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Submission by Meridian Energy
Limited on Transpower's Notices
of Requirement and Applications
for Resource Consent

Submission on Transpower's Notices of Requirement and Applications
for Resource Consents

Section 145, of the Resource Management Act 1991

To: Minister for the Environment
Freepost Grid Upgrade Submissions
PO Box 4405
Hamilton East
HAMILTON 3247

- 1.1 This submission relates to all of the Notices of Requirement and Applications for Resource Consent lodged by Transpower New Zealand Limited (*Transpower*) for the North Island Grid Upgrade Project (*Proposal*), and Identified in the table below.

Manukau City Council

Pakuranga Substation Notice of Requirement. Reference Number: 27619.

Otahuhu Substation Notice of Requirement. Reference Number: 27619.

Brownhill Substation Notice of Requirement. Reference Number: 27619.

Underground Cable – Pakuranga to Brownhill Notice of Requirement.
Reference Number: 27619.

Underground Cable – Otahuhu to Brownhill Notice of Requirement. Reference
Number: 27619.

Overhead Line Notice of Requirement. Reference Number: 27619.

Franklin District Council

Overhead Line Notice of Requirement. Reference Number: L07089.

Waikato District Council

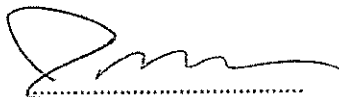
Overhead Line Notice of Requirement. Reference Number: DES0011/07.

Matamata-Piako District Council

Overhead Line Notice of Requirement. Reference Number: RMR200621.

<p>Waipa District Council</p> <p>Overhead Line Notice of Requirement. Reference Number: DN/0006/07.</p>
<p>South Waikato District Council</p> <p>Overhead Line Notice of Requirement. Reference Number: 240/021.</p>
<p>Taupo District Council</p> <p>Overhead Line Notice of Requirement. Reference Number: RM070209.</p> <p>Whakamaru and Whakamaru North Substation Notice of Requirement. Reference Number: RM070209.</p>
<p>Auckland Regional Council – Resource Consents</p> <p><i>Pakuranga to Brownhill Underground Cable Resource Consents</i></p> <p>Application 34102: Land Use Consent for earthworks.</p> <p>Application 34370: Discharge of Contaminants to land from ancillary activities that produce wastewater or washwater.</p> <p>Application 34372: Works in the Bed of a Watercourse.</p> <p>Application 34373: Diversion of Surface Water.</p> <p><i>Overhead Line and Brownhill Substation Resource Consents</i></p> <p>Application 34711: Land Use Consent for earthworks.</p> <p>Application 34712: Discharge of Contaminants to land.</p>
<p>Environment Waikato – Resource Consents</p> <p><i>Overhead Line and Whakamaru North Substation Resource Consents</i></p> <p>Application 116902: Land Use Consent for vegetation clearance and earthworks.</p> <p>Application 116903: Discharge Permit for the composting of vegetation.</p> <p>Application 116904: Land Use Consent for the drilling of tower foundation below the water table.</p> <p>Application 116905: Discharge Permit for the discharge of site water and drilling fluids from drilling activities into surface water.</p>

- 1.2 The specific provisions of the Proposal that Meridian Energy Limited's (*Meridian*) submission relates to are:
- (a) All Notices of Requirement and Applications for Resource Consents.
- 1.3 Meridian's submission is:
- (a) Meridian's submission is set out in detail in **Appendix A** to this submission. Appendix A is organised in the following way:
 - (i) Executive summary;
 - (ii) Why electricity transmission is important to Meridian;
 - (iii) Meridian's support for Transpower's Proposal;
 - (iv) The consideration of alternatives; and
 - (v) Consistency of the Proposal with Part 2 of the Resource Management Act 1991 (*RMA*).
 - (b) In summary, Meridian supports Transpower's Notices of Requirement and Applications for Resource Consent for the Proposal.
- 1.4 Meridian seeks the following decision from the Board of Inquiry:
- (a) Recommendations that the Designations be confirmed; and
 - (b) Decisions to grant the Resource Consents sought.
- 1.5 Meridian wishes to be heard in support of its submission (to present legal submissions and evidence).
- 1.6 If others make a similar submission, Meridian will consider presenting a joint case with them at the hearing.



John Hassan

Counsel for Meridian Energy Limited and person authorised to sign on behalf of submitter

4 October 2007

Date

(A signature is not required if you make your submission by electronic means.)

SUBMISSION BY MERIDIAN ENERGY LIMITED ON TRANSPOWER'S NOTICES OF REQUIREMENT AND APPLICATIONS FOR RESOURCE CONSENT

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A copy of this submission has been served on the Applicant in accordance with Section 96(4) of the RMA.

APPENDIX A – DETAILS OF MERIDIAN'S SUBMISSION

EXECUTIVE SUMMARY

- 1 Meridian generates electricity using only renewable energy resources. A robust electricity transmission network is essential to facilitate the development of renewable energy, as renewable resources are often located remote from demand.
- 2 This Proposal is critical to promoting a renewable energy future in New Zealand, something which is going to be increasingly important as New Zealand moves to a more carbon constrained environment. A reliable grid is also critical to keep the cost of electricity as low as possible, as it maintains strategic choices for supply from a range of potential renewable energy sources, promoting an efficient and sustainable national retail market.
- 3 Meridian submits that the Board should not be drawn into considering alternatives to Transpower's Proposal, or whether the Proposal is necessary. Such matters are outside the scope of the Board's function, and have been thoroughly addressed by the Electricity Commission.
- 4 Meridian considers the Proposal satisfies the relevant legislative requirements, and in particular, is consistent with the purpose and principles of the RMA. Accordingly, Meridian supports the confirmation of the designations and granting of resource consents.

WHY ELECTRICITY TRANSMISSION IS IMPORTANT TO MERIDIAN

- 5 Meridian is the largest state owned electricity generator in New Zealand, and the only electricity provider with certified carbon neutral electricity. Meridian generates using only renewable energy resources.
- 6 Meridian supports the development of a robust transmission system because it considers electricity transmission essential for New Zealand society. Society is reliant on electricity for its well-being and basic functioning. In many instances, electricity is not substitutable. It needs to be noted that transmission exists and is nationally significant because it conveys electricity from the location where it is generated to locations where it is required for consumption.
- 7 Encouraging the development of renewable energy resources is a key part of the Government's strategy for managing climate change and long term energy security¹. Renewable energy generation does not involve the emission of carbon,

¹ See paragraph 34A of the *Government Policy Statement on Electricity Governance*.

and therefore assists New Zealand to meet its climate change goals. The effects of climate change, and the benefits to be derived from the use and development of renewable energy, are matters to which persons exercising functions and powers under the RMA must have particular regard².

- 8 The fuel source for renewable energy is not transportable, and typically occurs in locations remote from demand for electricity. Many of New Zealand's best renewable energy resources (wind, hydro and geothermal) are located south of Auckland, and cannot be relocated close to the demand source. However, the electricity generated from those renewable sources can be transported to where the energy is required, provided the electricity transmission network facilitates this.
- 9 Meridian believes new renewables, and in particular wind generation, offer substantial and economic generation development options for New Zealand. New renewable generation projects:
- help significantly in addressing the country's national and international climate change policy obligations;
 - offer New Zealand a significant and sustainable competitive and strategic advantage; and
 - rely on a robust national grid.
- 10 In this context, the Proposal assumes critical importance for New Zealand's energy future. A robust electricity transmission network is essential to complement the development of renewable energy in New Zealand. Transmission investment will unlock the potential of many renewable projects to gain access to the national electricity market.
- 11 A reliable transmission grid that has adequate capacity to cope with a growing economy is vital. Security of supply over time, in the face of uncertainty, is critical to confidence in New Zealand's economy, its growth prospects, investment in business and the welfare of New Zealanders.
- 12 A reliable grid is also critical to keeping the cost of electricity as low as possible as it maintains strategic choices for supply from a range of potential sustainable energy sources.

² Section 7(i) and (j).

MERIDIAN'S SUPPORT FOR THE TRANSPOWER PROPOSAL

- 13 Meridian supports this Proposal for the reasons outlined below.
- 14 Transmission investment clearly has environmental impacts. However Transpower's Proposal has the benefit of minimising the number of additional transmission lines needed into Auckland over the medium to long term. Meridian considers that this is a very clear benefit of Transpower's Proposal. Alternative proposals would have required additional transmission lines to be built over the medium to long term.
- 15 Meridian:
- 15.1 Supports Transpower's Proposal to initially operate the new overhead transmission line at 220 kV, but with the capability of operating at 400 kV when required;
 - 15.2 Supports Transpower developing and articulating a long term grid vision for New Zealand so that the Proposal and future investments can be considered in that context;
 - 15.3 Submits that the Proposal put forward by Transpower is the best option for securing a renewable energy future;
 - 15.4 Submits that the Proposal will have benefits such as the need for less transmission corridors, which will in turn increase certainty for landowners.
- 16 The long term grid vision which this Proposal will establish will provide significant inter-generational benefits that other options could not deliver. The Proposal allows for a significant level of flexibility, which Meridian considers to be a strong benefit of the Proposal. The capacity of this Proposal can be unlocked over time by the addition of extra components when they are required, for example, additional cables, transformers, and switchyards. This goes a long way towards providing a long term strategic investment into Auckland that will deliver security of supply when it is needed while also being economic.

THE CONSIDERATION OF ALTERNATIVES

- 17 Section 171(1)(b) and (c) of the RMA requires the Board to have particular regard to (amongst other matters):
- whether adequate consideration has been given to alternative sites, routes, or methods of undertaking the work; and

- whether the work and designations are reasonably necessary for achieving Transpower's objectives for which the designations are sought.
- 18 Caselaw is clear that when it comes to considering alternative sites, routes and methods for a designation, local authorities, the Court, and by extension the Board, cannot compel Transpower to choose a particular option, or do things a particular way. The Board's role does not extend to recommending alternatives. The Board is not required to satisfy itself that the alternative chosen is the best one. Rather, it must simply satisfy itself that Transpower has undertaken a businesslike (not arbitrary or cursory) identification and comparison of alternative sites, routes or methods.
- 19 Some submitters may suggest that the location of additional (thermal) generation in Auckland would defer the need to undertake an upgrade of the transmission lines. While such an alternative is not something the Board could direct, Meridian would comment that any decision to build thermal generation in or near Auckland as a basis for avoiding or deferring an upgrade of the transmission line into Auckland would be sub-optimal. Transmission constraints should not be the primary driver of generation decisions, nor be allowed to create regional markets.
- 20 Furthermore, thermal generation plants are not sufficient on their own to ensure the security of supply that Auckland needs. Gas fired combined cycle plants do not operate well in transmission constrained "islands", as their reliability is significantly lower than that of transmission assets (that is, they cannot be relied upon to deliver security of supply to the same extent as transmission).
- 21 Finally, possibly the most important consideration for new thermal power stations is the availability of gas. New Zealand is forecast to face a significant shortfall in gas by the middle of the next decade. Indigenous gas finds are not keeping pace with the expected gas demands of the existing suite of gas fired generation stations. Any new gas fired thermal generation will create a more compelling case for the importation of LNG to refire existing (and any new) gas power stations. This would create a significant cost to the economy as a whole by creating upward price pressure on electricity prices (which will include the cost of carbon emissions). Meridian is strongly of the view that the entry cost of new gas generation which includes the cost of carbon is higher than a significant volume of new renewable projects. In this case, gas generation is unlikely to occur.
- 22 In summary, Meridian reiterates its view that gas fired generation in the region is unlikely to be economic, and therefore cannot be relied upon to be built instead of transmission, and even if operating, will not provide a level of reliability this is comparable with the reliability provided by transmission. New generation plants are not substitutes for a robust national grid.

- 23 Transpower's choice of this Proposal has been rigorously tested by the Electricity Commission. That process involved the consideration of alternatives, including considering new (thermal) generation in Auckland as an alternative to upgrading the transmission lines. The nature of this Board's inquiry is more confined than the Electricity Commission's inquiry - it is not the role of this Board to recommend one alternative over another.
- 24 Meridian submits that the Commission's quasi-judicial and mandated consideration of alternatives and "need" is more thorough than that which a requiring authority would normally be expected to undertake in order to pass the "adequacy test" in section 171 of the RMA. In these circumstances, Meridian submits that the Board should not look behind the decision of the Electricity Commission, or seek to revisit questions of necessity and alternatives. While the Board must be satisfied that the consideration of alternatives has been adequate, Meridian submits that it would not be reasonable to come to any other conclusion in this case.
- 25 Meridian submits that the Board can take into account the Electricity Commission's decision under section 104(1)(c) and 171(1)(d) of the RMA, as evidence of a thorough consideration of alternatives, and acceptance by the mandated body of the need for this Proposal.

PART 2 OF THE RMA

- 26 Meridian considers that the Transpower Proposal is consistent with Part 2 of the RMA, and will promote the sustainable management of natural and physical resources.
- 27 Upgrading electricity transmission infrastructure, and thereby protecting the provision of electricity to Auckland, will enable people and communities to provide for their social, economic and cultural well-being. Meridian submits that Transpower's Proposal does this with sufficient foresight that future transmission corridors will not be required in the medium to long term. This will ensure the reasonably foreseeable needs of future generations will be met. Further, Meridian considers the Proposal will safeguard the life supporting capacity of air, water, soil and ecosystems, and avoid, remedy or mitigate adverse effects of activities on the environment. The benefits of, and need for, this Proposal have been endorsed by the Electricity Commission.
- 28 This submission does not intend to traverse each environmental effect associated with the Proposal, and to note its consistency or otherwise with matters of national importance or other matters listed in Part 2 of the RMA. However, Meridian does highlight the consistency of the Proposal with section 7(i) and (j) of the RMA ("the effects of climate change" and "the benefits to be derived from the use and development of renewable energy"). As noted earlier, a robust grid is

essential for the development of renewable energy, which in turn is a key part of the Government's strategy to address climate change effects.