



**Consultation paper  
for the  
ELECTRICITY COMMISSION**

**Proposed appropriation change:  
Reserve Energy and Emergency Measures**

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#### Abbreviations used in this document

Act	Electricity Act 1992
Commission	Electricity Commission
GPS	<i>Government Policy Statement on Electricity Governance, May 2008</i>
Minister	Minister of Energy
SOI	<i>Statement of Intent 2008-2011</i>

## **Proposed appropriation change:**

### **Reserve energy and emergency measures**

#### Purpose

1. This consultation is taking place in accordance with section 172ZCA(1) of the Electricity Act 1992 (the Act).
2. The Commission has responsibilities under the Electricity Act 1992 (the Act) and *Government Policy Statement on Electricity Governance* (GPS) to monitor security of supply, and take action if needed.
3. The Electricity Commission (Commission) is seeking input on a proposed change to the **Reserve Energy and Emergency Measures—Variable** appropriation. The proposed change would provide funding to enable the Commission to implement measures to assist in ensuring security of supply.

#### Legislative background

4. Section 172N(1)(a) of the Act provides the Commission with the principal objective:

“to ensure that electricity is produced and delivered to all classes of consumers in an efficient, fair, reliable and environmentally sustainable manner”.
5. Section 172N(2) of the Act sets out the specific outcomes for the Commission, including:

“(b) risks (including price risks) relating to security of supply are properly and efficiently managed.”
6. Section 172O of the Act sets out the functions of the Commission, which include to:

“(d) use reasonable endeavours to ensure security of supply (including contracting reserve energy,), without assuming any reduction in demand from emergency conservation campaigns, while minimising distortions to the normal operation of the market:

...

(g) manage emergency conservation campaigns to avoid material risk of supply shortages:

...

(j) give effect to GPS objectives and outcomes:”

7. The Act provides for Commission functions to be funded by way of a levy on electricity industry participants. Section 172ZCA(1) of the Act also requires that the Commission consult affected levy payers on any proposed changes to its appropriation funding.
8. The Minister of Energy (the Minister) provided the Commission with a new GPS in May 2008. Paragraphs 51 to 78 of the GPS set out the Government's policy in relation to security of supply<sup>1</sup>. The provisions of the GPS that are particularly relevant to this proposal are:
  - “67. If the New Zealand or South Island mean year energy margin is unlikely to be met by market participants, the Commission should contract for, but not own, reserve energy (generation and contracted demand response) to maintain the desired energy margin. This is to be the Commission's primary means of meeting its security of supply objective.
  - ...
  70. Contracted demand response should form part of the Commission's portfolio of reserve energy, provided this is practicable and the Commission is confident that the reduction in demand is additional to normal demand-side responses to higher prices.”
9. The GPS also sets the security standard. Historically, the GPS has required the Commission to use reasonable endeavours to ensure a “1 in 60 dry year” security standard. The Commission's current security of supply policy reflects this standard. The 2008 GPS requires security to be assessed against a “winter energy margin”, with a requirement for the Commission to use reasonable endeavours to ensure a 17 percent margin for New Zealand and a 30 percent margin for the South Island. The GPS indicates that the revised standard “will provide a level of security similar to the 1 in 60 standard, but provides a measure that is clearer and easier to understand”.

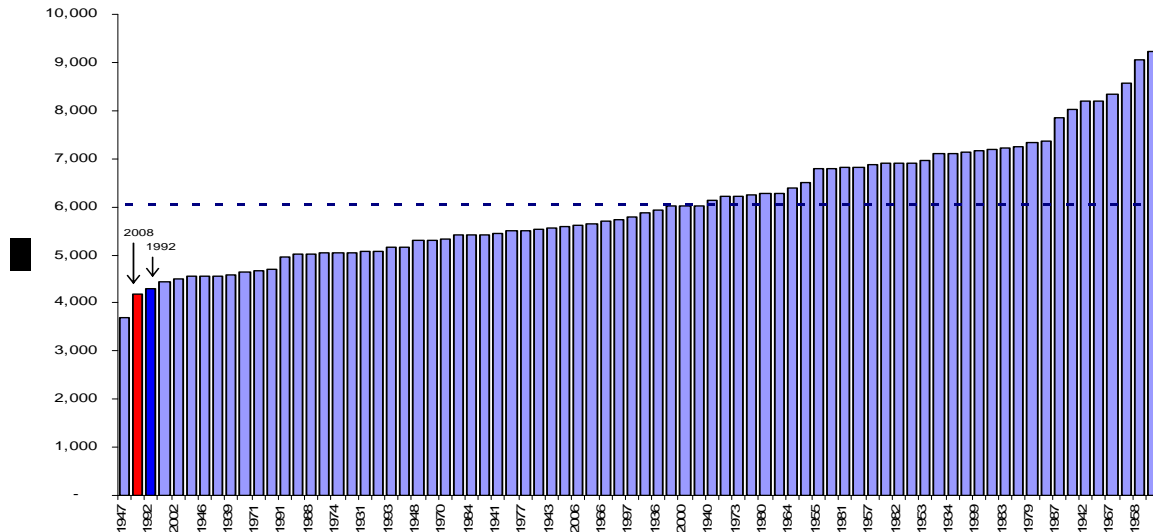
### Security of supply status

10. The prolonged drought in hydro generation catchments is putting substantial strain on the electricity system.
11. As shown in figure 1, national hydro inflows for the three months to 9 June 2008 were the second lowest since records began in 1931—and were worse than the extreme drought experienced in 1992.

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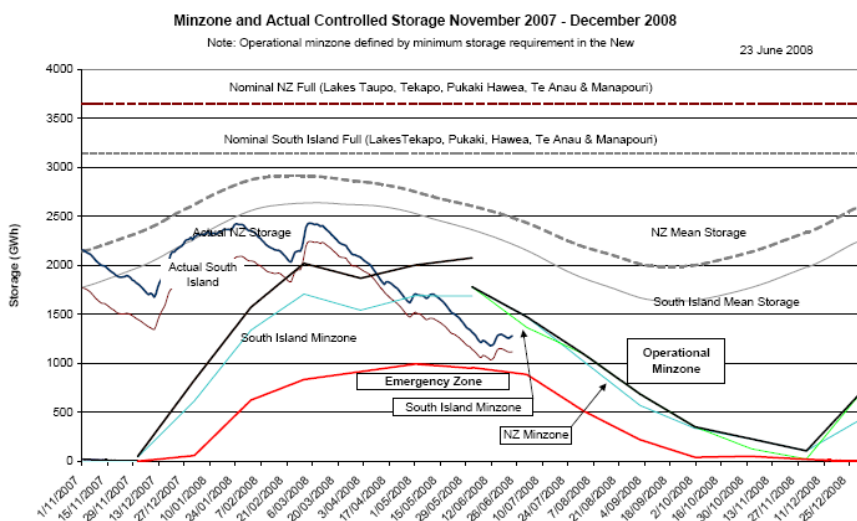
<sup>1</sup> The GPS is available at: [http://www.med.govt.nz/templates/MultipageDocumentTOC\\_35669.aspx](http://www.med.govt.nz/templates/MultipageDocumentTOC_35669.aspx) (accessed 24 June 2008).

**Figure 1: National hydro inflows – three months to 9 June**



12. Hydro storage levels have declined through most of the period since March 2008, and passed through the Commission’s Minzone<sup>2</sup> in April 2008, see figure 2. Aside from a brief period in May, and in mid-June hydro storage has been on a steady decline. If storage reaches the ‘Emergency Zone’, the Commission estimates there would be a 10 percent chance that involuntary cuts would be required later in the winter, unless additional measures are taken.
13. The Commission therefore considers it prudent to ensure it is able to fund additional fuel for Whirinaki and prepare for additional measures in case they are needed.

**Figure 2: Hydro storage**



The Minzone graph is updated regularly and available on the Commission’s website at: <http://www.electricitycommission.govt.nz/opdev/secsupply/sos/status/minzone>

<sup>2</sup> If storage is at the Minzone, it means that from that point there is at least one historical annual inflow sequence out of those on record which, if repeated, could result in all hydro storage being used, given particular assumptions about demand and thermal generation.

## Reserve Energy scheme

14. If the desired level of security is unlikely to be met by market participants, the Commission can contract to procure Reserve Energy. This can be in the form of additional generation or contracted demand response. The 155MW distillate-fired plant at Whirinaki owned by the Crown is currently contracted as Reserve Energy.
15. In October 2007, as part of its regular monitoring, the Commission considered the potential need for additional Reserve Energy resources. Based on information available at that time, the Commission concluded that there was no requirement to procure additional resources. However, it also noted that it would continue to monitor industry trends, and reassess the situation if circumstances changed in a material way.
16. The Commission has closely monitored the significant deterioration in hydro storage over recent months. It has also noted the actions that have already occurred in response to this deterioration. These include:
  - increased running of thermal plant, to the point where it appears that such plant is making the maximum possible contribution to supply;
  - reduced demand by some large grid-connected industrial users. For the six largest users, these equate to a reduction in daily usage of around 10 percent, relative to the same period in 2007;
  - actions by Transpower to alleviate transmission or other system constraints, and maximise the contribution from non-hydro generation;
  - actions by parties to offer more interruptible load in the South Island, to reduce draw-off from hydro storage;
  - reinstatement of a generation unit at New Plymouth that had previously been decommissioned;
  - accelerating the commissioning of a new geothermal plant at Kawerau;
  - provision of information and advice to the media and public, including setting up the powersavers website;<sup>3</sup> and
  - launch of a broad-based savings campaign funded by electricity suppliers.
17. While these actions are expected to make a major contribution to conserving hydro storage over the balance of winter, the Commission remains concerned about the outlook given the uncertainties about future hydro inflows.

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<sup>3</sup> Available at <http://www.powersavers.co.nz/> (accessed 16 June 2008).

18. For this reason, the Commission is now considering whether to contract for additional Reserve Energy resources. Such resources could take the form of additional generation supply, or firm demand response.
19. In both cases, the Commission will only contract if it can obtain a high level of assurance that the resources will be additional to those already available through the operation of the electricity market—i.e. contracting is expected to reduce pressure on hydro storage, relative to not contracting such resources.
20. To facilitate the consideration of the additional Reserve Energy options, the Commission has released a request for proposals (RFP). The RFP document is available at <http://www.electricitycommission.govt.nz/opdev/secsupply/winter08/index.html> Evaluation of the proposals will assist the Commission with determining the size of the appropriation to recommend to the Minister.
21. The Commission intends to make decisions on whether and how to contract for additional Reserve Energy, and the level of appropriation change to recommend to the Minister, in the light of:
  - trends in the supply outlook—especially the level of hydro inflows and any further changes to plant availability and grid configuration;
  - trends in the demand outlook—including the level of savings by major users and response to the broad-based industry campaign;
  - responses to the RFP; and
  - responses to this consultation paper.

#### Need for increased appropriation

22. The cost of planning and tendering processes for additional Reserve Energy can be met from within the Commission's current appropriations.
23. Additional costs have been incurred by the Commission to the end of this fiscal year (30 June 2008) due to the offer strategy for Whirinaki being held to below the cost of fuel on May 30<sup>th</sup>. These costs have been funded from profits made earlier in the financial year from Whirinaki electricity sales and the \$6 million Reserve Energy and Emergency Measures—Variable multi year appropriation.
24. This consultation is for the additional funding that is required from early in the 2008/09 year to cover the ongoing shortfall in funds for the running of Whirinaki to the current offer strategy plus for any reserve energy contracts and publicity campaigns as required.

### Additional Reserve Energy

25. The Commission would require an appropriation increase to cover the cost of additional Reserve Energy resources, if they are procured through the RFP process outlined above.

### Fuel for Whirinaki

26. The Commission is also concerned to ensure that Reserve Energy resources (including the Whirinaki plant) can be utilised to conserve hydro storage if required. In the normal course, this could be expected to occur through the operation of the wholesale electricity market, with discretionary generation from hydro storage being offered at a higher price than Reserve Energy. However, the Commission is concerned that this may not occur, especially given the recent sharp increases in oil prices. For this reason, the appropriation increase being sought provides the Commission with flexibility in its offer price for Reserve Energy.
27. On 30 May 2008, the Commission maintained the offer of Whirinaki into the market at \$289 MWh rather than increasing it in line with the cost of fuel at that time. The cost estimates for fuel shown in Table 1 below are on the basis of maintaining that offer strategy through this winter period to ensure there is a stable offer into the market. The range comes from different scenarios on how many hours per day Whirinaki may be required to run and also includes estimates for ongoing increases to the cost of fuel over the coming months through to the end of September 2008.

### Public conservation campaign

28. Lastly, the Commission also wants to be able to initiate a conservation campaign (as distinct from the industry campaign currently running) at short notice if this is required later in winter. The proposed appropriation includes a provision to cover the costs of campaign preparation and operation.
29. The Commission proposes to fund the potential 2008/09 costs through an increase in the **Reserve Energy and Emergency Measures—Variable** appropriation within an estimated range of \$55–165 million. The indicative components and costs of this proposed appropriation change are set out in table 1. The amount sought will be determined based on the information received from the tender process as outlined in paragraph 20 and ongoing analysis of the security of supply situation.

**Table 1: Components of the proposed appropriation change**

Component	Estimated range (\$million)
Fuel for Whirinaki	55–110
Reserve energy resources—demand response purchase	0–50
Conservation campaign	0–5

30. It should be noted that the appropriation level is the maximum expenditure the Commission can commit to over the life of the appropriation (1 July 2007 to 30 June 2012). The appropriation must allow for the 'worst case' scenario for this winter, but is not expected to be fully spent unless this scenario comes to pass.

## Levy

31. The Crown is reimbursed for the cost of the Commission by way of a levy on the electricity industry. The levy is collected by the Commission on behalf of the Crown. The Electricity (Levy of Industry Participants) Regulations 2005 provide that the proposed appropriation change would be levied on participants who purchase directly from the Clearing Manager. The amount paid by an individual company will depend on the volume of activity for that company, total volume of activity, and the Commission's expenditure.
32. If approved, these costs will be included in the annual levy rates to be published by the Commission shortly, and recovered monthly throughout the 2008/09 year.
33. As soon as practical during the 2008/09 financial year, the levy rates will be revised to reflect the actual costs incurred. In addition, the annual levy reconciliation process, carried out after the end of the financial year, ensures that only actual costs are levied.

## Making a submission

34. The Commission invites submissions on the appropriations proposal in this paper by **12 noon on 2 July 2008**.
35. The Commission prefers to receive submissions by email (preferably in Microsoft Word) with "**appropriation proposal for reserve energy**" in the subject header. Please email to [info@electricitycommission.govt.nz](mailto:info@electricitycommission.govt.nz). No hard copy of the submission is required if your submission is emailed.
36. If you are providing a hard copy submission, it must be postmarked by the deadline. Please post one copy to:  

Maree McGregor  
Electricity Commission  
P O Box 10041  
**WELLINGTON**
37. Unless otherwise requested, your submission will be made publicly available on the Commission's website. Submitters should indicate any documents attached in support of the submission in a covering letter, and clearly indicate any information that is provided to the Commission on a confidential basis. All information provided to the Commission is subject to the Official Information Act 1982.

## Next steps

38. Responses received from this consultation will be used by the Commission to prepare a report to the Minister on any resulting proposed changes to appropriations. This will be submitted to the Minister in accordance with section 172ZCA(2) of the Act.
39. The Commission's will publicise the results of the consultation and report to the Minister as soon as is practicable.
40. The Commission will give consideration on whether to amend its *2008–2011 Statement of Intent* (SOI) in accordance with section 148 of the Crown Entities Act 2004 once a decision has been made on the final appropriation proposal.
41. The Commission will publish information on its website about its planning for reserve energy actions, and any implementation, on an ongoing basis. The website can be accessed at: [www.electricitycommission.govt.nz](http://www.electricitycommission.govt.nz)