IN THE MATTER of the Resource Management Act 1991

AND

IN THE MATTER of an application by Transpower New Zealand Limited for resource consents and notices of requirement for the Upper North Island Grid Upgrade between Whakamaru and South Auckland

EVIDENCE OF ROBIN GARETH WILSON IN SUPPORT OF THE MINISTRY OF ECONOMIC DEVELOPMENT'S SUBMISSION

Introduction

1. My full name is Robin Gareth Wilson. I am the Manager of the Electricity Group, Energy and Communications Branch of the Ministry of Economic Development. I am responsible for leading electricity policy across central government.

2. I have worked on electricity policy in central government for the past four years. I have been a manager with the Ministry for the past two and a half years. I hold a degree in engineering and a postgraduate diploma in public policy. I have worked in various roles in the electricity sector for more than seventeen years.

3. My evidence, in support for the Ministry's submission, will focus on the contribution that Transpower's Upper North Island Grid Upgrade Proposal will make to achieving the government's policies and objectives for the energy sector. My evidence does not comment on the environmental effects or implications of the application.

4. In my evidence, I will deal with the following matters:
   - Why the proposal is of national significance (paragraph 6 to 8);
   - The proposal's contribution to government energy policies and objectives, including the New Zealand Energy Strategy, security of supply, low cost energy, and climate change (paragraph 9 to 29);
   - The Government Policy Statement on Electricity Governance (paragraph 30 to 32); and
   - National Guidance (under the RMA) on Transmission that is under development (paragraph 33 to 35).

5. To the extent that my evidence addresses matters of government policy, I have been authorised by the Minister of Energy to give this evidence on behalf of the Ministry of Economic Development.

The Ministry's support for the Proposal

6. The Ministry supports Transpower's proposal because it is of national significance. Its benefits will be national in their effect by enhancing security of supply and enabling the increased use of renewable energy.

7. The Ministry considers that the proposal is well aligned with the government's energy objectives. The upgrade supports the government's Economic Transformation policies, particularly the themes of world-class infrastructure, environmental sustainability and Auckland as an internationally competitive city.

8. The Ministry is giving evidence to ensure that the contribution the transmission upgrade would make to the government's energy and wider objectives is taken into account.

The Proposal's Contribution to Government Energy Policies and Objectives

9. The government is committed to a sustainable energy system and has a number of policies in place, or under development, to achieve this, including:
   - the New Zealand Energy Strategy;
   - the Government Policy Statement on Electricity Governance;
   - development of national guidance on transmission under the Resource Management Act.

10. I will explain the relevance of each of these policies in order.

The New Zealand Energy Strategy

11. The government launched the New Zealand Energy Strategy (NZES) in October 2007. The NZES establishes the government's vision for New Zealand's energy system, and the range of actions that the government will take to achieve that vision. The government wants to work towards a "reliable and resilient system delivering New Zealand sustainable, low emissions energy services".

12. The NZES states that this will be achieved through seven high-level objectives:
   - Providing clear direction on the future of New Zealand's energy system;

- Utilising markets and focused regulation to securely deliver energy services at competitive prices;
- Reducing greenhouse gas emissions, including through an emissions trading scheme;
- Maximising the contribution of cost-effective energy efficiency and conservation of energy;
- Maximising the contribution of cost-effective renewable energy resources while safeguarding our environment;
- Promoting early adoption of environmentally sustainable energy technologies;
- Supporting consumers through the transition.

13. These objectives are examined in further detail below.

Security of Supply

14. The upgrade will primarily serve Auckland and North Auckland, which comprise a very significant proportion of total economic activity in New Zealand. The grid upgrade proposal is nationally important because any increase in the risk, actual or perceived, of interruptions in electricity supply to this region would have an impact on the whole New Zealand economy.

15. Ensuring high levels of security of electricity supply is a critical issue for all New Zealanders and for the government. New Zealand's economic activity and future economic growth rely on a secure supply of electricity. Grid constraints could result in interruption to supply, higher electricity prices, and new electricity generation from renewable resources facing restricted access to the electricity market.

16. An aspect of security of supply is ensuring that New Zealand has sufficient transmission capacity to ensure that the forecasted growth in energy demand can be delivered.

17. Much of the existing transmission system was developed around 40 years ago. Demand has continued to increase since then, particularly in the Auckland region, but relatively little investment has occurred in upgrading the capacity of the network. We are now in a period where a major upgrade is necessary, to position the country for the coming decades.

Renewable Energy

18. Growth in demand and the likely decline in availability of indigenous gas is likely to be accommodated by a transition to renewable energy sources. The government has also announced a target for 90 per cent of electricity to be generated from renewable sources by 2025. This target will be supported by the Climate Change (Emissions Trading and Renewable Preference) Bill that has been introduced to Parliament. This will amend the Electricity Act 1992 to create a preference for renewable electricity generation by implementing a restriction on new fossil-fuelled thermal generation.

19. These renewable energy sources are generally located far away from the main centres of demand, particularly Auckland. The transmission proposal would facilitate greater use of generation from renewables required to satisfy demand while at the same time reducing New Zealand's dependence on non-renewable energy sources, by ensuring that energy can be delivered to where it is needed.

20. Transpower investigated the need for the grid upgrade project. It considered non-transmission alternatives, including electricity substitutes, generation alternatives, energy efficiency alternatives, and demand-side management alternatives. The conclusion was that these alternatives would be either inadequate or uncertain to meet increases in demand over the short or longer term.

21. The geographical spread of generation also contributes to security of supply. A strong grid means than sources of generation can be more diverse, and mitigates the risk of dry years in the south, a lack of wind in, for example, the Manawatu, or the breakdown of major thermal generation plant.

Low Cost Option

22. Another key government objective is that electricity is delivered at competitive prices. New transmission lines are likely to be a low cost option, which will ensure that electricity prices remain as low as possible. The proposal has been determined to be the most economically efficient option to ensure electricity supply to the upper North Island. Accordingly, it will help to achieve the government's objectives for a fair, efficient and reliable electricity system.

23. The Electricity Commission is responsible for ensuring that significant investments in transmission are justified on an economic basis. The government set up the Electricity Commission in 2003 to regulate the operation of the electricity industry and markets (wholesale and retail) in accordance with the Electricity Act and government energy policy. The Electricity Commission is required to consult on, and approve (or not) investments proposed by Transpower. After considering the alternatives to the current proposal, and other considerations, the Commission approved Transpower's North Island grid upgrade proposal as economically justified and the option that best meets the needs of the electricity sector. This supports the government's objective to pick low cost options to ensure that prices are competitive.

Government's strategic direction on climate change

24. The grid upgrade proposal is important to the government's direction on climate change, because it will help to maximise the proportion of cost-effective renewable energy resources, contribute to reducing our greenhouse gas emissions, and promote the adoption of environmentally sustainable energy technologies.

25. Over the past decade, climate change has emerged as the major global environmental concern about the impact of energy use. Burning fossil fuels for energy produces gases, particularly carbon dioxide, which accumulates in the earth's atmosphere and traps more heat – the 'greenhouse effect'. Greater use

of renewable energy resources that have low emissions of greenhouse gases is a key government priority for reducing the climate change impacts of energy use.

26. On 20 September 2007, the government announced that it had decided in principle that New Zealand will adopt an emissions trading scheme as its core price-based measure for mitigating climate change, alongside other policies and measures to reduce overall domestic emissions. The Climate Change (Emissions Trading and Renewable Preference) Bill introduces an emissions trading scheme. As I stated earlier, the government has announced a target for ninety per cent of our electricity generation to be from renewable sources by 2025.

27. A key issue for New Zealand is that sources of renewable energy are located far away from Auckland, where demand for electricity is significant and growing, notwithstanding an increased focus on end-use efficiency. This means that a reliable and robust transmission system is essential to ensure that we can effectively utilise renewable energy sources, wherever they are located, as part of New Zealand's response to climate change. The intermittent nature of many renewable energy resources puts more pressure on the grid.

28. The grid upgrade will encourage the greater use of renewables, which will break down a barrier that might prevent low emissions technologies from being more widely used.

29. To summarise, Transpower's proposal is aligned with the government's strategic direction for its climate change policies, which includes (amongst other things) the need to act to address the risks for New Zealand, the need to reduce greenhouse gas emissions, and recognition of the crucial role of new and newly economic energy technologies.

Government Policy Statement on Electricity Governance

30. The Government Policy Statement (GPS) on Electricity Governance sets out the objectives and outcomes the government wants the Electricity Commission to give effect to. It is made pursuant to section 172ZK of the Electricity Act 1992.

31. The government's overall objective for the electricity industry is to ensure that electricity is produced and delivered to all classes of consumer in an efficient, fair, reliable and environmentally sustainable manner and to promote and facilitate the efficient use of electricity.

32. The government's transmission objectives in the GPS that are consistent with Transpower's proposal include:
    - That services are provided in a manner consistent with the government's policy objectives for electricity and in particular that grid reliability should be maintained at a level required by residential, commercial and industrial users and the government's economic development objectives;
    - That competition in generation and retail is facilitated and transmission constraints are minimised; and
    - That the national transmission grid should be planned and made available so as to facilitate the potential contribution of renewables to the electricity system and in a manner that is consistent with the government's climate change and renewables policies.

National guidance on transmission in development

33. The Minister for the Environment is currently developing national guidance on electricity transmission and has proposed a National Policy Statement (NPS) on transmission. The draft NPS has been considered by a Board of Inquiry and is being considered by the government.

34. An NPS on Electricity Transmission would set out objectives and policies for managing the national grid under the RMA. It would require local authorities to recognise the national benefits of electricity transmission and the need to protect the integrity of the network, while managing the local environmental effects of transmission.

35. While the NPS has not been finalised, its development signifies the importance of transmission and sustainable energy projects to the government.

Conclusions

36. In conclusion, the application by Transpower for resource consent to undertake the Upper North Island Grid Upgrade will make a positive contribution to the government's policies and objectives for the energy sector. In particular, it would:
    - Facilitate maximising the contribution of cost effective renewable energy resources, which would help to reduce greenhouse gas emissions
    - Ensure that energy services are provided at competitive prices because transmission lines are a low cost option
    - Most importantly, the proposal would improve New Zealand's security of electricity supply, particularly to the economically significant Auckland region.

37. In addition, the proposal is also consistent with the Government Policy Statement on Electricity Governance and the draft National Policy Statement on transmission.

38. The Ministry of Economic Development supports this proposal.