Appendix A: Updated officer's recommended amendments to the REG - Renewable Electricity Generation chapter

Note the below provisions represent the Section 42A Report Writing Officer's recommended amendments to the provisions of the Proposed District Plan, in response to submissions (with red underline used for new text and ~~red strikethrough~~ for deleted text as recommended in the section 42A report, and purple underline used for new text and ~~purple strikethrough~~ for deleted text as recommended in the addendum to the section 42A report).

Overview

Safe and efficient delivery of electricity is essential for economic, social and cultural well-being of the Kaipara District. The Kaipara District has abundant sources of solar and wind generation potential and there is an opportunity in the Kaipara District to significantly increase renewable electricity generation capacity which will deliver numerous benefits for the District. Those benefits include improved community resilience and self-sufficiency, improving the affordability of renewable electricity, contributing to social and cultural well-being, and providing for economic and employment opportunities.

In enabling renewable electricity generation, it is important to ensure that the adverse environmental effects from these activities are appropriately managed through location, design and mitigation measures. It is also important to recognise the operational need and functional need~~s~~[1] of renewable electricity generation activities to be where renewable energy resources are located and in close proximity to supporting transmission or distribution networks.

The provisions in this chapter apply to all types of renewable electricity generation activities, from small-scale solar generation to large-scale wind farms, and apply across the Kaipara District. The zone rules in Part 3 — Area-specific matters do not apply to renewable electricity generation activities. ~~but there may be other~~ The provisions in Part 2 — District wide matters ~~that~~ apply to renewable electricity generation activities where relevant[2].

There are requirements under the RMA and the National Policy Statement for Renewable Electricity Generation 2011 to recognise the national significance of renewable electricity generation by providing for the development, operation, maintenance and upgrading of renewable electricity generation activities. There are also responsibilities under the Northland Regional Policy Statement to recognise and protect renewable electricity generation that connects to the National Grid or distribution networks as regionally significant infrastructure.

Objectives

REG-O1[3]	Benefits of renewable electricity generation activities
The benefits of increasing renewable electricity generation activities at all scales are recognised and provided for ~~realised~~ in the Kaipara District.	

REG-O2	Enabling renewable electricity generation activities[4] ~~to support well-being~~
Renewable electricity generation activities are enabled at all scales to provide for ~~support~~ the environmental, economic, social and cultural well-being of people and communities in the Kaipara District, and their health and safety.[5]	

[1] Clause 16 amendment, Schedule 1 of the RMA
[2] DOC [304.39]
[3] Northpower [283.43]
[4] Northpower [283.44]
[5] Mercury [326.2]

REG-O3	Managing adverse effects of renewable electricity generation activities[6]
Renewable electricity generation activities are developed in a safe, efficient and effective way ~~that~~ while appropriately manages ~~ges~~ adverse effects on the environment.[7]	

REG-O4	Adverse effects on renewable electricity generation activities
The efficient and effective operation, maintenance and upgrading of renewable electricity generation activities is ~~not constrained or compromised by~~ protected from the adverse effects of new activities, including by avoiding reverse sensitivity effects.[8]	

Policies

REG-P1	National significance and benefits of renewable electricity generation activities
Recognise and provide for the national significance and local, regional and national benefits of renewable electricity generation activities, which include but are not limited to: 1. Using renewable rather than finite sources of energy ~~resources~~[9]; 2. Maintaining and increasing the security, resilience, independence, diversity and affordability of electricity supply in the Kaipara District; 3. Providing for the environmental,[10] economic, social and cultural well-being of people and communities in the Kaipara District, and their health and safety; ~~and~~[11] 4. The ability for rehabilitation to reverse the adverse effects on the environment of some renewable electricity technologies; and 5. Avoiding reliance on imported and domestic fossil fuels for the purposes of generating electricity.[12]	

REG-P2	Enable the effective development, operation, maintenance and upgrade of renewable electricity generation activities
~~Provide for~~ Enable[13] the effective and efficient development, operation, maintenance and upgrading of renewable electricity generation activities at a range of scales and sources, particularly from solar and wind energy resources of the Kaipara District.[14]	

REG-P3[15]	Recognising and providing for the functional need or operational need of renewable electricity generation activities
Recognise and provide for the operational need or functional need of renewable electricity generation activities to be in particular locations and environments, including: 1. To be where the ~~wind and solar~~ renewable[16] energy resource is located and available at a viable scale and quality for the activity, particularly the solar and wind energy resources of the Kaipara District; 2. To be accessible and in close proximity to connect to transmission and distribution networks or its end use and being near to electricity demand; and 3. To have sufficient and accessible land to support all current and foreseeable future renewable electricity generation activities at that location.	

[6] Northpower [283.43] – consequential change under clause 10(2)(b), Schedule 1 RMA to align objective headings
[7] Mercury [326.3]
[8] Mercury [326.4]
[9] Mercury [326.5]
[10] NRC [332.5]
[11] Mercury [326.5]
[12] Electrify Te Taitokerau [145.1]
[13] Transpower [292.26]
[14] Mercury [326.6] and others
[15] Consequential changes under clause 10(2)(b), Schedule 1 RMA to achieve alignment with the amended NPS-REG
[16] NRC [332.7]

REG-PX[17]	No requirement to assess alternative sites
Recognise that an assessment of alternative sites is not required to demonstrate that an operational or functional need exists for a renewable electricity generation activity to be in a particular location.	

REG-P4[18]	Managing adverse effects of renewable electricity generation activities

Manage the adverse effects of renewable electricity generation activities by:

1. Recognising the need to enable ~~that there will be unavoidable adverse effects on the environment from~~ renewable electricity generation activities in all locations and environments;
2. Ensuring that the adverse effects are avoided, remedied or mitigated where practicable;
3. Implementing effective ~~mitigation~~ measures to avoid, remedy or mitigate adverse effects, which may include:
    a. Appropriate location and design;
    b. Screening and setbacks from sensitive activities;
    c. Adaptive management measures;
    d. Rehabilitation of the site at the end of its operational life; and
4. Having regard to any proposed offsetting or compensation measures for any residual[19] adverse effects that cannot practicably be avoided, remedied or mitigated, including measures or compensation that benefit the local environment and community affected.

REG-P5	Enabling small and community scale renewable electricity generation activities

When considering proposed small-scale and community-scale renewable electricity generation activities, have particular regard to:

1. The comparatively lower level of environmental effects that result from small scale and community scale renewable electricity generation activities; and
2. The benefits of small and community-scale renewable electricity generation activities, including:
    a. Local security of supply; and
    b. Energy and community resilience.

~~REG-P6[20]~~	~~Enabling large scale renewable electricity generation activities~~
~~When considering proposed large scale renewable electricity generation activities, have particular regard to the national and regional significance of renewable electricity generation activities that connect to the National Grid or local distribution network.~~	

REG-P7	Providing for innovation and technological advances

Provide flexibility for new and existing renewable electricity generation activities to adopt new technologies and sources of renewable energy where this:

1. Increases the efficient use of renewable energy resources;
2. Allows for the re-use of existing infrastructure where appropriate;
3. Increases the resilience, safety, efficiency or reliability of renewable electricity generation activities; and
4. Results in environmental benefits and enhancements.

REG-P8[21]	Upgrading and r~~R~~epowering of existing ~~wind and solar~~ renewable electricity generation activities

[17] Consequential change under clause 10(2)(b), Schedule 1 RMA to achieve alignment with the amended NPS-REG
[18] Mercury [326.8]
[19] Forest & Bird [149.17]
[20] Consequential change under clause 10(2)(b), Schedule 1 RMA to achieve alignment with the amended NPS-REG
[21] Consequential change under clause 10(2)(b), Schedule 1 RMA to achieve alignment with the amended NPS-REG

When considering ~~Recognise the benefits of enabling~~ the upgrading and repowering of existing renewable electricity generation activities, particularly wind and solar generation activities:

1. Recognise that existing renewable electricity activities form part of the existing environment;
2. Take into account the extent to which the effects of the proposed upgrading or repowering activities are different in scale, intensity, duration and frequency from the effects of the existing renewable electricity activities; and
3. Have particular regard to the efficiencies and environmental benefits of:
    a. Efficient use of existing infrastructure; and
    b. ~~Potential for delivering~~ ~~i~~increas~~ed~~ing renewable electricity generation output and capacity within an existing renewable electricity generation site.

REG-P9	~~Managing reverse sensitivity~~ **Protecting renewable electricity generation activities from other activities**

~~Manage reverse sensitivity effects~~ Protect existing renewable electricity generation activities, to the extent reasonably possible, from the adverse effects of new activities, including by~~:~~

~~1.~~ r~~R~~equiring new sensitive activities to be designed and located to avoid~~, or otherwise mitigate,~~ reverse sensitivity effects ~~on existing renewable electricity generation activities; and~~[22]

~~2. Requiring new renewable electricity generation activities to manage adverse effects on existing sensitive activities in close proximity.~~[23]

REG-P10	**Investigation of new renewable electricity generation sites and sources**

Enable activities associated with the investigation, identification and assessment of potential sites and energy sources for renewable electricity generation (i.e. wind monitoring masts), recognising both the need for flexibility in the location of these activities[24] and the temporary nature of any adverse effects of these activities.

[22] Northpower [283.55]
[23] Transpower [292.27]
[24] Forest & Bird [149.19]

Rules

Note:

1. *The underlying zone rules in Part 3 of the Plan — Area-Specific Matters do not apply to renewable electricity generation activities.*
2. *All rules in Part 2 — District-Wide Matters apply to renewable electricity generation activities where relevant.*

Investigation activities

REG-R1	Temporary wind anemometer (wind monitoring mast)	
General rural zone, Light industrial zone, Heavy industrial zone, Māori purpose zone	**1. Activity status:** Permitted **Where:** a. The height of the monitoring mast ~~anemometer~~ does not exceed: i. 80m in the General rural zone; or ii. 20m in the Light industrial zone, Heavy industrial zone, Māori purpose zone. b. No more than three monitoring mast ~~anemometer~~ are installed within a site; c. The monitoring mast ~~anemometer~~ is removed and site is remediated within 5 years of its installation; and d. The monitoring mast ~~anemometer~~ is setback at least a distance equal to the height of the monitoring mast ~~anemometer~~ from the boundary of any ~~other~~ site in different ownership.[25]	**2. Activity status when compliance not achieved:** Restricted Discretionary **3. Matters over which discretion is restricted:** a. The type, scale, form, location and number of the monitoring ~~of the wind turbine Adverse effects resulting from the height and scale of the~~ mast(s).; ~~b. The siting, colour and number of structure(s);~~[26] c. Duration of the activity and the plans for its removal and remediation; d. Operational need or functional need to be in the location; e. Visual and landscape effects; f. Any effects on ~~indigenous faunas and~~ ecosystems and indigenous biodiversity;[27] and g. Any proposed measures to mitigate adverse effects.

[25] Mercury [326.14]
[26] Mercury [326.14]
[27] DOC [304.44]

Operation, maintenance, and repair of existing renewable electricity generation activities

REG-R2	Operation~~,~~ and maintenance ~~and repair~~[28] of existing renewable electricity generation activities	
All zones	**1. Activity status:** Permitted	**2. Activity status when compliance not achieved:** Not applicable

Small and community scale renewable electricity generation

REG-R3	Roof-mounted wind turbines	
All zones	**1. Activity status:** Permitted **Where:** a. The wind turbine does not exceed the permitted building height of the underlying zone by more than 3m measured vertically; b. The wind turbine does not exceed the permitted height in relation to boundary standard for the underlying zone; c. The maximum rotor diameter is no more than 2.5m; d. There is only one roof-mounted wind turbine per site; and e. Compliance is achieved with NZS 6808:2010 Acoustics - Wind farm noise (refer General District Wide Matters - Noise).	**2. Activity status when compliance not achieved:** Restricted Discretionary **3. Matters over which discretion is restricted:** b. The type, scale, form and location of the wind turbine; c. Shadow flicker and glare; d. Visual and landscape effects; e. Noise and vibration effects; f. Cumulative effects; g. Any effects on ~~indigenous fauna and~~ ecosystems and indigenous biodiversity; and[29] h. Any proposed measures to mitigate adverse effects.

REG-R4	Roof-mounted solar generation	
All zones	**1. Activity status:** Permitted **Where:** a. Any solar panel does not exceed the permitted building height standard for the underlying zone by more than 1m measured vertically; and b. Any solar panel does not exceed the permitted height in relation to boundary standard for the underlying zone.	**2. Activity status when compliance not achieved:** Restricted Discretionary **3. Matters over which discretion is restricted:** a. The type, scale, form and location of solar panel; b. Glare on adjacent properties and the surrounding environment; c. Visual and landscape effects; d. Any effects on ~~indigenous fauna and~~ ecosystems and indigenous biodiversity;[30]

[28] Consequential amendment under clause 10(2)(b), Schedule 1 RMA to align wording with REG-P2
[29] DOC [304.45]
[30] DOC [304.46]

		and e. Any proposed measure to mitigate adverse effects.

REG-R5	Freestanding small scale wind turbines	
General rural zone, Light industrial zone, Heavy industrial zone, Māori purpose zone	1. **Activity status:** Permitted **Where:** a. No structure, including any attachments or turbine blades, exceed a maximum height above ground level of 20m measured from the highest point of the blade; b. Any structure is setback at least three times the height of the structure from the boundary of any other site in different ownership and any road boundary; c. There are no more than three turbines on a site; d. The wind turbine is setback at least 200m from any Significant Bird Area – Critical Bird Habitat mapped in the Northland Regional Plan;[31] and e. Compliance is achieved with NZS 6808:2010 Acoustics - Wind farm noise (refer General District-Wide Matters - Noise).	2. **Activity status when compliance not achieved:** Restricted Discretionary 3. **Matters over which discretion is restricted:** a. The type, scale, form and location of the wind turbine and associated infrastructure; b. Shadow flicker and glare; c. Visual and landscape effects; d. Noise and vibration effects; e. Any effects on ~~indigenous fauna and~~ ecosystems and indigenous biodiversity;[32] and f. Proposed measures to mitigate adverse effects, including siting, design, colour, finish, or landscaping.

REG-R6	Freestanding small scale solar generation	
General rural zone, Light industrial zone, Heavy industrial zone, Māori purpose zone	1. **Activity status:** Permitted **Where:** a. No solar panel array exceeds 2.5m in height measured from the ground; b. The cumulative area covered by the solar panels does not exceed 200m^2 per site; and c. All structures are setback at least 15m from the boundary of any other site in different ownership or road boundary.	2. **Activity status when compliance not achieved:** Restricted Discretionary 3. **Matters over which discretion is restricted:** a. The height, size and location of the solar infrastructure; b. Glare on adjacent properties and the surrounding environment; c. Visual and landscape effects; d. Any effects on ~~indigenous fauna and~~ ecosystems and indigenous biodiversity;[33] and e. Proposed measures to mitigate adverse effects, including siting, design, colour, finish, or landscaping.

[31] NRC [332.8]
[32] DOC [304.47]
[33] DOC [304.48]

REG-R7	Community scale renewable electricity generation activities	
General rural zone, Light industrial zone, Heavy industrial zone, Māori purpose zone	**1. Activity status:** Controlled **Where:** a. No structure or device, including any attachments or turbine blades, exceeds a maximum height above ground level of 30m; b. There are no more than three turbines on a site; c. Any wind generating structure is setback at least three times the height of the structure (including supporting structures) from the boundary of any other site in different ownership or road; d. Any solar generating structure is setback at least 15m or three times the height of the structure (including supporting structures) from the boundary of any other site in different ownership or road (whatever is the greater); e. All devices and supporting structures attached to land, including solar panels, cover a total area of no more than: i. 1 hectare per site where there is existing boundary vegetation that screens the development from view from the road and adjacent properties; or ii. 0.5 hectare per site where the development will be visible from the road or adjacent properties; and f. Compliance is achieved with NZS 6808:2010 Acoustics - Wind farm noise for any proposal involving wind generation (refer General District Wide Matters - Noise). **2. Matters over which control is reserved** a. The location, scale and intensity of the activity; b. Shadow flicker and glare; c. Noise and vibration effects; d. Any effects on ecosystems and indigenous biodiversity;[34] e. The extent to which any adverse effects are mitigated by design and siting, colour, size of the proposal; and f. Any screening or visual mitigation provided by landscaping.	**3. Activity status when compliance not achieved with REG-R7.1:** Restricted Discretionary **4. Matters over which discretion is restricted:** a. The location, scale and intensity of the activity; b. Shadow flicker and glare; c. Visual and landscape effects; d. Noise and vibration effects; e. Any effects on ~~indigenous fauna and ecosystems~~ and indigenous biodiversity;[35] f. Functional need or operational need to be in the location; g. The community benefits associated with the activity; h. Proposed measures to mitigate adverse effects, including siting, design, colour, finish, or landscaping; and i. Proposed rehabilitation of the site at the end of the operational life of the activity

[34] DOC [304.49]
[35] Ibid

Large-scale renewable electricity generation

REG-R8	Large scale renewable energy generation activities	
All zones	**1. Activity status:** Restricted[36] Discretionary **Where:** a. Compliance is achieved with NZS 6808:2010 Acoustics - Wind farm noise for any proposal involving wind generation. **X. Matters over which discretion is restricted:** a. The location, scale and intensity of the activity; b. Shadow flicker and glare; c. Visual and landscape effects; d. Noise and vibration effects; e. Any effects on ~~indigenous fauna and~~ ecosystems and indigenous biodiversity; f. Functional need or operational need to be in the location; g. The benefits associated with the activity; h. Proposed measures to mitigate adverse effects, including siting, design, colour, finish, or landscaping; and i. Proposed rehabilitation of the site at the end of the operational life of the activity.[37]	**2. Activity status when compliance not achieved:** Non-Complying

[36] Mercury [326.16] and Northpower [283.65]
[37] Northpower [283.65]

Upgrading and repowering

REG-R9	Upgrading or repowering existing renewable electricity generation activities	
All zones	**1. Activity status:** Permitted **Where:** a. The upgrade or repowering is located within the same site as the existing renewable electricity activity; b. Any replacement structure or building does not exceed the: i. Height of existing structures and buildings by more than: A. 3m for solar generation activities;[38] B. 10% for all other renewable electricity generation activities;[39] ii. Footprint of existing structures and buildings by more than 25%; and c. For wind farms, compliance is achieved with NZS 6808:2010 Acoustics - Wind farm noise.	**2. Activity status when compliance not achieved:** Restricted Discretionary **3. Matters over which discretion is restricted:** a. Any adverse environmental effects from the upgrade or repowering that are in addition to the existing renewable electricity generation activity; b. Proposed measures to mitigate adverse effects, including siting, design, colour, finish, or landscaping; and c. The benefits of maintaining or increasing generation output from an existing renewable electricity generation site.

Renewable electricity generation activities not otherwise provided for

REG-R10	Any other renewable electricity generation activity not listed in this chapter ~~provided for as a permitted, restricted discretionary, discretionary or non-complying activity~~[40]	
All zones	**1. Activity status:** Discretionary	**2. Activity status when compliance not achieved:** Not Applicable

[38] Northpower [283.66]
[39] Ibid
[40] Consequential change under clause 10(2)(b), Schedule 1 RMA to achieve consistent formatting and structure of "catch-all" rules in the PDP