
MainPower Request For Information

Title	Non-Network Capacity Support for Mouse Point Zone Substation
MainPower contact person	AJ Akhtar - aj.akhtar@mainpower.co.nz
Opening date	2 September 2024
Closing date	27 September 2024



1 Request for Information

Mainpower New Zealand Limited (**Mainpower**) invites proposals for the provision of non-network capacity solutions.

1.1 Background

MainPower New Zealand Limited owns and operates the electricity distribution system throughout the North Canterbury and Kaikōura regions and supplies line services to over 44,000 customers.

MainPower's strategic framework, the MPowered Future reflects the changing needs of our customers and the energy sector. MainPower needs to evolve and be prepared for changes across the sector, such as; growth in renewable energy, new technology, electrification and changing customer needs and expectations. MPowered Future delivers the future of energy to our region through four strategic pillars; An engaged community, Customer focused organisation, Decarbonising our place and Creating a sustainable future.

For more information on MainPower please visit our website www.MainPower.co.nz

2 Introduction

2.1 Purpose of RFI

The purpose of this RFI is to:

- (a) Assist MainPower in gathering information that may lead to the identification of potential non-network capacity solution suppliers or may lead it to enter into an RFP process
- (b) Determine the likely costs that would be associated with a proposed non-network capacity solution. (These costs are required for planning and budgeting purposes only at this time)
- (c) Determine the timeline and those milestones required to see a non-network capacity solution available for activation.
- (d) Understand your capability and capacity to perform the tasks required to deliver a new non-network capacity solution.
- (e) Understand any likely risks that would cause any delay to the delivery or use of a non-network capacity solution.

The following documents (**RFI Documents**) form part of this RFI:

(All RFI documentation is Confidential and remains the property of MainPower)

Schedules (part of this document)	
RFI	This Request for Information (This document)
Appendix 1	Scope of Works (page 6 of this RFI)
Appendix 2	Supplier Information Sought (page 11 of this RFI)

3 Proposal Process

3.1 Supplier Response Format:

Any submitted information must include:

- (a) All information that is requested in **Appendix 2** under the headings provided;

3.2 Evaluation:

Responses sought as detailed in Appendix 2: Supplier Information Sought will be evaluated by MainPower based on the ability to respond to MainPower’s Scope of Works detailed in Appendix 1, and a shortlist of Respondents will be established.

MainPower intends to invite shortlisted Respondents to participate in a Request for Proposal (RFP).

All responses to this RFI will be acknowledged by e-mail and respondents will be notified of any decision MainPower makes.

3.3 Response to RFI Timelines:

The timeframe of this RFI process is as follows (and may change at the discretion of MainPower):

Action	By Date
RFI issued	2 September 2024
Final date for Respondents Queries to be received by MainPower	13 September 2024
Closing date for submission of information (“Closure Date”)	27 September 2024
Evaluation of information (“ Proposals ”) by MainPower	11 October 2024
Respondent(s) notified of any supply decisions and/or next steps in the proposal process	18 October 2024

4 Information

4.1 MainPower information

MainPower company information may be found by visiting the website: <http://www.mainpower.co.nz>

4.2 Health and Safety

MainPower is committed to managing its business to prevent harm to its employee's; contractors or the general public by integrating health and safety requirements into supplier agreement management activities.

The engagement of a supplier establishes an important partnership with an objective to achieve specific health and safety performance outcomes by

- a) Working with MainPower to identify and act on opportunities to eliminate or control health and safety risks.
- b) Demonstrate shared values with regards to health and safety management through Suppliers internal policies and procedures.

5 Contact Details

5.1 Contact details for all Communications and Submission:

All communications in relation to this RFI including requests for further information, submission and any other should be directed in writing to the contacts below:

Closing date for submission of queries is 4 pm 13 September 2024. MainPower reserves the right to communicate the substance of any queries received along with replies given to all proposing suppliers, at its discretion.

Suppliers are requested to submit their response to this RFI by email to the following contacts:

Name: AJ Akhtar
Procurement and Contract Performance Manager
Email: aj.akhtar@mainpower.co.nz

MainPower requires the subject line to be clearly labelled as "RFI MainPower – Non-Network Capacity Solution for Mouse Point – Respondent business name". Submission to be provided in a .ZIP format containing all applicable documentation.

MainPower's mail server has a file size limit of 20MB, proposals exceeding this limit may be provided via email link to an online storage service such as Google OneDrive or Dropbox.

6 Additional Terms and Conditions

6.1 General

The submission of a response to this RFI will constitute a Supplier acceptance of the terms and conditions set out in in Schedule 1 this RFI. Nothing in this RFI (other than in section 6.2), or any document referred to in this RFI, shall be construed as creating any legal or other obligation between MainPower and a Supplier in relation to the conduct or outcome of this RFI.

6.2 Confidentiality

It is a condition of this RFI that information contained in this document is for the purpose of allowing Suppliers to submit information to MainPower and is not to be used for any other purpose.

This RFI and all other information, documents or materials provided by MainPower must be considered confidential. This RFI may not be forwarded to any third party for evaluation or for any other purpose or reproduced without the prior written consent of MainPower. This RFI and any copies will remain the property of MainPower and MainPower reserves the right to recall all copies and reproductions of the RFI at any time.

No organisation or individual shall, without the prior written consent of MainPower, make any public statements to third parties, or advertise in any manner; information relating to this RFI, the evaluation process that follows the submission of information, or the establishment of any business relationship.

6.3 Verbal Representations

No representations or statements made by MainPower staff or its agents shall constitute an official expression on its behalf unless such representations are made in a written communication from an appropriate MainPower officer or a duly authorised agent.

6.4 No Offer

This RFI is not an offer, but an invitation to respondents to submit information in the form of a proposal so MainPower may understand the opportunity and clarify supply for the provision of the Relevant Supplies. It is not intended to directly enter into negotiations based on results from this RFI. However, MainPower reserves the right to move into an RFP process, pursue a contract or enter into further discussions with a Supplier or Suppliers following the RFI.

Appendix 1- Scope of Works

Non-Network Capacity Solution

This RFI is focussed on the provision of non-network capacity support for Mouse Point Zone Substation,

Prospective suppliers are invited to submit a response even if the solution cannot fully meet the specific requirements have been outlined for Mouse Point Zone Substation.

MainPower has identified three other areas of the network which could benefit from non-network support of Hanmer Springs township¹, Cheviot² and Kaikoura³. MainPower anticipates issuing RFI's for these three network areas by the end of this calendar year and may choose to engage with respondents of this RFI to provide further support.

1. Technical Requirements

The following technical requirements will be used by MainPower to assess responses to this RFI:

Table 1: Flexibility Capacity Requirements for Mouse Point Zone Substation.

Metric	Demand (MVA)	
	2025-2030	2030-2035
Requested Peak Capacity	5MVA	10MVA (pending review in 2029)
Duration	4:45 am – 22:45 pm	
Availability	Mid-October – Mid-February	

- a) Capacity support will be sought if there is a substation outage that coincides with a period of high demand. This is an event of low probability (ie may not happen within the next 10 years), but it is anticipated that capacity will be available to respond should an event occur.
- b) If activation of the flexibility resource is required, the response needs to be rapid – preferably less than 30 seconds.
- c) MainPower is open to all available technologies, but preference will be given to low carbon solutions which meet MainPower's decarbonisation goals.
- d) Variations in the technical scope can be made to achieve a cost-effective outcome. Examples of this may include:
 - a. Reduced availability of capacity during the early morning or evening hours.
 - b. Matching capacity to the projected demand profile rather than meeting the maximum demand requirements over the entire day.
- e) Different techniques, or technologies may be employed together to achieve the specified capacity requirements. This may include modification of consumption patterns, or introduction of new storage or generation into the network.
- f) The additional capacity provided by the respondent should not include ripple control which is already accounted for within MainPower's demand peak control methodology.

¹ The proposed Hamner Springs township ROI will focus on supporting security of supply constraints.

² The proposed Cheviot ROI will focus on non-network capacity support.

³ The proposed Kaikoura ROI will focus on supporting security of supply constraints.

- g) Any option to improve the reliability of the specified zone substation by providing capacity in response to planned or unplanned outages will be favourably viewed but is not the primary focus of this request.
- h) Preference will be given to solutions that can provide a comparable level of reliability to traditional network investments during the defined period of agreed supply.
- i) Preference will be given to a communication interface that is a recognised industry standard and can be developed in coordination with MainPower’s technical team to ensure efficient and reliable operation.
- j) If the flexibility solution includes the incorporation of aggregated distributed resources, then MainPower will seek to ensure that the impact of demand reduction can be quantified on the network.

2. Background Information – Mouse Point Zone Substation

Mouse Point Zone Substation (MPT) supplies Rotherham, Culverden, and the surrounding areas in the central Hurunui District with a 22 kV distribution network. MPT is supplied by MainPower’s 33 kV sub-transmission network and contains two 13 MVA, 33/22 kV transformers.

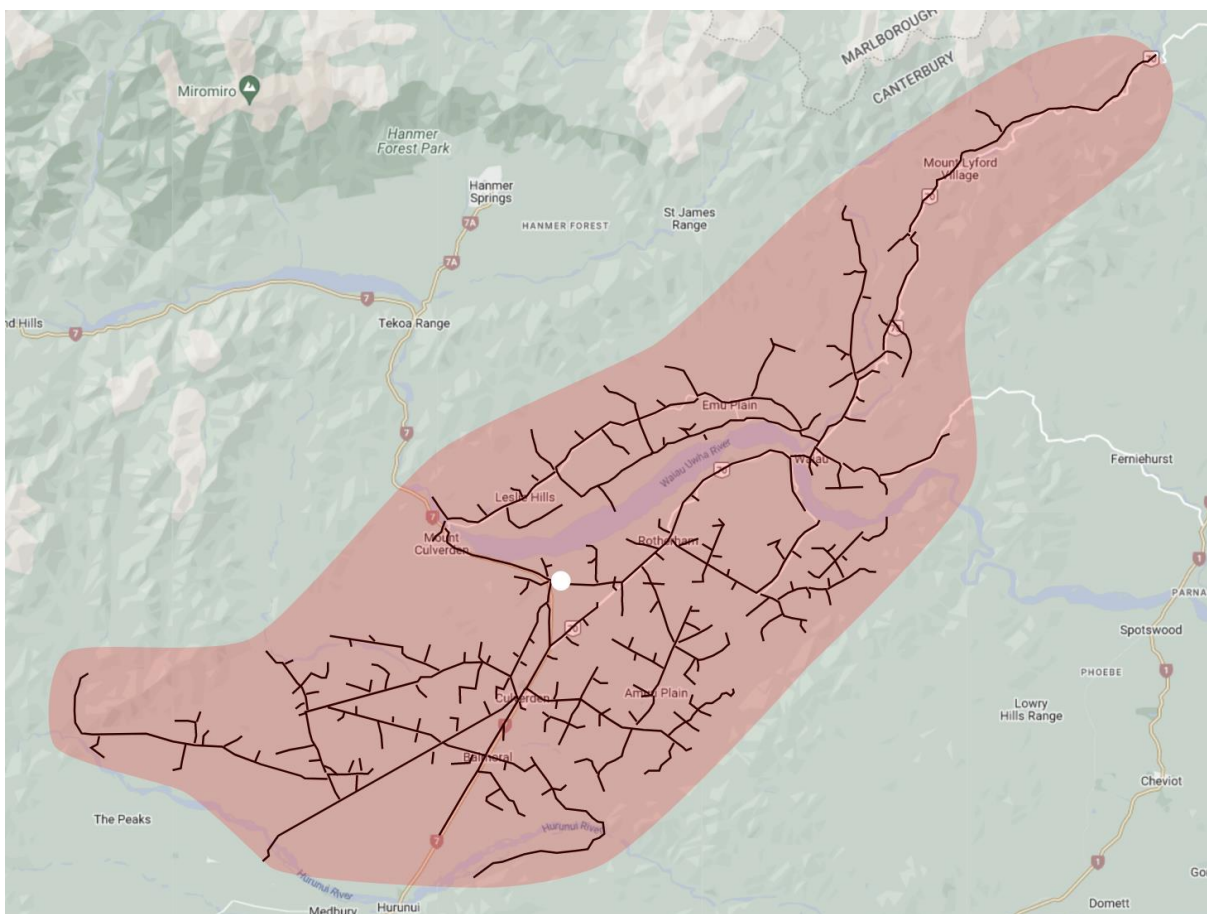


Figure 1: Mouse Point Zone Substation (white), with area of supply (shaded red) and 22 kV reticulation network (black).

3. Background Information – Security of Supply

According to MainPower’s security of supply standard (detailed within Section 6.2.1 of MainPower’s 2024 AMP) MPT is an A1 Class Substation, and the targeted duration for a

transformer, line or cable fault is the isolation time. ie the time required to disconnect that equipment from the network.

To meet this requirement, MPT must have the capacity to supply peak network demand without an outage (given that isolation of the transformer can occur almost instantaneously) should a failure occur on a single transformer, i.e. a single 13 MVA transformer must be able to supply the entire load at MPT.

The security of supply limit (firm capacity) at MPT is therefore 13 MVA, but the capacity limit at MPT is 26 MVA.

Recent demand peaks have exceeded 13 MVA, and although load on the existing equipment may exceed the long-term continuous rating (13MVA) for a short period, additional capacity support is required to ensure security of supply.

4. Electricity Demand at Mouse Point Zone Substation (MPT)

MPT supplies a primarily rural load which peaks in summer and has a relatively stable (but elevated) demand profile throughout the day. The demand profile appears to be primarily derived from irrigation and agricultural requirements – resulting in a rapid early morning increase.

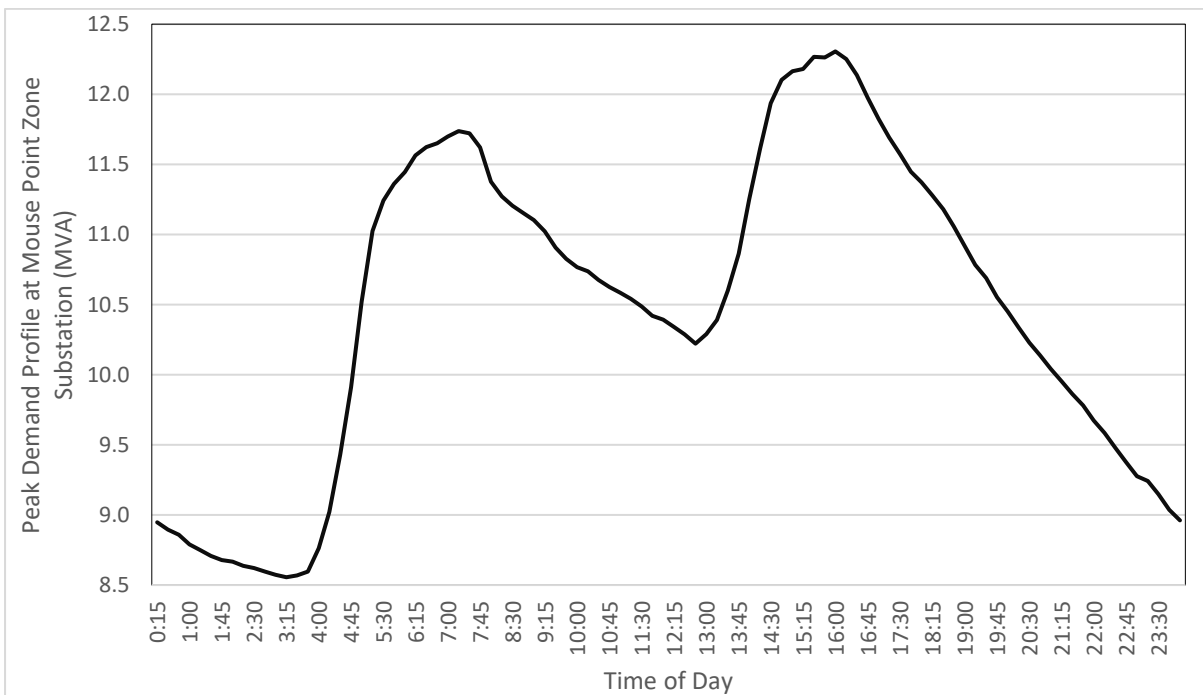


Figure 2: Average Daily Demand Profile at Mouse Point Zone Substation During the Summer.

Peak demand growth at MPT has been relatively stable, however during the summer of 2023-2024, there was an increase in daytime temperatures, resulting in an increase in peak demand at MPT. This increase is not projected to further increase year-on-year continuously, and projections indicate that peak demand at MPT will be less than 18 MVA by 2030.

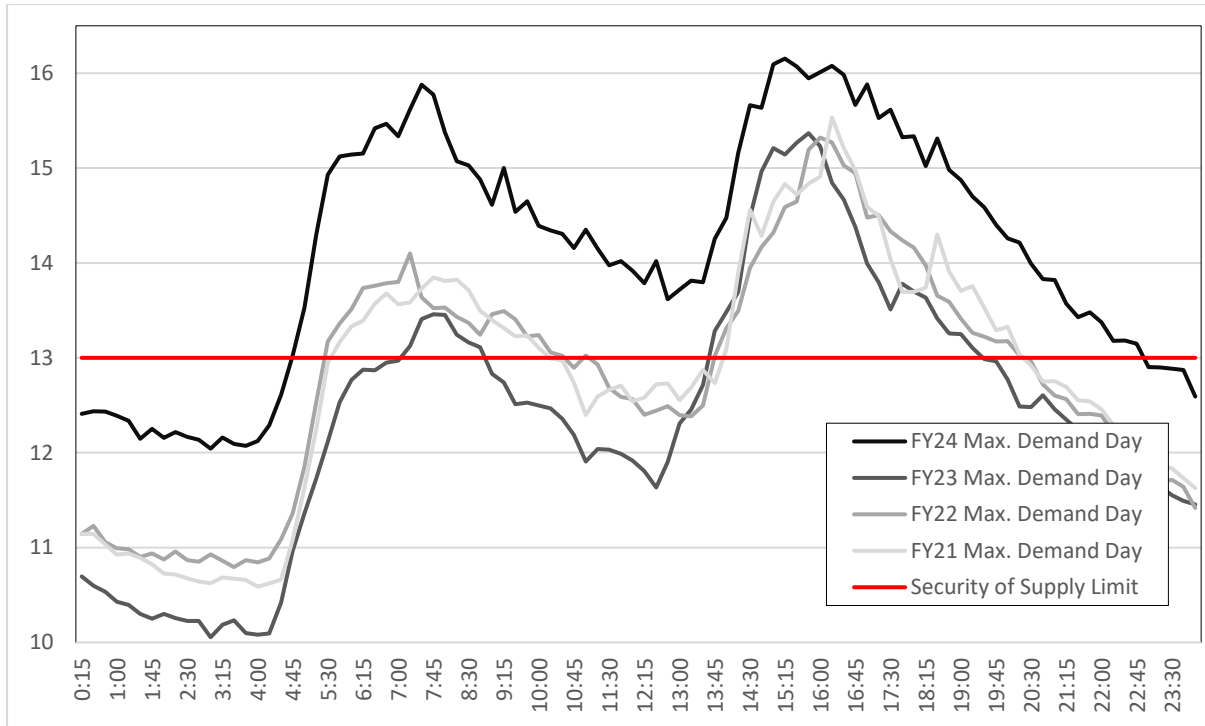


Figure 3: Demand Profile at Mouse Point Zone Substation on for Each Worst-Case Day from FY21 - FY24.

5. Electricity Demand at Mouse Point Zone Substation

MainPower is exploring options to provide the required capacity support at MPT, which may be either:

- a) Traditional network upgrades which increase the site capacity; or
- b) Non-network flexible solutions which provide either an alternative supply or reduction in demand that allows for deferral of traditional network investment; or
- c) A combination of a) and b).

Preference will be given to non-network solutions that provide a comparable level of reliability to a traditional network solution during the defined period of agreed supply.

The capacity at Mouse Point Zone Substation is limited by the two 13 MVA, 33/22 kV power transformers which are projected to have more than 30 years of remaining service life. Replacement of these assets, in time, may be deferred if non-network solutions provide more efficient use of MainPower financial resources.

6. Reliability and Capacity of the Non-Network Solution

Any solution will ideally be activated without prior advanced notice, and so be able to respond in real time. If this is not possible, respondents should specify what lead time for notice of operation is required.

The solution should respond with expected capacity when required.

7. Other MainPower ROI considerations

MainPower will also consider the following when assessing ROI responses:

Reputation / track record	Respondent's experience in delivering similar solutions and capacity to deliver.
Price	Assessing how the total payable, terms of payment and structure impact on MainPower.
Integration	How the response will integrate with MainPower's existing physical and digital infrastructure.
Other factors	How the response provides ancillary benefits to MainPower and its customer base.

Appendix 2 – Supplier Information Sought

Please respond to the following questions in your solution proposal.

1. An overview of the proposed Non-Network Solution

- a. Provide an overview of your proposed capacity support solution
- b. Provide details of the technology, infrastructure and communication modes your solution proposes to utilise.

2. Methodology

- a. Provide details of how you would intend to deliver and maintain your non-network capacity solution.
- b. A recommended implementation timeline, staged if appropriate

3. Demonstrated Capability

- a. Provide a summary of your capabilities to provide the proposed non-network capacity solution including
 - i. Resources
 - ii. Technology
 - iii. Infrastructure

4. Reliability

- a. Provide details of your expected solution reliability (levels of service).
- b. Provide samples of your Service Level Agreement and Key Performance Indicators

5. Health and Safety

- a. Please state any known health, safety or equipment risks that may be associated with the proposed flexibility solution.
- b. Identify how any risks associated with the solution will be managed.

6. Demonstrated Experience

- a. **References:** Please provide the names of two references whom we can contact

7. Pricing

Please provide indicative pricing information for

- a. The availability of the non-network solution for activation (available on standby).
- b. The activation of the non-network solution, including any per kWh or time basis for use.
- c. Any other charges or costs associated with the proposed solution.

8. Additional Information / Value Add

Please detail any additional benefits to MainPower including potential productivity gains, cost benefits, business simplification, and end user benefits.

9. Company Background

(Please provide the following information on your Company):

- a. Geographical area covered
- b. Where is your Company Head Office?
- c. Key Personnel, who will be involved with MainPower
- d. Major Shareholders
- e. Years established
- f. Annual Financial Report
- g. Please provide a list of your key customers.
- h. Do you have any endorsement of your product from a Utilities Company or other similar business? If so, please provide details of the Customer
- i. Environmental and Social Responsibility programmes
- j. Please provide a company organisation chart