

**IN THE MATTER**

of the Resource Management Act 1991

**AND**

**IN THE MATTER**

of the Proposed National Policy Statement  
for Renewable Electricity Generation

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**MEMORANDUM ADDRESSING QUESTIONS TO GENESIS ENERGY RAISED  
DURING THE HEARING**

**(23 JULY 2009)**

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## MAY IT PLEASE THE BOARD:

### INTRODUCTION

1. This memorandum addresses questions which arose during questioning of Genesis Energy by the Board at the hearing of 3 July 2009.
2. We address the questions thematically as they relate to each section of the NPS.

### OBJECTIVE

#### Question (i)

*Should the 90% renewable target by 2025 be removed from the NPS?*

3. The 'renewable target' is included in both the Preamble and Objective in the Proposed Policy Statement for Renewable Electricity Generation.
4. As discussed below, Genesis Energy considers the renewable target should be removed from the Objective as follows:<sup>1</sup>

**“Objective**  
To recognise the national significance and importance of renewable electricity generation by promoting the development, upgrading, maintenance and operation of new and existing renewable electricity generation activities. ~~such that 90 per cent of New Zealand’s electricity will be generated from renewable sources by 2025 (based on delivered electricity in an average hydrological year).~~”
5. If the renewable target remains in the Objective, it has the real potential to inappropriately become the focus of individual resource consent application hearings, ie whether or not the individual application will serve or compromise the “target”. Moreover, consent authorities would be in an invidious position attempting to determine individual applications against a target which will be influenced by separate applications elsewhere around the country over which that authority has no jurisdiction.
6. This position is analogous to the policy behind the passage of the Resource Management (Energy and Climate Change)

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<sup>1</sup> The track change amendments are denoted as follows:

- In **blue** – as shown in Appendix 4 from the Genesis Energy submission of 3 July 2009.
- In **red** – as shown in this memorandum of 23 July 2009.

Amendment Act 2004 which legislated a national approach to managing the effects of climate change. This was confirmed by the Supreme Court as follows:<sup>2</sup>

"[40] In our view, s 104E (and s 70A) can be fairly construed in accordance with the language used by the legislature and in the context of a clear legislative policy of nationalising New Zealand's approach to the emission of GHGs."

7. In relation to the Preamble of the Proposed NPS, the renewable target is expressed in definitive terms:

"In considering the risks and opportunities associated with various electricity futures, **the government has determined** that 90 per cent of electricity generated in New Zealand should be derived from renewable energy sources by 2025 (based on delivered electricity in an average hydrological year)." [Emphasis added]

8. The extract reflects the position of the previous administration. While the new administration has not abandoned the target, it has emphasised the importance of ensuring security of the nation's supply of electricity:<sup>3</sup>

"Thermal generation, particularly from gas-fired generation, is the insurance card underpinning the security of our electricity system..."

Reducing carbon emissions in the electricity sector remains a goal, and renewable technology will be encouraged through the Emissions Trading Scheme..."

9. Accordingly, the reference to the renewable target in the Preamble should be amended to read:

"... The contribution of renewable electricity generation, regardless of scale, towards addressing the effects of climate change plays a vital role in the wellbeing of New Zealand, its people and the environment. In considering the risks and opportunities associated with various electricity futures, the government has determined that 90 per cent of electricity generated in New Zealand should be derived from renewable energy sources by 2025 (based on delivered electricity in an average hydrological year) **subject to ensuring security of supply**."

### Question (ii)

***What is Genesis Energy's view on New Zealand's demand growth and future installed capacity?***

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<sup>2</sup> *Genesis Power Limited v Greenpeace New Zealand Incorporated* [2007] NZCA 569

<sup>3</sup> Hon Gerry Brownlee, 16 December 2008.

10. Genesis Energy expects demand growth to fluctuate at least between 1.5% and 2% a year in the medium to long term.
11. On that basis, it is conceivable that New Zealand's total demand could reach 50,000 GWh by 2025; the actual installed capacity (MW) being a direct function of the capacity factor of the various technologies adopted.

### **Question (iii)**

*What is Genesis Energy's opinion of the NZWEA view that if geothermal is maximised, then wind alone would be enough to achieve the 90% renewable target?*

*Under this scenario, would extra hydro be necessary to firm the system?"*

12. Genesis Energy agrees that geothermal, wind and hydro will play a role in future electricity supply for NZ.
13. The actual proportion from these different electricity sources will depend on a range of factors that are relevant in identifying least-cost generation options. These factors will change over time and the NPS needs to promote new and existing renewable energy development within this dynamic environment, without promoting some types of renewable electricity generation over others.

## **POLICY 1 - BENEFITS OF RENEWABLE ELECTRICITY GENERATION**

### **Question (i)**

*How could s7(ba) of the RMA be reflected in Policy 1, eg recognising the co-benefits of electricity generation?*

14. Section 7(ba) of the RMA states:
  - “7. In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall have particular regard to—...
    - (ba) the efficiency of the end use of energy...”
15. As discussed below, Genesis Energy considers Policy 1 should be amended as follows:

**“Recognising the national significance and importance of the benefits of renewable electricity generation activities**

## Policy 1

The benefits of renewable electricity generation activities, at any scale, are of national significance and importance. Decision-makers shall recognise and provide for ~~must have particular regard to~~ the global, national, regional and local benefits relevant to renewable electricity activities. These benefits may include, but are not limited to:

- i. maintaining or increasing electricity generation capacity while avoiding, reducing or displacing greenhouse gas emissions;
- ii. maintaining or increasing security of electricity supply at local, regional and national levels by diversifying the type and/or location of electricity generation;

ii(a). extent to which the renewable electricity generation activity achieves co-benefits;

...”.

16. The extended wording to Policy 1 sought by Genesis Energy<sup>4</sup> already recognises that renewable electricity activities can achieve efficient outcomes, for example:

“iv. reducing transmission losses and dependence on the national grid through locating electricity generation close to electricity demand centres;”

17. Including a provision in Policy 1 which also recognises the co-benefits of renewable electricity generation is consistent with this approach. However, the policy should avoid express reference to achieving efficient outcomes as this would lead to a “best use” type analysis which the Courts have long eschewed under the RMA (and previous planning law).<sup>5</sup>

## Question (ii)

***Would the phrase “the relative degree...” in Genesis Energy’s proposed wording of policy 1(iii) give rise to comparative assessments as between different renewable energy proposals?***

18. Genesis Energy submitted that proposed Policy 3 as currently framed acts as a barrier for new and existing

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<sup>4</sup> See Appendix 4 of Genesis Energy submission of 3 July 2009.

<sup>5</sup> See, for example, *Hall v Rodney District Council* 1995 NZRMA 537, where the court stated:

“The Resource Management Act does not set out to direct affirmatively that land must be used in particular ways that are considered to be the best, or the most efficient, use of that resource. Rather, as section 5(2) implies, functionaries acting under the Act are to do so in such a way as enables people to provide for their economic welfare among other things, while attaining the goals described in paragraphs (a), (b) and (c), ...”.

renewable energy proposals and undermines the objective of the NPS, and therefore proposed that Policy 3 be deleted and the reversibility consideration be moved to Policy 1 (as proposed in its legal submissions of 3 July 2009).

19. The use of the word 'relative' by Genesis Energy in its proposed Policy 1(iii)<sup>6</sup> was intended<sup>7</sup> to recognise that the irreversible components of a renewable energy development can and do include features agreed by way of mitigation or have the effect of mitigating potential adverse effects. In other words, the net environmental effect of the "non-reversible" components of a renewable electricity activity are a relative consideration.
20. On reflection, Policy 1(iii) could be better expressed as follows:

**“iii. the relative-net degree of reversibility of adverse environmental effects associated with proposed generation technologies;”**

#### **Question (iii)**

*How could the NPS facilitate the connections from renewable generation activities to the local electricity network and / or national grid given those connections are not provided for by the NPS for transmission?*

21. Connection to the transmission network is an integral element of any generation activity.
22. While the NPS Electricity Transmission provides for the national grid, it does not currently provide for the connection of generation activities to the national grid. It is therefore appropriate for this NPS to provide policy direction to facilitate and enable connections from renewable generation activities to the national grid or local electricity networks.
23. This could be achieved by amending policy 4 of the NPS, as provided below.

#### **Question (iv)**

*Should the NPS mandate the NZS6808 – wind farm noise standard?*

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<sup>6</sup> Which states:

**“iii. the relative degree of reversibility of adverse environmental effects associated with proposed generation technologies;”**

<sup>7</sup> See paragraph 44 of genesis Energy submission of 3 July 2009.

24. Yes.
25. This is consistent with the approach taken by the Environment Court in the Awhitu wind farm case.

**POLICY 4 – ENABLING IDENTIFICATION OF RENEWABLE ELECTRICITY GENERATION POSSIBILITIES**

**Question (i)**

*Should a policy like policy 8 of the Transmission NPS be included in the Proposed Policy Statement for Renewable Electricity Generation?*

26. No.
27. The matters covered in policy 8 of the Transmission NPS are more appropriately addressed by Part 2 of the RMA in the context of this NPS. Moreover:
- (a) Policy 8 of the Transmission NPS takes a selective approach to matters covered by Part 2 of the RMA, for example avoiding (as opposed to avoiding, remedying or mitigating) adverse effects on outstanding natural landscapes.
  - (b) The development of renewable energy proposals is different to transmission in that in many cases renewable energy development can only occur in potentially sensitive areas.
  - (c) The inclusion of such a policy into this NPS will therefore have a disproportionate effect (given the scale of potential renewable electricity generation proposals likely to be affected by such provision) and would unduly undermine the objective of the NPS to promote renewable electricity generation.
  - (d) It is appropriate to leave the consideration of these matters to the Part 2 assessment.

**Question (ii)**

*Is the thrust of paragraph 75 of Genesis Energy's submission of 3 July 2009 covered by s55 of the RMA?*

28. Section 55 of the RMA does not fully address the issue raised in Genesis Energy's submission.

29. While section 55(2) requires local authority's to amend documents (such as regional or district plans) in order to give effect to a NPS, that does not address how Councils may interpret Policy 4 when they come to implement and give effect to it through policy statements or plans.
30. Genesis Energy considers the NPS should be amended to clarify the scope of Policy 4 as follows:

**Policy 4**

"By 13 March 2012, local authorities are to notify, in accordance with Schedule 1 of the Act, a plan change, proposed plan or variation to introduce objectives, policies and, where appropriate, methods, into policy statements and plans to enable activities which associated with:

- i. directly enable generators to identify and assess the identification and assessment by generators of potential sites and energy sources for renewable electricity generation
- ii. directly enable research-scale investigation into emerging renewable electricity generation technologies and methods.
- iii. facilitate the connection of renewable electricity generation activities to the national grid and / or local electricity distribution networks"

**Question (iii)**

*Could the proposals in paragraph 77 of Genesis Energy's submission of 3 July 2009 be implemented under s55(2A)(b) of the RMA immediately without the need to undertake a Schedule 1 process?*

31. Yes.
32. The activities proposed by Genesis Energy would be appropriately accommodated by the use of this RMA mechanism.<sup>8</sup>

**POLICY 5 – SUPPORTING SMALL SCALE RENEWABLE ELECTRICITY GENERATION**

**Question (i)**

*Is the current 4MW threshold in the definition of the "small and community scale distributed renewable electricity generation" at the right level?*

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<sup>8</sup> See paragraph 77 of Genesis Energy submission of 3 July 2009.

33. Genesis Energy considers the current threshold is at the right level.

### **SECTION 30(1)(fa) WATER ALLOCATION**

#### **Question (i)**

*Could the Renewable Electricity Generation NPS help achieve / address issues with the allocation of water?*

34. Yes.
35. It is appropriate under the auspices of Part 2 of the RMA and section 30(1)(fa) for the NPS to actively encourage regional councils to implement rules to allocate water for electricity generation.

### **GENESIS ENERGY RETAIL BASE**

#### **Question (i)**

*What is Genesis Energy's retail base and does it match its retail business with its current and future generation?*

36. As at 30 June 2009, Genesis Energy has 567,649 electricity customers and 114,018 gas customers (including wholly owned subsidiary Energy Online).
37. Like all 'gentailers', Genesis Energy balances its generation output against its customer base and spot market price and that balance changes over time depending on market conditions, generation portfolio and associated business strategy.

### **FURTHER DOCUMENTS TO BE PROVIDED**

38. As requested by the Board, Genesis Energy provides the following documents:
- (a) Electronic copy of Genesis Energy's submission.
  - (b) Electronic copy of Genesis Energy submission on Proposed NPS for Freshwater Management.
  - (c) Electronic copy of Genesis Energy submission on the Proposed NZCPS.
  - (d) Genesis Energy's submission on the Horizons one Plan.

- (e) The 13 page agreed statement of facts for the Awhitu wind farm case.
- (f) Awhitu Environment Court decision extract (analysis of s6(b)).
- (g) Copy of NZS wind farm noise standard - Genesis Energy submission.
- (h) Updated Appendix 4.



**Paul F Majurey**

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(23 July 2009)

## UPDATED APPENDIX 4

### NPS PROVISIONS SOUGHT BY GENESIS ENERGY

#### Proposed National Policy Statement for Renewable Electricity Generation

##### Preamble

This national policy statement sets out an objective and policies to enable the sustainable management of renewable electricity generation under the Resource Management Act 1991 ('the Act').

New Zealand's energy demand has been growing steadily and is forecast to continue to grow. In October 2007 the government adopted the New Zealand Energy Strategy, which states that New Zealand must confront two major energy challenges as it meets growing energy demand. The first is to respond to the risks of climate change by reducing greenhouse gas emissions caused by the production and use of energy. The second is to deliver clean, secure, affordable energy while treating the environment responsibly.

The contribution of renewable electricity generation, regardless of scale, towards addressing the effects of climate change plays a vital role in the wellbeing of New Zealand, its people and the environment. In considering the risks and opportunities associated with various electricity futures, the government has determined that 90 per cent of electricity generated in New Zealand should be derived from renewable energy sources by 2025 (based on delivered electricity in an average hydrological year) [subject to ensuring security of supply](#).

Development that increases renewable electricity generation capacity can, however, have environmental effects that span local, regional and national scales, often with adverse effects manifesting locally and positive effects manifesting nationally. In some instances the benefits of renewable electricity generation can compete with matters of national importance as set out in section 6 of the Act, and with matters to which decision-makers are required to have particular regard under section 7 of the Act. In particular, the natural resources from which electricity is generated can coincide with areas of significant natural character, significant amenity values, historic heritage, outstanding natural features and landscapes, significant indigenous vegetation and significant habitats of indigenous fauna. Adopting a nationally consistent approach to balancing the competing values associated with the development of New Zealand's renewable energy resources will provide greater certainty to decision-makers, applicants, and the wider community.

##### Title

This national policy statement may be cited as the National Policy Statement for Renewable Electricity Generation.

##### Commencement

This national policy statement comes into force on the day after which it is notified in the Gazette.

### **Matter of national significance**

The matter of national significance and importance to which this national policy statement applies, and in respect of which decision-makers shall recognise and provide for, is the need to develop, upgrade, maintain and operate renewable electricity generation activities throughout New Zealand.”

### **Objective**

To recognise the national significance and importance of renewable electricity generation by promoting the development, upgrading, maintenance and operation of new and existing renewable electricity generation activities, ~~such that 90 per cent of New Zealand’s electricity will be generated from renewable sources by 2025 (based on delivered electricity in an average hydrological year).~~

### **Recognising the national significance and importance of the benefits of renewable electricity generation activities**

#### **Policy 1**

The benefits of renewable electricity generation activities, at any scale, are of national significance and importance. Decision-makers shall recognise and provide for ~~must have particular regard to~~ the global, national, regional and local benefits relevant to renewable electricity activities. These benefits may include, but are not limited to:

- i. maintaining or increasing electricity generation capacity while avoiding, reducing or displacing greenhouse gas emissions;
- ii. maintaining or increasing security of electricity supply at local, regional and national levels by diversifying the type and/or location of electricity generation;
- ~~ii(a). extent to which the renewable electricity generation activity achieves co-benefits;~~
- iii. the relative net degree of reversibility of adverse environmental effects associated with proposed generation technologies;
- iv. reducing transmission losses and dependence on the national grid through locating electricity generation close to electricity demand centres;
- v. reliability of generation including insulation from major external production cost variability;
- vi. development benefits in the form of industry development, including research, manufacturing, installation and distribution, and maintenance of facilities;
- vii. the extent to which the renewable electricity generation activity does not utilise finite resources;
- viii. the extent to which the renewable electricity generation activity involves minimal displacement of other productive uses of land; and
- ix. the extent to which the renewable electricity generation activity uses an energy resource without affecting that resource in any meaningful way.

### **Acknowledging the practical constraints associated with the development, upgrading, maintenance and operation of new and existing renewable electricity generation activities**

#### **Policy 2**

When considering measures to avoid, remedy or mitigate the adverse environmental effects of renewable electricity generation activities, consent authorities must have particular regard to the constraints imposed on achieving those measures by:

- i. the nature and location of the renewable energy source

- ii. logistical or technical practicalities associated with developing, operating or maintaining the proposed renewable electricity generation activity
- iii. the nature and location of existing renewable electricity generation activities
- iv. the location of existing structures and infrastructure including, but not limited to, roads, navigation and telecommunication structures and facilities, the local electricity distribution network, and the national grid.

**Having regard to the relative reversibility of adverse effects associated with particular generation types**

**Policy 3**

~~When considering proposals to develop new renewable electricity generation activities, decision-makers must have particular regard to the relative degree of reversibility of the adverse environmental effects associated with proposed generation technologies.~~

**Enabling identification of renewable electricity generation possibilities**

**Policy 43**

By 13 March 2012, local authorities are to notify, in accordance with Schedule 1 of the Act, a plan change, proposed plan or variation to introduce objectives, policies and, where appropriate, methods, into policy statements and plans to enable activities ~~which associated with:~~

- i. ~~directly enable generators to identify and assess the identification and assessment by generators of~~ potential sites and energy sources for renewable electricity generation
- ii. ~~directly enable~~ research-scale investigation into emerging renewable electricity generation technologies and methods
- iii. ~~facilitate the connection of renewable electricity generation activities to the national grid and / or local electricity distribution networks.~~

**Supporting small and community-scale renewable electricity generation**

**Policy 54**

By 13 March 2012, local authorities are to notify, in accordance with Schedule 1 of the Act, a plan change, proposed plan or variation to introduce objectives, policies and, where appropriate, methods, into policy statements and plans to enable activities associated with the development and operation of small and community-scale distributed renewable electricity generation.

**Identifying benefits of renewable electricity generation in policy statement and plans**

**Policy 5**

In accordance with section 55(2A)(b) of the Act, and within two years of approval of this national policy statement, local authorities are to process under clause 16 of Schedule 1 of the Act a plan change or review to introduce objectives, policies and assessment criteria identifying the benefits listed in policy 1 of this national policy statement.

**Protecting renewable electricity generation activities from reverse sensitivity effects**

**Policy 6**

Decision-makers must manage new third party activities to ensure that the reasonable operation and maintenance needs of consented and existing renewable electricity generation activities are not compromised.

## Giving effect to the national policy statement despite any other national policy statement

### Policy 7

In decisions involving renewable sources of energy, decision-makers must give effect to the provisions of this national policy statement, despite the provisions of any other national policy statement.

### **Interpretation**

In this national policy statement, unless the context otherwise requires:

“**Act**” means the Resource Management Act 1991.

“**Application**” means any application for resource consent or consents or application under section 127 of the Act. Applicant has the corresponding meaning.

“**Decision-makers**” means all persons exercising functions and powers under the Act.

“**Local electricity distribution network**” means the system of electricity conveyance that connects individual electricity users with the national grid and electricity generation facilities. “**National grid**” means the assets used or owned by Transpower NZ Limited.

“**Renewable electricity generation**” means generation of electricity from solar, wind, hydro, geothermal, biomass, tidal, wave, or ocean currents resources.

“**Renewable electricity generation activities**” means the construction, operation and maintenance of structures associated with the generation of renewable electricity. This includes small and community-scale distributed renewable generation activities and the system of electricity conveyance required to convey electricity to the local electricity distribution network and/or the national grid.

“**Small and community-scale distributed renewable electricity generation**” means renewable electricity generation projects with an installed electricity generation capacity of less than four megawatts and excludes offshore wind, tidal and wave generation.

### **Explanatory note**

*This note is not part of the national policy statement but is intended to indicate its general effect.*

This national policy statement comes into force on the day after which it is notified in the Gazette. It provides that renewable electricity generation is a matter of national significance under the Resource Management Act 1991.

This national policy statement is to be applied by all persons exercising powers and functions under the Act. The objective and policies are intended to guide applicants and decision-makers when making applications for resource consent, in making decisions on the notification and determination of resource consent applications, in drafting policy statements and plans that relate to renewable electricity generation activities, and when exercising other powers under the Act.

The national policy statement requires local authorities to give effect to its provisions in plans made under the Resource Management Act 1991 by initiating a plan change, proposed plan or variation by 13 March 2012.