



Consultation Paper

for

ELECTRICITY COMMISSION

**Proposed Rule Change to Embedded Generator
Reserve Gate Closure Rules**

September 2004

INTRODUCTION

PURPOSE

1. A change to Rules 6.11 to 6.16 of section II of part G of the Electricity Governance Rules concerning offering of reserve by is proposed. This proposed change is shown as marked up rule changes in Appendix A.
2. The purpose of this paper is to:
 - Provide background information for interested parties to base their submissions on; and
 - Provide the proposed rule change.

EXECUTIVE SUMMARY

OVERVIEW

3. The Rules permit embedded generators to change their energy offers up to 30 minutes before the start of the trading period.
4. This is referred to as the gate closure period and compares to a gate closure of 2 hours for grid-connected generators.¹ However the reserve offer rules still require a two-hour gate closure on all reserve offers.
5. Previously, under NZEM and MARIA, embedded generators were not subject to offer and dispatch rules at all. In the move to the gross pool under the EGRs they became subject to offer and dispatch rules but were granted a less stringent time table for offering, i.e. 30 minutes rather than 2 hours. This was to recognise that most embedded generators are used to limit transmission peak load by responding in real time to actual GXP load. It was considered economically efficient to allow them to continue to operate in this mode while bringing them within the gross pool.
6. This inconsistency in gate closure between energy and reserve offers for embedded generators means that embedded generators are not able to obtain the full benefit of the embedded generator offer rules.
7. Trustpower has been granted an exemption to the relevant reserve offer rules for their Patea hydro plant. This exemption currently expires on 1 September 2004. A proposal to extend the exemption to 31 March 2005 has been notified.
8. It is proposed to amend the reserve offering rules to allow embedded generators to amend their offers up to 30 minutes before the trading period.

¹ Special provisions on offering are also made for generators below 10 MW and generators with automatic controls.

RULE DRAFTING

9. In drafting the proposed changes the following principles have been adapted:
- a) **Align energy and reserve offering rules for embedded generators**
It is proposed to address this inconsistency by aligning the gate closure rules on energy and reserve offers for embedded generators, i.e. allowing embedded generators to revise reserve offers up to 30 minutes before the relevant trading period.
 - b) **Adopt same drafting approach for reserve as energy offer rules**
Revision of reserve offers is governed by Rules 6.11, 6.12, 6.14 and 6.16 of section II of part G. The equivalent energy offer Rules are 3.14, 3.17.1, 3.17.2 and 3.19 of the same section. In drafting the energy offer rules for embedded generators the approach taken was to explicitly include a reference to a shorter time frame for embedded generator offers within each rule. It is proposed to keep the energy and reserve offer processes consistent by adopting the same drafting approach to this proposed rule change.
 - c) **Restrict to embedded generators**
It is proposed to only extend the revised gate closure rules to reserve offers associated with embedded generators. Any extension beyond embedded generators, who already have an exemption from the relevant rules, would have security implications and require more careful consideration of Part C implications.
 - d) **No price changes**
Consistent with the generator offer rules it is proposed only quantity changes will be allowed inside 2 hours, and not price changes.
 - e) **No special provision for intermittent generators**
The energy offer rules have explicit provision for embedded intermittent generators. No such special provision is required for reserve offers from intermittent generators. The decision on whether an intermittent generator is capable of providing reserve, and the conditions on which it provides, is a matter for negotiation between the System Operator and the reserve provider, in the process of entering into a contract to provide reserve as per Rule 6.1 of section II of part G.
10. A marked up copy Rules 6.11 to 6.16 of section II of part C, showing the proposed changes, is included in Appendix A.

ANALYSIS AGAINST ELECTRICITY COMMISSION OBJECTIVES

OBJECTIVE

11. The draft Government Policy Statement² outlines a number of detailed policy objectives designed to achieve an overall objective.
12. The Government's overall objective is to ensure that electricity is delivered in an efficient, fair, reliable and environmentally sustainable manner to all classes of consumer. Consumers' electricity requirements should be met in a manner that is least-cost to the economy as a whole over the long term and is consistent with sustainable development.
13. Consistent with this overall objective, the government is seeking the following specific outcomes:
 - a. energy and other resources are used efficiently;
 - b. risks including price risks relating to security of supply are properly and efficiently managed. In particular the Government wants the Commission to use reasonable endeavours to ensure security of supply in a 1 in 60 dry year, without assuming any reduction in demand from emergency conservation campaigns, while minimising distortions to the normal operation of the market;
 - c. barriers to competition in electricity markets are reduced for the long-term benefit of end-users;
 - d. incentives for investment in generation, transmission, lines, energy efficiency and demand-side management are maintained and do not discriminate between public and private investment;
 - e. the full costs of producing and transporting each additional unit of electricity are signalled so that investors and consumers can make decisions consistent with obtaining the most value from electricity;
 - f. delivered electricity costs and prices are subject to sustained downward pressure; and
 - g. the electricity sector contributes to achieving the Government's climate change objectives by minimising hydro spill, efficiently managing transmission losses and constraints, promoting demand-side participation and energy efficiency and removing barriers to investment in new generation technologies, renewables and distributed generation.

² Latest draft, as at 14 September 2003. Available at <http://www.med.govt.nz/ers/electric/governance-gps/draft/20030914/20030914-01.html>

ANALYSIS OF PROPOSAL AGAINST ELECTRICITY COMMISSION OBJECTIVES

14. The proposed rule change advances objectives 2 a) and d).

2 a) efficient use of resources

There is a strong linkage between energy and reserves, particularly partially loaded reserve offers (PLRO). Consistency in gate closure for energy and reserve offers allows for significantly greater operational flexibility of generation plant. Through this enhanced flexibility, more efficient use of resources can be achieved.

2 d) incentives for investment

Consistency between energy and reserve offers ensures that both the security and energy benefits of an embedded generator are appropriately valued. Through maintaining value of the services provided by an embedded generator, the investment incentives for embedded generation are also maintained.

15. In summary, the Electricity Commission believes that the implementation of the proposed change to Rule 6.1 of section VI of part G of the Rules is positive in terms of meeting the Government Policy Objectives for electricity.

APPENDIX A – PROPOSED CHANGES TO RULES 6.11 TO 6.16 OF SECTION II OF PART G

The proposed change to the Rules is as per the following marked up version of the relevant Rules:

6.11 Reserve offers revised if energy offers revised

Subject to rule 6.12 Aan ancillary service agent that has made a **reserve offer** must revise or cancel that **reserve offer** if it has, in accordance with the provisions of rule 3, revised or cancelled the **offer** made in respect of the equivalent item of **generating plant**.

6.12 Reserve offers may be revised or cancelled

6.12.1 By ancillary service agents (other than ancillary service agents who are also embedded generators)

~~Notwithstanding rule 6.11 a~~Any ancillary service agent (other than an ancillary service agent that is an embedded generator) may:

6.12.1.1 Revise reserve offers

Revise either its **reserve offer** prices or its **reserve offer** quantities, as the case may be, for any **trading period** by submitting a new **reserve offer** to the **system operator**. Any revised **reserve offer** may be made ~~not later than~~ up to two hours prior to the beginning of the **trading period** ~~to~~ in respect of which the **reserve offer** ~~applies~~ is made; or

6.12.1.2 Cancel reserve offers

Cancel any **reserve offer** by notifying the **system operator**. Any such cancellation may be made up to two hours prior to the beginning of the **trading period** in respect of which the **reserve offer** was made.

6.12.2 By ancillary service agents who are embedded generators

Notwithstanding rules 6.12.1, and subject to rule 6.14 of this section, and to rule 8 of section III, an ancillary service agent revising a reserve offer associated with an embedded generating station must use reasonable endeavours to submit the revised reserve offer at least two hours prior to the beginning of the trading period in respect of which the reserve offer is made, but may:

6.12.2.1 Revise offers

Revise any of its reserve offer quantities for any trading period by submitting a new reserve offer to the system operator. Any revised reserve offer may be made up to 30 minutes prior to the beginning of

the trading period in respect of which the reserve offer was made;
or

6.12.2.2 Cancel offers

Cancel any of its reserve offers by notice in writing to the system operator. Any such cancellation of a reserve offer may be made up to 30 minutes prior to the beginning of the trading period in respect of which the reserve offer was made.

6.13 No price changes two hours prior to the trading period

No ancillary service agent may revise the price for its reserve offer later than two hours prior to the beginning of the trading period in which that price has been offered.

6.14 Quantity changes may be made within two hours prior to the trading period

Notwithstanding the provisions of rules 6.12, 6.13, and rule 8 of section III, any ancillary service agent may:

6.14.1 Cancel, revise or submit a new reserve offer

Cancel or revise a reserve offer or submit a new reserve offer to the system operator later than two hours, or in the case of a reserve offer associated with an embedded generating station later than 30 minutes, prior to the relevant trading period in respect of which the reserve offer is made only in circumstances where:

6.14.1.1 Bona fide physical reason

A bona fide physical reason necessitated the cancellation or revision; or

6.14.1.2 Grid emergency

The system operator issues a formal notice pursuant to rule 4 of technical code B in schedule C3 of part C;

6.14.2 Where a bona fide physical reason ceases to exist

Submit a reserve offer or revise a reserve offer to the system operator later than two hours, or in the case of a reserve offer associated with an embedded generating station later than 30 minutes, prior to the relevant trading period in respect of which the reserve offer is made where:

6.14.2.1 A bona fide physical reason ceases to exist

A **bona fide physical reason** that necessitated a cancellation or revision under rule 6.14.1.1 ceases to exist sooner than was expected at the time it arose; and

6.14.2.2 First trading period is within 24 hours

The first **trading period** after the original **bona fide physical reason** ceases to exist is within 24 hours of the original **bona fide physical reason** occurring; and

6.14.2.3 Total change in quantity is the same or less

The total change in quantity for the **reserve offer** in any one **trading period** that is revised as a result of the **bona fide physical reason** ceasing to exist is the same or less than the total change in quantity for the **reserve offer** that was made for the same **trading period** as a result of the original **bona fide physical reason**.

Whether or not the cancellation, revision or new submission, was in accordance with this rule (including, if applicable, whether it was necessitated by a **bona fide physical reason**) will be determined in accordance with rule 6.18.

6.15 System operator notified of revised reserve offers in certain circumstances

Where a cancellation, revision or new submission of a **reserve offer** is to be sent to the **system operator** pursuant to rule 6.14 and that cancellation, revision or new submission is submitted later than 15 minutes prior to the relevant **trading period**, prior to sending that cancellation, revision or new submission the **ancillary service agent** will immediately notify the **system operator** of the cancellation, revision or new submission by telephone or electronic means (where such electronic means have been agreed between the **system operator** and that **ancillary service agent** prior to the **ancillary service agent** notifying the **system operator** of the cancellation, revision or new submission).

6.16 Board notified of revised reserve offer inside the two hour period

Any **ancillary service agent** which cancels a **reserve offer** or submits a new or revised **reserve offer** to the **system operator** later than two hours, or in the case of a **reserve offer** associated with an **embedded generating station** 30 minutes, prior to the relevant **trading period** in respect of which the **reserve offer** is made will report each such cancellation, revision or new submission to the **Board** in writing together with an explanation of the reasons for such a cancellation, revision or new submission.