Section 32 Report

Pūngao me te hanganga hapori/Energy and Infrastructure

prepared for the

Proposed Waimakariri District Plan

18 September 2021

WAIMAKARIRI DISTRICT COUNCIL

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1. EXECUTIVE SUMMARY

In the Proposed District Plan, the ***Energy and Infrastructure Chapter*** is part of ***Part 2 – District Wide Matters - Energy, Infrastructure and Transport***.

Energy and Infrastructure are significant physical resources that make an essential contribution to the social and economic well-being of the District, and therefore must be sustainably managed.

The current Utilities provisions in the operative District Plan are relatively limited in scope, are outdated, and do not fully reflect the range of infrastructure activities or development. The current Utilities provisions pre-date National Policy Statements (NPS) and National Environmental Standards (NES) relevant to energy and infrastructure and therefore may not fully give effect to or be fully consistent with these NPS' and NES' and may not fully achieve Part 2 of the RMA.

The resource management issues that need to be addressed in relation to energy and infrastructure are to better or more fully:

a. Enable or provide for the establishment, maintenance, repair, removal, upgrading, development, resilience and sustainability of energy and infrastructure, including 'critical infrastructure', 'strategic infrastructure' and 'regionally significant infrastructure';

b. Have increased renewable energy for national, regional and local use; and to have greater renewable electricity generation, including small-scale and community-scale, with generation surplus able to be supplied to the electricity distribution network;

c. Manage actual or potential adverse effects of energy and infrastructure on the environment; and

d. Manage actual or potential adverse effects of incompatible activities and development on energy and infrastructure, including on the National Grid and on major electricity distribution lines, to protect and maintain their function.

A suite of significantly revised, updated and expanded specific objectives, policies, rules, standards, definitions and matters of discretion relating to energy and infrastructure are therefore proposed.

The ***Energy and Infrastructure Chapter*** contains provisions for the following:

- General provisions (applicable to all energy and infrastructure, as relevant) including meteorological and environmental sensing and monitoring equipment, and navigational aids;
- Electricity transmission and distribution;
- Communication facilities;
- Fuel and energy;
- Renewable energy including renewable electricity generation;
- Water, wastewater and stormwater;
- Irrigation/stockwater networks; and
- Managing effects of activities on energy and infrastructure, including on the National Grid and on major electricity distribution lines.

In this report, the provisions in the ***Energy and Infrastructure Chapter*** are evaluated as a package.

2. OVERVIEW AND PURPOSE

2.1 Purpose of Section 32 RMA

The overarching purpose of Section 32 of the Resource Management Act 1991 (RMA) is to ensure that plans are developed using sound evidence and rigorous policy analysis, leading to more robust and enduring provisions.

Section 32 reports are intended to clearly and transparently communicate the reasoning behind plan provisions to the public. The report should provide a record of the evaluation process, including the consultation, technical work, methods, assumptions and risks that informed that process. A robust report can prove highly useful to decision makers, particularly where it clearly communicates the analysis undertaken to identify the most appropriate way to achieve the purpose of the RMA.

The District Council is required to undertake an evaluation of any proposed District Plan provisions before notifying those provisions. The Section 32 report provides the reasoning and rationale for the proposed provisions (including compared to any relevant operative provisions) and should be read in conjunction with those provisions.

2.2 Topic Description

2.2.1 Scope of Energy and Infrastructure Chapter

In the Proposed District Plan, the ***Energy and Infrastructure Chapter*** is part of ***Part 2 – District Wide Matters - Energy, Infrastructure and Transport***.

The term 'infrastructure' is defined in Section 2 of the RMA.

The RPS defines the terms 'critical infrastructure', 'strategic infrastructure', and 'regionally significant infrastructure', as follows:

> *'Critical infrastructure' means infrastructure necessary to provide services which, if interrupted, would have a serious effect on people and communities and which would require immediate reinstatement. This includes any structures that support, protect or form part of critical infrastructure. Critical infrastructure includes:*
>
> - *regionally significant airports;*
> - *regionally significant ports;*
> - *gas storage and distribution facilities;*
> - *electricity substations, networks, and transmission and distribution installations, including the National Grid and the electricity distribution network;*
> - *supply and treatment of water for public supply;*
> - *stormwater and sewage treatment and disposal systems;*
> - *radiocommunication and telecommunication installations and networks;*
> - *strategic road and rail networks;*
> - *petroleum storage and supply facilities;*
> - *public healthcare institutions including hospitals and medical centres;*
> - *fire stations, police stations, ambulance stations, emergency coordination facilities;*
>
> *except that critical infrastructure excludes a service, facility or connection that does not have a public or community function.*

'Strategic infrastructure' means those necessary facilities, services and installations which are of greater than local importance, and can include infrastructure that is nationally significant, such as:

- *Strategic transport networks;*
- *Christchurch International Airport;*
- *Rangiora Airfield;*
- *Port of Lyttelton;*
- *Bulk fuel supply infrastructure including terminals, wharf lines and pipelines;*
- *Defence facilities;*
- *Strategic telecommunications and radiocommunications facilities;*
- *Electricity transmission and distribution network including the National Grid;*
- *Other strategic network utilities.*

'Regionally significant infrastructure' means:

- *Strategic land transport network and arterial roads;*
- *Timaru Airport;*
- *Port of Timaru;*
- *Commercial maritime facilities at Kaikoura;*
- *Telecommunication and radiocommunication facilities;*
- *National, regional and local renewable electricity generation activities of any scale;*
- *The electricity transmission and distribution network;*
- *Sewage collection, treatment and disposal networks;*
- *Community land drainage infrastructure;*
- *Community potable water systems;*
- *Established community-scale irrigation and stockwater infrastructure;*
- *Transport hubs;*
- *Bulk fuel supply infrastructure including terminals, wharf lines and pipelines; and*
- *Strategic infrastructure.*

There is noticeable overlap between these terms. Together, these terms include the following types of infrastructure, in summary:

- Fuel and energy, including renewable energy;
- Communication facilities;
- Electricity generation (including renewable electricity generation of any scale), transmission and distribution;
- Community-scale water, wastewater and stormwater systems;
- Strategic road and rail networks;
- Regionally significant airports and ports;
- Community-scale transport hubs;
- Navigation facilities;
- Network utilities;
- Hospitals and major medical centres;
- Emergency services facilities; and
- Community-scale irrigation and stockwater.

Such energy and infrastructure may be provided by network utilities, or by entities other than network utilities, including the private provision of and connection to such energy and infrastructure.

District-wide provisions relating to transport are contained in the ***Transport*** chapter, which also forms part of ***Part 2 – District Wide Matters - Energy, Infrastructure and Transport***. The Transport provisions are discussed in the Section 32 report for the ***Transport*** chapter.

Rangiora Airfield is provided for by a designation, which contains conditions, and the District wide Transport and Noise chapters also contain provisions relating to the Airfield. The Noise provisions are discussed in the Section 32 report for the ***Noise*** chapter.

The two existing hospitals in the District, at Rangiora and Oxford, and ancillary emergency services facilities and other health care facilities on those hospital sites, are provided for under a ***Special purpose (Hospital) zone***. The provisions for that zone are discussed in the Section 32 report for the ***Special purpose (Hospital) zone***.

Emergency services facilities and health care facilities outside the Rangiora and Oxford hospital sites, are subject to the provisions of the relevant zone in which they are located. The provisions of those zones are discussed in the Section 32 reports for those zones.

The ***Energy and Infrastructure Chapter*** therefore contains provisions for the following types of energy and infrastructure:

- General provisions (applicable to all energy and infrastructure, as relevant), including meteorological and environmental sensing and monitoring equipment, and navigational aids;
- Electricity transmission and distribution;
- Communication facilities;
- Fuel and energy;
- Renewable energy including renewable electricity generation;
- Water, wastewater and stormwater;
- Irrigation/stockwater networks; and
- Managing effects of activities on energy and infrastructure, including on the National Grid, and on major electricity distribution lines.

The ***Energy and Infrastructure Chapter*** contains District-wide provisions to:

A. Enable or provide for the establishment, maintenance, repair, removal, upgrading, development, resilience and sustainability of energy and infrastructure, including critical infrastructure, strategic infrastructure and regionally significant infrastructure;

B. Have increased renewable energy for national, regional and local use; and to have greater renewable electricity generation, including small-scale and community-scale, with generation surplus able to be supplied to the electricity distribution network;

C. Manage actual or potential adverse effects of energy and infrastructure on the environment; and

D. Manage actual or potential adverse effects of incompatible activities and development on energy and infrastructure, including on the National Grid and on major electricity distribution lines, to protect and maintain their function.

The ***Energy and Infrastructure Chapter***:

(a) Gives effect to the –

   i. National Policy Statement for Renewable Electricity Generation 2011 (NPSREG);

ii. National Policy Statement on Electricity Transmission 2008 (NPSET); and the

iii. New Zealand Coastal Policy Statement 2010 (NZCPS);

iv. National Policy Statement for Freshwater Management 2020 (NPSFM);

(b) Is consistent with the –

i. Resource Management (National Environmental Standards for Electricity Transmission Activities) Regulations 2009 (NESETA);

ii. Resource Management (National Environmental Standards for Telecommunication Facilities) Regulations 2016 (NESTF);

iii. Resource Management (National Environmental Standards for Freshwater) Regulations 2020 (NESF).

The proposed provisions reflect current best practice, are consistent with national and regional policy direction, will better or more fully give effect to and be consistent with relevant NPS' and NES', and will better achieve Part 2 of the RMA.

The drafting of the proposed provisions has had regard to the content of the provisions in a draft 'National Infrastructure Chapter' prepared by a 'National Infrastructure Working Group', as well as the energy and infrastructure provisions of other local authorities.

In this report, the provisions in the ***Energy and Infrastructure Chapter*** are evaluated as a package.

2.2.2 Relationship of Energy and Infrastructure Chapter to other parts of the District Plan

The status of any activity not provided for under the District wide Energy and Infrastructure provisions, will be determined under the relevant Zone provisions.

Activities subject to the provisions of the Energy and Infrastructure Chapter, are also subject to all other relevant parts of the District Plan.

Notwithstanding, the Energy and Infrastructure Chapter proposes controls on energy and infrastructure in the following types of 'sensitive environments' identified or defined in the proposed District Plan:

(a) Outstanding natural features and landscapes and significant amenity landscapes;
(b) Significant natural areas;
(c) Outstanding natural character areas, very high natural character areas, and high natural character areas, including in the coastal environment and the natural character of freshwater bodies;
(d) The root protection area of notable trees;
(e) Buildings or other structures with historic heritage values;
(f) Sites and areas of significance to Maori;
(g) Places adjoining the coastal marine area.

The proposed District Plan contains other District wide chapters with provisions relating to each of these types of 'sensitive environments', which does create the potential for overlap between the Energy and Infrastructure Chapter and other relevant parts of the proposed District Plan.

However, it was determined to propose controls on energy and infrastructure in 'sensitive environments' in the Energy and Infrastructure provisions, as that chapter may be the only part of the proposed District Plan that energy and infrastructure providers may look at, and it was considered important that provisions relating to energy and infrastructure in such 'sensitive environments' were not overlooked given that these 'sensitive environments' reflect Section 6 matters or matters in relevant NPS' and NES'.

2.3 Significance of this Topic

Energy and Infrastructure are significant physical resources that make an essential contribution to the social and economic well-being of the District, and therefore must be sustainably managed.

The operative District Plan was first publicly notified in 1995 and became operative in 2005. Since then, a number of factors have arisen relating to the provision for energy and infrastructure:

(a) Energy and Infrastructure has become more of a central feature in everyday work and living and is now commonplace;

(b) The types of energy and infrastructure are now more diverse;

(c) Some types of energy and infrastructure have evolved considerably in scale and appearance;

(d) Installation practices have evolved, including the development of industry standards, regulations and codes of practice;

(e) District Plan Effectiveness assessment and reporting was undertaken prior to the commencement of the District Plan Review. Key findings with respect to the Utilities provisions in the operative District Plan are summarised in Section 2.5 below;

(f) Central government has released a number of National Instruments in the form of NPS' and NES' directly concerning energy and infrastructure (see Section 2.2.1 above). The District Plan must now:

   i. Give effect to the NPSREG, NPSET, NPSFM and the NZCPS; and

   ii. Be consistent with the NESETA, NESF and the NESTF.

The combination of the above means a significantly revised and updated suite of Energy and Infrastructure provisions in the proposed District Plan is required.

2.4 Current Objectives, Policies and Methods

A summary of relevant key objectives, policies and methods in the operative District Plan that currently apply to utilities is contained in a table in **Appendix 1** of this report.

The current Utilities provisions in the operative District Plan are relatively limited in scope, are outdated, and do not fully reflect the range of energy and infrastructure activities or development. The current Utilities provisions pre-date NPS' and NES' relevant to energy and infrastructure cited in Section 2.2 above and therefore may not give effect to these NPS' and may not be consistent with these NES'. Under these NPS' and NES' the District Plan provisions need to enable not hinder the roll out of energy and infrastructure.

2.5 Information and Analysis

District Plan Effectiveness assessment and reporting was undertaken prior to the commencement of the District Plan Review. Key findings with respect to Energy and Infrastructure may be summarised as follows:

(a) Provisions are spread over a number of different chapters with some provisions contained within appendices. Grouping provisions for different types of energy and infrastructure could be useful for ease of interpretation;

(b) Revised bulk and location controls could be warranted in relation to amenity values and health and safety;

(c) Review energy and infrastructure rules and standards in relation to sensitive environments;

(d) Review height for energy and infrastructure support structures;

(e) Review energy and infrastructure definitions to improve certainty for development and reasonable flexibility for infrastructure operators;

(f) Revise the District Plan to ensure implementation of relevant NPS' and NES' is achieved;

(g) Review provisions for renewable energy generation, community reticulation schemes, new and emerging technologies, such as solar power, wireless communications, and on-site servicing (or management) for water supply and waste water, and stormwater disposal, detention and drainage;

(h) Review provisions for irrigation and stockwater.

2.6 Consultation Undertaken

Consultation has been undertaken as part of this District Plan Review process with key internal and external stakeholders and the wider community. The consultation undertaken and nature of involvement and the feedback received is summarised below.

2.6.1 Issues and Options

Comments were received from 75 persons or organisations in response to *'District Plan Review Issues and Options'* papers in 2017, which included an issues and options paper on *'Transport and Utilities'*. The comments received included general support either for reviewing and updating the current District Plan utilities provisions, or retaining them. Comments made raised with respect to energy and infrastructure, and the responses to these through the proposed Energy and Infrastructure Chapter, are summarised as follows in the table below.

Issues and Options Comments (Summary)	Responses (Summary)
Retain and/or simplify current District Plan provisions	As outlined in Section 2.2.1 above, a significantly revised and updated suite of infrastructure provisions in the proposed District Plan is required, including to give effect to a range of NPS' and NES'
Provide for support structures for amateur radio in a similar manner to Christchurch District Plan	Provision to this effect has been included
Update infrastructure rules to better reflect evolution of infrastructure over last 20 years	As outlined in Section 2.2.1 above, a significantly revised and updated suite of infrastructure provisions in the proposed District Plan is proposed
Promote/require more sustainable infrastructure	Objectives and policies proposed on various aspects of sustainability, including renewable energy, renewable electricity generation, and the utilisation of renewable resources, green infrastructure and energy efficiency Rules proposed on renewable energy, including renewable electricity generation by solar and wind, and sustainable water infrastructure such as solar hot water systems and rainwater collection tanks for non-potable use
Provide for the upgrade of utility and energy connections to/within historic buildings to enhance their usability Provide stringent controls over the placement of new utility and energy structures on heritage buildings to control visual effects and effects on heritage values	Policies and rules proposed on infrastructure on buildings and other structures identified in the District Plan as having historic heritage values
Need more enabling provisions to provide for a greater range of infrastructure without unnecessary resource consent requirements	As outlined in Section 2.2.1 above, a significantly revised and updated suite of infrastructure provisions in the proposed District Plan is required, including to give effect to a range of NPS' and NES'
Maintain current rules with minor enhancements as opposed to more detailed rules Opposed to District Plan promoting sustainable infrastructure, should be left to technology and market place	
Base future development around infrastructure capacity	Addressed through zone provisions
Support improved/enhanced communications facilities in District	As outlined in Section 2.2.1 above, a significantly revised and updated suite of infrastructure provisions in the proposed District Plan is proposed
Support providing for greater range of infrastructure to reduce unnecessary consenting costs	

Issues and Options Comments (Summary)	Responses (Summary)
Need to ensure greater resilience in location and design against natural hazards	The Natural hazards chapter contains provisions to avoid or mitigate the risks to energy and infrastructure from natural hazards.
A 'model' set of objectives, policies and rules are proposed to provide for a range of infrastructure to give effect to a range of National Policy Statements and National Environmental Standards, and to help achieve national consistency in provisions for infrastructure in district and regional plans	The proposed provisions are based in part on this 'model' set of national infrastructure provisions and have been reviewed by the group drafting the 'model' provisions
Update infrastructure rules to better and more explicitly give effect to the National Policy Statement on Electricity Transmission 2008 and the National Environmental Standard for Electricity Transmission Activities 2009, to better enable electricity transmission activities; better manage adverse effects of the transmission network in the District; and better manage adverse effects on the network	As outlined in Section 2.2.1 above, a significantly revised and updated suite of infrastructure provisions in the proposed District Plan is required, including to give effect to a range of NPS' and NES' Includes objective and policy provision and rules relating to electricity generation, transmission and distribution, and on managing adverse effects on energy and infrastructure including the National Grid and major electricity distribution lines
Provide for the establishment, operation and maintenance of irrigation schemes in the Infrastructure and Earthworks provisions of the proposed new District Plan	Provisions proposed for community-scale irrigation/stockwater

2.6.2 WDC Engineers

Drafts of the Energy and Infrastructure and Definitions Chapters were provided to the District Council's Engineers for review and comment. The Engineers assisted in the drafting of provisions requiring connection to water supply, wastewater system and stormwater infrastructure in specified circumstances.

With particular regard to greywater recycling, this was opposed by the Engineers due to concerns about potential health and adverse environmental effects, and as a consequence a draft policy promoting greywater recycling was deleted.

With particular regard to policy and rule provisions for adequate water supplies for firefighting, the Engineers advised that while there is no problem making future networks adequate for this, there was a concern about achieving adequate supply through some existing systems. Consequently the Engineers preferred these provisions. However after consideration it was decided to retain these provisions. The provisions would not apply retrospectively to existing supplies, only to future new supplies. In addition, the SNZ PAS 4509:2008 NZ Fire Service Firefighting Water Supplies Code of Practice makes provision for alternative firefighting water sources where a reticulated water supply compliant with the Standard is not available. Provision for adequate water supplies for firefighting is considered important to the health, safety and well-being of people and communities.

2.6.3 National Infrastructure Working Group

A 'National Infrastructure Working Group' (the Working Group) has been formed to draft a 'model' set of draft Infrastructure provisions for councils for use in policy statements and plans.

This Working Group includes a range of energy and infrastructure providers and related interests, including Spark, Chorus, Vodafone, Transpower (who withdrew at the end of 2018), NZTA, KiwiRail, lines companies, gas companies, and local government (but does not include major generators).

The Working Group held a workshop in Christchurch to discuss the development of a draft 'National Infrastructure Chapter', to which Environment Canterbury, Christchurch City and Selwyn, Waimakariri, Hurunui and Kaikoura District Councils were invited. A particular focus of the workshop was the potential value of the draft 'National Infrastructure Chapter' to reviews of policy statements and plans.

The draft 'National Infrastructure Chapter' is intended to form part of any future content-related additions to the National Planning Standards (see Section 3.2 below) or, alternatively, become a national 'best practice guide' for drafting infrastructure provisions. The aim of the Working Group and the draft 'National Infrastructure Chapter' is to provide technical assistance to councils in developing technically accurate provisions and achieve greater consistency in infrastructure provisions across the country.

The Working Group advised the draft 'National Infrastructure Chapter' is based in part on infrastructure provisions in both the operative Auckland Unitary Plan and the operative Christchurch District Plan. This is because both plans had been through Board of Enquiry hearings, had been subject to a wide range of expert evidence, and give effect to and are consistent with the NPS' and NES' cited in Section 2.2.1 above.

The Working Group provided copies of its draft 'National Infrastructure Chapter' to the District Council to assist the Council in drafting its energy and infrastructure provisions. Initially the preference of the Working Group was for the District Council to adopt the draft 'National Infrastructure Chapter' as part

of the proposed District Plan. However at the workshop outlined above it emerged the draft 'National Infrastructure Chapter' was unlikely to be finalised prior to notification of the proposed District Plan.

The drafting of the Waimakariri Energy and Infrastructure provisions has had regard to the content of the provisions in a draft 'National Infrastructure Chapter'.

Drafts of the Waimakariri Energy and Infrastructure and Definitions chapters were provided to the Working Group for review and comment.

2.6.4 MainPower NZ Ltd

MainPower NZ Ltd (MainPower) is a network utility operator and requiring authority based in Rangiora that operates and maintains an electricity distribution network in the District comprising 11kV, 22kV, 33kV and 66kV electricity distribution lines, as well as substations and depots. The 33kV and 66kV lines are considered to be the major electricity distribution lines in the District.

The Mainpower network services over 40,000 homes via 5,071km of overhead lines and underground cables across a geographic area of 11,180km^2 spanning from north of the Waimakariri River through the Waimakariri and Hurunui districts to Kaikoura.

Drafts of the Energy and Infrastructure and Definitions chapters were provided to MainPower for review and comment.

One particular issue MainPower wished addressed, was the inclusion of provisions seeking to avoid or mitigate adverse effects of incompatible activities adjacent to major electricity distribution lines, similar to provisions sought by Transpower with respect to the National Grid (see Section 2.6.5 below). However, if such provisions were to be included, the relevant electricity distribution lines would need to be mapped, similar to the National Grid in the District. It eventuated the 11kV and 22kV electricity distribution lines were too numerous and subject to frequent alteration to make mapping of these in the District Plan impractical. However, MainPower advised the 33kV and 66kV electricity distribution lines were relatively stable, making them more suited to mapping in the District Plan. MainPower therefore supplied technical data to the District Council's GIS team and the 33kV and 66kV electricity distribution lines in the District have been mapped. Accordingly, proposed provisions along the lines requested by MainPower have been included with respect to the 33kV and 66kV major electricity distribution lines. This is similar to the approach adopted in other recent district plans.

2.6.5 Transpower NZ Ltd

Transpower NZ Ltd (Transpower) is a network utility operator and requiring authority that operates and maintains the National Grid electricity transmission network throughout NZ. There are 350kV, 220kV and 66kV National Grid electricity transmission lines in the District.

Drafts of the Energy and Infrastructure and Definitions chapters were provided to Transpower for review and comment.

Feedback offered by Transpower concerned various objectives, policies, definitions, and rules. This was focussed on giving effect to NPS', being consistent with NES', managing the effects of infrastructure in a range of sensitive environments, and provisions seeking to avoid or mitigate adverse effects of incompatible activities adjacent to the National Grid. Transpower advised there was particular wording regarding relevant provisions it advocates to councils throughout NZ, which Transpower subsequently provided to assist the District Council in its drafting, and which have been incorporated into the Energy and Infrastructure provisions.

2.6.6 North Canterbury Federated Farmers and Horticulture NZ

A meeting was held with North Canterbury Federated Farmers and Horticulture NZ. Different aspects of the Waimakariri District Plan Review were discussed, mainly concerning provisions for Rural zones, but included an overview of the Energy and Infrastructure provisions. No specific changes were sought following the discussion.

2.6.7 Waimakariri Irrigation Ltd and Dairy NZ Ltd

A meeting was held with Waimakariri Irrigation Ltd (WIL) and Dairy NZ Ltd. Different aspects of the Waimakariri District Plan Review were discussed, including the Energy and Infrastructure provisions, particularly as they related to irrigation/stockwater. (WIL became a requiring authority on 1 September 2016 and irrigation is included in the RMA definition of 'network utility operator' in Section 166 of the RMA.)

WIL advised future hydro-electric generation was proposed in combination with its irrigation/stockwater network. This might include water storage enabling up to 8MW of generation sufficient for approximately 8000 homes. In the absence of water storage, 'run-of-the-scheme' hydro generation might be established on the irrigation/stockwater network enabling up to 1MW of generation sufficient for approximately 1000 homes.

In response, the District Council clarified that, in the context of the NPSREG which promotes small-scale and community-scale renewable electricity generation, the Energy and Infrastructure provisions made provision for wind and solar only, either for use on a site (which the Council considers small-scale), or for use on up to 20 sites (which the Council considers community-scale). The District Council considered generation of the scale envisaged by WIL was potentially greater than community-scale, and was cautious about enabling large scale water storage, and under the Energy and Infrastructure provisions what WIL was proposing would require resource consent as a discretionary activity.

The District Council queried whether WIL was likely to require any designations in the proposed District Plan given its recent requiring authority status. WIL advised it was unclear whether any new designations were proposed and would seek its own legal advice on this.

2.6.8 Other WDC Internal Stakeholders

Other than the District Council's Engineers (see Section 2.6.2 above), several other parts of the District Council have been consulted as internal stakeholders in the development of the Energy and Infrastructure provisions.

An overview of the draft Energy and Infrastructure provisions was provided to the District Council's Technical Advisory Group. The draft provisions were also provided for technical planning review to the District Council's District Plan Review Internal Review Group and to an External Reviewer. The draft provisions were also provided to the District Council's Plan Implementation Unit (or resource consents team). The District Council's District Planning and Regulation Committee were provided with briefings and the draft provisions.

2.7 Iwi Authority Advice

Clause 3(1)(d) of Schedule 1 of the RMA sets out the requirements for local authorities to consult with iwi authorities during the preparation of a proposed plan. Clause 4A requires the District Council to provide a copy of a draft proposed plan to iwi authorities and have particular regard to any advice received. This section summarises the consultation feedback/advice received from the iwi authority

relevant to ***Energy and Infrastructure***, and the District Council's consideration of, and response to (as required by Section 32(4A)(b) of the RMA), that feedback/advice.

Consultation has been undertaken with Te Ngāi Tūāhuriri Rūnanga regarding a range of District Plan matters. Specific feedback was provided with respect to energy and infrastructure. In summary, greater control was requested over energy and infrastructure in sites and areas of significance to Te Ngāi Tūāhuriri Rūnanga. The Energy and Infrastructure provisions provide for controls over infrastructure in a range of 'sensitive environments', including sites and areas of significance to Maori. This is discussed further in Section 3.4 below, which summarises how the Energy and Infrastructure provisions address the provisions of the Mahaanui Iwi Management Plan 2013 relevant to energy and infrastructure. In addition, how the Energy and Infrastructure provisions apply in the Special Purpose Zone (Kāinga Nohoanga) is set out in Appendices SPZ(KN)-APP1 to SPZ(KN)-APP5 of that chapter.

Consultation with Te Ngāi Tūāhuriri Rūnanga regarding the wider District Plan Review is ongoing.

2.8 Reference to other relevant Section 32 Evaluations

The following other evaluations that may be relevant to this Section 32 report include Section 32 reports for the following chapters of the proposed District Plan:

(a) ***Transport;***

This is relevant in terms of any applicable transport provisions applicable to future energy and infrastructure development.

(b) ***Coastal environment;***

This is relevant with regards any new energy and infrastructure development that may affect public access to fresh water bodies or to or along the coast or enjoyment of the coastal environment.

(c) ***Contaminated land;***
(d) ***Hazardous substances;***

With respect to (c) and (d) above, these matters are relevant as energy and infrastructure may involve the transportation, storage, use and disposal of hazardous substances and may take place on contaminated land or may result in land becoming contaminated.

(e) ***Noise;***
(f) ***Signs;***
(g) ***Light;***

With respect to (e) to (g) above, these matters are relevant in terms of how any environmental effects of these matters arising from any future energy and infrastructure development will be managed.

(h) ***Subdivision;***

This is relevant in terms of any subdivision requirements for new energy and infrastructure development.

(i) ***Natural hazards;***
(j) ***Historic heritage;***

(k) ***Notable trees;***
(l) ***Sites and areas of significance to Maori;***
(m) ***Ecosystems and indigenous biodiversity;***
(n) ***Natural character;***
(o) ***Natural features and landscapes;***

With respect to (i) to (o) above, these matters are relevant with regards any new energy and infrastructure development on land within District Plan overlays that identify such land as being subject to these matters.

(p) ***Earthworks;***

This is relevant in terms of the applicable earthworks requirements for any future energy and infrastructure development.

3. STATUTORY AND POLICY CONTEXT

3.1 Resource Management Act 1991

Section 5 of the RMA sets out the purpose of the RMA, which is to promote the sustainable management of natural and physical resources. In achieving this purpose, authorities need to recognise and provide for matters of national importance identified in Section 6, have particular regard to other matters listed in Section 7, and take into account the principles of the Treaty of Waitangi (Te Tiriti o Waitangi) under Section 8.

Energy and Infrastructure are significant physical resources that make an essential contribution to the social and economic well-being of the District, and therefore must be sustainably managed.

3.1.1 Section 6

The Section 6 matters potentially relevant to this topic are:

(a) the preservation of the natural character of the coastal environment (including the coastal marine area), wetlands, and lakes and rivers and their margins, and the protection of them from inappropriate subdivision, use, and development:

(b) the protection of outstanding natural features and landscapes from inappropriate subdivision, use, and development:

(c) the protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna:

(d) the maintenance and enhancement of public access to and along the coastal marine area, lakes, and rivers:

(e) the relationship of Māori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga:

(f) the protection of historic heritage from inappropriate subdivision, use, and development:

(h) the management of significant risks from natural hazards.

The operative District Plan was first publicly notified in 1995 and became operative in 2005. Since then, as outlined in Section 2.2.1 above, central government has released a number of NPS' and NES' directly concerning energy and infrastructure. The NPS' and NES' cited in Section 2.2.1 above include

controls on energy and infrastructure in a range of 'sensitive' cultural, natural and physical environments.

Overlays in the proposed District Plan for the coastal environment, outstanding natural features and landscapes, natural character, significant natural areas, buildings and other structures with historic heritage values, sites and areas of significance to Maori, and natural hazards, may overlie the sites of and routes for energy and infrastructure.

Energy and infrastructure makes an essential contribution to the social and economic wellbeing of the District, and should therefore be located, designed and constructed to be as resilient as far as practicable to significant risks from natural hazards. The Natural hazards chapter contain provisions to avoid or mitigate the risk to energy and infrastructure.

The Energy and Infrastructure Chapter proposes controls on energy and infrastructure in the following types of 'sensitive environments' identified or defined in the proposed District Plan, which recognise and provide for relevant Section 6 matters:

(a) Outstanding natural features and landscapes and significant amenity landscapes;
(b) Significant natural areas;
(c) Outstanding natural character areas, very high natural character areas, and high natural character areas, including in the coastal environment and the natural character of scheduled freshwater bodies;
(d) The root protection area of notable trees;
(e) Buildings and other structures with historic heritage values;
(f) Sites and areas of significance to Maori; and
(g) Places adjoining the coastal marine area.

3.1.2 Section 7

The Section 7 matters relevant to this topic are:

(b) the efficient use and development of natural and physical resources:

(ba) the efficiency of the end use of energy:

(c) the maintenance and enhancement of amenity values:

(d) intrinsic values of ecosystems:

(f) maintenance and enhancement of the quality of the environment:

(g) any finite characteristics of natural and physical resources:

(i) the effects of climate change:

(j) the benefits to be derived from the use and development of renewable energy.

As outlined in Section 3.1.1 above, the NPS' and NES' cited in Section 2.2.1 above include controls on energy and infrastructure in a range of 'sensitive' cultural, natural and physical environments.

Overlays in the proposed District Plan for the coastal environment, outstanding natural features and landscapes, natural character, significant natural areas, buildings and other structures with historic heritage values, sites and areas of significance to Maori, and natural hazards (which include the effects of climate change), may overlie the sites of and routes for energy and infrastructure.

Energy and infrastructure makes an essential contribution to the social and economic wellbeing of the District, and should therefore be located, designed and constructed to be as resilient as far as practicable to significant risks from natural hazards. The Natural hazards chapter contain provisions to avoid or mitigate the risk to energy and infrastructure, and take into account the effects of climate change.

The provisions of the Energy and Infrastructure Chapter will ensure that activities within these areas are managed to protect and maintain amenity values and the quality of the environment whilst ensuring energy and infrastructure continues to contribute to the social, economic and cultural well-being of the District.

A range of provisions are proposed aimed at promoting greater sustainability in energy and infrastructure, including the adoption of renewable energy, sustainable water use, and more energy efficient building design.

3.1.3 Section 8

Section 8 of the RMA requires the District Council to take into account the principles of the Treaty of Waitangi (Te Tiriti o Waitangi). Mana whenua, through iwi authorities have been consulted as part of the District Plan Review process and the obligation to make informed decisions based on that consultation is noted. Section 74(2A) further requires councils to take into account relevant Iwi Management Plans and their bearing on the resource management issues of the District.

Consultation has been undertaken with Te Ngāi Tūāhuriri Rūnanga regarding a range of District Plan matters, and specific feedback was provided with respect to energy and infrastructure. The nature of this feedback and the response to it was outlined in Section 2.7 above. How the Energy and Infrastructure provisions address relevant policies of the Mahaanui Iwi Management Plan 2013 is summarised in Section 3.4 below. Consultation with Te Ngāi Tūāhuriri Rūnanga regarding the wider District Plan Review is ongoing.

3.2 National Instruments

The following national instruments are relevant to this topic.

3.2.1 National Policy Statement on Urban Development Capacity 2016

The National Policy Statement on Urban Development Capacity 2016 (NPS-UDC) recognises the national significance of urban environments and provides direction to decision-makers on planning for urban environments.

The relevant objectives and policies place a requirement on local authorities to provide for urban growth. The NPS-UDC requires the District Council to look at the district projected population growth and pre-empt market demand by unlocking and servicing land feasible for development.

Under the NPS-UDC the District is recognised as a 'high growth area'. Between the 2013 and 2018 census, the population of the District rose from 49,989 to 59,502, a 19 per cent increase. That was on top of a 16.7 per cent lift between 2006 and 2013 from 42,834 people. The Waimakariri District Development Strategy 2018-2048 estimates the population of the District may grow by a further approximately 37,000 people by 2048. Critical to planning for these needs is integrated decision-making on infrastructure.

Policy PA1 of the NPS-UDC states that *"Local authorities shall ensure that at any one time there is sufficient housing and business land development capacity according to the table below"*:

Short term	Development capacity must be feasible, zoned and serviced with development infrastructure
Medium term	Development capacity must be feasible, zoned and either: • Serviced with development infrastructure, or • The funding for the development infrastructure required to service that development capacity must be identified in a Long Term Plan required under the Local Government Act 2002
Long term	Development capacity must be feasible, identified in relevant plans and strategies, and the development infrastructure required to service it must be identified in the relevant Infrastructure Strategy required under the Local Government Act 2002

Policy PA2 states that *"Local authorities shall satisfy themselves that other infrastructure required to support urban development are likely to be available".*

The NPS-UDC has been considered in developing the proposed Energy and Infrastructure provisions. The proposed provisions promote the planning and delivery of energy and infrastructure that is coordinated with subdivision, land use and development so that future land use, energy and infrastructure are integrated, aligned and compatible.

3.2.2 National Planning Standards 2019

The first set of National Planning Standards came into force on 3 May 2019 and minor amendments were incorporated in November 2019. The purpose of the National Planning Standards is to improve consistency in plan and policy statement structure, format and content.

Of particular relevance are Table 4 (district plan structure) of the District Plan Structure Standard, and paragraphs 5 to 8 of the District-wide Matters Standard. The combination of these directs that the District Plan must include provisions relating to energy, infrastructure and transport in one or more chapters in that part of ***Part 2 – District-wide matters*** concerning ***Energy, Infrastructure and Transport***.

In the Proposed District Plan, the ***Energy and Infrastructure Chapter*** is part of ***Part 2 – District Wide Matters - Energy, Infrastructure and Transport***.

The provision of the ***Energy and Infrastructure Chapter*** is consistent with the National Planning Standards.

3.2.3 NPSET, NZCPS, NPSREG, NPSFM, NESF, NESETA and the NESTF

- **National Policy Statement on Electricity Transmission 2008 (NPSET)**
- **New Zealand Coastal Policy Statement 2010 (NZCPS)**
- **National Policy Statement for Renewable Electricity Generation 2011 (NPSREG)**
- **National Policy Statement for Freshwater Management 2020 (NPSFM)**
- **National Environmental Standards for Freshwater 2020 (NESF)**
- **National Environmental Standards for Electricity Transmission 2019 (NESTA)**
- **National Environmental Standards for Telecommunication Facilities 2008 (NESTF)**

The table In **Appendix 2** of this report contains an overview of how these NPS' and NES' specifically affect the content of the Energy and Infrastructure provisions in the proposed District Plan.

The Energy and Infrastructure Chapter:

(a) Gives effect to the NPSREG, NPSET, NPSFM and the NZCPS; and

(b) Is consistent with the NESF, NESETA and the NESTF.

3.3 Regional policy statement and plans

Under Section 75(3)(c) of the RMA, a District Plan must give effect to the relevant or applicable regional policy statement or plan.

The operative Canterbury Regional Policy Statement (RPS) contains provisions of relevance.

The operative RPS sets out policy direction for sustainable development (and constraints) with which the District Plan must be consistent.

The RPS contains policy direction for district plans to provide for 'critical infrastructure', 'strategic infrastructure' and 'regionally significant infrastructure'.

Chapter 5 provides land use and infrastructure related provisions which all proposed district plan changes must be consistent with. In particular, Policies 5.3.5 and 5.3.6 consider servicing development for potable water and sewage and stormwater disposal and infrastructure. Policy 5.3.9 sets out requirements for 'regionally significant infrastructure' and Policy 5.3.11 is concerned with management of irrigation and stockwater.

Objectives 16.2.2, 16.3.2 and 16.3.3 of Chapter 16 – Energy, encourage the use of small-scale and community-scale renewable electricity generation.

The ***Energy and Infrastructure Chapter*** contains a range of provisions that address these matters. The provisions enable or provide for the establishment, maintenance, repair, removal, upgrading, development, resilience and sustainability of energy and infrastructure, including critical infrastructure, strategic infrastructure and regionally significant infrastructure. The provisions seek to have increased renewable energy for national, regional and local use; and to have greater renewable electricity generation, including small-scale and community-scale, with generation surplus able to be supplied to the electricity distribution network. The provisions will manage actual or potential adverse effects of energy and infrastructure on the environment, and manage actual or potential adverse effects of incompatible activities and development on energy and infrastructure. The provisions will therefore be consistent with the RPS.

There are no regional plans of specific relevance to this topic.

3.4 Iwi Management Plan

As outlined in Section 2.7 above, consultation has been undertaken with Te Ngāi Tūāhuriri Rūnanga regarding a range of District Plan matters, and specific feedback was provided with respect to energy and infrastructure. Consultation with Te Ngāi Tūāhuriri Rūnanga regarding the wider District Plan Review is ongoing.

The Mahaanui Iwi Management Plan 2013 (IMP) contains objectives and policies of relevance to energy and infrastructure in the District. The table below lists relevant IMP objectives and policies and summarises how the energy and infrastructure provisions address these.

IMP Objectives/Policies	Response (Summary)
Climate change *R3.4 To support the reduction of emissions as a response to climate change, including but not limited to:* *(b) Use of solar water heating and similar measures to reduce energy use*	Objectives and policies proposed on various aspects of sustainability, including renewable energy, renewable electricity generation, and the utilisation of renewable resources, green infrastructure and energy efficiency. Rules proposed on renewable energy, including renewable electricity generation by solar and wind, and sustainable water infrastructure such as solar hot water systems and rainwater collection tanks for non-potable use. The provisions of the Natural hazards chapter take into account the effects of climate change.
Electromagnetic radiation *R5.1 To highlight the potential risk to the health of our people and communities as a result of electromagnetic radiation sourced from overhead transmission lines and cell phone towers (and other) and to recognise this risk when considering the placement of these.* *R5.2 To require a precautionary approach to electromagnetic radiation regarding its possible effects on human health. This means that unknown effects do not mean no effects; and that protecting human health and taking preventative action before certainty of harm is proven must be the basis of decision making.*	Policies and rules proposed regarding compliance with standards relating to the generation of radiofrequency and electromagnetic fields and safe exposure levels.
Water quality ***Efficiencies*** *WM8.11 To support activities and strategies to improve the efficiency of water use in urban and rural situations, including:* *(a) Water efficiency technology in residential, commercial, industrial and urban environments:* *(i) rainwater storage tanks;* *(ii) greywater reuse;* *(iv) water efficient appliances.* *(b) (v) collecting and storing rainwater*	Objectives and policies proposed on various aspects of sustainability, including renewable energy, renewable electricity generation, and the utilisation of renewable resources, green infrastructure and energy efficiency. Rules proposed on renewable energy, including renewable electricity generation by solar and wind, and sustainable water infrastructure such as solar hot water systems and rainwater collection tanks for non-potable use. Greywater re-use not supported by WDC Engineers for health reasons.
Papatuanuku *P(7) Subdivision and development activities implement low impact, innovative and sustainable solutions to water, stormwater, waste and energy issues.*	

IMP Objectives/Policies	Response (Summary)
Energy *P17.4 To require that local authorities develop and implement effective policies requiring the use of renewable energy and energy saving measures in residential, commercial, industrial and other developments.* *P17.5 To support in principle the use of wind and solar energy generation in the region (see Section 5.7, Issue TAW1).*	Objectives and policies proposed on various aspects of sustainability, including renewable energy, renewable electricity generation, and the utilisation of renewable resources, green infrastructure and energy efficiency. Rules proposed on renewable energy, including renewable electricity generation by solar and wind, and sustainable water infrastructure such as solar hot water systems and rainwater collection tanks for non-potable use.
Wind Farms *TAW1.3 To require the protection of key cultural landscape values, as identified by tāngata whenua, from activities associated with the development and operation of wind farms.*	

3.5 Any relevant management plans and strategies

3.5.1 Waimakariri District Development Strategy 2018-2048

Between the 2013 and 2018 census, the population of the District rose from 49,989 to 59,502, a 19 per cent increase. That was on top of a 16.7 per cent lift between 2006 and 2013 from 42,834 people. The DDS estimates the population of the District may grow by a further approximately 37,000 people by 2048. An increase in population and settlement size and density implies a need to update the ability of the District Plan to enable or provide for energy and infrastructure in the District.

3.6 Any other relevant legislation or regulations

Other legislation and regulations are relevant to energy and infrastructure are summarised in **Appendix 3** of this report. These have helped inform the District Plan Effectiveness assessment and reporting (see Section 2.5 above), and in turn have informed preparation of the Energy and Infrastructure provisions.

The Energy and Infrastructure provisions include advice notes with cross references for plan users including energy and infrastructure providers to check whether any other relevant requirements under these other legislation or regulations that may apply.

3.7 Any plans of adjacent and other territorial authorities and other parties

The District Council is required to have regard to the extent to which the District Plan needs to be consistent with the plans and proposed plans of adjacent territorial authorities under Section 74(2)(c) of the RMA.

3.7.1 Christchurch District Plan

Drafting of the Waimakariri Energy and Infrastructure Chapter has had regard to the structure and content of the energy and infrastructure provisions in the operative Christchurch District Plan.

With respect to energy and infrastructure, the operative Christchurch District Plan contains *'General'* methods, and methods relating to *'Electricity Transmission and Distribution'*, *'Energy'*, *'Communication Facilities'*, and *'Water, Wastewater and Stormwater'*.

With reference to Section 5.4 below, this is similar to the structure and content of the Waimakariri Energy and Infrastructure Chapter. The proposed Energy and Infrastructure provisions include objectives, policies and methods relating to the following:

- General provisions (applicable to all energy and infrastructure, as relevant) including meteorological and environmental sensing and monitoring equipment, and navigational aids;
- Electricity transmission and distribution;
- Communication facilities;
- Fuel and energy;
- Renewable energy;
- Water, wastewater and stormwater;
- Irrigation/stockwater;
- Managing effects of activities on the National Grid; and
- Managing effects of activities on major electricity distribution lines.

In this context, proposed Waimakariri Energy and Infrastructure Chapter is therefore generally consistent with the operative Christchurch District Plan.

3.7.2 Proposed Selwyn District Plan

A proposed new Selwyn District Plan was publicly notified on 5 October 2020. The Selwyn Energy and Infrastructure Chapter is similar in scope to the proposed Waimakariri Energy and Infrastructure Chapter.

3.7.3 Hurunui District Plan

Hurunui District Council recently completed a review of its district plan which became operative on 21 June 2018. The energy and infrastructure provisions of that plan are relatively limited in scope. However, as that plan review just pre-dated the National Planning Standards (see Section 3.2.2 above), under Section 17 of the National Planning Standards the Hurunui District Council must commence another review of its district plan within the next 7 years.

3.7.4 Draft 'National Infrastructure Chapter' and Auckland Unitary Plan

As discussed in Section 2.6.3 above, a 'National Infrastructure Working Group' (the Working Group) has been formed to draft a 'model' set of draft Infrastructure provisions for councils for use in plans and proposed plans. A draft 'National Infrastructure Chapter' prepared by the Working Group is based in part on infrastructure provisions in both the operative Auckland Unitary Plan and the operative Christchurch District Plan, because both plans had been through Board of Enquiry hearings, had been subject to a wide range of expert evidence, and give effect to and are consistent with the NPS' and NES' cited in Section 2.2.1 above.

The Waimakariri Energy and Infrastructure Chapter has had regard to the infrastructure provisions in the draft 'National Infrastructure Chapter' and, indirectly, the Auckland Unitary Plan.

4. KEY RESOURCE MANAGEMENT ISSUES

The resource management issues that need to be addressed in relation to energy and infrastructure are to:

A. Enable or provide for the establishment, maintenance, repair, removal, upgrading, development, resilience and sustainability of ***energy and infrastructure***, including 'critical infrastructure', 'strategic infrastructure' and 'regionally significant infrastructure';

B. Have increased renewable energy for national, regional and local use; and to have greater renewable electricity generation, including small-scale and community-scale, with generation surplus able to be supplied to the electricity distribution network;

C. Manage actual or potential adverse effects of energy and infrastructure on the environment; and

D. Manage actual or potential adverse effects of incompatible activities and development on energy and infrastructure, including on the National Grid and on major electricity distribution lines, to protect and maintain their function.

The provisions in the Energy and Infrastructure Chapter must:

(a) Give effect to the NPSREG, NPSET, and the NZCPS; and

(b) Be consistent with the NESETA and the NESTF.

5. OVERVIEW OF PROPOSED OBJECTIVES, POLICIES AND METHODS

The proposed provisions are set out in the Energy and Infrastructure Chapter of the proposed District Plan. **These provisions should be referred to in conjunction with this evaluation report.** The proposed provisions are summarised below.

5.1 Strategic Directions

In the proposed District Plan, Strategic Direction Objective SD-O2 seeks, in summary, consolidated and integrated urban development and infrastructure that utilises Council's reticulated services for potable water, stormwater and waste servicing.

Strategic Direction Objective SD-O3 seeks that, in summary, infrastructure operates efficiently and effectively, and development and upgrading is enabled whilst managing adverse effects on the surrounding environment and adverse effects of activities on infrastructure, having regard to the social and economic benefits and functional need and operational need of infrastructure, and that the nature, timing and sequencing of new development and new infrastructure are integrated and coordinated.

Strategic Direction Policies on Urban Form and Development UFD-P2 and UFD-P3 seek that, in summary, new residential development is located so that it is sequenced in a manner that makes use of existing and planned three waters infrastructure, or where such infrastructure is not available, upgrades, funds and builds infrastructure as required, to an acceptable standard.

Strategic Direction Policy on Urban Form and Development UFD-P9 seeks, in summary, to avoid reverse sensitivity effects from residential activities that have the potential to limit the efficient and effective operation and upgrade of infrastructure.

The inclusion and provisions of the ***Energy and Infrastructure Chapter*** will address the key resource management issues in relation to energy and infrastructure in the District as identified in Section 4 above, and will therefore be consistent with and give effect to these Strategic Directions.

5.2 District-wide Subject

The scope of the ***Energy and Infrastructure Chapter*** is discussed in Section 2.2 above.

5.3 Proposed Objectives and Policies

The proposed objectives and policies are set out in the ***Energy and Infrastructure Chapter***. **Those provisions should be read in conjunction with this evaluation report.** With reference to the Energy and Infrastructure Chapter, the matters in which objectives and policies are proposed are summarised in the following table.

Objectives
Provision of energy and infrastructure
Adverse effects of energy and infrastructure
Effects of activities and development on energy and infrastructure
Policies
Recognising the benefits of, and providing for, energy and infrastructure
Availability, provision and adequacy of, and connection to, energy and infrastructure
New technologies and techniques
Environmentally sustainable outcomes

Manage adverse effects of energy and infrastructure
Effects of other activities and development on energy and infrastructure

The ***Energy and Infrastructure*** provisions contain a suite of significantly revised, updated and expanded objectives and policies to address the issues identified in sections 2.3 and 2.5 above, and achieve the key resource management issues with respect to energy and infrastructure identified in Section 4 above.

5.4 Proposed Methods

Proposed methods are set out in the ***Energy and Infrastructure Chapter***. **Those provisions should be read in conjunction with this evaluation report.**

The activities to be provided for in the ***Energy and Infrastructure Chapter*** are summarised in the table in **Appendix 4** of this report.

In summary, the ***Energy and Infrastructure Chapter*** includes rules and standards relating to:

- General provisions, applicable to all energy and infrastructure, as relevant;
- Electricity transmission and distribution;
- Communication facilities;
- Fuel and energy;
- Renewable energy, including small-scale and community-scale renewable electricity generation;
- Water, wastewater and stormwater;
- Irrigation/stockwater networks;
- Managing effects of activities and development on the National Grid; and
- Managing effects of activities and development on major electricity distribution lines.

Relevant definitions include definitions for the following:

- Utility/Utilities
- National grid
- National grid yard
- National grid support structure
- Electricity distribution
- Electricity distribution line
- Electricity transmission
- Electricity transmission line
- Telecommunication
- Critical infrastructure
- Strategic infrastructure
- Regionally significant infrastructure
- Lifeline utility
- Emergency
- Emergency service facility
- Water
- Water supply
- Drinking water
- Public drinking water supply
- Height in relation to infrastructure
- Ancillary infrastructure equipment
- Customer connection
- Navigational aid
- Temporary infrastructure
- Renewable electricity generation
- Pole
- Tower
- Pi-pole
- Antenna
- Cabinet
- Telecommunication line
- Radiocommunication
- Headframe
- Amateur radio configurations
- Amateur radio operators
- Communication kiosk
- Small cell unit
- Self-contained power unit

- Wastewater
- Wastewater system
- Public wastewater system
- Sewage
- Greywater
- Industrial waste and trade waste
- Stormwater
- Stormwater infrastructure
- Places adjoining the coastal marine area
- Small-scale and community-scale renewable electricity generation
- Gas pipeline
- Sensitive activity
- Noise sensitive activities
- Indigenous vegetation
- Indigenous fauna
- Conductor
- Gas distribution pipeline

Matters of discretion are proposed to guide the exercise of discretion regarding energy and infrastructure requiring resource consent.

The ***Energy and Infrastructure*** methods comprise a suite of significantly revised, updated and expanded rules, standards, definitions and matters of discretion to address the issues identified in sections 2.3 and 2.5 above, achieve the proposed objectives and policies, and achieve the key resource management issues with respect to energy and infrastructure identified in Section 4 above.

The ***Energy and Infrastructure*** provisions provide a framework to enable, provide for or manage energy and infrastructure while avoiding or mitigating adverse effects including reverse sensitivity. If proposed activities fall within relevant definitions, rules and standards, resource consent will not be required.

6. SCALE AND SIGNIFICANCE EVALUATION

Section 32 (1)(c) of the RMA requires that a Section 32 report contain a level of detail that corresponds with the scale and significance of the environmental, economic, social and cultural effects that are anticipated from the implementation of the proposed objectives, policies and methods.

The level of detail undertaken for the subsequent evaluation of the proposed objectives, policies and methods has been determined by this scale and significance assessment.

In particular, Section 32 (1)(c) of the RMA requires that:

A. Any new proposals need to be examined for their appropriateness in achieving the purpose of the RMA;

B. The benefits and costs, and risks of new policies and methods on the community, the economy and the environment need to be clearly identified and assessed; and

C. All advice received from iwi authorities, and the response to the advice, needs to be summarised.

Further, the analysis has to be documented to assist stakeholders and decision-makers understand the rationale for the proposed objectives, policies and methods under consideration.

In making this assessment regard has been had to a range of scale and significance factors, including whether the provisions:

(a) Are of regional or district wide significance:

The ***Energy and Infrastructure*** provisions apply District-wide. This will potentially affect both the wider community, as well as energy and infrastructure providers.

(b) Involve a matter of national importance in terms of Section 6 of the RMA:

The ***Energy and Infrastructure*** provisions will achieve relevant Section 6 matters, as outlined in Section 3.1.1 above.

(c) Involve another matter under Section 7 of the RMA:

The ***Energy and Infrastructure*** provisions will achieve relevant Section 7 matters, as outlined in Section 3.1.2 above.

(d) Raise any principles of the Treaty of Waitangi (Te Tiriti o Waitangi) under Section 8 of the RMA:

Consultation has been undertaken with Te Ngāi Tūāhuriri Rūnanga as part of the district plan review process regarding a range of District Plan matters, and is ongoing. Relevant provisions of the Mahaanui Iwi Management Plan 2013 have been considered, as outlined in Sections 3.1.3 and 3.4 above.

(e) Address an existing or new resource management issue:

The ***Energy and Infrastructure*** provisions will address the key resource management issues outlined in Section 4 above, and will give effect to and be consistent with a range of NPS' and NES' of direct relevance to energy and infrastructure.

(f) Adversely affect people's health and safety:
(g) Adversely affect those with particular interests including Maori:
(h) Adversely affect a large number of people:
(i) Result in a significant change to the character and amenity values of local communities:
(j) Result in a significance change to development opportunities or land use options:
(k) Limit options for future generations to remedy effects:

With respect to (f) to (k) above, the ***Energy and Infrastructure*** provisions will enable or provide for the establishment, maintenance, repair, removal, upgrading, development, resilience and sustainability of energy and infrastructure; manage actual or potential adverse effects of activities on energy and infrastructure; manage actual or potential adverse effects of energy and infrastructure on the environment, including in a range of more 'sensitive' environments; and promoting the planning and delivery of infrastructure that is coordinated with subdivision, land use and development so that future land use and infrastructure are integrated, aligned and compatible.

(l) Whether the effects have been considered implicitly or explicitly by higher order documents:

The ***Energy and Infrastructure*** provisions will be consistent with relevant National Instruments, as outlined in Section 3.2 above, and will be consistent with the RPS, as outlined in Section 3.3 above.

(m) Include regulations or other interventions that will impose significant costs on individuals or communities:

New, activity-based ***Energy and Infrastructure*** provisions provide greater certainty to energy and infrastructure operators and the community about the intended outcomes, and associated activity status. The provisions provide more flexibility for energy and infrastructure providers to locate and co-locate their activities and maintain/upgrade/replace energy and infrastructure and provide safe and efficient services, contributing to social and economic well-being. The

provisions will better enable, provide for or manage energy and infrastructure, which could lead to greater compliance with associated reduction in costs and time delay.

Policies and methods have been evaluated as a package, as together they address particular issues and seek to meet specific objectives.

6.1 Evaluation of Scale and Significance

	Low	Medium	High
Degree of change from the Operative Plan		✓	
The current Utilities provisions in the operative District Plan are relatively limited in scope, are outdated, and do not fully reflect the range of energy and infrastructure activities or development. The current Utilities provisions pre-date NPS' and NES' relevant to energy and infrastructure and therefore may not give effect to these NPS' and may not be consistent with these NES'. Under these NPS' and NES' the District Plan provisions need to enable not hinder the roll out of energy and infrastructure. The ***Energy and Infrastructure Chapter*** contains a significantly revised and updated suite of Infrastructure provisions from those in the operative District Plan, and therefore represents a moderate departure from the current approach of the operative District Plan. However, the proposed provisions reflect current best practice employed in a range of provisions of adjacent and other local authorities and other parties that have recently developed new energy and infrastructure provisions, are consistent with national and regional policy direction, will better or more fully give effect to and be consistent with relevant NPS' and NES', and will better achieve Part 2 of the RMA. Therefore, while the provisions are a moderate departure from the current approach of the operative District Plan, there are no significant consequences that are likely to arise from implementation of the provisions.			
Extent of effects on matters of national importance	✓		
The ***Energy and Infrastructure*** provisions will achieve the relevant parts of Part 2 of the RMA, as discussed in Section 3.1 above.			
Scale of effects geographically (local, district wide, regional, national)		✓	
Scale of effects on people (how many will be affected – single landowners, multiple landowners, neighbourhoods, the public generally, future generations?)		✓	
Scale of effects on those with specific interests, e.g., Mana Whenua, industry groups		✓	
The ***Energy and Infrastructure*** provisions apply District-wide. The provisions will potentially affect both the wider community, as well as energy and infrastructure providers. However, the provisions will enable or provide for the establishment, maintenance, repair, removal, upgrading, development, resilience and sustainability of energy and infrastructure; manage actual or potential adverse effects of activities on energy and infrastructure; manage actual or potential adverse effects of energy and infrastructure on the environment, including in a range of more 'sensitive' environments; and promote the planning and delivery of infrastructure that is coordinated with subdivision, land use and development so that future land use and infrastructure are integrated, aligned and compatible. Therefore, no significant consequences are likely to arise from implementation of the provisions.			

Degree of policy risk – does it involve effects that have been considered implicitly or explicitly by higher order documents? Does it involve effects addressed by other standards/commonly accepted best practice? Is it consistent, inconsistent or contrary to those?	✓		
As discussed in Section 3 above, there is little policy risk as the provisions are in accordance with or give effect to the RMA, relevant NPS' and NES', the National Planning Standards and the RPS. The provisions recognise and take into account the Mahaanui Iwi Management Plan 2013. The provisions are generally consistent with the provisions of adjacent and other local authorities and other parties, including the operative Christchurch District Plan, proposed Selwyn District Plan, the draft 'National Infrastructure Chapter', and the operative Auckland Unitary Plan.			
Likelihood of increased costs or restrictions on individuals, communities or businesses	✓		
The provisions will provide greater certainty to energy and infrastructure operators and the community about the intended outcomes, and associated activity status. The provisions provide more flexibility for energy and infrastructure providers to locate and co-locate their activities and maintain/upgrade/replace energy and infrastructure and provide safe and efficient services, contributing to social and economic well-being. The provisions will better enable, provide for or manage energy and infrastructure. Overall, this could lead to greater compliance with associated reduction in costs and time delay for stakeholders and the wider community.			

6.2 Summary - Evaluation of Scale and Significance

Overall, the scale and significance of the proposed ***Energy and Infrastructure*** provisions is assessed as **low to medium**. Given this, the level of detail in this report corresponds with the scale and significance of the environmental, economic and cultural effects anticipated from implementation of the proposed provisions.

7. EVALUATION OF PROPOSED OBJECTIVES

Section 32(1)(a) of the RMA requires the District Council to evaluate the extent to which the objectives are the most appropriate way to achieve the purpose of the RMA. The level of detail undertaken for the evaluation of the proposed objectives has been determined by the preceding scale and significance assessment.

Below is an evaluation of the proposed objectives that have been identified as the most appropriate to address the resource management issue(s) and achieve the purpose of the RMA, against the relevant objectives in the operative District Plan.

7.1 Evaluation of Proposed Objectives

Existing Objective/s	Appropriateness to achieve the purpose of the RMA
A summary of relevant key objectives in the operative District Plan that currently apply to utilities is contained in a table in **Appendix 1** of this report.	**Relevance:** The current Utilities provisions in the operative District Plan are relatively limited in scope, are outdated, and do not fully reflect the present day range of infrastructure activities or development. The current Utilities provisions pre-date National Policy Statements (NPS) and National Environmental Standards (NES) relevant to energy and infrastructure and therefore may not fully give effect to or be fully consistent with these NPS' and NES' and may not fully achieve Part 2 of the RMA. As a result, the existing approach is less relevant than the proposed approach which directly enables, provides for or manages a wider range of present day Energy and Infrastructure. The proposed provisions reflect current best practice elsewhere, and are consistent with current national and regional policy direction, and are therefore more relevant to achieving Part 2 of the RMA.
	Reasonableness: A number of shortcomings with the current Utilities provisions in the operative District Plan have been identified, as discussed in Sections 2.3 and 2.5 of this report, and as outlined immediately above. The current Utilities provisions in the operative District Plan do not expressly enable or provide for the establishment, maintenance, repair, removal, upgrading, development, resilience and sustainability of energy and infrastructure, including 'critical infrastructure', 'strategic infrastructure' and 'regionally significant infrastructure', nor make provision for renewable energy. The existing provisions also do not seek to manage reverse sensitivity effects of incompatible activities on energy and infrastructure.

Existing Objective/s	Appropriateness to achieve the purpose of the RMA
	The shortcomings in the current provisions creates ambiguity and uncertainty. This reduces the utility of the objectives and could lead to unintended economic and social consequences for energy and infrastructure. This, in turn, could impose unreasonable costs on energy and infrastructure providers and the wider community if consents are required for activities that might otherwise be enabled or provided for, or if effects are inappropriately managed. Overall, the existing objectives do not recognise the range of energy and infrastructure that needs to be enabled or provided for, do not provide plan users with sufficient certainty as to the expected outcomes, or recognise the protection that should be afforded to energy and infrastructure regarding reverse sensitivity effects. Consequently, the existing approach is less reasonable than the proposed approach.
	Achievability: The existing objectives do not directly or fully or sufficiently address the key resource management issues set out in Section 4 of this report. Consequently, the current framework of objectives provides insufficient direction and guidance to decision makers regarding the intended outcomes and specific activities and effects to be managed in relation to Energy and Infrastructure. Although the generic focus of the objectives on amenity values, well-being and health and safety generally achieves the purpose of the RMA, the contribution Energy and Infrastructure makes towards the well-being of the District is not expressly recognised. The current objectives do not fully or sufficiently recognise and provide for different types of present day Energy and Infrastructure, nor do they fully or sufficiently or expressly give effect to or achieve consistency with current national and regional policy direction directly regarding Energy and Infrastructure. The existing objectives are therefore considered not appropriate to fully achieve Part 2 of the RMA.

Proposed Objective/s	Appropriateness to achieve the purpose of the RMA
The proposed objectives are set out in the ***Energy and Infrastructure Chapter***. **Those provisions should be read in conjunction with this evaluation report.** The matters in which objectives are proposed are summarised in Section 5.3 above.	**Relevance:** The proposed objectives are relevant as they specifically recognise, enable or provide for and manage the range of present day energy and infrastructure, and anticipate technological change. The proposed objectives apply District-wide and give specific recognition to energy and infrastructure as a necessity for the District which needs to be provided for in a safe, efficient, and sustainable manner, and integrate with development and other activities. The proposed objectives still ensure that adverse effects of energy and infrastructure on the environment will be avoided, remedied or mitigated and amenity values and quality of the environment will be maintained. The proposed approach is therefore more relevant to achieving Part 2 of the RMA.
	Reasonableness: The proposed objectives more succinctly and clearly provide plan users with more certainty as to the expected outcomes, and give better recognition to the effects or types of energy and infrastructure that need to be enabled, provided for or managed. The proposed objectives specifically seek to manage reverse sensitivity effects of incompatible activities on energy and infrastructure. The proposed objectives are generally consistent with approaches adopted for energy and infrastructure elsewhere. The provisions will provide greater certainty to energy and infrastructure operators and the community about the intended outcomes, and associated activity status. The provisions provide more flexibility for energy and infrastructure providers to locate and co-locate their activities and maintain/upgrade/replace as appropriate and provide safe and efficient services, contributing to social and economic well-being. The provisions will better enable, provide for or manage energy and infrastructure. Overall, this could lead to greater compliance with associated reduction in costs and time delay for stakeholders and the

Proposed Objective/s	Appropriateness to achieve the purpose of the RMA
	wider community. Actual or potential adverse effects of energy and infrastructure on the environment will still be managed, with controls on energy and infrastructure in a range of more 'sensitive' environments. Consequently, the proposed approach is more reasonable than the existing approach.
	Achievability: The proposed objectives clearly set out the outcomes anticipated by the proposed District Plan with respect to energy and infrastructure. The proposed objectives more directly or more fully or more sufficiently address the key resource management issues set out in Section 4 of this report. The proposed objectives are designed to more directly or more fully or more sufficiently give effect to or better achieve consistency with national and regional policy direction with respect to energy and infrastructure. The proposed framework of objectives will provide direction and guidance to decision makers regarding the intended outcomes and specific activities and effects to be managed in relation to energy and infrastructure. The proposed objectives are therefore considered more appropriate to achieve Part 2 of the RMA.

7.2 Summary - Evaluation of Proposed Objectives

The proposed objectives better recognise, enable or provide for energy and infrastructure, including renewable energy and renewable electricity generation; better manage effects of energy and infrastructure on the environment; and better manage effects of activities on energy and infrastructure. They provide better guidance to decision makers on what outcomes are intended. They better recognise the important contribution energy and infrastructure makes to the social and economic well-being of the District. They align with contemporary planning practice applied elsewhere. They will better assist the District Council in giving effect to or being consistent with national and regional directions that relate to energy and infrastructure. They will better assist the District Council in achieving Part 2 of the RMA.

8. EVALUATION OF PROPOSED POLICIES AND METHODS

Section 32 (1)(b) of the RMA requires an evaluation of whether the proposed policies and methods (such as rules, standards, definitions and matters of discretion) are the most appropriate way to achieve the proposed objectives by identifying other reasonably practicable options, assessing the efficiency and effectiveness of the proposed policies and methods in achieving the objectives, and summarising the reasons for deciding on the proposed policies and methods.

The level of detail undertaken for the evaluation of the proposed policies and methods has been determined by the preceding scale and significance assessment.

The assessment must identify and assess the benefits and costs of environmental, economic, social and cultural effects that are anticipated from the implementation of the proposed policies and methods, including opportunities for economic growth and employment.

The assessment must, if practicable, quantify the benefits and costs and assess the risk of acting or not acting if there is uncertain or insufficient information available about the subject matter.

Policies and methods have been evaluated as a package, as together they address a particular issue and seek to meet specific objectives.

An evaluation of the proposed policies and methods is summarised in Section 8.1 below.

8.1 Evaluation of Proposed Policies and Methods

Policy and method options to achieve the District Plan objectives relating to Energy and Infrastructure	**Benefits** environmental, economic, social and cultural effects anticipated	**Costs** environmental, economic, social and cultural effects anticipated	**Efficiency and Effectiveness**	**Risk of acting / not acting** if there is uncertain or insufficient information about the subject matter of the provisions
Option A: Proposed Approach (a) Significantly revised and updated suite of activity-based energy and infrastructure provisions in the proposed District Plan; (b) Significantly revised and updated provisions to better: i. Enable or provide for energy and infrastructure, including renewable energy and renewable electricity generation; ii. Manage effects of energy and infrastructure on the environment;	**Environmental:** (a) Better recognition of the need to avoid reverse sensitivity effects; (b) Controls over energy and infrastructure in 'sensitive' environments; (c) Better give effect to or better achieve consistency with NPS' and NES' directly relevant to energy and infrastructure; (d) Provisions better reflect sustainability goal of Section 5 RMA; **Economic:** (e) Better recognition of the evolution of energy and infrastructure from the operative to the proposed plan through a significantly	**Environmental:** **Economic:** **Social:** **Cultural:** (a) Initially, less familiarity for plan users, given a significantly revised and updated suite of activity-based energy and infrastructure provisions for a significantly expanded range of energy and infrastructure types, in an e-Plan environment.	(a) The benefits of the approach significantly outweigh the costs; (b) Provisions are effective in that they provide for the efficient establishment, operation, maintenance, upgrade and replacement of a range of present day energy and infrastructure; (c) This approach will achieve effective, resilient and efficient energy and infrastructure; and avoid, remedy or mitigate the effects of energy and infrastructure on the environment, and the effects of incompatible activities or development on energy and infrastructure. This includes clearer policy direction, and explicit requirements for certain activities likely to generate adverse effects, including controls over energy and	(a) It is considered that there is sufficient information on which to act on the proposed provisions; (b) The proposed provisions will address identified resource management issues; (c) The provisions generally consistent with current best practice elsewhere; (d) Better give effect to or better achieve consistency with National Instruments; (e) The provisions will better achieve Part 2 of the RMA.

Policy and method options to achieve the District Plan objectives relating to Energy and Infrastructure	**Benefits** environmental, economic, social and cultural effects anticipated	**Costs** environmental, economic, social and cultural effects anticipated	**Efficiency and Effectiveness**	**Risk of acting / not acting** if there is uncertain or insufficient information about the subject matter of the provisions
iii. Manage effects of incompatible activities and development on energy and infrastructure; iv. Give effect to and be consistent with NPS' and NES'; (c) Significantly expanded list of new energy and infrastructure policies, rules, standards, definitions and assessment matters.	expanded range of energy and infrastructure types; (f) New, activity-based provisions provide greater certainty to energy and infrastructure operators and the community about the intended outcomes, and associated activity status; (g) Better considers the operational need and functional need of energy and infrastructure, including future requirements and advances in technology; (h) Better provides for the effective operation, maintenance, upgrading and replacement of a significantly expanded range of energy and infrastructure types; (i) Provisions that better enable, provide for or manage energy and infrastructure could lead to greater compliance with associated reduction in costs and time delay;		infrastructure in sensitive environments; (d) Provisions generally consistent with current best practice elsewhere, therefore will be efficient and effective; (e) Provisions will better give effect to and be consistent with NPS' and NES' directly relevant to energy and infrastructure, therefore will be efficient and effective.	

Policy and method options to achieve the District Plan objectives relating to Energy and Infrastructure	Benefits environmental, economic, social and cultural effects anticipated	Costs environmental, economic, social and cultural effects anticipated	Efficiency and Effectiveness	Risk of acting / not acting if there is uncertain or insufficient information about the subject matter of the provisions
	Social: **Cultural:** (j) Provides a clearer decision-making framework for plan users; (k) More flexibility for energy and infrastructure providers to locate and co-locate their activities and maintain/upgrade/replace as appropriate and provide safe and efficient services contributing to social and economic well-being; (l) Attempts to translate the requirements of highly technical regulations such as the NESTF into rules, standards and definitions structured and worded to aid interpretation and understanding of the scope and intent of provisions; **Environmental:** **Economic:** **Social:**			

Policy and method options to achieve the District Plan objectives relating to Energy and Infrastructure	Benefits environmental, economic, social and cultural effects anticipated	Costs environmental, economic, social and cultural effects anticipated	Efficiency and Effectiveness	Risk of acting / not acting if there is uncertain or insufficient information about the subject matter of the provisions
	Cultural: (m) Provisions generally consistent with current best practice elsewhere, including in the 'draft National Infrastructure chapter', Christchurch District Plan, proposed Selwyn District Plan, and Auckland Unitary Plan.			
	Opportunities for economic growth and employment			
	There is likely to be increased potential for new or extended energy and infrastructure in the District. This may generate additional economic activity and employment opportunities. This may also have enhanced social and cultural benefits in terms of provision of new services and additional coverage and capacity, albeit with environmental controls and controls on reverse sensitivity.			

Quantification

Section 32(2)(b) requires that if practicable the benefits and costs of a proposal are quantified.

Given the assessment of the scale and significance of the proposed changes above it is considered that quantifying costs and benefits would add significant time and cost to the Section 32 evaluation process. The evaluation in this report identifies where there may be additional cost(s), however the exact quantification of the benefits and costs discussed was not considered necessary, beneficial or practicable.

Policy and method options less appropriate to achieve the objective/s

Policy and method options to achieve the District Plan objectives relating to Energy and Infrastructure	**Benefits** environmental, economic, social and cultural effects anticipated	**Costs** environmental, economic, social and cultural effects anticipated	**Efficiency and Effectiveness**	**Risk of acting / not acting** if there is uncertain or insufficient information about the subject matter of the provisions
Option B: Status Quo (a) Maintain existing effects-based provisions in operative District Plan; (b) Relatively limited range of policies, rules, standards and definitions applicable to a relatively limited range of energy and infrastructure.	**Environmental:** (a) The greater degree of scrutiny and control over energy and infrastructure projects in (b) below will maintain amenity values and the quality of the environment; **Environmental:** **Economic:** **Social:** **Cultural:** (b) The relatively reduced scope of provisions may require more resource consents, allowing for a greater degree of scrutiny and control over energy and infrastructure projects; **Economic:** **Social:** **Cultural:** (c) Level of familiarity for existing plan users.	**Environmental:** (a) Limited flexibility could lead to increased adverse effects (e.g. a greater number of radiocommunication masts to comply with height limits and achieve maximum coverage in comparison with one taller mast with increased coverage); (b) Does not recognise the need to avoid reverse sensitivity effects; (c) Does not reflect current best practice elsewhere; (d) May not fully give effect to or better achieve consistency with NPS' and NES' directly relevant to energy and infrastructure; (e) May not achieve sustainability goal of Section 5 RMA; **Economic:**	(a) The costs of the approach significantly outweigh the benefits; (b) The current approach is relatively inefficient and ineffective as it is uncertain and out of date in relation to energy and infrastructure. This approach does not reflect best practice to provide sufficient flexibility, or reflect current technology, or reflect the current legislative requirements. It does not provide a robust assessment framework as the provisions are silent on the operational needs or functional needs of energy and infrastructure, the benefits of energy and infrastructure, and the management of adverse effects including reverse sensitivity.	(a) It is considered that there is sufficient information to not maintain this approach; (b) This approach would maintain the costs of the current approach, and not achieve the benefits, efficiency or effectiveness of the proposed approach (Option A).

Policy and method options to achieve the District Plan objectives relating to Energy and Infrastructure	Benefits environmental, economic, social and cultural effects anticipated	Costs environmental, economic, social and cultural effects anticipated	Efficiency and Effectiveness	Risk of acting / not acting if there is uncertain or insufficient information about the subject matter of the provisions
		(f) The existing approach may lead to uncertainty and inconsistent outcomes; (g) Potentially higher consenting and processing costs and time delays for energy and infrastructure providers and the District Council; (h) Limits flexibility for energy and infrastructure operators as it does not take into account operational need or functional need or advances in technology.		
	Opportunities for economic growth and employment			
	There may be less potential for additional economic activity and employment opportunities, due to undue restrictions on some types of energy and infrastructure, and additional resource consent requirements, delays, additional compliance costs and uncertainty of outcome. This may also have reduced social and cultural benefits in terms of delays in provision or expansion or improvement of services.			
Option C: Rely on other Legislation and Regulations (a) Rely on legislation and regulations outside the District Plan to	**Economic:** (a) Energy and infrastructure providers likely to be more familiar with industry-related legislation and regulations;	**Environmental:** (a) Inconsistent with national and regional policy direction; (b) The District Council would not be fulfilling its statutory	(a) The costs of the approach outweigh the benefits; (b) This approach would be ineffective as it would not achieve the key resource management issues identified;	(a) It is considered that there is sufficient information to not act on this approach due to its relative inefficiency and ineffectiveness.

Policy and method options to achieve the District Plan objectives relating to Energy and Infrastructure	Benefits environmental, economic, social and cultural effects anticipated	Costs environmental, economic, social and cultural effects anticipated	Efficiency and Effectiveness	Risk of acting / not acting if there is uncertain or insufficient information about the subject matter of the provisions
enable, provide for or manage energy and infrastructure, such as those in Section 3.6 above, and National Instruments including NPS' and NES'	**Economic:** **Social:** **Cultural:** (b) No time or cost involved to the District Council in reviewing the District Plan with respect to energy and infrastructure.	obligations under relevant national direction provided by NPS' and NES' and the RMA; (c) Would not achieve Part 2 of the RMA; **Environmental:** **Social:** **Cultural:** (d) Potential for adverse effects on the environment, particularly effects on amenity values, health and safety, and sensitive environments; **Social:** **Cultural:** (e) Little to no community involvement in decision-making.	(c) This approach would be ineffective as actual or potential environmental effects unlikely to be adequately addressed; (d) This approach would not be as effective at achieving the benefits of the proposed approach (Option A).	
	Opportunities for economic growth and employment			
	There may be less potential for additional economic activity and employment opportunities, due to undue restrictions on some types of energy and infrastructure under the District Plan, and additional resource consent requirements, delays, additional compliance costs and uncertainty of outcome. This may also have reduced social and cultural benefits in terms of delays in provision or expansion or improvement of services.			

8.2 Summary - Evaluation of Proposed Policies and Methods

The proposed policies and methods (Option A) are the most appropriate option to achieve the objectives relating to energy and infrastructure in the District. The benefits of Option A significantly outweigh the costs.

The current Utilities provisions in the operative District Plan (Option B) are inefficient and ineffective as they are relatively limited in scope, are outdated, and don't fully reflect the range of energy and infrastructure activities or development. The current Utilities provisions pre-date NPS' and NES' relevant to energy and infrastructure and therefore may not give full effect to these NPS' and may not be fully consistent with these NES'. Option B is restrictive and does not take into account operational needs or functional needs of energy and infrastructure. Nor does it specifically recognise the benefits provided by energy and infrastructure or provide detailed policy direction on the management of adverse effects from energy and infrastructure, particularly in sensitive environments, or adverse effects on energy and infrastructure including reverse sensitivity. The costs of Option B significantly outweigh the benefits.

Option C is inefficient and ineffective as the District Council would not be fulfilling its statutory obligations under the RMA, is inconsistent with national and regional policy direction, would not effectively manage environmental effects and would not achieve Part 2 of the RMA. The costs of Option C outweigh the benefits.

Consequently, an alternative approach is proposed (Option A) that involves a significantly revised and updated suite of energy and infrastructure provisions that addresses the key resource management issues identified in Section 4 above. Option A is the preferred approach, for the reasons outlined in Section 8.1 above.

9. SUMMARY

This 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 approach having regard to its effectiveness and efficiency relative to other means in achieving the purpose of the RMA. The evaluation demonstrates that the proposed approach is the most appropriate option as:

(a) The provisions are in accordance with or give effect to the RMA, National Instruments and the RPS. The provisions recognise and take into account the Mahaanui Iwi Management Plan 2013. The provisions are generally consistent with current best practice elsewhere, including the 'draft National Infrastructure chapter', the Christchurch District Plan, the proposed Selwyn District Plan, and the Auckland Unitary Plan;

(b) Specific objectives, policies, rules, standards, definitions and matters of discretion will:

   i. Enable or provide for the establishment, maintenance, repair, removal, upgrading, development, resilience and sustainability of energy and infrastructure, including 'critical infrastructure', 'strategic infrastructure' and 'regionally significant infrastructure';

   ii. Enable or provide for increased renewable energy for national, regional and local use; and greater renewable electricity generation, including small-scale and community-scale, with generation surplus able to be supplied to the electricity distribution network;

   iii. Manage actual or potential adverse effects of energy and infrastructure on the environment;

iv. Manage actual or potential adverse effects of incompatible activities and development on energy and infrastructure;

(c) The proposed approach, in particular the objectives and policies, will provide direction and guidance to decision makers regarding the intended outcomes for energy and infrastructure;

(d) The proposed approach will sustain the potential of energy and infrastructure as physical resources for current and future generations, maintain amenity values and quality of the environment, and achieve Part 2 of the RMA.

Overall, it is considered that the proposed provisions are the most appropriate given that the benefits outweigh the costs, and there are considerable efficiencies to be gained from adopting the proposed provisions. The risks of acting are also clearly identifiable and limited in their extent.

APPENDIX 1 Summary of Current Objectives, Policies and Methods for Utilities

Operative Plan Section	Objectives	Policies	Rules/Standards/Definitions
Health, Safety and Well-being	*12.1.1* *Maintain the amenity values and a quality of environment appropriate for different parts of the District which protects the health, safety and well-being of present and future generations, and ensure that any potential adverse environmental effects from buildings and structures… and hazardous substances are avoided or mitigated.*	*12.1.1.1 Structures* *Maintain and enhance the positive contribution that buildings and structures, and the spaces between them, make to the character and amenity of urban areas where people reside, the neighbourhood and streetscape.*	• *Setbacks from electricity transmission lines* • *Height*
Utilities and Traffic Management	*11.1.1* *Utilities that maintain or enhance the community's social, economic and cultural well-being, and its health and safety.*	*11.1.1.1* *A utility should:* *a. contribute to a safe environment;* *b. maintain or enhance public health;* *c. promote efficient use of resources and efficient development of the utility, so that resources are conserved and used in a sustainable manner;* *d. have regard to cross boundary issues where the utility or the service provided by the utility crosses the territorial boundary;* *e. where it is necessary to service new development, be paid for by the developer, or as a condition of consent for the development; and* *f. maintain and enhance social well-being.*	In addition to the above: • *Floor area* • *Amateur radio antenna height and length* • *Dish antennas* • *Antennas* • *Gas pipelines* • *Undergrounding lines* • *Maintenance and upgrading of electricity and telecommunication facilities* • *Telecommunication lines and support structures* • *Radiocommunication facilities* • *Meteorological facilities* • *Wastewater facilities*
		11.1.1.2 *Every new site within a design catchment of an existing or proposed utility should connect to the utility wherever possible.*	• *Definitions for: Floor Area, Infrastructure, Reticulated, Utility*

Operative Plan Section	Objectives	Policies	Rules/Standards/Definitions
		11.1.1.3 *Subdivision and development should not proceed within areas that do not have access to appropriate utilities, or where the utilities are operating at full capacity or where these subdivisions or developments are likely to adversely affect the planned expansion of those utilities. Subdivision and development can proceed if the existing utilities are upgraded to provide the appropriate capacity for the health and safety of the present and future population, or appropriate alternatives are provided. Appropriate alternative systems should, as a minimum:* *a. meet the current environmental and engineering design standards prescribed for the present utilities; and* *b. be capable of integration with existing utilities.*	
	11.2.1 *Adverse effects on the environment caused by the provision, use, maintenance and upgrading of utilities are avoided, remedied or mitigated.*	*11.2.1.1* *Avoid, remedy or mitigate adverse environmental effects created by the provision, use, maintenance and upgrading of utilities by:* *a. meeting environmental standards set by the Plan;* *b. having regard to the particular amenity or character of the area in which it is placed;* *c. integration with, and co-siting of, existing utilities where they are accessible and are, or can be, expanded to manage any additional loading and where such loading is technically and operationally feasible;* *d. meeting accepted design standards;* *e. in the case of the utilities associated with the development and occupation of Pegasus, requiring adequate redundant plant to be provided as part of the sewage treatment and disposal system, in order to avoid adverse effects on the surrounding environment in the event of any plant breakdown or loss of power supply;* *f. encouraging new utility services in residential areas to be placed underground, in consultation with utility operators;* *g. encouraging the under grounding of utilities as they are installed and upgraded in areas where the visual and amenity impact of overhead*	

Operative Plan Section	Objectives	Policies	Rules/Standards/Definitions
		reticulation is significant, provided that under grounding is technically and operationally feasible; *h. protection of areas of outstanding landscape, or areas of significant indigenous vegetation or significant habitat of indigenous fauna;…* *j. protecting aquatic ecosystems and the habitat of trout and salmon from the adverse effects of roading, stormwater runoff and effluent discharges;…*	
		11.2.1.2 *To minimise any actual or potential risks to health and safety from, and to the operation, maintenance and upgrading of, high voltage transmission lines by:* *a. encouraging the location of lines away from incompatible land uses; and* *b. avoiding development and/or land use activities which might increase those risks;* *c. avoiding earthworks which may compromise the stability of support structures or reduce conductor clearances.*	

APPENDIX 2 National Instruments – Energy and Infrastructure

National Instruments – Energy and Infrastructure
National Policy Statements
National policy statements (NPS) form part of the RMA's policy framework and are prepared by Central Government to address nationally significant matters. NPS' contain objectives, policies and methods that must be given effect to by decision makers and when drafting plans and policy statements. NPS' must also be given regard by consent authorities when making decisions on resource consent applications, alongside other considerations.
National Policy Statement on Electricity Transmission 2008 (NPSET)
The national significance of the National Grid is recognised by the NPSET. The preamble of the NPSET highlights that the National Grid has particular physical characteristics and operational/security requirements that create challenges for its management under the RMA, and it is important there are consistent policy and regulatory approaches by local authorities. The NPSET provides policy direction in relation to: • Recognising the benefits of National Grid transmission; • Managing the environmental effects of the National Grid; • Managing the adverse effects of third parties on the National Grid; and • Long term strategic planning for transmission assets. The NPSET seeks to avoid adverse effects of new and major upgrades to the National Grid in sensitive environments, including: • Outstanding natural features and landscapes and significant amenity landscapes; • Significant natural areas; and • Outstanding natural character areas, very high natural character areas, and high natural character areas. The NPSET also requires that the effects of incompatible activities and development be managed, to the extent reasonably possible, to avoid reverse sensitivity effects on the electricity transmission network and to ensure that the operation, maintenance, upgrading, and development of the electricity transmission network is not compromised. To achieve this, local authorities are required to consult with the operator of the National Grid to identify an appropriate buffer corridor. The District Council is required to give effect to the NPSET through the District Plan and, in so doing, ensure that: • The National Grid is able to be safely, effectively and efficiently operated, maintained, upgraded and developed providing a reliable, safe and secure supply of electricity to the District and beyond;

National Instruments – Energy and Infrastructure
• The adverse effects of incompatible activities and development in proximity to the National Grid are managed and are reduced, minimised or avoided depending upon the context in which the development occurs; and • Adverse effects of new and major upgrades to the National Grid in sensitive environments are avoided, remedied or mitigated.
New Zealand Coastal Policy Statement 2010 (NZCPS)
The NZCPS requires the avoidance of adverse effects of activities, including infrastructure, in sensitive environments on the coast, including in areas of outstanding natural character and high natural character in the coastal environment. The District Council is required to give effect to the NZCPS through the District Plan.
National Policy Statement for Renewable Electricity Generation 2011 (NPSREG)
The NPSREG recognises the importance of renewable energy and will help New Zealand achieve the central government's target to increase electricity production from renewable sources. The NPSREG promotes a more consistent approach to balancing the competing values associated with the development of New Zealand's renewable energy resources. The NPSREG applies to renewable electricity generation activities at any scale. It covers the construction, operation and maintenance of structures associated with renewable electricity generation. This includes: • Small-scale and community-scale renewable generation activities; • Systems to convey electricity to the distribution network or the National Grid; and • Electricity storage technologies associated with renewable electricity generation. The NPSREG covers all renewable electricity generation types, including: • Hydro • Wind • Geothermal • Solar • Biomass • Marine (tidal, wave, ocean current) The NPSREG also provides for investigation activities for renewable electricity generation such as wind masts and geothermal test bores. The District Council is required to give effect to the NPSREG through the District Plan.
National Policy Statement for Freshwater Management 2020 (NPSFM)
The NPSFM uses the concept of Te Mana o te Wai, that recognises that protecting the health of freshwater protects the health and well-being of the wider environment. As part of Te Mana o te Wai, the NPSFM objectives prioritises the health and well-being of water bodies and freshwater ecosystems, over the health needs of people (such as drinking water), which is over the ability of people and communities to provide for their social, economic, and cultural well-being, for now and in the future. The District Council is required to give effect to the NPSFM through the District Plan. As identified in Section 3.1.1 above, the Energy and Infrastructure Chapter proposes controls on energy and infrastructure in a range of 'sensitive environments', including the natural character of scheduled freshwater bodies.

National Instruments – Energy and Infrastructure
National Environmental Standards
National environmental standards (NES) provide a consistent approach to decision-making processes throughout the whole country or a specific area. NES' are prepared by central government and can prescribe technical standards, methods (including rules) or other requirements for environmental matters. If an activity doesn't comply with an NES, it requires a resource consent. NES' are enforced by local authorities. In some circumstances, plan rules can be more lenient or stringent than NES rules.
Resource Management (National Environmental Standards for Electricity Transmission Activities) Regulations 2009 (NESETA)
The NESETA contains separate provisions for the operation, maintenance, upgrading, relocation or removal of existing transmission lines that are part of the National Grid and were operating, or able to be operated, on or prior to 14 January 2010 and remain part of the National Grid. Except as provided for by the NESETA, no rules in the District Plan apply to such activities. Where an activity does not relate to an existing transmission line that is part of the National Grid, or where new transmission lines and associated structures are proposed, the rules of the District Plan apply.
Resource Management (National Environmental Standards for Telecommunication Facilities) Regulations 2016 (NESTF)
The NESTF contains regulations for telecommunication and radiocommunication activities and facilities. The NESTF controls all telecommunication and radiocommunication activities and facilities with respect to radiofrequency emissions. District plan provisions apply to telecommunication and radiocommunication activities and facilities that are not regulated by the NESTF. Telecommunication and radiocommunication activities and facilities are also controlled by district plan provisions where directed by the NESTF; this includes where they are located in the following types of areas as identified or defined in the District Plan: • Outstanding natural features and landscapes and significant amenity landscapes; • Significant natural areas; • The root protection area of notable trees; • Places with historic heritage values; • Places adjoining the coastal marine area.
Resource Management (National Environmental Standards for Freshwater) Regulations 2020 (NESF)
The Resource Management (National Environmental Standards for Freshwater) Regulations 2020 (NESF) were released on 5 July 2020. The NESF prescribes national environmental standards in relation to freshwater and set requirements for carrying out certain activities which pose a risk to freshwater and freshwater ecosystems. The NESF provides temporary standards for farming activities and outlines those activities which are permitted. Where the permitted thresholds cannot be met, the NESF provides standards for discretionary activities, and in some cases non-complying activities. The NESF prescribes standards for natural wetlands. Activity statuses are provided for vegetation clearance, earthworks or land disturbance, and the taking, use, damming, diversion, or discharge of water in relation to: • Restoration of wetlands;

National Instruments – Energy and Infrastructure
• Scientific research; • Construction and maintenance of wetland utility structures; • Construction, maintenance and operation of specified infrastructure and other infrastructure; • Sphagnum moss harvesting; • Arable and horticultural land use, • Natural hazard works; • Drainage of natural wetlands; and • Other activities without a status. The Reclamation of the bed of any river is provided for as a discretionary activity. The NESF prescribes standards for activities that relate to the passage of fish, particularly the placement, use, alteration, extension or reconstruction of certain structures in, on, over, or under the bed of any river, including culverts, weirs, flap gates, dams and fords. They do not apply to structures which were existing at the close of 2 September 2020 including later alterations or extensions and to customary weirs. The District Council is required to give effect to the NESF through the District Plan. As identified in Section 3.1.1 above, the Energy and Infrastructure Chapter proposes controls on energy and infrastructure in a range of 'sensitive environments', including the natural character of scheduled freshwater bodies.

APPENDIX 3 Other Relevant Legislation or Regulations

(a) The ***Telecommunications Act 2001*** regulates the supply of telecommunications services;

(b) The ***Electricity Act 1992*** provides for the regulation, supply and use of electricity in New Zealand, including the health and safety of members of the public, and the prevention of damage to property;

(c) The ***Gas Act 1992*** provides for the regulation, supply, and use of gas in New Zealand, and also regulates the gas industry, protects the health and safety of members of the public, and promotes the prevention of damage to property in connection with supply and use of gas;

(d) The ***NZ Electrical Code of Practice for Electrical Safe Distances NZECP 34:2001*** that apply to land use activities and vegetation under or near transmission lines which include restrictions on the location of structures and activities;

(e) The ***Utilities Access Act 2010*** requires utility operators and corridor managers to comply with a national code of practice that regulates access to transport corridors and provides for the making and administration of that code;

(f) The ***National Code of Practice on Utilities' Access to the Transport Corridors 2011*** sets out the processes and procedures for:

   i. Infrastructure operators to exercise right of access to the road corridor for the placement, maintenance, improvement, and removal of infrastructure;

   ii. Corridor Managers to exercise their right to apply reasonable conditions on working in the corridor; and

   iii. Managers of railway and motorway corridors to exercise their discretion to grant rights of access to infrastructure operators;

(g) The ***Electricity (Hazards from Trees) Regulations 2003*** define a safe separation distance for trees growing under overhead lines. They also specify who is responsible for ensuring separation distances are maintained; place potential liability on tree owners if the Regulations are breached; and provide an arbitration system to resolve disputes relating to tree trimming;

(h) ***Resource Management (National Environmental Standards for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011 (NESCS)***;

(i) ***Hazardous Substances and New Organisms Act 1996 (HSNO)***;

(j) The District Council's ***30 Year Infrastructure Strategy 2015 – 2045***, a high-level strategy that identifies significant issues and the management of Council infrastructure assets over the next 30 years. Used to inform activity management plans, development of district plan policy and private plan changes;

(k) The District Council's ***Water Conservation Strategy***, which identifies and priorities opportunities for water conservation within the Waimakariri District. It provides targets, initiatives and a monitoring regime to achieve higher levels of water conservation within the Waimakariri District Council community water supplies;

(l) The District Council's ***Engineering Code of Practice (ECOP)***. This sets out the technical standards for engineering requirements and can be applied as conditions of resource consent;

(m) The District Council's ***Stockwater Race Bylaw 2019***;

(n) The District Council's ***Rural Water Supplies Bylaw No 1 1992***;

(o) The District Council's ***Stormwater Bylaw 2011***;

(p) The District Council's ***Wastewater Bylaw 2015***;

(q) The District Council's ***Water Supply Bylaw 2012***, which sets out council restrictions under the Local Government Act and may require a permit application;

(r) The ***NZS 4404:2010 Land Development and Subdivision Infrastructure.*** This provides criteria for design and construction of land development and subdivision infrastructure. The Standard incorporates up-to-date design principles such as low impact design solutions to stormwater management, and urban design principles that encourage more sustainable places, spaces, and networks in towns and cities.

APPENDIX 4 Proposed Methods – Activity Rule Summary

General (applicable to all energy and infrastructure, as relevant)
Maintenance, repair or removal of existing infrastructure and ancillary vehicle access tracks
Construction of new, or widening or extension of existing, vehicle access tracks ancillary to infrastructure
New ancillary infrastructure equipment
New customer connection between a building, other structure, site, and infrastructure
New meteorological and environmental sensing and monitoring equipment, and navigational aid
Trimming or removal of trees and vegetation
New freestanding pole in the road corridor
New infrastructure within an existing building
Temporary infrastructure
Installation of new infrastructure, and upgrading of existing infrastructure, underground
Relocation of infrastructure
Replacement of a pole or tower
Addition to a pole or tower
Replacement of an antenna
Replacement of an infrastructure cabinet or infrastructure building
Upgrading above-ground lines, ducts, cables and pipes
Installation of new mid-span poles
Attachment of new pipes, cables, conductors or lines, to existing bridges, tunnels or culverts
New infrastructure cabinet
New infrastructure building
The generation of radiofrequency fields
The generation of electric and magnetic fields
Construction of new vehicle access tracks ancillary to infrastructure which are located in specified sensitive environments
Any other activity or development not provided for under any other Energy and Infrastructure rule as a permitted, controlled, restricted discretionary, discretionary, non-complying or prohibited activity, except where expressly specified by a district-wide or zone provision
Electricity Transmission and Distribution
New overhead electricity transmission and distribution lines and supporting poles and towers
New transformers, substations, switching stations, and energy storage batteries (not enclosed within a building)
Communication Facilities
New freestanding radiocommunication and telecommunication facilities, antennas, and supporting poles and towers
New radiocommunication and telecommunication facilities attached to buildings
New overhead telecommunication lines and supporting poles
New amateur radio configurations
New communication kiosk
New small cell unit
Fuel and Energy
Installation of new gas and fuel (including LPG) distribution pipelines and systems
An increase in the carrying or operating capacity, efficiency or security of existing fuel and gas distribution lines and systems
New tanks for the storage of fuel and gas (including LPG)
New transformers, substations, switching stations, and energy storage batteries (not enclosed within a building)

New permanent emergency or back-up electricity generation
New electricity generation from a non-renewable source
Renewable Energy
New self-contained power unit
New infrastructure for assessing a site or technology for suitability for renewable electricity generation
New solar cell/s for small-scale or community-scale renewable electricity generation
New small-scale wind turbine/s for small-scale or community-scale renewable electricity generation
Solar hot water systems
New infrastructure for generation of renewable energy including renewable electricity generation from waste
New large scale wind turbine/s for large scale renewable electricity generation
Water, Wastewater, Stormwater
Requirement to connect to water supply, wastewater system or stormwater infrastructure
Construction of new, or renewal or upgrading of existing, water supply, wastewater system or stormwater infrastructure
Rainwater collection systems for non-potable use
Requirement to provide water supply for firefighting
Irrigation/Stockwater
Maintenance, repair, and upgrade of existing community-scale irrigation/stockwater networks
New, or extension or expansion of existing, community-scale irrigation/stockwater networks
Managing Effects of Activities on the National Grid
Activities (other than earthworks) within a National Grid Yard
Earthworks within a National Grid Yard
Any quarry or landfill on the same site as any National Grid transmission line support structure
Managing Effects of Activities on Major Electricity Distribution Lines
Earthworks adjacent to a 66kV or 33kV electricity distribution line
Network utilities within 10m of the centre line of a 66kV or 33kV electricity distribution line
Activities (other than earthworks or network utilities) adjacent to a 66kV or 33kV electricity distribution line