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## Wholesale Electricity Market - Pre Market Rule Change Discussion Paper

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**Change Proposal No:** *[to be filled in by the IMO]*

**Received date:** *[to be filled in by the IMO]*

### Change requested by

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<b>Date submitted:</b>	7/3/2008
<b>Urgency:</b>	High
<b>Change Proposal title:</b>	Change in Individual Distribution Loss Factor Thresholds
<b>Market Rule(s) affected:</b>	2.27.2, 11

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### Introduction

Market Rule 2.5.1 of the Wholesale Electricity Market Rules provides that any person (including the IMO) may make a Rule Change Proposal by completing a Rule Change Proposal Form that must be submitted to the Independent Market Operator.

This Change Proposal can be posted, faxed or emailed to:

**Independent Market Operator**

Attn: Dora Guzeleva, Manager Market Administration  
PO Box 7096  
Cloisters Square, Perth, WA 6850

Fax: (08) 9254 4339

Email: [marketadmin@imowa.com.au](mailto:marketadmin@imowa.com.au)

The Independent Market Operator will assess the proposal and, within 5 Business Days of receiving this Rule Change Proposal form, will notify you whether the Rule Change Proposal will be further progressed.

In order for the proposal to be progressed, all fields below must be completed and the change proposal must explain how it will enable the Market Rules to better contribute to the achievement of the wholesale electricity market objectives. The objectives of the market are:

- (a) to promote the economically efficient, safe and reliable production and supply of electricity and electricity related services in the South West interconnected system;
- (b) to encourage competition among generators and retailers in the South West interconnected system, including by facilitating efficient entry of new competitors;
- (c) to avoid discrimination in that market against particular energy options and technologies, including sustainable energy options and technologies such as those that make use of renewable resources or that reduce overall greenhouse gas emissions;
- (d) to minimise the long-term cost of electricity supplied to customers from the South West interconnected system; and
- (e) to encourage the taking of measures to manage the amount of electricity used and when it is used.

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## **Details of the proposed Market Rule Change**

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### **1. Describe the concern with the existing Market Rules that is to be addressed by the proposed Market Rule change:**

Western Power is proposing changes to the Market Rules to:

- document the differences in approaches to loss factor between distribution and transmission – distribution losses represent average losses where as transmission losses represent average marginal losses. The changes are consistent with the National Electricity Rules (specifically section 3.6.2 (e) (4) and 3.6.3 (b) (1) of the National Electricity Rules).
- reduce the number of individual distribution loss factor calculations and associated high cost by setting the thresholds for individual distribution loss factors to 7,000 kVA and removing the choice of an individual distribution loss factor for certain customers.
- address concerns that the market rules do not reflect how loss factors are calculated and applied in practice.

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### **2. Explain the reason for the degree of urgency:**

This market rule change proposal and the associated market procedure change proposal are required prior to the calculation of loss factors in the second quarter of 2008. Western Power believes this warrants the use of the fast-track rule change process.

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### **3. Provide any proposed specific changes to particular Rules: (for clarity, please use the current wording of the Rules and place a ~~strikethrough~~ where words are deleted and underline words added)**

2.27.1. By 1 June of each year Network Operators must calculate and provide to the IMO Loss Factors that will apply at for each connection points in their Network at which is connected a:

- (a) Scheduled Generator;
- (b) Non-Scheduled Generator;
- (c) Non-Dispatchable Load;
- (d) Interruptible Load;
- (e) Curtailable Load; or
- (f) Dispatchable Load

2.27.1A. A Market Participant may request, during the process of obtaining a relevant Arrangement for Access, that the relevant Network Operator determine and provide to the IMO, Loss Factors to apply to a facility or a Non-Dispatchable Load where there are no Loss Factors applying to the connection point at which the facility or the Non-Dispatchable Load will be connected.

2.27.2. In calculating Loss Factors, Network Operators must apply the following principles:

(a) Loss Factors are static and apply ~~to each connection point~~ until new Loss Factors are calculated in accordance with clause 2.27.1 or 2.27.4(d);

(aa) Loss Factors are to be assigned to each connection point in accordance with the documented Market Procedure;

~~(b) Loss Factors must represent the marginal losses for a connection point relative to the Reference Node, averaged over all Trading Intervals in a year, weighted by the absolute value of the net demand at that connection point during the Trading Interval;~~

(c) Loss Factors must be calculated using:

- i. generation and load meter data from the preceding 12 months; or
- ia. for a new facility or a Non-Dispatchable Load, any other relevant data provided by the Market Participant and as agreed with the Network Operator and the IMO; ~~and~~
- ii. ~~an appropriate network load flow software package; and~~

(d) Loss Factors must be calculated separately for the transmission system ("transmission loss factors") and the distribution system ("distribution loss factors") must include transmission and distribution losses;

(da) Transmission loss factors must represent the marginal losses for a transmission connection point relative to the Reference Node, averaged over all Trading Intervals in a year, weighted by the absolute value of the net demand at that transmission connection point during the Trading Interval;

(db) Distribution loss factors must represent the average losses for electricity transmitted on a distribution system between a distribution connection point and a transmission connection point;

(dc) Transmission loss factors must be calculated using an appropriate network load flow software package;

(e) ~~a specific transmission loss factors~~ Loss Factor must be calculated for each of the following connection points on the transmission system:

- i. Scheduled Generator;
- ii. Non-Scheduled Generator;
- iii. Curtailable Load;
- iv. Interruptible Load;
- v. Dispatchable Load; ~~and~~
- vi. Non-Dispatchable Load ~~above 1000kVA peak consumption; and~~
- vii. connections to a distribution system

(ea) specific distribution loss factors must be calculated as:

(A) individually calculated distribution loss factors derived in accordance with the documented Market Procedure for each of the following types of connection points on the distribution system:

- i. Scheduled Generator above 1,000 kVA peak output;
- ii. Non-Scheduled Generator above 1,000 kVA peak output;
- iii. Curtailable Load above 7,000 kVA peak demand;
- iv. Interruptible Load above 7,000 kVA peak demand;
- v. Dispatchable Load above 7,000 kVA peak demand; and
- vi. Non-Dispatchable Load above 7,000 kVA peak demand; or

(B) average distribution loss factors for each customer group derived in accordance with the documented Market Procedure using the measured annual losses on the distribution system for connection points on the distribution system not of the type described in clause 2.27.2 (ea) (A).

~~(f) the same Loss Factor will apply to all Non-Dispatchable Loads less than 1000kVA peak consumption, and will be determined on an averaged basis. An average Loss Factor must be determined in accordance with the documented Market Procedure~~

Update Chapter 11: Glossary

**Loss Factor:** A factor defining the ~~annual average marginal network~~ loss between any given node and the Reference Node where the Loss Factor at the Reference Node is 1, determined in accordance with clause 2.27.2.

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#### **4. Describe how the proposed Market Rule change would allow the Market Rules to better address the Wholesale Market Objectives:**

The proposed market rule change aligns the markets rules with the loss factors calculations being undertaken by Western Power. The proposed market rule change provides clarity to facilitate competition and avoid discrimination.

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**5. Provide any identifiable costs and benefits of the change:**

The proposed market rule change aligns the markets rules with the loss factors calculations being undertaken by Western Power.

The proposed market rule change will provide an annual cost saving of approximately \$80,000 in administration.

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