Response ID ANON-URZ4-5FRU-Q

Submitted to Fast-track approval applications
Submitted on 2024-05-02 16:12:09

Submitter details

Is this application for section 2a or 2b?

2B

1 Submitter name

Individual or organisation name:
King Country Energy Limited

2 Contact person

Contact person name:
Lisa Mead

3 What is your job title

Job title:
Environmental Consenting Manager

4 What is your contact email address?

Email:
s 9(2)(a)

5 What is your phone number?

Phone number:
s 9(2)(a)

6 What is your postal address?

Postal address:

King Country Energy Limited
c/- Manawa Energy Limited
Private Bag 12055
Tauranga Mail Centre
Tauranga 3143

7 Is your address for service different from your postal address?

No

Organisation:

Contact person:

Phone number:

Email address:

Job title:

Please enter your service address:

Section 1: Project location

Site address or location

Add the address or describe the location:

The Scheme is sited near the northern end of the Tararua Ranges on its western side, roughly 15 km north-east of Levin and 28km south-west of Palmerston North.

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Do you have a current copy of the relevant Record(s) of Title?

Yes

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Mangahao HEPS - Records of Title.pdf was uploaded

Who are the registered legal land owner(s)?

Please write your answer here:

KCE Mangahao Limited

Detail the nature of the applicant's legal interest (if any) in the land on which the project will occur

Please write your answer here:

King Country Energy Limited is the 100% shareholder of KCE Mangahao Limited.

Section 2: Project details

What is the project name?

Please write your answer here:
Mangahao Hydro-Electric Power Scheme Re-Consenting and Maintenance Projects

What is the project summary?

Please write your answer here:

The Mangahao Hydro-Electric Power Scheme generates renewable electricity by taking, diverting and damming water from the Mangahao River through a series of tunnels and dams to the Mangahao Power Station. It has an installed generation capacity of 40 MW and generates on average 131 GWh of renewable electricity per annum.

What are the project details?

Please write your answer here:

The purpose of the Mangahao Hydro-Electric Power Scheme is to maintain the renewable generation of electricity in the Manawatu Region and enhance the energy security of the region/country, while diversifying and continuing to contribute to the de-carbonisation of New Zealand's energy portfolio. The Mangahao re-consenting and maintenance project is a top priority for King Country Energy.

The Mangahao Hydro-Electric Power Scheme was initially completed in 1924 and is located in the northern section of the Tararua Ranges. The Scheme generates up to a maximum 40 MW of electricity with an average annual output of 131 GWh, which is enough to power approximately 15,000 homes. The scheme also materially contributes to greenhouse gas emission reductions of between 49,000 tCO2-e (for gas) or 124,000 tCO2-e (for coal).

Water for the Scheme is sourced mainly from the upper part of the Mangahao River, which is a contributary to the Manawatū River. The Mangahao River is diverted by a dam, two tunnels and penstocks to a power station on the Mangaore Stream. Diverted water from the upper Mangahao River is conveyed to the Mangahao Power Station past the upper Tokomaru river where another dam intercepts the small catchment there. Its flow, together with the diverted flow from the upper Mangahao River, is diverted to the power station by the second tunnel and steel penstocks. Generation discharge is released into the Mangaore Stream which flows into the Manawatu River 8.7 km downstream of the power station tailrace.

There will be no change to how electricity is currently generated by the Mangahao Hydro-Electric Power Scheme under King Country Energy's existing resource consents.

The assets associated with the power generation require ongoing maintenance associated with their continued operation. A number of structures are ~100 years old and require upkeep in order to ensure their ongoing function and safety.

The project involves the following activities which require consent as a controlled activity pursuant to the Horizons Regional Council One Plan
• The discharge of water to water
• Discharge of contaminants to water
• The take and use of water (including non-consumptive take)
• The damming and diversion of water
• The maintenance and use of structures in the bed of a stream or river

Describe the staging of the project, including the nature and timing of the staging

Please write your answer here:

N/A - the Mangahao Hydro-Electric Scheme is existing infrastructure.

There are a number of maintenance projects which are applied for as part of this Application. No.1 erosion repair wall works and the repair to the No.1 dam diversion tunnel inlet will be carried out over the summer of 2025/26. No. 2 Bypass Tunnel Repair Works will be carried out over the summer of 2026/24 and an investigatory drilling programme will be carried out in the Summer of 2026/27.

The above mentioned works can only be undertaken during the summer period, as the management of water inflows and storage is required in order to undertake the works required, with the level of inflow outside of the summer period too high to practically undertake the required works. Unseasonal rainfall may affect works schedules.

What are the details of the regime under which approval is being sought?

Please write your answer here:

Resource Management Act 1991.

If you seeking approval under the Resource Management Act, who are the relevant local authorities?

Please write your answer here:

Horizons Regional Council.
Horowhenua District Council.

What applications have you already made for approvals on the same or a similar project?

Please write your answer here:

None.

Is approval required for the project by someone other than the applicant?

No

Please explain your answer here:

King Country Energy is the 100% owner of the Mangahao scheme and the board has approved the reconsenting of the scheme for the ongoing sustainable operation.

If the approval(s) are granted, when do you anticipate construction activities will begin, and be completed?

Please write your answer here:

The Mangahao Hydro-Electric Scheme consists of existing infrastructure. A number of the maintenance activities on the existing infrastructure will require construction activities.

No.1 Erosion Repair Wall
• Detailed Design – Complete
• Procurement – Q4 2024
• Funding – Q4 2024
• Commencement – Q1/Q2 2025
• Completion – Q2 2025

No.1 Bypass Tunnel Inlet Works
• Detailed Design – In progress
• Procurement – Q1 2025
• Funding – Q2 2025
• Commencement – Q1/Q2 2026
• Completion- Q2 2026

No.2 Bypass Tunnel Works
• Detailed Design – Q2 2025
• Procurement – Q3 2025
• Funding – Q3 2025
• Commencement – Q4 2025 / Q1 2026
• Completion – Q2 2026

Dam Safety Investigatory Works

• Detailed Design – Q2 2026
• Procurement – Q3 2026
• Funding – Q3 2026
• Commencement – Q4 2026
• Completion – Q1 2027

Other construction activities will be required outside of the abovementioned windows as part of ongoing maintenance of the structures within the scheme.

Section 3: Consultation

Who are the persons affected by the project?

Please write your answer here:

Horizons Regional Council
Horowhenua District Council
Ngāti Whakatere
Rāngitane o Manawatū
Muaūpoko
Department of Conservation
Fish and Game NZ
Whitewater NZ
Canoe Slalom NZ

Detail all consultation undertaken with the persons referred to above. Include a statement explaining how engagement has informed the project.

Please write your answer here:

It is King Country Energy's understanding that the catchments within, below and above the Mangahao Hydro-Electric Power Scheme have a cultural connection to three main iwi and hapū. The iwi and hapū that King Country Energy have engaged with to varying degrees on the reconsenting of the Mangahao Hydro-Electric Power Scheme are Ngāti Whakatere, Rangitane ō Manawatū and Muaūpoko. In the past King Country Energy has engaged with these iwi and hapū on a number of previous consenting and compliance projects, as well as for the purpose of general relationship building.

King Country Energy commenced engagement with mana whenua in 2022 regarding the reconsenting of the Mangahao Hydro-Electric Power Scheme and have derived an understanding of the key issues of concern for hapū and iwi from this engagement. The engagement has included hui, wānanga, site tours and cultural inductions.

Horizons Regional Council has also been engaged in regard to the Mangahao Hydro-Electric Power Scheme reconsenting, with initial discussions having taken place. The scheme also operates within the jurisdiction of Horowhenua District Council.

King Country Energy has previously engaged with the Department of Conservation and Fish & Game on previous consenting projects, with further engagement to come in relation to the Mangahao Hydro-Electric Power Scheme reconsent.

Engagement with Whitewater New Zealand and Canoe Slalom NZ has been continual in relation to recreational releases of water.

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Describe any processes already undertaken under the Public Works Act 1981 in relation to the land or any part of the land on which the project will occur:

Please write your answer here:

The Mangahao Hydro-Electric Power Scheme is existing and therefore no processes under the Public Works Act 1981 are necessary for the project.

Section 4: Iwi authorities and Treaty settlements

What treaty settlements apply to the geographical location of the project?

Please write your answer here:

Under section 29 of the Rangitāne o Manawatū Claims Settlement Act 2016, the Crown acknowledges the statement of association made by Rangitāne o Manawatū of their particular cultural, spiritual, historical, and traditional association with the Mangahao River and provides a statutory acknowledgement over the same. The Mangahao River and its distributaries (Tokomaru River and Mangahore Stream) were highly regarded sources of wai and kai and access ways into the Tararua Ranges. Rangitāne o Manawatū are also provided with a statutory acknowledgement over the Manawatū River and its tributaries. The Act provides for the establishment of the Manawatū River Catchment Advisory Board to advise the Horizons One Regional Council in relation to freshwater management issues concerning the Manawatū River Catchments.

The Rangitāne Tū Mai Rā (Wairarapa Tamaki nui-ā-Rua) Claims Settlement Act 2017 provides that Rangitāne o Wairarapa and Rangitāne o Tamaki nui-ā-Rua have a statutory acknowledgement that applies to the Manawatū River and its tributaries, which includes the Mangahao River. This acknowledges the Iwi's cultural, spiritual, historical and traditional association with the Manawatū River and its tributaries. The Act provides the ability for the Iwi to appoint one board member to the Manawatu River Catchment Advisory Board established under the Rangitāne o Manawatū Claims Settlement Act 2016.

Are there any Ngā Rohe Moana o Ngā Hapū o Ngāti Porou Act 2019 principles or provisions that are relevant to the project?

No

If yes, what are they?:

Are there any identified parcels of Māori land within the project area, marae, and identified wāhi tapu?

No

If yes, what are they?:

Is the project proposed on any land returned under a Treaty settlement or any identified Māori land described in the ineligibility criteria?

No

Has the applicant has secured the relevant landowners' consent?

Yes

Is the project proposed in any customary marine title area, protected customary rights area, or aquaculture settlement area declared under s 12 of the Māori Commercial Aquaculture Claims Settlement Act 2004 or identified within an individual iwi settlement?

No

If yes, what are they?:

Has there been an assessment of any effects of the activity on the exercise of a protected customary right?

No

If yes, please explain:

Upload your assessment if necessary:
No file uploaded

Section 5: Adverse effects

What are the anticipated and known adverse effects of the project on the environment?

Please describe:

King Country Energy has engaged the following experts to prepare full expert assessments relating to the Mangahao Hydro-Electric Power Scheme:

- Statutory Planning Assessment – Mitchell Daysh
- Hydrology Assessment – Tonkin & Taylor
- Sedimentation and River Hydraulic Assessment – Tonkin & Taylor
- Aquatic Ecology and Water Quality Assessment – Tonkin & Taylor
- Fish Habitat and Fish Passage Assessment – Tonkin & Taylor
- Terrestrial Ecology Assessment – Tonkin & Taylor
- Natural Character, Landscape and Visual Amenity Assessment – Boffa Miskell
- Recreation Assessment – Rob Greenaway & Associates.

The following descriptions provide initial high-level summaries of the effects being assessed based on the work of the experts listed above to date. The full expert assessments are in the process of being completed.

Hydrological Effects – Tonkin & Taylor have been engaged to prepare a hydrological report on the effects of the Mangahao Hydro-Electric Power Scheme. Their preliminary view based on their work to date is that if the current operation of the Scheme remains unchanged, then the hydrological effects of the Scheme will also remain unchanged.

Sedimentation and River Hydraulic Effects – Tonkin & Taylor have also been commissioned to prepare a sediment assessment. They consider that there will be sediment effects associated with the continued operation of the scheme, which will be characterised when the sediment report is finalised. Erosion effects may occur downstream of the Mangahao Power Station, where the riverbed consists largely of gravel. However, suitable mitigation may be proposed in the final report such as implementation of a sediment management plan to identify appropriate measures for managing the movement of sediment within the Scheme and changes to the sluicing regime.

Aquatic Ecology Water Quality Effects – An aquatic ecology assessment is being prepared by Tonkin & Taylor to assess any effects on aquatic ecology values from the continued operation, use and maintenance of the Scheme. Tonkin & Taylor expect that it will find that there may have been minor changes to water clarity during the consent term. Effects on fish habitat will also be quantified.

Fish Passage Effects – A fish assessment has also been commissioned from Tonkin & Taylor. A number of structures and features of the Mangahao Hydro-Electric Power Scheme have been identified as having the potential to impede fish passage and the assessment will consider measures to address fish package as part of the application.

Terrestrial Ecology Effects – King Country Energy are not proposing any changes to the footprint of the Mangahao Hydro-Electric Power Scheme, so there will be no physical disturbance to any areas of significant vegetation or significant habitats of terrestrial fauna. Tonkin & Taylor have also been engaged to prepare a terrestrial ecology and wetland assessment. Tonkin & Taylor consider that the continued operation, use and maintenance of the Scheme in its current configuration will have negligible effects on terrestrial values. Its assessment will also consider effects on wetland values.

Natural Character, Landscape and Visual Amenity Effects – Various components of the Mangahao Hydro-Electric Power Scheme have been in place for approximately 100 years and are a recognised part of the landscape. Boffa Miskell has been engaged to prepare a natural character, landscape and visual amenity assessment. An initial view, taking into account the scale and form of the various structures and components of the Mangahao Hydro-Electric Power Scheme, and the natural landscape character of much of the surrounding area, is that the ongoing landscape effects of the Scheme when considered as a whole are considered to be low.

Cultural Effects – consultation and engagement with mana whenua is ongoing, so the precise effects are yet to be ascertained. However, preliminary engagement suggests that iwi and hapū consider that the key issues raised by the continued use, operation and maintenance of the Mangahao Hydro-Electric Power Scheme relate to fish passage, cultural connectivity, residual flows and loss of mauri of the river.

Recreation Effects – Rob Greenway & Associates have been engaged to prepare an assessment on the effects of the Scheme on recreation activities. Whilst the Mangahao Hydro-Electric Power Scheme has heavily modified what was a natural setting, the Scheme has created and maintains a high level of recreational amenity, including the improved provision of access and the White Water Park. The main adverse effect on recreation is the lack of white water rafting on the Mangahao River itself, which is currently mitigated by recreational releases.

Dam Safety Effects – Riley Consultants conducted a Comprehensive Dam Safety Review in 2021. No material concerns were raised that are not already planned as part of the maintenance activities. As such, there are no material dam safety effects associated with reconsenting.

Maintenance Activities – The maintenance activities associated with the scheme are primarily related to earthworks and maintenance of existing concrete and earth structures. Potential of discharges to water, discharges to land and earthworks are the main effects that could be associated with the maintenance activities.

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Section 6: National policy statements and national environmental standards

What is the general assessment of the project in relation to any relevant national policy statement (including the New Zealand Coastal Policy Statement) and national environmental standard?

Please write your answer here:

Mitchell Daysh is carrying out a comprehensive planning assessment for King Country Energy in relation to the Mangahao Hydro Electric Power Scheme.

The New Zealand Coastal Policy Statement is not considered relevant as the Scheme is not located in the coastal environment. The relevant national policy statements and national environmental standards are:

- National Policy Statement for Renewable Electricity Generation (NPSREG)
- National Policy Statement for Freshwater Management (NPSFM)
- National Environmental Standards for Freshwater (NESF)

NPSREG – the NPSREG seeks to enable the sustainable management of renewable energy generation under the RMA. As such the project is entirely consistent with the objectives and policies of the NPSREG, with the following noted in particular:
- The objective to provide for the development and operation of new and existing renewable electricity generation activities, such that the proportion of New Zealand's electricity generated from renewable energy sources increases to levels that meet or exceed the Government's national target for renewable electricity generation.
- Policy A of the NPSREG recognises the benefits associated with renewable electricity generation activities, with the listed benefits in the policy being non-exclusive.
- Policy B requiring decision-makers to have particular regard to the practical implications of achieving the national target for electricity generated from renewable energy sources.
- Policies C1 and C2 requiring decision makers to have particular regard to the practical constraints associated with the development, operation, maintenance and upgrading of new and existing renewable energy generation activities.

NPSFM – the fundamental concept of the NPSFM encompasses Te Mana o Te Wai which refers to the fundamental importance of water and recognises that protecting the health of freshwater will protect the health and wellbeing of the wider environment. The use of water for electricity generation is considered to fall within the second priority articulated in the objective of the NPSFM - being managing natural and physical resources for the health needs of people.

The NPSFM includes an effects management hierarchy which requires all adverse effects of a proposal to be analysed and addressed through a number of different actions. Expert assessments obtained by King Country Energy have confirmed that all adverse effects associated with the Mangahao Hydro-Electric Power Scheme re-consenting have been remedied and mitigated, without the need to propose any offsetting and compensation, meaning the hierarchy has been complied with.

More broadly, the NPSFM is relevant to fish passage, residual flows, water quality, the management of adverse effects on aquatic ecosystems, and the management of the effects of the Scheme on the relationship of tangata whenua with the site and waterbodies. Based on the expert assessments obtained, and the engagement with mana whenua to date, it is considered that the continued operation, use and maintenance of the Scheme can occur in a manner that is consistent with the NPSFM.

NESF – the NESF does not impose any additional consent requirements in relation to the re-consenting of the Scheme, as it does not apply to existing structures (nor are relevant structures classified as 'weirs' for the purpose of the NESF), and the take, use, damming, diversion or discharge of water for the operation or maintenance of specified infrastructure is provided for as a permitted activity.

NPSIB - The National Policy Statement on Indigenous Biodiversity does not apply to the Mangahao Hydro-Electric Power Scheme as clause 1.3(3) of the NPS states that "nothing in this National Policy Statement applies to the development, operation, maintenance or upgrade of renewable electricity generation assets and activities and electricity transmission network assets and activities. For the avoidance of doubt, renewable electricity generation assets and activities, and electricity transmission network assets and activities, are not "specified infrastructure" for the purposes of this National Policy Statement."

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Section 7: Eligibility

Will access to the fast-track process enable the project to be processed in a more timely and cost-efficient way than under normal processes?

Yes

Please explain your answer here:

The Fast-track process allows for time savings of up to three to four years and up to $4-5 million in administrative/RMA costs from expanded council processing, regional council hearings and Environment Court appeals for consents that cannot be declined. Additionally, a decision often seeks to create a 'compromise' whereby shorter term durations, higher minimum flows and expensive mitigation are set to appease interested parties, as opposed to addressing real effects and this could result in a significant loss of energy production. The experience of King Country Energy's asset manager, Manawa Energy, is that the normal RMA process for re-consenting is lengthy and difficult. Re-consenting processes are taking three plus years and resulting in more complex conditions. This has a cost in terms of process costs, compliance costs, and in extreme cases the risk of lost generation.

With respect to timeframes, Manawa's experience includes the following re-consenting examples:

• Patea Hydro-Electric Power Scheme – application lodged in early 2007 and consents granted in 2010 following an Environment Court mediation process.
• Matahina Hydro-Electric Power Scheme – application lodged 2009 and consents granted in 2014 following four Environment Court mediations.
• Otago Water Races (Beaumont, Crystals, Black Rock, Shepherds) – application lodged in 2020 and granted in 2023 – but for a 6 year duration only – consents expire in 2029.
• Mangorei Hydro-Electric Power Scheme – application lodged in November 2020. As at May 2024, Manawa awaits a final response from Council on the second round of further information requests.
• Motukawa Hydro-Electric Power Scheme – application lodged in November 2021. As at May 2024, Manawa awaits a final response from Council on the second round of further information

With respect to the costs of the process, King Country Energy's experience is that the costs are historically in excess of $5 – 6 million for the more complex processes.

These difficulties are recognised in the National policy document Electrify NZ, which notes that re-consenting for existing generation assets has become unnecessarily difficult.

These costs and delays are particularly frustrating in the case of the Mangahao Hydro-Electric Power Scheme, which is a controlled activity. However, interested parties often seek to limit the duration to a short time period such as 10 years, which means that consent will need to be applied for again in less than 10 years' time. Given the time and cost involved to obtain consent in the first place, a short consent duration (i.e. less than the maximum duration under the RMA of 35 years) is a significant concern for King Country Energy. The Mangahao HEPS is an inter-generational asset that requires constant investment and maintenance appropriate with long-life assets. A shorter-term consent puts this investment at risk. The fast-track process offers much more certainty that the project will be consented in a timely manner with more certainty of outcome.

What is the impact referring this project will have on the efficient operation of the fast-track process?

Please write your answer here:

Expert reports are in the process of being finalised, and the Assessment of Environmental Effects will follow shortly thereafter. Is the project is listed an application could be lodged with the EPA by March 2025.

Therefore, referring this project will demonstrate the efficient operation of the fast-track process.

Has the project been identified as a priority project in a:

Other

Please explain your answer here:

While the Mangahao Hydro-Electric Power Scheme itself has not been specifically identified, the National policy document Electrify NZ notes that re-consenting for existing generation assets has become unnecessarily difficult. Listing this re-consenting project for fast-tracking would be consistent with that policy.

Will the project deliver regionally or nationally significant infrastructure?

National significant infrastructure

Please explain your answer here:

The Mangahao Hydro-Electric Power Scheme will deliver both nationally and regionally significant infrastructure.

The provision of, and access to, secure and reliable renewable electricity is of critical importance to the social and economic wellbeing of the Horizons One Region, and all New Zealanders. The Mangahao Hydro-Electric Power Scheme will continue to contribute to the security of electricity supply in the Horizons One Region (given it is embedded into the local electricity network), as well as contribute to the Government's strategic targets for renewable electricity generation and the decarbonisation of the New Zealand economy.

Schemes like Mangahao scheme provide the fundamental base of renewable generation that is crucial for New Zealand to meet its greenhouse gas commitments.

The National Policy Statement for Renewable Energy Generation (NESREG) provides that decision makers shall recognise and provide for the national significance of renewable energy generation activities. It also provides that matters of national significance include the need to develop, operate, maintain and upgrade renewable electricity generation activities. Given that the NPSREG acknowledges the importance of renewable energy infrastructure and the benefits derived from said infrastructure, it follows that the Mangahao Hydro-Electric Power Scheme delivers nationally significant infrastructure.

Will the project:

Please explain your answer here:

N/A

Will the project deliver significant economic benefits?

Yes

Please explain your answer here:

The key sources of economic benefit from Fast Tracking for existing hydro are (a) the reduction in consenting costs, (b) the opportunity cost and loss of focus in the business while time and resources are dedicated to navigating the RMA process and (c) the lost value in generation capacity or consent duration that may occur from a traditional consenting process.

The cost to reconsent a small- medium hydro station through the traditional consenting pathway is approximately $4-5M. Most of the cost are incurred through council processing, hiring consultants, regional council hearing, and any Environment Court appeals – with very little investment into actual environmental benefits. These costs directly slow down investment in new generation assets and increase the cost of electricity for all New Zealanders – a straight up loss for NZ and one of the main arguments for fast-track consenting. Reconsenting the Mangahao Scheme will help support the regional New Zealand economy.

Reconsenting the Mangahao HEPS through Fast Track will most likely save a significant generation loss. This scheme is valued at nearly five billion in replacement costs. The Mangahao HEPS is a crucial contributor the peak power supply of the Manawatu region and the national grid. Previous reconsenting through the RMA has shown up to 4-6% loss generation and these were prior to the 2020 NPS-FM and NES policies, which now have stricter requirements for river restoration. The loss of generation through the current RMA pathway is expected to be greater than previous reconsents given the current regulatory environment.

New generation investment would otherwise be required to fill the increasing demand. In particular, distributed generation helps to avoid or defer investment in distribution and transmission assets.

The economics of hydro are that they require high upfront capital costs and occasionally significant capital refurbishment costs. More importantly, the key point for existing hydro schemes is that losing water doesn't lower the required O&M cost of the hydro station and hence the unit cost/kWh increases. This in turn eventually results in higher electricity costs for all New Zealanders. If this zero-cost hydro-electricity at the margin is reduced and replaced with something else, then, unless that new generation has the same operating and economic characteristics as controlled hydro-electricity, it must increase costs to the electric power supply, and probably prices.

The operation of the Mangahao HEPS scheme also results in the employing of six full time staff on-site to manage the day to day operation of the scheme, as well as multiple support staff and the commissioning of contractors who work on the maintenance and constant improvement of the scheme. The scheme contributes multiple millions of dollars to the local economy annually from the operation and maintenance of the scheme.

In order to meet the objectives in the Government's coalition agreements and as detailed in Electrify NZ, New Zealand needs to more than double its existing installed electricity generation capacity over the next 25 years. The Mangahao Hydro-Electric Power Scheme will deliver significant economic benefits in the form of directly supplying electricity to the Horizons One Region.

The Mangahao scheme replacement cost is $523 million and has a regular valuation of $120 million. Past re-consenting processes have resulted in a loss of up to 8% in generation due to required residual flows, and that was prior to the now stricter requirements of the National Policy Statement for Freshwater Management 2020 and the National Environmental Standards for Freshwater 2020 coming into force. Losing even 7% of water through a re-consenting process is 8.4GWh of lost generation, and the cost to replace that generation would be $1.7 million per annum. New generation investment would be required to fill the increasing demand. Additionally, re-consenting means that savings of up to $4 million on extensive council processing, regional council hearing and environment court appeals can be redistributed to the development of new generation.

It is therefore critical to maintain the generation output from the Mangahao Hydro-Electric Power Scheme to avoid the need to replace it in both the short and long term or add to the expansion of capacity required elsewhere. Being embedded these schemes provide electricity into the local network reducing the requirements on the transmission network.

In summary, the economic benefits of the project include:
• providing a secure supply of renewable energy directly to the Horizons One Region's electricity network;
• contributing to the doubling of renewable electricity generation, and emissions reductions targets;
• avoidance of a slight increase in vulnerability of the Horizons One Region to the loss of electricity supply through transmission failures;
• provision of hydro capacity in a different climatic region from the main storage lakes in the South Island; this reduces the risk of correlated dry periods across hydro capacity;
• maintenance of the economic activities associated with operation of the scheme to the benefit of local suppliers of labour, goods and services.

Will the project support primary industries, including aquaculture?

No

Please explain your answer here:

Will the project support development of natural resources, including minerals and petroleum?

No

Please explain your answer here:

Will the project support climate change mitigation, including the reduction or removal of greenhouse gas emissions?

Yes

Please explain your answer here:

The ongoing operation of the Mangahao Hydro-Electric Power Scheme contributes towards decarbonising New Zealand's economy. It will also contribute to achieving the 90% renewable energy target by 2025 set out in the National Policy Statement for Renewable Electricity Generation and the aspiration to achieve 100% renewable energy by 2030.

The Mangahao HEPS has an important role in achieving New Zealand's 2050 targets in the Climate Change Response Act 2002. The Mangahao HEPS will also play a role in substituting fossil fuel energy with renewable energy. That amounts to real emissions reduction, especially as New Zealand's electricity cannot be imported, and therefore it will contribute to reductions in the country's greenhouse gas inventory. Economic analysis by NZEIR indicates greenhouse gas emission reductions at the Mangahao HEPS of approximately 49,000 tCO_2-e (for gas) or 124,000 tCO_2-e (for coal). Any reduction in the generation capacity of the Mangahao HEPS would need to be replaced by non-renewable sources or construction of new generation options.

The National Policy Statement for Renewable Electricity Generation, Policy A, provides for as a matter of national significance renewable electricity generation, including its benefit of maintaining or increasing electricity generation capacity while avoiding, reducing or displacing greenhouse gas emissions. The Preamble to the National Policy Statement for Renewable Electricity Generation notes "the contribution of renewable electricity generation, regardless of scale, towards addressing the effects of climate change plays a vital role in the wellbeing of New Zealand, its people and the environment". The Mangahao HEPS is entirely consistent with that national direction.

Will the project support adaptation, resilience, and recovery from natural hazards?

Yes

Please explain your answer here:

As a generator of electricity, King Country Energy Limited is recognised as a lifeline utility under the Civil Defence Emergency Management Act 2002 (Schedule 1, Part B). Lifeline utilities play a vital role in recovery from natural hazards and have statutory duties such as the need to ensure the ability to function to the fullest possible extent, even though this may be at a reduced level, during and after an emergency. This includes the Mangahao Hydro-Electric Power Scheme.

Part of the maintenance activities are to do dam safety investigations to understand what works if any are to keep the dam structures to standard.

Will the project address significant environmental issues?

Yes

Please explain your answer here:

Although the Mangahao Hydro-Electric Power Scheme has not been assessed as causing any significant environmental issues, it is noted that the Scheme has significance as a generator of renewable electricity, supporting the reduction of greenhouse gas emissions.

Is the project consistent with local or regional planning documents, including spatial strategies?

Yes

Please explain your answer here:

Mitchell Daysh are carrying out a full planning assessment of the project against the relevant statutory and non-statutory planning documents, and iwi and hapū resource management plans. Its conclusion is that the project is consistent with those documents, which are the:

• Horizons One Regional Policy Statement;
• Horizons One Regional Plan; and
• Te Kāuru Eastern Manawatū River Hapū Collective Te Kāuru Taiao Strategy.

Anything else?

Please write your answer here:

The Mangahao re-consenting and maintenance project is a top priority for King Country Energy.

King Country Energy would like to emphasise that it is currently incurring significant expenditure on the re-consenting of the Mangahao Hydro-Electric Power Scheme (with multiple schemes needing to be re-consented), through a process that will likely take more than two years from lodgement to obtaining consent (excluding any appeals that may be lodged). That is for a scheme that has been in operation in some configuration for approximately 100 years, has effects that are well understood and has controlled activity status.

The RMA process is extremely inefficient for critical infrastructure such as the Mangahao Hydro-Electric Power Scheme, and King Country Energy seeks to be listed in the Fast-track Approvals Bill to make use of the fast track process for this reason.

Does the project includes an activity which would make it ineligible?

No

If yes, please explain:

Section 8: Climate change and natural hazards

Will the project be affected by climate change and natural hazards?

Yes

If yes, please explain:

Climate Change – Climate change impacts on the Scheme are being assessed by Tonkin & Taylor as part of its Hydrological Assessment. Natural variability in the climate may impact the behaviour of the Mangahao Hydro-Electric Power Scheme and its effects on the flow regime of the waterbodies associated with the Scheme. The changes in temperatures, rainfall, drought conditions from predicted climate change has the potential to reduce the mean flows of the Manawatū River Catchment. At this stage it is not anticipated that climate change will have any material impact on the way in which the scheme operates.

Natural Hazards – The Mangahao Hydro-Electric Power Scheme could be affected by potential earthquakes and floods. However, key structures of the Scheme are inspected and maintained to ensure that they are able to perform as intended during natural hazards. Flood risks are mitigated throughout

the Mangahao Hydro-Electric Power Scheme by a variety of structures and procedures.

Section 9: Track record

Please add a summary of all compliance and/or enforcement actions taken against the applicant by any entity with enforcement powers under the Acts referred to in the Bill, and the outcome of those actions.

Please write your answer here:

Regular compliance checks of the Scheme are undertaken by Horizons Regional Council (and its other schemes), and occasionally these involve some discussion with King Country Energy. However, to the best of its knowledge, King Country Energy has not had any enforcement actions taken against it under the Resource Management Act 1991 or the other legislation covered by the Fast-track Approvals Bill.

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Declaration

Do you acknowledge your submission will be published on environment.govt.nz if required

Yes

By typing your name in the field below you are electronically signing this application form and certifying the information given in this application is true and correct.

Please write your name here:
Cory Lipinski

Important notes