

TRANSITIONAL PROCEDURE: RCM LIMIT ADVICE REQUIREMENTS

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IMPORTANT NOTICE - EXPLANATORY NOTES

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CONTENTS

1	INTRODUCTION	4
1.1	Purpose and scope	4
1.2	Definitions	5
1.3	Interpretation	5
1.4	Related documents	6
2	COMMUNICATIONS	6
3	TIMEFRAME	7
4	FORMAT, FORM AND MANNER	7
4.1	Provision of information to a Network Operator by AEMO	7
4.2	Provision of information to AEMO by a Network Operator	8
5	INFORMATION REQUIRED UNDER CLAUSE 4.4B.5	9
5.1	Estimated Proportion of Peak Demand	9
5.2	Thermal Network Limits	10
5.3	New load that is equal to or greater than 10 MW or existing load that increases by 10 MW or more	11
5.4	Network configuration	11
5.5	Any changes to the RCM Limit Advice	12
6	REQUESTING ADDITIONAL INFORMATION	13
	APPENDIX A. RELEVANT CLAUSES OF THE WEM RULES	15

TABLES

Table 1	Related documents	6
Table 2	Required format and form, for which the information specified in clause 4.4B.5 must be provided.....	9
Table 3	Examples of explanations specified in paragraph 5.5.1(d) of the Procedure	13
Table 4	Relevant clauses of the WEM Rules	15

1 INTRODUCTION

1.1 Purpose and scope

- 1.1.1 This Transitional Procedure: Limit Advice Requirements (Procedure) is made in accordance with AEMO's functions under clause 2.1A.2(h) of the Wholesale Electricity Market Rules (WEM Rules).
- 1.1.2 The *Electricity Industry Act 2004*, the WEM Regulations and the WEM Rules prevail over this Procedure to the extent of any inconsistency.
- 1.1.3 In this Procedure, where obligations are conferred on a Rule Participant, that Rule Participant must comply with the relevant obligations in accordance with clause 2.9.7A, 2.9.7D or 2.9.8, as applicable.
- 1.1.4 The purpose of this Procedure is to outline:
- (a) in respect of the information to be provided by a Network Operator to AEMO under clause 2.27A.2 (to the extent that the information relates to RCM Limit Advice):
 - (i) the information and data to be provided by each Network Operator to AEMO [Clause 2.27A.10(a)(i)];
 - (ii) the processes to be followed for the provision of and, where applicable, updates to such information and any other information referred to in clause 2.27A.4, from each Network Operator to AEMO, including:
 - 1. the format, form and manner in which such information must be provided [Clause 2.27A.10(a)(ii)(1)]; and
 - 2. where the WEM Rules do not provide a timeframe for the provision of such information to AEMO, the reasonable times by which such information must be provided having regard to the scope and nature of the information to be provided [Clause 2.27A.10(a)(ii)(2)];
 - (b) the processes AEMO must follow in providing the information to Network Operators under clause 4.4B.2 [Clause 2.27A.10(bA)]; and
 - (c) any other processes or procedures relating to Constraints or Network congestion that AEMO considers are reasonably required to enable it to carry out its functions under the WEM Rules [Clause 2.27A.10(d)].

1.1.5 Appendix A of this Procedure outlines the head of power clauses that this Procedure is made under, as well as other obligations in the WEM Rules covered by this Procedure.

1.2 Definitions

1.2.1 Terms defined in the *Electricity Industry Act 2004*, the WEM Regulations and the WEM Rules have the same meanings in this Procedure unless the context requires otherwise.

1.2.2 The following definitions apply in this Procedure unless the context requires otherwise.

Table 1 Definitions

Term	Definition
Block Load	A net Withdrawal that a Network Operator proposes, and AEMO accepts, that is not expected to vary for different SWIS load levels, for the purpose of paragraph 5.1.1.
Network Reinforcement Scheme	A scheme developed, designed and maintained by a Network Operator, which includes a runback scheme or an inter-tripping scheme, for the purpose of supporting maintenance of Power System Security and Power System Reliability.

1.3 Interpretation

1.3.1 The following principles of interpretation apply in this Procedure unless the context requires otherwise.

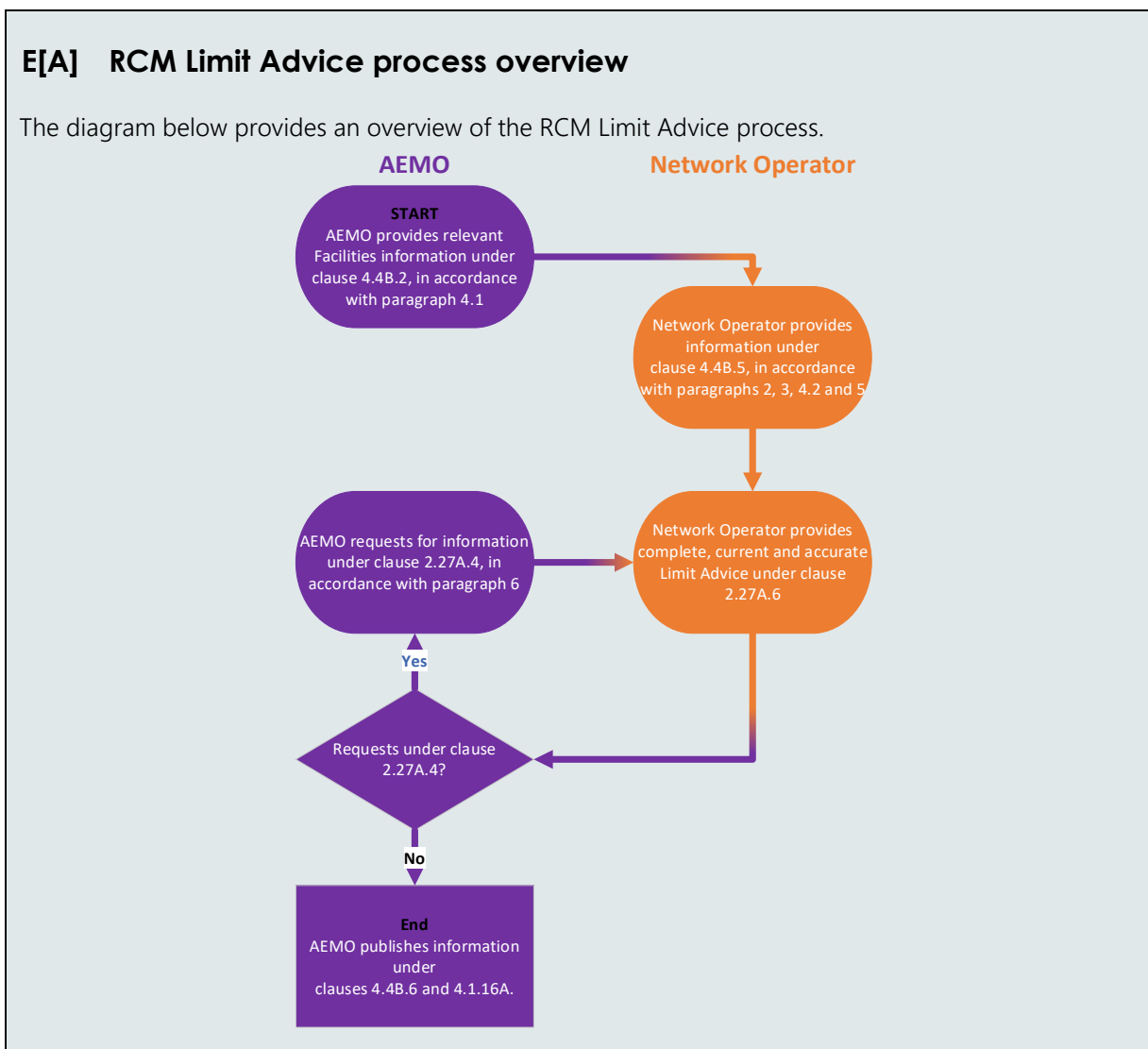
- (a) Clauses 1.3 to 1.5 of the WEM Rules apply in this Procedure.
- (b) References to time are references to Australian Western Standard Time.
- (c) Terms that are capitalised, but not defined in this Procedure, have the meaning given in the WEM Rules.
- (d) A reference to the WEM Rules or WEM Procedures includes any associated forms required or contemplated by the WEM Rules or WEM Procedures.
- (e) Words expressed in the singular include the plural and vice versa.
- (f) A reference to a paragraph refers to a paragraph of this Procedure.
- (g) A reference to a clause refers to a clause or section of the WEM Rules.
- (h) References to WEM Rules in this Procedure in bold and square brackets [Clause XXX] are included for convenience only, and do not form part of this Procedure.
- (i) Text located in boxes and headed as Explanatory Note X in this Procedure is included by way of explanation only and does not form part of this Procedure. The Procedure prevails to the extent of any inconsistency with the explanatory notes contained within it.
- (j) The body of this Procedure prevails to the extent of any inconsistency with the figures, diagrams, appendices, schedules, annexures or attachments contained within this document.

1.4 Related documents

1.4.1 The documents in Table 1 are associated with this Procedure.

Table 1 **Related documents**

Reference	Title	Location
WEM Rules	WEM Rules	EPWA website
Technical Rules	Technical Rules	Economic Regulation Authority (ERA) website
WEM Procedure	WEM Procedure: RCM Constraint Formulation	WEM Web Site
WEM Procedure	WEM Procedure: Development of Limit Advice (maintained by Western Power)	Western Power Website
WEM Procedure	WEM Procedure: Congestion Information Resource	WEM Web Site



2 COMMUNICATIONS

- 2.1.1 AEMO must provide information specified in clause 4.4B.2 to a Network Operator by email, or as otherwise agreed with the relevant Network Operator.
- 2.1.2 All submissions to AEMO by a Network Operator in accordance with clause 4.4B.5, paragraph 5 and paragraph 6 must (unless otherwise agreed with AEMO) be via email to wem.limitadvice@aemo.com.au and cc wa.capacity@aemo.com.au, and must specify 'RCM' in the subject line of the email, wherever possible.

3 TIMEFRAME

- 3.1.1 By 5:00 PM on the last Business Day falling on or before the date and time specified in clause 4.4B.5 or (for the 2022 Reserve Capacity Cycle only) as modified by AEMO under clause 1.36B or (for the 2023 and subsequent Reserve Capacity Cycles) as modified by AEMO under clause 4.1.1C, each Network Operator must provide the information outlined in clause 4.4B.5 (as further outlined in paragraph 5) in respect of its Network to AEMO [clause 4.4B.5].
- 3.1.2 Information requested by AEMO under paragraph 6 must be submitted by a Network Operator to AEMO by the date and time agreed between AEMO and the Network Operator.

4 FORMAT, FORM AND MANNER

4.1 Provision of information to a Network Operator by AEMO

- 4.1.1 In providing information specified in clauses 4.4B.2(a) and 4.4B.2(c) to a Network Operator, AEMO must include the information specified in clause 4.4.1, and may provide any additional information as agreed between AEMO and the Network Operator, which include but are not limited to:
- (a) reference number of the application submitted to a Network Operator for the purpose of an Access Proposal or an Arrangement for Access; and
 - (b) the date of the application in paragraph 4.1.1(a):
- 4.1.2 In providing information specified in clause 4.4B.2(b) to a Network Operator, AEMO must include the following information:
- (a) Facility name;
 - (b) expected closure date; and
 - (c) any other information AEMO considers relevant.

4.1.3 AEMO must provide all information specified in paragraphs 4.1.1 and 4.1.2 to a Network Operator in a spreadsheet, or any other format as agreed with the Network Operator, in accordance with paragraph 0, and by the date and time specified in clause 4.4B.2.

4.2 Provision of information to AEMO by a Network Operator

4.2.1 All submissions of information to AEMO by a Network Operator in accordance with clause 4.4B.5, paragraph 5 and (where applicable) paragraph 6 must be made in accordance with the format outlined in Table 2.

4.2.2 For the purposes of ensuring AEMO may carry out its obligations specified in clause 2.27A.7, all submissions of information to AEMO by a Network Operator in accordance with clause 4.4B.5, paragraph 5 and (where applicable) paragraph 6 must include each relevant Facility regardless of whether the Network Operator considers its status is committed or uncommitted¹.

E[B] Publication requirements

Clause 4.4B.6(a) requires AEMO to publish the information provided under clause 4.4B.5 in the Constraints Library for the Reserve Capacity Cycle.

In addition to enabling AEMO to carry out its obligation under clause 2.27A.7, AEMO considered the following matters in developing the requirements in Table 2, to the extent possible:

- provide the information in the most easy-to-understand manner to Rule Participants;
- provide the information in a format that can be accessed via typical office applications (for example, CSV, MS Excel or MS Word format) so that they can be accessed by Rule Participants;
- provide the information in the form and format that are suitable to be published by AEMO without significant additional processing of information;
- provide the information in a form that allows the changes to be easily tracked from year to year; and
- maintain confidentiality where required.

Therefore, where the information is:

- expected to be a long list of items and does not require extensive description in memorandum style, AEMO requires the information to be in a list in CSV or spreadsheet;
- expected to be a short list of items and may require extensive description in memorandum style, AEMO requires the information either to be in a list in CSV or spreadsheet; or in the form of a report; and
- expected to involve detailed modelling, AEMO requires the information in both a report format, which assists Rule Participants to understand the new augmentation and new Facilities; as well as PowerFactory format, for the sole purpose of including the modelling in AEMO's computer models easily.

¹ A Network Operator may deem a connection of a new Facility committed or uncommitted in accordance with its commitment criteria, which may include a Facility having signed the relevant connection works contracts with the Network Operator.

Table 2 Required format and form, for which the information specified in clause 4.4B.5 must be provided

Clause in WEM Rules	Format and form
4.4B.5(a)	In the form of a list and in the format of CSV or spreadsheet, or another format as agreed with AEMO.
Thermal Network Limits in 4.4B.5(b) and 4.4B.5(d)	In the form of a list and in the format of CSV or spreadsheet, or another format as agreed with AEMO.
4.4B.5(c)	Either: <ul style="list-style-type: none"> in the form of a list and in the format of CSV or spreadsheet, or another format as agreed with AEMO; or in the form of a report.
4.4B.5(e)	Either: <ul style="list-style-type: none"> in the form of a list and in the format of CSV or spreadsheet, or another format as agreed with AEMO; or in the form of a report.
Network configuration in 4.4B.5(b), 4.4B.5(d)	Either: <ul style="list-style-type: none"> in the form of a report; or another form and format as agreed with AEMO.

5 INFORMATION REQUIRED UNDER CLAUSE 4.4B.5

5.1 Estimated Proportion of Peak Demand

E[C] Information specified in clause 4.4B.5(a)

Paragraph 5.1 refers to the information specified in the clause 4.4B.5(a), which is the estimated proportion of the peak demand of a Network Operator’s Network, in Year 3 (starting 1 October) of a relevant Reserve Capacity Cycle.

5.1.1 For information submitted under clause 4.4B.5(a), a Network Operator must propose a list of:

- (a) existing Electrical Locations and Block Load connections; and
- (b) Electrical Locations and Block Load connections it reasonably estimates to be in-service at peak demand in Year 3 (starting 1 October) of the Reserve Capacity Cycle,

for which it must provide the information under paragraph 5.1.2. AEMO may accept the proposed list or a modified list that AEMO considers appropriate after consulting the Network Operator on the proposed list.

- 5.1.2 For information submitted under clause 4.4B.5(a), a Network Operator must include:
- (a) for each relevant Electrical Location, as agreed with AEMO under paragraph 5.1.1, its estimated proportion of the peak demand of its Network, as a percentage, excluding the net Withdrawal in paragraph 5.1.2(b);
 - (b) for each net Withdrawal that has been identified as a Block Load connection by a Network Operator, and agreed to by AEMO under paragraph 5.1.1:
 - (i) the identity of the Block Load connection; and
 - (ii) the estimated net Withdrawal at peak time in MW.

5.2 Thermal Network Limits

E[D] First type of information specified in clause 4.4B.5(b) and 4.4B.5(d)

Paragraph 5.2 refers to the Thermal Network Limit information specified in clauses 4.4B.5(b) and 4.4B.5(d). These Thermal Network Limits must include:

- Thermal Network Limits associated with a Network Operator's estimate of its Network configuration at peak demand in Year 3 (starting 1 October) of a relevant Reserve Capacity Cycle (refer to clause 4.4B.5(d));
- Thermal Network Limits associated with any new Network augmentations that will be in service by the relevant Capacity Year, as specified in applications for Early Certified Reserve Capacity (refer to clause 4.4B.5(b)); and
- separate Thermal Network Limits for Network Augmentation Funding Facilities (refer to clause 4.4B.5(b)).

- 5.2.1 For Thermal Network Limit information submitted under clauses 4.4B.5(b) and 4.4B.5(d), a Network Operator must provide Thermal Network Limits that consider all relevant limiting components², in accordance with clause 4.4B.3(a), for:
- (a) transmission lines;
 - (b) terminal substation circuits, including transformers;
 - (c) any other equipment the Network Operator considers relevant, and as requested by AEMO under paragraph 6.1.1; and
 - (d) any other equipment the Network Operator considers relevant.
- 5.2.2 For information submitted under paragraph 5.2.1, a Network Operator must include:
- (a) site ID;
 - (b) equipment ID;
 - (c) equipment description;
 - (d) type of equipment;
 - (e) unit of measurement;
 - (f) nominal voltage in kV;

² For example, the thermal rating of a transmission line may be limited by the thermal rating of its current transformer.

- (g) continuous ratings in accordance with clause 4.4B.3(a)i, for each relevant connection end of each equipment³ listed in paragraph 5.2.1;
- (h) description of the most limiting factor or limiting component of the equipment; and
- (i) any other information the Network Operator considers relevant.

5.3 New load that is equal to or greater than 10 MW or existing load that increases by 10 MW or more

E[E] Information specified in clause 4.4B.5(c)

Paragraph 5.3 refers to any new load that is equal to or greater than 10 MW, or existing load that increases by 10 MW or more, as specified in clause 4.4B.5(c).

5.3.1 For information submitted under clause 4.4B.5(c), a Network Operator must also include:

- (a) the Electrical Location where the new load connection or an existing load connection are supplied from;
- (a) specifying if it is a new load or an increase of an existing load;
- (b) for a new load connection, the new net Withdrawal in MW;
- (c) for an increase of an existing load connection, its net Withdrawal in MW provided for the previous Reserve Capacity Cycle and its updated net Withdrawal in MW; and
- (d) a description, including its impact on the information submitted under paragraph 5.1.2.

5.4 Network configuration

E[F] Second type of information specified in clause 4.4B.5(b) and 4.4B.5(d)

Paragraph 5.4 refers to the Network configuration information specified in clauses 4.4B.5(b) and 4.4B.5(d). The Network configuration must also include:

- a Network Operator's estimate of its Network configuration at peak demand in Year 3 (starting 1 October) of a relevant Reserve Capacity Cycle (refer to clause 4.4B.5(d));
- any new Network augmentations that will be in service by the relevant Capacity Year, as specified in applications for Early Certified Reserve Capacity (refer to clause 4.4B.5(b)); and
- include separate Thermal Network Limits for Network Augmentation Funding Facilities (refer to clause 4.4B.5(b)).

5.4.1 For Network configuration information submitted under clauses 4.4B.5(d), a Network Operator must include:

- (a) equipment that is not normally required to be in-service;
- (b) operational switching practices such as normally open points, and open points to manage network fault levels or specific network conditions;

³ For example, for a terminal substation transformer, the rating of the HV terminal of the transformer may be different from the rating at its LV terminal.

- (c) all relevant Network Reinforcement Schemes and the details explaining the trigger events for the schemes to operate;
- (d) each Facility that is required to be in-service during the peak demand in Year 3 (starting 1 October) of a relevant Reserve Capacity Cycle, to provide Network Control Service or equivalent service; and
- (e) any other items the Network Operator considers relevant to the Network configuration, that a Network Operator reasonably estimates to be applicable at peak demand of its Network in Year 3 (starting 1 October) of the Reserve Capacity Cycle.

5.4.2 For Network configuration information submitted under clauses 4.4B.5(b) and 4.4B.5(d), and where relevant to clause 4.4B.3(a)iii, a Network Operator must include:

- (a) Declared Sent Out Capacity in MW of the Facility, if different from paragraph 4.1.1;
- (b) description of how the Facility is to be connected to the Network, including any reconfiguration of the Network;
- (c) if different from paragraph 2.1.1, the proposed or best estimate of the commissioning year and where possible, month of that year; and
- (d) where available to a Network Operator, references to computer models that reasonably reflect the Facility and its connection to the Network.

5.5 Any changes to the RCM Limit Advice

E[G] Information specified in clause 4.4B.5(e)

Paragraph 5.5 refers to information in relation to any changes to the RCM Limit Advice provided to AEMO for the Reserve Capacity Cycle from the RCM Limit Advice provided to AEMO for a previous Reserve Capacity Cycle, as specified in clause 4.4B.5(e).

5.5.1 For information submitted under clause 4.4B.5(e), and where relevant to Thermal Network Limits, a Network Operator must include:

- (a) identification of any:
 - (i) new Thermal Network Limits, in accordance with clause 4.4B.3(a)ii.1;
 - (ii) retired Thermal Network Limits, in accordance with clause 4.4B.3(a)ii.2; or
 - (iii) changes to previous Thermal Network Limits not captured by paragraphs 5.5.1(a)(i) and 5.5.1(a)(ii);
- (b) the relevant equipment relating to the changed RCM Limit Advice;
- (c) RCM Limit Advice provided for a previous Reserve Capacity Cycle as well as the RCM Limit Advice for the current Reserve Capacity Cycle; and
- (d) explanation for the changes, including in relation to future augmentations or Network configuration as provided under clauses 4.4B.5(b) and 4.4B.5(d), where applicable.

E[H] Examples: explanations for the changes to the RCM Limit Advice

In providing explanations for different types of changes to RCM Limit Advice and Network configuration, a Network Operator may follow the examples provided in Table 3.

Table 3 Examples of explanations specified in paragraph 5.5.1(d) of the Procedure

Equipment ID	Comments
A-B 81	New underground cable installed under project 'New load connection B'.
J-K 81	To be decommissioned due to decommissioning of zone substation 'J'.
X-Y 81	To be decommissioned under project 'Mitigating line XY asset condition risks'.
P-Q/R 81	Refer to new lines P-Q 81 and Q-R 81.
P-Q 81	Network reconfiguration under project 'Big Wind Farm'.
Q-R 81	Network reconfiguration under project 'Big Wind Farm'.

6 REQUESTING ADDITIONAL INFORMATION

E[I] Clause 2.27A.4

In respect of the RCM Limit Advice, AEMO may request additional information, clarification or additional RCM Limit Advice from a Network Operator in accordance with clause 2.27A.4. The following clauses detail the process AEMO and the Network Operator must follow when additional detail or information is required.

- 6.1.1 In respect of clause 2.27A.4, AEMO may request additional information or data from a Network Operator and must provide a time and date by which the information must be provided.
- 6.1.2 A Network Operator may request an extension in writing to AEMO when providing the information and data under paragraph 6.1.1, and AEMO must consider the request and if appropriate, amend the timeframe nominated under paragraph 6.1.1.
- 6.1.3 Where a Network Operator is required to provide updated RCM Limit Advice to AEMO under clause 2.27A.6(a)ii and 2.27A.6(a)iii, the relevant Network Operator must do so in accordance with the requirements specified in paragraph 0.

E[J] An example of additional information requested under Clause 2.27A.4

AEMO may request confirmation that the information provided by a Network Operator under clause 4.4B.5 is still complete, current and accurate for a Reserve Capacity Cycle, prior to formulating RCM Constraint Equations. In its request, AEMO may provide a list of Facilities to the Network Operator following the date specified in clause 4.1.11. Network Operator must provide updates to the information submitted under clause 4.4B.5, or provide confirmation that there have been no changes since its submission in accordance with clause 4.4B.5 to AEMO for a Reserve Capacity Cycle.

APPENDIX A. RELEVANT CLAUSES OF THE WEM RULES

Table 4 details:

- (a) the head of power clauses in the WEM Rules under which the Procedure has been developed; and
- (b) each clause in the WEM Rules requiring an obligation, process or requirement be documented in a WEM Procedure, where the obligation, process or requirement has been documented in this Procedure.

Table 4 Relevant clauses of the WEM Rules

Clause
2.27A.4
2.27A.6(a)iii
2.27A.10(a)(i)
2.27A.10(a)(ii)1
2.27A.10(a)(ii)(2)
2.27A.10(bA)