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National Office
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31 October 2008

Submission on proposal for national policy statement for renewable electricity generation

In accordance with section 49 of the Resource Management Act 1991

To the Chairperson
Board of Inquiry

This is a submission on the (following) proposed national policy statement for renewable electricity generation (the proposal) that was publicly notified on 6 September 2008.

(a) The specific provisions of the proposal that our submission relates to are:

(i) The Objective;
(ii) The Interpretation section: definitions of "renewable electricity generation" and "renewable electricity generation activities," and those sections of the document where those terms appear;
(iii) Policy 3.

(b) Our submission is:

(i) The proposed Objective is poorly specified. First, rather than attempt to promote particular industries, a function which is not specified in RMA sec 30, the Objective should focus on the underlying environmental purpose of avoiding greenhouse gas emissions. Second, the proposed Objective should take a holistic view of the greenhouse gas footprint of activities, including embodied carbon, methane emissions from impoundments, efficiency losses from transmission from remote locations, etc. Third, the proposed Objective is not consistent with the overall purpose of the RMA in that, unlike the Objective of the NPS on Electricity Transmission, it makes no explicit provision for weighing adverse effects and further, simply classifies certain activities as "renewable" by the use of a misleading definition of "renewable electricity generation," even though the activities so defined may have large adverse effects on resources and values which cannot simply be "renewed." Fourth, the proposed Objective fails to adopt a policy distinction between existing and new generation activities which is necessary to acknowledge the reality of community views: these generally do not favour dismantling regarding hydro-electric facilities but are frequently opposed to the construction of new ones because of the high environmental impacts of such facilities. Fifth, the

wider objective of 90 percent of New Zealand's electricity being generated from renewable sources by 2025 should be acknowledged in a broader context rather than presented as though it depended on building generating facilities alone. In reality, the 90 percent objective requires a number of other actions to be taken. These include curbing the building of fossil fuelled generation facilities, which are curiously not covered in this policy statement, and the improvement of energy efficiency; and it is important to take into account that the building of so-called renewable generation facilities at locations remote from centres of electricity demand is likely to detract from the overall efficiency of the electricity system.

(ii) The "renewable" definitions referred to above are misleading and artificial, and should be deleted from the Interpretation section, and where used elsewhere in the document, replaced by more appropriate language.

(iii) Policy 3 should be upheld, and if possible made more specific and given more weight. We attach as an Appendix to this submission, our earlier submission on this topic dated 9 November 2007. This sets out information on the potentially high risks which the National Policy Statement may pose to many of New Zealand's remaining natural rivers, and the importance of introducing a concept of reversibility, which is integral to the notion of sustainable management of resources. We are pleased that the proposed NPS has taken up the concept of reversibility promoted in our submission. In broad terms we envisage that the desired effect of Policy 3 should be to encourage windfarms (subject to the identification of outstanding natural features and landscapes which should be protected pursuant to RMA sec 6(b)) and also the diversion of water from existing lakes and riverbeds through pipe or canal structures (subject to the maintenance of environmental flow regimes and the protection of the natural character of the margins of water bodies) but would exclude new impoundments of major water bodies.

(c) We seek the following changes to the proposal:

(i) The proposed Objective should be restated as follows:

To recognise the national significance of avoiding greenhouse gas emissions associated with electricity generation, by:

i. facilitating the upgrading, maintenance and operation of those existing electricity generating activities which are free of operational greenhouse gas emissions;

ii. facilitating the development, upgrading, maintenance and operation of new electricity generation facilities which do not emit greenhouse gases in the course of their operation and have a low carbon footprint for their construction and maintenance;

while minimising the adverse environmental effects associated with moving the electricity generation and transmission system on to a basis that is 90 percent renewable by 2025 (based on delivered electricity in an average hydrological year).

(ii) Amend Policy 3 as follows:

When considering proposals to develop new electricity generation activities of the type covered by this National Policy Statement, to avoid those which have large adverse effects which cannot be reversed, or which can only be reversed at high cost and/or over long periods of time.

(iii) Delete definitions of "renewable electricity generation" and "renewable electricity generation activities."

(d) I wish to be heard in support of my submission.

Guy Salmon
Executive Director
Ecologic Foundation Inc
31 October 2008

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APPENDIX: COPY OF SUBMISSION ON PREPARATION OF PROPOSED NATIONAL POLICY STATEMENT

9 November 2007

Sue Powell
General Manager
Local Government Group
Ministry for the Environment
PO Box 10 362
WELLINGTON

Dear Sue

National Guidance on Renewable Energy- National Policy Statement

Thanks for your letter of 11October inviting our comments on what should be included in this proposed NPS. We are quite concerned that the NPS could have some adverse consequences for the environment, especially for rivers. We would be grateful if you consider the following ideas and comments. I would stress these ideas are very preliminary; time has not allowed us to consider them in depth or discuss them widely. However we intend to do some further work on these issues this summer and would welcome the opportunity for dialogue with your team as its work on the NPS proceeds.

1. Basis of our concern regarding threat to rivers

The 2006 Ministry of Economic Development publication *New Zealand's Energy Outlook to 2030* refers to 1790 MW of hydro projects that could be built by 2015 with "high or medium confidence." This estimate is based on work by consultants East Harbour Management Services (EHMS), whose report *Availabilities and Costs of Renewable Sources of Energy for Generating Electricity and Heat: 2005 Edition* indicates that the estimate corresponds to 8870 GWh/year.

To provide some context for comparison, Trustpower's highly controversial proposed scheme on Marlborough's Wairau River, which would divert up to 40 cumecs of water into 46 km of canals and five power stations, would produce in total 415 GWh/year. Thus, the amount of hydroelectricity identified by the MED for early development is equivalent to building 21 Wairau-sized schemes.

Electricity demand has been growing over the last five years, 2002-2006, by 848 GWh/year. That means that sacrificing a Wairau-sized river to development could only meet the nation's electricity demand growth for less than six months. After that, the power companies would move on to the next river to dam or divert.

The total electricity potential from sacrificing these rivers is modest. To illustrate, if all demand growth at the current rate were met from hydro sources, the MED's 8870 GWh of potential hydro developments could only 'feed the monster' for ten years. So the current push into hydro development is clearly not a long term solution to New Zealand's growing energy needs.

New Zealand will either have to change to new sources of energy in the very near future, when there are many fine rivers still left, or we will change over later on, when many of those rivers have been lost. Some other countries have simply said "no more rivers development," and moved their search for energy elsewhere. Ecologic believes this is a collective value judgment which New Zealand should now consider.

2. Potential impact of the proposed NPS on rivers

The EHMS 2005 report cited above makes clear that the estimates of "medium confidence" hydroelectric resources are differentiated from those of "high confidence" primarily on the basis that developing the former would require "a more liberal consenting environment."

The apparent purpose of the proposed NPS is to increase the weight given in decision-making to the national benefits of renewable energy, including environmental benefits, relative to the environmental attributes of locally-affected sites. It would appear that such an NPS would provide the "more liberal consenting environment" required to push "medium confidence" hydroelectric development into the "high confidence" category. Table 1 in the EHMS 2004 report *Waters of National Importance: Identification of Potential Hydroelectric Resources* shows that this could materially assist the development of 65 hydro-electric projects, the overwhelming majority of them at sites which we would regard as highly controversial.

In addition, there is a risk that such an NPS would materially assist the movement of projects from the "low confidence" category into higher categories, which would more than double the amount of hydro-electric resources estimated to be available for development by 2015 (EHMS 2005 Table 2).

From this analysis it is clear that the nature of the RMA consenting environment will play a crucial role in protecting or destroying New Zealand's remaining undeveloped rivers. The signal sent by the NPS as to the acceptability of further hydroelectric development therefore requires the most careful consideration at the political level.

3. Use of concept of renewability in the proposed NPS

As your letter points out, renewable energy has been defined in the RMA to include hydroelectricity. This does not, however, mean that hydroelectric development *per se* contributes positively to sustainable development. This depends on the extent to which the concept of renewability is applied not just to the energy yield of a lake or river, but to the other resources and values that are affected by hydroelectric development. The NPS provides an opportunity to clarify that the renewability of these other resources and values is an important matter in relation to the Government's objectives and policies.

The context for any policy on renewable energy development is that many of the so-called renewable resources currently being considered in New Zealand (including hydroelectricity and windpower) are essentially stop-gap technologies required for a transitional period before solar photovoltaics (PV) become economically available on a large scale. As PV technology offers large amounts of energy without major irreversible environmental impacts, it is important that New Zealand does not sacrifice its important natural resources on a near-irreversible basis during this transition period.

The NPS needs to be firmly grounded in section 5 of the RMA. Two aspects of this are important in relation to hydroelectricity. First, as regards enabling people and communities to meet their economic needs for electricity, a key point is that electricity is a homogeneous commodity which can be produced in a great variety of sites and processes. This is true even in respect of those electricity generation methods which do not create net additions to the atmospheric carbon load. Consents have been forthcoming in most cases applied for; there is no apparent shortage of economically viable and consentable opportunities to generate electricity; and there is no compelling need for economic considerations to over-ride environmental ones in this policy area.

Second, as regards section 5's requirements to safeguard the needs of future generations and the life-supporting capacity of water and ecosystems, there is a clear need to avoid irreversible impacts. We propose that the concept of the *reversibility of the impacts of the development* could provide a useful elaboration for testing whether a renewable energy development meets the requirements of section 5. Reversibility provides options for future generations.

The Government could, for example, specify in the proposed NPS that its objective is to ensure that the natural resources (excluding minerals) affected by any renewable energy development are to be returned to a state approximating their original state by the end of the term of the consent (maximum 35 years). A policy in the NPS could further require the lodging of a bond for removing structures and restoring affected resources, as a condition of consent for such developments.

Hydroelectric impoundments have essentially irreversible impacts on lakes and rivers, causing loss of fish passage, natural vegetation and wildlife habitats, and scenic/amenity values. The costs of removing dam structures and canal works, if imposed as a bonded requirement on developers, would assist in clarifying that such projects may not be reversible in practical terms, and are therefore not sustainable. Works and impacts associated with wind power and geothermal energy developments are, in contrast, more readily reversible, and the removal of such structures at the end of their economic lives is already an accepted responsibility of developers.

4. Specific statements on rivers protection

As noted above, electricity is a homogeneous commodity which can be produced in a great variety of sites and processes. Given this flexibility of supply, which may be less applicable for (say) provision of urban water supplies or irrigated food products, and given the value placed by New Zealanders on retaining their remaining rivers through the transition to solar energy, we consider that the Government should indicate in broad terms a policy that it does not wish to see new dams for the purposes of electricity supply built on New Zealand's remaining unmodified lakes and rivers.

In the case of proposed new diversions of rivers into pipe or canal structures, the Government's policy should focus on assurance of reversibility (as discussed above) and on a requirement that such developments should only proceed where there is a substantial and widely agreed net conservation gain from the development. Ideally the existence of the latter would be established, if at all, through a collaborative governance process.

5. Requirement for emission reduction benefits to be genuine

It is easy for developers (or for naïve national policy statements) to make the claim that because something is renewable, it creates environmental benefits at the national level. However, if such findings are to be supported in the consent process, there should be clear evidential rules for accepting the existence of such benefits. For

example, there should be unequivocal evidence of attributable emission reduction benefits elsewhere in the electricity system.

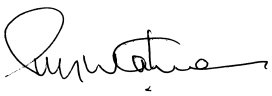
The claim that extra weight should be given to the environmental benefits of a renewable power station cannot be upheld in cases where, in practice, one renewable project is simply competing with another renewable project at the margin. Given the Government's stated policy of banning new thermal power plants, this means that any renewable power project claiming emission reduction benefits under the RMA would need to show a contractual linkage to emission reductions from thermal plant closures, or from emission reduction investments which meet an additionality test. We propose that policies to this effect should be spelt out in the proposed NPS.

6. General

As an overall guide, we suggest that the drafters of the proposed NPS should see their task not as *promoting* renewable energy but as *clarifying and providing greater certainty* as to the policy framework and consenting environment for renewable energy projects. This might involve, for example, requiring districts in high-wind resource parts of the country to define in their planning documents zones where windmills will not be permitted for reasons of landscape values and similar RMA sec 6 reasons.

In addition, we foresee that the NPS might usefully provide some requirements for district plan policies which ensure that future subdivisions and buildings are aligned in a way that provides for achieving optimum benefits from passive solar design.

Yours sincerely



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