ADDENDUM TO RULE CHANGE NOTICE:
RC_2010_23: Consequential Outage – Relief from capacity refund and unauthorised deviation penalties

The IMO acknowledges that, because this addendum is not contained in a Rule Change Notice, the addendum has no formal standing. However, the IMO invites Rule Participants to make submissions on the Rule Change Notice as previously notified. If considered appropriate the IMO invites Rule Participants to specifically submit on the information contained in this addendum during the first submission period.

As previously notified, the first submission period submissions must be delivered to the IMO by 5.00pm on **Thursday 14 October 2010.**

BACKGROUND

RC_2010_23, proposed by Alinta on 3 August 2010, seeks to amend the Wholesale Electricity Market Rules to provide Market Participants with relief from capacity refunds and UDAP/DDAP where a Facility suffers a Consequential Outage.

Full details of the original proposed amendments are provided in the Rule Change Proposal available: http://www.imowa.com.au/RC_2010_23

IMPACT OF PARTIAL CONSEQUENTIAL OUTAGES

Following the publication of the Rule Change Notice, the IMO raised an issue with Alinta concerning the impact of its Rule Change Proposal on a Facility suffering a partial Consequential Outage. The drafting in the Rule Change Proposal would protect a Facility that suffered a Consequential Outage from any deviation penalties, even where the outage did not affect the Facility's ability to meet its Resource Plan.

Alinta agreed with the IMO that where a Facility suffers a Consequential Outage that affects only a part of its capacity, it should be protected from deviation penalties only to the extent that the Facility's capacity was reduced as a direct result of the Consequential Outage. In its correspondence with the IMO, Alinta considered that this approach was preferable even though the incidence of partial Consequential Outages may be low.

After discussions with System Management and Alinta the IMO has prepared an alternative drafting that limits the extent of the relief provided in the event of a partial Consequential Outage. The alternative drafting, which is provided in this addendum, is of necessity much more complex than the original drafting proposed by Alinta.

In recognition of this complexity, its likely cost implications and the possibility that Consequential Outages are at present under-reported, the IMO sought an estimate from System Management of the frequency of unreported Consequential Outages and the relative frequency of partial Consequential Outages. Due to the complexities involved System Management has not been able to provide an estimate of these values, although it has advised that in the event of this Rule Change Proposal being

progressed it expects that the number of reported Consequential Outages may increase.

STRENGTHENED GOVERNANCE ARRANGEMENTS IN RELATION TO CONSEQUENTIAL OUTAGE SUBMISSIONS

System Management has advised that it appreciates that the current treatment of Consequential Outages under the Market Rules creates an impost on recipients of Capacity Payments that cannot be managed or ameliorated by them.

System Management considers that, under the proposed drafting, there is potential for participants to "game" the arrangements by either claiming a Forced Outage as a Consequential Outage, or else exaggerating the impact of the Consequential Outage on the Facility's ability to meet its obligations.

This is because, in some cases, establishing a link of causality between events or circumstances on the SWIS and a Market Participant's submissions to System Management in relation to a particular outage event may be difficult or impossible.

In such circumstances the use of system simulations may assist to resolve some of this uncertainty. However, depending on the extent to which the frequency of Consequential Outages increases, commissioning such studies into every event may be costly. Further, it is likely that such studies may not be able to be completed in time for data be submitted to the IMO for use in its settlement processes.

System Management has suggested several additional clauses may be necessary to strengthen governance and establish increased accountability regarding a Market Participant's outage submissions to System Management.

The approach has not been developed to the drafting stage, but may include the following elements.

- A Market Participant would be required to provide information, certified by a representative with appropriate authority, affirming that the Consequential Outage had occurred and providing relevant details to the best of its knowledge of the events which resulted in the Consequential Outage.
- Subject to the receipt of a letter as described above and in the absence of information that would be grounds for System Management to disallow the application, the outage details would be provided to the IMO as part of its normal procedures (i.e. 15 days after the Trading Day).
- At regular intervals (to be determined, but probably annually), System Management would commission a modelling study into the Consequential Outages (or a subset of these) that were recorded during the previous period. The intent of the review would be to investigate, by way of system simulation, the circumstances surrounding some or all of the outages and to determine the validity of the claims made by Market Participants. This information would then be provided to the market for its consideration and assessment.

System Management has noted that the cost of a modelling study would not be covered under its existing budget, and so the provision of funding to undertake the studies would need to be discussed with the ERA.

ALTERNATIVE PROPOSED AMENDMENTS

The general idea behind the alternative drafting is that when a participant reports a Consequential Outage for a Scheduled Generator or Dispatchable Load they will need to provide estimates of the maximum MWh quantities that could have been supplied or consumed by the Facility in each affected Trading Interval, taking into account the Consequential Outage. For a full Consequential Outage it would be expected that these values would be zero. Under the proposed drafting maximum quantities are required for both consumption and supply, since (at least in theory) generators can consume and Dispatchable Loads can provide net generation in a Trading Interval.

These quantities would be sanity-checked by System Management, which would be able to replace the values provided by the Market Participant if it considered that they were not reasonable for the Facility and the Consequential Outage. System Management would not be obliged to take any action if it did not know that the values provided were inconsistent with its knowledge of the Facility and Consequential Outage. If System Management altered the values proposed by a Market Participant it would be required to notify the participant of its actions.

System Management would need to include the values provided by Market Participants in the outage schedules sent to the IMO under clauses 7.3.4(a) and 7.13.1A.

If a Consequential Outage is reported for a Scheduled Generator or Dispatchable Load, then the process to calculate the DSQ under clause 6.15.1 would first assess how much the Facility could have supplied or consumed in the Trading Interval, i.e.:

- the maximum supply quantity is assumed to be the maximum of the max supply value provided by the Market Participant and the MSQ (the MSQ is considered in case the participant underestimated what could be supplied); and
- the maximum consumption quantity is the minimum (since consumption is negative) of the max consumption value provided by the participant and the MSQ.

These two values form the boundaries of the range of what the Facility could reasonably have been to supply/consume in the Trading Interval. If the Resource Plan amount, adjusted for Dispatch Instructions, etc, falls outside of this range then for the purposes of calculating the DSQ it will be reduced (for supply) or increased (for consumption) to the extent needed to bring it inside the range.

The alternative proposed drafting is as follows (~~deleted text~~, <u>added text</u>):

3.21.4. If a Facility or item of equipment that is on the list described in clause 3.18.2 or a Facility or generation system to which clause 3.18.2A relates suffers a Forced Outage or Consequential Outage, then the relevant Market Participant or Network Operator must inform System Management

of the outage as soon as ~~practical~~practicable. Information provided to System Management must include:

(a) the time the outage commenced;

(b) an estimate of the time the outage is expected to end;

(c) the cause of the outage;

(d) the Facility or item of equipment or Facilities or items of equipment affected; and

(e) for each affected Facility or item of equipment, the expected quantity of any de-rating by Trading Interval, where, if the Facility is a generating system, this quantity is to be submitted in accordance with clause 3.21.5~~.~~;

(f) for each Scheduled Generator or Dispatchable Load suffering a Consequential Outage and for each affected Trading Interval, the estimated maximum Loss Factor adjusted MWh quantity of energy that, after taking into account the impact of the Consequential Outage, could have been consumed by the Facility during that Trading Interval (where this number may have a zero or negative value); and

(g) for each Scheduled Generator or Dispatchable Load suffering a Consequential Outage and for each affected Trading Interval, the estimated maximum Loss Factor adjusted MWh quantity of energy that, after taking into account the impact of the Consequential Outage, could have been supplied by the Facility during that Trading Interval.

3.21.4A. System Management, in its assessment of a Consequential Outage under clause 3.21.2, must consider whether the estimated values provided by a Market Participant in accordance with clauses 3.21.4(f) and 3.21.4(g) are consistent with System Management's knowledge of the relevant Facility and the Forced Outage which caused the Consequential Outage. If System Management considers that any estimated values provided by the Market Participant are not reasonable then System Management must, for the purposes of clauses 7.3.4(a) and 7.13.1A replace these values with values that System Management considers are more appropriate for the particular Facility and Consequential Outage.

3.21.4B. If System Management decides to replace any estimated values provided by a Market Participant under clauses 3.21.4(f) or 3.21.4(g) in accordance with clause 3.21.4A, then System Management must as soon as practicable provide the Market Participant with a notification that specifies:

(a) the Facility and Trading Intervals affected by the decision;

(b) System Management's reasons for the replacement; and

(c) for each affected Trading Interval, the value or values proposed by the Market Participant and the replacement value or values determined by System Management.

6.15.1. For a Market Participant other than the Electricity Generation Corporation, the Dispatch Schedule for a Trading Interval for a Scheduled Generator (excluding those to which clauses 3.21A.14 or 4.25.10 apply) or Dispatchable Load is:

(a) where no Dispatch Instructions were issued in respect of the Registered Facility for the Trading Interval, equal to the ~~energy to be generated and sent out or consumed by the Registered Facility indicated in the applicable Resource Plan (where for the purpose of this calculation a Loss Factor adjustment is to be applied to the quantity of energy so that the result is measured at the Reference Node) for that Trading Interval~~ quantity determined in accordance with clause 6.15.1A, plus;

i. where the Metered Schedule for the Trading Interval is higher than or equal to the ~~applicable Resource Plan value~~ quantity determined in accordance with clause 6.15.1A, the Facility's Facility Dispatch Tolerance as a positive value to the extent that the resulting Dispatch Schedule does not exceed the Metered Schedule or

ii. where the Metered Schedule for the Trading Interval is lower than the ~~applicable Resource Plan value~~ quantity determined in accordance with clause 6.15.1A, the Facility's Facility Dispatch Tolerance as a negative value to the extent that the resulting Dispatch Schedule is not lower than the Metered Schedule;

(b) where one or more Dispatch Instructions that specified a target MW output level or an instruction under a Network Control Service Contract were issued to the Market Participant in respect of the Registered Facility for the Trading Interval, equal to:

i. where:

1. the Metered Schedule plus the Facility's Facility Dispatch Tolerance (Loss Factor adjusted so as to be measured at the Reference Node) is greater than or equal to the quantity determined in accordance with clause 6.15.1B~~amount calculated in accordance~~

~~with Appendix 7 plus the quantities under a Network Control Service Contract instructions plus Balancing Support Contract energy dispatched (where for the purpose of this calculation a Loss Factor adjustment is to be applied to the amount calculated in accordance with Appendix 7, to the Facility Dispatch Tolerance, to the quantities under a Network Control Service Contract and to the quantities under a Balancing Support Contract so that in each case the result is measured at the Reference Node)~~; and

2. the Metered Schedule less the Facility's Facility Dispatch Tolerance (Loss Factor adjusted so as to be measured at the Reference Node) is less than or equal to the quantity determined in accordance with clause 6.15.1B~~amount calculated in accordance with Appendix 7 plus the quantities under a Network Control Service Contract instructions plus Balancing Support Contract energy dispatched (where for the purpose of this calculation a Loss Factor adjustment is to be applied to the amount calculated in accordance with Appendix 7, to the Facility Dispatch Tolerance, to the quantities under a Network Control Service Contract and to the quantities under a Balancing Support Contract so that in each case the result is measured at the Reference Node)~~;

then the Metered Schedule; or

ii. otherwise, the quantity determined in accordance with clause 6.15.1B~~amount calculated in accordance with Appendix 7 plus the quantities under a Network Control Service Contract instructions plus Balancing Support Contract (where for the purpose of this calculation a Loss Factor adjustment is to be applied to the amount calculated in accordance with Appendix 7, to the quantities under a Network Control Service Contract and to the quantities under a Balancing Support Contract so that the result is measured at the Reference Node)~~.

6.15.1A. For the purposes of clause 6.15.1(a) the IMO must determine a MWh quantity for a Trading Interval for a Registered Facility equal to the energy to be generated and sent out or consumed by the Registered Facility indicated in the applicable Resource Plan (where for the purpose of this calculation a Loss Factor adjustment is to be applied to the quantity of

energy so that the result is measured at the Reference Node) for that Trading Interval. However, if System Management has advised the IMO of a Consequential Outage suffered by the Registered Facility during the Trading Interval in accordance with clause 7.13.1A(b) then the IMO must adjust this MWh quantity so that it does not exceed the energy that could have been generated and sent out or consumed by the Registered Facility during the Trading Interval. The adjusted MWh quantity is equal to:

Min(Max(INITQ, Min(CMAX, MSQ)), Max(SMAX, MSQ))

where:

INITQ is the MWh quantity that would apply for the purposes of clause 6.15.1(a) if the Registered Facility had not suffered a Consequential Outage during the Trading Interval;

CMAX is equal to the value provided by the responsible Market Participant for the Trading Interval under clause 3.21.4(f) and (if applicable) adjusted by System Management under clause 3.21.4A, provided to the IMO in accordance with clause 7.13.1A(b);

SMAX is equal to the value provided by the responsible Market Participant for the Trading Interval under clause 3.21.4(g) and (if applicable) adjusted by System Management under clause 3.21.4A, provided to the IMO in accordance with clause 7.13.1A(b); and

MSQ is equal to the Metered Schedule for the Trading Interval.

6.15.1B. For the purposes of clause 6.15.1(b) the IMO must determine a MWh quantity for a Trading Interval for a Registered Facility equal to the amount calculated in accordance with Appendix 7 plus the quantities under Network Control Service Contract instructions plus Balancing Support Contract energy dispatched (where for the purpose of this calculation a Loss Factor adjustment is to be applied to the amount calculated in accordance with Appendix 7, to the quantities under a Network Control Service Contract and to the quantities under a Balancing Support Contract so that in each case the result is measured at the Reference Node). However, if System Management has advised the IMO of a Consequential Outage suffered by the Registered Facility during the Trading Interval in accordance with clause 7.13.1A(b) then the IMO must adjust this MWh quantity so that it does not exceed the energy that could have been generated and sent out or consumed by the Registered Facility during the Trading Interval. The adjusted MWh quantity is equal to:

Min(Max(INITQ, Min(CMAX, MSQ)), Max(SMAX, MSQ))

where:

INITQ is the MWh quantity that would apply for the purposes of clause 6.15.1(b) if the Registered Facility had not suffered a Consequential Outage during the Trading Interval;

CMAX is equal to the value provided by the responsible Market Participant for the Trading Interval under clause 3.21.4(f) and (if applicable) adjusted by System Management under clause 3.21.4A, provided to the IMO in accordance with clause 7.13.1A(b);

SMAX is equal to the value provided by the responsible Market Participant for the Trading Interval under clause 3.21.4(g) and (if applicable) adjusted by System Management under clause 3.21.4A, provided to the IMO in accordance with clause 7.13.1A(b); and

MSQ is equal to the Metered Schedule for the Trading Interval.

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