APPENDIX 5.3 PROVISION CASCADE – Renewable Electricity Generation

Issue to be addressed	Objective	Policies	Rules	Conditions / Assessment Criteria
The location of renewable electricity generation depends on a particular resource.	**6.3.1Objective – Renewable energy** (a) Energy efficient design and an increase in renewable electricity generation ~~activities are promoted~~.	**6.3.4 Policy – Future renewable electricity** (a) Provide for the investigation, identification and assessment of potential sites and energy sources for renewable electricity generation activities.	**Rule 14.6.1 P3** Research and exploratory-scale investigations for renewable electricity generation activities	14.6.1.2 (a) Research and exploratory-scale investigations for renewable electricity generation activities that comply with all of the following: (i) The noise limits that are applicable to the zone; (ii) The height of any equipment must not exceed the building height limit of the zone in which they are located by more than 3m, or within the Rural Zone must not exceed 20m total height; (iii) The size and location of any equipment must not exceed height in relation to boundary relevant to the zone in which it is located; and (iv) Setbacks relevant to the zone in which it is located; (v) Is not located within an identified area; (vi) is not located on a road, or unformed road.
			Rule 14.6.2 RD3 Research and exploratory-scale investigations for renewable electricity generation activities that do not comply with one or more of the conditions of Rule 14.6.1.2	Discretion is restricted to: (a) The functional and operational needs of, and benefits derived from, the infrastructure; (b) Visual, landscape, streetscape and amenity effects, including noise; (c) Shadow flicker effects; (d) The risk of hazards affecting public or individual safety, and risk of property damage; (e) Effects on the values, qualities and characteristics of any Identified Area.

Enabling renewable electricity generation activities.	**6.3.1Objective – Renewable energy** (a) Energy efficient design and an increase in renewable electricity generation ~~activities are promoted~~.	**6.3.2 Policy – Utilising energy efficiency** (a) Design subdivision, land use and development so that buildings can utilise energy efficiency and conservation measures, including by orientation to the sun and through other natural elements. **6.3.3 Policy – Enabling renewable electricity generation** (a) Enable the investigation, development, operation, maintenance and upgrading of renewable electricity generation activities, including domestic and community scale distributed renewable electricity generation, provided that adverse effects are avoided, remedied or mitigated. **6.3.4 Policy – Future renewable electricity** (a) Provide for the investigation, identification and assessment of potential sites and energy sources for renewable electricity generation activities.	**Rule 14.6.1 P1** Small-scale electricity generation **Rule 14.6.1 P2** Community-scale electricity generation	14.6.1.1 (a) Small-scale electricity generation and community-scale electricity generation that comply with each of the following conditions, where applicable: (a) Is not located within an Identified Area; (b) Is not located on a road, or unformed road; (c) Less than 20kW of electricity is generated; (d) Maximum one wind turbine per site in the Residential, Rangitahi Peninsula and Village Zones; (e) Freestanding wind turbines must not exceed the building height limit of the zone in which they are located by more than 3m; (f) Freestanding wind turbines have a maximum blade diameter of 2.5m; (g) Roof-mounted wind turbines must not exceed the building height limit of the zone in which they are located by more than 3m; (h) Roof-mounted wind turbines have a maximum blade diameter of 2.5m; (i) Any wind turbine on a site adjoining Residential, Rangitahi Peninsula or Village Zones must meet the height in relation to boundary limits on the boundary with that adjoining zone; (j) Solar panels on the roof of a building must not exceed 1.5m in height above the existing roof; or attached to a ground mounted frame (k) Wind turbine noise must: (i) Not exceed the background sound level (L95) by more than 5dBA, or a level of 40dBA (L95), whichever is the greater, when measured at operational wind speeds, and for properties located adjacent to the facility when measured at: (1) Any existing building or structure for sensitive land uses; and (2) Any potential building site where a building or structure for sensitive

				land uses could be located as a permitted activity; (ii) Be measured and assessed in accordance with NZS6808: 2010 Acoustics – Wind Farm Noise (l) All other structures not listed above must not be higher than the maximum building height limit of the zone in which they are located.
			Rule 14.6.2 RD1 Small-scale electricity generation that do not comply with one or more of the conditions of Rule 14.6.1.1	Discretion is restricted to: (a) The functional and operational needs of, and benefits derived from, the infrastructure; (b) Visual, landscape, streetscape and amenity effects, including noise; (c) Shadow flicker effects; (d) The risk of hazards affecting public or individual safety, and risk of property damage; (e) Effects on the values, qualities and characteristics of any Identified Area.
			Rule 14.6.2 RD2 Community-scale electricity generation that do not comply with one or more of the conditions of Rule 14.6.1.1	
			Rule 14.6.3 D1 Large-scale wind farms located within the Rural Zone, not within an Identified Area.	Nil
The need to maintain the efficiency of, and production from, existing	**6.3.1Objective – Renewable energy** (a) Energy efficient design and an increase in		**Rule 14.3.1 P1** The operation, maintenance, repair and removal of existing infrastructure	Nil

renewable electricity generation activities.	renewable electricity generation ~~activities are promoted~~. **6.1.1 Objective – Development, operation and maintenance of infrastructure** (a) Infrastructure is developed, operated and maintained and upgraded to ~~benefit the~~ enhance social, economic, cultural and environmental well-being ~~of the district~~. **6.1.6 Objective – ~~Reverse sensitivity~~ Adverse Effects on Infrastructure** Infrastructure is protected from reverse sensitivity effects, and ~~infrastructure (including the National Grid)~~ its construction, operation, maintenance repair, replacement and upgrading is not compromised.	**6.3.5 Policy – Existing renewable electricity facilities** (a) Ensure subdivision, use and development are designed and located so that they do not adversely affect the operation and maintenance of existing, lawfully established renewable energy generation facilities. (b) Enable non-sensitive rural land use activities, where they can co-exist with existing renewable electricity generation facilities. **6.1.2 Policy - Development, operation and maintenance** (a) Provide for the development, operation, maintenance, repair, replacement, upgrading and removal of infrastructure throughout the district by recognising: (i) Functional and operational needs; (ii) Location, route and design needs and constraints;	**Rule 14.3.1 P2** Minor upgrading of existing infrastructure	14.3.1.1 (1) The realignment, configuration, relocation or replacement of infrastructure and associated structures that meet all of the following conditions: (a) Are within 5m of the existing alignment or location; (b) Do not increase the height of any existing pole or support structure by more than ~~15%~~ 40% to a maximum height of 20m in all zones except the Rural Zone, Industrial Zone, Industrial Zone Heavy and Motor Sport and Recreation Zone; (c) Do not increase the diameter (width) of any existing pole or support structure by more than ~~15~~ 50% or 100% increase in the case of a double pole in ALL zones; (d) Do not increase the diameter of any existing above-ground pipe by more than ~~15%~~300mm; and (e) Do not increase the area of any existing above-ground structure by more than ~~15%~~25%. (2) Alterations and additions to overhead electricity and telecommunication lines on existing poles or support structures involving any of the following: (a) The addition of conductors to form a twinned or duplex-pairing; (b) The reconductoring of the line with higher capacity conductors; (c) The resagging of conductors; (d) The addition of longer, more efficient insulators; (e) The addition of earth wires (which may contain telecommunication lines), earthpeaks and lightning rods; (f) The addition, replacement or relocation of transformers or visually similar fixtures; (g) The addition, replacement or relocation of circuits and conductors; (h) The addition or replacement of telecommunication lines and fittings;

		(iii) Locational constraints related to the need to access suitable resources or sites; (iv) The benefits of infrastructure to people and communities; (v) The need to quickly restore disrupted services; and (vi) Its role in servicing existing consented and planned development. (vii) The need to access infrastructure. **6.1.3 Policy - Technological advances** (a) Provide flexibility for infrastructure operators to to ~~use new technological advances~~ adopt new technologies that: (i) Improve access to, and ~~enable the~~ efficient use of, networks and services ~~or development of infrastructure~~; (ii) Allow for the reuse of redundant services ~~infrastructure~~ and structures ~~where appropriate~~; ~~and~~ (iii) ~~Result in positive environmental and community outcomes~~ Increase resilience, safety		(i) The replacement of existing crossarms with crossarms of an alternative design; (j) The increase in voltage of electric lines up to 110kV; or (k) The installation of mid-span electricity poles in existing networks to address clearances in New Zealand Electrical Code of Practice for Electrical Safe Distances 34:2001 ISSN 0114-0663 (NZECP34:2001). (3) The addition, replacement or relocation of existing antennas where: (a) The antennas shall not increase ~~in~~ the face area by more than 20% ~~of the relevant permitted standard~~ for new panel antennas and shall not increase the diameter of dish antenna by more than 20% of the relevant permitted standard for a new dish antenna; and (b) The antennas shall not increase in height by more than 20% of the relevant permitted standard for new dish and panel antennas. (4) Earthworks activities associated with the minor upgrading of existing infrastructure must comply with the conditions of Rule 14.3.1.3. (5) The minor upgrading of existing infrastructure must not remove any tree identified in Schedule 30.2. (6) Any trimming of a tree identified in Schedule 30.2 associated with the minor upgrading of existing infrastructure must be undertaken in accordance with the conditions of Rule 14.3.1.4. (7) The conditions in Rule 14.3.1.1(1) do not apply to road network activities or other lineal transport networks.
			Rule 14.3.3 RD1 Minor upgrading of existing infrastructure that does not comply with one or more of the conditions of Rule 14.3.1.1 which are	Discretion is restricted to: i. The functional and operational needs of, and benefits derived from, the infrastructure; ii. Visual, streetscape and amenity effects; iii. Transport ~~road~~ network safety and efficiency;

		or reliability of networks and services; (iv) Result in environmental benefits and enhancements; or (v) Promote environmentally sustainable outcomes including green infrastructure and the increased utilisation of renewable resources. **6.1.7 Policy – ~~Reverse sensitivity~~ Adverse Effects on ~~and~~ infrastructure** (a) Avoid reverse sensitivity effects on infrastructure from subdivision, use and development as far as reasonably practicable, and ensure ~~so~~ that ~~the~~ its construction, operation, maintenance, repair, replacement and upgrading ~~the ongoing and efficient operation~~ of infrastructure is not compromised.	relevant to the activity proposed	iv. Management of sediment and dust, including the staging of works; ~~v. The volume, extent and depth of the earthworks activities;~~ vi. The location of the earthworks activities, taking into account any effects on the values, qualities and characteristics of the site; ~~vii. Any flood or land stability risks;~~ ~~viii. Visual, landscape and amenity effects;~~ ix. Whether alternative methodologies avoiding the need to affect any tree identified in Schedule 30.2 have been adequately considered.

There are effects from renewable electricity generation activities.	**6.3.1Objective – Renewable energy** (a) Energy efficient design and an increase in renewable electricity generation ~~activities are promoted~~. **6.1.8 Objective – Infrastructure in the community and identified areas** (a) Infrastructure takes into account the qualities and characteristics of surrounding environments and community well-being.	**6.3.3 Policy – Enabling renewable electricity generation** (a) Enable the investigation, development, operation, maintenance and upgrading of renewable electricity generation activities, including domestic and community scale distributed renewable electricity generation, provided that adverse effects are avoided, remedied or mitigated. **6.1.9 Policy - Environmental effects, community health, safety and amenity** (a) Require the development, operation, maintenance, repair, replacement, upgrading and removal of infrastructure and its associated structures to avoid, remedy or mitigate adverse effects on the environment, community health, safety and amenity.	**Rule 14.6.2 RD1** Small-scale electricity generation that do not comply with one or more of the conditions of Rule 14.6.1.1	Discretion is restricted to: (a) The functional and operational needs of, and benefits derived from, the infrastructure; (b) Visual, landscape, streetscape and amenity effects, including noise; (c) Shadow flicker effects; (d) The risk of hazards affecting public or individual safety, and risk of property damage; (e) Effects on the values, qualities and characteristics of any Identified Area.
			Rule 14.6.2 RD2 Community-scale electricity generation that do not comply with one or more of the conditions of Rule 14.6.1.1	
			Rule 14.6.3 D1 Large-scale wind farms located within the Rural Zone, not within an Identified Area.	Nil
			Rule 14.6.4 NC1 Large-scale wind farms ~~not~~ located ~~within~~ in a zone other than the Rural Zone~~, including within an Identified Area~~	Nil

		6.1.10 Policy – Infrastructure in identified areas (a) Ensure consideration of the values, qualities and characteristics of Significant Natural Areas, Landscape and Natural Character Areas and Heritage Items, Heritage Precincts, and Maaori Sites and Areas of Significance, including Waahi Tapu and Waahi Tapu Areas when proposing new infrastructure or undertaking significant upgrades to existing infrastructure.	**Rule 14.6.4 NC2** Large-scale wind farm located within the Rural Zone and within an Identified Area	Nil