

ELECTRICITY INDUSTRY ACT 2004
ELECTRICITY INDUSTRY (WHOLESALE ELECTRICITY - MARKET)
REGULATIONS 2004
Wholesale Electricity Market Rules

IMO AMENDING RULES RC_2010_25 MADE ON 15 December 2011
These Amending Rules commence at 08.00am on 1 January 2012

The following clauses are amended (~~deleted wording~~, new wording):

- 4.10.1. Each Market Participant must ensure that information submitted to the IMO with an application for certification of Reserve Capacity pertains to the Reserve Capacity Cycle to which the certification relates, is supported by documented evidence and includes, where applicable, the following information:

...

(dA) a description and a configuration of the main components of the Facility;

...

(i) whether the applicant wishes to nominate the use of the methodology described in clause 4.11.2(b), in place of the methodology ~~that~~ described in clause 4.11.1(a), in assigning the Certified Reserve Capacity or Conditional Certified Reserve Capacity to apply to a Scheduled Generator or a Non-Scheduled Generator; ~~and~~

(j) whether the Facility will be subject to a Network Control Service contract; and

(k) where an applicant nominates to use the methodology described in clause 4.11.2(b) and the Facility is already in full operation under the configuration for which certification is being sought (as outlined in clause 4.10.1(dA)), the date on which the Facility became fully operational under this configuration, unless this date has already been provided to the IMO in a previous application for certification of Reserve Capacity.

- 4.10.3. An application for certification of Reserve Capacity that includes a nomination to use the methodology described in clause 4.11.2(b) for a Facility that:

(a) is yet to enter service;

(b) is to re-enter service after significant maintenance;

(c) is to re-enter service after having been upgraded; or

(d) has not operated with the configuration outlined in clause 4.10.1(dA) for the full period of performance assessment identified in step 1(a) of the Relevant Level Methodology under 4.11.2(b),

must include a report prepared by an expert accredited by the IMO in accordance with clause 4.11.6. The IMO will use the report to assign Certified

Reserve Capacity for the Facility and to determine the Required Level for that Facility. The report must include:

- ~~(a) — an estimate of what the expert considers the Certified Reserve Capacity of the Facility would have been for the purposes of clause 4.11.2(b) had the history of performance been available;~~
- ~~(b) — a value, expressed in MW as a sent out value, which equals the 5 percent probability of exceedance of expected generation output for the Facility for all the Trading Intervals that occurred within the last three years up to, and including, the last Hot Season, where this value is to be used in the calculation of the Required Level in clause 4.11.3B;~~
- ~~(c) — a proposed alternative value to that specified in clause 4.10.3(b), expressed in MW as a sent out value, to apply for the purposes of the Required Level, if in the opinion of the expert the value provided under clause 4.10.3(b) would not be a reasonable representation of the Facility's 5 percent probability of exceedance of expected generation output during its first year of operation; and~~
- ~~(d) — the reasons for any proposed alternative value provided under clause 4.10.3(c); and;~~
- ~~(e) — an estimate of the expected electricity sent out by the Facility that would have been sent out for the full period of performance assessment under clause 4.11.2(b).~~

~~The applicant may provide the same report until the Facility has been in operation for the full period of performance assessment under clause 4.11.2(b).~~

4.10.3A. A report provided under clause 4.10.3 must include:

- (a) for each Trading Interval during the period identified in step 1(a) of the Relevant Level Methodology, a reasonable estimate of the expected energy that would have been sent out by the Facility had it been in operation with the configuration proposed under clause 4.10.1(dA) in the relevant application for certification of Reserve Capacity;
- (b) a value, expressed in MW as a sent out value, which equals the 5 percent probability of exceedance of expected generation output for the Facility for all the Trading Intervals that occurred within the last three years up to, and including, the last Hot Season, where this value is to be used in the calculation of the Required Level in clause 4.11.3B;
- (c) a proposed alternative value to that specified in clause 4.10.3A(b), expressed in MW as a sent out value, to apply for the purposes of the Required Level, if in the opinion of the expert the value provided under clause 4.10.3A(b) would not be a reasonable representation of the Facility's 5 percent probability of exceedance of expected generation output during its first year of operation; and

(d) the reasons for any proposed alternative value provided under clause 4.10.3A(c).

4.11.2. Where an applicant submits an application for Certified Reserve Capacity, in accordance with ~~section clause~~ 4.10, and nominates under clause 4.10.1(i) to have the IMO use the methodology described in clause 4.11.2(b) to apply to a Scheduled Generator or a Non-Scheduled Generator, the IMO:

- (a) may reject the nomination if the IMO reasonably believes that the capacity of the Facility has permanently declined, or is anticipated to permanently decline prior to or during the Reserve Capacity Cycle to which the Certified Reserve Capacity relates;
- (aA) if it the IMO rejects such a nomination under clause 4.11.2(a), the IMO must process the application as it would if the application had nominated to use the methodology described in clause 4.11.1(a) no nomination to use rather than the methodology described in clause 4.11.2(b) had been made; and
- (b) if it has not rejected the nomination under ~~paragraph clause~~ 4.11.2(a), must assign a quantity of Certified Reserve Capacity to the relevant Facility for the Reserve Capacity Cycle equal to the Relevant Level as determined in accordance with the Relevant Level Methodology ~~determined in accordance with clause 4.11.3A~~, but subject to clauses 4.11.1(b), 4.11.1(c), 4.11.1(f), 4.11.1(g), 4.11.1(h) and 4.11.1(i).

4.11.2A. Where an applicant nominates under clause 4.10.3A(c) to have the IMO use an alternative value to that specified in clause 4.10.3A(b) the IMO:

- (a) may reject the proposed alternative value if it does not consider the reasons provided in accordance with clause 4.10.3A(d) provide sufficient evidence that an alternative value is required; and
- (b) must use the alternative value in the calculation of the Required Level if it does not reject the proposed alternative value under clause 4.11.2A(a).

4.11.3A. [Blank]

~~The Relevant Level in respect of a Facility at a point in time is determined by the IMO following these steps:~~

- ~~(a) take all the Trading Intervals that fell within the last three years up to, and including, the last Hot Season, excluding any Trading Intervals where the Facility either:
 - ~~(i) was owned, controlled or operated by a Market Participant other than the Electricity Generation Corporation and:
 1. was affected by a Planned Outage or Consequential Outage as notified under clause 7.13.1A; or
 2. was issued a Dispatch Instruction from System Management as notified under clause 7.13.1(c); or~~~~

- (ii) ~~was owned, controlled or operated by the Electricity Generation Corporation and:
 - 1. ~~was affected by a Planned Outage or Consequential Outage as notified under clause 7.13.1A; or~~
 - 2. ~~was issued an instruction from System Management to deviate from the Dispatch Plan or change its commitment or output as notified under clause 7.13.1C;~~~~
- (b) ~~determine the amount of electricity (in MWh) sent out by the Facility in accordance with Meter Data Submissions received by the IMO in accordance with clause 8.4 for all Trading Intervals occurring during the period referred to in step (a);~~
- (c) ~~if the Facility has not entered service, or if it entered service during or after the period referred to in step (a), estimate in accordance with the Reserve Capacity Procedure the amount of electricity (in MWh) that would have been sent out by the Facility, had it been in service, for all Trading Intervals occurring during the period referred to in step (a) which are prior to it entering service;~~
- (cA) ~~if, during the period described in step (a), the Facility's output was reduced in order to comply with a Dispatch Instruction from System Management, issued in accordance with clause 7.7, use:
 - (a) ~~the estimated decrease (in MWh) in the output of each Facility, by Trading Interval, as a result of System Management Dispatch Instructions, provided by System Management in accordance with clause 7.13.1(eB); and~~
 - (b) ~~the amount of electricity (in MWh) sent out for the Facility determined from Metered Data Submissions received by the IMO in accordance with clause 8.4 for all the Trading Intervals that were excluded under step (a)(i)(2),~~
~~to estimate the amount of electricity (in MWh) that would have been sent out by the Facility, had it not complied with the Dispatch Instruction for all the Trading Intervals that were excluded under step (a)(i)(2);~~~~
- (cB) ~~if, during the period described in step (a), the Facility's output was reduced in order to comply with an instruction from System Management under clause 7.6A.3(a) to deviate from the Dispatch Plan or change its commitment or output, use:
 - (i) ~~the estimated decrease (in MWh) in the output of each Facility, by Trading Interval, as a result of an instruction from System Management in accordance with clause 7.6A.3(a), where this information has been either:
 - 1. ~~provided by System Management in accordance with clause 7.13.1C(b) for the Trading Intervals that were excluded under step (a)(ii)(2), where actual data for the~~~~~~

~~site of the Facility has been provided to System Management under clause 7.7.5B; or~~

~~2. determined by the IMO in accordance with the Reserve Capacity Procedure for all the Trading Intervals that were excluded under step (a)(ii)(2), where actual data for the site of the Facility has not been made available to System Management under clause 7.7.5B; and~~

~~(ii) the amount of electricity (in MWh) sent out for the Facility determined from Meter Data Submissions received by the IMO in accordance with clause 8.4 for all the Trading Intervals that were excluded under step (a)(ii)(2);~~

~~to estimate the amount of electricity (in MWh) that would have been sent out by the Facility had it not complied with System Management's instruction for all the Trading Intervals that were excluded under step (a)(ii)(2); and~~

~~(d) set the Relevant Level as double the sum of the quantities determined in steps (b), (c), (cA) and (cB) divided by the total number of Trading Intervals identified in steps (a), (cA) and (cB).~~

4.11.3B. The Required Level (which for an upgraded Facility is calculated for the Facility as a whole):

- (a) for Facilities assigned Certified Reserve Capacity under clause 4.11.1(a), is calculated by the IMO using the Capacity Credits assigned to the Facility and temperature dependence information submitted to the IMO under clause 4.10.1(e)(i) or provided in Standing Data (where available) and converted to a sent out basis to 41°C;
- (b) for Facilities assigned Certified Reserve Capacity under clause 4.11.2(b), is either:
 - i. the value, expressed in MW as a sent out value, that equals the 5 percent probability of exceedance of expected generation output for the Facility, submitted to the IMO in the report described in clause 4.10.3A(b); or
 - ii. the proposed alternative value, expressed in MW as a sent out value, provided in the report described in clause 4.10.3A(c), where the IMO has accepted the proposed alternative value under clause 4.11.2A; and
- (c) for Demand Side Programmes, is calculated by the IMO using the Facility's Relevant Demand minus the Capacity Credits assigned to the Facility.

4.11.3C. For each three year period, beginning with the period commencing on 1 January 2015, the IMO must, by 1 April of the first year of that period, conduct a review of the Relevant Level Methodology. In conducting the review, the IMO must:

(a) examine the effectiveness of the Relevant Level Methodology in meeting the Wholesale Market Objectives; and

(b) determine the values of the parameters K and U in step 17 of the Relevant Level Methodology to be applied for each of the three Reserve Capacity Cycles commencing in the period,

and the IMO may examine any other matters that the IMO considers to be relevant.

4.11.3D. In conducting a review under clause 4.11.3C, the IMO must publish a draft report and invite submissions from Rule Participants and any other stakeholders the IMO considers should be consulted.

4.11.3E. At the conclusion of a review under clause 4.11.3C, the IMO must publish a final report containing:

(a) details of the IMO's review of the Relevant Level Methodology;

(b) a summary of the submissions received during the consultation period;

(c) the IMO's response to any issues raised in those submissions;

(d) the values of the parameters K and U determined under clause 4.11.3C; and

(e) any recommended amendments to the Relevant Level Methodology which the IMO intends to progress as a Rule Change Proposal.

6.17.6 The Dispatch Instruction Payment, $DIP(p,d,t)$, for Market Participant p and Trading Interval t of Trading Day d equals either:

(a) zero, if Market Participant p :

i is the Electricity Generation Corporation; or

ii was issued no Dispatch Instructions for Trading Interval t ;

or the sum of:

...

(c) the sum over all Non-Scheduled Generators registered by the Market Participant of the amount that is the product of:

i. the quantity, defined as a negative value, by which the Non-Scheduled Generator was instructed by System Management to reduce its output, as provided to the IMO by System Management under clause 7.13.1(eB) (where for the purpose of this calculation a Loss Factor adjustment is to be applied to the quantity specified by System Management so that the result is measured at the Reference Node); and

ii. the Standing Data price defined in Appendix 1(e)(v) that was current at the time of the Trading Interval for the Non-Scheduled Generator for a decrease in generation, (accounting for whether

the Trading Interval is a Peak Trading Interval or an Off-Peak Trading Interval) less MCAP for the Trading Interval; and

...

7.7.5A. ~~For the purpose of determining the quantity described in clause 6.17.6(c)(i) for each Trading Interval, the quantity is:~~

- ~~(a) — where System Management has been provided with information in accordance with clause 7.7.5B, System Management's estimate of the MWh reduction in output, by Trading Interval, of the Non-Scheduled Generator as a result of System Management's Dispatch Instruction; or~~
- ~~(b) — in the case of a Non-Scheduled Generator included in a Resource Plan, for which System Management has not been provided with information in accordance with clause 7.7.5B, the greater of zero and the MWh difference between the Resource Plan MWh quantity of the Non-Scheduled Generator less the MWh output of the Non-Scheduled generator over the Trading Interval implied by its Dispatch Instruction.~~

System Management must develop, in a Power System Operation Procedure, the information that must be provided by a Market Participant to System Management for each of the Market Participant's Non-Scheduled Generators for each Trading Interval to enable an estimation of the output of each Facility (in MWh) to be undertaken by:

- (a) System Management, as required under clauses 7.7.5B(a) and 7.13.1C(e); and
- (b) the IMO, as required by the Relevant Level Methodology.

7.7.5B. ~~A Market Participant may provide System Management with information specified in the Power System Operation Procedure to support the calculation of the quantity described in clause 7.7.5A(a) and 7.7.5E.~~

The quantity reduction in the output of a Non-Scheduled Generator as a result of a Dispatch Instruction from System Management (in MWh) for each Trading Interval to be used in clause 6.17.6(c)(i) is:

- (a) where information has been made available to System Management in accordance with the Power System Operation Procedure developed under clause 7.7.5A, System Management's estimate, determined in accordance with the Power System Operation Procedure, of the decrease in output of the Non-Scheduled Generator (in MWh) during the Trading Interval; or
- (b) in the case of a Non-Scheduled Generator included in a Resource Plan, for which System Management has not been provided with information in accordance with the Power System Operation Procedure developed under clause 7.7.5A, the greater of zero and the difference between the Resource Plan quantity of the Non-Scheduled Generator (in MWh) less

the output of the Non-Scheduled Generator (in MWh) over the Trading Interval derived from its Dispatch Instruction.

~~7.7.5C. The Power System Operation Procedure must specify that actual wind data for the site of a wind farm and the number of turbines operating, if made available by a Market Participant to System Management, are sufficient to allow System Management to determine what the output of a wind farm would have been had no Dispatch Instruction been issued.~~

~~7.7.5D [Blank]~~

~~7.7.5E Where the Electricity Generation Corporation has made information available to System Management in accordance with clause 7.7.5B and the Power System Operation Procedure, System Management must estimate for each Trading Interval the decrease, in MWh, in the output of each Electricity Generation Corporation Non-Scheduled Generator as a result of an instruction from System Management to deviate from the Dispatch Plan or change its commitment or output in accordance with clause 7.6.A.3(a).~~

7.7.9. System Management must ~~document~~ develop, in a Power System Operation Procedure, the procedure System Management and Market Participants must follow in forming, issuing, recording, receiving and confirming Dispatch Instructions and that System Management must follow in determining the quantities described in clause 7.7.5A(a), and 7.7.5D in the a Power System Operation Procedure, and:

(a) ~~System Management must follow that documented Market Procedure when issuing, recording, and confirming a Dispatch Instruction and in determining the quantities described in clauses 7.7.5A(a) and 7.7.5D; and~~

(b) ~~Market Participants must follow that documented Market Procedure when receiving and confirming a Dispatch Instruction and in providing information to support the calculation of the quantity described in clause 7.7.5A.~~

7.13.1. System Management must provide the IMO with the following data for a Trading Day by noon on the first Business Day following the day on which the Trading Day ends:

...

(eB) the estimated decrease, in MWh, in the output of each Non-Scheduled Generator, by Trading Interval, as a result of System Management Dispatch Instructions, as determined in accordance with clause 7.7.5AB; ~~where this is to be used in settlement as the quantity described in clause 6.17.6(c)(i).~~

...

(g) details of the instructions provided to:

- i. Demand Side Programmes that have Reserve Capacity Obligations; and
 - ii. providers of Supplementary Capacity;
- on the Trading Day; and
- (h) the identity of the Facilities ~~which that~~ were subject to either a Commissioning Test or a test of Reserve Capacity for each Trading Interval of the Trading Day.

7.13.1C The IMO may request, and System Management must provide, within 10 Business Days of receipt of a request from the IMO, provide the IMO with the following information:

- (a) for each Facility, all information made available to System Management under the Power System Operation Procedure developed under clause 7.7.5A;
- (b) an estimate of the total quantity of energy not served (in MWh) due to involuntary load shedding (manual and automatic);
- (c) an estimate of the reduction in energy consumption (in MWh) of any Interruptible Loads in accordance with the terms of an Ancillary Service Contract;
- (d) a schedule of all instructions provided to the Electricity Generation Corporation's Non-Scheduled Generators to deviate from the Dispatch Plan or change their commitment or output in accordance with clause 7.6A.3; and
- (e) an estimate of the decrease in the output (in MWh) of each Electricity Generation Corporation Non-Scheduled Generator as a result of an instruction from System Management to deviate from the Dispatch Plan or change their commitment or output in accordance with clause 7.6A.3(a),

for each Trading Interval during the time period specified by the IMO in its request.

- ~~(a) a schedule of all instructions provided to the Electricity Generation Corporation's Non-Scheduled Generators to deviate from the Dispatch Plan or change their commitment or output in accordance with clause 7.6A.3(a) for each Trading Interval during the time period specified by the IMO in its request; and~~
- ~~(b) where the Electricity Generation Corporation has made actual wind data available in accordance with clause 7.7.5B, the estimated decrease, in MWh, in the output of each Electricity Generation Corporation Non-Scheduled Generator as a result of an instruction from System Management to deviate from the Dispatch Plan or change their commitment or output in accordance with clause 7.6A.3(a), as determined in accordance with clause 7.7.5E, for each Trading Interval~~

~~during the time period specified by the IMO in its request, where this is to be used in the calculation of the Relevant Level described in clause 4.11.3A.~~

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:

(a) the following Market Rule and Market Procedure information and documents:

...

(f) the following Reserve Capacity information (if applicable):

i. Requests for Expressions of Interest described in clause 4.2.3 for the previous five Reserve Capacity Cycles;

...

ix. The following annually calculated and monthly adjusted ratios:

1. NTDL_Ratio as calculated in accordance with Appendix 5, STEP 8;
2. TDL_Ratio as calculated in accordance with Appendix 5, STEP 8; and
3. Total_Ratio as calculated in accordance with Appendix 5, STEP 10; and

x. The following information identified for a Reserve Capacity Cycle under the Relevant Level Methodology:

1. the Existing Facility Load for Scheduled Generation for each Trading Interval in the five year period determined under step 1(a) of the Relevant Level Methodology; and
2. the 12 Trading Intervals occurring on separate Trading Days with the highest Existing Facility Load for Scheduled Generation for each 12 month period in the five year period.

Glossary

Existing Facility Load for Scheduled Generation: Means the MWh quantity determined for a Trading Interval under step 7 of the Relevant Level Methodology.

New Facility Load for Scheduled Generation: Means, for a new or upgraded Facility that has applied to be assigned Certified Reserve Capacity under clause 4.11.2(b), the MWh quantity determined for a Trading Interval under step 11 of the Relevant Level Methodology for that Facility and the relevant Reserve Capacity Cycle.

Relevant Level: Means the MW quantity determined by the IMO in accordance with the Relevant Level Methodology.

Relevant Level Methodology: Means the method of determining the Relevant Level specified in Appendix 9.

Appendix 9: Relevant Level Determination

This Appendix presents the methodology for determining the Relevant Levels for Facilities that have applied for certification of Reserve Capacity under clause 4.11.2(b) for a given Reserve Capacity Cycle (“Candidate Facility”).

For the purposes of the Relevant Level determination in this Appendix 9:

- the full operation date of a Candidate Facility for the Reserve Capacity Cycle (“Full Operation Date”) is:
 - the date provided under clause 4.10.1(c)(iii)(7) or revised in accordance with clause 4.27.11A or clause 4.27.11B, where at the time the application for certification of Reserve Capacity is made the Facility, or part of the Facility (as applicable) is yet to enter service; or
 - the date most recently provided for a Reserve Capacity Cycle under clause 4.10.1(k) otherwise; and
- a Candidate Facility will be considered to be:
 - a new candidate Facility, if the five year period identified in step 1(a) of this Appendix commenced before 8:00 AM on the Full Operation Date for the Facility (“New Candidate Facility”); or
 - an existing Candidate Facility (“Existing Candidate Facility”), otherwise.

The IMO must perform the following steps to determine the Relevant Level for each Candidate Facility:

Determining Existing Facility Load for Scheduled Generation

Step 1: Identify:

- (a) the five year period ending at 8:00 AM on 1 April of Capacity Year 1 of the relevant Reserve Capacity Cycle;
- (b) any 12 month period, from 1 April to 31 March, occurring during the five year period identified in step 1(a), where the 12 Trading Intervals with the highest Existing Facility Load for Scheduled Generation in that 12 month period have not previously been determined under this Appendix 9; and

(c) any 12 month period, from 1 April to 31 March, occurring during the five year period identified in step 1(a), where the 12 Trading Intervals with the highest Existing Facility Load for Scheduled Generation in that 12 month period have previously been determined under this Appendix 9.

Step 2: Determine the quantity of electricity (in MWh) sent out by each Candidate Facility using Meter Data Submissions for each of the Trading Intervals in the period identified in step 1(b).

Step 3: For each Candidate Facility, identify any Trading Intervals in the period identified in step 1(b) where the Facility:

(a) was owned, controlled or operated by a Market Participant other than the Electricity Generation Corporation and was issued a Dispatch Instruction from System Management as notified under clause 7.13.1(c); or

(b) was owned, controlled or operated by the Electricity Generation Corporation and was issued an instruction from System Management to deviate from its Dispatch Plan or change its commitment or output as notified under clause 7.13.1C(d); or

(c) was affected by a Consequential Outage as notified by System Management to the IMO under clause 7.13.1A.

Step 4: For each Candidate Facility and Trading Interval identified in step 3(a) use:

(a) the estimate provided by System Management to the IMO under clause 7.13.1(eB); and

(b) the quantity determined for the Facility and Trading Interval in step 2, to estimate the quantity of energy (in MWh) that would have been sent out by the Facility had it not complied with the Dispatch Instruction during the Trading Interval.

Step 5: For each Candidate Facility and Trading Interval identified in step 3(b) use:

(a) the estimate provided by System Management to the IMO under clause 7.13.1C(e); and

(b) the quantity determined for the Facility and Trading Interval in step 2, to estimate the quantity of energy (in MWh) that would have been sent out by the Facility had it not complied with System Management's instruction to change its commitment or output during the Trading Interval.

Step 6: For each Candidate Facility and Trading Interval identified in step 3(c) use:

(a) the schedule of Consequential Outages provided by System Management to the IMO under clause 7.13.1A;

(b) the quantity determined for the Facility and Trading Interval in step 2; and

(c) the information provided by System Management under clause 7.13.1C(a),

to estimate the quantity of energy (in MWh) that would have been sent out by the Facility had it not been affected by the notified Consequential Outage during the Trading Interval.

Step 7: Determine for each Trading Interval in each 12 month period identified in step 1(b) the Existing Facility Load for Scheduled Generation (in MWh) as:

(Total Generation + DSP Reduction + Interruptible Reduction + Involuntary Reduction) – CF Generation

where

Total Generation is the total sent out generation of all Facilities, as determined from Meter Data Submissions;

DSP Reduction is the total quantity by which all Demand Side Programmes reduced their consumption in response to a Dispatch Instruction, as determined under clause 6.17.6(d)(i)(3);

Interruptible Reduction is the total quantity by which all Interruptible Loads reduced their consumption in accordance with the terms of an Ancillary Service Contract, as provided by System Management to the IMO under clause 7.13.1C(c);

Involuntary Reduction is the total quantity of energy not served due to involuntary load shedding (manual and automatic), as provided by System Management to the IMO under clause 7.13.1C(b); and

CF Generation is the total sent out generation of all Candidate Facilities, as determined in step 2 or estimated in steps 4, 5 or 6 as applicable.

Step 8: Determine for each 12 month period identified in step 1(b) the 12 Trading Intervals, occurring on separate Trading Days, with the highest Existing Facility Load for Scheduled Generation.

Step 9: Identify, for each 12 month period identified in step 1(c), the following:

(a) the Existing Facility Load for Scheduled Generation previously determined under this Appendix 9 for each Trading Interval in the 12 month period;

(b) the sent out generation (in MWh) for each Candidate Facility for each Trading Interval in the 12 month period that was used in the determination of the Existing Facility Load for Scheduled Generation for that Trading Interval; and

(c) the 12 Trading Intervals occurring on separate Trading Days that were previously determined to have the highest Existing Facility Load for Scheduled Generation in the 12 month period.

Determining New Facility Load for Scheduled Generation

Step10: For each New Candidate Facility determine, for each Trading Interval in the period identified in step 1(a) that falls before 8:00AM on the Full Operation Date for the Facility, an estimate of the quantity of energy (in MWh) that would have been sent out by the Facility in the Trading Interval, if it had been in operation with the configuration proposed under clause 4.10.1(dA) in the relevant application for certification of Reserve Capacity. The estimates must reflect the estimates in the expert report provided for the Facility under clause 4.10.3, unless the IMO reasonably considers the estimates in the expert report to be inaccurate.

Step11: For each New Candidate Facility determine, for each Trading Interval in the period identified in step 1(a), the New Facility Load for Scheduled Generation (in MWh) as:

(a) if the Trading Interval falls before 8:00 AM on the Full Operation Date for the Facility:

$$\text{EFLSG} + \text{Actual CF Generation} - \text{Estimated CF Generation}$$

where

EFLSG is the Existing Facility Load for Scheduled Generation for the Trading Interval, determined in step 7 or identified in step 9(a) as applicable;

Actual CF Generation is the sent out generation of the New Candidate Facility for the Trading Interval, as identified in step 9(b), determined in step 2 or estimated in steps 4, 5 or 6 as applicable; and

Estimated CF Generation is the quantity determined for the New Candidate Facility and the Trading Interval in step 10;

or

(b) the Existing Facility Load for Scheduled Generation for the Trading Interval, otherwise.

Step 12: For each New Candidate Facility determine, for each 12 month period identified in step 1(a), the 12 Trading Intervals, occurring on separate Trading Days, with the highest New Facility Load for Scheduled Generation.

Determining the Facility Average Performance Level

Step 13: For each Existing Candidate Facility, determine the 60 quantities comprising:

(a) the MWh quantities determined in step 2 or estimated in steps 4, 5 or 6 as applicable for each of the Trading Intervals determined in step 8, multiplied by 2 to convert to units of MW; and

(b) the MWh quantities determined in step 9(b) for each of the Trading Intervals identified in step 9(c), multiplied by 2 to convert to units of MW.

Step 14: For each New Candidate Facility, determine the 60 quantities comprising:

- (a) the MWh quantities identified in step 9(b), determined in step 2 or estimated in steps 4, 5 or 6 as applicable for each of the Trading Intervals identified in step 12 that fall after 8:00 AM on the Full Operation Date for the Facility, multiplied by 2 to convert to units of MW; and
- (b) the MWh quantities determined in step 10 for each of the Trading Intervals identified in step 12 that fall before 8:00 AM on the Full Operation Date of the Facility, multiplied by 2 to convert to units of MW.

Step 15: Determine the average performance level (in MW) for each Candidate Facility f (“Facility Average Performance Level”) as the mean of the 60 quantities determined for Facility f in step 13 or step 14 as applicable.

Determine the Facility Adjustment Factor

Step 16: Determine the variance (in MW) for each Candidate Facility f (“Facility Variance”) as the variance of the MW quantities determined for Facility f in step 13 or step 14 as applicable.

Step 17: Determine the facility adjustment factor (in MW) for each Candidate Facility f (“Facility Adjustment Factor”) in accordance with the following formula:

Facility Adjustment Factor = min (G x Facility Variance (f), Facility Average Performance Level (f) /3 + K x Facility Variance (f))

Where

$$G = K + U/\text{Facility Average Performance Level (f)}$$

K is determined in accordance with the following table:

<u>Reserve Capacity Cycle</u>	<u>Capacity Year</u>	<u>K value</u>
<u>2012</u>	<u>2014/15</u>	<u>0.001</u>
<u>2013</u>	<u>2015/16</u>	<u>0.002</u>
<u>2014</u>	<u>2016/17</u>	<u>0.003</u>
<u>2015 onwards</u>	<u>From 2017/18 onwards</u>	<u>To be determined by the IMO in accordance with clause 4.11.3B.</u>

U is determined in accordance with the following table:

<u>Reserve Capacity Cycle</u>	<u>Capacity Year</u>	<u>U</u>
<u>2012</u>	<u>2014/15</u>	<u>0.211</u>
<u>2013</u>	<u>2015/16</u>	<u>0.422</u>
<u>2014</u>	<u>2016/17</u>	<u>0.635</u>
<u>2015 onwards</u>	<u>From 2017/18 onwards</u>	<u>To be determined by the IMO in accordance with clause 4.11.3B.</u>

Determining the Relevant Level for a Facility

Step 18: Determine the Relevant Level for each Candidate Facility f (in MW) in accordance with the following formula:

$$\text{Relevant Level (f)} = \max(0, \text{Facility Average Performance Level (f)} - \text{Facility Adjustment Factor (f)})$$

Publication of information

Step 19: Publish on the Market Web Site by 1 June of Year 1 of the relevant Reserve Capacity Cycle:

- (a) the Trading Intervals identified in step 8; and
- (b) the Existing Facility Load for Scheduled Generation quantities determined in step 7.