

Network Support Options for the Coromandel Region

Registration of Interest

23 March 2021



Section 1: Introduction

Powerco Limited (Powerco) has identified that investment is required to improve the reliability of electricity delivered to customers in the Coromandel Peninsula area.

The purpose of this document is to seek information from potential providers of solutions.

1. Overview of Powerco and the location of the required service

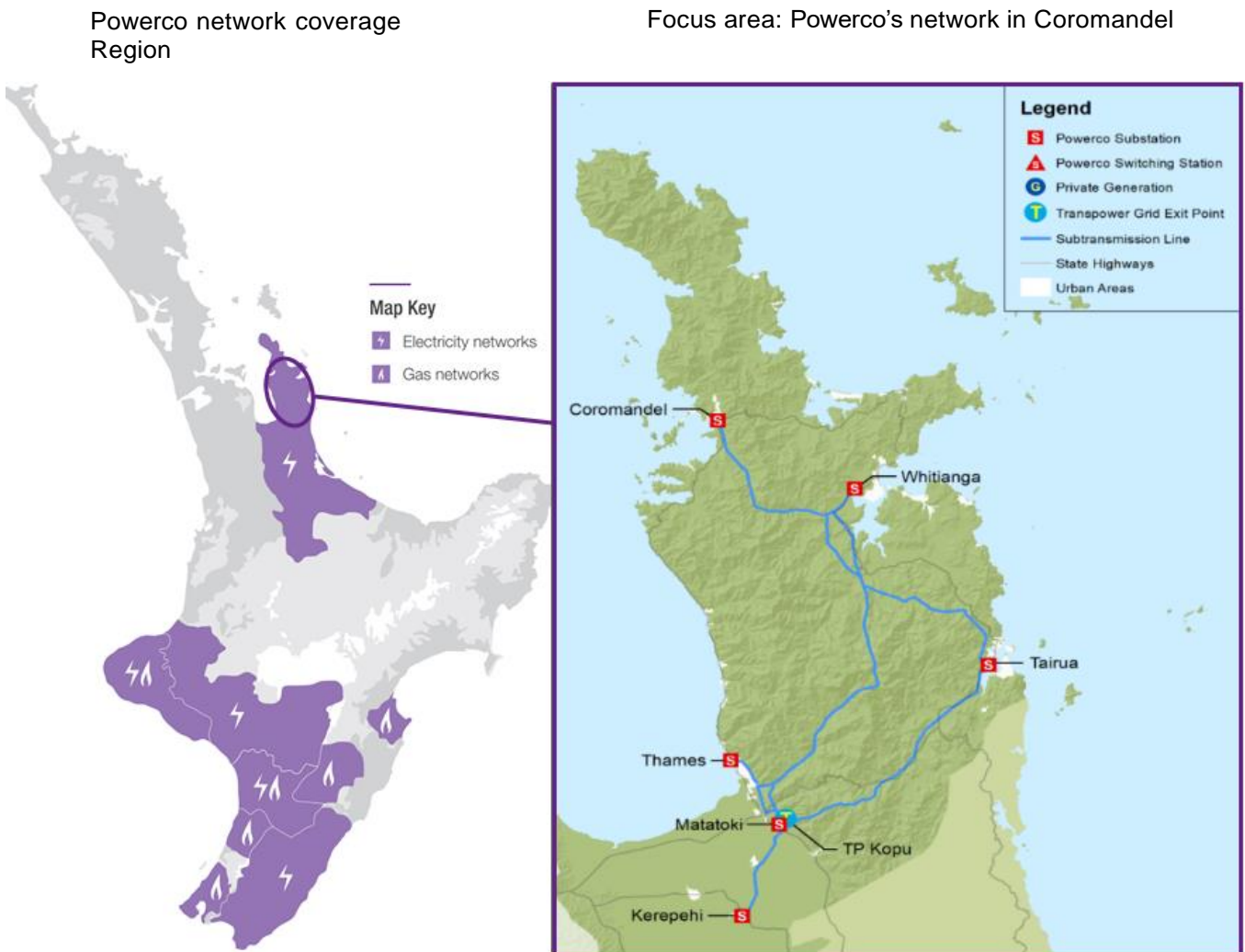
Powerco is the second largest electricity and gas distribution business in New Zealand. Its network extends across the Taranaki, Manawatu-Whanganui, greater Wellington, Hawke’s Bay, Waikato and Bay of Plenty regions of the North Island.

Powerco provides distribution services to more than 336,000 electricity customer connections and more than 107,000 gas connections. The extent of Powerco’s footprint in terms of gas and electricity networks, and details of the Coromandel peninsula are shown in Figure 1.

The Coromandel Peninsula area includes the towns of Coromandel, Whitianga, Tairua and holiday resorts of Matarangi, Cooks Beach, Hahei and Hot Water Beach. There are approximately 17,082 connection points in the area that are a mix of commercial, urban residential and rural customers.

Powerco is interested in potential network alternatives north of Tairua on the Coromandel Peninsula.

Figure 1: Powerco’s network and the Coromandel area



2. Powerco's commitment to the Coromandel region

The Coromandel region presents significant challenges in terms of maintaining reliability on feeders supplying sparsely populated areas in what is often remote, difficult-to-access terrain. Investment priorities have focused on improving network security and resilience.

Powerco has identified the following key customer values:

1. Reliability of supply by reducing or avoiding outages
2. Responsiveness to outages that are unplanned or outside our control
3. Delivering efficient and effective value
4. Ensuring customers receive timely and accurate information about their electricity supply

Powerco identified a traditional network solution to meet the capacity requirements for the Coromandel region. This included building new 66kV transmission lines to support the existing network.

The purpose of this ROI is to allow Powerco to explore other solutions that meet the low cost, high reliability, and low environmental impact criteria.

Powerco supports the drive for consideration of third-party alternatives to traditional network solutions. This is aligned with Powerco's strategy to provide an Open Access network, and ultimately, lower costs for our customers.

3. Purpose of this Registration of Interest (ROI)

Powerco is seeking Registrations of Interest (ROI's) from suitably qualified companies (Respondents) who are interested in delivering electricity network support in the Coromandel region.

Overview

Electricity to the Coromandel region is supplied from Transpower's Kopu grid exit point (GXP) substation by sub-transmission lines operating at 66kV. These 66kV sub-transmission circuits supply Powerco's Tairua, Whitianga and Coromandel zone substations. Powerco is seeking solutions to manage the loading on the sub-transmission lines and zone substations in contingency situations – for example where one sub transmission circuit experiences an outage coincident with peak load. This is to ensure continued security of supply to the Coromandel region, and to delay or avoid upgrading the sub-transmission lines or zone substation equipment. In turn the network support is to provide a more cost-effective solution.

Purpose

The purpose of this ROI is to start formal engagement with the market for the supply of network support for the Coromandel Peninsula and a Registration of Interest (ROI) from parties that are interested in participating in a future Request for Proposal (RFP) process. This ROI:

1. Highlights the key characteristics the network alternative would need to meet
2. Provides an explanation of the network issues that underpin the reliability investment
3. Proposes the contract term and start date
4. Requests feedback on the ROI
5. Requests feedback on the information that would be required in an RFP
6. Requests parties to register their interest for providing a network alternative that meets these requirements, together with some preliminary information about potential distribution generation alternatives that could be offered

Response

If you own and operate, or plan to own and operate, equipment capable of network support, connected to the Powerco network in the Coromandel, Powerco encourages you to respond to this ROI. We are interested in the following types of equipment (but not limited to):

1. Backup generators
2. Generator(s) continuously supplying electricity, and able to supply at the times Powerco may require network support
3. Large-scale storage battery system(s)
4. Small-scale storage battery systems that can be aggregated on a large scale
5. Demand response of any kind that can be aggregated on a large scale (in addition to Powerco's existing ripple load control)
6. Intermittent generation supported by battery storage (both large-scale and small-scale)

ROI submissions should clearly demonstrate the Respondent's proven abilities in relation to the key aspects of the Services. Solutions should use proven technology. It is anticipated that shortlisted Respondents will then be asked to provide commercial proposals under an RFP process.

The following high-level steps are anticipated:

1. An ROI to identify and shortlist a group of Respondents
2. A selected Request for Proposal (RFP) to shortlisted Respondents
3. An interactive RFP process to encourage innovation and value for money initiatives
4. Negotiation and due diligence stages will be undertaken with Respondents
5. Recommendations developed and approved

4. Requirements for network support

Powerco is seeking network support options for three related needs on the Coromandel Peninsula:

1. Coromandel zone substation alternative supply
2. Matarangi alternative supply
3. Kopu-Tairua 66kV sub-transmission circuit capacity alternative

Network Requirements

Tairua, Whitianga and Coromandel are supplied with electricity from the National Grid via Transpower's Kopu substation. The three network needs are summarised below.

1. Planned and unplanned outages of the single 66kV circuit supplying Coromandel substation results in a loss of supply to most of the customers supplied from the Coromandel zone substation. Only very limited 11kV backup supply is available from Thames coast 11kV feeder from Thames substation.
2. At Matarangi, Kuaotunu and Opito Bay backfeed 11kV capacity is affected by thermal and voltage constraints during an unplanned outage at peak load times on the 11kV distribution network that supplies these areas.
3. At present, during peak load times, N-1 security cannot be maintained at Tairua, Whitianga and Coromandel due to low voltage issues and conductor capacity/ thermal issues. However, N-1 capacity is currently only exceeded for approximately 52 hours per year during public holidays.

Table 1 below outlines the high-level requirements for each need. Powerco is interested in discussing with parties' potential solutions are able to meet most, if not necessarily all, the requirements for each of the three needs (see Table 1 for more detail about this).

Aggregation

Powerco does not have an aggregation capability to co-ordinate supply from multiple sources to deliver the required capacity. Respondents will need to provide their own aggregation systems and services.

Powerco requires that provided solutions can supervise the control and regulation of dispersed generators and maintain stable operation without generator hunting particularly when islanded. The microgrid controller while operating in grid-connect mode will take commands from centralised Powerco Network Operations Centre (NOC).

Reliability requirements

The service is required to provide security of supply to the Coromandel region customers during periods of peaks loading as well as during planned and unplanned outages, this means there is limited advanced notice for when the service is needed. A network alternative must be able to provide the required service whenever it is required, without exception.

Contract term

This a reliability investment to provide long-term security of supply to Coromandel region customers and, like with any solution, Powerco is looking for long-term certainty.

The proposed operational start date for the network alternative is 1 December 2022. The proposed contract period is between 10 and 20 years.

Table 1: Powerco’s high level requirements

	Coromandel zone substation alternative supply	Matarangi area alternative supply	Kopu-Tairua 66kV sub transmission line capacity alternative
Role	Back-up supply	Backfeed post contingency Back-up supply	Peak reduction post contingency
Capacity	4.5 MW (but also capable of stable operation down to 1.0 MW) Growing to ~5.0 MW (2035)	1.4 MW (backfeed) 3.1 MW (backup supply) Minimum requirements – forecast to increase with uncertainty	10 MW ¹ Growing to ~18 MW (2035)
Location	Concentrated: near Coromandel zone substation Distributed: on Coromandel zone substation 11kV feeders	Matarangi township or Kuaotunu West vicinity	Concentrated: near Coromandel, Whitianga and Tairua zone substations Distributed: on Coromandel, Whitianga and Tairua zone substation 11kV feeders
Annual requirement	50 hours (estimated)	200 hours (estimated)	30 hours (estimated)
Time of year	All	Peak periods – public holidays. (backfeed) All (backup supply)	Peak periods – public holiday periods. Winter (future, following expected demand growth).
Time of day	Anytime	Anytime	7am-10am, 4pm-9pm
Duration	Typically 1-6 hours, up to 24+ hours (until fault is repaired)	Typically 4 hours, up to 18 hours (until fault is repaired)	Up to 5 hours
Response time	5 minutes (islanding)	1 minute (backfeed) 5 minutes (islanding)	1 minute
Whole/partial ²	Whole	Backfeed minimum ³	Partial

Note 1: This capacity can be met (in-part) by resolving the Coromandel and Matarangi requirements.

Note 2: Whether the network support is required to meet the whole capacity need, or whether a partial capacity solution will be considered.

Note 3: A full backfeed solution is required, but backup supply role is optional.

5. Summary and process

This ROI initiates formal engagement with the market for the supply of network support for the Coromandel area. It provides an opportunity for potential proponents to engage with Powerco about the requirements and register their interest in participating in a future RFP process.

The proposed timetable for this ROI process is as follows:

Table 2: ROI timetable

Item	Due date
Release of ROI	Tuesday, 23 rd March 2021
Last date for questions and requests for explanatory notices from Respondents.	Friday, 9 th April 2021 at 4.00pm
Last date for responses for Powerco	Friday, 16 th April 2021
ROI Closing Date and Time	Friday, 23 rd April 2021 at 12.00pm (Noon)
Evaluation period commences	Tuesday, 27 th April 2021
Respondent Clarification period	Monday, 03 rd to Friday, 7 th May 2021
Evaluation period ends	Friday, 14 th May 2021
Respondents advised of outcome of ROI	Friday, 14 th May 2021

Respondents should note this timetable is indicative only. Powerco may amend this timetable from time to time. Any changes to the timetable will be published on Powerco's website <https://www.powerco.co.nz/roi-coromandel/>.

Interested parties are encouraged to email Powerco at Coromandel.ROI@powerco.co.nz and they will be advised by email of any updates or changes by the Powerco contact person.

Powerco contact person

For the purposes of this ROI, the Powerco contact email is Coromandel.ROI@powerco.co.nz. If this changes, Powerco will notify respondents.

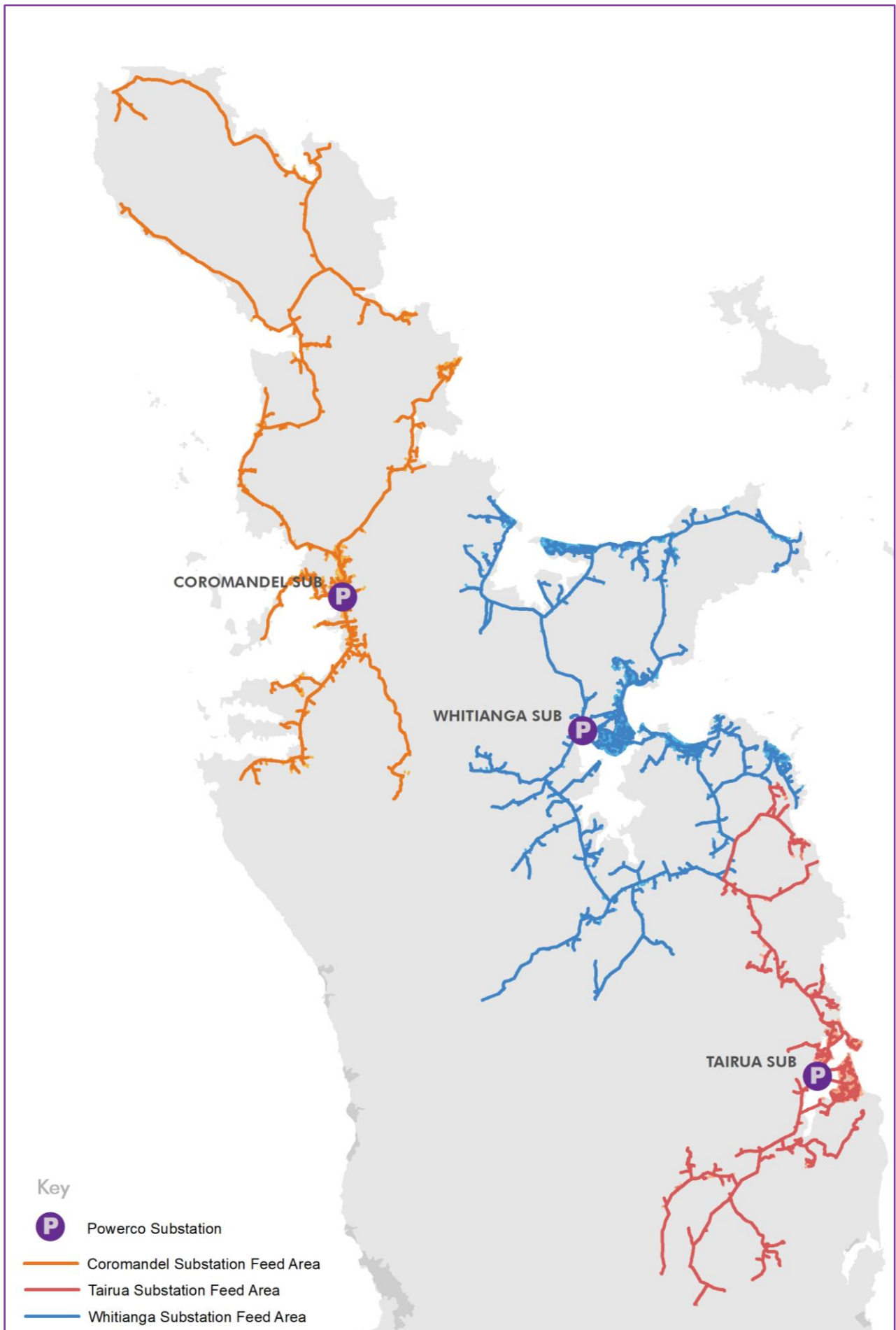
Only emails issued from the Powerco contact email are to be treated as valid responses to respondents in relation to this ROI.

Form of response

The response must be supplied in an electronic format and must, as a minimum, include the complete responses in a Word or PDF format to the requirements outlined in Section 3 and 4 of this ROI.

The respondent may attach any other material they wish to lodge in support of their response. Powerco may in its evaluation choose to consider or disregard any supporting material not specifically requested by this ROI.

Section 2: Network Map



Section 3 – Information required from Respondents

This section summarises the information that must accompany any Response.

Details	
Response for:	Network Support Options for the Coromandel Region
Name of Respondent:	[response]
Signed by Contact Person for the Respondent:	[response]
Name and title of Contact Person:	[response]
Date:	[response]
Contact person's address:	[response]
Contact person's telephone number:	[response]
Contact person's email address:	[response]

Relevant Experience	
<p>Provide relevant examples to evidence your previous experience in providing capacity support / network support in the last 5-10 years and / or;</p> <p>Provide relevant examples to evidence your experience with a proven technology/solution.</p> <p>Examples should include using that network support on request to support load in a defined area and details for each area applicable to the solution.</p>	
<p>Include the following:</p> <ul style="list-style-type: none"> a) Technology installed b) Size of load supported (kW) c) Responsiveness d) Duration of load support provided e) Date commissioned 	[response]

Regional Solutions	
<p>Please indicate which areas you would be able to provide a Network Support solution for the Coromandel Region. Please include preliminary concept detail including technology, ability to meet Powerco's time-line and constraints or factors that could risk achieving it (indicative only).</p> <p>For locations not included in the Respondents ROI, clearly indicate as "not applicable"</p>	
Coromandel zone substation alternative supply	[response]
Matarangi area alternative supply	[response]
Kopu-Tairua 66kV sub transmission line capacity alternative	[response]

Section 4: General conditions of ROI

1. No contract or legal relations

This ROI is solely a request for information. It does not constitute a contract, offer to enter into a contractual relationship or give rise to any binding legal obligations on Powerco.

Powerco reserves the right to:

- Cancel, alter or postpone this ROI at any time
- To decide not to shortlist any or all respondents and/or
- Not to proceed with any subsequent process at the completion of this ROI

As far as permitted by law, Powerco is free to deal with responses and respondents as it considers necessary or appropriate at the time.

Powerco is not required to disclose its dealings to respondents or provide an opportunity for respondents to comment, except to the extent specifically required by this ROI.

All respondents agree that:

- No legal or other obligations shall arise between a respondent and Powerco in relation to this ROI or the process, conduct or outcome of the ROI; and
- This ROI, and any response to it, does not create any form of process contract between Powerco and any respondent, potential respondent or other party, or a right for any respondent (including a shortlisted respondent) to participate in any subsequent process carried out at the completion of this ROI.

2. Acceptance of ROI General Terms and Conditions

By submitting a response, the respondent accepts and agrees to be bound by all the terms and conditions specified in this ROI.

3. Confidentiality of this ROI

This ROI, and the information, notices, comments and documents (electronic and paper) supplied at any time by Powerco (either itself or through its consultants or advisors) in connection with this ROI, is confidential. Powerco retains all ownership and other rights (including intellectual property) in the information it provides to the respondent.

Respondents must:

- not use the information provided by Powerco for any purpose other than preparing a response to this ROI;
- treat this ROI and any such information as strictly confidential and not release or disclose any of the information to any other person (other than your employees or professional advisors for the purpose of preparing your response) without the prior written consent of Powerco.

A respondent must not make any public statement in relation to this ROI or the awarding of any subsequent contract without

the prior permission of Powerco.

The obligations of confidentiality in this section are ongoing and will continue indefinitely.

4. Confidentiality of responses

Powerco will treat information contained in any response as confidential except to the extent disclosure is required by law. This obligation of confidentiality does not apply to confidential information that:

- Is disclosed by Powerco to its consultants, legal and other advisors or employees solely in order to consider or progress the ROI responses
- Powerco is required to disclose by law
- Is or becomes available to Powerco through other legitimate channels without confidentiality restrictions; and/or
- Is in the public domain otherwise than due to a breach of this paragraph
- The obligation of confidentiality in this section is ongoing and will continue indefinitely.

5. Accuracy of information

Powerco believes that the information contained in, or provided in connection with, this ROI is correct at the time it is issued.

While Powerco endeavours to supply correct information, it does not provide any warranty as to the accuracy or completeness of information supplied with this ROI. Any reliance on the information provided by Powerco is solely at the respondent's risk.

Powerco reserves the right to expand, amend, alter, correct and/or clarify any information at any time.

Those submitting a response will be deemed to have:

- Examined this ROI and any notice to respondents or other information supplied by Powerco in writing (if any)
- Made its own enquiries and applied its own judgment in deciding whether or how to submit their response
- Considered all the risks, contingencies and other circumstances that may have an effect on their response; and
- Satisfied themselves as to the correctness and sufficiency of their response

6. Response completeness and accuracy

The respondent warrants that the information they provide to Powerco, including information contained in any response, is complete and accurate and not misleading in all material respects, and that material details have not been withheld.

The respondent also warrants that the information they provide to Powerco (including in any response) and the use of such information by Powerco for the purposes of this ROI (including the evaluation the

response and the negotiation and implementation of any contract) will not breach any third-party intellectual property rights.

7. **Non-conforming responses**

Responses which:

- Are not submitted in the format set out in, or required by, Section 3
- Do not include, in the form required, all the information required to be included
- Are submitted late; or
- Do not comply with, or conform to, this ROI in any other way

will be deemed to be 'Non-conforming Responses'.

Any Non-conforming Responses received by Powerco may be rejected or evaluated during evaluation at the sole discretion of Powerco.

Powerco encourages respondents to seek clarification or explanation from Powerco if required on any points to enable it to submit a conforming response.

8. **Ambiguities or inconsistencies**

Where any respondent identifies an ambiguity or inconsistency in this ROI, the respondent must bring that ambiguity or inconsistency to Powerco's attention by completing and returning the Request for Explanation Form attached at the end of this ROI to the Powerco contact email.

If Powerco considers there is an ambiguity or inconsistency in this ROI, it may issue a Notice to Respondents to all respondents at its sole discretion.

9. **Variations of this ROI**

Powerco reserves the right, at its sole and absolute discretion, to modify and/or amend this ROI, at any time prior to the closing date. Any such modifications and/ or amendments made will be issued as a 'Notice to Respondents'.

If the modification(s) or amendment(s) to the ROI specified in the Notice to Respondents is of such a nature that it could reasonably be expected to have a material impact on a response that has already been submitted by a respondent, the respondent will be given the opportunity to submit to Powerco any modification(s) and/or amendment(s) that is necessary to its response.

10. **Notice to Respondents**

Any Notice to Respondents will be issued to all recipients of this ROI.

A Notice to Respondents that is issued by Powerco and sent to all respondents will, upon issue, become part of the ROI.

Powerco is not liable to any respondent who fails to become aware of any Notice to Respondents, which has been published or distributed in the same manner as the original ROI.

Powerco may, at its discretion, respond to the Respondent alone or publish the response in a Notice to Respondents. Powerco will not publish or divulge material which indicates a

particular Respondent's commercial approach. The source of each Request for Explanation will be kept confidential.

11. **Evaluation**

Powerco reserves the right to weight any assessment and selection criteria in accordance with its own priorities at the time. Powerco is not bound to accept any response and will have absolute discretion to apply whatever evaluation criteria it considers appropriate to prepare a shortlist of potential respondents (if applicable).

12. **Response validity period**

All responses are irrevocable and cannot be withdrawn or amended during the Response Validity Period except with the prior written consent of Powerco.

13. **Ownership of responses**

All responses become the property of Powerco upon submission, and do not have to be kept, destroyed or returned to the Respondent. Powerco may use the information contained in a response as it sees fit, subject to the above obligations of confidentiality.

14. **Powerco's reserved rights**

Powerco reserves the right to:

- a) Suspend, postpone or cancel this ROI at any time prior to the closing date or to re-advertise for ROI responses
- b) Make any change to this ROI and any associated documents
- c) Accept, reject or refuse any response (in whole or in part) and/or not to invite any respondent to participate in any subsequent process following completion of this ROI process
- d) Exclude any person from this ROI or any part of this ROI process for any reason
- e) Not to proceed with any subsequent process following the completion of this ROI and not contract for all or any of services on which this ROI is seeking information
- f) Treat any response as valid notwithstanding that it does not strictly comply with this ROI and/or rectify any errors in, or omissions from, any responses;
- g) waive any irregularities or informalities in the ROI process; and
- h) Seek clarification or undertake further inquiries concerning any response
- i) Apply any weighting or other judgement process to information provided in response to this ROI
- j) Provide to, or withhold from, any respondent (or other person) questions and answers to questions arising through this ROI process
- k) Restrict the supply of, or access to, any of Powerco's personnel, information or property
- l) Meet with, enter into discussions with one, or more than one, respondent (or any other person) at any time and upon any terms and conditions
- m) Not to draw up a shortlist of respondents; and/or
- n) Do any other act or thing that it sees

- o) fit in relation to this ROI, in each case with or without notice to all or any respondents, and with or without having or giving any reason.

15. No liability

Except for a breach of its confidentiality obligations above, Powerco will not be liable for any direct or indirect damage, loss or cost (including legal costs and response preparation costs) to any respondent or other person in relation to this ROI and/or preparing any response to this ROI, including, to avoid doubt, where Powerco exercises any of its reserved rights above.

16. Conflicts of interest

Respondents are to disclose and advise Powerco of any facts or circumstances which may give rise to any conflict of interest arising from the interests or duties of the respondent or its employees, officers, shareholders or directors in relation to this ROI or are relevant to their response.

17. Costs

Respondents and potential respondents must bear all of the costs of preparing and submitting a response, regardless of whether Powerco alters, postpones or cancels this ROI or does not proceed with any subsequent process after the completion of this ROI, including all costs relating to any:

- a) Requests for information (including additional information) or clarification by Powerco; and/or
- b) Discussions and/or meetings with Powerco (if applicable)

18. No collusion

Collusion between respondents is strictly prohibited and may result in the respondent being excluded or disqualified from further participation in this ROI at Powerco's discretion.

19. Governing law

This ROI is governed by the law of New Zealand, and the New Zealand courts have exclusive jurisdiction as to all matters relating to this ROI.