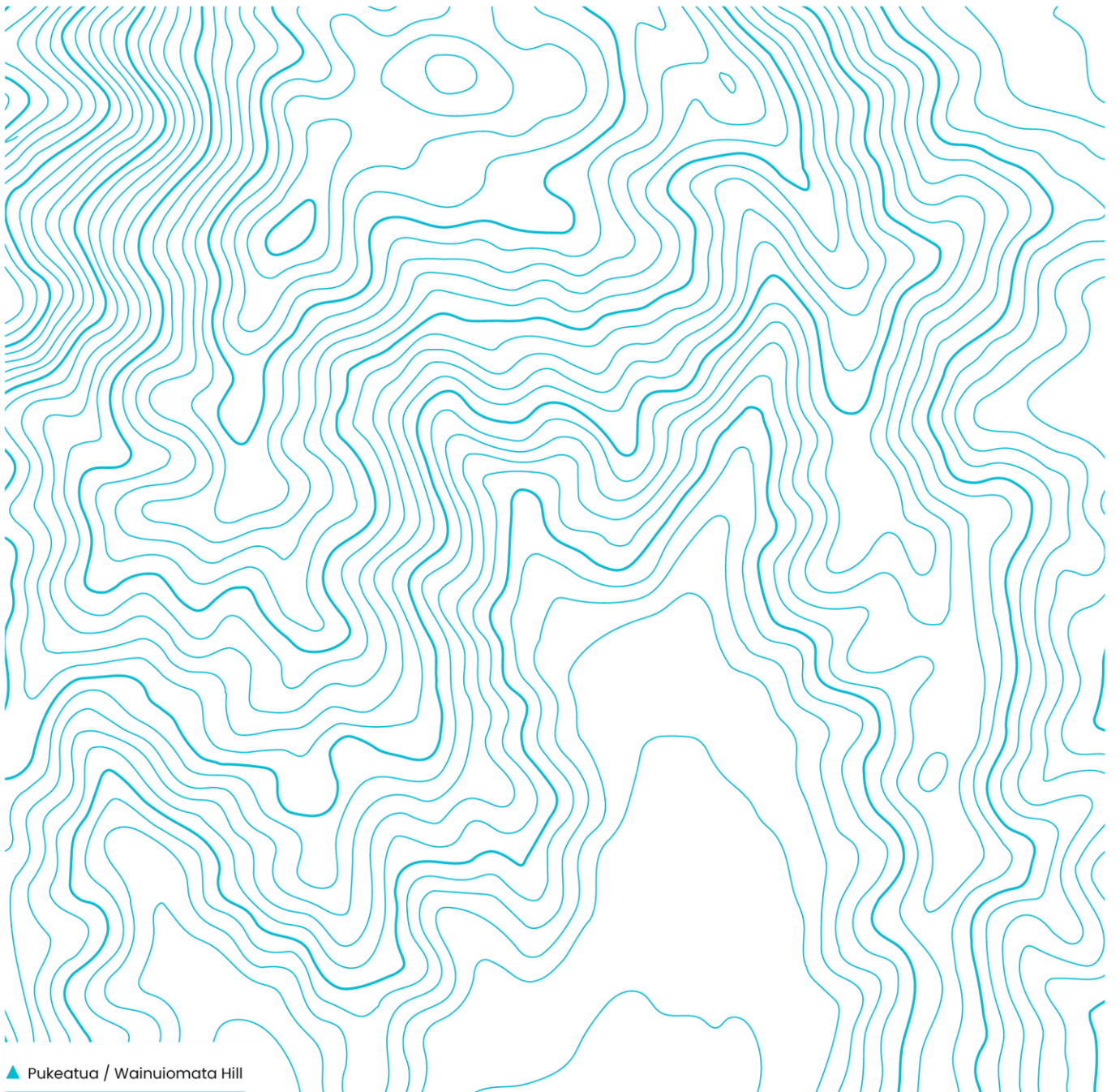


# Section 32 Evaluation

## RENEWABLE ELECTRICITY GENERATION



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## 2 Overview and Purpose

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- (1) Hutt City Council is reviewing the City of Lower Hutt District Plan. This is a full review of the District Plan, including the approach to renewable electricity generation.
- (2) This report is a record of the review with regard to renewable electricity generation and includes an evaluation of objectives and provisions for a proposed District Plan to address renewable electricity generation, in accordance with the requirements of s32 of the Resource Management Act 1991.
- (3) A standalone Renewable Electricity Generation (REG) chapter is proposed, which contains provisions for these activities in all zones, as well as overlays.
- (4) This report sits as one of a package of reports for the proposed Plan and should be read alongside the General evaluation report, which covers matters common to all topics.

### **Renewable electricity generation and district plans**

- (5) Renewable electricity generation refers to the generation of electricity from solar, wind, hydroelectricity, geothermal, biomass, tidal, wave, or ocean current energy sources.
- (6) Renewable electricity generation is an important resource management issue as the use and development of renewable energy resources can have significant local, regional and national benefits, including in responding to climate change issues, while also having the potential to have significant adverse effects on the environment.
- (7) The District Plan has a role to play in enabling renewable electricity generation and managing the potential adverse effects, including through giving effect to higher order RMA documents.
- (8) The National Policy Statement for Renewable Electricity Generation (NPS-REG) sets national direction on recognising and providing for renewable electricity at different scales. The Regional Policy Statement for the Wellington Region (RPS) also includes objectives and policies for renewable

electricity generation, with policies that require recognition in district plans of the social, economic, cultural and environmental benefits of energy generated from renewable energy resources and promotion of the use of domestic-scale and small-scale distributed renewable electricity generation.

- (9) Despite the benefits that renewable electricity generation can have, these activities can also result in significant adverse effects. Most often, this includes amenity, landscape, ecological, cultural values, and traffic. A particular issue relating to renewable electricity generation is that these effects can be experienced locally, while benefits are achieved at a larger regional or national scale. Effects can also be long and short term, uncertain, and may not always be able to be avoided, remedied and mitigated.

## 3 Statutory and Policy Context

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- (10) The following sections discuss the national, regional and local policy framework that are particularly relevant to the statutory and policy context for renewable electricity generation for the District Plan Review.

### 3.1 Resource Management Act 1991

#### 3.1.1 Section 5 – Purpose and Principles

- (11) The purpose of the RMA is set out in Section 5. The purpose is to promote the sustainable management of natural and physical resources.

- (12) Under s5(2) of the 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.*

- (13) The following aspects of sustainable management are particularly relevant for renewable electricity generation:

- Renewable electricity generation plays a role in enabling people and communities to provide for their economic wellbeing.
- Renewable electricity generation can have a positive effect on the environment by reducing the reliance on other forms of electricity

that may have more significant adverse environmental effects (such as electricity generated through fossil fuels).

- Development of renewable electricity generation can have adverse effects on the environment, including adverse effects on the natural environment through construction and development of renewable electricity generation facilities.

### 3.1.2 Section 6 – Matters of National Importance

- (14) Section 6 of the RMA sets out matters of national importance that all persons exercising functions and powers under the Act shall *recognise and provide for* in achieving the purpose of the RMA.
- (15) Renewable electricity generation activities may have a functional or operational need to be located in areas which have characteristics related to matters of national importance, and there is the potential for the development of renewable electricity generation activities to have an adverse effect on these matters if not managed appropriately.
- (16) The s6 matters are:

Section	Relevant Matter
6(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.
6(b)	The protection of outstanding natural features and landscapes from inappropriate subdivision, use, and development.
6(c)	The protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna.
6(d)	The maintenance and enhancement of public access to and along the coastal marine area, lakes, and rivers.
6(e)	The relationship of Māori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga.

6(f)	The protection of historic heritage from inappropriate subdivision, use, and development.
6(h)	The management of significant risks from natural hazards.

### 3.1.3 Section 7 – Other Matters

(17) Section 7 of the RMA sets out other matters that all persons exercising functions and powers under it shall *have particular regard to* in achieving the purpose of the RMA. The relevant s7 matters for renewable electricity are:

Section	Relevant Matter
7(b)	<p><i>The efficient use and development of natural and physical resources</i></p> <p>The RMA definition of natural and physical resources specifically includes energy.</p>
7(c)	<p><i>The maintenance and enhancement of amenity values.</i></p> <p>Structures used for renewable electricity generation activities can have an impact on visual amenity values.</p> <p>Noise generated from renewable electricity generation activities may also impact on amenity values.</p>
7(f)	<p><i>Maintenance and enhancement of the quality of the environment.</i></p> <p>Increasing the supply of energy from renewable sources, may reduce the need for fossil fuel combustion to generate energy needs. Structures used in the development of renewable electricity generation activities and noise generated during operation can also impact on the quality of the environment.</p>
7(g)	<p><i>Any finite characteristics of natural and physical resources.</i></p> <p>Increasing the supply of energy from renewable sources can reduce the reliance on finite resources for energy generation.</p>



7(j)	<p><i>The benefits to be derived from the use and development of renewable energy.</i></p> <p>This is of direct relevance to renewable electricity generation activities. The National Policy Statement for Renewable Electricity Generation provides further direction on which benefits of renewable electricity generation activities should be recognised in district plans.</p>
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### 3.1.4 Section 8 – Treaty of Waitangi

- (18) Section 8 of the RMA requires Council to take into account the principles of the Treaty of Waitangi when exercising functions and powers under the Act.
- (19) Council has engaged with Mana Whenua of Lower Hutt as part of the District Plan Review, including with representatives of Taranaki Whānui ki te Upoko o te Ika (Port Nicholson Block Settlement Trust), Wellington Tenth Trust, Palmerston North Māori Reserve Trust, Te Rūnanganui o Te Āti Awa ki Te Upoko o Te Ika a Māui Incorporated and Te Rūnanga o Toa Rangatira Incorporated.
- (20) This engagement has demonstrated two key principles of the treaty, the first being the principle of partnership by, recognising and fostering mutual good faith with our existing iwi partnerships and continuing to provide the opportunities for tangata whenua to input meaningfully into the district plan review.
- (21) Secondly, the principle of active protection is another key aspect of the treaty principles demonstrated, as it seeks ways to deliver mixed and culturally dynamic communities in a sustainable way.

## 3.2 National Policy Statement for Renewable Electricity Generation 2011

- (22) Section 75(3)(a) of the RMA requires district plans to give effect to any national policy statement, including the National Policy Statement for Renewable Energy Generation 2011 (NPS-REG).

(23) The objective of the NPS-REG is:

To recognise the national significance of *renewable electricity generation activities*<sup>1</sup> 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*<sup>2</sup>.

(24) The policies of the NPS-REG give direction on:

- Recognising the benefits of renewable electricity generation activities,
- Acknowledging the practical implications of achieving New Zealand's target for electricity generation from renewable resources,
- Acknowledging the practical constraints associated with the development, operation, maintenance and upgrading of new and existing renewable electricity generation activities,
- Considering off-setting and compensation when considering residual adverse effects,
- Managing reverse sensitivity effects on renewable electricity generation activities,
- Incorporating provisions into district plan for:
  - Different forms of renewable electricity generation activities,
  - Small and community-scale renewable electricity generation activities,

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<sup>1</sup> The NPS-REG defines *renewable electricity generation activities* – means the construction, operation and maintenance of structure associated with *renewable electricity generation*. This includes small and community-scale distributed renewable electricity 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.

<sup>2</sup> The NPS-REG defines *renewable electricity generation* as generation of electricity from solar, wind, hydroelectricity, geothermal, biomass, tidal, wave, or ocean current energy sources.

- Enabling identification of renewable electricity generation possibilities, and
- Timeframes for implementation.

### **3.3 New Zealand Coastal Policy Statement**

(25) The New Zealand Coastal Policy Statement 2010 (NZCPS) sets out the objectives and policies in order to achieve the purpose of the RMA in relation to the coastal environment. Section s75(3)(b) of the RMA requires district plans to give effect to the NZCPS.

(26) The relevance of the objectives and policies of the NZCPS to renewable electricity generation activities is discussed below:

- Objective 6 and Policy 6:
  - Recognises that the protection of values of the coastal environment does not preclude development in appropriate places and forms.
  - Recognises the provision of infrastructure including the supply of energy are important to the social, economic, and cultural well-being of people and communities.
  - Recognises the coastal environment contains renewable energy resources of significant value which have potential to contribute to the energy needs of future generations.
- Policy 11 – Avoid adverse effects on certain categories of threatened or at risk indigenous taxa, ecosystems or vegetation types. Avoid other significant adverse effects on indigenous biodiversity and ecosystems.
- Policies 13 and 15 – Avoid adverse effects on outstanding coastal character and outstanding natural features and landscapes, where located in the coastal environment. Avoid significant adverse effects on other areas of coastal character, natural features and landscapes, where in the coastal environment.
- Policy 25 – Encourage infrastructure to not be located in areas which have potential to be affected by coastal hazard risk in the next 100 years.

### **3.4 National environmental standards**

(27) National environmental standards are regulations made under s43 of the RMA, and effectively function like rules in a district or regional plan. No national environmental standards are relevant for renewable electricity generation.

### **3.5 National Planning Standards**

(28) Section 75(3)(ba) of the RMA requires district plans to give effect to national planning standards.

(29) Key requirements of the National Planning Standards (from Standard 5) for renewable electricity generation are:

- Provisions relating to energy, infrastructure and transport that are not specific to the Special purpose zone chapter or sections must be located in one or more chapters under the Energy, infrastructure and transport heading (Standard 5).
- The chapters under the Energy, infrastructure and transport heading must include cross-references to any energy, infrastructure and transport provisions in a Special purpose zones chapter or sections.
- Zone chapters must include cross-references to relevant provisions under the Energy, infrastructure and transport heading.
- District plans are required to use the noise measurement methods and symbols set out in the New Zealand Standard 6808:2010 Acoustics – Wind farm noise.

### **3.6 Regional Policy Statement for the Wellington Region**

(30) Section 75(3)(c) of the RMA requires district plans to give effect to regional policy statements. The Regional Policy Statement for the Wellington Region (the RPS) identifies the significant resource management issues for the region and outlines the policies and methods required to achieve the integrated sustainable management of the region's natural and physical resources.

(31) The relevant objectives and policies of the RPS for renewable electricity generation are:

Section	Objective / Policy
Objective 9	<p>The region's energy needs are met in ways that:</p> <ul style="list-style-type: none"> <li>(a) improve energy efficiency and conservation;</li> <li>(b) diversify the type and scale of renewable energy development;</li> <li>(c) maximise the use of renewable energy resources;</li> <li>(d) reduce dependency on fossil fuels; and</li> <li>(e) reduce greenhouse gas emissions from transportation.</li> </ul>
Policy 7	<p>District and regional plans shall include policies and/or methods that recognise:</p> <ul style="list-style-type: none"> <li>(a) the social, economic, cultural and environmental benefits of regionally significant infrastructure including: <ul style="list-style-type: none"> <li>(i) people and goods can travel to, from and around the region efficiently and safely;</li> <li>(ii) public health and safety is maintained through the provision of essential services:- supply of potable water, the collection and transfer of sewage and stormwater, and the provision of emergency services;</li> <li>(iii) people have access to energy so as to meet their needs; and</li> <li>(iv) people have access to telecommunication services.</li> </ul> </li> <li>(b) the social, economic, cultural and environmental benefits of energy generated from renewable energy resources including:</li> </ul>

	<ul style="list-style-type: none"> <li>(i) security of supply and diversification of our energy sources;</li> <li>(ii) reducing dependency on imported energy resources; and</li> <li>(iii) reducing greenhouse gas emissions.</li> </ul>
Policy 11	<p>District plans shall include policies and/or rules and other methods that:</p> <ul style="list-style-type: none"> <li>(a) promote energy efficient design and the use of domestic scale (up to 20 kW) and small scale distributed renewable electricity generation (up to 100 kW); and</li> <li>(b) provide for energy efficient alterations to existing buildings.</li> </ul>
Policy 39	<p>When considering an application for a resource consent, notice of requirement or a change, variation or review of a district or regional plan, particular regard shall be given to:</p> <ul style="list-style-type: none"> <li>(a) the social, economic, cultural and environmental benefits of energy generated from renewable energy resources and/or regionally significant infrastructure;</li> <li>(b) protecting regionally significant infrastructure from incompatible subdivision, use and development occurring under, over, or adjacent to the infrastructure;</li> <li>(c) the need for renewable electricity generation facilities to locate where the renewable energy resources exist; and</li> <li>(d) significant wind and marine renewable energy resources within the region.</li> </ul>

### 3.6.1 Proposed RPS Change 1

- (32) Section 74(2)(a)(i) of the RMA requires territorial authorities, when preparing and changing their district plan, to have regard to any proposed regional policy statement. Greater Wellington Regional Council notified a proposed change to the RPS on 19 August 2022 (Proposed RPS Change 1). The Regional Council notified its decisions on Proposed RPS Change 1 in October 2024. However, as of the writing of this report, these decisions are still open to appeals.
- (33) Changes to the RPS proposed by this plan change which are of particular relevance to renewable electricity generation include:
- A new objective (CC.3) which seeks to support the global limiting of warming to 1.5 degrees Celsius,
  - An amendment to Policy 7 to refer to low and zero carbon infrastructure/energy, and
  - An amendment to Policy 11 amended to enable the installation (rather than only use) of domestic scale (up to 20 kW) and small scale distributed renewable electricity generation (up to 100 kW).

## 3.7 Natural Resources Plan for the Wellington Region

- (34) Under section 75(4)(b) of the RMA, a district plan must not be inconsistent with a regional plan for a matter specified in section 30(1) of the Act (which relates to functions of regional councils). There are a range of relevant objectives, policies and rules of the operative Natural Resources Plan (NRP) which are relevant to renewable electricity generation. These objectives include:
- Recognising the benefits of renewable electricity generation, and meeting the needs of present and future generations in appropriate ways;
  - Protecting renewable electricity generation activities from incompatible use and development occurring under, over, or adjacent to the infrastructure or activity;

- (35) A range of policies of the NRP are also relevant. These policies include:
- Giving particular regard to the benefits of renewable electricity generation;
  - Providing for the use, development, operation, maintenance, and upgrade of R renewable electricity generation activities are in appropriate places and ways;
  - Protecting renewable electricity generation activities from incompatible use and development occurring under, over or adjacent to it, by locating and designing any use and development to avoid, remedy or mitigate any reverse sensitivity effects.
- (36) The NRP does not include any rules that relate specifically to renewable electricity generation. However, the construction and development of new renewable electricity generating facilities (particularly larger scale facilities) may require resource consent under a regional plan (for example, for associated earthworks, discharges, or activities in the coastal marine area or beds of a waterbodies).

### **3.7.1 Proposed NRP Change 1**

- (37) Under section 74(2)(a)(ii) of the RMA, the Council shall have regard to any proposed regional plan in regard to any matter of regional significance for which the regional council has primary responsibility. Proposed Change 1 to the Natural Resources Plan includes the implementation of recommendations from Whaitua processes, and other regulatory amendments to the Natural Resources Plan. This plan change has been reviewed and these changes are not considered to be directly relevant to renewable electricity generation.

## **3.8 Iwi management plans**

- (38) Section 74(2A) requires territorial authorities, when preparing or changing a district plan, to take into account any relevant planning document recognised by an iwi authority and lodged with the territorial authority, to the extent that its content has a bearing on the resource management issues of the district.



- (39) In addition, iwi authorities may have other planning documents that, while not mandatory considerations for the District Plan Review, should still be taken into account for the Review as they are a source of information on the intentions of an iwi authority. And considering these documents can aid integrated management.
- (40) No iwi management plans or other iwi planning related documents address renewable electricity generation.

### **3.9 Other plans, policies, and strategies**

- (41) Section 74(2)(b)(i) of the RMA requires the Council to have regard to management plans and strategies prepared under other Acts. In addition, there are other Council plans, policies and strategies that should be considered when developing the District Plan as they set Council's intentions on matters that are considered relevant for the District Plan. Plans, policies and strategies which are relevant to renewable electricity generation activities are discussed below.
- (42) There are also national and regional plans, policies and strategies that should be considered in developing a district plan as it aides with integrated resource management.
- (43) The following plans, policies and strategies are relevant for renewable electricity generation:
- New Zealand Energy Efficiency and Conservation Strategy 2017–2022
  - New Zealand Infrastructure Strategy 2022–2052
  - New Zealand Urban Design Protocol 2005
  - Aotearoa New Zealand's First Emissions Reduction Plan 2022
  - Regional Emissions Reduction Plan | Te Mahere ā-Rohe Whakaheke Tukunga 2024–2030
  - The Lower Hutt Climate Action Pathway | Te Ara Whakamua o Te Awa Kairangi ki Tai
- (44) Council also has an Environmental Sustainability Strategy 2015–2045 and the Environmental Sustainability Implementation Plan. However, following the development of the Climate Action Pathway and the Interim Plan, these are now out of date and have not been considered in the preparation of this report.

### **3.9.1 New Zealand Energy Efficiency and Conservation Strategy 2017–2022**

- (45) The NZEECS sets the overarching policy direction for government support and intervention for promoting energy efficiency, energy conservation and the use of renewable sources of energy.
- (46) The strategy sets a goal for New Zealand to have an energy-productive and low-emissions economy with the following priority areas:
- Renewable and efficient use of process heat
  - Efficient and low-emissions transport
  - Innovative and efficient use of electricity (including a target of 90% of electricity to be generated by renewable sources by 2025).
- (47) The current NZEECS was due to expire in mid-2022. A replacement NZEECS has been in development since December 2021, however has not been completed at the time of writing this report.

### **3.9.2 New Zealand Infrastructure Strategy 2022–2052**

- (48) The NZIS is a nationwide strategy which takes a holistic and long-term view of infrastructure.
- (49) The strategy contains five strategic objectives to achieve the vision of a thriving New Zealand. This includes enabling a net-zero carbon emissions Aotearoa.
- (50) The strategy sets out that over the next 30 years significantly more low-emissions electricity generation will be required, and suggests that councils could identify renewable energy 'zones' in their regional spatial plans which would present fewer barriers to obtaining resource consent.

### **3.9.3 New Zealand Urban Design Protocol 2005**

- (51) The NZUDP is published by the Ministry for the Environment and seeks to provide a platform to make towns and cities more successful through quality urban design, including through incorporation of renewable energy sources and passive solar gain as an aspect of quality urban design.

(52) This document has been endorsed by HCC and is incorporated by reference in the Regional Policy Statement for the Wellington Region.

### **3.9.4 Emissions Reduction Plan 2022**

(53) The ERP is published by the Minister of Climate Change and contains strategies, policies and actions for achieving the first emissions budget.

(54) The plan:

- Sets the first emission reduction plan in achieving net zero by 2050,
- Identifies renewable electricity generation as a key component in meeting the targets and
- Sets aspiration for New Zealand to be 100% renewable energy sourced by the year 2030.

### **3.9.5 Regional Emissions Reduction Plan | Te Mahere ā-Rohe Whakaheke Tukunga 2024–2030**

(55) The RERP is published by the Wellington Regional Leadership Committee and outlines the strategic actions and shifts that will make the most difference to greenhouse gas emissions in the Wairarapa-Wellington-Horowhenua region.

(56) Energy is one of four areas of focus of the FERP, which identifies the need to decarbonise energy use, including the need to move towards using more renewable sources, and identifies a potential role for the WRLC in supporting small-scale distributed renewable energy generation like micro-grids.

### **3.9.6 The Lower Hutt Climate Action Pathway 2022 | Te Ara Whakamua o Te Awa Kairangi ki Tai**

(57) The Lower Hutt Climate Action Pathway sets a pathway for the city to achieve a zero emissions target. This includes where future effort should be targeted, to reduce transport, energy and waste emissions. Of particular relevance to renewable energy, an action includes exploring local renewable electricity generation.

## 3.10 Other legislation or regulations

- (58) In addition to the RMA, other legislation and regulations can be relevant considerations for a district plan, particularly where management of an issue is addressed through multiple pieces of legislation and regulatory bodies.
- (59) The following other legislation and regulations are relevant for renewable electricity generation:
- Climate Change Response Act 2002
  - Energy Efficiency and Conservation Act 2000

Act or Regulation	Comments
Climate Change Response Act 2002 <sup>1</sup>	<ul style="list-style-type: none"> <li>• Sets a domestic greenhouse gas emissions reduction target to reduce net emissions of all greenhouse gases (except biogenic methane) to zero by 2050, and emissions of biogenic methane.</li> <li>• Establishes a system of emissions budgets.</li> <li>• Requires the Government to develop and implement policies for climate change adaptation and mitigation.</li> <li>• Establishes an independent Climate Change Commission.</li> </ul>
Energy Efficiency and Conservation Act 2000	<ul style="list-style-type: none"> <li>• <i>Section 5 Purpose is to promote, in New Zealand, energy efficiency, energy conservation, and the use of renewable sources of energy.</i></li> <li>• Section 8 directs the preparation of the national energy efficiency and conservation strategy.</li> </ul>

<sup>1</sup> Including as amended by the Climate Change Response (Zero Carbon) Amendment Act 2009

# 4 Resource management issues

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## 4.1 Background

- (60) Renewable electricity generation is an important resource management issue as the use and development of renewable electricity resources can have significant local, regional and national benefits, including responding to climate change issues, while also having the potential to have significant adverse effects on the environment.
- (61) At a national level, Aotearoa has the goal (from the Emissions Reduction Plan 2022) of reducing emissions to net zero no later than 2050. The New Zealand Infrastructure Strategy outlines that we will need to build significantly more low-emissions electricity in order to decarbonise the economy and to provide sufficient supply for the future<sup>3</sup>.
- (62) Specific to Lower Hutt, the Council has set a goal of halving emissions by 2030, and reducing emissions to net zero by no later than 2050. The majority of emissions in Lower Hutt are a result of transportation emissions. However, secondary to this is stationary energy, with electricity consumption comprising 13% of total gross emissions in the city<sup>4</sup>. The use and development of renewable electricity generation can contribute to reducing greenhouse gas emissions from electricity generation and contributing to the net zero carbon goals at a national and city level.
- (63) While renewable electricity generation is influenced by a number of factors, the District Plan has a role to play, including through giving effect to higher level RMA documents. The NPS-REG provides national direction on recognising and providing for renewable electricity at different scales. The

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<sup>3</sup> <https://media.umbraco.io/te-waihanganga-30-year-strategy/mmahiykn/rautaki-hanganga-o-aotearoa-new-zealand-infrastructure-strategy.pdf>

<sup>4</sup>

[https://hccpublicdocs.azurewebsites.net/api/download/d2fb4e0b803d4d0fa42ae37edebc54d4/\\_sustainability/e3b067c072465c7044dc80a8a8abf40baac2](https://hccpublicdocs.azurewebsites.net/api/download/d2fb4e0b803d4d0fa42ae37edebc54d4/_sustainability/e3b067c072465c7044dc80a8a8abf40baac2)

RPS also includes objectives and policies for renewable electricity generation, with directive policies requiring district plan recognition of the social, economic, cultural and environmental benefits of energy generated from renewable energy resources and the promotion of the use of domestic scale and small scale distributed renewable electricity generation.

- (64) Despite the benefits that renewable electricity generation can have, these activities can also result in significant adverse effects. This can include amenity, landscape, ecological, cultural values, and traffic. A particular issue relating to renewable energy is that these effects can be experienced locally, while benefits may be achieved at a larger regional or national scale. Effects can also be long and short term, uncertain, and may not always be able to be avoided, remedied and mitigated.
- (65) Lower Hutt currently generates very little of its own electricity. The District Plan objectives, policies and rules for renewable electricity generation have only been in the Plan since June 2016 (introduced through Plan Change 34), and there is little resource consent or compliance information in relation to these provisions. No consent applications have been received since 2016. This indicates that there is not current market demand for these types of renewable electricity generation activities in the district at present (smaller-scale renewable electricity generation activities, such as rooftop solar panels or domestic wind turbines, can be permitted activities, so may not show in resource consent records).

## 4.2 Evidence base

- (66) Identification of the resource management issues has involved:
- A review of the Renewable Electricity Generation chapter of the operative District Plan,
  - A review of other district plans from the Wellington region,
  - A review of national and regional plans and strategies, particularly the National policy Statement on Renewable Electricity Generation and Regional Policy Statement for the Wellington Region (discussed in section 3 of this report),
  - A review of other council plans and strategies (discussed in section 3 of this report), and

- Community, stakeholder and Manage Whenua engagement, particularly through engagement on the draft District Plan (in 2023).

## 4.2.1 Existing approach of City of Lower Hutt District Plan

- (67) Renewable electricity generation is addressed in Chapter 14L of the District Plan. Chapter 14L was added to the District Plan by Plan Change 34, and has been operative since June 2016.
- (68) Section 14L 1.1 of the District Plan includes the following objectives:
- (a) *Provide for the development of renewable electricity generation that is designed located constructed operated maintained and upgraded so as to:*
    - (i) *Avoid remedy or mitigate adverse effects on the environment; and*
    - (ii) *Promote the local regional and national benefits of the use and development of renewable energy resources.*
  - (b) *Enable small-scale renewable energy generation and the identification and assessment of potential renewable energy sources and sites in appropriate locations within the City.*
- (69) The above objective responds to the identified issue of balancing conflicts between the effects of renewable energy generation, and its local, regional and national benefits. No information has been found to suggest this issue is no longer relevant.
- (70) Supporting provisions seek to provide for renewable electricity generation activities by enabling small-scale generation activities and investigation structures as permitted activities, subject to compliance for standards.
- (71) All community-scale or commercial-scale activities, and small-scale activities which do not comply with the standards, require resource consent, in most cases with a restricted discretionary activity status. Activities on heritage sites, or for wind generation activities which fail to comply with the noise standard NZS 6808:2010, are non-complying activities.

(72) As part of the District Plan Review, the effectiveness, efficiency, usability and overall appropriateness of the operative provisions have been assessed, and the following has been noted:

- The operative provisions have not been prepared in reference to the National Planning Standards, nor more recent policy direction concerning providing for renewable energy generation and reducing greenhouse emissions.
- Since 2016, there have been few applications for small-scale renewable electricity generation activities, and no applications for larger scale activities. This suggests there is currently little market demand.
- Although the provisions are largely untested, there is no information to suggest the operative provisions are presenting barriers to renewable electricity generation activities in Lower Hutt.

## 4.2.2 Analysis of other District Plans

(73) Current practice has been considered in respect of this topic, with a review undertaken of the following District Plans:

- Kāpiti Coast District Plan
- Proposed Porirua Proposed District Plan (decisions version)
- Proposed Wairarapa Combined District Plan
- Proposed Wellington District Plan

(74) A summary of key findings from the review of these plans is provided below:

### Structure

- All plans included renewable electricity generation as a separate chapter. However, two councils utilised a broader energy chapter which also contained provisions relating to energy transmission and the National Environmental Standard for Electricity Transmission Activities.
- Most plans did not apply zone provisions to renewable energy. However, there were a variety of approaches in terms of how overlays were addressed. One plan stated that the REG chapter provisions were the only ones to apply, with no overlay rules being applicable. Conversely, other plans contained a policy framework for



various overlays within the REG chapter, but with rules in overlay specific chapters also applying.

#### Objectives and policies

- Most councils split the policy and rule framework between small-scale, community and large-scale renewable electricity generation activities, providing definitions for these terms.
- Some objectives sought an increase in renewable electricity, or sought to move to a low-emissions economy, while others only sought to recognise the benefits of renewable energy.
- There was a split approach in terms of overlays. Some councils included policies that provided direction relating to activities inside and outside of identified overlays, while referencing any relevant policies from any other chapter. Others included assessment criteria applicable to all renewable electricity, or broader policies that were not specific to overlays.
- Most councils included a policy to avoid new large scale renewable electricity generation outside of the General Rural Zone and within specified overlays.

#### Rule framework

- Small-scale renewable energy was generally provided for as a permitted activity when outside of overlays (such as significant natural areas and outstanding natural landscapes) and where standards were met.
- Community-scale renewable energy was generally provided for as a restricted discretionary activity in certain zones and outside of overlays, or full discretionary in other zones (such as residential and open space zones) or where outside of overlays.
- Most councils included large-scale electricity generation as a discretionary activity in General Rural Zones, and non-complying activity in all other zones.
- Most councils focussed their rule framework on solar and wind renewable energy sources, including specific standards relating to the size and locations of structures and equipment (such as

maximum height standards). One council included specific rules and standards relating to in-stream hydro generation.

- The Proposed Wairarapa Combined District Plan specified non-renewable energy as a non-complying activity.

### **4.2.3 Advice from mana whenua**

(75) Council has engaged with mana whenua on the district plan review through the Kāhui Mana Whenua engagement group. No specific issues have been raised with regard to renewable electricity generation. However, mana whenua have provided advice on the sites and areas that are of significance to them. The values associated with these sites and areas have potential to be impacted by renewable electricity generation activities.

### **4.2.4 Stakeholder and community engagement**

(76) Council has primarily engaged with the community and other stakeholders through two rounds of engagement:

- The Shaping Your City engagement (2020), on issues and options for the District Plan Review, and
- The Draft District Plan engagement (2023), on a full draft of the plan that had been developed through the District Plan Review.

(77) Very little feedback was received on the Renewable Electricity Generation chapter. However, amendments were requested to:

- Address the transmission of renewable electricity (in addition to its generation), and
- Include references to the Electricity Industry Participation Code within the chapter.

### **4.2.5 Technical information/advice commissioned**

(78) As part of the District Plan Review, a review of the Draft District Plan with a specific focus on climate change issues was commissioned. The review, dated April 2024, considered the effectiveness of the draft provisions with regards to addressing emissions reduction and climate change

adaptation. Some key points of the review of particular relevance to renewable electricity generation include:

- The topic of renewable electricity generation is very highly impacted by Lower Hutt's and New Zealand's transition towards a net-carbon zero future.
- While New Zealand's electricity system relies heavily on renewable sources, energy-related emissions contribute significantly (40.6%) to New Zealand's gross greenhouse gas emissions, primarily through road transportation, manufacturing and construction. Without major expansion of the renewable electricity system, the ability to decarbonise buildings, transportation and industry will continue to be constrained.
- The report included feedback that the draft provisions could do more to recognise the benefits of renewable electricity generation in enabling the decarbonisation of industrial activities and transportation and supporting the transition to renewable energy sources to meet future demands (this feedback has informed revisions to policy REG-P1).
- The report suggested consideration of alternative or complementary approaches to the provisions including taking a more spatial approach in identifying appropriate locations for different scales and types of renewable electricity generation activities, considering requirements of minimum provision of renewable electricity generation for some activities, and providing for battery storage facilities.

## **4.3 Summary of issues analysis**

(79) Based on the above sources of information, including the statutory and strategic review in Section 3 of this report, the following key resource management issues have been identified:

### **4.3.1 Recognising the benefits of renewable electricity generation**

(80) Renewable electricity generation results in benefits, including:

- Maintaining or increasing electricity generation capacity and security,
- Using renewable natural resources instead of finite resources,
- The reversibility of adverse effects on the environment of some renewable electricity generation technologies; and
- Contributing to national and district carbon and renewable energy goals, including achieving net zero carbon by 2050.

(81) Higher order planning documents, including the National Policy Statement on Renewable Electricity Generation and Regional Policy Statement for the Wellington Region require that the benefits of renewable electricity generation are recognised.

### **4.3.2 Providing for renewable electricity generation**

(82) Construction of new renewable electricity generation activities is necessary, in order to meet net-zero carbon and renewable energy goals. District plans therefore need to include sufficient provisions to provide for these activities where appropriate, while recognising that renewable electricity generation has specific operational and functional requirements.

(83) Providing for renewable electricity generation needs to address the following:

- Renewable electricity generation activities can utilise a range of resources and be developed at a range of scales.
- Investigation, identification and assessment of renewable energy resources is often required to determine the feasibility of renewable electricity generation activities.
- Different types of renewable electricity generation activities have differing functional and operational requirements, which need to be recognised and provided for through the Proposed District Plan provisions and resource consent decision making.

(84) The National Policy Statement on Renewable Electricity Generation has a range of requirements relating to this issue. This includes requiring plans to include provisions for small, community-scale and investigation activities. The NPS also contains provisions relating to decision-makers having

regard to a range of practical constraints in relation to renewable electricity.

### **4.3.3 Adverse effects of renewable electricity generation activities**

- (85) Providing for the benefits of renewable electricity generation needs to be balanced with appropriate management of effects. Adverse effects from renewable electricity generation can include construction effects related to establishing or decommissioning the activity, landscape or visual effects related to the structures used, and operation effects such as noise. These effects can vary greatly according to the scale of the activity. Small-scale electricity generation for domestic purposes may have negligible adverse effects, whereas large-scale renewable electricity generation may have significant landscape or noise effects.
- (86) The sensitivity of environments to the adverse effects from renewable electricity generation can also vary greatly by location. The functional and operational needs of renewable electricity generation, including the need to locate where the resource is available, may require activities to be located in sensitive areas. Some activities may not be appropriate in urban environments or within overlays with identified values which are sought to be protected.

### **4.3.4 Adverse effects on renewable electricity generation activities**

- (87) Inappropriate subdivision, use and development, including intensification of activities, in the vicinity of renewable electricity generation activities can have reverse sensitivity effects which may result in constraints on its operation and use. This may result in adverse effects on the effective and efficient operation and consequently the local, regional and national benefits derived from it.
- (88) Both the NPS-REG and the RPS contain provisions that relate to avoiding reverse sensitivity effects on consented and existing renewable electricity generation activities, and protecting regionally significant infrastructure.

- (89) There are no existing or consented community-scale or large-scale renewable electricity generation activities within Lower Hutt.

# 5 Scale and significance assessment

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(90) This evaluation report must provide a level of detail that corresponds to the scale and significance of the environmental, economic, social, and cultural effects anticipated from the implementation of the proposal.

(91) In assessing that scale and significance we have had regard to:

Matters of national importance	<b>Moderate</b> - This topic involves matters of national significance in relation to RMA s6(a), (b), (c), (d), (e), (f) and (h) as renewable electricity generation activities may occur or be proposed within those areas with identified significant social, ecological or cultural values, or natural hazard risk.
Other matters	<b>High</b> - This topic is related directly to s7 matters. In particular, the benefits to be derived from the use and development of renewable energy (matter (j)). Other matters of relevance include the efficient use and development of natural and physical resources, the maintenance and enhancement of amenity values, and the maintenance and enhancement of amenity value (matters (b), (c) and (f)).
Degree of change from the operative plan	<b>Low/moderate</b> - The operative District Plan went through a plan change process in 2016 to give effect to the NPS-REG. The proposed District Plan introduces a slightly different zoning approach compared with the operative District Plan

	<p>(to implement the National Planning Standards). There is also the inclusion of a number of new overlays within the proposed District Plan. This means that changes are required to address how renewable electricity generation is addressed in these different zone and more sensitive areas.</p>
<p>Geographic scale of effects</p>	<p><b>Moderate</b> - Renewable electricity generation activities vary in type and scale. Small-scale renewable electricity generation activities would likely have effects limited to the immediate surrounding area, due to the small scale of the associated structures. Community-scale renewable electricity generation activities are larger in scale and may have wider effects on the environment. Large-scale commercial renewable electricity activities have the potential to have significant adverse effects on a large geographic area, due to large structures (e.g. wind turbines) often located in visually prominent areas in order to access the renewable energy resource. However, it is likely there is limited demand for large-scale facilities within Lower Hutt.</p>
<p>Number of people affected</p>	<p><b>Moderate</b> - Given the above in terms of the range of scales and types of renewable electricity generation activities, the potential number of people affected (including through positive effects) has the potential to be moderate.</p>



Duration of effects	<b>Moderate</b> – Given the above in terms of the range of scales and types of renewable electricity generation activities, the duration of effects can be short (associated with construction activities) or long-term through the operation of the facilities.
Economic impacts	<b>Moderate</b> – Small-scale or domestic renewable electricity generation may result in cost-savings for households. Community-scale or large-scale generation, provide opportunities for increased diversity and security in electricity supply, as well as cost-savings, which can support economic activity. Given the demand for large-scale renewable electricity generation within Lower Hutt is likely to be low, significant economic impacts are not expected.
Social and cultural impacts	<b>Low/moderate</b> – There will generally be little to no impacts on social cohesiveness or cultural values, except where activities are located on sites or areas of significance to Māori or historic heritage.
Environmental impacts	<b>Moderate</b> – Can contribute to a reduction in energy related greenhouse gas emissions, but also can have adverse impacts on amenity and landscape values and other effects. These may be limited (e.g. for small-scale, domestic activities such as solar panels attached

	to a building) or may be significant when related to large-scale activities.
Health and safety impacts	<b>Low</b> – Neither small-scale or larger scale renewable electricity generation activities are expected to have any notable impact on the health and safety of people and communities.
Degree of interest from Mana Whenua	<b>Moderate</b> – Mana Whenua have not expressed a particular interest in this topic. However, renewable electricity generation activities can take place in locations with particular values that Mana Whenua have expressed an interest in, including in natural landscape areas, coastal and riparian margins, and other sites and areas of significance to Māori.
Degree of interest from the public	<b>Low</b> – Few submissions were received on the Draft District Plan, and as noted above the demand for large-scale renewable electricity generation within Hutt City is likely to be low. However, if there were any large-scale activities proposed there would likely be a higher interest from the public.
Degree of risk or uncertainty	<b>Low</b> – The degree of risk and uncertainty is relatively low due to the certainty provided by well-understood potential effects, and the approach taken for their management in the proposed provisions.

(92) Accordingly, the overall scale and significance of the effects of Renewable Electricity Generation are **moderate**.

# 6 Proposed District Plan objectives and provisions

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## 6.1 Overview of proposed provisions

(93) The proposed provisions are set out in detail in the proposed District Plan, which should be read in conjunction with this evaluation report.

(94) The REG chapter includes two objectives:

- **REG-O1 – Benefits of renewable electricity generation**

*The local, regional and national benefits from the use and development of renewable electricity generation are recognised.*

- **REG-O2 – Providing for renewable electricity generation**

*Renewable electricity generation activities, and the identification and assessment of potential renewable electricity sources are able to establish and operate in appropriate locations within Lower Hutt while:*

1. *Managing adverse effects on the environment, and*
2. *Recognising their practical constraints including those arising from their functional needs, operational needs and technical requirements.*

(95) To implement these objectives, ten policies are proposed that address the following matters:

- Recognising the benefits of renewable electricity generation (REG-P1),
- Guidance for the consideration of adverse effects of renewable electricity generation (REG-P2),
- Operating, maintaining and repairing renewable electricity generation activities (REG-P3),
- Renewable electricity generation investigation activities (REG-P4),
- Upgrading and developing renewable electricity generation activities (REG-P5), and

- Particular matters for upgrading and developing renewable electricity generation activities in sensitive locations (REG-P6 to REG-P10).

(96) These policies are implemented through seven rules on:

- Maintenance and repair of renewable electricity generation activities (REG-R1),
- Renewable electricity generation investigation activities (REG-R2),
- Upgrading, developing and operating small-scale renewable electricity generation activities (REG-R3 to REG-R4),
- Upgrading, developing and operating community-scale renewable electricity generation activities (REG-R5 to REG-R6), and
- Upgrading, developing and operating large-scale renewable electricity generation activities (REG-R7).

### **Note on the relationship of the proposed Renewable Electricity Generation chapter with other proposed chapters**

(97) For the most part, the REG chapter is a “one-stop-shop” for renewable electricity generation activities, with these activities mostly precluded from the provisions of other chapters including district-wide chapters. The REG chapter includes provisions for where renewable electricity generation activities are located in overlays such as coastal natural character, outstanding natural features, natural hazards or sites and areas of significance to Māori. Renewable electricity generation activities are precluded from the provisions in the chapters for these overlays (although the objectives of these chapters would still be relevant).

(98) For structures, the provisions of the REG chapter only apply to the renewable electricity generating structure (such as the wind turbine, solar panel and supporting structures). They do not apply to other buildings that these structures may be mounted to, and do not apply to ancillary buildings (such as maintenance and service buildings that may be associated with community or large-scale generation activities). For such buildings, the provisions within the relevant zone chapter, as well as any relevant district-wide chapter would apply.

# 7 Evaluation of objectives

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- (99) This section is the evaluation of objectives, as required through s32(1)(a) of the RMA.
- (100) An objective is a statement of what is to be achieved through the resolution of a particular resource management issue. A district plan objective should set out a desired end state to be achieved through the implementation of policies and rules.
- (101) Under s75(1)(a) of the Resource Management Act, a district plan must state the objectives for the district.
- (102) Under s32(1)(a) of the Resource Management Act, an evaluation report required under the Act must examine the extent to which the objectives of the proposal being evaluated are the most appropriate way to achieve the purpose of the RMA. The purpose of the RMA, as stated in s5(1) of the Act, is to promote the sustainable management of natural and physical resources.

## 7.1 Evaluation of Objective REG-O1 and REG-O2

### **REG-O1 – Benefits of renewable electricity generation**

*The local, regional and national benefits from the use and development of renewable electricity generation are recognised.*

### **REG-O2 – Providing for renewable electricity generation**

*Renewable electricity generation activities, and the identification and assessment of potential renewable electricity sources are able to establish and operate in appropriate locations within Lower Hutt while:*

- 1. Managing adverse effects on the environment, and*
- 2. Recognising their practical constraints including those arising from their functional needs, operational needs and technical requirements.*

**Relevance**

- REG-O1 directly aligns with issue 4.3.1 (on the benefits of renewable electricity generation). It gives effect to section 7(j) of the RMA, which requires particular regard to be given to “the benefits derived from the use and development of renewable energy”. It also gives effect to Policy A of the NPS-REG, through the recognition of the benefits of electricity generation.
- REG-O2 directly aligns with issues 4.3.2 and 4.3.3, by seeking an outcome to provide for renewable electricity generation, address adverse effects, and recognise the practical constraints of the activity including its operational and functional needs. Recognising the practical constraints of renewable electricity generation activities also gives effect to Policy C1 of the NPS-REG.

**Usefulness**

- REG-O1 provides clarity for decision-makers when considering a resource consent application under section 104, in that benefits of from renewable electricity generation are to be recognised.
- REG-O2 clearly identifies the extent of activities which are sought to be provided for while recognising the need for activities to locate in appropriate locations. It also recognises the practical constraints of renewable electricity generation activities are relevant when considering their adverse effects.
- The proposed objectives assist the Council in undertaking its functions under section 31, as it related to the management of effects of use, development or protection of land for the purpose of renewable electricity generation.

**Reasonableness**

- The proposed objectives do not create unreasonable costs for the community, as they seek to recognise the benefits of, and provide for all scales of, renewable electricity generation.

**Achievability**

- The outcome sought by REG-O1 can be achieved, noting that it relates to recognising benefits.
- The outcomes sought by REG-O2 can be achieved, if implemented by provisions which provide clear direction on the appropriate locations for renewable electricity generation activities, and which help to balance the provision for these activities and recognising their constraints while managing their adverse effects.
- The outcome sought by the proposed objectives can be achieved without imposing a significant regulatory burden on people undertaking land use and development under the District Plan (although the policies and rules that implement the objective would have a greater influence on this).

## Alternatives

- **Status quo**

The objective within the Renewable energy generation chapter of the operative District Plan is as follows:

**Objective 14L 1.1 –**

- a. *Provide for the development of renewable energy generation that is design located constructed operated maintained and upgraded so as to:*
  - i. *Avoid remedy or mitigate adverse effects on the environment; and*
  - ii. *Promote the local regional and national benefits of the use and development of renewable energy resources.*
- b. *Enable small-scale renewable energy generation and the identification and assessment of potential renewable energy sources and sites in appropriate locations within the City.*

The main differences between the proposed objectives and the operative objective is in their respective approaches with regard to the benefits of renewable energy/electricity generation activities, managing adverse effects, and small-scale activities.

With regards to the benefits of renewable electricity, the status quo approach is not proposed as promoting the benefits of renewable electricity generation is a weaker outcome than recognising and providing for the benefits (Policy A of the NPS-REG). Having a standalone objective for recognising the benefits of renewable electricity generation provides clear direction and clarity for decision makers.

With regard to managing effects, the status quo approach is not proposed as the direction on managing effects in the operative objective is too directive. It does not account for the practical constraints of renewable electricity generation (Policy C of the NPS-REG). Some adverse effects on the environment may be acceptable when considered within the constraints and benefits of the activity.

The status quo approach with regards to enabling small-scale renewable electricity generation as a sub-clause in an objective is not proposed, as this is a means to achieve the desired outcomes and is better to be addressed within the policies.

- **Targets for increased renewable electricity generation**

This alternative would be to include targets for increased renewable electricity generation within Lower Hutt. This approach would align with national and regional targets around increasing renewable energy generation and decarbonising energy use.

The alternative is not proposed as increases to renewable electricity generation, are subject to factors, such as market demand and costs, which are beyond the control of the District Plan. Therefore, such a target within an objective might not be possible to be implemented through provisions in the District Plan. The approach taken has been to focus on the factors which can be influenced by the District Plan. This includes

objectives which recognise and provide for the benefits of renewable electricity generation which will help ensure regulatory barriers are not onerous.

- **An objective for reverse sensitivity**

This alternative would comprise the inclusion of an objective which responds to Issue 4.3.4 (Adverse effects on renewable electricity generation activities).

This alternative is not proposed as there are no existing or consented community or large-scale renewable electricity generation activities. As no such activities have been established it is not feasible to anticipate the nature or location of potential interface issues, and is not reasonable to unnecessarily constrain other use and development on the anticipation of future renewable electricity generation activities becoming established. This approach is consistent with the NPS-REG (Policy D) which refers specifically to avoiding reverse sensitivity effects on consented and existing renewable electricity generation activities.

There is not a need to manage reverse sensitivity effects in relation to small-scale renewable electricity generation activities due to the small scale of effects of such activities.

#### **Summary**

Objectives REG-O1 and REG O2 set clear outcomes for providing for renewable electricity generation activities and managing adverse effects, which respond to the identified issues and give effect to relevant direction of the NPS-REG.

It is not unreasonable to seek to provide for the benefits of renewable electricity generation, and the objectives are achievable if supported by appropriate implementing provisions.



# 8 Evaluation of Policies and Rules

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- (103) Policies and rules implement, or give effect to, the objectives of a plan.
- (104) Policies of a district plan are the course of action to achieve or implement the plan's objective (i.e. the path to be followed to achieve a certain, specified, environmental outcome). Rules of a district plan implement the plan's policies, and have the force and effect of a regulation.
- (105) Under s32(1)(b) of the Resource Management Act, an evaluation report required under the Act must examine whether the provisions in the proposal are the most appropriate way to achieve the objectives by—
- (i) *identifying other reasonably practicable options for achieving the objectives; and*
  - (ii) *assessing the efficiency and effectiveness of the provisions in achieving the objectives; and*
  - (iii) *summarising the reasons for deciding on the provisions.*
- (106) Under s32(2) of the Resource Management Act, the assessment of the efficiency and effectiveness of the provisions must:
- (a) *identify and assess the benefits and costs of the environmental, economic, social, and cultural effects that are anticipated from the implementation of the provisions, including the opportunities for—*
    - (i) *economic growth that are anticipated to be provided or reduced; and*
    - (ii) *employment that are anticipated to be provided or reduced; and*
  - (b) *if practicable, quantify the benefits and costs referred to in paragraph (a); and*

- (c) *assess the risk of acting or not acting if there is uncertain or insufficient information about the subject matter of the provisions.*

## **Structure of this evaluation**

(107) The evaluation of policies and rules is grouped as follows:

- Provisions for all scales of renewable electricity generation activities – provisions for the development, upgrade, operation, maintenance and repair of all scales of renewable electricity generation activities:
  - REG-P1 Benefits of renewable electricity generation
  - REG-P2 Consideration of the adverse effects of renewable electricity generation activities
  - REG-P3 Operating, maintaining and repairing renewable electricity generation activities
  - REG-P5 Upgrading and developing renewable electricity generation activities
  - REG-R1, REG-R3 to REG-R7
- Upgrading and developing of renewable electricity generation activities in sensitive areas:
  - REG-P6 Upgrading and developing renewable electricity generation activities in natural hazard overlays
  - REG-P7 Upgrading and developing renewable electricity generation activities in coastal margins and riparian margins
  - REG-P8 Upgrading and developing renewable electricity generation activities, in the coastal natural character areas
  - REG-P9 Upgrading and developing renewable electricity generation activities, in Outstanding Natural Features and Outstanding Natural Landscapes
  - REG-P10 Upgrading and developing renewable electricity generation activities, in sites and areas of significance to Māori, and heritage areas and sites containing heritage buildings or heritage structures
  - REG-R3 to REG-R7
- Renewable electricity generation investigation activities:
  - REG-P4 Renewable electricity generation investigation activities

- REG-R2

(108) Where relevant, the evaluation of impacts on opportunities for economic growth and employment (as required under s32(2)(a) of the RMA) is provided alongside the evaluation of other benefits and costs.

### **Quantification of benefits and costs**

(109) Section 32(2)(b) of the RMA requires that benefits and costs be quantified if practicable.

(110) Specific quantification of benefits and costs associated with the proposed District Plan is considered neither practicable nor readily available, in part due to the wide range of types of activities covered by this chapter and the wide range of locations where the activities may take place (both of which impact the type and scale of benefits and costs). In general, a qualitative assessment of costs and benefits associated with the proposed District Plan is considered sufficient, and this is provided for in the below evaluation of policies, rules and other methods. Where practicable and considered appropriate to supporting the evaluation, some of the benefits or costs associated with the proposed District Plan have been quantified.

### **Risk of acting / not acting if information is uncertain or insufficient**

(111) The evidence base which has informed the proposed provisions is identified in section 4.2 of this report. There is a degree of uncertainty as there are no existing or consented community or large-scale renewable electricity generation activities in Lower Hutt. However, such activities have been established in the wider region, and the NPS-REG provides direction as to how to manage the relevant issues. To the extent that any information is uncertain or insufficient, the risk of not acting may be that the benefits of renewable electricity generation activities are not fully realised, or adverse effects are not appropriately managed.

## 8.1 Evaluation of general provisions for renewable electricity generation activities

- (112) These provisions collectively address the development, operation, maintenance, repair and upgrading of all scales of renewable electricity generation activities.
- (113) REG-P1 identifies the benefits of renewable electricity generation activities which should be recognised and which should inform decision making. This policy is implemented through rules REG-R1 to REG-R7.
- (114) REG-P2 provides direction for the consideration in resource consent applications of the adverse effects of renewable electricity generation activities. This policy is implemented through rules REG-R2 to REG-R7.
- (115) REG-P3 is to enable the operation, maintenance and repair of renewable electricity generation activities, and provides direction on managing adverse effects. This policy is implemented through rules REG-R1 (maintenance and repair) and REG-R3 to REG-R7 (operation).
- (116) REG-P5 provides for the upgrading and developing of all scales of renewable electricity generation activities. This policy is implemented through rules REG-R3 to REG-R7.
- (117) Rules which implement these policies include:
- REG-R1 Maintenance and repair of renewable electricity generation activities
  - REG R3 Upgrading, developing and operating small-scale renewable electricity generation activities – Roof-mounted structures
  - REG-R4 Upgrading, developing and operating small-scale renewable electricity generation activities – Freestanding structures
  - REG-R5 Upgrading, developing and operating community-scale renewable electricity generation activities – roof-mounted structures
  - REG-R6 Community-scale renewable electricity generation activities not otherwise provided for

- REG-R7 Upgrading, developing and operating large-scale renewable electricity generation activities

(118) Rules REG-R3 to REG-R6 identify standards for which compliance is required for permitted activities. These include standards REG-S3 to REG-S6 which specify size and location requirements for solar panels and wind turbines.

- **REG-P1 Benefits of renewable electricity generation**
- **REG-P2 Consideration of the adverse effects of renewable electricity generation activities**
- **REG-P3 Operating, maintaining and repairing renewable electricity generation activities**
- **REG-P5 Upgrading and developing renewable electricity generation activities**
- **REG-R1 Maintenance and repair of renewable electricity generation activities**
- **REG-R3 Upgrading, developing and operating small-scale renewable electricity generation activities – Roof-mounted structures**
- **REG-R4 Upgrading, developing and operating small-scale renewable electricity generation activities – Freestanding structures**
- **REG-R5 Upgrading, developing and operating community-scale renewable electricity generation activities – Roof-mounted structures**
- **REG-R6 Community-scale renewable electricity generation activities not otherwise provided for**
- **REG-R7 Upgrading, developing and operating large-scale renewable electricity generation activities**

**Why these provisions are included in the proposed District Plan**

These provisions implement REG-O1 and REG-O2 and ensure that the adverse effects of renewable electricity generation activities will be appropriately managed, while recognising and providing for their benefits.

**Efficiency and effectiveness**

**Benefits**

- Supports increases to the diversity and security of electricity supply, localised energy production and opportunities for lower costs in electricity supply, all of which support economic growth.
- Providing for the benefits of community-scale renewable electricity generation supports social cohesiveness.

- Providing for the generation of electricity from local and renewable sources, supports reductions in greenhouse gas emissions produced from the generation, supply and consumption of energy.
- Gives effect to the NPS-REG, particularly with regard to providing for the national significance of renewable electricity generation activities (Policy A) and incorporating provisions for small and community scale renewable electricity generation activities (Policy F).

### **Costs**

- The provisions which apply to renewable energy generation structures will in some instances be more permissive than the provisions for structures for the underlying zone. There will be some adverse effects on the environment, such as on amenity values, from these structures.
- The rule for large-scale renewable electricity generation activities, is effectively a catch-all for all activities which are not small-scale or community-scale. Therefore REG-R7 applies to a potentially broad range of activities which will have potentially higher consenting costs, particularly if located outside rural environments.

### **Overall assessment**

The provisions will be effective in implementing the REG-O1 and REG-O2, in that REG-P1 clearly identifies the benefits of renewable electricity generation activities, and the other provisions provide for these benefits either as permitted activities, or through a consenting pathway to ensure appropriate consideration is also given to the effects on the environment.

The three-tiered approach (small-scale, community-scale and large-scale) approach to providing for renewable electricity generation activities, and the requirements in some rules for compliance with standards, will ensure that any consenting requirements are closely related to the potential scale of adverse effects on the environment.

### **Reasonably practicable alternatives**

- **Status quo**

The operative District Plan includes a Renewable Energy Generation chapter. Provisions of the chapter enable operation and maintenance of existing renewable energy generation facilities as permitted activities. The chapter does not provide specific rules for renewable energy generation which is small-scale, or community-scale within urban environments. Instead, specific facilities such as solar panels and wind turbines are enabled as permitted activities subject to compliance with standards. Community-scale renewable energy generation in the rural environment, and all commercial-scale renewable energy generation requires resource consent outright. There is a catch-all rule for activities not otherwise provided for.

The status quo is not proposed as the proposed approach provides more clarity to the status of small-scale and community-scale activities as well as allowing targeting of provisions to each of these scales of activities. Both small-scale and community-scale activities are subject to the same standards for structures, however community-scale, unlike small-scale activity, has no restriction on the number of turbines per site. This is because there may be a greater tolerance or acceptability of the effects of these structures, when the benefits are more diffused within the community. However, community-scale wind generation is subject to compliance with the wind farm noise standard.

- **Provisions by generation type**

This alternative would comprise structuring the rules to address specific categories of electricity generation such as solar, wind and hydro. The rationale for this approach is that it would allow provisions to be targeted to address the effects of each type of activity.

The alternative is not proposed as the use of standards (such as for freestanding wind turbines or roof-mounted solar panels) allows for the proposed provisions to adequately target the effects of different types of electricity generation. These rules and standards focus on wind and solar power as being the most likely renewable electricity generation activities to occur in Lower Hutt, however they include adequate catch-all cross-references to the standards for the underlying zone for any other freestanding structures. The three-tiered approach in the rules which targets small, community and large-scale activities, allows for the chapter provisions to more effectively align with the NPS-REG.

## 8.2 Evaluation of provisions for renewable electricity generation activities in sensitive areas

- (119) These provisions provide specific direction for renewable electricity generation activities located in sensitive areas. Each of REG-P6 to REG-P10 provides direction for new or upgraded renewable electricity generation activities located in one of six categories of spatially defined areas. Each of REG-R3 to REG-R7 identifies the activity status which applies to new or upgraded renewable electricity generation activities, including whether this varies depending on its location. Standards may also have particular requirements for locating within some of these areas.
- (120) REG-P6 provides direction for renewable electricity generation activities located in natural hazard areas which are spatially defined as overlays. This includes specific guidance to avoid increases to natural hazard risk within high hazard areas, which is implemented through the activity statuses in the rule table. The direction in the policy in relation to the Overland Flow and Stream Corridor overlays is implemented through requirements in the standards, and is intended to manage effects related to structures obstructing and displacing flood water.
- (121) REG-P7 provides direction in relation to coastal margins and riparian margins which are defined in the PDP and represented in the mapping for the proposed District Plan. This policy is implemented through requirements in the standards which control freestanding structures which are located in these margins.
- (122) REG-P8 provides direction in relation to coastal natural character areas which are spatially defined as overlays. The direction in this policy is implemented primarily through the activity statuses in the rules, and is intended to give effect to the relevant avoid directives of the NZCPS. The policy is also implemented through requirements in the standards.
- (123) REG-P9 provides direction in relation to outstanding natural features and landscapes which are spatially defined as overlays. The direction in this policy is implemented primarily through the activity statuses in the rules,



and is intended to give effect to the relevant avoid directives of the NZCPS. The policy is also implemented through requirements in the standards.

- (124) REG-P10 provides direction in relation to historic heritage and sites and areas of significance to Māori. These areas may be spatially defined as overlays, or otherwise include sites which contain scheduled buildings or features. The policy is primarily implemented through the activity statuses in the rules, but there are also some requirements in the standards.

- **REG-P6 Upgrading and developing renewable electricity generation activities in natural hazard overlays**
- **REG-P7 Upgrading and developing renewable electricity generation activities in coastal margins and riparian margins**
- **REG-P8 Upgrading and developing renewable electricity generation activities, in the coastal natural character areas**
- **REG-P9 Upgrading and developing renewable electricity generation activities, in Outstanding Natural Features and Outstanding Natural Landscapes**
- **REG-P10 Upgrading and developing renewable electricity generation activities, in sites and areas of significance to Māori, and heritage areas and sites containing heritage buildings or heritage structures**
- **REG-R1 and REG-R3 to REG-R7 (in relation to their application to sensitive areas)**

**Why these provisions are included in the proposed District Plan**

These provisions help implement the objectives, especially clause 1 of REG-O2 (managing adverse effects on the environment). Each of these policies also help to implement objectives in district-wide chapters with regard to the specific outcomes sought for the areas addressed by those objectives.

**Efficiency and effectiveness**

**Benefits**

- Supports the protection of identified values within specified overlays and other significant sites and areas.
- Recognises that renewable electricity generation activities may have functional and operational requirements to locate in sensitive areas. The provisions provide for the benefits of these activities in these locations where the effects can be suitably managed.
- These benefits include reduced impacts of greenhouse gas emissions, and economic benefits related to increased supply, diversity, security and localisation of electricity supply.

- Managing the effects of renewable electricity generation on natural hazard risk supports the health, safety and wellbeing of peoples and communities.
- Managing the effects of renewable electricity generation on values of the areas identified contributes to recognising and providing for the matters of national importance identified in s6 of the RMA, including in relation to natural character, outstanding natural features and landscapes, the relationship of Māori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga, and historic heritage. This also contributes to implementing direction from the RPS on these matters.
- Provides certainty to individuals, communities or network utility operators with regard to consenting requirements for renewable electricity generation activities in each specified overlay or significant site or area.

### **Costs**

- Given the functional and operational needs of renewable electricity generation activities to be located in the areas identified, some adverse effects will be enabled. There will be some changes to the quality of the environment resulting from the new or upgraded renewable electricity generation activities.
- Where, due to these provisions, renewable electricity generation activities are not able to or is disincentivised from locating in the areas identified, there may be a loss to people and communities from the benefits that may have otherwise been provided to their social and economic wellbeing.
- There may be some ambiguity as to how to “thread the needle” between providing for the benefits of renewable electricity generation activities and the direction to avoid some adverse effects where there is a need to locate in particularly sensitive environments.

### **Overall assessment**

The provisions are effective in balancing the outcome expressed in sub-clause 1 of REG-O2 (managing adverse effects) and relevant objectives in other district-wide chapters concerned with managing effects within overlays and other significant sites and areas, with the need to recognise and provide for the benefits of renewable electricity generation activities (REG-O1 and REG-O2), including recognising their functional and operational needs. It is inevitable there will be some tension between providing for these outcomes, but the provisions along with REG-P2 provide direction on how to manage this tension.

Both rules and standards are used to determine consenting requirements where renewable electricity generation activities is located within sensitive locations. This approach ensures that consenting requirements are efficiently focused with regard to both the sensitivity of the location and the scale of the activity and its effects.

## Reasonably practicable alternatives

- **Status quo**

Under the operative District Plan, activities which are provided for in the Renewable Energy Generation chapter are not excluded in any way from the provisions of other district-wide chapters which cover matters including historic heritage and natural hazards. The operative District Plan does not identify coastal natural character areas or outstanding natural features or landscapes.

The status quo approach is not proposed as excluding renewable electricity generation activities from some provisions of other district-wide chapters in favour of containing relevant provisions for overlays within the REG chapter provides more clarity and direction around balancing providing for the benefits of these activities while managing their adverse effects on the features of the overlay. This approach aligns with the NPS-REG as it the provisions within the REG chapter recognise the practical constraints of renewable electricity generation activities, which includes their functional needs to locate where the renewable electricity source is available.

- **Extending preclusions to district-wide chapter provisions**

The activities which are provided for in the REG chapter are not proposed to be excluded from all district-wide provisions. For example, renewable electricity generation activities which alter or remove a historic heritage building or a notable tree, are still subject to the provisions of the Historic Heritage and Notable Trees chapters. An alternative approach would be more comprehensive exclusions from these and other district-wide chapters.

The reason this approach is not proposed, is because activities result in significant and direct effects on the value of the feature, such as removing heritage buildings or notable trees, which may be difficult to avoid or minimise, are best addressed through the provisions of those district-wide chapters.

## 8.3 Evaluation for renewable electricity generation investigation activities

- (125) The provisions evaluated below specifically address renewable electricity generation investigation activities, including activities located within sensitive locations.
- (126) REG-P4 provides direction on how effects of renewable electricity generation investigation activities are to be managed, based on where they are located. This includes through controlling the size of structures, limiting the duration of activities and restoring sites to pre-works conditions.
- (127) REG-P4 is implemented by REG-R2. Under REG-R2, renewable electricity generation investigation activities which comply with standards controlling the size of structures and the duration of activities, and where sites are restored to pre-works condition following cessation of the activity, are enabled as permitted activities regardless of the location.
- (128) Activities which do not comply with the permitted activity rule, require resource consent, with the activity status determined by location (whether or not is within an overlay or other significant site or area).

- **REG-P4 Renewable electricity generation investigation activities**
- **REG-R2 Renewable electricity generation investigation activities**

### Why these provisions are included in the proposed District Plan

These provisions implement REG-O2, specifically through enabling the *"identification and assessment of potential renewable electricity sources"*.

### Efficiency and effectiveness

#### Benefits

- Enables the investigation of new opportunities for establishing renewable electricity generation activities from which social and economic benefits may be derived.
- Allows for information gathering including with regard to the potential adverse effects of renewable electricity generation activities, before the activity is permanently established.

- Avoids or minimises adverse effects on the environment through provisions to limit the duration of activities and to restore sites to pre-works conditions after the activity has ceased.
- Provides clear and simple consenting requirements for renewable electricity generation investigation activities for all locations.

### **Costs**

- Enables adverse effects from structures such as anemometers up to 80m in some locations. These structures will have non-permanent adverse effects on landscape and visual amenity values. In some locations, these structures may be in place for up to five years.
- There would be some economic costs associated with regulation of these activities, including consenting costs and potential costs of an activity not taking place if resource consent requirements discourage the activity.

### **Overall assessment**

The provisions are effective in supporting REG-O2 as they enable the identification and assessment of potential renewable electricity sources while managing their adverse effects on the environment. The provisions are efficient as the consenting requirements are targeted to those activities which will have non-permanent adverse effects on the environment.

### **Reasonably practicable alternatives**

- **Status quo**

Under the Renewable Energy Generation chapter of the operative District Plan, temporary assessment and research structures within Rural, Recreation and Business (industrial) zones are enabled as permitted activities subject to compliance with standards including for height of structures, duration of activities and restoring sites to pre-works conditions.

The proposed provisions are generally consistent with the status quo, so far as it relates to renewable electricity generation investigation activities located in the General Rural Zone. However, the proposed provisions are generally more enabling, with renewable electricity generation investigation activities provided for as permitted activities in all locations, albeit with variability in the maximum permitted height of structures. This approach recognises the potential for renewable electricity generation activities in all environments, while recognising the acceptability of effects will vary between these environments.

- **Not permitting investigation activities in sensitive locations**

This alternative would comprise not providing a permitted pathway for renewable electricity generation investigation activities to locate in some sensitive locations such as Outstanding Coastal Natural Character Areas. The rationale for this approach would be to have greater control over effects on

matters of national importance to better align with national policy direction as well as objectives in other district-wide chapters of the proposed District Plan.

This alternative is not proposed as the controls necessary to achieve a permitted activity status should be effective in avoiding non-transitory adverse effects on the values or features of these overlays, whereby these values and features will be adequately protected. This includes a maximum duration of six months for structures, and the requirement that the site be restored to pre-works condition after the activity has ceased.

- **More extensive controls on structures**

The proposed provisions include controls on the maximum height of structures (between 20 – 80m), and setbacks and height in relation to boundary (with the standards of the underlying zone applicable). An alternative would be to include additional controls such as on the diameter or footprint of the structure.

Such additional controls are not necessary, as the use of such structures and the requirement and the control on duration, will naturally limit their size. The boundary controls will provide a suitable buffer of effects from adjoining properties and the wider environment.

## 9 Summary

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(129) This report has been prepared to set the context for the Renewable Electricity Generation chapter of the proposed District Plan. The evaluation has been undertaken in accordance with section 32 of the RMA in order to identify the need, benefits and costs and the appropriateness of the proposed chapter, having regard to its effectiveness and efficiency relative to other means in achieving the purpose of the RMA. The evaluation demonstrates that this proposal is the most appropriate option as it:

- Recognises and provides for the benefits of renewable electricity generation,
- Manages the adverse effects of renewable electricity generation and investigation activities, including where located within specified overlays or natural hazard areas, and
- Provides for small-scale and community-scale renewable electricity generation activities, and recognises the practical constraints of undertaking renewable electricity generation activities, to give effect to the National Policy Statement for Renewable Electricity Generation.