INDEPENDENT MARKET OPERATOR

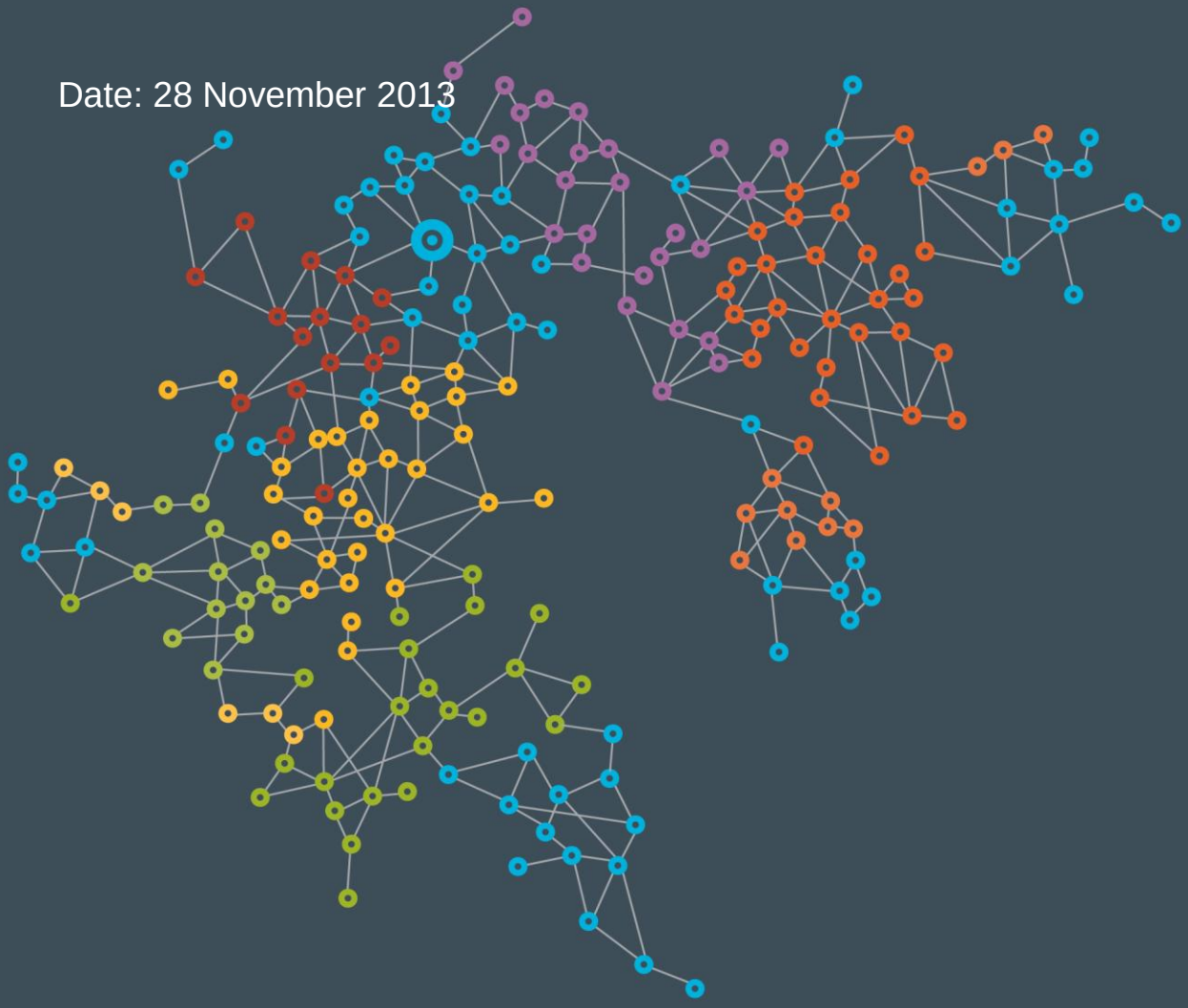
Draft Rule Change Report

Title: Incentives to Improve Availability of Scheduled Generators

RC_2013_09

Standard Rule Change Process

Date: 28 November 2013



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Executive Summary

Proposed amendments

This Rule Change Proposal seeks to improve the incentives in the Market Rules for Market Participants to maximise the availability of their Scheduled Generators, by:

- allowing the IMO more flexibility in assigning a reduced quantity of Certified Reserve Capacity (between zero and full allocation) to Scheduled Generators that display excessive outage rates over a 36 month period;
- imposing an upper limit on the number of Trading Intervals in any 36 month period for which a generator can receive a reduction of its Reserve Capacity Obligation Quantities due to Planned Outages; and
- providing the IMO with discretion to require performance reports from a Market Participant concerning a Scheduled Generator with an excessive Planned Outage rate, regardless of the availability of total system capacity.

Consultation

A preliminary Concept Paper (CP_2013_01) was presented to the Market Advisory Committee (MAC) at its 20 March 2013 meeting and a Pre Rule Change Proposal was discussed at the 10 April 2013 and 12 June 2013 meetings. The IMO also held a discussion forum on 8 May 2013 to allow interested stakeholders to discuss the proposal in greater detail.

The Rule Change Proposal was submitted on 18 June 2013 and the first submission period was held between 19 June 2013 and 27 August 2013. During the first submission period the IMO met with both Alinta and Verve Energy to discuss their concerns that the proposed outage thresholds were too low.

Submissions were received from Alinta, Bluewaters Power, Community Electricity, Perth Energy, System Management, Tesla and Verve Energy. Community Electricity, Perth Energy and System Management supported the Rule Change Proposal, with System Management suggesting some minor enhancements to the drafting. Tesla also supported the proposal, but proposed that Planned Outages coinciding with a network outage should be classified as Consequential Outages. Bluewaters Power was supportive of the concept and the majority of the detail of the proposal, but suggested several changes to the proposed amendments.

Alinta and Verve Energy did not support the Rule Change Proposal, considering that most of the proposed amendments would impose unnecessary cost, risk and regulatory burden and potentially lead to perverse outcomes such as a decrease in reliability. Both parties however supported the inclusion of the range of factors the IMO will take into account when making decisions under clause 4.11.1(h). Alinta also supported the proposed changes to permit the IMO more flexibility in the quantity of Certified Reserve Capacity it can assign.

Both Bluewaters Power and Verve Energy proposed alternative values for some of the outage thresholds and review periods set out in the Rule Change Proposal.

Assessment against Wholesale Market Objectives

The IMO considers that the proposed amendments will better address Wholesale Market Objectives (a), (b) and (d) and are consistent with Wholesale Market Objectives (c) and (e).

Practicality and cost of implementation

The proposed amendments will require changes to the IMO's IT systems, at an estimated cost of approximately $90,000. Changes will also be required to the Market Procedure for Certification of Reserve Capacity, Market Procedure for Reserve Capacity Performance Monitoring and the IMO's internal procedures; however the costs of these changes fall within the IMO's normal operating budget.

Alinta identified (but did not quantify) potential costs to allow it to continuously monitor its Planned Outage levels. No other implementation costs or practicality issues were raised, although Alinta, Bluewaters Power and Verve Energy all noted potential future costs associated with failures to meet the various outage thresholds specified in the proposed amendments.

The IMO's proposed decision

The IMO's proposed decision is to accept the Rule Change Proposal as modified following the first submission period.

Next steps

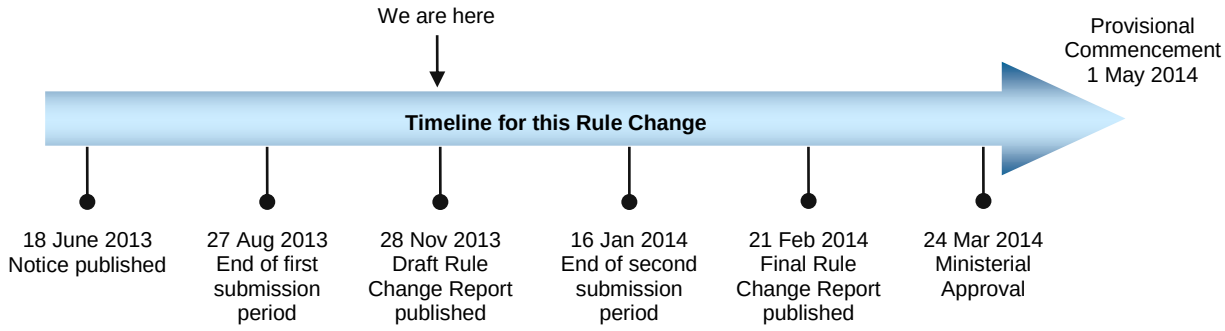
The IMO now invites interested stakeholders to make submissions on this Draft Rule Change Report by **5:00 pm on Thursday 16 January 2014**.

1. Rule Change Process and Timetable

On 18 June 2013 the IMO submitted a Rule Change Proposal regarding amendments to clauses 2.17.1 and 4.9.9, sections 4.11, 4.12, 4.26 and 4.27 and the Glossary of the Wholesale Electricity Market Rules (Market Rules).

This proposal is being processed using the Standard Rule Change Process, described in section 2.7 of the Market Rules. In accordance with clause 2.5.10 of the Market Rules, the IMO decided to extend the timeframes for the first and second submission periods and the preparation of the Draft Rule Change Report and Final Rule Change Report. Further details of the extensions are available on the Market Web Site.

The key dates in processing this Rule Change Proposal, as amended in the extension notices, are:



Please note that the commencement date is provisional and may be subject to change in the Final Rule Change Report.

2. Call for Second Round Submissions

The IMO invites interested stakeholders to make submissions on this Draft Rule Change Report. The submission period is 32 Business Days from the publication date of this report. Submissions must be delivered to the IMO by **5:00 pm on Thursday 16 January 2014**.

The IMO prefers to receive submissions by email (using the submission form available on the Market Web Site: 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: Group Manager, Development and Capacity
PO Box 7096
Cloisters Square, PERTH, WA 6850
Fax: (08) 9254 4399

3. Proposed Amendments

3.1. The Rule Change Proposal

The IMO sought to amend the Market Rules to improve the incentives for Market Participants to maximise the availability of their Scheduled Generators. The IMO also proposed a number of related amendments to strengthen and provide greater transparency around the certification process.

The IMO proposed the following amendments.

Amendments to section 4.11: the IMO sought to improve the practicality and effectiveness of clause 4.11.1(h) by:

- permitting the IMO more flexibility in assigning a quantity of Certified Reserve Capacity (CRC) (between zero and full allocation) to Scheduled Generators displaying excessive outage rates over 36 months;
- specifying a range of factors for the IMO to consider in making its decision, adding certainty, structure and transparency to the process; and
- progressively tightening the combined Planned Outage rate and Forced Outage rate thresholds that trigger clause 4.11.1(h), from 30% to 20% over five years, commencing in 2016, with corresponding changes to the Forced Outage rate threshold and provision for review in 2018.

Clarification of clause 4.9.9: the IMO sought to clarify the nature of the Reviewable Decision under clause 4.9.9 by including an explicit obligation on the IMO to decide whether to assign CRC to a Facility and, if so, the quantity to assign. Currently this decision is implicit and the clause only explicitly mentions actions that the IMO must take if it assigns CRC to a Facility. This will clarify that the IMO's decisions regarding the quantity of CRC to assign to a Facility are reviewable (as clause 4.9.9 is a Reviewable Decision), including where the IMO decides to assign a lesser quantity of CRC to a Facility under clause 4.11.1(h).

Payment of capacity refunds for excessive Planned Outages: the IMO sought to impose an upper limit on the number of Trading Intervals in any 36 month period for which a generator can claim a reduction of its Reserve Capacity Obligation Quantities (RCOQs) due to Planned Outages. Under the proposed amendments:

- once a Facility reached the cap, the IMO would no longer reduce the RCOQ for that Facility to reflect the amount of capacity unavailable due to Planned Outages;
- the relevant Market Participant would be liable to pay Facility Reserve Capacity Deficit Refunds for subsequent Planned Outages taken by that Facility, as well as for its Forced Outages, until its total Planned Outage hours over the previous 36 months no longer exceeded the cap;
- the cap would be applied over a rolling 36 month period to allow Facilities to accommodate periodic major overhauls by smoothing their Planned Outage rates over a longer period;
- the cap would not apply to Planned Outage hours taken before the implementation of the rule change;

- the proposed initial cap would be 7800 Trading Intervals (3900 hours or 23.2 weeks) over 36 months, equivalent to an average annual Planned Outage Factor of 14.8%;

- the cap would be reviewed within five years of operation (by 31 December 2018); and

- Trading Intervals would not count towards the cap if no adjustment to RCOQs were made and the Market Participant was required to pay a Facility Reserve Capacity Deficit Refund in relation to that Trading Interval.

Amendments to section 4.27: the IMO sought to improve the practicality and effectiveness of section 4.27 by:

- granting the IMO discretion to require a performance report and performance improvement reports from the relevant Market Participant concerning a Scheduled Generator with an excessive Planned Outage rate, regardless of the availability of total system capacity;

- deleting clauses 4.27.7 and 4.27.8, which became redundant as a result of the proposed change to section 4.12 that imposes a cap on Planned Outages for which a reduction in RCOQ may be claimed; and

- permitting the IMO to temporarily adjust the cap on the number of Trading Intervals eligible for a reduction of RCOQs if the system capacity availability criterion in clause 4.27.9 is met (this was a consequential change to maintain the intent of clause 4.27.9 in the event that the total system was under extreme capacity stress due to generator unavailability).

Full details of the Rule Change Proposal are available on the Market Web Site: http://www.imowa.com.au/rc_2013_09.

3.2. The IMO's Initial Assessment of the Rule Change Proposal

The IMO decided to progress the Rule Change Proposal on the basis that Rule Participants should be given an opportunity to provide submissions as part of the rule change process.

4. Consultation

4.1. The Market Advisory Committee

The proposed amendments were discussed by the Market Advisory Committee (MAC) at its 20 March 2013, 10 April 2013 and 12 June 2013 meetings.

March 2013 MAC meeting

Ms Anne Hill gave a presentation to MAC members on the IMO's Concept Paper: Incentives to Improve Availability of Scheduled Generators (CP_2013_01). A copy of Ms Hill's presentation is available on the Market Web Site: http://www.imowa.com.au/MAC_58.

Ms Hill outlined three proposals that the IMO was putting forward:

- to amend clause 4.11.1(h) to allow the IMO to assign CRC between zero and full allocation, specify factors to be considered in the decision and progressively reduce the outage threshold;

- to amend section 4.27 to grant the IMO discretion to monitor performance of individual high-outage Facilities regardless of system capacity availability, to better inform clause 4.11.1(h) decisions; and

- to introduce a performance adjustment to reduce capacity payments to high-outage Facilities.

A fourth option, to limit the hours of Planned Outages exempt from Facility Reserve Capacity Deficit Refunds, was proposed for future consideration.

The following points were noted in an extensive discussion:

- Mr Shane Cremin queried the relationship between future reliability and reliability over the previous 36 months, suggesting that trying to understand, monitor and audit a Facility to predict its future operation is irrelevant. He stated that clause 4.11.1(h) should result in the Facility not receiving any Capacity Credits since that is the penalty for breaching the 30% outage cap. The Chair noted that clause 4.11.1(h) outlined an option rather than an obligation.

- Mr Cremin and Mr Nenad Ninkov questioned whether the IMO Board felt that it was unable to make use of clause 4.11.1(h). The Chair responded that the IMO Board considered that it could use the measure but also that the clause could have quite severe consequences for the wider market. The Chair noted that the IMO Board had given great consideration to the consequences for the wider market when determining whether to make use of clause 4.11.1(h). The IMO considered there needed to be more flexibility and structure in the mechanism than was currently available.

- Mr Ninkov stated that he had an issue with the change because he considered that clause 4.11.1(h) provided a strong signal for when plant should be retired. Mr Ninkov questioned whether the percentage of time that generation plant is available was more important than its reliability, or being available when needed. He said he felt that incentivising plant to be available 100% of the time may not be efficient. The Chair clarified that the expectation was not that Facilities be available 100% of the time but that unavailability levels of 40% to 50% over three years was excessive. He reiterated Ms Hill's analysis which showed that some of the plant in Western Australia was in the worst-performing decile of generators internationally.

- Mr Ben Tan, Mr Ninkov and Mr Cremin each suggested that the length of time for non-acceptable performance before the IMO would do something was too long. They suggested that by allowing non-performing Facilities to retain Capacity Credits, the market was effectively rewarding non-performance.

- Mr Andrew Sutherland considered that any review that considered a reduction or cancellation of Capacity Credits which could result in the premature forced closure of a Facility must consider the net effect to the market (for example in relation to energy prices) rather than considering capacity in isolation.

- Mr Tan queried the effectiveness of the proposed rolling percentage discount (performance adjustment) for capacity allocations, suggesting that it may prove ineffective.

- Ms Hill outlined the alternative proposal to limit the number of Planned Outages that could be taken without exposure to the Facility Reserve Capacity Deficit Refunds. Mr Cremin

stated that he preferred this option to the others presented. He expressed concern about some of the bureaucratic and administrative issues that might arise with the other proposals and argued that the issue is that the Wholesale Electricity Market (WEM) allows Market Participants too many Planned Outages. He supported the proposal that there should be a certain amount of Planned Outages each year and beyond that Planned Outages would incur refunds. He added that recycling the refunds to available generators reinforces this message. Mr Cremin agreed that there still needed to be the ability for the IMO to refuse to allocate CRC to generators who persisted in demanding capacity revenue while not improving their plant. There was some discussion about the comparative incentive value of the gradual reduction of Capacity Credits over time and the potential cap on refund exemptions for Planned Outages.

- There was some discussion about what level of Planned Outages should be allowed. Mr Andrew Stevens raised the concern that all plant needed some minimum amount of Planned Outages. A major outage may take around 50 days every three years, and sometimes additional damage is revealed at that time which necessitates a longer outage period. Delays may be due to importing parts or other issues which could result in not being able to re-start for maybe a further 45 days. Mr Stevens noted that any Planned Outage limit needed to recognise such situations.

- The Chair and Mr Stevens agreed that a two-pronged approach could be appropriate. The Chair suggested the approach could involve a limit of around 15% over three years and then a 50 day annual limit, where both would need to be breached.

- Mr Andrew Everett said that, from a market perspective, he felt that all the proposals were an over-reaction to the issue and would increase the risk on generators and therefore increase energy prices in the market. From a Verve Energy perspective, he contended that the high outage rates on some of the Verve Energy machines did not equate to poor performance, but was a result of a large investment in extending the life of the plant, particularly Muja, which would produce cheap electricity.

- Mr Everett stated that the high outage rates in Verve Energy plant over the last few years were a temporary aberration and Verve Energy has a plan to have lower outage rates. He believed that by the time the rule changes took effect, Verve Energy's outage rates would be at a level where the rules would not have an impact. Mr Ninkov suggested that if that were the case then no Facilities would be affected by the changes and therefore the change would not be required. Mr Tan countered that if that were the case, then the proposed change should proceed as it would protect the market if high Planned Outage rates occurred in the future.

- Ms Wana Yang emphasised the value of making the IMO's decisions transparent and suggested that naming the units with poor availability, regardless of the IMO's decision under clause 4.11.1(h), can itself be a deterrent. She pointed out that since the Economic Regulation Authority (ERA) had started publishing outage rates for individual plants, the performance had improved.

- Mr Cremin considered clause 4.11.1(h) is currently a non-reviewable decision and that people like to have some recourse if they feel a decision is not just, especially if it is meant to be a guillotine for Capacity Credit allocation.

The Chair advised MAC members that the IMO would review its proposals based on the MAC's discussion and prepare a Pre Rule Change Proposal.

April 2013 MAC meeting

Ms Hill presented the Pre Rule Change Proposal: Incentives to Improve Availability of Scheduled Generators (PRC_2013_09) and provided an update to MAC members on the changes made by the IMO since the Concept Paper CP_2013_01 was presented at the March 2013 meeting. These included replacing the proposed "performance adjustment" with a cap on the number of refund exempt Planned Outages.

The following discussion points were noted.

- Mr Sutherland suggested the IMO's comment in the proposal that "there is currently no direct financial consequence" in relation to excessive Planned Outages was inaccurate and did not agree that there were no current incentives in the market for availability. Ms Kate Ryan responded that the proposal described the incentives as "inadequate" rather than not there at all.

- Mr Sutherland noted he had not seen any analysis on the net effect of a decision by the IMO to not certify a Facility and suggested that the IMO's recent decision to certify the poorly performing Verve Energy Facilities was because it had concluded that removing them from the market would lead to higher energy prices. Ms Hill responded that the IMO had been concerned by the quantity of capacity under consideration and had not considered that it could assign CRC to one of the Facilities but not another. Mr Everett disagreed with Ms Hill, considering that the IMO had the discretion to certify or not certify any of the Facilities in question and did not necessarily have to treat them all the same.

- Mr Stephen MacLean considered that allowing the IMO more flexibility in the quantity of CRC it could assign to a Facility was only going to make the decision process harder for the IMO. Mr Cremin agreed with Mr MacLean and mentioned procedural fairness might be compromised if the IMO moved away from a binary approach.

- Mr MacLean also suggested that the Pre Rule Change Proposal required more work and discussion by the market prior to its progressing into the rule change process. Mr Stevens agreed with Mr MacLean's suggestion. The MAC agreed for the IMO to hold a half-day discussion group in the following six to eight weeks to work through the proposal. *(Note: the IMO held the proposed discussion forum on 8 May 2013.)*

- Ms Yang queried if the MAC had come to a consensus that the current Market Rules result in inefficient outcomes. If that was the case then a change should occur. Both Mr Sutherland and Mr MacLean disagreed that the Market Rules result in inefficient outcomes. Specifically Mr Sutherland considered that an additional level of bureaucracy would not result in improved efficiency. Ms Hill suggested the main concern was around the limiting of refund exempt Planned Outages and questioned how this constituted an increase in bureaucracy.

- Mr Sutherland repeated his concerns about the impact of capacity leaving the market in response to decisions made under clause 4.11.1(h). Ms Hill suggested that a decision made under clause 4.11.1(h) to not certify a Facility would not necessarily result in the retirement of that Facility. Mr Sutherland and Mr Stevens considered that the IMO would be contributing to the possibility that the Facility would shut down. Ms Hill noted that the relevant clause had always been in the Market Rules.

- Mr Phil Kelloway stated that the current Market Rules place a large onus on System Management to determine the veracity of Planned Outage requests. He

requested that the proposal should analyse this aspect of the issue with a view to relieve some of the current pressure on System Management. The Chair noted that Ms Hill had looked at some of the current definitions of planned and forced outages in the WEM against international standards. The Chair requested System Management to provide some details at the proposed discussion forum regarding the types and levels of outage requests System Management receive.

- Mr MacLean noted that the proposed defined term "Equivalent Planned Outage Hours" referred to the Market Procedure. Mr MacLean considered that the definition should be set out in the Market Rules and not a subordinate procedure. Mr MacLean also noted that the words "subject to clause 4.12.10" should be removed from proposed clause 4.12.9.

- Mr Everett noted that the Chair suggested to use 15% in calculating an average Planned Outage factor, however this had not been discussed by MAC members. Mr Stevens considered that 15% may be too low it for a Facility that has a significant major outage. Ms Hill stated she had undertaken a scenario analysis based on data from 2007 and the concern raised by Mr Stevens would have only affected the plant that had experienced Planned Outage rates of over 30% for the past three years. Mr Kelloway noted that the proposal could incorporate certain exclusions such as Facility overhauls. Ms Hill added that an appeal system could also be considered. The Chair noted this could be discussed at the half-day forum.

June 2013 MAC meeting

Ms Jenny Laidlaw presented an updated version of PRC_2013_09 and provided an update to the MAC about the changes since the April 2013 MAC meeting. The following discussion points were noted.

- Ms Laidlaw noted a concern that if the Planned Outage threshold was exceeded Market Participants may not have an incentive to apply for a Planned Outage and that this issue was currently being addressed in phase two of the work to implement the recommendations of the Outage Planning Review.
- Mr Peter Huxtable queried, in relation to the requirement for a Market Participant to pay for a report required by the IMO for Facilities with high levels of outages, whether there were similar reports in the market or a consistent approach to payments. Ms Ryan responded that it was common to have a regulator who required a report about a certain participant's behaviour and have the participant pay for it.
- Mr Everett questioned when the IMO would be undertaking consultation with Market Participants that had indicated that the thresholds were incorrect. Ms Laidlaw replied that the IMO would be happy to start these discussions with the relevant parties by the late in the next week.
- Mr Sutherland queried whether the proposed drafting in clause 4.12.6(b) was correct in stipulating that a Consequential Outage would be included in the count of RCOQ adjusted Planned Outages. Ms Laidlaw responded that the drafting only meant to apply to a Planned Outage for which the RCOQ had been reduced.

Further details are available in the MAC meeting minutes available on the Market Web Site: http://www.imowa.com.au/MAC.

4.2. Consultation during the first submission period

During the first submission period the IMO met with Alinta and Verve Energy to discuss their concerns about the outage thresholds set by the IMO in the Rule Change Proposal. Both meetings took place on 28 June 2013.

During its meeting with the IMO, Alinta provided an overview of the current maintenance arrangements for its Scheduled Generators. The IMO concluded that that under these arrangements it was extremely unlikely that Alinta's Facilities would ever breach the thresholds specified by the IMO in the Rule Change Proposal.

Verve Energy also provided the IMO with an overview of its maintenance arrangements and timelines. In particular, Verve Energy provided some preliminary information to support its claim that the proposed 14.8% cap on refund exempt Planned Outages was inappropriately low for its thermal plant. The IMO suggested that Verve Energy provide the IMO with further details of the component tasks in its maintenance cycle for its coal fired Facilities and their associated timeframes. The IMO notes that the submission received from Verve Energy during the first submission period provided additional details of its maintenance arrangements in confidential appendices.

4.3. Submissions received during the first submission period

The first submission period for this Rule Change Proposal was held between 19 June 2013 and 27 August 2013. Submissions were received from Alinta, Bluewaters Power, Community Electricity, Perth Energy, System Management, Tesla and Verve Energy.

Community Electricity, Perth Energy and System Management all supported the Rule Change Proposal. System Management proposed some minor drafting changes to clarify that the IMO (and not System Management) was responsible for determining which Planned Outages were liable for refunds and suggested the Forced Outage rate, Planned Outage Rate, Planned Outage Hours and Equivalent Planned Derated Hours definitions be moved from the Power System Operation Procedure (PSOP): Facility Outages to a Market Procedure.

Tesla was generally supportive of the structure and intention of the rule change, but proposed that a Planned Outage coinciding with a network outage should be classified as a Consequential Outage and not be counted against the proposed percentage caps.

Bluewaters Power was supportive of the concept and the majority of the detail of the proposal, but suggested several changes to the proposed amendments. These included:

- making the provision of performance reports and performance improvement reports to the IMO under clause 4.27.5 optional;
- limiting the refund multiplier for non-refund exempt Planned Outages to one;
- conducting the reviews proposed in clauses 4.11.1E and 4.12.10 after three years rather than five years; and
- increasing the cap on refund exempt Planned Outages from 14.8% to somewhere between 16.8% and 17.5%, with a corresponding increase to the combined Planned Outage rate and Forced Outage rate thresholds prescribed in clause 4.11.1D. Bluewaters Power considered that exceedance of this range would be indicative of systematic rather than "one-off" issues.

Alinta and Verve Energy did not support the Rule Change Proposal, considering that most of the

proposed amendments would impose unnecessary cost, risk and regulatory burden on Market Participants and potentially lead to perverse outcomes such as a decrease in reliability. Alinta did not believe that the current Planned Outage rates posed a risk to system security and considered that the Market Rules already provide the IMO with an ability to address any concerns around high levels of unavailability. Verve Energy considered that the proposal was an over-reaction to a current set of circumstances in the WEM and was heavy handed and unnecessarily invasive.

Both parties however supported the inclusion in the Market Rules of the range of factors the IMO will take into account when making decisions under clause 4.11.1(h). Alinta also supported changes to permit the IMO more flexibility in the quantity of CRC it can assign.

Verve Energy was not against the proposal to reduce the combined Planned Outage rate and Forced Outage rate thresholds that trigger clause 4.11.1(h) per se, but considered the proposed glide path was too aggressive and proposed a number of alternatives. Verve Energy also proposed:

- an increase to the cap on refund exempt Planned Outages, to somewhere between 17% and 20%, to reflect the additional maintenance requirements of its thermal plant;
- several alternatives to allowing the IMO more flexibility in the quantity of CRC it assigns a Facility;
- a requirement for the reviews in clauses 4.11.1E and 4.12.10 to be undertaken every five years;
- the inclusion of additional detail about what the IMO would consider in the review under clause 4.12.10;
- the suspension of capacity payments for exceeding the proposed cap on Planned Outages, rather than the payment of Facility Reserve Capacity Deficit Refunds;
- an increase to the Equivalent Planned Outage Hours threshold in clause 4.27.3A, from 1750 hours to 2191 hours;
- the inclusion of explicit timing requirements for performance improvement reports;
- the socialisation of any costs incurred by the IMO for an opinion on a performance report or performance improvement report across all Market Participants; and
- a number of minor amendments to improve the integrity of the drafting.

The assessment by submitting parties as to whether the proposal would better achieve the Wholesale Market Objectives is summarised below:

Submitter	Wholesale Market Objective Assessment
Alinta	No specific assessment, but raises concerns around a decrease in reliability (Wholesale Market Objective (a)) and increased costs (Wholesale Market Objective (d)).
Bluewaters Power	Will better facilitate the achievement of the Wholesale Market Objectives as outlined by the IMO in the Rule Change Proposal.
Community Electricity	Considers the changes are in harmony with all the Wholesale Market Objectives, and supports the IMO's contention that they improve the achievement of Wholesale Market Objectives (a), (b) and (d).

Submitter	Wholesale Market Objective Assessment
Perth Energy	Will positively impact on the achievement of Wholesale Market Objectives (a), (b) and (d). No impacts identified on the remaining Wholesale Market Objectives.
System Management	Supports the Wholesale Market Objectives as stated in the Rule Change Proposal.
Tesla	Better facilitates the achievement of the Wholesale Market Objectives through minimisation of Outages which will therefore lead to a reduction in costs to the market.
Verve Energy	No specific assessment, but raises concerns around a decrease in reliability (Wholesale Market Objective (a)) and increased costs (Wholesale Market Objective (d)).

A copy of all submissions in full received during the first submission period (excluding the information provided by Verve Energy on a confidential basis) is available on the Market Web Site: http://www.imowa.com.au/RC_2013_09.

4.4. The IMO's response to submissions received during the first submission period

The IMO's response to each of the issues identified during the first submission period is presented in Appendix 2 of this report.

4.5. Public Forums and Workshops

On 8 May 2013 the IMO held a discussion forum to allow interested stakeholders to discuss PRC_2013_09 in greater detail. The forum was attended by representatives of various Market Participants, System Management, the ERA and the Public Utilities Office.

During the forum Ms Hill provided further details of the IMO's reasons for the progression of the proposed amendments. The group then discussed each of the three main components of the proposal in greater detail.

The following points were discussed in relation to the proposed cap on refund exempt Planned Outages.

- Concerns were raised by some participants that the proposed cap of 7800 Trading Intervals over three years was too low and that as a consequence generators may undertake less preventative maintenance, which could result in more Forced Outages. It was noted that Forced Outages have a more disruptive impact on system security than Planned Outages.

- It was noted that the Forced Outage rate in the WEM is low by international standards and is understated because the criteria to qualify for a Planned Outage is much less strict in the WEM than in other jurisdictions.

- The proposed limits were questioned on the basis that, according to the statistics provided by the IMO, over 30% of the thermal plant in the United States would not meet a combined outage cap of 20%. In response it was noted that many of the electricity markets captured in that statistic were operating in energy only markets where generators

can take as many outages as they wish without penalty, while in the WEM generators are being paid for capacity.

- It was proposed that breaching the proposed Planned Outage cap should not result in the relevant Market Participant paying refunds but should instead cause the participant to stop receiving capacity payments until it is able to reduce the level back below the cap.

- It was noted that the Planned Outage cap may have the perverse outcome of removing the incentive for participants who have exceeded the cap to bother requesting Planned Outages, since refunds will be payable regardless of whether the outage is logged as a Planned Outage or a Forced Outage. It was considered that the Market Rules may need to be amended to address this issue.

- Some participants suggested that there were already adequate incentives for Scheduled Generators to be available at peak times due to their bilateral contract obligations.

- One participant questioned whether a Facility taking a Planned Outage would have any impact on Balancing Prices if that Facility had a very long start-up time. In response it was noted that submissions for the Verve Energy Balancing Portfolio would be different depending on whether low cost generation within the portfolio was available or on a Planned Outage.

The following points were discussed in relation to the proposed changes to the operation of clause 4.11.1(h).

- There was some discussion as to whether it would be more appropriate for a Facility triggering clause 4.11.1(h) to be paid less for each Capacity Credit it received or to simply receive fewer Capacity Credits. It was agreed that the Facility should receive fewer Capacity Credits.

- It was agreed that clause 4.11.1(h) should be a Reviewable Decision.

- It was agreed that review of the outage thresholds should allow the values to be adjusted above or below the values prescribed in the table.

- It was agreed that the counting of outages towards the proposed thresholds should apply only to Facilities once they are in Commercial Operation.

- It was suggested that separate caps should apply for Forced Outages and Planned Outages as the former are much more disruptive than the latter.

- It was noted that the review of the outage caps would be difficult because the WEM had different outage definitions to those used in other markets. It response it was argued that a comparison could be made, although it would require a degree of judgement to be exercised. The MAC Chair noted that if the definitions of outages in the WEM were to be changed significantly then the proposed caps would be reviewed.

- There was a query as to whether it was fair for the IMO to be able to pass on the costs to a Market Participant of the IMO seeking a second opinion from a consultant. In response it was noted that the market should not pay for the costs associated with the IMO seeking a second opinion on a poorly performing generator (which would be the case if the IMO incurred these costs).

The following points were discussed in relation to the proposed amendments to section 4.27.

- The IMO noted that the reason why it proposed to have discretion as to whether or not it requested a performance report from a Market Participant was that the IMO may know the reasons for the relevant Facility's high outage rate in a particular year (for example a periodic major outage) and therefore not need any additional information.

- There was some discussion about whether some or all of the information contained in a report requested under section 4.27 should be made public.

The MAC Chair noted that after considering the views expressed during the forum the IMO would prepare an updated version of the Pre Rule Change Proposal for presentation at the next MAC meeting. The IMO welcomed any informal submissions from participants, in particular where a participant had an alternative practical option to the proposals outlined in PRC_2013_09. *(Note: three Market Participants (Alinta, Community Electricity and Verve Energy) provided informal submissions to the IMO, which the IMO took into consideration when updating the Pre Rule Change Proposal for presentation to the June 2013 MAC meeting.)*

No other public forums or workshops have been held with regard to this Rule Change Proposal.

5. The IMO's Draft 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. A summary of the views expressed in submissions and by the MAC is available in section 4 of this report.

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

5.1. Additional Amendments to the proposed Amending Rules

Following the first public submission period the IMO has made some additional changes to the proposed Amending Rules. A summary of these changes is provided below. The additional amendments are shown in detail in Appendix 1 of this report.

Amendments to the methodology used to impose the cap on refund exempt Planned Outages

In its Rule Change Proposal, the IMO sought to impose a cap on refund exempt Planned Outages by preventing the reduction under clause 4.12.6(b) of a Scheduled Generator's RCOQ for a Planned Outage if this would cause the Facility to exceed its refund exempt cap. If the RCOQ was not reduced for a Planned Outage then the Facility would be charged Facility Reserve Capacity Deficit Refunds under clause 4.26.1A.

The cap was defined in terms of a Facility's "RCOQ Reduced Planned Outage Count", effectively a count of the Trading Intervals in a period for which the RCOQ had been reduced to reflect Planned Outages. The RCOQ Planned Outage Count for the 36 months up to and including the relevant Trading Interval was not permitted to exceed 7800.

The IMO has identified several issues with the proposed methodology.

- The reduction of RCOQs under clause 4.12.6 is based on the outage schedules provided by System Management to the IMO on the Scheduling Day under clause 7.3.4. This means that the RCOQ of a Facility is never reduced for Opportunistic Maintenance requests approved after the transfer of the ex-ante outage schedule for the relevant Trading Day.

- It is not actually necessary to prevent the reduction of a Facility's RCOQ in order to charge Facility Reserve Capacity Deficit Refunds for excessive Planned Outages, as the adjusted RCOQ value is only used in the Net STEM Shortfall calculation in clause 4.26.2.

- The proposed timeframe for the threshold test (36 months up to and including the relevant Trading Interval) would create unnecessary complexities in the IMO's settlement systems, due to the need to store measures by Trading Interval and account correctly for leap years.

To address these issues the IMO has modified the proposed Amending Rules to:

- reverse the proposed changes to the calculation of RCOQs for Scheduled Generators in clause 4.12.6 (as they are not required);

- use the ex-post outage schedules provided by System Management under clause 7.13.1A(b) to source the Planned Outages for assessment; and

- amend the timeframes for the threshold test, so that the status of Planned Outages occurring in a given Trading Day will depend on the "Refund Exempt Planned Outage Count" for the previous 1000 Trading Days.

Changes to the cap on refund exempt Planned Outages

After consideration of the of the submissions received during the first submission period and the historical performance of thermal plant in other jurisdictions the IMO has decided to increase the proposed cap on refund exempt Planned Outages from 14.8% (averaged over 36 months) to 17.5% (averaged over 1000 Trading Days). This equates to a limit of 8400 Trading Intervals or 25 weeks over any 1000 Trading Day period.

The revised cap is consistent with the ranges suggested by Verve Energy (17%-20%, averaged over 36 months) and Bluewaters Power (16.8%-17.5% averaged over 36 months) in their

submissions on the Rule Change Proposal. The cap will allow a generator, for example, to take twelve weeks for a major overhaul, eight weeks for a minor overhaul and an additional five weeks for other maintenance in any 1000 Trading Day period.

Removal of clause 4.27.9

The IMO reviewed its proposed amendments to clause 4.27.9 in response to a number of concerns raised in submissions by Alinta and Verve Energy. The IMO concluded that clause 4.27.9 and its related provisions should be removed altogether from the Market Rules, for the following reasons:

- the proposed cap on refund exempt Planned Outages is already set to an appropriate level and further reductions could be potentially counter-productive or discriminate against some generator types;
- the IMO agrees that the ability to reduce the Planned Outage cap by an arbitrary amount for all Scheduled Generators could impose a regulatory risk on Market Participants;
- the current regime in the Market Rules, under which Facilities can be restricted to individual Planned Outage caps set up to two years in advance, also risks treating Market Participants unfairly, for example if there are changes to the timing of their scheduled outages due to system constraints;
- the trigger events (40 or 80 days in the previous 12 months exceeding the available capacity criterion in clause 4.27.2) have not occurred since market start and the chance of them occurring in the future is negligible;
- if the trigger events did ever occur then it is likely that Planned Outages would already be severely restricted by System Management due to insufficient system reserve; and
- it is extremely unlikely that the IMO would need to undertake the monitoring prescribed in clause 4.27.1 and 4.27.2 to notice a capacity shortage sufficient to trigger clause 4.27.9.

Minor amendments

The IMO has also made changes to the proposed Amending Rules to:

- publish daily Refund Exempt Planned Outage Count values for each Scheduled Generator, to assist Market Participants in monitoring their Planned Outage rates;
- provide details of some of the matters to be assessed as part of the IMO's review of the Planned Outage cap in 2018;
- distinguish between the matters the IMO must consider and may consider when making a decision under clause 4.11.1(h);
- correct an erroneous cross-reference to clause 4.28C.4 in clause 4.12.6;
- clarify the status of the table in clause 4.11.1D within the Market Rules; and
- incorporate a number of minor and typographical amendments to improve the overall integrity of the Amending Rules.

5.2. Wholesale Market Objectives

The IMO considers that the Market Rules as a whole, if amended as presented in section 7 of this report, will not only be consistent with the Wholesale Market Objectives but also allow the Market Rules to better address Wholesale Market Objectives (a), (b) and (d).

The IMO's assessment is presented below:

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

The IMO considers that the proposed amendments would better address Wholesale Market Objective (a) by:

- providing the IMO with the discretion to value frequently unavailable capacity lower than high-availability capacity when assigning Certified Reserve Capacity to a Scheduled Generator;
- providing for the IMO to ensure that Scheduled Generators with high outage rates or excessive Planned Outage rates do not receive a higher effective Reserve Capacity Price per available hour than Scheduled Generators with low outage rates;
- reducing incentives for Market Participants to retain inefficient, high-maintenance Scheduled Generators with poor availability;
- improving the economic efficiency of dispatch by increasing the range of capacity available from Scheduled Generators in the Balancing Merit Order;
- improving accountability for unavailability by limiting the number of Planned Outage hours that can be taken by a Facility without exposure to Facility Reserve Capacity Deficit Refunds;
- establishing a mechanism for the IMO to independently monitor the performance of individual Scheduled Generators with high outage rates, and consider that performance in assigning Certified Reserve Capacity; and
- improving the information available to the IMO in making Certified Reserve Capacity decisions under clause 4.11.1(h).

(b) to encourage competition among generators and retailers in the South West interconnected system, including by facilitating efficient entry of new competitors:

The IMO considers that the proposed amendments would better address Wholesale Market Objective (b) by:

- better matching nominal Reserve Capacity to reliably available capacity;
- increasing the transparency of the IMO's decisions under clause 4.11.1(h); and
- reducing incentives for retention of unreliable, high-maintenance Scheduled Generators, providing greater opportunities for investment in more efficient and reliable generation plant.

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

The IMO considers that the proposed amendments would better address Wholesale Market Objective (d) by:

- ceasing to pay the full Reserve Capacity Price for frequently unavailable capacity;
- increasing the competitive pressure on energy prices by increasing the availability of registered Scheduled Generators bidding into the energy markets;
- requiring Scheduled Generators with excessive Planned Outage rates to compensate the market for their unavailability through payment of Facility Reserve Capacity Deficit Refunds;
- closer scrutiny of the efficiency and effectiveness of Market Participants in improving the availability of their low-availability Scheduled Generators; and
- encouraging the replacement of inefficient, unreliable and high-maintenance Scheduled Generators with more efficient and reliable generating Facilities.

5.3. Practicality and cost of implementation

5.3.1. Cost:

The proposed amendments will require changes to the IMO's IT systems, at an estimated cost of $90,000. Changes will also be required to the Market Procedure for Certification of Reserve Capacity, Market Procedure for Reserve Capacity Performance Monitoring and the IMO's internal procedures; however the costs of these changes fall within the IMO's normal operating budget.

System Management noted that it would incur minor administrative costs if the definitions of Planned Outage rate, Forced Outage rate, Planned Outage Hours and Equivalent Planned Derated Hours were moved from the PSOP: Facility Outages. However, the IMO has decided to progress this change as part of a separate Rule Change Proposal.

Alinta identified (but did not quantify) potential costs to allow it to continuously monitor its Planned Outage levels. No other implementation costs were identified, although Alinta, Bluewaters Power and Verve Energy all noted potential future costs associated with failures to meet the various outage thresholds specified in the proposed amendments.

5.3.2. Practicality:

No issues were identified with the practicality of implementation of the proposed changes.

5.4. Impact on the Regulations

The IMO notes that under the Electricity Industry (Wholesale Electricity Market) Regulations 2004 (WEM Regulations):

- clauses 4.9.9 (to be amended) and 4.27.7 (to be deleted) are Reviewable Decisions; and
- clause 4.27.5 is subject to Category B civil penalties.

The IMO considers that under the proposed Amending Rules it is still appropriate for clause 4.9.9 to be a Reviewable Decision and clause 4.27.5 to remain a Category B civil penalty provision. The IMO has commenced discussions with the Public Utilities Office to progress the necessary amendments to the WEM Regulations to remove clause 4.27.7 as a Reviewable Decision.

6. The IMO's Proposed Decision

The IMO's proposed decision is to accept the Rule Change Proposal as modified by the amendments outlined in section 5.1 and specified in Appendix 1 of this report.

6.1. Reasons for the decision

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

- will allow the Market Rules to better achieve Wholesale Market Objectives (a), (b) and (d);
- are consistent with Wholesale Market Objectives (c) and (e); and
- have the support of the majority of submissions received during the first submission period.

Additional detail outlining the analysis behind the IMO's decision is outlined in section 5 of this report.

6.2. Proposed Commencement details

The Amending Rules are proposed to commence at **8:00 am on 1 May 2014**.

7. Proposed Amending Rules

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

1.4.1. In these Market Rules, unless the contrary intention appears:

…

(r) (**Headings and comments**): headings and comments appearing in boxes in these Market Rules (other than the Refund Table in clause 4.26 and the Outage Rate Limit Table in clause 4.11.1D) are for convenience only and do not affect the interpretation of these Market Rules.

2.17.1. Decisions by the IMO or System Management, as applicable, made under the following clauses are Reviewable Decisions:

(a) clause 2.3.8;

(b) clauses 2.5.6(c) and 2.5.9;

(c) clause 2.6.3A(a);

(d) clause 2.7.7A(a);

(e) clause 2.10.2A(a);

(f) clause 2.10.13;

(g) clause 2.10.14;

(h) clause 2.13.28;

(i) clause 2.28.16;

(j) clauses 2.30.4 and 2.30.8;

(k) clause 2.31.10;

(l) clause 2.32.7E(b);

(m) clause 2.34.7;

(n) clause 2.34.7A(b)(ii);

(o) clause 2.34.7C(c);

(p) clause 2.34.11;

(q) clauses 2.37.1 to 2.37.3;

(r) clause 4.9.9;

(s) clause 4.15.1;

(sA) clause 4.20.11;

(t) ~~clause 4.27.7;~~[Blank]

(u) clause 4.28.7;

(v) clause 7A.1.11; and

(w) clause 10.2.1.

4.9.9. The IMO must decide whether or not to assign Certified Reserve Capacity to a Facility in respect of a Reserve Capacity Cycle, and if so, the quantity to be assigned. If the IMO decides to assign~~s~~ Certified Reserve Capacity to a Facility in respect of a Reserve Capacity Cycle, the IMO must advise the applicant:

(a) of the amount of Certified Reserve Capacity assigned to the Facility in respect of the Reserve Capacity Cycle, as determined in accordance with clause 4.11 or clause 4.9.5(c) (as applicable);

(b) of the initial Reserve Capacity Obligation~~s~~ Quantity set for the Facility, as determined in accordance with clause 4.12 or clause 4.9.5(c) (as applicable);

(c) of any Reserve Capacity Security required as a condition of a Market Participant holding the Certified Reserve Capacity, as determined in accordance with clause 4.13.2 or clause 4.9.5(c) (as applicable);

(d) in the case of Conditional Certified Reserve Capacity, that the certification is subject to the conditions in clause 4.9.5(a) and (b);

(e) upon the request of the applicant, of the calculations upon which the IMO's determinations are based; and

(f) whether the IMO accepted or rejected a proposed alternative value to be used in the calculation of the Required Level for a Facility for which a Market Participant nominated to use the methodology described in clause 4.11.2(b) in its application for certification, as determined in accordance with clause 4.11.2A, if applicable.

4.11.1. Subject to clauses 4.11.7 and 4.11.12, the IMO must apply the following principles in assigning a quantity of Certified Reserve Capacity to a Facility for the Reserve Capacity Cycle for which an application for Certified Reserve Capacity has been submitted in accordance with clause 4.10:

…

(h) subject to clauses 4.11.1B and 4.11.1C, the IMO may decide not to assign any Certified Reserve Capacity to a Facility, or to assign a lesser quantity of Certified Reserve Capacity to a Facility than it would otherwise assign in accordance with this clause 4.11.1, if:

i. the Facility has ~~operated~~ been in Commercial Operation for at least 36 months and has had a Forced Outage rate ~~of greater than 15%~~ or a combined Planned Outage rate and Forced Outage rate ~~of~~ greater than ~~30%~~ the applicable percentage specified in the Outage Rate Limit Table over the preceding 36 months; or

ii. the Facility has ~~operated~~ been in Commercial Operation for less than 36 months, or is yet to commence Commercial Operation~~operation~~, and the IMO has cause to believe that over ~~a period of~~ the first 36 months of Commercial Operation the Facility is likely to have a Forced Outage rate ~~of greater than 15%~~ or a combined Planned Outage rate and Forced Outage rate ~~of~~ greater than ~~30%,~~ the applicable percentage specified in the Outage Rate Limit Table,

where the Planned Outage rate and the Forced Outage rate for a Facility for a period ~~will be~~ are calculated in accordance with the Power System Operation Procedure~~. The IMO may consult with System Management in deciding whether or not to refuse to grant Certified Reserve Capacity under this clause 4.11.1(h)~~;

…

4.11.1A. The IMO must publish the reasons for a decision made under clause 4.11.1(h) on the Market Web Site to the extent those reasons do not contain any confidential information.

4.11.1B. In making a decision under clause 4.11.1(h), the IMO may:

(a) seek such additional information from the relevant Market Participant that the IMO considers is relevant to the exercise of its discretion;

(b) use information provided in reports related to the Facility submitted by:

i. the Market Participant under clause 4.27.3; and

ii. another person under clause 4.27.6; and

(c) consult with:

i. System Management; and

ii. any person the IMO considers suitably qualified to provide an opinion on issues relevant to the exercise of the IMO's discretion.

4.11.1C. In making a decision under clause 4.11.1(h), the IMO:

(a) must be satisfied that its decision under clause 4.11.1(h) would not, on balance, be contrary to the Wholesale Market Objectives;

(b) may:

i. consider the extent to which the Reserve Capacity that can be provided by the Facility is necessary to meet the Reserve Capacity Target;

ii. consider whether the Reserve Capacity provided by the Facility is of material importance to the SWIS, having regard to:

1. the size of the Facility;

2. the operational characteristics of the Facility;

3. the extent to which the Facility contributes to the security of the system through fuel diversity or location; and

4. the demonstrated reliability of the Facility;

iii. assess the effectiveness of strategies undertaken by the applicant in the previous three years to reduce outages, and consider the likelihood that strategies proposed by the applicant to maximise the availability of the Facility in the relevant Capacity Cycle will be effective;

iv. consider whether a decision to not assign Certified Reserve Capacity to the Facility is likely to result in a material decrease in competition in at least one market;

v. consider any positive or negative impacts on the long term price of electricity supplied to consumers that might arise if Certified Reserve Capacity was not assigned to the Facility; and

vi. consider any other matter the IMO determines to be relevant.

4.11.1D. The relevant outage criteria to apply under clause 4.11.1(h) in a particular Capacity Year is as set out in the following table:

OUTAGE RATE LIMIT TABLE

For IMO decisions related to the Capacity Year	Forced Outage rate greater than	Combined Planned Outage rate and Forced Outage rate greater than
Prior to 2016/17	15%	30%
2016/17	14%	28%
2017/18	13%	26%
2018/19	12%	24%
2019/20	11%	22%
2020/21 onwards	10%	20%

4.11.1E. The IMO must undertake a review, to be completed by 31 December 2018, of the operation of clause 4.11.1(h) in which it must consider the appropriate thresholds under clause 4.11.1D for Capacity Years after 2020/2021. The review must include, at a minimum, an assessment of:

(a) the availability performance of the generation sector in the Wholesale Electricity Market compared with analogous generating plant in other markets, using Industry Standard Generation Performance Indicators for benchmarking;

(b) the number of Facilities in the SWIS to which the criteria in clause 4.11.1(h) have applied in each of the previous five Capacity Years; and

(c) the impact on the Wholesale Electricity Market of decisions made by the IMO under clause 4.11.1(h) in the previous five Capacity Years.

4.12.6. Subject to clause 4.12.7, any initial Reserve Capacity Obligation Quantity set in accordance with clauses 4.12.4, 4.12.5, 4.28B.4, or ~~4.28C.4~~ 4.28C.11 is to be reduced once the Reserve Capacity Obligations take effect, as follows:

…

(b) where System Management notifies the IMO under clause 7.3.4 of a Consequential Outage or a Planned Outage in respect of a Facility and a Trading Interval, ~~subject to clause 4.27.9, during Trading Intervals where there is a Consequential Outage or a Planned Outage for a Facility provided to the IMO by System Management in accordance with clause 7.3.4,~~ the IMO must reduce the Reserve Capacity Obligation Quantity for that Facility and that Trading Interval, after taking into account any adjustments in accordance with

~~paragraph (a)~~ clause 4.12.6(a), to reflect the amount of capacity unavailable due to that outage; and

…

4.26.1A. The IMO must calculate the Reserve Capacity Deficit refund for each Facility ("**Facility Reserve Capacity Deficit Refund**") for each Trading Month m as the lesser of:

(a) the sum over all Trading Intervals t in Trading Month m of the product of:

i the Off-Peak Trading Interval Rate or Peak Trading Interval Rate determined in accordance with the Refund Table applicable to Trading Interval t; and

ii the Reserve Capacity Deficit in Trading Interval t,

where the Reserve Capacity Deficit for a Facility is equal to whichever of the following applies:

iii. if the Facility is required to have submitted a Forced Outage under clause 3.21.4, or is a Scheduled Generator that has taken a Non-Refund Exempt Planned Outage, the total Forced Outage and Non-Refund Exempt Planned Outage in that Trading Interval measured in MW; or

…

4.26.1C. Where System Management notifies the IMO under clause 7.13.1A(b) of the Planned Outage of a Scheduled Generator in a Trading Interval, the IMO must determine that Planned Outage to be:

(a) if the Refund Exempt Planned Outage Count for the Facility, calculated over the 1000 Trading Days preceding the Trading Day in which the Trading Interval falls, is less than 8400 – a Refund Exempt Planned Outage; or

(b) otherwise - a Non-Refund Exempt Planned Outage.

4.26.1D. The IMO must undertake a review, to be completed by 31 December 2018, of whether the limit for the Refund Exempt Planned Outage Count referred to in clause 4.26.1C should be modified to better address the Wholesale Market Objectives. The review must include, at a minimum, an assessment of:

(a) variations in Planned Outage rates and Forced Outage rates of Scheduled Generators since the introduction of the limit on Refund Exempt Planned Outages;

(b) for each Scheduled Generator and each year since the introduction of the limit on Refund Exempt Planned Outages:

i. the number of Equivalent Planned Outage Hours for which Facility Reserve Capacity Deficit Refunds were payable; and

ii. the total amount of Facility Reserve Capacity Deficit Refund associated with Non-Refund Exempt Planned Outages; and

(c) the level of participation by Scheduled Generators in the Reserve Capacity Mechanism in each year since the introduction of the limit on Refund Exempt Planned Outages; and

(d) changes in the mix of Scheduled Generators that have participated in the Reserve Capacity Mechanism in each year since the introduction of the limit on Refund Exempt Planned Outages.

4.26.2. The IMO must determine the net STEM shortfall ("Net STEM Shortfall") in Reserve Capacity supplied by each Market Participant p holding Capacity Credits associated with a generation system in each Trading Interval t of Trading Day d and Trading Month m as:

SF(p,m,d,t) = Max(~~RTFO~~RCDF(p,d,t), RCOQ(p,d,t) - A(p,d,t)) - ~~RTFO~~RCDF(p,d,t)

Where:

A(p,d,t) = Min(RCOQ(p,d,t), CAPA(p,d,t));

RCOQ(p,d,t) for Market Participant p and Trading Interval t of Trading Day d is equal to:

(a) the total Reserve Capacity Obligation Quantity of Market Participant p's unregistered facilities that have Reserve Capacity Obligations, excluding Loads that can be interrupted on request; plus

(b) the sum of the product of:

i. the factor described in clause 4.26.2B as it applies to Market Participant p's Registered Facilities; and

ii. the Reserve Capacity Obligation Quantity for each Facility,

for all Market Participant p's Registered Facilities, excluding Demand Side Programmes,

CAPA(p,d,t) is for Market Participant p and Trading Interval t of Trading Day d:

(c) equal to RCOQ(p,d,t) for a Trading Interval where the STEM Auction has been suspended by the IMO in accordance with clause 6.10;

(d) subject to clause 4.26.2(c), for the case where Market Participant p is not Verve Energy, the sum of:

i. the Reserve Capacity Obligation Quantities in Trading Interval t of that Market Participant's Interruptible Loads; plus

ii. the MW quantity calculated by doubling the net MWh quantity of energy sent out by Facilities registered by that Market Participant during that Trading Interval calculated as the Net Contract Position less the shortfall as indicated by the applicable Resource Plan; plus

iiA. if a STEM submission does not exist for that Trading Interval, the MW quantity calculated by doubling the total MWh quantity of energy to be consumed by that Market Participant including demand associated with any Interruptible Load, but excluding demand associated with any Dispatchable Load during that Trading Interval as indicated by the applicable Resource Plan; plus

iii. the MW quantity calculated by doubling the total MWh quantity covered by the STEM Offers which were not scheduled and the STEM Bids which were scheduled in the relevant STEM Auction, determined by the IMO for that Market Participant under clause 6.9 for Trading Interval t, corrected for Loss Factor adjustments so as to be a sent out quantity in accordance with clause 4.26.2A; plus

iv. double the total MWh quantity to be provided as Ancillary Services as specified by the IMO in accordance with clause 6.3A.2(e)(i) for that Market Participant corrected for Loss Factor adjustments so as to be a sent out quantity in accordance with clause 4.26.2A; plus

v. the greater of zero and (BSFO(p,d,t) – RTFO(p,d,t)); and

(e) subject to clause 4.26.2(c), for the case where Market Participant p is Verve Energy, the sum of:

i. the sum of the Reserve Capacity Obligation Quantities in Trading Interval t of that Market Participant's Interruptible Loads; plus

ii. the MW quantity calculated by doubling the total MWh quantity of the Net Contract Position quantity of that Market Participant for Trading Interval t, corrected for Loss Factor adjustments so as to be a sent out quantity in accordance with clause 4.26.2A; plus

iii. the MW quantity calculated by doubling the total MWh quantity of the STEM Offers which were not scheduled and the STEM Bids which were scheduled in the relevant STEM Auction, determined by the IMO for that Market Participant under clause 6.9 for Trading Interval t, corrected for Loss Factor adjustments so as to be a sent out quantity in accordance with clause 4.26.2A; plus

iv. double the total MWh quantity to be provided as Ancillary Services as specified by the IMO in accordance with clause 6.3A.2(e)(i) for Verve Energy corrected for Loss Factor adjustments so as to be a sent out quantity in accordance with clause 4.26.2A; plus

v. the greater of zero and (BSFO(p,d,t) – RTFO(p,d,t)).

RCDF(p,d,t) = RTFO(p,d,t) + RTNREPO(p,d,t);

RTNREPO(p,d,t) = Sum (f∈F, Max(0, NREPO(f,d,t) – BSPO(f,d,t));

NREPO(f,d,t) is the total MW quantity of Non-Refund Exempt Planned Outage associated with Facility f for Trading Interval t of Trading Day d;

BSPO(f,d,t) is the total MW quantity of Planned Outage associated with Facility f before the STEM Auction for Trading Interval t of Trading Day d, as provided to the IMO by System Management in accordance with clause 7.3.4;

F denotes the set of Scheduled Generators registered by Market Participant p, where "f" is used to refer to a member of that set;

BSFO(p,d,t) is the total MW quantity of Forced Outage associated with Market Participant p before the STEM Auction for Trading Interval t of Trading Day d, where this is the sum over all the Market Participant's Registered Facilities of the lesser of the Reserve Capacity Obligation Quantity of the Facility for Trading Interval t and the MW Forced Outage of the Facility for Trading Interval t as provided to the IMO by System Management in accordance with clause 7.3; and

RTFO(p,d,t) is the total MW quantity of Forced Outage associated with Market Participant p in real-time for Trading Interval t of Trading Day d, where this is the sum over all the Market Participant's Registered Facilities of the lesser of the Reserve Capacity Obligation Quantity of the Facility for Trading Interval t and the MW Forced Outage of the Facility for Trading Interval t as provided to the IMO by System Management in accordance with clause 7.13.1A(b).

4.27.1. ~~The IMO must monitor the total availability of capacity in the SWIS on a daily basis. The total available capacity should equal:~~[Blank]

~~(a) the total Capacity Credits held by Market Participants on that day; less~~

~~(b) the maximum amount of capacity unavailable at any time due to Planned Outages.~~

4.27.2. By the twenty~~-~~fifth day of each month, the IMO must assess the number of ~~days in the preceding 12 calendar months where the total available capacity in the SWIS dropped below 80% (during the Hot Season), and 70% (in either the Intermediate Season or Cold Season), of the total Capacity Credits held by Market Participants for more than six hours on the day~~ Equivalent Planned Outage Hours taken in the preceding 12 Trading Months by each Facility assigned Capacity Credits for the current Capacity Year.

4.27.3. If the number of ~~days determined in accordance with clause 4.27.2 exceeds 40, then the IMO must require reports to be filed by those Market Participants holding Capacity Credits for each Facility which~~ Equivalent Planned Outage Hours for a Facility, as determined under clause 4.27.2, exceeds 1750 hours for the preceding 12 Trading

Months, the IMO may require the Market Participant holding Capacity Credits for that Facility to provide to the IMO:

(a) a report as described in clause 4.27.4~~has been unavailable due to Planned Outages for more than 1000 hours during the preceding 12 calendar months~~; and

(b) a report as described in clause 4.27.4A, to be provided at specified intervals, but not more frequently than once per quarter~~has not been included in such a report during the preceding 12 calendar months~~.

4.27.3A. In making its decision whether to require a report under clause 4.27.3, the IMO must assess whether the number of Equivalent Planned Outage Hours taken by the Facility in the previous 12 Trading Months was attributable to specific, infrequent events or is indicative of an underlying performance deficiency, and may consider any matters it considers relevant in making this assessment. The IMO may consult System Management in deciding whether or not to require a report.

4.27.4. A report provided to the IMO under ~~The reports described in~~ clause 4.27.3(a) must include:

(a) explanations of all Planned Outages taken by the Facility in the preceding 12 ~~calendar months~~ Trading Months;

(b) a statement of the expected maximum number of days of Planned Outages to be taken by the Facility in each of the next ~~24~~ 36 ~~months~~ Trading Months commencing from the ~~month~~ Trading Month in which the report is requested, including adequate explanation to make clear the reason for each Planned Outage; ~~and~~

(bA) the relationship of the Planned Outages to the long term asset management strategy and established maintenance plan for the Facility;

(c) measures being undertaken or proposed by the Market Participant to increase the availability of the Facility~~.~~, and their actual and anticipated effect on the frequency of Planned Outages; and

(d) any other information concerning the availability of the Facility that the IMO may request.

4.27.4A. A report provided to the IMO under clause 4.27.3(b) must include:

(a) descriptions of the measures proposed, being undertaken or already undertaken by the Market Participant to increase the availability of the Facility;

(b) the target and actual availability and reliability of the Facility as measured by Industry Standard Generation Performance Indicators; and

(c) explanation of any variation between expected and actual improvement of the availability of the Facility as a result of the measures taken.

4.27.5. A Market Participant must:

(a) provide a report described in clause 4.27.3(a) to the IMO in a format specified in the Reserve Capacity Procedure within 20 Business Days of being requested to do so~~.~~; and

(b) provide a report described in clause 4.27.3(b) to the IMO in a format specified in the Reserve Capacity Procedure by the date specified by the IMO under clause 4.27.3(b).

4.27.6. The IMO may ~~must~~ consult with System Management on the implications of ~~the~~ a report provided under clause 4.27.5, and may also consult, at the Market Participant's expense, with any person the IMO considers suitably qualified to provide an opinion on the report. The IMO may ask the person to provide an opinion on the report generally, or to limit the scope of the opinion to specified matters covered in the report.

4.27.7. ~~If the IMO considers the number of days reported in accordance with clause 4.27.4(b) to be unjustified based on good industry practice it may, at its sole discretion, limit the number of days on which Planned Outages are to be taken by the Facility in each of the next 24 months for the purposes of clause 4.27.8 and 4.27.9 and must notify the Market Participant who filed the report described in clause 4.27.3 of the limit.~~ [Blank]

4.27.8. ~~If the IMO limits the number of days in accordance with clause 4.27.7 then the modified value is to supersede the corresponding value specified in the report described in clause 4.27.4.~~ [Blank]

4.27.9. ~~If the number of days determined in accordance with clause 4.27.2 exceeds 80 then the IMO must:~~[Blank]

~~(a) notify all Market Participants that this has occurred; and~~

~~(b) during the 12 months commencing from the first Trading Day of the following month, cease to adjust Reserve Capacity Obligation Quantities under clause 4.12.6(b) in response to Planned Outages for Facilities:~~

~~i. referred to in clause 4.27.3; and~~

~~ii. for which the number of days of Planned Outage during that 12 month period has exceeded the total number of days of Planned Outage predicted for that 12 month period in accordance with clause 4.27.4(b), as modified by clause 4.27.8.~~

10.5.1. The IMO must set the class of confidentiality status for the following information under clause 10.2.1, as Public and the IMO must make each item of information available from the Market Web Site after that item of information becomes available to the IMO:

…

(zG) documentation of the functionality of:

i. any software used to run the Reserve Capacity Auction;

ii. the STEM Auction software; and

iii. the Settlement System software; ~~and~~

(zH) information relating to Commissioning Tests which is supplied under clause 3.21A.16 by System Management~~.~~; and

(zI) the Refund Exempt Planned Outage Count for each Scheduled Generator for each of the 1000 Trading Days up to and including the most recent Trading Day for which System Management has provided a schedule to the IMO in accordance with clause 7.13.1A(b).

Glossary

Equivalent Planned Outage Hours: means, in respect of a Facility, the sum of the "Planned Outage Hours" and the "Equivalent Planned Derated Hours" for the Facility as calculated in accordance with the Power System Operation Procedure.

Industry Standard Generation Performance Indicators: means the most recent edition of the IEEE Standard Definitions for Use in Reporting Electric Generating Unit Reliability, Availability, and Productivity (IEEE 762), as published by the Institute of Electrical and Electronics Engineers, or appropriate equivalent.

Non-Refund Exempt Planned Outage: means a Planned Outage of a Scheduled Generator for which a Facility Reserve Capacity Deficit Refund is payable, as determined by the IMO under clause 4.26.1C.

Outage Rate Limit Table: The table titled "Outage Rate Limit Table" and set out in clause 4.11.1D.

Refund Exempt Planned Outage: means a Planned Outage of a Scheduled Generator for which a Facility Reserve Capacity Deficit Refund is not payable, as determined by the IMO under clause 4.26.1C.

Refund Exempt Planned Outage Count: means, in respect of a Scheduled Generator and a period of time, the sum over all Trading Intervals in that period of:

(a) zero, if the Trading Interval occurs before 8:00 AM on 1 March 2014 or if no Capacity Credits were associated with the Facility in the Trading Interval; or

(b) the MW quantity of Refund Exempt Planned Outage for the Facility in the Trading Interval, divided by the number of Capacity Credits associated with the Facility in the Trading Interval.

Appendix 1 Further Amendments to the Proposed Amending Rules

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

1.4.1. In these Market Rules, unless the contrary intention appears:

…

(r) (**Headings and comments**): headings and comments appearing in boxes in these Market Rules (other than the Refund Table in clause 4.26 and the Outage Rate Limit Table in clause 4.11.1D) are for convenience only and do not affect the interpretation of these Market Rules.

4.9.9. The IMO must decide whether or not to assign Certified Reserve Capacity to a Facility in respect of a Reserve Capacity Cycle, and if so, the quantity to be assigned. If the IMO decides to assign Certified Reserve Capacity to a Facility in respect of a Reserve Capacity Cycle, the IMO must advise the applicant:

(a) of the amount of Certified Reserve Capacity assigned to the Facility in respect of the Reserve Capacity Cycle, as determined in accordance with clause 4.11 or clause 4.9.5(c) (as applicable);

(b) of the initial Reserve Capacity Obligation~~s~~ Quantity set for the Facility, as determined in accordance with clause 4.12 or clause 4.9.5(c) (as applicable);

…

4.11.1. Subject to clauses 4.11.7 and 4.11.12, the IMO must apply the following principles in assigning a quantity of Certified Reserve Capacity to a Facility for the Reserve Capacity Cycle for which an application for Certified Reserve Capacity has been submitted in accordance with clause 4.10:

…

(h) subject to clauses 4.11.1B and 4.11.1C, the IMO may decide not to assign any Certified Reserve Capacity to a Facility, or to assign a ~~specified~~ lesser quantity of Certified Reserve Capacity to a Facility than it would otherwise assign in accordance with this clause 4.11.1, if:

i. the Facility has been in Commercial Operation for at least 36 months and has had a Forced Outage rate or a combined Planned Outage rate and Forced Outage rate greater than the applicable percentage specified in ~~clause 4.11.1D~~ the Outage Rate Limit Table over the preceding 36 months; or

ii. the Facility has been in Commercial Operation for less than 36 months, or is yet to commence Commercial Operation, and the IMO has cause to believe that over the first 36 months of Commercial Operation the Facility is likely to have a Forced Outage rate or a combined Planned

Outage rate and Forced Outage rate greater than the applicable percentage specified in ~~clause 4.11.1D~~ the Outage Rate Limit Table,

where the Planned Outage rate and the Forced Outage rate for a Facility for a period ~~will be~~ are calculated in accordance with the Power System Operation Procedure;

…

4.11.1B. In making a decision under clause 4.11.1(h), the IMO may:

(a) seek such additional information from the relevant Market Participant that the IMO considers is relevant to the exercise of its discretion;

(b) use information provided in reports related to the Facility submitted by:

i. the Market Participant under clause~~s~~ 4.27.3 ~~or 4.27.3A~~; and

ii. another person under clause 4.27.6; and

(c) consult with:

i. System Management; and

ii. any person the IMO considers suitably qualified to provide an opinion on issues relevant to the exercise of the IMO's discretion.

4.11.1C. In making a decision under clause 4.11.1(h), the IMO ~~must~~:

(a) must be satisfied that its decision under clause 4.11.1(h) would not, on balance, be contrary to the Wholesale Market Objectives;

(b) may:

~~(a)~~i. consider the extent to which the Reserve Capacity that can be provided by the Facility is necessary to meet the Reserve Capacity Target;

~~(b)~~ii. consider whether the Reserve Capacity provided by the Facility is of material importance to the SWIS, having regard to:

~~i.~~1. the size of the Facility;

~~ii.~~2. the operational characteristics of the Facility;

~~iii.~~3. the extent to which the Facility contributes to the security of the system through fuel diversity or location; and

~~iv.~~4. the demonstrated reliability of the Facility;

~~(c)~~iii. assess the effectiveness of strategies undertaken by the applicant in the previous three years to reduce outages, and consider the likelihood that strategies proposed by the applicant to maximise the availability of the Facility in the relevant Capacity Cycle will be effective;

~~(d)~~iv. consider whether a decision to not assign Certified Reserve Capacity to the Facility is likely to result in a material decrease in competition in at least one market;

~~(e)~~v. consider any positive or negative impacts on the long term price of electricity supplied to consumers that might arise if Certified Reserve Capacity was not assigned to the Facility; and

~~(f)~~vi. consider any other matter the IMO determines to be relevant~~; and~~.

~~(g) be satisfied that its decision under clause 4.11.1(h) would not, on balance, be contrary to the Wholesale Market Objectives.~~

4.11.1D. The relevant outage criteria to apply under clause 4.11.1(h) in a particular Capacity Year is as set out in the following table:

OUTAGE RATE LIMIT TABLE

For IMO decisions related to the Capacity Year	Forced Outage rate greater than	Combined Planned Outage rate and Forced Outage rate greater than
Prior to 2016/17	15%	30%
2016/17	14%	28%
2017/18	13%	26%
2018/19	12%	24%
2019/20	11%	22%
2020/21 onwards	10%	20%

4.12.6. Subject to clause 4.12.7, any initial Reserve Capacity Obligation Quantity set in accordance with clauses 4.12.4, 4.12.5, 4.28B.4, or ~~4.28C.4~~ 4.28C.11 is to be reduced once the Reserve Capacity Obligations take effect, as follows:

…

(b) where System Management notifies the IMO under clause 7.3.4 of a Consequential Outage or a Planned Outage in respect of a Facility and a Trading Interval, ~~subject to clause 4.12.9, where System Management notifies the IMO of a Planned Outage or Consequential Outage for a Facility under clause 7.3.4,~~ the IMO must reduce the Reserve Capacity Obligation Quantity for that Facility and that Trading Interval, after taking into account any adjustments in accordance with clause 4.12.6(a), to reflect the amount of capacity unavailable due to that outage; and

…

~~4.12.9. The IMO must not reduce the Reserve Capacity Obligation Quantity of a Facility for a Trading Interval under clause 4.12.6(b) in respect of a Planned Outage, if this would result in the RCOQ Reduced Planned Outage Count for that Facility over the 36 months up to and including the Trading Interval exceeding 7800.~~

~~4.12.10. The IMO must undertake a review, to be completed by 31 December 2018, of whether the limit for the RCOQ Reduced Planned Outage Count referred to in clause 4.12.9 should be altered to better meet the Wholesale Market Objectives.~~

4.26.1A. The IMO must calculate the Reserve Capacity Deficit refund for each Facility ("**Facility Reserve Capacity Deficit Refund**") for each Trading Month m as the lesser of:

(a) the sum over all Trading Intervals t in Trading Month m of the product of:

i the Off-Peak Trading Interval Rate or Peak Trading Interval Rate determined in accordance with the Refund Table applicable to Trading Interval t; and

ii the Reserve Capacity Deficit in Trading Interval t,

where the Reserve Capacity Deficit for a Facility is equal to whichever of the following applies:

iii. if the Facility is required to have submitted a Forced Outage under clause 3.21.4, or is a Scheduled Generator that has taken a Non-Refund Exempt Planned Outage ~~Non-RCOQ Adjusted Planned Outage~~, the total Forced Outage and Non-Refund Exempt Planned Outage ~~Non-RCOQ Adjusted Planned Outage~~ in that Trading Interval measured in MW; or

…

4.26.1C. Where System Management notifies the IMO under clause 7.13.1A(b) of the Planned Outage of a Scheduled Generator in a Trading Interval, the IMO must determine that Planned Outage to be:

(a) if the Refund Exempt Planned Outage Count for the Facility, calculated over the 1000 Trading Days preceding the Trading Day in which the Trading Interval falls, is less than 8400 – a Refund Exempt Planned Outage; or

(b) otherwise - a Non-Refund Exempt Planned Outage.

4.26.1D. The IMO must undertake a review, to be completed by 31 December 2018, of whether the limit for the Refund Exempt Planned Outage Count referred to in clause 4.26.1C should be modified to better address the Wholesale Market Objectives. The review must include, at a minimum, an assessment of:

(a) variations in Planned Outage rates and Forced Outage rates of Scheduled Generators since the introduction of the limit on Refund Exempt Planned Outages;

(b) for each Scheduled Generator and each year since the introduction of the limit on Refund Exempt Planned Outages:

i. the number of Equivalent Planned Outage Hours for which Facility Reserve Capacity Deficit Refunds were payable; and

ii. the total amount of Facility Reserve Capacity Deficit Refund associated with Non-Refund Exempt Planned Outages; and

(c) the level of participation by Scheduled Generators in the Reserve Capacity Mechanism in each year since the introduction of the limit on Refund Exempt Planned Outages; and

(d) changes in the mix of Scheduled Generators that have participated in the Reserve Capacity Mechanism in each year since the introduction of the limit on Refund Exempt Planned Outages.

4.26.2. The IMO must determine the net STEM shortfall ("Net STEM Shortfall") in Reserve Capacity supplied by each Market Participant p holding Capacity Credits associated with a generation system in each Trading Interval t of Trading Day d and Trading Month m as:

SF(p,m,d,t) = Max(~~RTFO~~RCDF(p,d,t), RCOQ(p,d,t) - A(p,d,t)) - ~~RTFO~~RCDF(p,d,t)

Where:

A(p,d,t) = Min(RCOQ(p,d,t), CAPA(p,d,t));

RCOQ(p,d,t) for Market Participant p and Trading Interval t of Trading Day d is equal to:

(a) the total Reserve Capacity Obligation Quantity of Market Participant p's unregistered facilities that have Reserve Capacity Obligations, excluding Loads that can be interrupted on request; plus

(b) the sum of the product of:

i. the factor described in clause 4.26.2B as it applies to Market Participant p's Registered Facilities; and

ii. the Reserve Capacity Obligation Quantity for each Facility,

for all Market Participant p's Registered Facilities, excluding Demand Side Programmes,

CAPA(p,d,t) is for Market Participant p and Trading Interval t of Trading Day d:

(c) equal to RCOQ(p,d,t) for a Trading Interval where the STEM Auction has been suspended by the IMO in accordance with clause 6.10;

(d) subject to clause 4.26.2(c), for the case where Market Participant p is not Verve Energy, the sum of:

i. the Reserve Capacity Obligation Quantities in Trading Interval t of that Market Participant's Interruptible Loads; plus

ii. the MW quantity calculated by doubling the net MWh quantity of energy sent out by Facilities registered by that Market Participant during that Trading Interval calculated as the Net Contract Position less the shortfall as indicated by the applicable Resource Plan; plus

iiA. if a STEM submission does not exist for that Trading Interval, the MW quantity calculated by doubling the total MWh quantity of energy to be consumed by that Market Participant including demand associated with any Interruptible Load, but excluding demand associated with any Dispatchable Load during that Trading Interval as indicated by the applicable Resource Plan; plus

iii. the MW quantity calculated by doubling the total MWh quantity covered by the STEM Offers which were not scheduled and the STEM Bids which were scheduled in the relevant STEM Auction, determined by the IMO for that Market Participant under clause 6.9 for Trading Interval t, corrected for Loss Factor adjustments so as to be a sent out quantity in accordance with clause 4.26.2A; plus

iv. double the total MWh quantity to be provided as Ancillary Services as specified by the IMO in accordance with clause 6.3A.2(e)(i) for that Market Participant corrected for Loss Factor adjustments so as to be a sent out quantity in accordance with clause 4.26.2A; plus

v. the greater of zero and (BSFO(p,d,t) – RTFO(p,d,t)); and

(e) subject to clause 4.26.2(c), for the case where Market Participant p is Verve Energy, the sum of:

i. the sum of the Reserve Capacity Obligation Quantities in Trading Interval t of that Market Participant's Interruptible Loads; plus

ii. the MW quantity calculated by doubling the total MWh quantity of the Net Contract Position quantity of that Market Participant for Trading Interval t, corrected for Loss Factor adjustments so as to be a sent out quantity in accordance with clause 4.26.2A; plus

iii. the MW quantity calculated by doubling the total MWh quantity of the STEM Offers which were not scheduled and the STEM Bids which were scheduled in the relevant STEM Auction, determined by the IMO for that Market Participant under clause 6.9 for Trading Interval t, corrected for Loss Factor adjustments so as to be a sent out quantity in accordance with clause 4.26.2A; plus

iv. double the total MWh quantity to be provided as Ancillary Services as specified by the IMO in accordance with clause

6.3A.2(e)(i) for Verve Energy corrected for Loss Factor adjustments so as to be a sent out quantity in accordance with clause 4.26.2A; plus

v. the greater of zero and (BSFO(p,d,t) – RTFO(p,d,t)).

RCDF(p,d,t) = RTFO(p,d,t) + RTNREPO(p,d,t);

RTNREPO(p,d,t) = Sum (f∈F, Max(0, NREPO(f,d,t) – BSPO(f,d,t));

NREPO(f,d,t) is the total MW quantity of Non-Refund Exempt Planned Outage associated with Facility f for Trading Interval t of Trading Day d;

BSPO(f,d,t) is the total MW quantity of Planned Outage associated with Facility f before the STEM Auction for Trading Interval t of Trading Day d, as provided to the IMO by System Management in accordance with clause 7.3.4;

F denotes the set of Scheduled Generators registered by Market Participant p, where "f" is used to refer to a member of that set;

BSFO(p,d,t) is the total MW quantity of Forced Outage ~~and Non-RCOQ Adjusted Planned Outage~~ associated with Market Participant p before the STEM Auction for Trading Interval t of Trading Day d, where this is the sum over all the Market Participant's Registered Facilities of the lesser of the Reserve Capacity Obligation Quantity of the Facility for Trading Interval t and the ~~sum of the~~ MW Forced Outage ~~and MW Non-RCOQ Adjusted Planned Outage~~ of the Facility for Trading Interval t as provided to the IMO by System Management in accordance with clause 7.3; and

RTFO(p,d,t) is the total MW quantity of Forced Outage ~~and Non-RCOQ Adjusted Planned Outage~~ associated with Market Participant p in real-time for Trading Interval t of Trading Day d, where this is the sum over all the Market Participant's Registered Facilities of the lesser of the Reserve Capacity Obligation Quantity of the Facility for Trading Interval t and the ~~sum of the~~ MW Forced Outage ~~and MW Non-RCOQ Adjusted Planned Outage~~ of the Facility for Trading Interval t as provided to the IMO by System Management in accordance with clause 7.13.1A(b).

4.27.1. ~~The IMO must monitor the total availability of capacity in the SWIS on a daily basis. The total available capacity should equal:~~[Blank]

~~(a) the total Capacity Credits held by Market Participants on that day; less~~

~~(b) the maximum amount of capacity unavailable at any time due to Planned Outages.~~

4.27.2. By the twenty ~~-~~fifth day of each month, the IMO must assess the number of ~~days in the preceding 12 calendar months where the total available capacity in the SWIS dropped below 80% (during the Hot Season), and 70% (in either the Intermediate Season or Cold Season), of the total Capacity Credits held by Market Participants for more than six hours on the day~~ Equivalent Planned Outage Hours taken in the preceding 12

Trading Months by each Facility assigned Capacity Credits for the current Capacity Year.

~~4.27.2A. By the twenty fifth day of each month, the IMO must assess the number of Equivalent Planned Outage Hours taken in the preceding 12 calendar months by each Facility assigned Capacity Credits for the current Capacity Year.~~

4.27.3. If the number of ~~days determined in accordance with clause 4.27.2 exceeds 40, then the IMO must require reports to be filed by those Market Participants holding Capacity Credits for each Facility which~~ Equivalent Planned Outage Hours for a Facility, as determined under clause 4.27.2, exceeds 1750 hours for the preceding 12 Trading Months, the IMO may require the Market Participant holding Capacity Credits for that Facility to provide to the IMO:

(a) a report as described in clause 4.27.4~~has taken more than 1000 Equivalent Planned Outage Hours during the preceding 12 calendar months~~; and

(b) a report as described in clause 4.27.4A, to be provided at specified intervals, but not more frequently than once per quarter~~has not been included in such a report during the preceding 12 calendar months~~.

~~4.27.3A. If the number of Equivalent Planned Outage Hours for a Facility, as determined under clause 4.27.2A, exceeds 1750 hours for the preceding 12 calendar months, the IMO may require the Market Participant holding Capacity Credits for that Facility to provide to the IMO:~~

~~(a) an explanatory report as described in clause 4.27.4; and~~

~~(b) performance improvement reports at specified intervals (not more frequently than once per quarter) on the effectiveness of measures being taken by the Market Participant to improve the availability of the Facility.~~

4.27.3~~B~~A. In making its decision whether to require a report under clause 4.27.3~~A~~, the IMO must assess whether the number of Equivalent Planned Outage Hours taken by the Facility in the previous 12~~ months~~ Trading Months was attributable to~~ a~~ specific, infrequent ~~occurrence~~ events or is indicative of an underlying performance deficiency, and may consider any matters it considers relevant in making this assessment. The IMO may consult System Management in deciding whether or not to require a report.

4.27.4. A report provided to the IMO under ~~The reports described in clause~~ 4.27.3(a) ~~and 4.27.3A(a)~~ must include:

(a) explanations of all Planned Outages taken by the Facility in the preceding 12 ~~calendar months~~ Trading Months;

(b) a statement of the expected maximum number of days of Planned Outages to be taken by the Facility in each of the next 36~~ months~~ Trading Months commencing from the~~ month~~ Trading Month in which the report is requested,

including adequate explanation to make clear the reason for each Planned Outage;

(bA) the relationship of the Planned Outages to the long term asset management strategy and established maintenance plan for the Facility;

(c) measures being undertaken or proposed by the Market Participant to increase the availability of the Facility, and their actual and anticipated effect on the frequency of Planned Outages; and

(d) any other information concerning the availability of the Facility that the IMO may request.

4.27.4A. A report provided to the IMO under ~~The reports described in~~ clause 4.27.3~~A~~(b) must include:

(a) descriptions of the measures proposed, being undertaken or already undertaken by the Market Participant to increase the availability of the Facility;

(b) the target and actual availability and reliability of the Facility as measured by Industry Standard Generation Performance Indicators; and

(c) explanation of any variation between expected and actual improvement of the availability of the Facility as a result of the measures taken.

4.27.5. A Market Participant must:

(a) provide a report described in clause 4.27.3(a) ~~or clause 4.27.3A(a)~~ to the IMO in a format specified in the Reserve Capacity Procedure within 20 Business Days of being requested to do so; and

(b) provide a report described in clause 4.27.3~~A~~(b) to the IMO in a format specified in the Reserve Capacity Procedure by the ~~time~~ date specified by the IMO under clause 4.27.3~~A~~(b).

4.27.6. The IMO may ~~must~~ consult with System Management on the implications of a report provided under clause 4.27.5, and may also consult, at the Market Participant's expense, with any person the IMO considers suitably qualified to provide an opinion on the report. The IMO may ask the person to provide an opinion on the report generally, or to limit the scope of the opinion to specified matters covered in the report.

4.27.7. [Blank]

4.27.8. [Blank]

4.27.9. ~~If the number of days determined in accordance with clause 4.27.2 exceeds 80 then the IMO:~~

~~(a) must notify all Market Participants that this has occurred; and~~

~~(b) during the 12 Trading Months commencing from the first Trading Day of the following Trading Month, may adjust the limit for the RCOQ Reduced Planned Outage Count specified in clause 4.12.9.~~ [Blank]

10.5.1. The IMO must set the class of confidentiality status for the following information under clause 10.2.1, as Public and the IMO must make each item of information available from the Market Web Site after that item of information becomes available to the IMO:

…

(zG) documentation of the functionality of:

i. any software used to run the Reserve Capacity Auction;

ii. the STEM Auction software; and

iii. the Settlement System software; ~~and~~

(zH) information relating to Commissioning Tests which is supplied under clause 3.21A.16 by System Management~~.~~; and

(zI) the Refund Exempt Planned Outage Count for each Scheduled Generator for each of the 1000 Trading Days up to and including the most recent Trading Day for which System Management has provided a schedule to the IMO in accordance with clause 7.13.1A(b).

Glossary

Equivalent Planned Outage Hours: means, in respect of a Facility, the sum of the "Planned Outage Hours" and the "Equivalent Planned Derated Hours" for the Facility as calculated in accordance with the Power System Operation Procedure.

Industry Standard Generation Performance Indicators: means the most recent edition of the IEEE Standard Definitions for Use in Reporting Electric Generating Unit Reliability, Availability, and Productivity (IEEE 762), as published by the Institute of Electrical and Electronics Engineers, or appropriate equivalent.

~~**Non-RCOQ Adjusted Planned Outage:** means a Planned Outage for which the IMO has not adjusted the Facility's Reserve Capacity Obligation Quantity under clause 4.12.6(b).~~

Non-Refund Exempt Planned Outage: means a Planned Outage of a Scheduled Generator for which a Facility Reserve Capacity Deficit Refund is payable, as determined by the IMO under clause 4.26.1C.

Outage Rate Limit Table: The table titled "Outage Rate Limit Table" and set out in clause 4.11.1D.

~~**RCOQ Adjusted Planned Outage:** means a Planned Outage for which the IMO has adjusted the Facility's Reserve Capacity Obligation Quantity under clause 4.12.6(b).~~

~~**RCOQ Reduced Planned Outage Count:** means, in respect of a Facility and a period of time, the sum over all Trading Intervals in that period of:~~

~~(a) zero, if the Trading Interval occurs before 8:00 AM on 1 January 2014 or if no Capacity Credits were associated with the Facility in the Trading Interval; or~~

~~(b) the MW quantity of RCOQ Adjusted Planned Outage for the Facility in the Trading Interval, divided by the number of Capacity Credits associated with the Facility in the Trading Interval.~~

Refund Exempt Planned Outage: means a Planned Outage of a Scheduled Generator for which a Facility Reserve Capacity Deficit Refund is not payable, as determined by the IMO under clause 4.26.1C.

Refund Exempt Planned Outage Count: means, in respect of a Scheduled Generator and a period of time, the sum over all Trading Intervals in that period of:

(a) zero, if the Trading Interval occurs before 8:00 AM on 1 March 2014 or if no Capacity Credits were associated with the Facility in the Trading Interval; or

(b) the MW quantity of Refund Exempt Planned Outage for the Facility in the Trading Interval, divided by the number of Capacity Credits associated with the Facility in the Trading Interval.

Appendix 2 Responses to submissions received during the first submission period

	Submitter	Comment/Change Requested	IMO's Response
1.	Alinta	While Alinta agrees with the general policy issue that generators which are unreliable should not receive the same capacity income as those which have a high level of reliability, we note the broader issue of appropriately reflecting the value of capacity should be considered via the WEM review.	The IMO notes Alinta's view but considers that the State Government's proposed wide-ranging review of the WEM should not delay the proposed amendments, which will better achieve the Wholesale Market Objectives and can be implemented quickly and inexpensively.
2.	Alinta	Alinta disagrees with the ERA's concerns that higher energy market prices during a facility outage is, in itself, an inefficient market outcome that warrants further market intervention. Assuming that the high level of outages for the facilities is legitimately required, the higher prices in the energy market are indicative that the market is working effectively in this circumstance, regardless of the existence of a capacity market. Short term increases in energy market prices will potentially signal changes in behaviour from other participants. Assuming that given the existence of the capacity market, energy prices shouldn't adjust to signal changes in behaviour is overly simplistic.	The IMO agrees that an increase in energy prices during an outage is not necessarily an inefficient market outcome. However, an excessive level of outages (regardless of whether the outages are all physically required by the Facilities) is likely to increase average energy prices over time, particularly in years where there is less excess capacity in the market. This is an inefficient outcome, particularly if the subsidisation of the relevant Facilities with capacity payments prevents their retirement and replacement with more efficient plant which could contribute more consistently to lower energy price outcomes.
3.	Alinta	Higher prices are a reflection of the market working effectively in so far as the Balancing Price determined is a direct result of the bid prices of the respective available plant mix and heavily influenced by the type of plant which is on outage. Naturally if there are units with lower operating costs on outage, then the availability of low cost energy during those periods is scarce resulting in facilities which would normally feature higher up in the Balancing Merit Order being required to be dispatched. These facilities would only do so if the resultant Balancing Price is able to at least re-coup their costs of production. Alinta is uncertain whether during the relevant periods when the "excessive outages" took place the liquid price caps were reached, potentially because Verve's low cost plant was still available for dispatch.	Please refer to the IMO's response to issue 2. The IMO also notes that energy prices do not need to reach the Alternative Maximum STEM Price to be inefficient. Price spikes of up to the Maximum STEM Price have occurred during periods with high Planned Outage levels, for example during early July 2011.
4.	Alinta	The IMO appears to be incorrectly assuming that having available capacity is the same as having reliable capacity. There is no certainty that when dispatched capacity that had been made available through the Balancing Merit Order can perform and therefore meet the SWIS's reliability standards. While the expectation is that participants will in good	The IMO appreciates the difference between reliability and availability but considers both are important qualities which need to be demonstrated by Facilities receiving Capacity Credits. The Reserve Capacity Mechanism (RCM) already provides very strong incentives to ensure the reliability of Facilities. It is unlikely

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		faith bid into the market, for units, particularly those that are infrequently dispatched, there is a risk of plant failure on dispatch. While Alinta acknowledges the role of the Reserve Capacity Testing mechanism in reducing the risk of plant failure when dispatched it is not entirely possible to entirely remove this risk. The proposed amendments will however potentially encourage greater availability at the risk of reducing reliability of some plants. This appears to be at odds with the objective of reliability embedded within the Wholesale Market Objectives and the incentives of the Reserve Capacity Testing mechanism.	that a rational Market Participant would risk the high costs of a plant failure by failing to undertake necessary maintenance, even where a Facility has reached the proposed cap on refund exempt Planned Outages. Further, the IMO notes that the poor availability of some generators has had less impact on system reliability in recent years due to an excess of capacity in the WEM. This could however change in future if the capacity situation becomes tighter, as the Reserve Margin may be insufficient to allow a generator with excessive maintenance requirements from taking all the Planned Outages it needs.
5.	Verve Energy	On many occasions the IMO has inferred that Facilities with high unavailability rates are unreliable. Verve Energy considers that the IMO is mixing the concepts of reliability and availability. At its most simple, availability is about being able to be used/called upon if required, and reliability is the ability to be relied on to provide the good or service when asked. These are quite different concepts and should remain so. Verve Energy notes that no generating facility is reasonably capable of achieving 100% availability and, indeed, the RCM does not include a premium to achieve that level of performance.	Please refer to the IMO's response to issue 4. The IMO agrees that no generating facility is reasonably capable of achieving 100% availability but notes this was not suggested in the Rule Change Proposal.
6.	Verve Energy	Verve Energy is concerned that, by introducing a number of proposals to incentivise availability (from different and unaligned work streams), there may be the perverse impact of generators not undertaking any non-mandatory preventative and/or corrective maintenance, which may lead to higher Forced Outages (and therefore unreliability) in the future. Further, Verve Energy contends that Forced Outages are the most costly events to the market. Planned Outages, when taken at the appropriate time, are almost benign.	Please refer to the IMO's response to issues 4, 16 and 18.
7.	Alinta	Imposing a limitation on the level of Planned Outages that a Facility may have over a three year period may be detrimental to reliability standards in the SWIS. This is because some facilities may need to reduce current levels of maintenance in order to make sure they do not breach the Planned Outage cap (and suffer financial penalties) there will likely be an impact on the reliability of facilities on the SWIS. Likewise there will be less opportunity for facilities to undertake upgrades that may in fact	Please refer to the IMO's response to issue 4. The IMO also notes that it considered the information provided in submissions by Verve Energy and Bluewaters Power when reviewing the level for its proposed cap on refund exempt Planned Outages.

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		improve their overall performance. Alinta suggests the IMO takes advice on this matter from participants with fuel types which require greater levels of maintenance (e.g. coal).	
8.	Alinta	It is unclear how there could be a higher risk to the system associated with the excessive outage rates of some facilities in the SWIS given that one of the key considerations of System Management in approving Planned Outages is whether there would still be sufficient margin available to ensure system security can be maintained. Therefore it could be argued that the excessive outage rates of some facilities in the SWIS are in part a symptom of the current oversupply of capacity. If the market was not in over-supply then the outages would simply not have been approved by System Management.	The IMO notes that if the excessive outage rates of the relevant plant were essential for their operation then this could pose a risk to system security in times when the market was not in over-supply. On the other hand, if the outages were not in fact required then this would also be a concern in that capacity was being unnecessarily withheld from the market, potentially increasing energy prices.
9.	Verve Energy	The outage rates displayed by some Facilities are entirely within the bounds of the current Market Rules and in part are an outcome of the current excess capacity in the WEM. Further, Verve Energy notes that in approving Planned Outages System Management needs to ensure that there is sufficient margin available to ensure system security can be maintained – as such, if the Facilities had been needed, System Management would simply not have approved the Planned Outages.	Please refer to the IMO's response to issue 8.
10.	Alinta	There are off-market incentives for the availability of generators that need to provide energy in order to cover their fixed costs. While removal of these facilities from the market may potentially increase the energy market price (as these facilities provide low cost energy) it is likely that they will have bilateral contracts in place which they would need to purchase energy to cover if they are on extended outages. Purchasing energy at a potentially higher cost than the generator could produce the energy at provides a strong commercial incentive to ensure these facilities are available and providing energy. It is unclear whether there has been adequate consideration of these off-market incentives for availability in developing the IMO's proposed amendments.	The poor availability performance of some generators in the WEM suggests that the off-market incentives for availability are not always sufficient. In particular, depending on its portfolio and bilateral arrangements a participant may not always need to purchase energy to cover extended outages of its plant. The receipt of capacity payments and the risks associated with Forced Outages may also tend to counteract the off-market incentives for poorly performing plant to provide energy to the market.
11.	Verve Energy	The IMO has stated that a capacity market should not deliver lower incentives for availability than an energy market. However, Verve Energy notes that there are also natural (and very strong) incentives to be available in a predominantly bilateral contract market which cannot be	Please refer to the IMO's response to issue 10.

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		ignored. However, these off-market incentives do not seem to have been addressed or considered by the IMO in developing this Rule Change Proposal.	
12.	Bluewaters Power	The major concern is now the potential impact of one-off incidents or failures, rather than systematic issues, which may now impose an additional penalty on otherwise healthy units. We note that the rules (e.g. clauses 4.11.1B and 4.27.3B) do in essence grant the IMO the flexibility it needs to take into account such events and to rule accordingly.	Noted.
13.	Alinta	The current Market Rules already provide the IMO an ability to address any concerns around high levels of unavailability. That is, the current Market Rules already provide a mechanism for the IMO to not provide any CRC to a Facility which has an excessive level of unavailability. This provides a clear signal for the retirement of inefficient plant and addresses any concerns about "value for money" with respect to the provision of capacity. The relevant facilities that are considered to have experienced excessive rates of outages are Verve's older and potentially less efficient facilities.	The proposed amendments address concerns raised by the IMO Board about limitations in the current mechanisms in the Market Rules to incentivise generator availability. In particular, the proposed cap on refund exempt Planned Outages provides a more immediate incentive that will apply even where the IMO Board concludes that a reduction of a Facility's CRC is not in the best interests of the market, while the proposed requirement for a Facility with high unavailability to provide performance reports and performance improvement reports will provide the IMO Board with valuable information to assist it in its decisions under clause 4.11.1(h).
14.	Alinta	The proposed amendments place an unnecessary regulatory burden on all Scheduled Generators, adding to the costs of operating in the market.	As outlined in the Rule Change Proposal, the IMO considers that the proposed amendments are necessary to ensure that the Market Rules provide adequate incentives to Market Participants to maximise the availability of their Scheduled Generators. The IMO expects that the proposed amendments will have no impact on most Market Participants, based on the historical outage rates for their Facilities. The changes only impact Facilities that demonstrate excessive outage levels.
15.	Alinta	The progressive tightening of the combined Planned Outage rate and Forced Outage rate and the introduction of a cap on Planned Outages under which a reduction in the RCOQ can be claimed are unnecessary, will potentially distort the current incentives for centrally planning outages and result in unwarranted administration costs being incurred by the market.	Please refer to the IMO's response to 14. In addition, the IMO intends to strengthen the Market Rules as necessary to clarify the requirement for a Market Participant to follow the outage scheduling process, and in particular to request a Planned Outage before making capacity unavailable to perform discretionary maintenance. For further details please refer to the Concept Paper: Outage Planning Phase 2 – Outage Process

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			Refinements (CP_2013_04)[1].
16.	Alinta	We acknowledge that the IMO is looking at the incentives for centrally planning outages through a different proposal. It is unclear why this change would not be progressed as part of this package of amendments.	The IMO expects changes to sections 3.18 (Outage Scheduling) and 3.19 (Outage Approval) of the Market Rules will be needed to clarify the obligations of a Market Participant to follow the outage scheduling process even where it has exceeded its refund exempt Planned Outage cap. The IMO intends to progress these changes together with the other amendments to the outage scheduling and approval processes outlined in CP_2013_04. This will help streamline the redrafting of sections 3.18 and 3.19 and allow stakeholders to review all the proposed changes to these sections together. The IMO notes it is extremely unlikely that any Facility would reach its refund exempt Planned Outage cap prior to the expected commencement of the CP_2013_04 changes.
17.	System Management	This Rule Change Proposal seeks to stimulate the retirement of old and unreliable plant. There is significant lead time involved in encouraging and connecting new generation facilities, as such System Management expects the capacity available for dispatch to be carefully monitored. Any forecast scenarios where generation is not sufficient to meet load reflects a failure of the Reserve Capacity Mechanism to procure necessary capacity, and will result in an unacceptable impact on Power System Security.	Noted. The IMO considers that reducing incentives for retention of unreliable, high-maintenance Scheduled Generators will provide greater opportunities for investment in more efficient and reliable generation plant.
18.	Verve Energy	Verve Energy notes that the IMO is progressing other work streams which will incentivise availability, for example the dynamic refunds proposal. Verve Energy considers that as the refund regime is under review, it is unable to full assess the potential impacts of this Rule Change Proposal. As such, Verve Energy considers that the IMO should combine the dynamic refunds and availability incentives for Scheduled Generators into one holistic piece of work to allow participants to adequately assess the risk (and likely impact) associated with the proposal.	The IMO considers that combining the two proposals would provide little benefit to participants and would delay the progression of this Rule Change Proposal. The proposals both provide incentives to generators to maximise their availability and their progression is being closely coordinated by the IMO to ensure their alignment. It is unclear how the specific concerns raised by Verve Energy in its submission would be affected if this proposal was expanded to include the introduction of dynamic refunds.

[1] Available at: http://www.imowa.com.au/concept-papers.

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19.	Tesla	Now that a "limit" on Planned Outages has been proposed, it would not be correct to count Planned Outages (that would otherwise be Consequential Outages had the generator not submitted a Planned Outage request) against the percentage caps proposed. Tesla proposes that the Network Operator be given the ability to lodge Consequential Outage requests to both the generator and System Management, and if accepted, then the generator would be classified as being on "Consequential Outage" for that period of time. This Consequential Outage should not be counted against either the Forced or Planned Outage allowances proposed in clause 4.11.1D.	The IMO does not support Tesla's suggestion for the following reasons. • System Management needs to know whether a Facility is undertaking maintenance during an outage, as this may affect how quickly the Facility can be brought back into service if the associated network outage is cancelled or ends early due to system security issues. • Any maintenance undertaken by a generator during a network outage would presumably reduce the maintenance that needed to be undertaken at other times, and so it is reasonable that these outages should be counted towards the Facility's Refund Exempt Planned Outage Count. • A Network Operator may not always have the details required to log a Consequential Outage for a generator, in particular where the exact timing and impact on specific generators is not known in advance.
20.	Verve Energy	Verve Energy does not consider it necessary for the IMO to have the ability to certify a quantity of Certified Reserve Capacity between zero and full allocation. Applying partial certification for two years hence cannot be deemed to be an incentive to maximise availability in real time. If the IMO was trying to solve a problem of excessive partial outages then only allocating partial capacity may be sensible. However, this is not the issue that the IMO is trying to resolve.	The possibility of losing some part of a Facility's CRC in a future Capacity Year would almost certainly act as an incentive for a Market Participant to maximise the current availability of that Facility. While partial certification may not be suitable in all cases, the inclusion of this option in the Market Rules will give the IMO Board flexibility to decide on partial certification in situations where it is appropriate (e.g. for a Facility with excessive partial outages as noted by Verve Energy).
21.	Verve Energy	Verve Energy suggests an alternative proposal (to the proposed changes to clause 4.11.1(h)) whereby once a facility triggers the availability thresholds then the rate paid for capacity slides linearly for Planned Outages and logarithmically for Forced Outages (to discourage unreliability). If this is deemed to be administratively too complex, Verve Energy suggests that if a Facility exceeds the prescribed thresholds then it loses its capacity payments until the Facility is back below the thresholds.	The IMO notes that decisions made under clause 4.11.1(h) relate to the CRC assigned to a Facility for a future Capacity Year, and are meant to reflect the expected capacity value of the Facility in that Capacity Year. As such, the IMO does not consider that Verve Energy's alternative proposals (which alter current capacity payment levels) are an appropriate substitute for the proposed changes to section 4.11. It is also unclear how Verve Energy's suggestions would be implemented without complex and expensive changes to the settlement processes. In particular it is unclear how any changes

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			to the "rate paid for capacity" would be applied to capacity that is traded under bilateral contracts rather than purchased by the IMO.
22.	Verve Energy	Verve Energy supports the inclusion in the Market Rules of the range of factors the IMO will consider in making a decision under clause 4.11.1(h). However, Verve Energy considers that despite specifying the range of factors for the IMO to consider in making this decision, application of such a rule will be largely subjective and difficult to apply appropriately and equitably over time.	Noted.
23.	Verve Energy	The proposed five year glide path to reduce the combined Planned Outage rate and Forced Outage rate thresholds that trigger clause 4.11.1(h) is too aggressive, and could lead to perverse market outcomes. Verve Energy considers that at the very least the proposal should allow for a break point at year two of the glide path (for at least two years) in order for Market Participants to adjust their behaviour and for the IMO to undertake a review of the appropriateness of the rates at that time and whether further amendments are needed. Verve Energy considers that the proposed glide path to year two is appropriate; or if the IMO agrees to incorporate a break point at year two, Verve Energy suggests that the IMO could adopt a slightly more aggressive start to the glide path, i.e. Forced Outage rates of 12% and combined rates of 25% for year two.	The IMO has received no evidence to suggest that the proposed five year glide path is too aggressive or that the target thresholds proposed to apply from the 2020/21 Capacity Year are too low. The IMO will observe the impacts of the reducing thresholds each year as part of the certification process. If any perverse market outcomes are identified then the IMO (or any other stakeholder) is not obliged to wait until the completion of the review specified in new clause 4.11.1E to propose further amendments to the Market Rules to address the problem.
24.	Verve Energy	If the IMO does not agree with Verve Energy's suggestion to review the outage rate thresholds in clause 4.11.1D after year two of the glide path, then Verve Energy questions whether there should be a regular review process for these thresholds (i.e. once every five years) with the first review to be completed by 31 December 2018 as opposed to just a single review midway through the proposed glide path.	At this stage the IMO expects that the factors which would affect the appropriate thresholds for clause 4.11.1(h) are not sufficiently volatile to warrant a regular five yearly review. The IMO notes however that the proposed Amending Rules do not prevent the IMO from conducting a review of the thresholds at any time, if a change in any of the relevant factors is identified.
25.	Bluewaters Power	If the allowable Planned Outage rate is increased above 14.8% Bluewaters suggests consideration should be given to adjusting the combined rates proposed in clause 4.11.1D.	Although the IMO has decided to increase the proposed cap on refund exempt Planned Outages from 14.8% to 17.5%, it does not consider that this should translate into a corresponding increase in the combined Planned Outage rate and Forced Outage rate thresholds in new clause 4.11.1D. The Planned Outage cap was increased to 17.5% primarily to account for the

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			higher maintenance requirements of coal fired generators. However, even for these units the IMO considers it reasonable to expect an Equivalent Availability Factor of at least 80% when averaged over a three year period.
26.	Verve Energy	Proposed clause 4.11.1A introduces an obligation on the IMO to publish on the Market Web Site the reasons for a decision made under clause 4.11.1(h), to the extent that those reasons do not contain any confidential information. The Market Rules require the IMO to "document the Market Procedure it follows in setting and publishing the confidentiality status of information in clause 10.2". However, Verve Energy considers that the current Market Procedure for Information Confidentiality does not provide sufficient detail as to the IMO's process of assessing potentially confidential material. As such, Verve Energy requests clarification on the IMO's assessment criteria for identifying what may be confidential information.	In order to comply with proposed clause 4.11.1A the IMO will need to assess, for each decision made under clause 4.11.1(h), which components of the reasons for its decision should be classified as confidential. The assessments will need to be made on a case by case basis due to the wide variety of information that may be considered by the IMO when making decisions under clause 4.11.1(h). However, in all cases the IMO will take into consideration the general principles for setting the confidentiality status of market related information and documents outlined in clause 10.2.3.
27.	Verve Energy	Proposed clause 4.11.1D outlines the applicable outage percentages the IMO will apply to its decisions under clause 4.11.1(h) by Capacity Year. Clause 1.4.1(r) notes that heading and comments appearing in boxes in the Market Rules (other than the Refund Table in section 4.26) are for convenience only and do not affect the interpretation of the Market Rules. Verve Energy suggests there may be an issue with the interrelationship of proposed clause 4.11.1D and clause 1.4.1(r), and suggests a number of minor amendments to the proposed Amending Rules to address this.	Agreed. The proposed Amending Rules have been updated accordingly.
28.	Bluewaters Power	Bluewaters Power would like to see an allowable RCOQ-adjusting outages level of 8830 Trading Intervals to 9200 Trading Intervals (16.8% - 17.5%). Exceedance of this range would be indicative of systematic rather than "one-off", issues at play.	After consideration of the submissions received during the first submission period and the historical performance of thermal plant in other jurisdictions the IMO proposes to set the cap on refund exempt Planned Outages at 17.5%, i.e. 8400 Trading Intervals over 1000 days. Please refer to section 5.1 of this report for further details.
29.	Verve Energy	Verve Energy is against the proposal to impose a cap on the Trading Intervals where a generator's RCOQ can be reduced due to Planned Outages. Verve Energy considers that the proposal, as it stands, could be detrimental to the future reliability standards in the SWIS. This is because some Market Generators may need to reduce current levels of	As mentioned in its response to issue 28, the IMO has increased the proposed cap on refund exempt Planned Outages from 14.8% to 17.5%, after consideration of the submissions provided by stakeholders (including Verve Energy). The IMO considers that a need for a higher level of maintenance to ensure the

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		maintenance on certain Facilities in order to ensure that the proposed cap is not breached. As such, Verve Energy considers that it would be more appropriate for a Facility exceeding the prescribed thresholds (having allowed for special long outages and major refurbishments, etc) to lose its capacity payments until the Facility is back below the thresholds.	reliability of a Facility may indicate the unit is approaching the end of its economic life and its retirement should be considered. The IMO considers that the suspension of capacity payments to Facilities exceeding the proposed Planned Outage cap would be difficult to implement in practice and may, depending on the nature of existing bilateral contract arrangements, adversely impact the counter-parties of a Market Participant rather than the participant itself.
30.	Bluewaters Power	Where a Facility is granted a Planned Outage by System Management but is over the limit for a reduction of its RCOQ, the Facility/Market Participant should not pay a refund greater than 1x. That is, the facility should not receive any net revenue from the IMO, nor should it pay any greater penalty as System Management has seen fit to grant a non-Forced Outage because the application otherwise meets the criteria for a Planned Outage.	The IMO disagrees with Bluewaters Power's suggestion and considers that applying the standard Facility Reserve Capacity Deficit Refund multipliers will be simpler (and therefore less expensive to implement) and provide a sharper incentive to Market Participants with poor availability to undertake discretionary maintenance when reserve levels are highest. The IMO notes that under both the current Market Rules and the dynamic refund regime proposed in the recent Concept Paper: Changes to the Reserve Capacity Price and the Dynamic Refunds Regime (CP_2013_06)[2] refund multipliers are frequently less than one.
31.	Verve Energy	The outage requirements for a generation facility vary greatly depending on the type of fuel used, the design of the facility, how the facility is operated/dispatched and the stage of its lifecycle the facility is at. Verve Energy considers that the threshold (for RCOQ reductions for Planned Outages) needs to be set at an appropriate level to cover all these circumstances and to ensure that no technology type is discriminated against. Verve Energy considers that a 14.8% Equivalent Planned Outage factor is too low, particularly for coal fired power stations, and something in the range 17-20% Equivalent Planned Outage factor (approximately 26.6 to 31.3 weeks over the 36 month period respectively) would be more appropriate. Verve Energy provides various details (some on a	Please refer to the IMO's response to issue 28.

[2] Available at: http://www.imowa.com.au/concept-papers. The IMO presented the Concept Paper at the October 2013 MAC meeting.

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		confidential basis) to support its alternative proposal, including: • details of its asset management philosophy and the findings of recent audits of its asset management system; • discussion of the impacts of the dispatch of its plant by System Management to maintain system security; • details of the maintenance, refurbishment and investment program for its thermal plant, which typically includes major outages (A-class outages (turbine critical path) of around 12 weeks every five years, and B-class outages (boiler critical path) of around 8 weeks every two and a half years), maintenance outages (which for plant with high operating hours can exceed 5-6%) and special projects (which can extend the duration of the major outages); and • the historical compliance of its thermal facilities against the proposed cap, based on data from 1982 to 2013.	
32.	Verve Energy	In its "problem statement" the IMO identified five facilities that it was concerned about with regards to what it deemed to be undertaking excessive Planned Outages. However, the IMO has identified that its proposed solution would capture nine facilities (nearly double the number of facilities that the IMO identified as having issues). This in itself indicates that the proposed threshold is more heavy handed than required. Verve Energy notes that the IMO's original presentation on this issue identified that 20% could be an appropriate cap (as presented at the 20 March 2013 MAC meeting). This was reduced to 14.8% following a suggestion by the Chair at the MAC meeting. However, this reduction was not discussed or endorsed by the MAC.	Please refer to the IMO's response to issue 28.
33.	Verve Energy	Verve Energy considers that the IMO should take a more conservative approach (to the cap on RCOQ reductions for Planned Outages) in the first instance, with the opportunity for further reductions of the cap in the future should further reform be needed. This is consistent with the IMO's light handed approach to regulation in other areas of the Market Rules (and upcoming reform, for example the proposal to relax the firm fuel requirements).	Please refer to the IMO's response to issue 28.

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34.	Alinta	We are concerned that the level of the cap (14.8% average over three years) may negatively impact on participants that are "doing the right thing".	Please refer to the IMO's response to issue 28.
35.	Verve Energy	The proposed Amending Rules do not specify what the IMO must take into account in when undertaking its review of the appropriateness of the limit for the RCOQ Reduced Planned Outage Count under clause 4.12.10. It would be Verve Energy's preference for the IMO to include additional detail as to what the review would include (similar to clause 4.11.1E). This not only provides consistency in drafting, but also greater certainty for Market Participants.	Agreed. The proposed Amending Rules have been updated accordingly.
36.	Alinta	It is assumed that the proposed outage cap will be applied ex-post via the IMO's settlement processes. We note that this will require generators to continuously monitor their level of Planned Outages which will require changes to Alinta's current business practices and result in IT costs being incurred.	As previously stated, the IMO expects that most Market Participants are unlikely to be affected by the proposed amendments. However, the IMO proposes to publish daily Refund Exempt Planned Outage Count values for each Scheduled Generator to assist Market Participants in monitoring their levels of Planned Outage. Please refer to section 5.1 of this report for further details.
37.	System Management	The proposed wording of clause 4.26.2 implies that System Management provides Non-RCOQ Adjusted Planned Outage data in clauses 7.3 and 7.13.1A(b). System Management understands that its current processes will remain the same and it will provide only Planned Outage data under clauses 7.3 and 7.13.1A(b). The adjustment decision in regard to Planned Outages will be made by the IMO. System Management suggests an alternative wording for the clause to remove the potential ambiguity.	The IMO has added new clause 4.26.1C and amended clause 4.26.2 to clarify that the IMO (and not System Management) is responsible for determining whether a Planned Outage will be liable for Facility Reserve Capacity Deficit Refunds. Please refer to section 5.1 of this report for further details.
38.	Verve Energy	Verve Energy notes the proposal to allow the IMO to require a performance report and performance improvement reports from a Market Participant concerning a Scheduled Generator with an excessive Planned Outage rate, regardless of the availability of total system capacity. Verve Energy does not agree that this proposal is necessary, as it creates unnecessary regulatory burden and the incentives created by the other aspects of the proposal will be sufficient.	The performance reports and performance improvement reports will provide the IMO with valuable information to assist it in making decisions under clause 4.11.1(h). The other incentives outlined in the proposal are complementary but do not provide this necessary information for decision-making. The IMO notes that unless a Market Participant has a Facility with an excessive Planned Outage rate it will be completely unaffected by this proposal.
39.	Verve Energy	Should the IMO proceed with its proposed amendments around	Although a Facility may reasonably exceed the 1750 hour

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		performance reports and performance improvement reports, Verve Energy considers that the threshold would be more appropriately set at 2191 hours (approximately 13 weeks) in the 12 month period. This would allow for an A class overhaul during the year (which is typically 12 weeks long) as well as a minor provision for any emerging maintenance requirements. Verve Energy is concerned that setting the level at 1750 hours (approximately 10 weeks) is unnecessarily restricting, and questions whether an A Class overhaul would be deemed to be an "infrequent occurrence" in the context of clause 4.27.3B (given that A class overhauls are undertaken as part of a maintenance cycle and could be a frequent as every three years). Verve Energy has provided the IMO (on a confidential basis) with statistics on the historical compliance of its thermal facilities against both the proposed threshold (1750 hours) and Verve Energy's proposed alternative threshold (2191 hours).	threshold during a year in which it undertakes an A Class outage, in other years a threshold of 2191 hours would be inappropriately high and might prevent the timely identification of significant performance issues. While the IMO would consider each case on its individual merits, it is highly unlikely to view a pre-planned major outage, undertaken in accordance with the Facility's long term maintenance plan as being "indicative of an underlying performance deficiency" in the context of this clause (now 4.27.3A). As such the IMO does not expect that the undertaking of a Class A outage consistent with a Facility's normal maintenance cycle would ever result in the Market Participant being required to provide performance reports to the IMO.
40.	Verve Energy	Clause 4.27.5(a) provides an explicit timing requirement of 20 Business Days for a participant to provide a report described in clause 4.27.3 or clause 4.27.3A(a). However, clause 4.27.5(b) does not include an explicit timing requirement for a participant to provide a report described in clause 4.27.3A(b), instead linking it to a time to be specified by the IMO under clause 4.27.3A(b). Verve Energy would prefer that clause 4.27.5(b) include an explicit timing requirement. This provides consistency in drafting and greater certainty for Market Participants.	The IMO considers that an explicit timing requirement could prove overly restrictive and result in Market Participants being required to provide performance improvement reports more frequently than necessary. To provide greater certainty for Market Participants and ensure they are given adequate time to prepare these reports the IMO intends to specify an appropriate minimum notice period for requesting reports in the Market Procedure for Reserve Capacity Performance Monitoring.
41.	Bluewaters Power	Bluewaters Power considers it reasonable that the IMO have the right to request (but not require) performance reports from a Market Participant, concerning any generator or Demand Side capacity, with excessive Planned Outages. Failure by the participant to provide a requested report should not result in any penalty, other than the lost opportunity to provide additional information to the IMO ahead of its decision, and should not otherwise prejudice the IMOs process or decision. In other words, the report should be considered an opportunity for the capacity holder to outline / argue a case for no penalties or capacity reductions to be imposed.	The IMO needs the information contained in the performance reports and performance improvement reports in order to make informed decisions under clause 4.11.1(h). For this reason the IMO considers that it is not in the best interests of the market for the provision of these reports to be optional.

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42.	Bluewaters Power	Any reports requested by the IMO must be in a pro forma format for clarity, scope control, consistency and transparency.	The Market Procedure for Reserve Capacity Performance Monitoring will specify the format and contents of the performance reports and performance improvement reports required under clause 4.27.3.
43.	Verve Energy	Verve Energy is strongly opposed to a requirement for a Market Participant to pay the IMO's expenses where the IMO commissions a consultant to provide an opinion on issues relevant to the IMO's discretion to partially certify a Facility. This includes the provision of an opinion on a performance report or performance improvement report under clause 4.27.6. Verve Energy considers that the whole market will benefit from the IMO's decision making process under clause 4.11.1(h). As such, the costs for making such decisions should be apportioned appropriately.	Although the market may benefit from the from the IMO's decision making processes around certification, the IMO would only be seeking an opinion on a report under clause 4.27.6 if the Planned Outage rate for a Facility was extremely high and the IMO had concerns about the contents of the performance reports provided by the responsible Market Participant. Given these circumstances the IMO considers it appropriate that the costs should be borne by the Market Participant rather than the market as a whole.
44.	Verve Energy	Verve Energy is strongly opposed to the proposed amendments to clause 4.27.9. Verve Energy is concerned that the IMO would have a unilateral right (if the system capacity criterion is met) to adjust the cap on the number of Trading Intervals eligible for a reduction in RCOQ for a year with: • no identified framework for making this decision; • no indication of what the cap could be reduced to; and • no right of reply for the participant involved. Verve Energy considers this lack of governance framework around the IMO's decision making process represents undue regulatory risk, regardless of the fact that the rule is expected to be used infrequently. Verve Energy considers that the Market Rules (or the Market Procedure for Reserve Capacity Performance Monitoring) should be expanded to include a framework as to what the IMO would take into consideration in making such a decision and also what the cap may be adjusted to.	After further consideration the IMO has concluded that the imposition of an additional cap on "refund exempt" Planned Outages (over the general cap of 17.5% assessed over 1000 Trading Days) is not required. The IMO has therefore modified the proposed Amending Rules to remove clause 4.27.9 and its associated provisions completely. For further details please refer to section 5.1 of this report.
45.	Verve Energy	Any decision made under clause 4.27.9(b) should be a Reviewable Decision, and as such requests that the IMO liaise with the Public Utilities Office on this aspect.	Please refer to the IMO's response to issue 44.
46.	Alinta	The proposed amendments to clause 4.27 create:	The IMO notes that performance reports and performance improvement reports will only be required for Facilities with

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		• regulatory burden by enabling the IMO to request performance reports; and • regulatory uncertainty by enabling adjustments to a participant's Planned Outage cap when the system capacity availability criterion is met. These changes are not required to address the core issue under consideration by the IMO and should not be progressed.	extremely high levels of Planned Outages and so most Market Participants will experience no additional regulatory burden. With regard to Alinta's concerns around clause 4.27.9 please refer to the IMO's response to issue 44.
47.	Alinta	We note that under clauses 4.27.7 and 4.27.8 (proposed to be removed) the IMO is currently provided with the discretion to limit Planned Outages under certain circumstances. While it is better regulatory practice to specify a value for the "cap" so as to provide certainty to all participants, given the wider impacts on reliability we do not consider any limitation on the level of Planned Outages undertaken is required in this case. Rather poor availability should be dealt with by the IMO entirely through the assignment of CRC.	Please refer to the IMO's response to issue 44.
48.	Alinta	Alinta supports making a decision to adjust a participant's Planned Outage cap a Reviewable Decision, given that there is significant discretion afforded to the IMO with respect to how exactly it adjusts the maximum number of Trading Intervals that are eligible for an RCOQ adjustment. There should also be full transparency of the IMO's decision making criteria in such cases.	Please refer to the IMO's response to issue 44.
49.	Bluewaters Power	Suggests a review period of three years as opposed to five years for clauses 4.11.1E and 4.12.10. Bluewaters believes five years is too long to be locked into a new regime which may quickly prove too punitive or too lenient.	The IMO considers that a five year review period is preferable as it will allow sufficient time for the new arrangements to influence participant behaviour and make any historical analysis less sensitive to "one-off" events. It should also be noted that the obligation to review the various thresholds by 31 December 2018 would not prevent the IMO from reviewing and proposing changes to these values earlier if they prove to be either too punitive or too lenient.
50.	Verve Energy	Proposed clauses 4.11.1E and 4.12.10 provide for a one off review of both the outage criteria to apply under clause 4.11.1(h) and the RCOQ Reduced Planned Outage Count, to be completed by 31 December 2018. Verve Energy questions whether this should be a regular review process,	At this stage the IMO expects that the factors which would affect the appropriate thresholds for clause 4.11.1(h) and proposed clause 4.26.1D (previously 4.12.10) are not sufficiently volatile to warrant a regular five yearly review. The IMO notes however that

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		(i.e. once every five years), with the first review to be completed by 31 December 2018.	the proposed Amending Rules do not prevent the IMO from conducting a review of the thresholds at any time, if a change in any of the relevant factors is identified.
51.	System Management	System Management notes that clause 4.11.1(h) refers to the "Planned Outage rate" and "Forced Outage rate" of a Facility which are "calculated in accordance with the Power System Operation Procedure", while the proposed definition of Equivalent Planned Outage Hours refers to the "Planned Outage Hours" and "Equivalent Planned Derated Hours" for a Facility "as calculated in accordance with the Power System Operation Procedure". System Management contends that these definitions are only used by the IMO and so should be defined in a Market Procedure. Hence it suggests that in these two instances "Power System Operation Procedure" should be replaced with "Market Procedure".	The IMO proposes to amend the methodology for calculating Planned Outage rates, Forced Outages rates and Equivalent Planned Outage Hours to appropriately account for outages of Non-Scheduled Generators. The IMO also proposes to move the methodology definition from the Power System Operation Procedure: Facility Outages to an appendix of the Market Rules. The proposed changes were outlined in the Concept Paper: Availability, Outages and Constraint Payments for Non-Scheduled Generators (CP_2013_05)[3], which was presented by the IMO at the August 2013 MAC meeting. The changes have since been incorporated into a Pre Rule Change Proposal (PRC_2013_16) which is due to be presented at the November 2013 MAC meeting[4]. The changes have been included in PRC_2013_16 instead of this Rule Change Proposal because the revised calculations for Non-Scheduled Generators depend on changes to the outage schedule details provided by System Management to the IMO under clause 7.13.1A(b). The IMO considers it more practical to bundle these changes into PRC_2013_16 with other, related changes that also require updates to System Management's IT systems. The IMO notes that the implementation of this Rule Change Proposal is not dependent on the changes outlined in PRC_2013_16.
52.	Verve Energy	Clause 4.11.1 currently notes that "where the Planned Outage rate and the Forced Outage rate for a Facility for a period will be calculated in accordance with the Power System Operation Procedure". In its Concept Paper "CP_2013_05: Availability, Outages and Constraint Payments for	Please refer to the IMO's response to issue 51.

[3] Available at: http://www.imowa.com.au/concept-papers.
[4] PRC_2013_16 was distributed with the papers for the October 2013 MAC meeting (see: http://www.imowa.com.au/mac-65) but was held over until the following meeting.

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		Non-Scheduled Generators" the IMO recognises that, given the increasing significance of the Planned Outage and Forced Outage rate calculations, the outage rate calculation methodology should be transferred from the Facility Outages Power System Operation Procedure into an Appendix of the Market Rules. This should occur as part of this Rule Change Proposal. This will provide greater certainty and rigour in the calculation of Planned Outage and Forced Outage rates, which is vital to support this Rule Change Proposal.	
53.	Verve Energy	The Equivalent Planned Outage Hours definition currently notes that it will be calculated in accordance with the Power System Operation Procedure. Verve Energy considers that the Equivalent Planned Outage Hours calculation methodology should be included in an Appendix of the Market Rules. This will provide greater certainty and rigour in the calculation of Planned Outage and Forced Outage rates, which is vital to support this Rule Change Proposal. If the calculation methodology is to be kept in the Power System Operation Procedure as currently proposed, the proposed amendments should be developed as soon as practicable to allow participants to consider them during the second submission period for this Rule Change Proposal.	Please refer to the IMO's response to issue 51.