

31 May 2010

Manager
Economics and Approvals
Grid Development
PO Box 1021
WELLINGTON

Dear Sir/Madam

**SUBMISSION TO THE WAIKATO 110KV NETWORK INVESTIGATION:
ASSUMPTIONS, APPROACH AND OPTIONS CONSULTATION DOCUMENT.**

1.0 INTRODUCTION

- 1.1 Hamilton City Council (HCC) staff welcome the opportunity to make a submission to Transpower on the 'Waikato 100kV Network Investigation, Assumptions, Approach and Options' Consultation Document.
- 1.2 It should be noted that the comments expressed in this submission are from Hamilton City Council staff, and do not necessarily reflect the views of the Council itself.
- 1.3 As part of the development of the submission, HCC staff (and their representatives) attended a meeting with Transpower on 20 May 2010. The minutes of these meetings are referred to in our recommendations.

2.0 GENERAL COMMENTS

2.1 HCC Strategic Interest in Transpower Services

- 2.1.1 HCC staff recognise the importance of having secure power supply to the city and support options that ensure supply is not compromised, whilst allowing for planned development activity in the greater Hamilton area.
- 2.1.2 Where practical staff have a preference for options that:
 - Enable Transpower services to be located outside of the proposed city limits.
 - Consolidate services to a smaller number of corridors.
 - Place services underground to maximise land use potential and provide a safer and more aesthetic environment.
 - Utilise the Waikato Expressway corridor for aligning Transpower services.
 - Do not increase the need for additional Transpower services into the Ruakura substation.

2.2 Summary of meetings with WEL Networks and Transpower

- 2.2.1 In Transpower's Long List Options for each of the 110 kV lines heading north from the Hamilton substation (Ruakura), there is an option for each line to be decommissioned. Transpower advised that decommissioning all three lines heading north was not a feasible option¹ for a number of reasons. The likely scenario is that the double circuit tower line (Bombay - Hamilton, Hamilton - Arapuni) would be upgraded which would enable the Arapuni - Bombay single circuit pole line to be decommissioned.
- 2.2.2 HCC staff understand that WEL Networks are aware that this is a likely scenario and propose to take over the 110 kV corridor running along Tramway and Gordonton Roads. WEL Networks propose to build a 110 kV network², overhead and/or underground, to meet the future electricity demands of Hamilton.
- 2.2.3 HCC staff would prefer all 110 kV lines to be underground or moved to outside of the new city boundaries.
- 2.2.4 HCC staff, Transpower and WEL Networks staff have agreed to meet to discuss future city growth scenarios for the Hamilton area, with the aim of achieving a transmission system around Hamilton that meets all needs.

2.3 HCC Future Plans for Ruakura Growth Cell

- 2.3.1 The city's eastern boundary is proposed to change in the near future, thus incorporating land currently managed by Waikato District Council into the city.
- 2.3.2 HCC's urban growth strategy describes this block of land as R1 and R2 forming the Ruakura growth cell, which is currently planned for urban development between 2019-2043.
- 2.3.3 The Hamilton Urban Growth Strategy (HUGS) states that the Ruakura area is proposed to be developed for general employment purposes, beginning with the innovation precinct that specialises in research, innovation and high technology businesses. The Transpower lines present a significant barrier to optimising land use and are a major constraint to realising the long-term economic development potential for this area and the wider sub-region.
- 2.3.4 If Transpower's 110 kV lines distributed from Ruakura substation remain, they will significantly impact on the future development options for this area. The preference of HCC staff is to have all the Transpower 110 kV lines moved to outside of the new city boundary (refer to the attached plan for an overview of the area and Transpower transmission lines).

2.4 Background

- 2.4.1 HCC staff understand Transpower's proposition to include the upgrading of the double circuit line Bombay to Hamilton and Hamilton to Arapuni, which would enable part or all of the Arapuni - Bombay line to be decommissioned. HCC staff also understand that Transpower considers decommissioning all the 110 kV lines in this area is an unlikely scenario as significant investment would be required to the 220 kV system, in addition to security of supply issues. HCC staff consider it important to relocate these services out of the existing and future city boundary area.

¹ Refer to Minutes of Meeting dated 20 May 2010.

² Refer to Minutes of Meeting dated 17 May 2010.

2.4.2 The future Ruakura growth cell is currently crossed by the following Transpower lines which are included in the current Consultation Document. Refer to the attached plan for reference:

- Bombay - Hamilton double circuit tower line - heading north from Ruakura.
- Arapuni - Hamilton double circuit tower line - heading south east from Ruakura
- Arapuni - Bombay single circuit pole line - heading north and south from Ruakura.

2.4.3 HCC staff note that Transpower lines that cross this area and are not part of the current consultation document include:

- Hamilton 220 kV deviation double circuit tower lines - heading east from Ruakura.
- Hamilton - Waihou 110 kV double circuit tower line - heading east from Ruakura.
- Cambridge - Hamilton 110 kV double circuit tower line - heading south from Ruakura.

2.4.4 HCC staff consider it important that the above three lines be included in the scope of consultation.

2.5 Recommendations

2.5.1 The following HCC staff recommendations are in response to Waikato 110 kV Options Document, Section 5 Long List Options.

2.5.2 A number of Transpower's 110 kV lines included in the Consultation Document would significantly impact on the proposed development options for the future Ruakura growth cell, (refer to the Plan showing the Transpower network, current city boundary and Waikato Expressway). HCC staff require these lines to be decommissioned or moved into the proposed expressway.

2.5.3 In making this submission HCC staff would not want to adversely affect the security of supply to Hamilton or detrimentally impact the electricity infrastructure capability for managing future increased growth and electricity demand.

2.6 Bombay - Wiri Section

2.6.1 No comment.

2.7 Bombay - Hamilton Section (HAM-MER B)

2.7.1 This line is currently a double circuit tower line, strung with copper conductor. HCC would prefer that this line is decommissioned. The second preferred option is to upgrade the transmission line with a larger conductor so that the Arapuni - Bombay single circuit line (ARI-HAM A) can be decommissioned.

2.7.2 If this line is upgraded, HCC staff would like the opportunity to review its location and discuss options for moving or undergrounding the length from the Ruakura substation to where the line crosses the proposed expressway.

2.8 Arapuni - Bombay Circuit (ARI-HAM A)

2.8.1 HCC staff would prefer that this pole line is decommissioned and dismantled. This option is considered feasible, if the double circuit tower line Bombay - Hamilton (HAM-MER B) and Arapuni - Hamilton (ARI-HAM B) are upgraded to

a larger conductor. The current location of this line adjacent to Tramway and Gordonton Roads is significantly impacting development options and road widening along these roads. If this line is not decommissioned then HCC would wish to investigate increasing the length of undergrounding from the Ruakura substation out to the end of the existing underground commencing at Thomas Road.

2.9 Arapuni - Kinleith Section

2.9.1 No comment.

2.10 Kinleith - Tarukenga Section

2.10.1 No comment.

2.11 Request for Information (RFI) for Alternative Projects

2.11.1 The other Transpower assets crossing the Ruakura Block also of interest to HCC, are the 110 kV double circuit lines to Waihou and the 220 kV Hamilton Deviation. These lines also impact the future development plans for this area.

2.11.2 Although both of these two networks are not part of this consultation phase it is necessary to consider them now as they restrict opportunities to have Transpower services relocated outside the future urban development.

2.11.3 HCC staff advise that the future Ruakura growth cell will surround the Ruakura substation. Further development of this substation and additional (220 kV/110 kV) lines is not considered desirable. HCC staff request that Transpower consider establishing a new substation to the east of the city boundary at the intersection of the Hamilton Deviation with the Otahuhu - Whakamaru 220 kV transmission lines. Connection of the Waihou 110 kV double circuit line into the substation would provide security to Waihou and remove the need to develop the Ruakura substation in future.

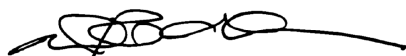
2.11.4 HCC staff understand that Transpower will be issuing additional consultation documents for the above options, and we register our interest in further discussion.

3.0 CONCLUDING COMMENTS

3.1 HCC staff trust that the points made in this submission are helpful to Transpower when considering all submissions to the proposed "Waikato 110 kV Network Investigation: Assumptions, Approach and Options Consultation Document".

3.2 If you require clarification of the points raised in this submission, or additional information, please contact Tony Denton (HCC's Growth Programme Leader) on 07 838 6807 or email tony.denton@hcc.govt.nz

Yours faithfully



Michael Redman
CHIEF EXECUTIVE