MARKET SUSPENSION COMPENSATION METHODOLOGY

DRAFT REPORT AND DETERMINATION

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NOTICE OF SECOND STAGE CONSULTATION – MARKET SUSPENSION COMPENSATION

National Electricity Rules – Rule 8.9

Date of Notice: 12 April 2019

This notice informs all Registered Participants and interested parties (Consulted Persons) that AEMO is commencing the second stage of its consultation on the Market Suspension Compensation Methodology[1] (Methodology).

This consultation is being conducted under clauses 3.14.5A(h) and 11.111.2 of the National Electricity Rules (NER), in accordance with the Rules consultation requirements detailed in rule 8.9 of the NER.

Invitation to make Submissions

AEMO invites written submissions on this Draft Report and Determination (Draft Report).

Please identify any parts of your submission that you wish to remain confidential, and explain why. AEMO may still publish that information if it does not consider it to be confidential, but will consult with you before doing so.

Consulted Persons should note that material identified as confidential may be given less weight in the decision-making process than material that is published.

Closing Date and Time

Submissions in response to this Notice of Second Stage of Rules Consultation should be sent by email to Rye.Johnstone@aemo.com.au, to reach AEMO by 5.00pm (Melbourne time) on 3 May 2019.

All submissions must be forwarded in electronic format (both pdf and Word). Please send any queries about this consultation to the same email address.

Submissions received after the closing date and time will not be valid, and AEMO is not obliged to consider them. Any late submissions should explain the reason for lateness and the detriment to you if AEMO does not consider your submission.

Publication

All submissions will be published on AEMO's website, other than confidential content.

[1] Available here: https://www.aemo.com.au/-/media/Files/Electricity/NEM/Emergency_Management/2018/Market-Suspension-Compensation-Methodology.pdf

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1. STAKEHOLDER CONSULTATION PROCESS

As required by National Electricity Rules (NER) clause 11.111.2, AEMO is consulting on an updated *Market Suspension Compensation Methodology* (Methodology) in accordance with clause 3.14.5A(h) and the Rules consultation process in rule 8.9.

AEMO's indicative timeline for this consultation is outlined below. Future dates may be adjusted depending on the number and complexity of issues raised in submissions.

Deliverable	Date
Notice of first stage consultation [and Issues Paper] published	11 February 2019
First stage submissions closed	20 March 2019
Draft Report & Notice of second stage consultation published	12 April 2019
Submissions due on Draft Report	3 May 2019
Final Report published	17 June 2019

The publication of this Draft Report marks the commencement of the second stage of consultation.

2. BACKGROUND

2.1. NER requirements

NER 3.14.5A(h) requires AEMO to develop, publish and make available on the AEMO website a methodology that specifies:

- the classes of Scheduled Generator and Ancillary Service Provider to be used for the purpose of calculating benchmark values;
- the approach to be adopted by AEMO in calculating the benchmark values for each class of Scheduled Generator and Ancillary Service Provider in each region, including determining the equivalent NTNDP inputs for the purpose of the calculation in 3.14.5A(e); and
- AEMO's administrative fees associated with a claim for compensation under clause 3.14.5B or the manner in which those fees are to be determined.

2.2. Context for this consultation

The requirement for AEMO to develop and publish the Methodology was introduced by the *National Electricity Amendment (Participant compensation following market suspension) Rule 2018*. The transitional provisions of that Rule required AEMO to determine and publish an initial version of the Methodology by 19 December 2018, and then consult on an updated version by 19 June 2019. The initial Methodology will remain in place until the conclusion of this consultation.

2.3. First stage consultation

AEMO issued a Notice of First Stage Consultation on 11 February 2019[2]. The accompanying Issues Paper[3] explained the development of the initial Market Suspension Compensation Methodology, including the

[2] https://www.aemo.com.au/-/media/Files/Stakeholder_Consultation/Consultations/NEM-Consultations/2019/Market-Suspension-Compensation/Notice-of-First-Stage-Consultation---Market-Suspension-Compensation-Methodology.pdf

[3] https://www.aemo.com.au/-/media/Files/Stakeholder_Consultation/Consultations/NEM-Consultations/2019/Market-Suspension-Compensation/Consultation-Issues-Paper---Market-Suspension-Compensation-Methodology.pdf

requirements of the NER, and invited submissions on alternative approaches in each of the three mandatory components of the Methodology:

- Scheduled Generator and Ancillary Service Provider classes
- Benchmark value calculation
- AEMO's administrative fees.

AEMO received one written submission in the first stage of consultation, from ERM Power. A copy has been published on AEMO's website here.

A detailed summary of issues raised in the submission, together with AEMO's responses, is contained in Appendix A.

3. DISCUSSION OF MATERIAL ISSUES

3.1. Scheduled Generator and Ancillary Service Provider classes

3.1.1. Issue summary and submissions

The Issues Paper sought feedback on the appropriateness and completeness of scheduled generator and ancillary service provider classes for current and future Market Suspension Compensation Claimants (Claimants).

ERM Power's submission identified that the classes of Claimants did not account for open cycle gas turbines (OCGTs) that can operate on both gas and liquid fuel. The submission suggested that the classes of claimants be expanded to include both gas and liquid fuelled OCGTs to account for power stations able to operate on both fuel types.

3.1.2. AEMO's assessment

The classes outlined in the Methodology account for current scheduled generators (consuming their primary fuel) as well as making provisions for possible new classes in the future.

The market suspension compensation process is closely aligned with the process for 'Affected Participant' compensation for AEMO intervention events. The Affected Participant compensation process incorporates a short-run marginal cost value based on NTNDP inputs. The automated market suspension compensation process relies on annual benchmark values that are also calculated using NTNDP inputs.

At present, the NTNDP inputs assume that dual-fuel capable open cycle gas turbines run on gas, given the much higher cost of liquid fuel. Including an additional category to cover the occasions a dual-fuel capable OCGT consumes liquid fuel would require additional data not present in the NTNDP inputs. The process for calculating compensation in that circumstance would require interpreting and verifying a complex schedule of operations within the intervention settlement timetable. This is likely to complicate the framework and increase the administrative burden, thus increasing costs for consumers for what is a rare event (only two market suspensions since the beginning of the NEM).

AEMO recognises that it is preferable for the suspension pricing compensation formula to capture a broad range of the most likely participant costs. However, noting the relative infrequency of liquid fuel operation and the fact that suitable benchmark information is not currently available from NTNDP inputs, in these circumstances AEMO considers it would not be unreasonable for a Claimant to make a claim for additional compensation, if the formula compensation amount was not sufficient to cover direct costs.

3.1.3. AEMO's conclusion

AEMO concludes that the current classes of Claimants set out in the Methodology provide an appropriate balance between granularity and simplicity.

3.2. Calculation of benchmark values

3.2.1. Issues summary

The Issues Paper sought feedback on the approach to determining the capacity-weighted average amount used to calculate the benchmark values for each class of Claimant and not the relevant NTNDP inputs to be used in the calculation process.

ERM Power's submission raised concerns with the assumed output factor of OCGTs in the Current Modelling and Assumptions Workbook (the Workbook).

The ERM Power submission also noted that default values would be used in the calculation of benchmark values if not available in the Workbook, as per NER 3.14.5A(e).

The inclusion of unit start costs in the calculation of benchmark was raised by ERM Power as a further concern with the calculation of benchmark values

3.2.2. AEMO's assessment

NTNDP inputs to be included in the calculation of benchmark values are set out in NER 3.14.5A(e), these values are subject to consultation requirements in NER 5.20.1. NER 3.14.5A(e) also specifies the default values to be used in the calculation of benchmark values if there is no equivalent NTNDP input value.

The AEMC's rule making process examined the impact of variable fuel costs, heat rates and other factors on the compensation that would be payable to Claimants in sections 4.2.4 to 4.2.7 of the final determination. A premium of 15% was included in the calculation of benchmark values. AEMO considers this to be a compromise between the interests of generators and consumers.

The AEMC's final determination[4] includes a review of the inclusion of generator start costs in section 4.2.3. AEMO supported the assessment and notes the AEMC's decision to not include generator start costs in the formula set out in NER 3.14.5A.

As required by the NER, section 4.1.1 of the Methodology confirms that individual benchmark values for each generating system are calculated using formulas and input values (including default values) set out in NER 3.14.5a(e). NER 3.14.5 does not specify the inclusion of start-up costs, variable fuel costs or variable heat rates, and does not support the inclusion of additional discretionary inputs.

3.2.3. AEMO's conclusion

AEMO notes that the formulas for calculation of compensation and the inputs for benchmark value calculation are set out NER 3.14.5A.

AEMO concludes that the current mathematical approach for determining the capacity weighted average is reasonable and consistent with the NER.

[4] AEMC Final Determination: https://www.aemc.gov.au/sites/default/files/2018-11/Final%20determination_0.pdf

3.3. AEMO's administrative fee

3.3.1. Issues summary

The issues paper highlighted that while AEMO may recover a fee from a Claimant to recoup some of the costs in administering the claims process under NER 3.14.5B, no fee or fee structure was set out in the rule.

ERM Power's submission expressed the view that a fee should not be payable for an additional claim by a dual-fuel capable generator that is operationally required to use a more expensive fuel during market suspension pricing schedule periods.

3.3.2. AEMO's assessment

AEMO considers the fee put forward in the initial Methodology reflects a reasonable estimate of AEMO's average administrative costs in considering a straightforward claim, but recognises that the actual administrative costs and potential expert fees incurred in more complex claims could be materially higher.

As noted in the AEMC's final determination dual-fuel plants can, and have, used both gas and diesel in a single day. As a result of this flexibility any compensation assessment where an OCGT has run on liquid fuel would require a detailed individual assessment to determine the period and volume of liquid fuelled generation, in conjunction with the relevant participant.

3.3.3. AEMO's conclusion

AEMO concludes that the administrative fee proposed in the initial methodology is sufficient to meet the objectives canvassed by the AEMC in its final determination:

- Deter submission of immaterial claims that are less than the costs to the market of processing the claim.
- Not act as a deterrent to claims to the extent that participants are incentivised to withdraw generation and await direction in a market suspension scenario (noting that no fee is payable for an additional compensation claim resulting from a direction, but a $5,000 minimum threshold applies).
- Provide for an appropriate allocation of costs between an individual generator claimant and the market as a whole, neither encouraging claims with limited merit nor discouraging a participant from claiming legitimate losses and costs – even if the circumstances of the claim warrant independent expert determination.
- Relative simplicity in terms of application and recovery of the fee, noting that a possible two-tier fee structure (for example claims with and without independent expert referral) may require AEMO to collect fee components at different stages of the process, introducing more complexity or uncertainty.

4. DRAFT DETERMINATION

Having considered the matters raised in submissions, AEMO's draft determination is to make the Market Suspension Compensation Methodology in the form of Attachment 1, in accordance with clause 3.14.5A(h) of the NER.

APPENDIX A. SUMMARY OF SUBMISSIONS AND AEMO RESPONSES

No.	Consulted person	Issue	AEMO response
1.	ERM Power	We believe from a perspective of clarity that Section 3 of the proposed methodology should be amended to show both fuel types of open cycle gas turbines separately: gas fuelled open cycle gas turbines, liquid fuelled open cycle gas turbines.	Noted, detailed response in 4.1.2
2.	ERM Power	We believe the need to claim for additional compensation based on the type of fuel used whilst complying with an AEMO dispatch instruction creates an unwarranted additional administrative cost on a scheduled generator that may be responding to the needs of the power system at a time of system stress.	Noted, detailed response in 4.1.2
3.	ERM Power	We believe that AEMO must ensure that these values [*NTNDP inputs*] are adequately and accurately represented in the current modelling and assumptions workbook.	Noted, NTNDP inputs are subject to consultation requirements in NER 5.20.1.
4.	ERM Power	During a market suspension event, generating units could be required to operate anywhere between minimum stable loading and maximum capability. Actual unit heat rates could vary by considerable values based on time of year and actual generator loading compared to the values contained in the current modelling and assumptions workbook. We suggest that in considering benchmark values to be used in the calculation of compensation, the baseline value for flexible operating plant should be based on an output factor of 80%.	The AEMC's rule making process examined the impact of variable fuel costs and heat rates on the compensation that would be payable to Claimants. A premium of 15% was included in the calculation of benchmark values. AEMO considers this to be a compromise between the interests of generators and consumers.
5.	ERM Power	Scheduled generators should not be financially penalised by having to lodge claims for additional compensation for providing operational flexibility during a period of market suspension due to the omission of unit start costs from the proposed automated compensation methodology.	Noted, the AEMC's final determination (section 4.2.3) provides an explanation for the exclusion of generator start costs from the compensation calculation set out in NER 3.14.5A

APPENDIX B. ATTACHMENT 1 – DRAFT MARKET SUSPENSION COMPENSATION METHODOLOGY

This appendix contains the draft substantive provisions for inclusion in AEMO's revised Market Suspension Compensation Methodology. Once finalised, the Market Suspension Compensation Methodology will be published in AEMO's standard template format for NER procedures, including introductory text, definitions and version history.

1. NER REQUIREMENTS

1.1. Methodology requirements

The requirements for participant compensation following market suspension in the *NEM* are specified in clause 3.14.5A of the NER.

Under NER 3.14.5A(h), AEMO must develop this Methodology to include:

(a) the classes of *Scheduled Generator* and *Ancillary Service Provider* to be used for the purpose of calculating benchmark values to be applied in the calculation of compensation during a *market suspension pricing period*;

(b) AEMO's approach in calculating the benchmark values for each class of *Scheduled Generator* and *Ancillary Service Provider* in each *region*, including determining the equivalent *NTNDP* inputs for the purpose of clause 3.14.5A(e); and

(c) AEMO's administrative fees associated with a claim for compensation under clause 3.14.5B or the manner in which those fees are to be determined.

1.2. Participant compensation following market suspension objective

The objective for the payment of compensation under NER 3.14.5A and 3.14.5B is (NER 3.14.5A(a)):

> "..to maintain incentive for:
>
> 1. *Scheduled Generators* to supply *energy*; and
> 2. *Ancillary Service Providers* to supply *market ancillary services*,
>
> during *market suspension pricing schedule periods*."

2. SCHEDULED GENERATOR AND ANCILLARY SERVICE PROVIDER CLASSES

AEMO will calculate benchmark values for the following classes of *Scheduled Generator* and *Ancillary Service Provider* based on the *generating system* fuel source or technology type:

- Black coal
- Brown coal
- Open cycle gas turbine
- Combined cycle gas turbine
- Hydro
- Wind
- Solar photovoltaic
- Large scale batteries
- Biomass
- Solar thermal
- Liquid fuel

The individual components of combined *generating systems* with multiple energy sources will be accounted for in the benchmark values for each applicable *Scheduled Generator* and *Ancillary Service Provider* class.

3. CALCULATION OF BENCHMARK VALUES

3.1. Benchmark value process

The benchmark values for *generation* and *market ancillary* services are calculated in accordance with NER 3.14.5A(e) and 3.14.5A(f) and the following process:

(a) A benchmark cost is calculated for each individual *generating system* of a *Scheduled Generator*.

(b) Individual benchmark costs are aggregated to a capacity-weighted average figure for each *region* and *Scheduled Generator* class.

(c) Final benchmark figures for *generation* and *ancillary services* are calculated.

3.1.1. Individual benchmark costs

Individual benchmark costs are calculated for each *generating system* of a *Scheduled Generator* using the formula for 'BC' set out in NER 3.14.5A(e) and replicated below for convenience:

$$BC = (FC \times E) + VOC$$

where:

FC = the fuel cost (in $/GJ) for the relevant *Generator*.

E = the efficiency (in GJ/MWh) for the relevant *Generator*.

VOC = the variable operating cost (in $/MWh) for the relevant *Generator*.

In each case, the above inputs (FC, E and VOC) are to be the same as the equivalent *NTNDP inputs*. If there is no equivalent *NTNDP input* for "FC" or "E", it will be deemed to be one. If there is no equivalent *NTNDP input* for "VOC", it will be deemed to be zero.

Note that 'relevant *Generator*' in the descriptions of the terms FC, E and VOC refers to the *generating system* for which the calculation is being performed.

The source of the *NTNDP inputs* is described in section 3.2 of this Methodology.

3.1.2. Capacity-weighted average aggregation

The capacity-weighted average of the benchmark costs of all *generating systems* of *Scheduled Generators* in a specific class and specific *region* (BC_{av})is calculated in accordance with the following formula:

$$BC_{(av)} = BC_1 \times \frac{C_1}{TC} + BC_2 \times \frac{C_2}{TC} + \cdots + BC_m \times \frac{C_m}{TC}$$

where:

BC_i is the value determined under section 3.1.1 of this Methodology for the i^{th} *generating system* in the class for that *region*,

C_i is the i^{th} *generating system's* maximum capacity,

TC is the aggregate maximum capacity of all *generating systems* (i=1 to m) in the specific class and *region*.

3.1.3. Benchmark value for generation

The benchmark value for *generation* (BVG) for a specific *Scheduled Generator* class in a specific *region* is calculated in accordance with the following formula:

$$BVG = BC_{(av)} \times 1.15$$

where:

$BC_{(av)}$ is the value determined under section 3.1.2 of this Methodology for that *Scheduled Generator* class and *region*.

3.1.4. Benchmark value for ancillary services

The benchmark value for *market ancillary services* (BVAS) for a specific *Ancillary Service Provider* class in a specific *region* is calculated in accordance with the following formula:

$$BVAS = BC_{(av)} \times \left(\frac{0.15}{n}\right)$$

where:

$BC_{(av)}$ is the value determined under section 3.1.2 of this Methodology for the corresponding *Scheduled Generator* class and *region*,

n = the number of *trading intervals* within a one hour period.

3.2. Benchmark formulation inputs

NTNDP input values for the calculation of the benchmark values are sourced from the latest Integrated System Plan modelling and assumptions spreadsheet published by AEMO.

Input value	ISP Modelling assumptions spreadsheet location (tab)
Capacity	Maximum capacity
Fuel cost	a) Coal and Biomass price b) Gas and Liquid fuel prices
Efficiency	Heat rates
Variable operating cost	Variable OPEX

4. AEMO'S ADMINISTRATIVE FEES

Under NER 3.14.5B(e) AEMO may recover an administrative fee from a *Market Suspension Compensation Claimant*.

If a *Market Suspension Compensation Claimant* claims additional compensation under NER 3.14.5B(a), an administrative fee of $3,500 excluding GST is payable on submission of the claim to cover AEMO's administrative costs.