
**Wholesale Electricity Market – Submission to Procedure Change
Proposal PC_2011_06
5-yearly Review of the Methodology and Process for Determining
the Maximum Reserve Capacity Price**

Submitted by

Name:	Andrew Everett
Phone:	9424 1836
Fax:	9424 1818
Email:	andrew.everett@verveenergy.com.au
Organisation:	Verve Energy
Address:	15 -17 William Street Perth WA 6000
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Submission

Clause 2.10.7 of the Wholesale Electricity Market Amending Rules provides that any person may make a submission for a Procedure Change Proposal by filling in this Procedure Change Submission form.

Submissions for Procedure Changes that relate to the Power System Operation Procedures and IMO Market Procedures should be submitted to:

Independent Market Operator

Attn: Manager Market Development & System Capacity
PO Box 7096
Cloisters Square, Perth, WA 6850
Fax: (08) 9254 4399
Email: market.development@imowa.com.au

1. Please provide your views on the Procedure Change Proposal, including any objections or suggested revisions:

As recorded in the minutes of the Maximum Reserve Capacity Price Working Group (MRCPWG) Meeting No 10, Verve Energy is concerned that the non-inclusion of an adjustment for forced outage rate in the MRCP formula could have a significant financial impact, even for plants with a relatively low forced outage rate. Verve Energy does not support the conclusion "...it was generally accepted that an allowance for compensation for forced outages within the MRCP was not justified at present".

In the MRCPWG's deliberation on including a forced outage rate in the MRCP formula, no logical objection was found. The IMO had researched its forced outage record and determined the forced outage rate for peaking generators to be 0.73%. On the premise that such a FOR is low, the MRCPWG appears to have dismissed it on the basis that it would not be a material component. Verve Energy considers that materiality determination to be disputable. Indeed, the impact could be commensurate with, and possibly more significant than, that from other parameters such as insurance cost, an increase in the fuel requirement from 12 to 14 hours or using the average land cost which have been incorporated in the proposal.

The IMO statistics, reported in the Meeting 10 minutes, of 0.73% based on 6 facilities over 3 years are noted. However, given the infrequent and random nature of forced outages it is suggested that a larger database should be considered.

There is an Electricity Commission (New Zealand) report in the public domain entitled "Development of a Capacity Adequacy Standard"

(<http://www.google.com/search?hl=en&source=hp&q=open+cycle+gas+turbine+forced+outage+standard+statistics&meta=&aq=f&aql=&aql=&og=>)

Section 2.3 of that report discusses forced outage rate assumptions. Paragraph 2.3.6 is of relevance:

There is considerable variation in forced outage rate for open cycle gas turbines. The NERC data adjusted for low capacity factor operation bias is around 2%. Australia uses 22%, but this measure may also be biased and probably includes old unreliable units. The only OCGT in New Zealand is Whirinaki, which is new and has very good start reliability

The report mentions that MMA in its HVDC Study in February 2008 used 2% for Whirinaki.

Table 4 provides a series of forced outage rates for various generator types. Focussing on OCGTs the NERC statistic has:

FOR	5.7%
EFOR	5.8%
EFORd	2.0%

The preceding paragraph (2.3.2) explains the measures. Both FOR and EFOR can be biased upward from units with low capacity factor operation. The NERC EFORd measure has been derived to adjust for this bias.

In the WEM situation with a Reserve Capacity Credit payment, EFORd is probably a more appropriate measure for the purpose of the MRCP formula. In NERC, the low capacity factor units are not as well maintained whereas in the WEM low capacity factor peaking plant is paid to be well maintained.

Verve Energy considers that a FOR of 0.73% is material and should be incorporated in the determination of MRCP. If the contention holds that 2% is a more appropriate FOR to use, and I consider that it should, then the argument for incorporating the parameter is even more compelling – generators could be under compensated not by 0.73% but by 2%.

Verve Energy requests that IMO reconsiders its position on this matter.

2. Please provide an assessment whether the Procedure Change Proposal is consistent with the Market Objectives and the Wholesale Electricity Market Amending Rules.

3. Please indicate if the Procedure Change Proposal will have any implications for your organisation (for example changes to your IT or business systems) and any costs involved in implementing these changes.

4. Please indicate the time required for your organisation to implement the changes, should they be accepted as proposed.
