand Emissions Trading Scheme (ETS), which aims to provide a price incentive to reduce emissions.

Since the introduction of the NPS-REG in 2011, New Zealand's climate change policy has continued to facilitate our transition to a low-carbon economy, and a majority of New Zealanders have remained concerned about climate change.¹⁸ In 2015, the Government announced its provisional target to reduce New Zealand's emissions by 30 per cent from 2005 levels by 2030, and the ETS is currently under review.¹⁹

2.3 Energy sector developments

2.3.1 REG continues to be cost-effective in New Zealand

Globally, there is a clear trend that renewable power generation is becoming cheaper over time. For example, wind turbine prices declined by almost a third between 2009 and 2014.²⁰ On the other hand, there are uncertainties in the long-term trends for prices of non-renewables, even though coal and oil prices have been falling because of slowing growth in emerging markets and rising supply, and gas prices have been stable since 2011.

In New Zealand, the abundance of available renewable resources (mainly water, wind and geothermal) means that renewables have generally favourable economics relative to traditional thermal options (gas and coal). The relatively low cost of renewables and the availability of resource is one of the main factors in the high share of renewables in New

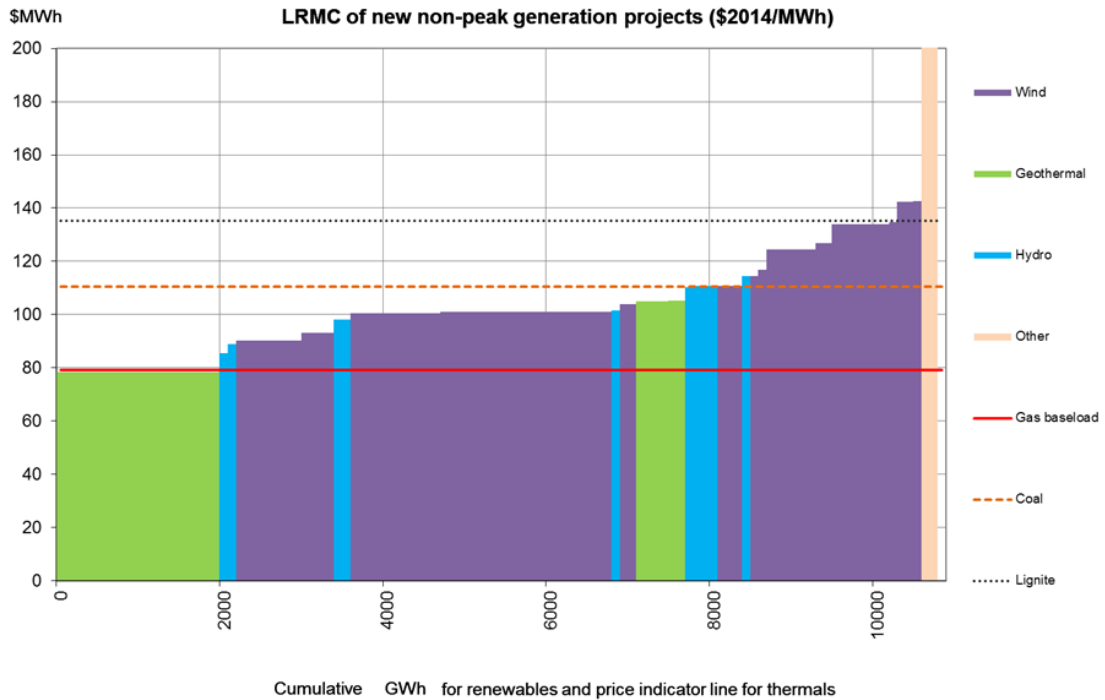
¹⁸ Relevant surveys include *New Zealanders' Climate Change Actions and Attitudes* (Horizon Research, 2014), and *New Zealanders' attitudes to climate change*, national climate change survey of 2851 New Zealanders (New Zealand Business Council for Sustainable Development, 2009).

¹⁹ For more information on New Zealand's emissions reduction targets, see web page, www.mfe.govt.nz/climate-change/international-forums-and-agreements/united-nations-framework-convention-climate. For more information on the Review of ETS, see web page, www.mfe.govt.nz/climate-change/reducing-greenhouse-gas-emissions/new-zealand-emissions-trading-scheme/about-nz-ets

²⁰ IRENA, 2014.

Zealand. In MBIE’s base case scenario for electricity and demand, geothermal is the cheapest new generation option, with some small hydro and wind not far behind.²¹ Figure 2 illustrates this with the long run marginal cost (LRMC) for consented REG projects based on current fuel and carbon cost assumptions.

Figure 2: Long-run marginal costs for new non-peak generation projects



Source: Data compiled by MBIE’s Energy and Building Trends team

Hydro

Hydro generation continues to be important for New Zealand, but major growth in hydro generation is not expected, due to a combination of the relatively high capital cost of major hydro development and increasing competing pressures on the use and allocation of freshwater resources.

Hydroelectricity output can vary year-to-year, due to hydrological variations in the South Island catchments and because of limited lake storage capacity. For example, the share of electricity generation that is hydro ranged from 65 per cent in 2004, to 53 per cent in 2012 and 57 per cent in 2014,²² despite hydro generation capacity being relatively constant

Variability in hydro generation has traditionally been softened by the use of more flexible sources of power, mainly gas-fired plants and, to a smaller extent, coal. In 2015, two gas-fired thermal stations closed (Southdown 140 MW and Otahuhu B 400 MW), and the coal/gas-fired thermal station (Huntly 500 MW) may close in 2022. The main driver for closure of these plants is displacement by cheaper geothermal generation, which does not suffer from the same fluctuations as hydro generation.

²¹ Ministry of Business, Innovation and Employment, 2015a.

²² Ministry of Business, Innovation and Employment, 2015b.

Geothermal

Geothermal generation has been increasing since the introduction of the NPS-REG, with its share of total electricity generation growing from 13 per cent in 2011 to 16 per cent.²³ In all of the supply scenarios modelled, the share of total electricity generation that is geothermal increases to 21–28 per cent in 2040.²⁴ It is expected that geothermal generation will have a bigger role in providing flexibility to offset variations in hydroelectricity output.

Solar

Solar generation is increasing, and between September 2013 and January 2016 solar generation capacity grew from 5 MW to 34 MW, and residential solar connections from about 1,400 to more than 8,300.²⁵ The proportion of electricity generation that is solar, however, is still well below 1 per cent.

Unlike geothermal energy, solar energy does not improve flexibility to offset variation in New Zealand's hydroelectricity output. This is because solar photovoltaic (PV) systems generate less electricity in winter, when electricity demand is much higher in New Zealand, as well as at times of the day that do not match peaks in electricity demand.²⁶ Some analysis suggests it is possible that in the long term the increase in the uptake of solar PV systems may even modestly increase the need for fossil-fuelled generation.

Wind

Wind generation is also expected to increase. New Zealand still has a number of excellent wind sites available with high potential load factors by international standards. The timing of new investments in wind, however, is affected by variables like the international price of wind turbines and the purchasing power of the New Zealand dollar.

2.3.2 Uncertainty in electricity demand

The Rio Tinto aluminium smelter in Invercargill makes up approximately 13 per cent of New Zealand's electricity demand.²⁷ From 1 January 2017, the smelter will have an option to terminate its contracts with Meridian Energy with one year's notice. While there is no indication to date that the smelter intends to exercise this option, continued low prices for aluminium in the world commodity markets adds to the uncertainty over the smelter's long-term future. Should the smelter leave New Zealand, it will free up around 500 MW of hydro generation for sale into the electricity market at short notice, creating implications for generators' appetite for large-scale investment in new generation capacity.

²³ Ministry of Business, Innovation and Employment, 2015b.

²⁴ Ministry of Business, Innovation and Employment, 2015a.

²⁵ Electricity Authority, 2016a.

²⁶ Concept Consulting Group, 2016.

²⁷ Ministry of Business, Innovation and Employment, 2015c.

3 Evaluation method

The evaluation was undertaken in three phases:²⁸

Phase 1: Stakeholder feedback In October 2015, stakeholders were invited via email to provide feedback on how the National Policy Statement for Renewable Electricity Generation (NPS-REG) has been working. An open invitation to participate was also posted on Ministry for the Environment’s website.

The invitation to provide feedback was structured to focus on the key evaluation questions.

Responses were gathered during October to December 2015. Data gathered through stakeholder feedback was analysed to identify key themes.

Appendix 2 provides the list of stakeholders contacted, and respondents.

Phase 2: Stakeholder interviews To gain a more in-depth understanding of the themes identified through the Phase 1 stakeholder feedback, staff from the Ministry for the Environment and MBIE invited Phase 1 respondents to interviews, to expand on their written feedback.

Interviews were held over the period October 2015 to January 2016. The interviews were informal, with interviewees encouraged to expand on their written feedback. Ministry staff provided focus questions to test the key themes from Phase 1, and to elicit evidence to test these themes.

Data gathered through interviews was analysed to identify, expand on, and support key themes.

Phase 3: Review of plans and consents Consultants were contracted by the Ministry for the Environment to review sampled council plans and renewable electricity generation (REG) projects, to better understand:

- the timeframes and overall progress of councils to implement the NPS-REG
- how regional policy statements, regional plans and district plans have “given effect to” the NPS-REG, the different approaches taken, and the level of consistency or variation
- the impact of the NPS-REG and REG plan provisions on plan users.

The review was done in four stages:

- 1 Desktop assessment of how the NPS-REG is being given effect in sampled regional policy statements, regional plans and district plans (five regional councils, one unitary council and 20 territorial authorities). See Appendix 2 for the sampled councils.

²⁸ Phases 1–3 also collected information for the evaluation of the National Policy Statement on Electricity Transmission (NPS-ET) and the National Environmental Standard for Electricity Transmission Activities (NES-ETA). Phase 3 also collected information to inform a study of the compatibility of national direction tools with the proposed National Planning Template.

- 2 Review and comparison of four sample REG consents (two before and two after the NPS-REG coming into effect) to ascertain whether the introduction of the NPS-REG has had any material influence on the consenting process, including costs, information requirements, and the final consent decision. See Appendix 2 for the sampled consents.
- 3 Feedback from the sampled councils via email questionnaires and phone conversations to better understand the challenges, barriers and costs of implementing the NPS-REG.
- 4 Interviews with sampled consent applicants to better understand their experience of the consenting process both before and after the introduction of the NPS-REG.

3.1 Strengths and limitations of the evaluation method

3.1.1 Engagement

There was a high response rate from stakeholders who are directly impacted by the NPS-REG (such as the electricity generators and the wider electricity industry) during all three phases. These stakeholders were able to provide substantial information on how the NPS-REG is operating. This information was helpful in informing and helping to guide the assessment.

Councils sampled during Phase 3 responded well with information to supplement the desktop research, although there was a low response rate from councils during Phase 1. This low response rate was likely due to the NPS-REG being perceived as low priority relative to other current resource management issues.

Other stakeholders that are generally not directly affected by this NPS-REG (predominantly non-electricity industry stakeholders, including non-government organisations (NGOs) and private landowners) did not respond to opportunities to be involved in the evaluation, so this report may not adequately reflect their perspectives.

3.1.2 Plan and consent assessment

Phase 3 was conducted by consultants under contract to the Ministry for the Environment. The number of councils and consents reviewed was constrained by available budget, but the sample of councils used is considered to provide a reasonably representative sample of the 78 councils in terms of type, size and geographic location. The consents reviewed during Phase 3 were selected for their geographical diversity and were from four separate applicants. These consents were for large-scale REG projects, to better assess projects that are more likely to have a large impact on the local environment. As a result, this report does not provide an in-depth analysis of consents for small- or community-scale REG projects, or renewals of consents for existing REG activities.

3.1.3 Attribution of NPS-REG to anticipated outcomes

This evaluation assesses progress towards achieving the elements of the objective statement that can be directly attributed to the NPS-REG.

The NPS-REG and associated policy documents also outline anticipated outcomes that cannot be directly attributed to the NPS-REG. This proves problematic when measuring the effectiveness of the NPS-REG in achieving anticipated outcomes. For instance, the NPS-REG objective's link into increasing the proportion of New Zealand's electricity generated from renewable sources proves problematic to measure, as the NPS-REG is only one of many factors influencing this outcome. The NPS-REG can only influence planning and consenting decisions, while the remainder of the decisions to construct new (or decommission) electricity infrastructure are market driven.

4 Findings

4.1 Impact on regional policy statements, regional plans and district plans

4.1.1 Policy and plan-making requirements for councils to implement a national policy statement (NPS)

Section 55 of the Resource Management Act 1991 (RMA) requires local authorities to make amendments to the following, to give effect to any provision in a national policy statement (NPS) that affects those documents:

- regional policy statements (including proposed regional policy statements)
- regional plans (including proposed regional plans and regional plan variations)
- district plans (including proposed district plans and district plan variations).

This requires local authorities to review any planning tools under their control and, where required, make any necessary amendments. The National Policy Statement on Renewable Electricity Generation (NPS-REG) provided a staged transition period for local authorities to prepare and notify the requisite policy or plan changes.²⁹

- 1 by 13 May 2013:
 - a. regional councils were required to publicly notify relevant changes to existing or proposed regional policy statements, unless they considered their regional policy statement already gave effect to the NPS-REG.
 - b. where a change or variation to the relevant regional policy statement was not required, local authorities were required to publicly notify a plan change or variation to give effect to the NPS-REG in their regional and district plan/s.
- 2 within 12 months of the relevant amended regional policy statement becoming operative:
 - a. local authorities are required to publicly notify a plan change or variation to give effect to the NPS-REG in their regional or district plan/s.³⁰

The obligation to “give effect to” the NPS-REG doesn’t allow any discretion to be exercised about whether it is implemented or not; it requires that all steps necessary to implement the NPS be taken. The obligation may need to be balanced against a local authority’s other mandatory obligations, such as giving effect to other national policy statements, or recognising and providing for matters of national importance under section 6 of the RMA.

For decision-making on regional policy statements and plans, the NPS-REG policies fall into two distinct groups.

²⁹ Policies H1 and H2 of the NPS-REG.

³⁰ A plan change is when a council changes an existing plan that is already being used (an ‘operative’ plan). A plan variation is when a council changes a plan that is still in the ‘proposed stage’ and has yet to be finalised. A proposed plan, plan change or variation is a document that has been issued by the council and ‘proposed’ as the council’s official position. To be legally proposed, a document must be publicly notified so people can make submissions.

- Policies E, F and G provide clear direction on specific matters that are required to be included in policy statements and plans. Policies E1–4 and F are qualified by “to the extent applicable to the region or district”, however. Local authorities need to actively evaluate the relevance of these policies to their jurisdictions and ensure that appropriate objectives, policies and methods (including rules) are included in policy statements and relevant plans that substantially address the matters in these policies.
- Policies A, B, C and D are more generic in nature, and apply to decision-makers in a broader sense. Local authorities need to actively evaluate whether their relevant policies and plans give effect to Policies A, B, C and D, and make any amendments necessary to implement them.

4.1.2 Implementation not yet completed due to staged timeframe requirements

The majority of the councils reviewed have made progress implementing the NPS-REG. Sixteen of the 25 councils in the sample had either fully or partially given effect to the NPS-REG. Councils are generally using full plan reviews to give effect to the NPS-REG, with only one of the reviewed councils initiating a specific plan change to give effect to the NPS-REG. Where no plan change has been initiated to give effect to the NPS-REG, the council either considers that their plan already gives effect to the policy statement (or at least does not prevent its objectives from being achieved, or plan provisions are not inconsistent with the NPS-REG), or they are waiting for a wider plan change to be initiated.

Not all of the regional policy statements were operative at time of evaluation, even though they may have been notified within required timeframes. The subsequent period for consultation and decisions (maximum two years) that follows notification may mean that some regional policy statements might not have become operative until May 2015. This date can also be delayed by a subsequent appeals process. Consequently, at the time of research for this evaluation, some district and regional plans are not yet required to have given effect to the NPS-REG. This means that REG projects are being consented under planning regimes that have not yet been amended to implement the NPS-REG.

4.1.3 Full plan review timeframes are primary driver for implementation timeframes

The timeframes for implementation set out in the NPS-REG (outlined above) generally do not appear to be the primary driver to give effect to the NPS-REG. Rather, the timing for implementation seems to be pragmatic, related to where a council is at with its plan review,³¹ with a general trend to incorporate the NPS requirements as part of a wider plan review where possible.

Most councils indicated that there were efficiencies gained through incorporating their obligation to give effect to national tools (including the NPS-REG) as part of a wider plan review. A full plan review process is generally more efficient, as costs such as notification, administration, publications etc can be shared across a range of issues.

³¹ The RMA requires councils to review their regional policy statements and regional and district plans at least every 10 years.

It is very difficult for councils to separate out costs associated with the implementation of specific national tools, however, particularly when this was undertaken as part of a wider plan review. Cost, time and effort to give effect to the NPS-REG in a regional policy statement, regional plan or district plan is generally dependent on:

- full plan review versus a specific plan change (ie, there are considerable efficiencies as part of wider plan review)
- regional issues (ie, competing pressures on renewable electricity generation resources) and how actively councils seek to identify and enable development and use of REG resources
- level of submitter interest or contention (ie, lower costs when able to reach agreement with key submitters early in process, whereas higher costs where mediation required)
- shared approach across multiple councils (ie, cost-sharing with additional benefit of promoting greater consistency across the region).

4.1.4 Regional policy statements and regional plans not giving full effect to the NPS-REG

Of the five sampled regional authorities (four of 11 regional councils and one of six unitary authorities), only two regional policy statements and two regional plans have sought to give effect to the NPS-REG. None of these councils appear to have given full effect to all NPS-REG objectives and policies in their regional policy statements or regional plans.

The sample showed the most common NPS-REG policy to be given effect to is Policy A (recognising benefits of REG activities). Policy A is the most directive of the NPS-REG policies – the only one requiring decision-makers to “have particular regard to and provide for”, without being qualified by “to the extent applicable” or “to the extent reasonably possible”.

The most common policies that appear to be absent were policies C2 (offsetting and compensation) and D (reverse sensitivity). As expected, policies E1–E4 (specific REG activity provisions) were varied in their implementation, likely reflecting the regional variation of applicable REG resources.

4.1.5 District plans show no common approach to implementation

Within the sampled district plans, there is no common or dominant approach to how new objectives, policies and rules are implemented to give effect to the NPS-REG.

Provisions no more specific than the NPS-REG

The most common approach to creating plan provisions to give effect to the NPS-REG is for councils to translate the general principles of the NPS-REG objectives and policies into specific REG provisions. These REG-specific provisions usually mirror the concepts outlined in the NPS-REG, without providing any greater specificity. Approaches are varied across plans, however, with a small number of councils using generic utility provisions to give effect to the NPS-REG.

In relation to resource specific provisions in policies E1–E4 (eg, tidal, wave, wind or geothermal), where a type of resource is not available or is limited within their district, councils generally excluded this type of generation from their provisions.

Provisions more restrictive for larger-scale REG projects

The majority of the district plans reviewed that have implemented the NPS-REG show objectives and policies that are reasonably enabling for REG projects. The permissiveness of the supporting rules (or activity class), however, generally differs depending on the size of the REG projects. Most district plans were only enabling of small/community scale generation activities, usually under 20MW of output.

Larger-scale projects, which are more likely to make a significant contribution to the national REG target, may also have larger potential adverse environmental effects. A council is unlikely to have enough information to explicitly enable this scale of project without an application before it. More restrictive plan provisions allow councils to take more comprehensive assessment through the resource consent application process when information is available.

Plan form and structure are primary drivers for NPS-REG provision locations

The initial form and structure that councils have adopted for their plans (ie, zone-based provisions versus effects-based provisions, or whether there was already a separate network utilities chapter, etc) has been more influential in determining how REG activities are incorporated into plans than the NPS-REG and associated guidance. Consequently, the reviewed councils' approaches to inserting NPS-REG provisions into their plans are varied, but can be generally grouped into four styles:

- all REG provisions (generic or specific) spread out across multiple chapters, with no consolidated section to look at most of the provisions (40 per cent)
- all REG provisions grouped into the network utilities chapter (25 per cent)
- combination of consolidated and dispersed locations, with most REG provisions found in a single location (25 per cent)
- all REG provisions grouped into a separate REG chapter (10 per cent).

4.2 Impact on resource consent decision-making

4.2.1 Requirements for resource consent decision-making

Decision-makers are required to “have regard” to the provisions of the NPS-REG when processing and/or determining resource consent applications.³² The requirements for decisions on designations, heritage orders and water conservation orders are also impacted.³³ This obligation may arise in relation to approvals for REG activities, or in relation to approvals for other activities that potentially affect existing or consented REG activities.

The obligation to “have regard to” relevant provisions of the NPS-REG took effect from the date the NPS-REG became operative (13 May 2011).

To “have regard to” is a standard that has been defined by resource management case law. Under current case law, this means a local authority must give genuine attention and thought to the relevant matters identified in the NPS, and must decide what weight they are to be given in the particular circumstances. The weight to be given to them is not predetermined in

³² Refer section 104(1)(b) of the RMA.

³³ Refer sections 191(1)(d), 171(1)(a)(i) and 207(c) of the RMA.

relation to other matters that a local authority is also obliged to “have regard to”, nor does it lessen the obligation of a local authority to apply the provisions of Part 2 of the RMA.³⁴

The provisions of the NPS-REG that are of particular relevance to resource consent applications are the Objective, and Policies A, B, C and D.

4.2.2 Resource consent decisions more influenced by effects of REG activity

The NPS-REG alone does not appear to have a significant impact on the way final decisions on the sampled REG consents are made. Some of the matters covered by the NPS-REG were already included as matters that decision-makers shall “have particular regard” to under the RMA,³⁵ so were already being given due weight by decision-makers prior to the NPS-REG.³⁶

The main change perceived by generators is the elevation of the potential benefits of REG projects to a matter of national significance to be “recognised and provided for” (NPS-REG Policy A), as opposed to a matter to which “particular regard” must be had. Generators consider that REG benefits are now considered more like a section 6 matter than a section 7 matter in decision-making (see Appendix 4 for RMA sections 6 and 7).

Generators consider that final decisions on REG projects are still made on the same points that they were before the introduction of the NPS-REG; namely, the balancing of positive and adverse effects at a national and local level, and the degree to which significant effects can be adequately mitigated. Key areas of contention (eg, noise and visual effects) do not appear to be handled differently as a result of the NPS-REG. The continued introduction into district and regional plans of more REG-specific objectives and policies may have more of an impact on REG project decision-making in the future.

The flat electricity demand in recent years has likely had an influence on the degree to which the NPS-REG has influenced decision-making on REG projects. Some generators consider that without a tangible risk of electricity shortage, or scarcity of alternative generation options, it is harder to argue that REG projects’ contribution to New Zealand’s electricity need and security of supply is truly a matter of national significance. This may mean that the NPS-REG could have more of an impact on decision-making in a context where the electricity supply is at risk.

4.2.3 No noticeable impact on resource consent application time, costs or processing methods

The NPS-REG provisions focus on matters to be considered in consenting, rather than the consenting process. The NPS-REG was not intended to change any processes for resource consent assessment, nor change the need for an application’s comprehensiveness, consultation or assessment of environmental effects.

³⁴ Quality Planning, no date.

³⁵ “The effects of climate change” and “the benefits to be derived from the use and development of renewable energy” under section 7(i) and (j) of the RMA, considered as part of overall section 104 assessment.

³⁶ Through resource consent application assessments under section 104 of the RMA.

The findings of the desktop review of four large REG consents, and the supporting applicants' interviews, indicated that the NPS-REG does not appear to have had a major impact on the consent requirements for REG projects in terms of timeframes, activity status, numbers and reasons for consent, amount of work required to prepare consent applications, or the need for notification.

Time and cost

The individual nature of most REG consents and the limited number of new major consents means it is very difficult to compare the average time and cost of one REG consent to another. For example, the time and cost to obtain consents for a large REG project is significantly influenced by the scale and degree of adverse effects on the environment. As a result there is insufficient information to draw a conclusion on time and cost factors before and after the implementation of the NPS-REG.

Information requirements

Generators consider that following the implementation of the NPS-REG into plans, applications still need to provide the same amount of information, engage similar specialists, and they still need to put the same amount of time and effort into preparing the consent application package as they did pre-NPS-REG. For example, large scale projects would still be fully notified and, as such, the consent processing costs and timeframes would likely be similar. Generators anticipate that consenting timeframes and costs for future projects would increase as the bar is constantly being raised as to what level of information is required to satisfy decision-makers, as renewable electricity resources are increasingly under pressure.

The complex nature of large scale REG projects, and the significant effects that often arise, means that most projects are still going to prove challenging to consent, regardless of any policy changes filtering down to regional and district plan level from the NPS-REG. A permitted or controlled activity status is unlikely to ever be appropriate for these sorts of activities. This is consistent with the finding that REG provisions introduced into district and regional plans are often enabling at the policy level, but less enabling at the rule level (see section 4.1).

Consent assessment process

There does not appear to be a correlation between the introduction of the NPS-REG and the method by which REG projects are processed (either by the EPA, directly referred to the Environment Court, or processed at the council level). The process used seems to depend more on the scale of the project and its potential to be contentious, with the least contentious projects being processed at the council level. The review of sample consents showed that pre-NPS-REG projects already used arguments based on the national significance of the project to meeting REG targets as justification for using the EPA and direct referral processes.

Generators also consider, however, that the NPS-REG has helped with persuading councils to use fast-track consenting processes to reduce processing timeframes (ie, the Environmental Protection Authority or direct referral process) on the basis that REG projects are of national significance. They note that conversations regarding the importance of new REG projects have been easier, as the NPS-REG provides clear national policy guidance on the issue.

The 2013 RMA amendments to streamline consenting processes and provide for applications to go straight to a Board of Inquiry or the Environment Court are likely to have increased the efficiency of the consenting process more than the NPS-REG.

4.2.4 Generators consider third-party effects on consented REG projects are not adequately addressed

Policy D of the NPS-REG directs decision-makers “to the extent reasonably possible, manage third-party activities to avoid reverse sensitivity effects on consented and on existing renewable electricity generation activities”. These effects may arise where new sensitive activities are introduced into an existing environment (eg, locating residential development in the vicinity of an existing or consented windfarm). Generators remain concerned, however, about how effective the NPS-REG is at protecting both existing and un-built consented REG assets from reverse sensitivity effects. The NPS-REG is considered by industry as most useful as a tool in the development of plan provisions to manage reverse sensitivity, rather than actively managing other activities during a consenting process.

The industry also considers that reverse sensitivity consideration is not addressing other effects that indirectly compromise the viability of REG; that is, land development potentially affecting access, water allocation or electricity network (note that electricity transmission is covered by the NPS for Electricity Transmission (NPS-ET),³⁷ but distribution is not provided for).

There have been situations where the local benefits of a project adjacent to a REG activity appear to be given more weight than the reverse sensitivity risks to the existing REG asset. In one case, the decision-makers decided that the local benefits of tourism activities outweighed the risks to the ongoing viability of the REG activity.³⁸

Industry considers that there is little or no regard to addressing reverse sensitivity on consented (but as yet un-built) REG projects. This may be due to case law on reverse sensitivity generally only applying to the built environment. The NPS-REG appears to extend standard application of the reverse sensitivity concept under the RMA to these consented un-built REG activities, but this does not appear to be well implemented by councils.

4.2.5 Minimal increase in relative certainty

The NPS-REG has increased the likelihood of positive outcomes for REG activities in situations where there is no other interacting national policy direction and where no other RMA section 6 or 7 (Part 2) matters apply (or where they only apply to a minor extent).

Despite the duty in the RMA to “avoid, remedy or mitigate” adverse environmental effects, and in situations where there are interacting national direction policies or RMA section 6 and 7 (Part 2) matters, there remains a degree of uncertainty.

Some generators consider that there has been no noticeable increase in certainty for applicants, decision-makers or the community, due to the inconsistent approach between planning documents across the country. Generators also note that they have not experienced any major changes or shifts in perspective towards REG activities from the councils as a result of the NPS-REG.

³⁷ The effectiveness of the NPS-ET is to also be evaluated in 2016.

³⁸ Contact Energy gave the example of an upmarket hotel development (on the Wairakei International Golf course) being proposed within 100 metres of the drill cap for one of their geothermal projects. Consent was approved despite objections from Contact Energy, based on the fact that they cannot reduce/properly attenuate noise effects from the drill cap and that reverse sensitivity effects are likely (ie, complaints from the hotel about the existing drilling noise).

4.2.6 Challenges and barriers to giving effect to the NPS-REG in RMA decision-making

Challenges and barriers to giving effect to the NPS-REG, identified by councils and the electricity industry, are listed below. See Appendix 5 for further detail on these.

Identified by councils

Challenges and barriers identified by councils include:

- lack of detailed direction and guidance, making development of REG customised provisions more complicated than some consider it should be
- the complexities in balancing and resolving interactions between the NPS-REG, other NPSs and other competing RMA Part 2 matters at a local level
- the nature and extent of the REG resources and pressures that need to be assessed and balanced in a district/region before REG provisions can be implemented are delaying implementation timeframes
- territorial authorities are required to wait for the regional policy statement to give effect to the NPS-REG, and some councils are concerned that their regional policy statement does not adequately reflect the NPS-REG.

Electricity industry

Challenges and barriers identified by the electricity industry include:

- considerable industry resource is required to input into regional and district planning documents, to ensure the NPS-REG is “given effect to” in a satisfactory way
- the high degree of variation of REG planning provisions, both between and within regions, is not improving national consistency or certainty
- the degree to which plans address the interaction between the NPS-REG and other NPSs, and variation in this, particularly in balancing directive policies with non-directive policies
- competing pressures on freshwater resources reducing certainty of future hydro generation capacity
- the NPS-REG Preamble statement regarding water allocation is perceived as reducing applicability of NPS-REG to hydro schemes
- continued challenge by councils, submitters and decision-makers of windfarm adverse effects (ie, noise) that are covered by a New Zealand Standard
- insufficient recognition of the importance of, and need to connect REG to, distribution networks
- local politics and opinions overriding national direction in local decision-making
- non-renewable back-up generation for REG is not recognised in the NPS-REG.

4.3 Is the NPS-REG achieving its objective?

The objective of the NPS-REG is:

“To recognise the national significance of renewable electricity generation activities providing for the development, operation, maintenance and upgrading of new and existing renewable

electricity generation activities, such that the proportion of New Zealand’s electricity generated from renewable energy sources increases to a level that meets or exceeds the New Zealand Government’s national target for renewable electricity generation.”

The NPS-REG covers the following matters of national significance:

- the need to develop, operate, maintain and upgrade renewable electricity generation activities throughout New Zealand
- the benefits of renewable electricity generation.

In light of these statements in the NPS-REG, the following questions were examined to assess the extent to which the NPS-REG is achieving its objective:

- How successful has the NPS-REG been in recognising and providing for the need to develop, operate, maintain and upgrade REG activities throughout New Zealand?
- How successful has the NPS-REG been in recognising and providing for the benefits of renewable electricity generation?
- How successful has the NPS-REG been in increasing the proportion of New Zealand’s electricity generated from renewable energy sources to a level that meets or exceeds the Government’s national target for renewable electricity generation?

4.3.1 No significant impact on recognising and providing for the need to develop, operate, maintain and upgrade renewable electricity generation activities

In theory, the NPS-REG should improve the likelihood of positive outcomes for resource consent applications for REG activities, particularly where no conflicting national policy direction and no competing section 6 (Part 2) RMA “matters of national importance” apply.

As discussed in section 4.1, however, from the sample consents reviewed and interviews with generators, the NPS-REG does not appear to have resulted in noticeably more certainty for resource consent applicants for REG projects. The NPS-REG has not resulted in nationally consistent approaches to the drafting of regional and district plans, nor does it have any significant impact on the time and costs associated with obtaining resource consents for renewable electricity generation projects. The NPS-REG also does not appear to have any significant impact on the way final consent decisions on REG projects are made.

Possible reasons for this limited impact of the NPS-REG on REG projects include:

- The lag time between the NPS-REG coming into effect and the introduction of REG-specific provisions into regional and district plans does mean that post-NPS-REG REG resource consents were probably processed under pre-NPS-REG plan provisions, so the NPS-REG has only had an influence on the final decision-making, not the entire consent process.
- Growth in electricity demand has plateaued since about 2007, which has slowed the development of new generation projects and affected the way the generators have interacted with the NPS-REG. Instead of the NPS-REG being tested on a wide range of new REG projects over the last five years, the NPS-REG has primarily been applied to consent renewal applications.
- The NPS-REG does not contain strong direction for councils on how to provide for REG in policies and plans. The resulting plan rules, if they have been implemented, are variable in detail and potentially variable in any additional impact to pre-NPS-REG plan provisions.

4.3.2 NPS-REG contribution to recognising and providing for the benefits of renewable electricity generation unclear

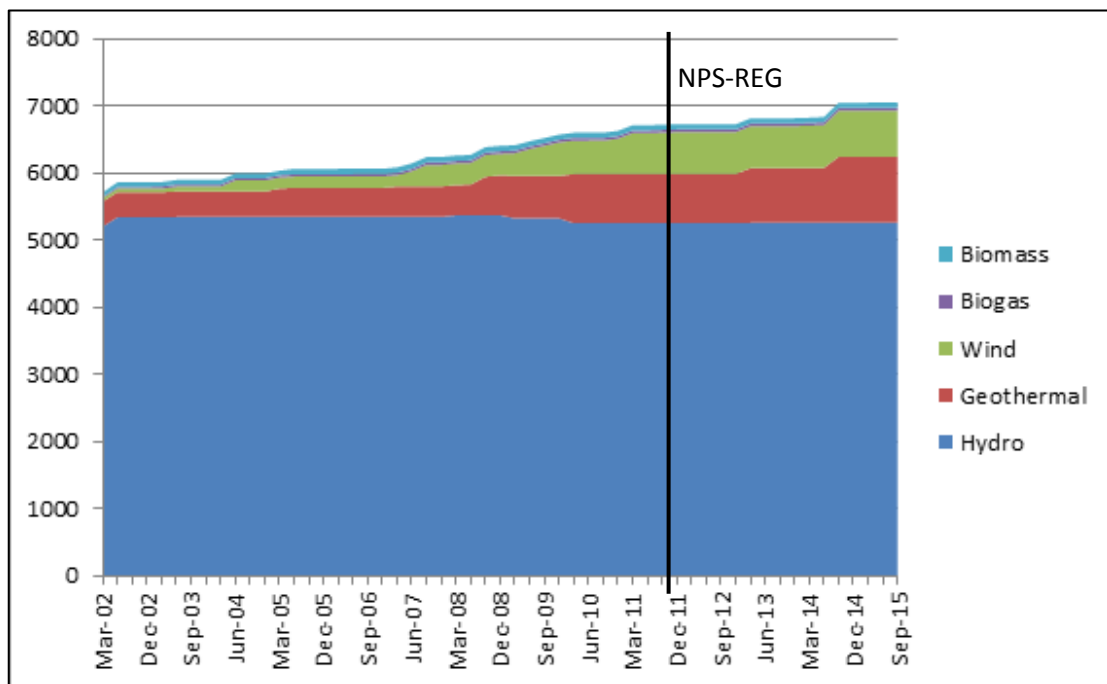
The key benefits, as identified in Policy A of the NPS-REG, include but are not limited to maintaining or increasing:

- electricity generation capacity while mitigating greenhouse gas emissions
- security of electricity supply by diversifying the type or location of electricity generation sources.

Renewable electricity generation capacity increasing

Since the introduction of the NPS-REG there has not been a significant increase in total electricity generation capacity in New Zealand. REG capacity has increased by 5 per cent between the June 2011 quarter and the June 2015 quarter, however, compared with an increase of 9.3 per cent between the June 2007 quarter and June 2011 quarter (Figure 3).³⁹

Figure 3: Total renewable electricity capacity per generation type 2002–15



Source: Data compiled by MBIE’s Energy and Building Trends team

While renewable electricity capacity has been increasing since the introduction of the NPS-REG, the NPS-REG is only one of many factors influencing the REG activities. Other factors include:

- New Zealand’s relative abundance of available renewable resource (mainly wind and geothermal)
- generally favourable economics relative to traditional thermal options (gas and coal) in New Zealand,⁴⁰ and related to this, electricity generators’ commercial decision to close thermal plants (discussed in section 2.3.1)

³⁹ Ministry of Business, Innovation and Employment, 2015b.

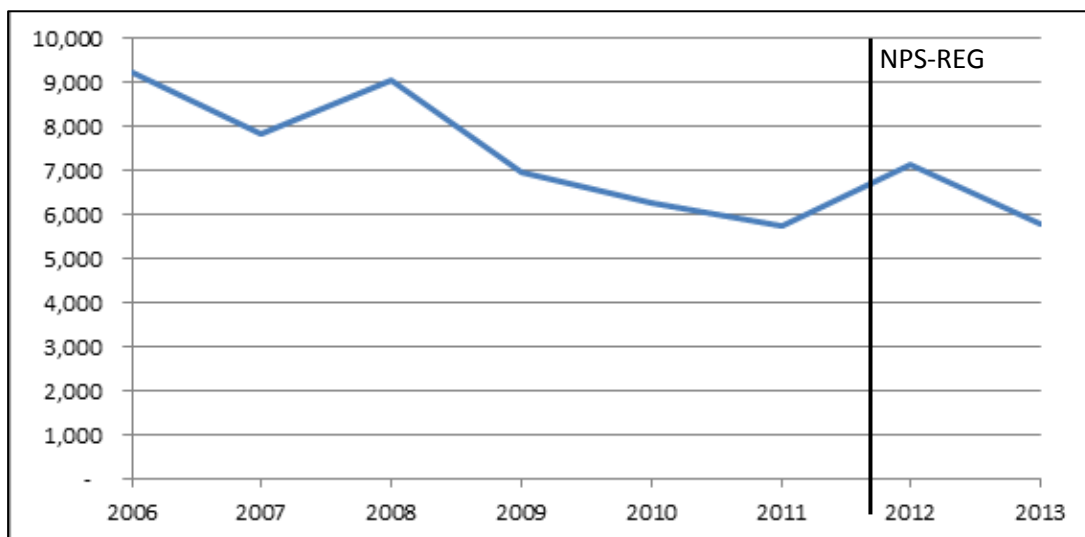
⁴⁰ Ministry of Business, Innovation and Employment, 2015a.

- other policies, such as the New Zealand Emissions Trading Scheme (discussed in section 2.2).

NPS-REG impact on emissions from electricity generation unclear

It is difficult to evaluate the NPS-REG’s impact on emissions from electricity generation. Data on actual emissions from electricity generation is only available to the year 2013. In 2011 and 2013, emissions from electricity generation was just below 5800 kt CO₂-e. In 2012, there was a jump in emissions from the sector, which was primarily due to low hydro inflows (Figure 4).

Figure 4: Emissions from electricity generation (kt CO₂-e) 2006–13



Source: Data compiled by MBIE’s Energy and Building Trends team

NPS-REG has limited role managing risks to security of supply

Since 2011, the level of risk to the security of electricity supply in New Zealand has remained largely benign, with market participants effectively managing actual and potential generation closures.

As discussed in section 4.1, the NPS-REG has not resulted in a nationally consistent approach to REG provisions in regional and district planning documents, nor has it had any major impact on the consent requirements for REG projects.

One of the key comments from electricity generators is that the NPS-REG is not directive enough to provide improved certainty for renewal of consents for existing REG projects, particularly for hydro projects. Generators are facing arguments that existing hydro schemes should not be considered as part of the existing environment for re-consenting purposes. Such arguments would require generators to approach re-consenting as though the scheme did not exist.

Generators consider that this issue, combined with regular changes to water allocation regimes every 10 years, is a potential risk to security of electricity supply. The NPS-REG is not intended to guarantee that all existing REG schemes will be re-consented automatically, however.

While substantial new electricity generation capacity (well over 3,000 MW) has already been consented, which is sufficient to cover projected baseload⁴¹ growth of 1.1 per cent per annum for over 15 years, there has been little activity in obtaining resource consents for new major electricity generation projects since 2013. The Ngawha geothermal plant expansion (50 MW) is the only major project to gain consent over this period. Table 1 shows the capacity of current consented but unbuilt electricity generation projects (measured in MW) by generation technology.

Table 1: Capacity of current consented unbuilt electricity generation projects (MW)

Electricity generation technology	Consented capacity (MW)	Applied for consent (MW)	Consent under appeal (MW)	Under construction (MW)
Diesel	23	0	0	0
Gas	100	0	0	0
Geothermal	320	35	0	0
Hydro	251	255	7	0
Marine	200	0	0	0
Wind	2537	0	0	0
TOTAL	3431	290	7	0

Source: Electricity Authority (2016b)

As resource consents lapse over time, generators may still need to apply for resource consents for REG projects in the near future. The decision to actually construct new generation capacity ultimately lies with the generators. The Government, the Electricity Authority and Transpower will continue to monitor the risks associated with security of electricity supply, and work with generators to manage these risks.

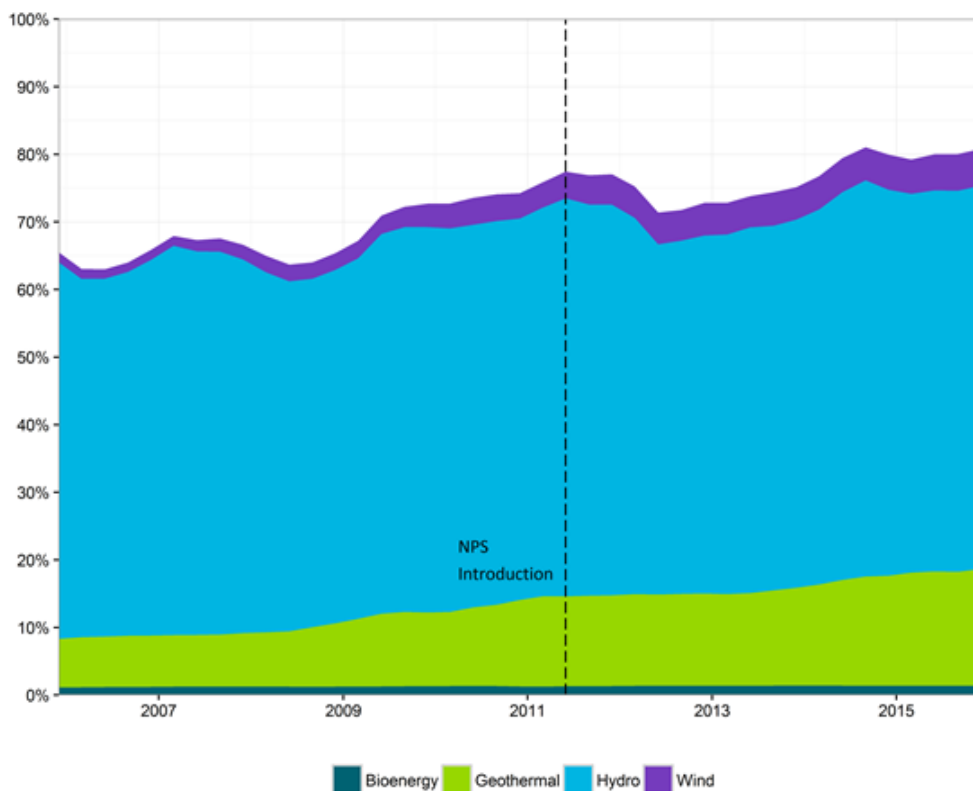
4.3.3 Progress towards REG national target cannot be clearly attributed to the NPS-REG

The New Zealand Energy Strategy specified the target of 90 per cent of electricity generation to be from renewable sources by 2025 (in an average hydrological year), providing this does not affect security of supply.

Since the introduction of the NPS-REG in 2011, there has been progress towards this target. Renewable energy contributed 80.7 per cent of New Zealand's electricity generation in the 2015 calendar year. This is the highest contribution from renewables since 1995.

⁴¹ Baseload is the minimum level of demand on an electrical supply system over 24 hours.

Figure 5: Percentage of New Zealand electricity generation from renewable resources 2007–16



Source: Ministry of Business, Innovation and Employment (2016b)

While the share of renewable electricity generation has continued to increase since the introduction of the NPS-REG in 2011, a wide range of other factors influence REG activities (as discussed in section 4.3.2). These all influence whether the 90 per cent renewable electricity generation target can be achieved by 2025. Therefore it would not be appropriate to attribute New Zealand’s progress towards the 90 per cent renewable electricity generation target to the NPS-REG itself.

New Zealand’s natural advantage in renewable resources, and costs of REG technologies relative to thermal options, are much more likely to be the drivers behind the long-term trend in the share of renewable electricity generation than the NPS-REG itself.

4.4 Does the NPS-REG remain appropriate?

The objective of the NPS-REG remains in line with the Government’s strategic direction to continue towards a low-carbon economy and promote the use of renewable energy. The NPS-REG also does not appear to have any technical error creating a barrier to implementation or uptake of renewable technologies. Key stakeholders engaged in this evaluation are generally supportive of the intention of the NPS-REG, as it highlights the national significance of REG activities.

The NPS-REG does not appear to have had a significant impact on councils’ planning and consenting processes, and decisions in relation to REG projects, however. While the share of REG has continued to increase since the introduction of the NPS-REG, factors other than the NPS-REG (discussed in section 4.2.2) seem to be driving this trend.

5 Conclusions

Of the sampled councils and renewable energy generation (REG) projects, the National Policy Statement on Renewable Energy Generation (NPS-REG) does not appear to have had a significant impact on councils' planning outcomes and decision-making in relation to REG projects. This is in spite of the increased legal weighting the NPS-REG has given to the benefits of REG activities. Generators agree that the NPS-REG is 'nice to have', but it does not (and was not intended to) change the fundamental way that REG projects are treated through the consenting process.

The lack of increase in demand in the electricity market since 2007 has meant that the NPS-REG has not been widely tested through the consenting process. While substantial new electricity generation capacity (well over 3,000 MW) has already been consented, there has been little activity in obtaining resource consents for new major electricity generation projects since 2013.

Also, due to specified staged implementation timeframes, we are yet to see the results of REG consents tested through council planning frameworks that have completed implementation of the NPS-REG.

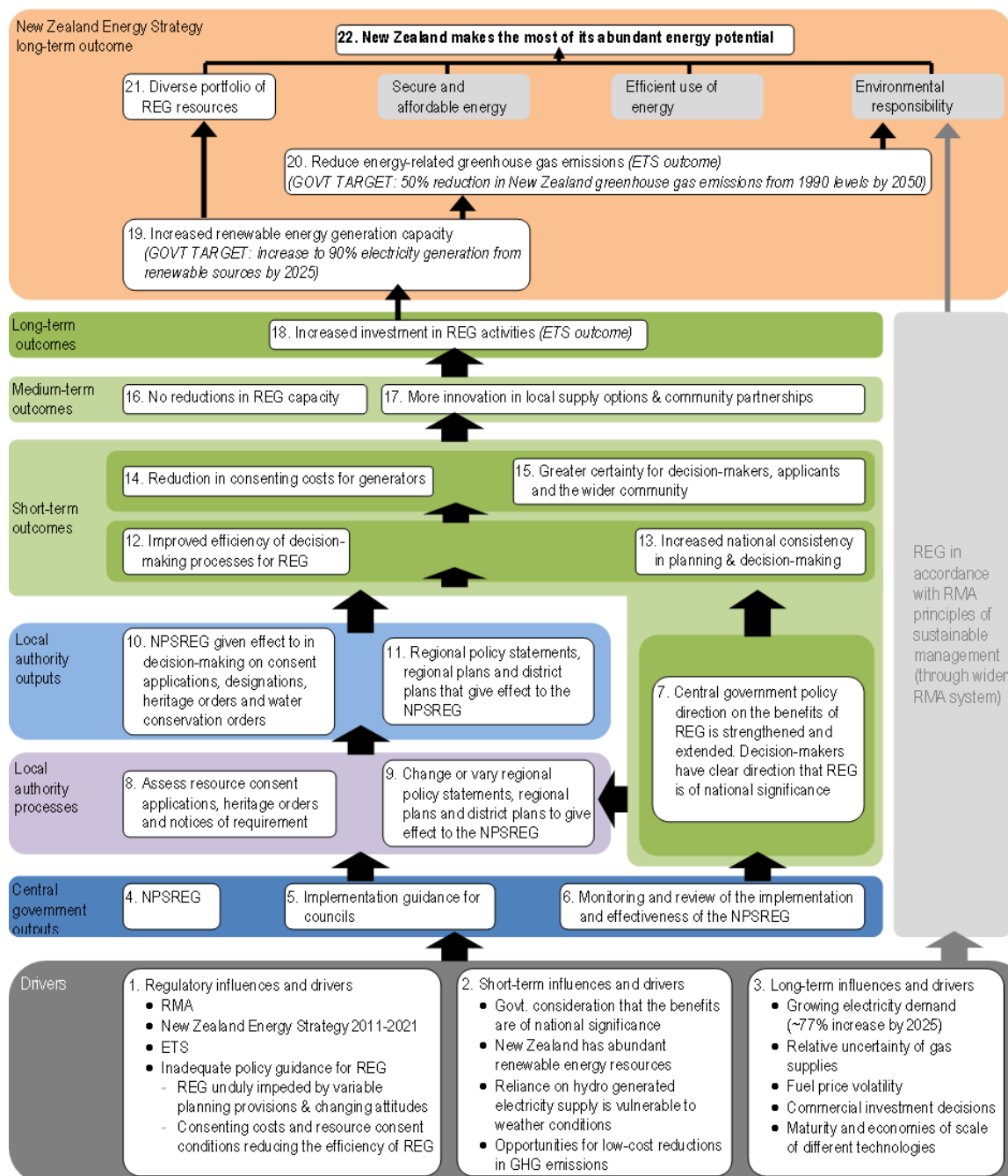
Other national direction tools under the Resource Management Act 1991 (RMA), such as the National Policy Statement on Freshwater Management (NPS-FM) and the New Zealand Coastal Policy Statement (NZCPS), use language that is more directive than that used in the NPS-REG. Less directive tools, such as the NPS-REG, may be given less weight than more directive tools in planning and consenting decisions. The higher level of direction in the NZCPS and NPS-FM can be argued to be more in line with the RMA section 6 matters, than activity-based RMA section 7 matters (such as the NPS-REG). This may impact the effectiveness of the NPS-REG in facilitating REG activities, however, particularly hydro generation activities.

While renewable energy contributed 80.7 per cent of New Zealand's electricity generation in the 2015 calendar year (the highest contribution from renewables since 1995), there are inherent difficulties in measuring the effectiveness of the NPS-REG in terms of meeting or contributing to its objectives. The objective's link to increasing the proportion of New Zealand's electricity generated from renewable sources is problematic to measure, as the NPS-REG is only one of many factors influencing this. The NPS-REG can only influence planning and consenting decisions, while the remainder of the decisions to construct new (or decommission old) electricity infrastructure are market driven.

The objective of the NPS-REG remains in line with the Government's strategic priorities, and the NPS-REG does not appear to have any technical error. There are questions, however, about whether and how the NPS-REG (and more broadly the planning and consenting framework under the RMA) can or should better provide for the continuing development and maintenance of REG activities. The results of this evaluation will be considered in line with other Government work currently underway, including:

- the evaluation of the effectiveness of the NPS on Electricity Transmission and the National Environmental Standard (NES) for Electricity Transmission Activities, being conducted in 2016–2017 by the Ministry for the Environment and MBIE
- updating the list of priorities that will be addressed nationally using one of the RMA legislative tools.

Appendix 1: Evaluation framework



Appendix 2: Evaluation participants

Evaluation phases 1–2: stakeholder groups invited to participate

Stakeholders were invited by email to provide feedback on how the National Policy Standard for Renewable Energy Generation (NPS-REG) has been working, and an open invitation to participate was posted on the Ministry for the Environment’s website. The Ministry for the Environment and MBIE met with stakeholders who requested the opportunity to expand on their written feedback.

Table 2: Stakeholder groups invited to participate in the evaluation

Stakeholder group	Invited to participate in the evaluation	Provided input into the evaluation
Renewable electricity generators	Contact Energy	Contact Energy
	Genesis Energy	Energy3 Limited
	Independent Electricity Generators Association	Genesis Energy
	King Country Energy	Independent Electricity Generators Association
	Meridian Energy	Kawatiri Energy
	Mighty River Power	King Country Energy
	Nova Energy	Meridian Energy
	NZ Energy Ltd	Mighty River Power
	Pioneer Generation	NL and CE Wensley
	Trustpower	NZ Energy Ltd Pioneer Generation Southern Generation Limited Partnership Trustpower
Renewable electricity groups	AWATEA (Aotearoa Wave and Tidal Energy Association)	New Zealand Wind Energy Association
	Bioenergy Association of New Zealand	
	New Zealand Geothermal Association	
	New Zealand Wind Energy Association	
	SEANZ (Sustainable Electricity Association New Zealand)	
	Sustainable Business Council Sustainable Business Network	
Electricity distributors	Electricity Networks Association	POWERCO
	Transpower New Zealand	Unison Networks Limited
		Wellington Electricity Lines Ltd
Environmental groups, landowners and business groups	Business New Zealand	
	Environmental Defence Society	
	Federated Farmers of New Zealand	
	Fish & Game New Zealand	
	Forest Owners Association	
	Home Owners & Buyers Association of New Zealand	
	Horticulture New Zealand	
	Landowners & Contractors Protection Association	

Stakeholder group	Invited to participate in the evaluation	Provided input into the evaluation
	Royal Forest and Bird Protection Society of New Zealand	
Iwi groups	Ministry for the Environment's iwi partners†	
Local government	Local Government New Zealand Regional councils, unitary authorities and territorial authorities*	(refer to Phase 3 of the evaluation below)
Central government	Commerce Commission Department of Conservation Electricity Authority Energy Efficiency and Conservation Authority (EECA)	Commerce Commission Electricity Authority
Other	Electricity Engineers' Association Institution of Professional Engineers New Zealand (IPENZ) Major Electricity Users' Group (MEUG) New Zealand Telecommunications Forum Resource Management Law Association	Electricity Engineers' Association

* Regional councils, unitary authorities and territorial authorities were contacted through Local Government New Zealand (LGNZ).

† The Ministry for the Environment's iwi partners were notified through the quarterly pānui, *Te Kōmiromiro*. Iwi groups that had submitted on the development on the NPS-REG were also notified directly via email.

Evaluation phase 3 – Review of policy statements and plans

Twenty-five councils were selected for this research: 20 district councils, four regional councils and one unitary authority. The councils are listed in Table 3 below. This mix of local authorities is considered to provide a reasonably representative sample of the 78 councils across the country in terms of council type, size and geographic location.

Table 3: Sample of 25 councils reviewed during Phase 3 of the evaluation:

Territorial authorities	
Ashburton District Council	Kaipara District Council
Central Otago District Council	Porirua City Council
Clutha District Council	Rotorua Lakes Council
Christchurch City Council	Southland District Council
Dunedin City Council	South Waikato District Council
Grey District Council	Taupo District Council
Hamilton City Council	Tauranga City Council
Hastings District Council	Waipa District Council
Hutt City Council	Wellington City Council
Invercargill City Council	Western Bay of Plenty District Council
Regional councils	
Environment Canterbury	Greater Wellington Regional Council
Hawke's Bay Regional Council	Waikato Regional Council
Unitary authority	
Tasman District Council	

Evaluation phase 3 – Review of REG consents

Four renewable energy generation (REG) projects across the country were selected for this research: two projects consented prior to the NPS-REG coming into effect, and two projects consented after the NPS-REG had effect (but before the NPS-REG was fully implemented into the local planning regimes). Table 4 below lists the four projects selected, briefly outlines what the project was for and explains why each project was selected.

Table 4: Selected REG projects for research

Project/applicant	Scope of project	Criteria met
<p>Turitea Wind Farm – Mighty River Power</p> <p>Horizons Regional Council Palmerston North City Council Tararua District Council</p>	<ul style="list-style-type: none"> 60 wind turbines up to 125m in height (revised proposal scaled back from 131 to 105 turbines, final decision scaled back proposal again to 60 turbines) Wind monitoring masts Internal road access network Two substations and 220kV transmission line Vegetation removal and earthworks 	<ul style="list-style-type: none"> Pre NPS-REG example Directly comparable with Hurunui wind farm project in terms of renewable energy source and scale of project Palmerston North area Processed through the EPA Not a repeat applicant
<p>Hurunui Wind Farm – Meridian Energy</p> <p>Canterbury Regional Council Hurunui District Council</p>	<ul style="list-style-type: none"> 33 turbines up to 130.5 metres in height Earthworks Internal road access network One substation and a mix of 33 and 66kV transmission lines The erection of up to two permanent wind meteorological monitoring towers up to 80 metres in height Approximately 14 turbines or masts will have aviation obstacle lighting installed 	<ul style="list-style-type: none"> Post NPS-REG example Directly comparable with Turitea wind farm project in terms of renewable energy source and scale of project Hurunui area (only South Island example) Not a repeat applicant
<p>Tauhara II Geothermal Project – Contact Energy</p> <p>Waikato Regional Council Taupo District Council</p>	<ul style="list-style-type: none"> New power station on a site located east of Taupo and north of Mt Tauhara A steamfield development covering a broad area of the Tauhara Geothermal Field Alignment of some existing consents for other activities using the geothermal field (including the Wairakei Power Station and Steamfield; the Tauhara I geothermal project and the Te Mihi Power Station Project) 	<ul style="list-style-type: none"> Pre NPS-REG example Reasonably comparable with the Te Ahi O Maui project (same REG source but different scale project) Taupo area Not a repeat applicant
<p>Te Ahi O Maui Geothermal Power Station – Eastland Group</p> <p>Bay of Plenty Regional Council Whakatane District Council Kawerau District Council</p>	<p>Take, use and discharge geothermal fluid from the Kawerau Geothermal Field and to establish a power station and associated activities for the production of electricity, and for other 'cascade' uses</p>	<ul style="list-style-type: none"> Post NPS-REG example Reasonably comparable with the Tauhara II project (same REG source but different scale project) Kawerau/Whakatane area Not a repeat applicant

Appendix 3: National Policy Statement on Renewable Electricity Generation

NATIONAL POLICY STATEMENT

for Renewable Electricity Generation 2011

Issued by notice in the Gazette on 14 April 2011

newzealand.govt.nz

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Preamble

This national policy statement sets out an objective and policies to enable the sustainable management of renewable electricity generation under the Resource Management Act 1991 ('the Act').

New Zealand's energy demand has been growing steadily and is forecast to continue to grow. New Zealand must confront two major energy challenges as it meets growing energy demand. The first is to respond to the risks of climate change by reducing greenhouse gas emissions caused by the production and use of energy. The second is to deliver clean, secure, affordable energy while treating the environment responsibly.

The contribution of renewable electricity generation, regardless of scale, towards addressing the effects of climate change plays a vital role in the wellbeing of New Zealand, its people and the environment. In considering the risks and opportunities associated with various electricity futures, central government has reaffirmed the strategic target that 90 per cent of electricity generated in New Zealand should be derived from renewable energy sources by 2025 (based on delivered electricity in an average hydrological year) providing this does not affect security of supply.

Development that increases renewable electricity generation capacity can have environmental effects that span local, regional and national scales, often with adverse effects manifesting locally and positive effects manifesting nationally.

This national policy statement does not apply to the allocation and prioritisation of freshwater as these are matters for regional councils to address in a catchment or regional context and may be subject to the development of national guidance in the future.

In some instances the benefits of renewable electricity generation can compete with matters of national importance as set out in section 6 of the Act, and with matters to which decision-makers are required to have particular regard under section 7 of the Act. In particular, the natural resources from which electricity is generated can coincide with areas of significant natural character, significant amenity values, historic heritage, outstanding natural features and landscapes, significant indigenous vegetation and significant habitats of indigenous fauna. There can also be potential conflicts with the relationship of Maori with their taonga and the role of kaitiaki. The New Zealand Coastal Policy Statement 2010 also addresses these issues in the coastal environment. Increased national consistency in addressing the competing values associated with the development of New Zealand's renewable energy resources will provide greater certainty to decision-makers, applicants, and the wider community.

Title

This national policy statement is the National Policy Statement for Renewable Electricity Generation 2011.

Commencement

This national policy statement will take effect 28 days after the date of its issue by notice in the New Zealand Gazette.

Interpretation

In this national policy statement, unless the context otherwise requires:

Act means the Resource Management Act 1991.

Decision-makers means all persons exercising functions and powers under the Act.

Distribution network means a distributor's lines and associated equipment used for the conveyance of electricity on lines other than lines that are part of the national grid.

Distributor means a business engaged in distribution of electricity.

National grid means the lines and associated equipment used or owned by Transpower to convey electricity.

Renewable electricity generation means generation of electricity from solar, wind, hydro-electricity, geothermal, biomass, tidal, wave, or ocean current energy sources.

Renewable electricity generation activities means the construction, operation and maintenance of structures associated with renewable electricity generation. This includes small and community-scale distributed renewable generation activities and the system of electricity conveyance required to convey electricity to the distribution network and/or the national grid and electricity storage technologies associated with renewable electricity.

Small and community-scale distributed electricity generation means renewable electricity generation for the purpose of using electricity on a particular site, or supplying an immediate community, or connecting into the distribution network.

Terms given meaning in the Act have the meanings so given.

Matters of national significance

The matters of national significance to which this national policy statement applies are:

- a) the need to develop, operate, maintain and upgrade renewable electricity generation activities throughout New Zealand; and
- b) the benefits of renewable electricity generation.

Objective

To recognise the national significance of renewable electricity generation activities by providing for the development, operation, maintenance and upgrading of new and existing renewable electricity generation activities, such that the proportion of New Zealand's electricity generated from renewable energy sources increases to a level that meets or exceeds the New Zealand Government's national target for renewable electricity generation.

A. Recognising the benefits of renewable electricity generation activities

POLICY A

Decision-makers shall recognise and provide for the national significance of renewable electricity generation activities, including the national, regional and local benefits relevant to renewable electricity generation activities. These benefits include, but are not limited to:

- a) maintaining or increasing electricity generation capacity while avoiding, reducing or displacing greenhouse gas emissions;
- b) maintaining or increasing security of electricity supply at local, regional and national levels by diversifying the type and/or location of electricity generation;
- c) using renewable natural resources rather than finite resources;
- d) the reversibility of the adverse effects on the environment of some renewable electricity generation technologies;
- e) avoiding reliance on imported fuels for the purposes of generating electricity.

B. Acknowledging the practical implications of achieving New Zealand's target for electricity generation from renewable resources

POLICY B

Decision-makers shall have particular regard to the following matters:

- a) maintenance of the generation output of existing renewable electricity generation activities can require protection of the assets, operational capacity and continued availability of the renewable energy resource; and
- b) even minor reductions in the generation output of existing renewable electricity generation activities can cumulatively have significant adverse effects on national, regional and local renewable electricity generation output; and
- c) meeting or exceeding the New Zealand Government's national target for the generation of electricity from renewable resources will require the significant development of renewable electricity generation activities.

C. Acknowledging the practical constraints associated with the development, operation, maintenance and upgrading of new and existing renewable electricity generation activities

POLICY C1

Decision-makers shall have particular regard to the following matters:

- a) the need to locate the renewable electricity generation activity where the renewable energy resource is available;
- b) logistical or technical practicalities associated with developing, upgrading, operating or maintaining the renewable electricity generation activity;
- c) the location of existing structures and infrastructure including, but not limited to, roads, navigation and telecommunication structures and facilities, the distribution network and the national grid in relation to the renewable electricity generation activity, and the need to connect renewable electricity generation activity to the national grid;

- d) designing measures which allow operational requirements to complement and provide for mitigation opportunities; and
- e) adaptive management measures.

POLICY C2

When considering any residual environmental effects of renewable electricity generation activities that cannot be avoided, remedied or mitigated, decision-makers shall have regard to offsetting measures or environmental compensation including measures or compensation which benefit the local environment and community affected.

D. Managing reverse sensitivity effects on renewable electricity generation activities

POLICY D

Decision-makers shall, to the extent reasonably possible, manage activities to avoid reverse sensitivity effects on consented and on existing renewable electricity generation activities.

E. Incorporating provisions for renewable electricity generation activities into regional policy statements and regional and district plans

E1 Solar, biomass, tidal, wave and ocean current resources

POLICY E1

Regional policy statements and regional and district plans shall include objectives, policies and methods (including rules within plans) to provide for the development, operation, maintenance, and upgrading of new and existing renewable electricity generation activities using solar, biomass, tidal, wave and ocean current energy resources to the extent applicable to the region or district.

E2 Hydro-electricity resources

POLICY E2

Regional policy statements and regional and district plans shall include objectives, policies, and methods (including rules within plans) to provide for the development, operation, maintenance, and upgrading of new and existing hydro-electricity generation activities to the extent applicable to the region or district.

E3 Wind resources

POLICY E3

Regional policy statements and regional and district plans shall include objectives, policies, and methods (including rules within plans) to provide for the development, operation, maintenance and upgrading of new and existing wind energy generation activities to the extent applicable to the region or district.

E4 Geothermal resources

POLICY E4

Regional policy statements and regional and district plans shall include objectives, policies, and methods (including rules within plans) to provide for the development, operation, maintenance, and upgrading of new and existing electricity generation activities using geothermal resources to the extent applicable to the region or district.

F. Incorporating provisions for small and community-scale renewable electricity generation activities into regional policy statements and regional and district plans

POLICY F

As part of giving effect to Policies E1 to E4, regional policy statements and regional and district plans shall include objectives, policies, and methods (including rules within plans) to provide for the development, operation, maintenance and upgrading of small and community-scale distributed renewable electricity generation from any renewable energy source to the extent applicable to the region or district.

G. Enabling identification of renewable electricity generation possibilities

POLICY G

Regional policy statements and regional and district plans shall include objectives, policies, and methods (including rules within plans) to provide for activities associated with the investigation, identification and assessment of potential sites and energy sources for renewable electricity generation by existing and prospective generators.

H. Time within which implementation is required

POLICY H1

Unless already provided for within the relevant regional policy statement or proposed regional policy statement, regional councils shall give effect to Policies A, B, C, D, E, F and G by notifying using Schedule 1 of the Act, a change or variation (whichever applies) within 24 months of the date on which this national policy statement takes effect.

POLICY H2

Unless already provided for within the relevant regional or district plans or proposed plans, plan changes or variations, local authorities shall give effect to Policies A, B, C, D, E, F and G by notifying using Schedule 1 of the Act, a change or variation (whichever applies) within the following timeframes:

- a) where the relevant regional policy statement or proposed regional policy statement already provides for the Policies, 24 months of the date on which this national policy statement takes effect; or
- b) where a change or variation to the regional policy statement or proposed regional policy statement is required by Policy H1, 12 months of the date on which the change or variation becomes operative.

Monitoring and reviewing the implementation and effectiveness of the national policy statement

To monitor and review the implementation and effectiveness of this national policy statement in achieving the purpose of the Act, the Minister for the Environment should:

- in collaboration with local authorities and relevant government agencies collect data for, and, as far as practicable, incorporate district and regional monitoring information into a nationally consistent monitoring and reporting programme, including monitoring the performance of local authorities against the timeframes for giving effect to this national policy statement;
- utilise other information gathered or monitored that assists in measuring progress towards the Government's national target for the generation of electricity from renewable sources;
- within five years of its taking effect, and thereafter as considered necessary, assess the effect of this national policy statement on relevant regional policy statements and regional or district plans, resource consents and other decision-making; and
- publish a report and conclusions on matters above.

Explanatory note

This note is not part of the national policy statement but is intended to indicate its general effect.

This national policy statement takes effect 28 days after the date of its issue by notice in the *New Zealand Gazette*. It recognises renewable electricity generation activities and the benefits of renewable electricity generation as matters of national significance under the Resource Management Act 1991.

This national policy statement is to be applied by all persons exercising powers and functions under the Act. The objective and policies are intended to guide applicants and decision-makers on applications for resource consent, in making decisions on the notification and determination of resource consent applications, in considering a requirement for a designation or a heritage order, in considering an application for a water conservation order and when exercising other powers as required by the Act. Regional policy statements, regional plans and district plans must give effect to this national policy statement.

This national policy statement requires regional councils, unless they have already provided for renewable electricity generation activities, to give effect to its provisions by notifying changes to existing or proposed regional policy statements within 24 months of the date on which it takes effect. In the case of district plans, proposed plans or variations, local authorities are required to give effect to its provisions by notifying changes within the following timeframes: 24 months of the date on which this national policy statement takes effect where the regional policy statement or proposed regional policy statement already provides for the policies; or, where a change or variation to the regional policy statement or proposed regional policy statement is required, within 12 months of the date on which the change or variation becomes operative.

Appendix 4: Resource Management Act 1991, Part 2

Resource Management Act 1991: Part 2 – Purpose and principles

5 Purpose

- (1) The purpose of this Act is to promote the sustainable management of natural and physical resources.
- (2) In this Act, sustainable management means managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural well-being and for their health and safety while—
 - (a) sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and
 - (b) safeguarding the life-supporting capacity of air, water, soil, and ecosystems; and
 - (c) avoiding, remedying, or mitigating any adverse effects of activities on the environment.

6 Matters of national importance

In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall recognise and provide for the following matters of national importance:

- (a) the preservation of the natural character of the coastal environment (including the coastal marine area), wetlands, and lakes and rivers and their margins, and the protection of them from inappropriate subdivision, use, and development
- (b) the protection of outstanding natural features and landscapes from inappropriate subdivision, use, and development
- (c) the protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna
- (d) the maintenance and enhancement of public access to and along the coastal marine area, lakes, and rivers
- (e) the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga
- (f) the protection of historic heritage from inappropriate subdivision, use, and development
- (g) the protection of protected customary rights.

7 Other matters

In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall have particular regard to—

- (a) kaitiakitanga
- (aa) the ethic of stewardship
- (b) the efficient use and development of natural and physical resources
- (ba) the efficiency of the end use of energy
- (c) the maintenance and enhancement of amenity values
- (d) intrinsic values of ecosystems
- (e) [Repealed]
- (f) maintenance and enhancement of the quality of the environment
- (g) any finite characteristics of natural and physical resources
- (h) the protection of the habitat of trout and salmon
- (i) the effects of climate change
- (j) the benefits to be derived from the use and development of renewable energy.

8 Treaty of Waitangi

In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall take into account the principles of the Treaty of Waitangi (Te Tiriti o Waitangi).

Appendix 5: Challenges and barriers to giving effect to the NPSREG identified by stakeholders

Challenges and barriers to giving effect to the National Policy Statement on Renewable Electricity Generation (NPS-REG) in Resource Management Act 1991 (RMA) decision-making identified by stakeholders.

Challenges and barriers identified by councils	
Lack of detailed direction and guidance	Lack of detailed direction and guidance is making implementation more complicated than some consider it should be. For example, the wide definition of “small and community scale energy generation”, and determining what are appropriate standards for REG projects (ie, in terms of noise, glare, amenity and landscape protection). Consequently, councils spent a lot of time developing more precise provisions in their district, and assigning appropriate activity status in different zones, when they consider that at least some of this could have been done at a national level.
Interaction between the NPS-REG, other NPSs and other competing RMA Part 2 matters	Interaction between the NPS-REG, other national policy statements (NPSs), and other competing RMA Part 2 matters, are required to be balanced by councils at a local level. For example, balancing the NPS-REG with the New Zealand Coastal Policy Statement (NZCPS) outstanding natural landscape requirements – which are often good areas for wind generation.
The nature and extent of the REG resources and pressures within a district/region	The nature and extent of the REG resources and pressures within a district/region that need to be assessed and balanced before REG provisions can be implemented are delaying implementation timeframes. For example, current uncertainty about the level of significance for many water resource values in the district, how best to resolve contests for resource use, and the ability to fully resolve iwi concerns about the impact of hydro-energy on the mauri of waterways. Regions and districts that had previously mapped and categorised REG resources and created an enabling framework for the use and development of these resources (eg Waikato and Bay of Plenty regional council’s mapping and categorising of geothermal resources) reported few challenges in giving effect to the NPS-REG, however.
Territorial authorities required to wait for the regional policy statement to give effect to the NPS-REG	Territorial authorities required to wait for the regional policy statement to give effect to the NPS-REG before they can give effect to it. Also, in 2012 some councils stated concern that the regional policy statement in their region does not adequately reflect the NPS-REG.
Challenges and barriers identified by the electricity industry	
Considerable industry resource to input into regional and district planning documents	Considerable industry resource is required to input into regional and district planning documents, to ensure that existing REG resources are provided for.
High degree of variation of REG planning provisions	High degree of variation of REG planning provisions, both between regions and within regions, is not improving national consistency or certainty. Industry does support some variations in provisions, to reflect local circumstances.
The interaction between the NPS-REG and other NPSs	The interaction between the NPS-REG and other NPSs, particularly balancing directive policies with non-directive policies. For instance, the language of the NPS-REG is not particularly strong, especially when compared to the New Zealand Coastal Policy Statement (NZCPS) and the NPS for Freshwater Management (NPS-FM). Generators consider that decision-makers are challenged when reconciling potentially divergent policy advice arising from different NPSs, for example balancing the NPS-REG and NZCPS for REG infrastructure in outstanding natural landscapes.

	<p>Generators also expressed concern at the implications of the King Salmon decision for how the NPS-REG is taken into account in RMA decisions. In the light of this decision, there is a risk that councils may give less weight to the NPS-REG than they do the other national direction tools when making RMA decisions, particularly when considering mitigation measures and imposing conditions of consent. This risk arises from the fact that the NPS-REG is less directive than the other national direction tools, such as the NPS-FM and the NZCPS.</p>
<p>Pressures on freshwater resources reducing certainty of future hydro generation capacity</p>	<p>Generators consider that renewing consents for hydro projects is getting more difficult over time, due to the pressures on freshwater resources (and resulting regular changes to water allocation regimes), so they are not actively looking for new REG projects. There is ongoing tension between hydroelectricity generators and councils with respect to setting the status for activities for water takes for existing hydroelectricity generation schemes. Generators consider that reduction of generation through re-consenting is the biggest foreseeable risk for electricity supply from REG projects (over half of New Zealand’s REG comes from hydro stations). The uncertainty over re-consenting water allocation is potentially in conflict with Policy B(a) of the NPS-REG.⁴²</p> <p>Also, generators are facing arguments that existing hydro schemes should not be considered as part of the existing environment for re-consenting purposes (these arguments would require generators to approach re-consenting as though the scheme did not exist).</p>
<p>Preamble water allocation statement perceived as reducing applicability of NPS-REG to hydro schemes</p>	<p>Generators consider that the Preamble text regarding water allocation is limiting the effectiveness of the NPS-REG for hydro, and therefore is in potential conflict with policy B(a) of the NPS-REG regarding continued availability of resources to maintain generation output. They consider that the Preamble statement, combined with the more directive wording of the NPS-FM, suggests that the NPS-REG does not apply to the allocation and prioritisation of fresh water that may result in water allocation to existing hydro activities being reduced.</p> <p>The argument of the relevance of the NPS-REG in water allocation decisions has been considered by the Environment Court,⁴³ finding that that inclusion of the water allocation statement in the NPS-REG Preamble does not preclude decision-makers having regard to the NPS-REG in decisions on water allocation. The judgement states:</p> <p>“...the location of the [water allocation] statement in the Preamble illustrates that it is not intended to act as a guide to decision-makers in respect to any freshwater allocation decisions they are making. Rather, the statement says that (amongst other things) the [NPS-REG] should not be used to justify always giving hydro-electricity generation activities priority when making freshwater allocation decisions. It envisages that there may be circumstances when this will not be appropriate and should not occur.</p> <p>However, the statement in the Preamble should not be read as excluding the ability of regional councils to make freshwater allocation decisions which reflect the importance of renewable energy activities. Even if we are wrong in this regard, we consider it necessary, as a cautionary approach, to consider the policy statement’s provisions which reflect and give strong guidance to the relevant statutory provisions contained in Part 2 of the Act.</p>

⁴² Policy B(a) requires decision-makers to have particular regard to the “maintenance of the generation output of existing REG activities can require the protection of assets, operational capacity and continued availability of the renewable energy resource”

⁴³ Carter Holt Harvey Ltd v Waikato Regional Council, [2011] NZEnvC 380

	<p>The provisions in the [NPS-REG] provide a clear indication that the government sees renewable electricity generation as an essential need for the nation and which should be treated as of national significance.</p> <p>The provisions in the [NPS-REG] are particularly relevant to the main issue between the electricity generators and those parties seeking water for agricultural purposes. We will be conscious of the relevant provisions when we address that issue.”</p>
Windfarm adverse effects consideration	<p>There are continued challenges on the appropriate way of assessing and managing wind farm noise and shadow flicker. This prevents efficiencies in the consenting process. There is a New Zealand standard⁴⁴ that provides suitable methods for the prediction, measurement and assessment of sound from wind turbines. Expert evidence presented in wind farm cases has reinforced that the limits in this standard appropriately avoid adverse noise and health effects. This standard is not always given much weight by decision-makers, however, because it does not officially form part of the RMA decision-making framework. Generators also consider that shadow flicker from wind farm turbines is a fairly standard effect regardless of where the windfarm is located.</p>
Insufficient recognition of the importance and need to connect REG to distribution networks	<p>Conveyance of electricity to the distribution network and national grid are provided for in the definition of renewable electricity generation activities,⁴⁵ and Policy C(c)⁴⁶ requires “particular regard” to the location of existing distribution network and national grid. Where particular regard to the need to connect to the national grid is explicitly provided for as practical constraint to be acknowledged under Policy C(c), however, there is no similar explicit provision for the distribution network.</p> <p>There are significant transaction costs in getting easement consents or licences to occupy for constructing distribution lines, which can create risks and uncertainties for delivery and overall viability of REG projects. For example, in the case of constructing the Te Huka Binary geothermal power station, Unison had to construct a new 5-kilometre stretch of distribution line from the power station to the National Grid; crossing multiple pieces of private land as well as a river crossing. According to Unison, approximately \$500,000 (approximately 20 per cent of Unison’s project cost) was spent on consulting with landowners, acquiring consents and easements.</p>
Local politics and opinions	<p>Local politics and opinions appear at times to override national policy direction in decision-making. The ease with which a large scale REG project is consented is largely dependent on the attitudes of staff and politicians at the time.</p>
Non-renewable back-up generation for REG	<p>Non-renewable back-up generation for REG is not recognised in the NPS-REG. Non-renewable back-up generation options may be required to ensure the viability of REG projects through guaranteeing security of supply (eg, gas-fired power stations are a back-up option for wind and hydro projects when there are periods of low wind or droughts).</p>

⁴⁴ NZS 6808:2010 Acoustics – Wind farm noise

⁴⁵ NPS-REG interpretation – “Renewable electricity generation activities means the construction, operation and maintenance of structures associated with renewable electricity generation. This includes small and community-scale distributed renewable generation activities and the system of electricity conveyance required to convey electricity to the distribution network and/or the national grid and electricity storage technologies associated with renewable electricity.”

⁴⁶ NPS-REG Policy C(c) – “Decision-makers shall have particular regard to the following matters: c) the location of existing structures and infrastructure including, but not limited to, roads, navigation and telecommunication structures and facilities, the distribution network and the national grid in relation to the renewable electricity generation activity, and the need to connect renewable electricity generation activity to the national grid.”

Appendix 6: Stakeholders’ suggestions for expansions to the NPS-REG

Industry and local authorities have identified areas that would benefit from additional national consistency. These are yet to be considered by the Government.

Suggestion	Description
Detailed direction and guidance to implement the National Policy Statement on Renewable Electrical Generation (NPS-REG) into planning documents	Councils suggest that more detailed guidance (within the national policy statement (NPS) or as a separate document) would have avoided some duplication of effort and associated costs required by all councils (ie, to define NPS-REG terms more precisely and assign appropriate activity status to REG activities).
Direction on landscape assessment	<p>Councils and generators consider the NPS-REG could benefit from an NPS on landscape and/or a national environmental standard (NES) on landscape assessment methodology so councils could make more informed judgements on where REG should or should not go ahead.</p> <p>Some generators want councils to be required to map out potential REG resources (ie, wind farms) and identify which landscape should be available for these.</p> <p>Alternatively, some generators consider that trying to impose a generic set of NES on landscapes would be too contentious.</p>
NES to support the NPS-REG, model REG provisions and more readily available data on REG resources	<p>Councils noted that the absence of a corresponding NES to support the NPS-REG has resulted in each council having to determine what is appropriate (eg, in terms of noise, glare, amenity and landscape protection) for REG projects when at least some of this could have been done once at a national level.</p> <p>Council consider that implementation of the NPS-REG could benefit from some model provisions and more readily available data on renewable energy sources (eg, viable wind resources within a region).</p> <p>Some generators suggested the idea of developing NES that would specify nationally consistent rules, standards and assessment criteria to be applied to the consenting and re-consenting of REG activities.</p>
Direction for consideration of generation, distribution and transmission activities in their entirety	<p>Electricity distributors consider that national environmental legislative tools (including NPSs and NESs) should appropriately reflect the electricity industry as a whole because of the linkages and overlaps between electricity generation, distribution and transmission activities.</p> <p>Some electricity distributors and engineers made some more specific suggestions for the NPS-REG:</p> <ul style="list-style-type: none"> • Definition of “renewable electricity generation activities” in NPS-REG should cover transmission activities via distribution networks. • Definition of “national grid” in the NPS-REG should be based on the nature of assets rather than ownership. • Policy C1 should be amended to explicitly include the need to connect renewable electricity generation to the distribution network, in order not to limit the statement to connections to the national grid. • Technical issues triggered by the development of new renewable electricity generation and impacting the electricity network should be consistently recognised and addressed.

Suggestion	Description
Develop NPS and NES for Electricity Distribution	Some electricity distribution businesses consider an NPS and/or NES for electricity distribution is required to improve consistency in district council rules governing the distribution sector. This would support construction of new distribution networks to support renewable distributed generation.
More directive provisions in the NPS-REG to manage interactions between different NPSs	<p>Broadly, generators consider that central government should provide more direction on how competing nationally significant matters, as encapsulated in the RMA and all the national direction tools, should be balanced in RMA decision-making processes. The generators noted that the NPS-REG requirements tend to conflict most with those in the NPS-FM and the New Zealand Coastal Policy Statement 2010.</p> <p>Generators consider that the language across the NPSs (including the NZCPS) needs to be reviewed as a whole in the light of the in SC 82/2013 <i>Environmental Defence Society Inc v The New Zealand King Salmon Co Ltd</i> [2014] decision. The NPS-REG, in particular, should be reviewed to ensure that it is able to deliver its objective and that its policies will not be trumped by style differences in other NPSs.</p> <p>Suggestions for improvements include:</p> <ul style="list-style-type: none"> • use more directive or outcome-focused language in the NPS-REG • provide more direction in the NPS-REG on how regional and district plans should manage interaction between and REG activities and other matters of national significance (eg, competition for fresh water, outstanding natural landscape values) • amend the NPS-FM water allocation policies to recognise the importance of hydroelectricity generation to New Zealand • provide recognition that some development with national benefits may be necessary and appropriate in areas with high environmental values • provide more direction on the need for regional and district plans to clearly identify where the requirement to avoid adverse effects apply in planning maps.
Deletion of NPS-REG Preamble statement regarding water allocation	<p>Generators have expressed concern at the Preamble statement that the NPS-REG “does not apply to the allocation and prioritisation of fresh water”. There are questions about the interpretation of this Preamble statement, particular the applicability of the NPS-REG to freshwater allocation decisions that affect hydro generation. (Refer section 4.1.3)</p> <p>For clarification, generators consider that this Preamble statement should be deleted and the NPS-REG should include explicit policy direction as to how councils should provide for hydroelectricity generation activities in making decisions on water allocation.</p>
More guidance for decision-makers on how to deal with consent renewal applications (particularly for hydro projects)	Generators consider that the NPS-REG is not explicit enough and should give decision-makers more direction as to how to process renewal applications. Potential uncertainty for investors could be reduced by an NES specific to re-consenting of existing REG schemes (eg, developing NES to confirm classification of existing REG schemes as controlled activities upon re-consenting).
More directive reverse sensitivity provisions	Generators would like to see stronger direction to protect consented and existing REG activities from reverse sensitivity effects (ie, stronger than the current direction of Policy D). Generators consider Policy 11 of the National Policy Statement for Electricity Transmission to be more effective or appropriate with its requirement for councils to consult the national grid operator.
NES for noise and/or shadow flicker from wind farm turbines	Some generators and the New Zealand Wind Energy Association suggested that an NES could be a useful supporting measure for the NPS-REG by streamlining the consenting process for new wind farms. This could include nationally consistent permitted activity rules for noise, wind monitoring masts, and a restricted discretionary activity for wind farms.

Suggestion	Description
	New Zealand Standard NZS6808:2010 is often used as a yardstick for wind farm noise in RMA decisions, but is not a mandatory or determinative instrument under the RMA.
Direction for regional and territorial authorities to work collaboratively, and in a manner that minimises procedural duplication, when developing provisions relating to outstanding natural features and landscapes (which are often potential wind farm sites)	Some electricity generators consider such direction would be useful, as regional councils are increasingly identifying “regional outstanding natural features and landscapes”, and there are overlaps with territorial jurisdictions in this regard.
Shift the objective and focus of the NPS-REG to renewable energy more broadly rather than only renewable electricity	An individual stakeholder suggested this so that the benefits of all types of renewable energy can be recognised as a matter of national significance.
More promotion of guidance materials	Generators consider that more publicity and promotion of the NPS-REG implementation guide and technical guide is needed to improve local authorities’ understanding of REG technologies and facilitate implementation of the NPS-REG.

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