

Draft Rule Change Report
Title: Application of Spinning Reserve
to Aggregated Facilities

Ref: RC_2010_06
Standard Rule Change Process

Date: 30 July 2010

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DOCUMENT DETAILS

1. INTRODUCTION

n 17 April 2010 Griffin Energy submitted a Rule Change Proposal regarding

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2 CALL FOR SECOND ROUND SUBMISSIONS

The IMO invites interested stakeholders to make submissions on this Draft Rule Change Report. The submission period is 20 Business Days from the publication date of this report. Submissions must be delivered to the IMO by 5.00pm, Thursday 9 September 2010.

The IMO prefers to receive submissions by email (using the submission form available on the IMO website: <http://www.imowa.com.au/rule-changes>) to: market.development@imowa.com.au

Submissions may also be sent to the IMO by fax or post, addressed to:

Independent Market Operator
Attn: Manager Market Development and System Capacity
PO Box 7096
Cloisters Square, PERTH, WA 6850
Fax: (08) 9254 4399

3. THE RULE CHANGE PROPOSAL

3.1 *Submission Details*

Name:	Shane Cremin
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Email:	shane.cremin@thegriffingroup.com.au
Organisation:	Griffin Energy
Address:	15th Floor, 28 The Esplanade, Perth, Western Australia 6000
Date submitted:	27 April 2010
Urgency:	2-medium
Change Proposal title:	Application of Spinning Reserve to Aggregated Facilities
Market Rule affected:	Clause 2.30.6, 2.30.7, and Appendix 2 and new clause 2.30.7A

3.2 *Summary details of the Proposal*

Griffin Energy's Rule Change Proposal sought to amend the Market Rules to treat aggregated Facilities as individual Facilities for the purpose of the calculation and provision of Ancillary Services. This was on the basis that each individual (physical) Facility comprising the aggregated Facility will have the same impact on the market with respect to the requirement for Ancillary Services whether it is aggregated or not.

The full details of the Rule Change Proposal are contained in Appendix 1.

3.3 *The Proposal and the Wholesale Market Objectives*

Griffin Energy submitted that the proposed changes would allow the Market Rules to better address Wholesale Market Objectives (a), (c) and (d).

a) *to promote the economically efficient, safe and reliable production and supply of electricity and electricity related services in the South West interconnected system;*

Griffin Energy considered that applying Ancillary Service (Spinning Reserve) costs to aggregated facilities based on the sum of their available capacity has no practical benefit

to the market, but may lead to a loss in market efficiency as generators choose not to aggregate facilities to achieve operational efficiencies.

c) to avoid discrimination in the 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.

Griffin Energy noted that the current Market Rules imply that aggregating two (or more) facilities to create an aggregated facility larger than 200MW incurs more costs than aggregating two (or more) smaller facilities, the sum of which is less than 200MW. Griffin Energy considered that such a disparity in cost allocation based on the size of units is discrimination.

d) to minimise the long-term cost of electricity supplied to customers from the South West interconnected system;

Griffin Energy considered that encouraging Market Participants to aggregate facilities may lead to lower wholesale generation costs as operational efficiencies are realised.

Griffin Energy considered that the proposed Amending Rules are consistent with the remaining Wholesale Market Objectives.

3.4 Amending Rules proposed by Griffin Energy

The amendments to the Market Rules originally proposed by Griffin Energy are available in the Rule Change Notice and presented in Appendix 2 of this report.

3.5 The IMO's Initial Assessment of the Proposal

The IMO decided to proceed with the proposal on the basis that Market Participants should be given an opportunity to provide submissions as part of the rule change process.

4. FIRST SUBMISSION PERIOD

The first submission period for this Rule Change Proposal was between 4 May 2010 and 15 June 2010.

4.1 Submissions received

The IMO received submissions from ERM Power, Landfill Gas & Power (LGP), Perth Energy, and Synergy during the first submission period. The IMO also received a submission from Alinta outside of the first submission period. The main points raised in the submissions are summarised below; additional detail along with outside of the IMO's response is contained in section 4.2 of this paper. A copy of the full text of all submissions is available on the IMO website.

In summary, all the submissions received during the first submission period, including the out of session submission from Alinta, support the Rule Change Proposal. Alinta does however note that this support is based on the assumption that System Management determines the required amount of Spinning Reserve by treating aggregated Facilities as separate Facilities. Alinta requests confirmation from System Management that this assumption is accurate.

ERM Power notes that there have been concerns raised that the proposal would potentially allow Intermittent Generators with many small generators to register as an

aggregated Facility to avoid Spinning Reserve costs. ERM suggests if this is a valid concern specifications regarding the registration of an aggregated Facility may be required. Similarly, Perth Energy suggests that an alternative methodology, which would complement Griffin's proposal, would be to charge all generation units for Spinning Reserve, with a fixed fee component to cover non-size related costs and a \$/MW variable component to cover the variable costs of providing Spinning Reserve.

The assessment by submitting parties of whether the proposal would better facilitate the Wholesale Market Objectives is summarised below:

Submitter	Wholesale Market Objective
Alinta (out of session)	a, b and c

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Clause/Issue	Submitter	Comment/Change Requested	IMO's response
2.30.7A	Alinta	Suggests that the IMO consider whether the reference should be to "Reserve_Share" in place of "Spinning Reserve".	Clause 2.30.7A has been amended to refer to the determination of the Reserve_Share(p,t) values in Appendix 2.
3.9.2(a)	Perth Energy	Amend to clarify that Spinning Reserve is the service of holding capacity in reserve to be able to respond	

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Clause/Issue	Submitter	Comment/Change Requested	IMO's response
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Clause/Issue	Submitter		
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Clause/Issue	Submitter	Comment/Change Requested	IMO's response
			of units providing these services is required.
Alternate Methodology	Perth Energy	Consider that, dependent on the result of investigation into the matters raised in its submission, an alternative methodology could be to charge all generation units for Spinning Reserve, with a fixed fee component to cover non-size related costs and \$/MW variable component to cover the variable costs of providing Spinning Reserve.	Based on the above identified points, the IMO does not agree with the proposed alternative method for the allocation of Spinning Reserve costs as suggested by Perth Energy.

4.3 Public Forums and Workshops

No public forums or workshops were held in relation to this Rule Change Proposal.

4.5 Additional Amendments to the Amending Rules

Following the first public submission period the IMO has made some minor changes to the proposed Amending Rules to ensure that the cost allocation methodology reflects System Management's system planning methodology and does not inherently treat aggregated units differently. These additional amendments are contained in Appendix 3 of this paper.

5. THE IMO'S ASSESSMENT

In preparing its Draft Rule Change Report, the IMO must assess the Rule Change Proposal in light of clauses 2.4.2 and 2.4.3 of the Market Rules.

Clause 2.4.2 outlines that the IMO "*must not make Amending Rules unless it is satisfied that the Market Rules, as proposed to be amended or replaced, are consistent with the Wholesale Market Objectives*".

Additionally, clause 2.4.3 states, when deciding whether to make Amending Rules, the IMO must have regard to the following:

Any applicable policy direction from the Minister regarding the development of the market;

The practicality and cost of implementing the proposal;

The views expressed in submissions and by the MAC; and

Any technical studies that the IMO considers necessary to assist in assessing the Rule Change Proposal.

The IMO notes that there has not been any applicable policy direction from the Minister or any technical studies commissioned in respect of this Rule Change Proposal.

The IMO's assessment is outlined in the following sections.

5.1 Wholesale Market Objectives

The IMO considers that the Market Rules as a whole, if amended, will be consistent with the Wholesale Market Objectives.

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5.3 *Market Advisory Committee*

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presented below.

overview of

5.4 Views Expressed in Submissions

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ubmission period supporting the proposed amendments. In summary, all the

to Griffin Energy's Rule Change Proposal

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two (o more) facilities that create an aggregated facility which is larger than 200MW will

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The IMO agrees that there may be some efficiency gains available to Market Participants as they will be able to determine the optimal use of plant from within its aggregated portfolio to meet its Resource Plan. The IMO notes that while this may be the case, it considers that this will not necessarily equate to the optimal use of resources for the Market as a whole as it is feasible that a Market Participant meets a shortfall using less efficient generation than available from the Balancer. The IMO however notes that a Market Participant will still be required to log a Forced Outage in the event that a unit is not operating and as such will be required to make Capacity Cost Refunds.

5.5.3 Effect of proposal on other market segments

The IMO notes that the proposed amendments will not change the total costs paid for Spinning Reserve however there will be changes to the distribution of those costs to Market Generators dependent on which Block they were operating within during a specific Trading Interval. The impact of these changes on the size of costs incurred by each Market Generator will be dependent on the behaviour of all other participants in the market at a point of time, both within the same block and in other blocks. There will be no financial impact on Market Customers associated with the proposed amendments.

6. THE IMO'S DRAFT DECISION

The IMO's draft decision is to accept the amendment of clause 2.30.6, 2.30.7, 2.30.7A, 3.9.2 and Appendix 2 of the Market Rules as proposed in the Rule Change Proposal and amended following the first submission period.

6.1 *Reasons for the decision*

The IMO has made its decision on the basis that the Amending Rules:

- will allow the Market Rules to better address Wholesale Market Objective (a);
- are consistent with the remaining Wholesale Market Objectives;
- have the general support of the MAC members;
- have the general support of submissions received during the first submission period;
- do not impose additional costs on Market Customers; and
- ensures that costs are allocated on a causer pays basis.

Additional detail outlining the analysis behind the IMO's reasons is outlined in section 5 of this Draft Rule Change Report.

7. PROPOSED AMENDING RULES

The IMO proposes to implement the following Amending Rules (added text, ~~deleted text~~):

- 2.30.6. If the individual Facilities forming part of an aggregated facility have their own meters, and there is no single meter for the entire aggregated facility, then the settlement meter data for the aggregated facility must be the sum of the meter readings for its component facilities. Subject to clause 2.30.7A, an An

aggregated facility which has been registered as a Facility is taken to be treated as a single Facility for the purpose of these rules.

2.30.7. If the IMO approves the aggregation of Facilities then, subject to clause 2.30.7A, that aggregated facility must be registered as a single Facility for the purpose of these Market Rules.

2.30.7A. If the IMO approves the aggregation of Facilities of a Scheduled Generator then each individual facility in that aggregated Facility that injects energy at an individual network connection point to the South West interconnected system must be treated as an individual Facility for the purpose of determining the Reserve Share(p,t) values under Appendix 2.

3.9.2. Spinning Reserve Service is the service of holding capacity associated with a synchronised Scheduled Generator, Dispatchable Load or Interruptible Load in reserve so that the relevant Facility is able to respond appropriately in any of the following situations:

- (a) to retard frequency drops following the failure of one or more ~~Registered Facilities~~ generating works or transmission equipment; and
- (b) in the case of Spinning Reserve Service provided by Scheduled Generators and Dispatchable Loads, to supply electricity if the alternative is to trigger involuntary load curtailment.
- (c) [Blank]

Appendix 2

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For the purpose of determining the Reserve_Share(p,t) values, each applicable facility f has an applicable capacity associated with it for Trading Interval t.

If facility f is an Intermittent Generator with an interval meter then this is double the MWh average interval meter reading for the Trading Month containing Trading Interval t.

If facility f is a Scheduled Generator with an interval meter then this is double the MWh interval meter reading for Trading Interval t.

If facility f is a Scheduled Generator that is the sum of more than one aggregated Facilities, each with an interval meter and each injecting energy at an individual network connection point to the South West interconnected system, then each individual Facility is treated as an individual Scheduled Generator under Appendix 2.

If facility f is an Electricity Generation Corporation Intermittent Generator without an interval meter then this is double the average monthly MWh sent out generation of that facility based on SCADA data over the Trading Month containing Trading Interval t.

If facility f is an Electricity Generation Corporation Scheduled Generator without an interval meter or an unmetered generation system serving Intermittent Load then this is double the MWh sent out generation of that facility based on SCADA data for Trading Interval t .

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APPENDIX 1: GRIFFIN ENERGY'S RULE CHANGE PROPOSAL

In its proposal Griffin Energy notes that the Market Rules currently allow Market Participants to aggregate facilities under certain circumstances. The aggregation of facilities may lead to more efficient nomination and real time generating behaviour, as Market Participants have a more flexible arrangement for engagement with the market.

Clause 2.30.6 of the Rules ensures that “An aggregated facility which has been registered as a Facility is taken to be treated as a single Facility for the purpose of these rules.”

Spinning Reserve, an Ancillary Service, is allocated under the Market Rules in accordance with Appendix 2. Allocation is heavily biased towards larger facilities, with those facilities operating at a level over 200MW incurring a greater proportion of the costs.

Griffin Energy contends that practically, an aggregated facility is the conceptual sum of two (or more) separate physical facilities. Each individual (physical) facility will have the same impact on the market with respect to the requirement for Ancillary Services whether it is aggregated or not. Griffin Energy considers that the allocation of Spinning Reserve costs to a single Facility which comprises the sum of the aggregated facilities, as currently contemplated by the Rules, may act as a disincentive for Market Participants to aggregate facilities. Griffin Energy considers that this may lead to a loss of a potential market efficiency, achieved by generators being able to operate their facilities more flexibly.

APPENDIX 2: PROPOSED AMENDING RULES IN THE RULE CHANGE PROPOSAL

Griffin Energy proposed the following amendments to the Market Rules in its Rule Change Proposal (~~deleted text~~, added text):

- 2.30.6. If the individual Facilities forming part of an aggregated facility have their own meters, and there is no single meter for the entire aggregated facility, then the settlement meter data for the aggregated facility must be the sum of the meter readings for its component facilities. Subject to clause 2.30.7A, an ~~An~~ aggregated facility which has been registered as a Facility is taken to be treated as a single Facility for the purpose of these rules.
- 2.30.7. If the IMO approves the aggregation of Facilities then, subject to clause 2.30.7A, that aggregated facility must be registered as a single Facility for the purpose of these Market Rules.
- 2.30.7A. If the IMO approves the aggregation of Facilities of a Scheduled Generator then each individual facility in that aggregated Facility must be treated as an individual Facility for the purpose of the calculation of Spinning Reserve.

Appendix 2

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For the purpose of determining the $Reserve_Share(p,t)$ values, each applicable facility f has an applicable capacity associated with it for Trading Interval t .

If facility f is an Intermittent Generator with an interval meter then this is double the MWh average interval meter reading for the Trading Month containing Trading Interval t .

If facility f is a Scheduled Generator with an interval meter then this is double the MWh interval meter reading for Trading Interval t .

If facility f is a Scheduled Generator that is the sum of more than one aggregated Facilities, each with an interval meter, then each individual Facility is treated as an individual Scheduled Generator under Appendix 2.

If facility f is an Electricity Generation Corporation Intermittent Generator without an interval meter then this is double the average monthly MWh sent out generation of that facility based on SCADA data over the Trading Month containing Trading Interval t .

If facility f is an Electricity Generation Corporation Scheduled Generator without an interval meter or an unmetred generation system serving Intermittent Load then this is double the MWh sent out generation of that facility based on SCADA data for Trading Interval t .

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APPENDIX 3: ADDITIONAL AMENDMENTS MADE BY THE IMO FOLLOWING THE FIRST SUBMISSION PERIOD

The IMO has made some amendments to the Amending Rules following its assessment of the first submission period responses. These changes are as follows (~~deleted text~~, added text):

The proposed amendment to clause 2.30.7A will clarify that aggregated Facilities will only be treated separately for the purposes of determining the Reserve_Share values in Appendix 2 if they are individually connected to the SWIS. If two or more facilities share a connection to the SWIS then for the purposes of determining Spinning Reserve costs they will be treated as one aggregated facility.

2.30.7A. If the IMO approves the aggregation of Facilities of a Scheduled Generator then each individual facility in that aggregated Facility that injects energy at an individual network connection point to the South West interconnected system must be treated as an individual Facility for the purpose of determining the Reserve Share(p,t) values under Appendix 2 calculation of Spinning Reserve.

The proposed amendment to clause 3.9.2 will clarify that Spinning Reserve Service relates to frequency drops as a result of the failure of one or more generating works or transmission equipment at a connection point to the SWIS.

3.9.2. Spinning Reserve Service is the service of holding capacity associated with a synchronised Scheduled Generator, Dispatchable Load or Interruptible Load in reserve so that the relevant Facility is able to respond appropriately in any

the failure of one or more

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For the purpose of determining the Reserve_Share(p,t) values, each applicable facility f has an applicable capacity associated with it for Trading Interval t.

If facility f is an Intermittent Generator with an interval meter then this is double the MWh average interval meter reading for the Trading Month containing Trading Interval t.

If facility f is a Scheduled Generator with an interval meter then this is double the MWh interval meter reading for Trading Interval t.

If facility f is a Scheduled Generator that is the sum of more than one aggregated Facilities, each with an interval meter and each injecting energy at an individual network connection point to the South West interconnected system, then each individual Facility is treated as an individual Scheduled Generator under Appendix 2.

If facility f is an Electricity Generation Corporation Intermittent Generator without an interval meter then this is double the average monthly MWh sent out generation of that facility based on SCADA data over the Trading Month containing Trading Interval t.

If facility f is an Electricity Generation Corporation Scheduled Generator without an interval meter or an unmetered generation system serving Intermittent Load then this is double the MWh sent out generation of that facility based on SCADA data for Trading Interval t.

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