



## **Consultation Paper**

**for**

**ELECTRICITY COMMISSION**

**Recommended Approach and Rule Changes Regarding  
Group Offer and Dispatch of Interruptible Load**

**3 November 2004**

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## Introduction and Purpose

- 1 A proposal to amend the requirements regarding offers for interruptible load in the Electricity Governance Rules (“the Rules”) was made to the Electricity Commission (“the Commission”) by the System Operator. The Commission has now developed this proposal to the stage where consultation with interested parties is appropriate.
- 2 The purpose of this paper is to:
  - Outline the analysis undertaken on interruptible load offers;
  - Recommend a set of draft rule changes to the Rules that were developed taking into account the results of the analysis; and
  - Provide background for interested parties to base their submissions on.
- 3 The Commission is satisfied that the effect of the proposed rules is minor and will not adversely affect the interests of any person in a substantial way. Consequently, the Commission has not carried out an assessment under [the proposed] s172F(1) of the Electricity Act 1992.<sup>1</sup>

## Terminology

Act	Electricity Act 1992
Commission	Electricity Commission
CQAG	Common Quality Advisory Group
GXP	Grid Exit Point
IL	Interruptible load
Rules	Electricity Governance Rules 2003
SPD	Scheduling Pricing and Dispatch model
WMAG	Wholesale Market Advisory Group

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<sup>1</sup> As amended by the Electricity and Gas Industries Bill.

## **Background**

### *Original proposal*

- 4 In the May 2004 System Operator Report, the System Operator identified an issue relating to the offer and dispatch of interruptible load (“IL”).
- 5 Under the direction of the Commission, a proposed rule change has been developed by the Wholesale Market Advisory Group (“WMAG”).

### *Consultation required*

- 6 Development of the proposed rules has now reached the stage where consultation with interested parties is appropriate.

## **Review of the Current Rule Requirements**

### *Current requirements*

- 7 Rule 6.3.3 of Section II of Part G requires each reserve offer made by an ancillary service agent to be a reasonable estimate of the quantity of instantaneous reserve available from that ancillary service agent at that grid injection point or grid exit point (“GXP”).

### *Issues with current requirements*

- 8 The current practice of some ancillary service agents is to offer all IL at a single or a minimal number of nodes, but in so doing, these participants are technically in breach of the Rules. The System Operator believes that IL providers should be able to offer the IL on an aggregated basis, as it is more efficient for ancillary service agents (who are also distributors) to manage load in their local networks and facilitates provision of this ancillary service. As current practice seems to be an efficient way of operating, it would be more appropriate to amend the Rules to allow current practices to continue. If the Rules remain unchanged, and require ancillary service agents to offer the exact quantity available at each grid exit point, flexibility may be inhibited and the number of providers providing this service at current prices is likely to be limited.

## Analysis

### *Use of a reference node or zone*

- 9 Allowing IL to be offered on an aggregated basis rather than by node can be achieved by allowing ancillary service agents to offer load at either some kind of reference node<sup>2</sup> or by zone.

### *Option One: Offer by Reference Node*

- 10 Under this approach, the ancillary service agent would agree with the System Operator a node or nodes at which its IL should be offered. Having the Board approve a reference node could be considered, but given the responsibility that the System Operator has to manage the grid, it would be more appropriate for the System Operator and the relevant ancillary service agent to reach agreement. Having the System Operator approve a reference node with the relevant participant would help ensure that the System Operator has sufficient information and influence to enable it to meet its PPOs if a reference node is used. It is likely (although not essential) that the approved node will be within the geographical area in which the supplier is offering the IL.

### *Option Two: Offer by Zone*

- 11 An alternate to using a reference node is to offer by zone. The term “zone” is used in the rules in relation to four zones (upper NI, lower NI, upper SI and lower SI) for the purposes of voltage support cost allocation. However, the use of zones is probably not necessary at this stage given the current aggregation of the reserve market by island. Such a change could be made in the event that regional reserve markets are introduced (see below). It is not possible to identify at this stage how the zones might be defined under such a proposal. Thus if a definition were put in place now, it would be likely to have to be changed if or when regional reserve markets are implemented.

### *Regional reserve markets*

- 12 Currently reserve is scheduled and dispatched on an island basis, though the System Operator may examine reserve at a more detailed level (zone or region) for security purposes. In the future, reserve might be scheduled and dispatched on a more regional basis (either by zone, region or even GXP). This proposal is on the workplan of the Common Quality Advisory Group (“CQAG”), and is likely to be addressed in the 2005 calendar year both as part of its development path, and because of the opportunity to amend the scheduling pricing and dispatch model (“SPD”) that may arise under the proposed SPD replacement.

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<sup>2</sup> The term used here for “reference node” should not be confused with the defined term “reference point” (which refers to Haywards or Benmore), or the commonly used term “reference node” (which is not a defined term in the Rules) which is commonly used in reference to Benmore, Haywards or Otahuhu.

- 13 Should regional reserve markets be established, reserve would need to be offered at least at the regional level, and possibly by GXP (depending on the level of constraints in the system) at specific GXPs. Because the proposal to include a scheduling and dispatch process for regional reserve markets in SPD has not been evaluated in detail, it is not possible to say how the regions would be identified.

## Proposed Rule Amendments

- 14 The following sections of this paper present draft rules based on the analysis presented in the previous sections.

### *Recommended approach*

- 15 The preferred approach is to require IL to be offered at a node that is approved by the System Operator as suitable for the purposes of offer and dispatch.

### *Proposed rule amendments*

- 16 The proposed approaches require amendments as follows:

- Introduce a new definition in Part A as follows:

**“IL group GXP”** means the **grid exit point**, approved by the **system operator**, at which a **reserve offer** made by the **ancillary service agent** for **interruptible load** may be referenced for the purposes of **offer** and **dispatch**;

- Amend Form 5 of Schedule G1 of Part G by requiring ancillary service agents to specify either a “Grid Exit Point” or a “IL group GXP” instead of a just a “Grid Exit Point”; and
- Amend Rule 6.3.3 of Section II of Part G as follows:

#### **6.3.3 Reasonable estimate of available instantaneous reserve**

Be a reasonable estimate of the quantity of **instantaneous reserve** available from that **ancillary service agent** at that **grid injection point, or grid exit point or IL group GXP**.

## Cost-benefit Analysis

### *Proposal has benefits for ancillary service agents*

- 17 The proposed amendments have benefits for ancillary service agents as unnecessary compliance requirements will be removed, thus facilitating increased IL offers.

### *Proposal has benefits for other participants*

- 18 The proposed amendments have benefits for other participants as, due to the likely increase in IL offer quantity, the cost of procuring instantaneous reserve will be reduced, thus reducing costs faced by payers of ancillary services.

### *Benefits for the System Operator*

- 19 Currently, when an ancillary service agent makes an offer for IL at one node, when the load is actually at a number of nodes, the System Operator has no information as to the distribution of the load which will be interrupted following a contingent event. The proposed amendments will therefore provide benefits for the System Operator, as the System Operator will have access to information about the GXP's any offers for IL actually represent.

### *Costs of implementing the proposed changes*

- 20 The proposed amendments would require the System Operator and relevant ancillary service agents to reach agreement on the "IL group GXP". The amount of time this is expected to take is likely to be minimal. No IT system changes are required, as all "IL group GXP's" will also be GXP's, and thus already fit within the current systems and processes.

### *Benefits outweigh costs*

- 21 While the benefits of the proposal are difficult to quantify, the Commission believes that, on balance, the benefits of the proposal outweigh the costs.

## Analysis Against Electricity Commission Objectives

### *Objectives*

- 22 Under s172X of the Electricity Act 1992 (the Act), in formulating recommendations for Rules, the Commission must give effect to its principal objectives and specific outcomes and its GPS objectives and outcomes.
- 23 Section 172N of the Act, the principal objectives of the Commission are to:
- ensure that electricity is produced and delivered to all classes of consumers in an efficient, fair, reliable, and environmentally sustainable manner and
  - promote and facilitate the efficient use of electricity.
- 24 Section 172N of the Act and the draft Government Policy Statement on Electricity Governance<sup>3</sup> requires the Commission to seek to achieve 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;
  - c barriers to competition in the electricity industry are minimised for the long-term benefit of end-users;
  - d incentives for investment in generation, transmission, lines, energy efficiency, and demand-side management are maintained or enhanced and do not discriminate between public and private investment;
  - e the full costs of producing and transporting each additional unit of electricity are signalled;
  - 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 unnecessary hydro spill, efficiently managing transmission and distribution losses and constraints, promoting demand-side management and energy efficiency, and removing barriers to investment in new generation technologies, renewables and distributed generation.

### *Analysis of proposal against objectives*

- 25 The proposed rule changes contribute to achieving the principal objectives by:

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<sup>3</sup> Latest draft, as at 21 September 2004. This version is subject to the passage of the Electricity and Gas Industries Bill 2003.

- a. Increasing the efficiency of the delivery of electricity by removing an unnecessary compliance cost on ancillary service agents;
- b. Increasing the fairness of the delivery of electricity by reducing the compliance requirements to what is actually necessary to ensure the stability of the system;
- c. Increasing the reliability of the delivery of electricity by facilitating increased supply of reserves into the market; and
- d. Facilitating the efficient use of electricity by allowing greater efficiency in the ability of ancillary service agents to offer IL when the market requires it.

26 The proposed rule changes contribute to achieving the GPS objectives as follows:

s172N and GPS Objectives	Comments
The Government has amended the Electricity Act 1992 to set the following <b>principal objectives</b> for the Electricity Commission:	
<ul style="list-style-type: none"> <li>• to ensure that electricity is produced and delivered to all classes of consumers in an efficient, fair, reliable and environmentally sustainable manner; and</li> <li>• to promote and facilitate the efficient use of electricity.</li> </ul>	The proposed rules encourage the efficient use of electricity by improving the process and reducing compliance obligations associated with the offering and dispatch of interruptible load.
Consistent with those principle objectives, the Commission is required by the Act to seek to achieve the following <b>specific outcomes</b> :	
a) energy and other resources are used efficiently	The proposed rules increase the efficiency of resources used by reducing the compliance obligations on ancillary service agents.
b) risks (including price risks) relating to security of supply are properly and efficiently managed.	The proposed rules will not affect this objective
c) barriers to competition in electricity are minimised for the long-term benefit of end-users	The proposed rules reduce barriers to competition by reducing the compliance obligations on ancillary service agents
d) incentives for investment in generation, transmission, lines, energy efficiency and demand-side management are maintained or enhanced and do not discriminate between public and private investment	The proposed rules increase the incentives for investment in demand side management as ancillary service agents will have increased incentives to provide IL
e) the full costs of producing and transporting each additional unit of electricity are signalled	The proposed rules will not affect this objective
f) delivered electricity costs and prices are subject to sustained downward pressure	The proposed rules will place downward pressure on prices by reducing the costs that parties have in relation to the reserve requirements.

<b>s172N and GPS Objectives</b>	<b>Comments</b>
g) the electricity sector contributes to achieving the Government's climate change objectives by minimising unnecessary hydro spill, efficiently managing transmission and distribution losses and constraints, promoting demand-side management and energy efficiency, and removing barriers to investment in new generation technologies, renewables and distributed generation	The proposed rules help facilitate the efficient management of transmission losses and promote demand-side management through encouraging the provision of interruptible load.

27 In summary, the Commission believes that the implementation of the proposed rules would give effect to the Commission's relevant principal objectives and specific outcomes under s172N of the Act and the GPS.