

INTERIM ENERGY BALANCING AND SETTLEMENT PROCEDURE

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1. Introduction

1.1 Purpose and Scope

- 1.1.1 This Interim Energy Balancing and Settlement Procedure (Procedure) is made in accordance with the Pilbara ISOCO (ISO) functions under Chapter 8 and Sub-appendix 4.14 of the Pilbara Networks Rules (the Rules).
- 1.1.2 The purpose of this Procedure is to describe the process that the ISO will follow to carry out cost allocation and settlement for Essential System Services (ESS) and energy imbalances.
- 1.1.3 This Procedure outlines the requirements for the ISO, the ISO Control Desk, NSPs, generators and users to submit information that supports the settlement of ESS costs and energy imbalances. This Procedure also sets out the process payers and payees are to follow to enable settlement.
- 1.1.4 This Procedure does not cover the assessment, procurement or management of ESS.
- 1.1.5 The *Electricity Industry Act 2004* (WA), the Electricity Industry (Pilbara Networks) Regulations 2021, the Pilbara Networks Access Code and the Rules prevail over this Procedure to the extent of any inconsistency.
- 1.1.6 In this Procedure, where obligations are conferred on a Rules Participant, that Rules Participant must comply with the relevant obligations in accordance with Rule 85 of the Rules, unless the Rules Participant has grounds for non-compliance under Rule 172 of the Rules.
- 1.1.7 In the handling of other entities' data under this Procedure, any party to this Procedure shall comply at all times with Rule 100 and Subchapter 11.2 {Confidential Information} of the Rules.

1.2 Definitions and Interpretation

- 1.2.1 Terms defined in the *Electricity Industry Act 2004* (WA), the Electricity Industry (Pilbara Networks) Regulations 2021, the Pilbara Networks Access Code and the Rules have the same meaning in this Procedure unless the context requires otherwise. The ISO does not capitalise or italicise terms defined in the above instruments in this Procedure.
- 1.2.2 Where there is a discrepancy between the Rules and information or a term in this Procedure, the Rules take precedence.
- 1.2.3 The following principles of interpretation apply in this Procedure unless the context requires otherwise.
- (a) Subchapter 1.2 of the Rules apply to this Procedure.
 - (b) References to time are references to Australian Western Standard Time.
 - (c) A reference to the Rules or Procedures made under the Rules, have the meaning given to them in the Rules.

- (d) Words expressed in the singular include the plural and vice versa.
- (e) A reference to a paragraph refers to a paragraph in the Procedure.
- (f) A reference to a rule, subchapter or chapter refers to the relevant section in the Rules.
- (g) References to the Rules in this Procedure is bold and square brackets e.g. **"See Rule [XXX]"**, are included for convenience only, and do not form part of this Procedure.
- (h) Explanatory notes are included for context and explanation and do not form part of this Procedure.
- (i) Text located in boxes in this Procedure is included by way of explanation only and does not form part of this Procedure. This excludes tables marked with a caption.

1.2.4 Appendix A of this Procedure outlines the head of power rule(s) that this Procedure is made under, as well as other obligations in the Rules covered by the Procedure.

1.2.5 The acronyms, definitions and meanings in Table 1 are used throughout this Procedure.

Table 1: Acronyms, definitions and meanings

Acronym	Term	Definition
APP	Administered Penalty Price	As defined in the Pilbara Networks Rules
AP	Administered Price	As defined in the Pilbara Networks Rules
ESS	Essential System Services	As defined in the Pilbara Networks Rules
FCESS	Frequency Control Essential System Services	As defined in the Pilbara Networks Rules
SRESS	Spinning Reserve Essential System Services	As defined in the Pilbara Networks Rules
EBAS	Energy Balancing and Settlement	As defined in the Pilbara Networks Rules
NMI	National Meter Identifier	
NWM	Notional Wholesale Meters	As defined in the Pilbara Networks Rules
-	Rules Participant	As defined in the Pilbara Networks Rules
-	Nominator	Short for "balancing point nominator" as defined in the Pilbara Networks Rules
-	Balancing Nominee	As defined in the Pilbara Networks Rules

1.3 Preservation of Records

See Rule [293]

1.3.1 In accordance with Rules 293(2), a Rules Participant must preserve any records it is required to make under this Procedure for at least 7 years, or such longer period as may be required by law.

1.4 References

1.4.1 The following Procedures are linked and must be consulted in conjunction with this Procedure:

- (a) Interim Registration and Standing Data Procedure;
- (b) Interim Notices and Communications Procedure;

- (c) Interim Essential System Services Procedure; and
- (d) Interim Protocol Framework Procedure.

2. Procedure Overview

2.1 Overview

2.1.1 This Procedure follows the structure of Chapter 8 of the Rules. An overview of the sections of this Procedure and the relevant parties is given in Table 2.

Table 2: Procedure overview

Section	Section Name	Relevant Parties	Overview
3	Appointment of Responsible Parties	NSPs, users	Describes the process for appointing Nominators, nominating Balancing Nominees, and allocating payers for settling of payment notes.
4	Allocation of FCESS Costs	NSPs, users	Details the methodology for allocating costs associated with Frequency Control ESS (FCESS) and provides some worked examples.
5	Collection of FCESS Standing Data	NSPs	Lists the standing information and the metering data necessary for allocation of FCESS costs, and describes the process used to collect and verify this information.
6	Allocation of SRESS Costs	NSPs, users	Details the methodology for allocating costs associated with Spinning Reserve ESS (SRESS) and provides some worked examples.
7	Collection of SRESS Standing Data	ISO only	Lists the information necessary for allocation of SRESS costs, and describes the process used to collect and verify this information.
8	Energy Balancing	NSPs, users	Details the methodology for carrying out energy balancing and provides some worked examples.

Section	Section Name	Relevant Parties	Overview
9	Collection of EBAS Standing Data	NSPs, users	Lists the standing information necessary to conduct energy balancing, and describes the process used to collect and verify this information.
10	Collection of EBAS Metering Data	NSPs	Describes the responsibility, format, content and timing of metering data collected by the ISO to carry out energy balancing calculations.
11	Non-Normal EBAS States	ISO Control Desk, NSPs	Defines non-normal EBAS states, describes the content of the records kept of the non-normal EBAS, and identifies the ISO Control Desk as the responsible party for recording and providing these records to the ISO for use in settlement.
12	Settlement	ISO Control Desk, NSPs, users	Describes the process followed by the ISO to carry out settlement of ESS costs and energy balancing, includes an overview of the EBAS engine used to carry out settlement calculations, and details the content, timing, distribution, enforcement and correction of payment notes.

3. Appointment of Responsible Parties

3.1 Purpose

- 3.1.1 The purpose of this section of the Procedure is to define the process for appointment and nominations of parties responsible for the range of functions under the EBAS Procedure.
- 3.1.2 This section outlines how network users may appoint Nominators to carry out their responsibilities with respect to the EBAS scheme on their behalf.
- 3.1.3 The section also explains the responsibilities of Nominators to assign liabilities for payments under this Procedure to the nominated Balancing Nominees for the balancing points to which they have been appointed by the network user(s).

3.2 Definitions

See Rule [218; 220]

- 3.2.1 Rule 218 defines a “balancing point” as:
 - (a) a connection point at which a generation facility is connected to the covered network;
 - (b) a connection point at which a contestable consumer’s consumer facility is connected to the covered network;
 - (c) an interconnection point between the covered network and a non-covered network (including an integrated mining system, an excluded network and a CPC network);
 - (d) one or more single points for covered networks determined under rule 218(2); and
 - (e) a single point being the notional wholesale meter, which measures net network load.

Explanatory Note – Interconnections and Notional Wholesale Meters

Interconnection points between covered networks are not balancing points in the Rules. However, the ISO may make calculations at those points to determine net network loads.

The notional wholesale meter measures net network load, which comprises losses, plus all of the loads referred to in Rule 218(2) which are not assigned their own balancing point under that Rule.

- 3.2.2 As defined in Rule 220(1), a “relevant user” means a network user with an entry or exit service at a balancing point.

3.3 Identifying Network Users

See Rule [8; 17]

- 3.3.1 The definition of the term "Network User" is given in the Rules and applies throughout this Procedure.
- 3.3.2 If a Vertically Integrated Entity (as defined in Rule 17) has an agreement to supply electricity to a consumer and it is not clear from the agreement which of the parties is the Network User, then the Vertically Integrated Entity must, after consulting with the relevant consumer, give the ISO a notice designating one of the parties to be the Network User, and the person so designated is to be regarded as the Network User for this Procedure.

{Note: This does not just refer to electricity supply agreements within the Vertically Integrated Entity (i.e. associated agreements or deemed associated agreements), it also refers to legacy agreements entered into prior to the Pilbara electricity system regulatory framework was in place, where it is not clear which party is the Network User.}

- 3.3.3 A notice under paragraph 3.3.2 may designate a Network User for all purposes under the Rules and Procedures.

3.4 Network User to Appoint Nominator

See Rule [220; 221]

- 3.4.1 Under Rule 220 of the Rules, there must be a Nominator appointed to each balancing point.
- 3.4.2 Each balancing point can only have one Nominator assigned to it.
- 3.4.3 A Nominator may be appointed for multiple balancing points.
- 3.4.4 A relevant user may appoint a Nominator for the balancing points for which the relevant user is solely responsible.
- 3.4.5 Where multiple generation or contestable consumer facilities are connected to the same balancing point, the relevant users must decide and appoint amongst themselves a single Nominator for the balancing point.
- 3.4.6 The relevant user(s) must have written consent from the appointed Nominator relating to the Nominator's acceptance to be a Nominator.
- 3.4.7 Where Nominator appointments are made, the relevant user(s) must notify the ISO in writing of the Nominator appointed for each balancing point.
- 3.4.8 Appointments of Nominators under this Procedure will remain in place until the ISO is notified otherwise.

3.5 Default Nominators

See Rule [220]

- 3.5.1 For balancing points of which a network user is the sole relevant user, the relevant user may choose to rely on the default mechanism in Rule 220(4) of the Rules. In this case the relevant user does not need to notify the ISO of an appointment and will become the default Nominator.
- 3.5.2 A relevant user appointed as a default Nominator will remain the default Nominator until the ISO is notified otherwise, or until the ISO becomes aware of an additional relevant user at the balancing point, at which time paragraphs 3.4.5 and 3.6.1 of this Procedure will apply.

3.6 ISO Appointed Nominators

See Rule [220; 221]

- 3.6.1 In accordance with Rule 220(4)(a)(ii) and Rule 220(4)(b) of the Rules, where the ISO has not received a valid appointment of a Nominator for a balancing point with more than one relevant user, the ISO must appoint a Nominator and notify the relevant users as soon as practicable, and not less than 5 business days before the commencement of the relevant settlement period.
- 3.6.2 For the purposes of Rule 220(6), the ISO must notify affected persons as soon as practicable, and not less than 5 business days before the commencement of the relevant settlement period.
- 3.6.3 Rule 221 of the Rules applies to any Nominators appointed under paragraph 3.6.1 of this Procedure.
- 3.6.4 For the avoidance of doubt, appointments of Nominators under paragraph 3.6.1 of this Procedure will remain in place until the ISO is notified otherwise.

3.7 Requirements for Notices for Appointment of Nominators

See Rule [220]

- 3.7.1 Notices for appointment of Nominators must include the following information:
- (a) The future calendar month from which the appointment commences;
 - (b) The National Meter Identifier (NMI) for each metered connection to which the Nominator is being appointed;
 - (c) Statement of consent certifying that the relevant user(s) has received written consent for appointment from the Nominator;
 - (d) Business legal name of the Nominator;
 - (e) The Nominator's business bank account details to facilitate transactions under EBAS payment notes using Electronic Funds Transfers (EFT);

- (f) Contact details for issuance of EBAS payment notes, which must include an email address.

3.7.2 Notices for appointment of Nominators must be submitted in the following timeframes:

- (a) for existing connections to covered networks, within 15 business days after this Procedure has been published;
- (b) for existing connections to non-covered networks that are transitioning to covered networks, by the deadline notified by the NSP of the transitioning network;
- (c) for existing non-contestable connections that become contestable, not less than 10 business days before the end of the settlement period in which it becomes, or is expected to become, contestable; and
- (d) for new connections to covered networks, at least 10 business days before energisation of the connection point.

3.7.3 Notices for appointment of Nominators must be submitted to the ISO via email to ebas@pilbaraisoco.com.au.

3.8 Nominator May Make Balancing Nominations

See Rule [222; 223]

- 3.8.1 Nominators may provide to ISO in writing the nominated Balancing Nominees for a settlement period. Such notices are referred to in this Procedure as "Balancing Nomination Notices".
- 3.8.2 Balancing Nominees are responsible for completing payments of, or receiving payments for, payment notes issued under this Procedure.
- 3.8.3 Nominators may choose to rely on the default mechanism in Rule 223 of the Rules. In this case Nominators do not need to submit Balancing Nomination Notices and will become the default Balancing Nominees.

3.9 Requirements for Balancing Nomination Notices

See Rule [222]

- 3.9.1 Balancing nominations must be completing using the template provided by the ISO under Appendix C.
- 3.9.2 A Balancing Nomination Notice for a Balancing Point must include all the allocations and relevant details for each Balancing Nominee. Multiple notices that collectively allocate all the metered quantities for a settlement period are not acceptable.
- 3.9.3 Balancing Nomination Notices may apply to multiple consecutive settlement periods.
- 3.9.4 Balancing Nomination Notices may include standing nominations, which apply for all future settlement periods until further notice.

- 3.9.5 Balancing Nomination Notices must include, for each Balancing Nominee, the following information:
- (a) Statement certifying that the Nominator has received written consent for nomination from each Balancing Nominee listed on the notice. One statement may cover multiple or all Balancing Nominees;
 - (b) Settlement periods to which the notice relates;
 - (c) For each trading interval, allocate the metered quantity at the balancing point between one or more Balancing Nominees using an allocation methodology which ensures that 100% of the metered quantity is allocated;
 - (d) Business legal name;
 - (e) Business bank account details to facilitate transactions under EBAS payment notes using Electronic Funds Transfers (EFT); and
 - (f) Email address for issuance of EBAS payment notes.
- 3.9.6 Balancing Nomination Notices must be submitted to the ISO on or before the last business day before the start of the settlement period to which it relates. See paragraph 12.10.1 of this Procedure (Settlement Timeline).

3.10 Submission of Balancing Nomination Notices

See Rule [222; 223]

- 3.10.1 If the ISO has not received a compliant Balancing Nomination Notice prior to the start of a settlement period, the Nominator will be appointed as the default Balancing Nominee for that settlement period.
- 3.10.2 The ISO may, but is not obligated to, notify the Nominator if it has been appointed as the default Balancing Nominee under Rule 223 of the Rules.
- 3.10.3 A Nominator may, by notification to the ISO, cancel or provide an updated Balancing Nomination Notice for a settlement period for which it had previously submitted a Balancing Nomination Notice. Such notices must comply with all the requirements for Balancing Nomination Notices in this Procedure, including any deadlines.
- 3.10.4 Balancing Nomination Notices must be submitted via email to ebas@pilbaraisoco.com.au.

3.11 Rejection of Balancing Nomination Notices

- 3.11.1 The ISO may reject a Balancing Nomination Notice if it does not comply with section 3.9 and 3.10 of this Procedure, and if it does so, it must within 5 business days provide by notice to the relevant Nominator the reasons for the rejection.
- 3.11.2 If, under paragraph 3.11.1 of this Procedure, the ISO receives within 5 business days of the ISO's rejection notice an updated Balancing Nomination Notice that is compliant with this Procedure, it may not reject the updated Balancing Nomination Notice on the basis that it has

been submitted after the start of the settlement period to which the Balancing Nomination Notice relates.

- 3.11.3 If the ISO receives an updated Balancing Nomination Notice and determines that it remains non-compliant with this Procedure, then it must, within 5 business days, notify the Nominator that the Balancing Nomination Notice for the settlement period to which it relates (and that is currently underway) is unsuccessful.
- 3.11.4 The Balancing Nominee, for the settlement period for which an unsuccessful Balancing Nomination Notice was submitted, is either:
- (a) the Balancing Nominee(s) identified in the previous Balancing Nomination Notice for the settlement period, if the Nominator can re-affirm consent from the relevant Balancing Nominees and notify this to the ISO; otherwise
 - (b) the Nominator as the default Balancing Nominee.
- 3.11.5 The notice under paragraph 3.11.3 of this Procedure must identify the Nominator of the Balancing Nominee(s) for the settlement period to which it relates, as identified under paragraph 3.11.4 of this Procedure.

3.12 Payer May Make Payment Allocation

See Rule [238]

- 3.12.1 The original payer under this Procedure, being either the network user, Nominator or Balancing Nominee, may give the ISO a payment allocation notice for a settlement period.
- 3.12.2 Payment allocation notices may designate one or more other persons as payers in respect of part or all of the aggregate amount otherwise payable by the original payer under Chapter 8 of the Rules and this Procedure.
- 3.12.3 Payment allocation notices may only be given for payment amounts relating to future settlement periods.
- 3.12.4 For the purposes of payment allocation notices, the following definitions apply:
- (a) "settlement amount" – dollar amount payable under section 12 of this Procedure for a future settlement period.
 - (b) "original payer" – the person(s) responsible for payment of the settlement amount if no payment allocation notice relating to the settlement amount were to be submitted. Specifically, this includes:
 - i. For FCESS and SRESS allocations, the Nominator.
 - ii. For balancing allocations, the Balancing Nominee (noting that this may be the network user or Nominator under the default mechanisms in Rule 220(4) and Rule 223 respectively).
 - (c) "replacement payer" – a person identified in a payment allocation notice as the new payer for a settlement amount.

3.13 Requirements for Payment Allocation Notices

See Rule [238]

- 3.13.1 Payment allocation notices must include, for each replacement payer, the following information:
- (a) Statement certifying that the original payer has received written consent for allocation from the replacement payer. One statement may cover multiple or all replacement payers;
 - (b) Settlement amounts to which the notice relates;
 - (c) Allocation percentage for each replacement payer, using an allocation methodology which ensures that 100% of the original amount is allocated;
 - (d) Business legal name;
 - (e) Business bank account details to facilitate transactions under EBAS payment notes using Electronic Funds Transfers (EFT); and
 - (f) Email address for issuance of EBAS payment notes.

3.14 Notifiable Events

See Rule [162; 166; 167; 169; 173; 177; 185; 261]

- 3.14.1 Rule 166 of the Rules defines a notifiable event for a power system is any planned or anticipated system event (including a planned outage, commissioning or testing of a facility or network element) which might credibly be expected to adversely affect –
- (a) Security or reliability; or
 - (b) The ability of any part of a covered transmission network to benefit from essential system services; or
 - (c) The ability of a covered NSP to provide transmission voltage contracted network services.
- 3.14.2 Where there is a planned or anticipated notifiable event for the power system, the responsible NSP which has caused the notifiable event (the responsible NSP) must have in place necessary arrangements that meet the System Security Objective, as defined in Rule 162 of the Rules.
- {Note Rule 162 of the Rules defines the System Security Objective is to:*
- (a) *Maintain the power system inside the Technical Envelope where practicable, otherwise promptly return it to inside the Technical Envelope; and*
 - (b) *Maintain the power system in a Secure State where practicable, and otherwise return it to a Secure State as soon as practicable; and*
 - (c) *Otherwise – to a GIEP standard maintain, and to a GIEP standard seek to improve, security and reliability.}*
- 3.14.3 Notifiable events are system coordination matters and must be discussed at the system coordination meeting convened under Rule 174 of the Rules.

3.14.4 For each notifiable event the responsible NSP must outline at the system coordination meeting. See Rule [167]:

- (a) its likely consequences on security and reliability; and
- (b) its likely consequences in terms of whether a constraint rule is or is likely to be violated; and
- (c) any measures which may be necessary or desirable to have in place for managing the power system in order to achieve the system security objective during the event, including any changes in essential system services procurement, configuration, enablement and dispatch; and
- (d) If it is a planned outage - whether it should proceed.

{Note The ISO has developed a Guide to System Coordination which details the assessment process to be undertaken by the responsible NSP or NSPs when assessing notifiable events}

3.14.5 The responsible NSP may request the ISO to undertake system modelling in connection with the notifiable event.

3.14.6 After each system coordination meeting, the ISO gives a system coordination report to each registered NSP and ESS provider recommending any measures the responsible NSP should take to assist in managing the notifiable event in accordance with System Security Objective. See Rule [177].

Impact on Essential System Services

3.14.7 Where the responsible NSP determines that additional ESS are required to ensure the notifiable event is managed in accordance with the System Security Objective – this is to be contracted and paid for by the responsible NSP.

Impact on Balancing

3.14.8 A notifiable event may result in the ISO Control Desk issuing a constraint direction.

3.14.9 A balancing nominee in a covered network, in normal operating conditions must use reasonable endeavours to a GEIP standard to balance whilst a constraint direction is issued.

3.14.10 If the ISO is dissatisfied that arrangements have been put in place to ensure balancing nominees are able to continue to meet their obligations, the ISO may direct a registered controller to procure satisfactory arrangements. See Rule [261(2)(b)].

4. Allocation of FCESS Costs

4.1 Purpose

- 4.1.1 The purpose of this section of the Procedure is to describe the mechanism for allocating Frequency Control Essential System Services (FCESS) costs to NWIS participants as described in Subchapter 8.3 of the Rules.
- 4.1.2 Allocation of costs incurred by NWIS participants for provision of FCESS is executed in the EBAS engine. The EBAS engine is a tool to execute energy balancing and settlement of Essential System Services (ESS) costs in arrears for each settlement period. Refer to section 12.3 of this Procedure for further information on the EBAS engine.
- 4.1.3 This section outlines the calculations carried out by the EBAS engine to allocate the FCESS costs and provides some worked examples.

4.2 Definitions

See Rule [219;226;227]

- 4.2.1 As defined in Rule 226 of the Rules, "reference period" means the whole period covering the previous 3 consecutive financial years.
- 4.2.2 As defined in Rule 227(b) of the Rules, "exit balancing point" refers to a balancing point on covered networks with at least one negative metered quantity for a trading interval in the reference period.
- 4.2.3 As defined in Rule 227(a) of the Rules, the "FCESS payment threshold" is a load swing of 5 MWh.
- 4.2.4 For the purposes of this Procedure, "FCESS standing data" is the set of information relating to each relevant exit balancing point that describes the allocation of the FCESS costs payable to the primary FCESS provider for each settlement period.
- 4.2.5 As defined in Rule 219(2) of the Rules, "negative metered quantity" refers to a loss-factor adjusted metered quantity of energy leaving the covered network, and "positive metered quantity" refers to a loss-factor adjusted metered quantity of energy entering the covered network.
- 4.2.6 For the purposes of this Procedure "FCESS costs" refers to the sum of the primary and secondary FCESS costs.

4.3 Overview of FCESS Costs

See Rule [204;206]

- 4.3.1 FCESS costs consist of the following components:

- (a) Fixed monthly payment to primary FCESS provider, reflecting the operational and opportunity cost of reserving generation capacity for frequency regulation and any profit margin. The primary FCESS contract is procured through a competitive process, with the payments set by the confidential contract between the ISO and the primary FCESS provider.
- (b) Variable monthly payments to secondary FCESS providers, based on the number of hours enabled as secondary FCESS provider and the cost per hour as defined in Rule 206 of the Rules.

4.4 Overview of FCESS Cost Allocations for Existing Connections (> 3 years)

See Rule [226; 227; 228]

4.4.1 FCESS costs, including primary and secondary FCESS costs, are allocated to all balancing points on the covered networks that experienced at least one negative metered quantity in the previous 3 financial years.

4.4.2 Rule 227 of the Rules describes the detailed methodology to calculate the share of the FCESS costs to be allocated to each exit balancing point and the relevant payers. This methodology is summarised as follows:

- (a) Identify all exit balancing points as defined in section 4.2 of this Procedure.
- (b) For each exit balancing point:
 - i. Compile the set of all trading intervals with negative metered quantities in the reference period.
 - ii. Calculate the "maximum load", which is equal to the largest absolute value in the set.
 - iii. Calculate the "minimum load", which is equal to the smallest absolute value in the set.
 - iv. Calculate the "load swing" which is equal to the difference between the maximum and minimum load.
- (c) Identify all exit balancing points at which the load swing was bigger than the FCESS payment threshold (5 MWh, as per Rule 227(a) of the Rules), and for these balancing points, do the following:
 - i. Calculate the FCESS balancing point share for the balancing point, which is equal to the load swing divided by the sum of the load swings of all exit balancing points in the reference period.
 - ii. Identify the payer of FCESS for each exit balancing point, being the Nominator associated with the relevant exit balancing point.
 - iii. For each payer, determine the payer's aggregate FCESS payment share for the settlement period, this being the sum of the FCESS balancing point shares of all exit balancing points for which the payer is the Nominator.

- 4.4.3 The outcome of the above methodology is a data set relating to each relevant exit balancing point that describes the allocation of the FCESS costs to be paid to the primary and secondary FCESS providers for each settlement period. This information is referred to as "FCESS standing data".
- 4.4.4 The above process must be executed at the start of a new financial year for all relevant balancing points that were connected and metered for the previous three (3) consecutive financial years.
- 4.4.5 FCESS payments may be allocated to other parties via the payment allocation notices as described in sections 3.12 and 3.13 of this Procedure.

4.5 Example – FCESS Allocation for Multiple Balancing Points

Example – FCESS Allocation for Multiple Balancing Points

For a particular settlement period, Utility A is the Nominator for four balancing points having the following measured load data in the previous 3 financial years:

Balancing Point	Minimum Load (MWh)	Maximum Load (MWh)	Load Swing (MWh)
Point 1	0	10	10
Point 2	2	15	13
Point 3	0	20	20
Point 4	0.5	5	4.5

Only points 1 to 3 have load swings greater than the FCESS threshold of 5 MWh, so Point 4 is excluded from the FCESS cost allocations.

The sum of all load swings on covered networks in the NWIS for the previous 3 financial years, that exceeded the FCESS threshold of 5 MWh, is 120 MWh.

The FCESS cost allocation for which Utility A is liable in the settlement period is given as follows:

Balancing Point	Load Swing (MWh)	FCESS Cost Allocation
Point 1	10	$10/120 = 8\%$
Point 2	13	$13/120 = 11\%$
Point 3	20	$20/120 = 17\%$
Utility A total	43	$43/120 = 36\%$

Utility A will pay 36% of the total FCESS costs for the NWIS for the settlement period.

Example – Payment Allocation Notice for FCESS Costs

Utility A may choose, with the consent of the relevant users, to submit a payment allocation notice to the ISO, which allocates the portion of the FCESS cost allocated to Utility A that each relevant user of the balancing points must pay.

For example, Points 1 and 2 may be controlled by the same entity, Miner A, while Point 3 is controlled by Utility A itself. Utility A may then submit a payment allocation notice detailing the following allocations:

Balancing Point	Allocated Payer	Load Swing (MWh)	% of Utility A FCESS Cost Allocation
Point 1	Miner A	10	$10/43 = 23\%$
Point 2	Miner A	13	$13/43 = 30\%$
Point 3	Utility A	20	$20/43 = 47\%$
Total		43	100%

Miner A pays $23\% + 30\% = 53\%$ and Utility A pays 47% of the FCESS costs allocated to Utility A as the Nominator.

4.6 FCESS Allocations for New Connections (< 3 years)

Explanatory Note – FCESS Allocation for New Connections

The Rules do not specify treatment of new loads in FCESS allocation and therefore the ISO has developed a reasonable methodology to estimate the load swing for the periods when no FCESS data is available, to ensure new loads contribute fairly to the cost of FCESS once connected and can impact system frequency.

The drafting recognises that commissioning and tuning of process heavy loads such as mining, energy and minerals processing facilities can take some time. The choice of 18 months avoids overly frequent revision of FCESS standing data. It also provides sufficient time for the facility to complete commissioning of all load sources at a connection. This seeks to ensure that all contributions to the net load swing are appropriately represented in the first 18 months of metering

- 4.6.1 When a new Rules Participant connects to a covered network forming a new exit balancing point and there is no FCESS metering data available for the reference period for this connection, then the following process shall be used to determine the FCESS allocation for the balancing point:
- (a) For the first 18 months after connection, the load swing (in MWh) at the new exit balancing point shall be equal to the Contracted Maximum Demand (CMD), in MW, multiplied by the duration of a single trading interval (in hours).
 - (b) From the end of the first 18 months after connection, and until three consecutive financial years after connection, the load swing (in MWh) at the new exit balancing point shall be calculated in accordance with the methodology detailed in Rule 227 of the Rules and summarised in section 4.4 of this Procedure, using 18 months of FCESS metering data for the facility.
 - (c) From three financial years after connection, the load swing (in MWh) at the new exit balancing point shall be calculated in accordance with the methodology detailed in Rule 227 of the Rules and summarised in section 4.4 of this Procedure.
- 4.6.2 For existing balancing points that have not been interval-metered for the previous three financial years, the same process in paragraph 0 of this Procedure shall be used, where the stipulated time periods are with reference to the implementation date of this EBAS Procedure (instead of the connection date).

4.7 Example – Load Swing for FCESS Allocation for New Connection

Example – Load Swing for FCESS Allocation for New Connection

User A builds a new mine and connects it on the 20th of October 2022. The mine features a Contracted Maximum Demand of 30 MW. The mine has a loss factor of 1.001.

First 18 months after connection

For the settlement period ending October 2022, and for all settlement periods up to and including April 2024, the mine's load swing is $1.001 \times 30 \text{ MW} \times 0.5 \text{ hours} = 15.015 \text{ MWh}$.

18 months to 3 financial years after connection

Between October 2022 and April 2024, the loss-factor adjusted minimum and maximum loads of the mine were metered as 0 MWh and 7.5 MWh respectively.

For the settlement periods between and including May 2024 and June 2026, the mine's load swing is $7.5 - 0 = 7.5 \text{ MWh}$.

3 financial years after connection

Between July 2023 and June 2026, the loss-factor adjusted minimum and maximum loads of User A's facility were metered as 0 MWh and 10 MWh respectively.

For the settlement periods between and including July 2026 and June 2027, User A's load swing is $10 - 0 = 10 \text{ MWh}$.

4.8 Consumer Facilities with Multiple Connections to Covered Networks

4.8.1 It is not uncommon for consumer facilities to seek multiple connections to covered networks for increased reliability of supply. Such connections typically involve one of the following arrangements:

- (a) Two or more metered connections to different covered networks, with a moveable open point between the covered networks within the consumer facility; or
- (b) Two or more metered connections to the same covered network that are electrically interconnected within the consumer facility.

In both cases the consumer facility is associated with two or more balancing points that would be subject to the FCESS allocation method prescribed in the Rules.

4.8.2 Applying the FCESS allocation formula to all balancing points for such facilities would lead to inequitable allocation of FCESS costs to the affected Nominators. The FCESS load swings of these balancing points would be considered separately, while in reality the FCESS load swings are dependent on one another. The FCESS load swings observed for the balancing points could in practise not occur simultaneously, as the load of the facility is spread across the balancing points.

4.8.3 Nominators of consumer facilities described in paragraph 4.8.1 of this Procedure may submit a request to the ISO to have the FCESS metering data for balancing points relating to such facilities summed across trading intervals, thereby producing a single effective balancing point for the purpose of determining FCESS cost allocations to such facilities.

4.8.4 Requests made under paragraph 4.8.3 of this Procedure may be submitted via email to ebas@pilbaraisoco.com.au

4.8.5 Requests made under paragraph 4.8.3 of this Procedure must include:

- (a) NMIs of the relevant balancing points;
- (b) evidence demonstrating that the relevant points of connection are, or are proposed to be, normally operated in the manner described in paragraph 4.8.1 of this Procedure. Such evidence may include (but is not limited to):
 - i. historic electricity bills; or
 - ii. metering data from the relevant covered NSPs.
- (c) statements from the relevant covered NSPs corroborating the claim that the facility and its connections points are, or are proposed to be, normally operated as described in paragraph 4.8.1 of this Procedure.

Explanatory Note

Under the Metering Code network users may request metering data from the NSP. This can be used to provide the necessary evidence.

4.8.6 The ISO must review any request made under paragraph 4.8.3 of this Procedure and provide a response to the relevant Nominator within 15 business days after it received the request.

4.8.7 The ISO may reject requests made under paragraph 4.8.3 of this Procedure if it is not satisfied that sufficient evidence has been submitted, or the request is otherwise not compliant with paragraph 4.8.5 of this Procedure. In this case the ISO must provide reasons for the rejection with sufficient detail to enable the Nominator to submit a compliant request.

4.8.8 If the ISO accepts a request made under paragraph 4.8.3 of this Procedure, it must:

- (a) notify the relevant Nominator and the relevant covered NSPs of its acceptance as soon as practicable;
- (b) process the existing FCESS metering data for the relevant balancing points as described in paragraph 4.8.3 of this Procedure; and
- (c) calculate new FCESS allocations for use in settlement of the first settlement period that commences after the ISO has notified its acceptance of the request.

4.8.9 There will be no adjustments made to historic payment notes following the ISO's acceptance of a request made under paragraph 4.8.3, and such requests may not be the basis of submissions to review payment notes made under paragraph 12.9.1 of this Procedure.

- 4.8.10 If a Nominator does not submit a request to the ISO to consolidate metering data, or ISO rejects the request, the FCESS load swings of these balancing points will continue to be considered separately for the purposes of FCESS cost allocation.

4.9 Non-Normal EBAS Intervals are Excluded from Allocations

- 4.9.1 Non-normal EBAS intervals are excluded from the calculation to determine FCESS allocations.

Explanatory Note – Non-normal EBAS intervals are excluded from the FCESS allocation methodology

The ISO is required to calculate FCESS cost allocations based on the difference between the maximum and minimum negative metered quantities for all balancing points on covered networks (Rule 227). Notional Wholesale Meters (NWM) of covered networks are also defined as balancing points, see Rule 218(1)(e) of the Rules so are to be included in the calculation.

The NWM for a covered network is calculated as follows:

$$\text{NWM (kWh)} = \text{Generation on network} - \text{metered loads on network} - \text{interconnector flows to covered networks}$$

In the above equation, a positive NWM means the covered network generated more energy than was consumed in metered loads on its network and transferred across interconnectors to other covered networks. This approach works in system normal operation. The NWM above is normally positive, representing non-interval metered loads and losses not allocated by loss factors, and this is allocated to the covered NSP as balancing nominee. This quantity can reasonably be included in the FCESS allocation calculation.

However, when generation on Covered Network 1 is supporting a contingency on Covered Network 2, causing substantial flows across the interconnectors, then a large positive NWM results for reasons outside the control of the Covered NSP 1 and not associated with unmetered loads or losses. The ISO concludes it would not be equitable for Covered NSP 1 to have its FCESS cost allocation impacted by its actions to support a contingency.

The ISO currently does not have an alternative means of obtaining NWM quantities, and expects any alternative approach would be administratively burdensome on both the ISO and covered NSPs. Excluding non-normal EBAS intervals from the FCESS allocation methodology avoids inappropriate allocations to NWMs due to contingency events.

5. Collection of FCESS Standing Data

5.1 Purpose

- 5.1.1 The purpose of this section of the Procedure is to describe the information collected and produced for allocation of FCESS costs as described in Subchapter 8.2 of the Rules. This information is referred to as "FCESS standing data".
- 5.1.2 To settle costs among generating facilities for provision of FCESS by the contracted FCESS providers, the EBAS engine relies on a set of historical information relating to each relevant balancing point on covered networks. Refer to section 12.3 of this Procedure for further information on the EBAS engine.
- 5.1.3 This section of the Procedure outlines how the ISO collects, produces and otherwise manages the FCESS standing data for use in the EBAS engine.

5.2 Definitions

See Rule [226; 227]

- 5.2.1 As defined in Rule 226 of the Rules and for the purposes of this Procedure, "reference period" means the whole period covering the previous three consecutive financial years.
- 5.2.2 As defined in Rule 227(b) of the Rules, "exit balancing point" refers to a balancing point on covered networks with at least one negative metered quantity for a trading interval in the reference period.
- 5.2.3 For the purposes of this Procedure, "FCESS standing data" is the set of information relating to each relevant exit balancing point that describes the allocation of the FCESS costs to be paid to the primary FCESS provider for each settlement period.

5.3 NSPs to provide FCESS Metering Data

See Rule [138]

- 5.3.1 The ISO must obtain the appropriate metering data, referred to as "FCESS metering data", to facilitate the ISO's execution of the methodology detailed in Rule 227 of the Rules and summarised in section 4.4 of this Procedure.
- 5.3.2 Where available registered NSPs must use revenue quality metering in accordance with the Rule 66 and the Metering Code.
- 5.3.3 If revenue quality meters are not available, the registered NSP and the ISO will develop an adequate solution to obtain EBAS metering data in accordance with GEIP.
- 5.3.4 If a NSP has been granted an exemption from the Electricity Industry (Metering) Code 2012 under Rule 69, arrangements put in place under paragraph 5.3.3 of this Procedure are to be the

alternative arrangements the NSP has in place for FCESS cost allocation for the purposes of Rule 69(1)(b) of the Rules.

5.3.5 As required by Rule 138 of the Rules, covered NSPs must provide FCESS metering data, containing the content and in the format stipulated by the ISO, for all relevant balancing points on their respective covered networks.

5.3.6 If the NSP does not provide metering data in the format stipulated by the ISO, the ISO may reject the provision of metering data, and the NSP must resubmit the data within the format stipulated and the timeframe stipulated, or will be deemed to not be compliant with the Rules.

5.4 NSPs Responsible for Quality of Data

See Rule [Subchapter 5.1]

5.4.1 NSPs of covered networks are responsible for the accuracy and completeness of the FCESS metering data they provide.

5.4.2 The ISO, at its own discretion, may conduct any quality checks it deems appropriate on the FCESS metering data received.

5.4.3 Where the ISO has detected potential flaws with the data received, it must notify the relevant NSP, and the ISO and the relevant NSP must cooperate to ensure the ISO obtains a complete and accurate set of FCESS metering data.

5.4.4 Nothing in this section of the Procedure detracts from the NSPs' obligations under Subchapter 5.1 of the Rules.

5.5 NSPs May Verify FCESS Metering Data

See Rule [139]

5.5.1 NSPs of covered networks may at any time request from the ISO a copy of the FCESS metering data that relates to their respective networks, that the ISO used to produce FCESS standing data relating to one or more balancing points on the relevant covered network.

5.5.2 The ISO must comply expediently with any request made under paragraph 5.5.1 of this Procedure, and where practicable, provide the requested information prior to issuance of payment notes for the previous settlement period.

5.6 Timing of FCESS Metering Data

5.6.1 FCESS metering data must be provided to the ISO in accordance with the following time frames:

- (a) Within 10 business days after the end of a financial year;

- (b) For new balancing points under paragraph 0 of this Procedure, within 5 business days following end of the last settlement of the first 18 months after energisation of the new balancing point;
- (c) For existing balancing points without FCESS metering data under paragraph 4.6.2 of this Procedure, within 5 business days following end of the last settlement period of the first 18 months after implementation of the EBAS Procedure.

5.7 Content of FCESS Metering Data

5.7.1 The following points are excluded from the provision of FCESS metering data in paragraph 5.3.5 of this Procedure:

- (a) Interconnection points between covered networks; and
- (b) Balancing points without any negative metered intervals in the reference period.

Explanatory Note – Generation points with bi-directional services to be included in FCESS metering data

Balancing points with a bidirectional network service and Declared Send Out Capacity (DSOC) and/or CMD greater than 10 MW must be included, because they can feasibly produce load swings in excess of the FCESS payment threshold.

5.7.2 FCESS metering data must be provided –

- (a) for each balancing point on the relevant covered network, subject to paragraph 5.7.1 of this Procedure;
- (b) for the reference period, being the time period covering the previous three consecutive financial years, starting at 00:30 on the 1st of July of the first financial year and ending at 24:00 (midnight) on the 30th of June of the third financial year; and
- (c) for each trading interval in the reference period.

5.7.3 FCESS metering data must include the following information:

- (a) National Meter Identifier if the balancing point is physically metered, or the unique identifier if the balancing point is a notional exit point;
- (b) Timestamp referring to the end of the respective trading interval, including:
 - i. Year (yyyy);
 - ii. Month (MM);
 - iii. Day (dd);
 - iv. Hour (hh);
 - v. Minute (mm).
- (c) Net metered energy quantities, in kWh, where
 - i. negative quantities are quantities withdrawn from the covered network; and
 - ii. positive quantities are quantities injected into the covered network.
- (d) Reference to the ISO template version.

6. Allocation of SRESS Costs

6.1 Purpose

- 6.1.1 The purpose of this section of the Procedure is to describe the mechanism for allocating Spinning Reserve Essential System Services (SRESS) costs as described in Subchapter 8.3 of the Rules.
- 6.1.2 Allocation of costs incurred by NWIS participants for provision of SRESS is executed in the EBAS engine. The EBAS engine is a tool to execute energy balancing and settlement of Essential System Services (ESS) costs in arrears for each settlement period. Refer to section 12.3 of this Procedure for further information on the EBAS engine.
- 6.1.3 This section of the Procedure outlines the calculations carried out by the EBAS engine to allocate the SRESS costs and provides some worked examples.

6.2 Definitions

See Rule [229]

- 6.2.1 As defined in Rule 229(1)(b)(i) of the Rules, “entry balancing points” are all balancing points on covered networks where at least one generating unit was connected, directly or indirectly, to the power system during the reference period.
- 6.2.2 As defined in Rule 229(1)(c) of the Rules, “reference unit” means the generating unit with the largest operating capacity in MW, and which is capable of forming a contingency outage, out of all the generating units that are associated with a Nominator for one or more entry balancing points.
- 6.2.3 A generating unit is capable of forming a contingency outage if it is capable of unexpected failure or removal from the power system.
- 6.2.4 Credible and non-credible contingency events are further defined in the Rules and the Interim Protocol Framework Procedure.
- 6.2.5 As defined in Rule 229(1)(a) of the Rules, the “SRESS payment threshold” equals the regulation raise reserve specified in the primary FCESS provider’s ESS contract, in MW (and if this value changes during a settlement period, the smaller value is to be used for the full settlement period). This value is published separately on the ISO website, and does not form part of this Procedure.
- 6.2.6 For the purposes of Rule 229 of the Rules and this Procedure, “nameplate capacity” means the value which the ISO determines is likely to be what the manufacturer would have guaranteed as

the Generating Unit's maximum continuous output in active power at or about ISO standard reference conditions¹.

6.2.7 In determining nameplate capacity,

- (a) the ISO may rely on publicly available information or information provided to it by Rules Participants or others, and is not required to investigate the Generating Unit's actual contractual arrangements; and
- (b) if a single contingency event can affect the output of more than one machine (for example the gas and steam turbines in a combined cycle plant), or more than one generating unit (for example inverter based technology which is separately connected) the ISO may treat the machines or generating units as a notional single generating unit, and may —
 - i. determine what the manufacturer would likely have specified as the loss of active power output which would result from the contingency event; and
 - ii. treat the value it determines under subparagraph (b)(i) as the nameplate capacity of the notional unit.

6.3 Overview of SRESS Costs

See Rule [214]

6.3.1 SRESS costs consist of fixed monthly payments to SRESS providers, reflecting the opportunity cost of reserving generation capacity for spinning reserve. These payments are set by the confidential contract between the ISO and the SRESS providers.

6.4 Overview of SRESS Cost Allocation

See Rule [226; 229; 230]

6.4.1 SRESS costs are allocated to all balancing points on the covered networks at which at least one generating unit was connected to the power system during the reference period. This means SRESS costs are allocated primarily to generating facilities.

6.4.2 The methodology to allocate SRESS costs uses the "runway model" in which the largest share of the cost is allocated to the largest generating unit. That is, the potential causer of the largest single contingency due to loss of generation pays the largest share of the SRESS cost.

6.4.3 Rule 229 of the Rules describes the detailed methodology to calculate the share of the SRESS costs to be allocated to each entry balancing point and the relevant payers. This methodology is summarised as follows:

- (a) Identify all entry balancing points as in paragraph 6.2.1 of this Procedure.

¹ As defined in ISO 3977-2:2023. Specifically, 15°C air intake, cooling water and ambient air temperature, and 101,325 kPa air intake and ambient air pressure.

- (b) Identify the Nominator associated with each entry balancing point.
- (c) For each Nominator identified above, identify the reference unit.
- (d) Identify the "payers" for SRESS in the settlement period, being the Nominators for entry balancing points which have reference units bigger than the SRESS payment threshold as defined above.
- (e) Rank the payers by reference to the size of their reference units, from smallest (rankp = 1) to largest (rankp = **n**).
- (f) for each SRESS payer **p**, perform the following calculation to determine its proportionate "SRESS payment share" for the settlement period:

$$SRESS\ share_p = \sum_{i=1}^{rank_p} \frac{MW_i - MW_{(i-1)}}{[MW_n - MW_0] \times (n + 1 - i)}$$

where

$SRESS\ share_p$	=	the proportional SRESS payment share for payer p
i	=	the summation index
$rank_p$	=	the rank assigned to the payer p
n	=	the number of payers
MW_i	=	the nameplate capacity in MW of the reference unit for each $payer_i$ (such that MW_p is the nameplate capacity for payer p)
MW_0	=	the SRESS payment threshold

6.5 Example – SRESS Allocation for Multiple Balancing Points

Example – SRESS Allocation for Multiple Balancing Points

For a particular settlement period, Nominator A is the Nominator for 3 entry balancing points having a range of generating units connected in the previous 3 financial years:

Balancing Point	Generating Units Connected (MW)	Operating Capacity of Largest Generating Unit (MW)
Point 1	10, 15, 15	15
Point 2	45, 45	45
Point 3	20, 50	50

The reference unit for Nominator A is 50 MW. There are two other Nominators, Nominator B and Nominator C, with reference units of 20 MW and 30 MW respectively.

The SRESS payment threshold is set to $MW_0 = 10$ MW.

The nameplate capacities of the reference units are:

Nominator	Operating capacity of reference unit (MW)	Nameplate capacity of Reference Unit (MW)
Nominator A	50	55
Nominator B	20	22
Nominator C	30	34

The ranking of SRESS payers, the Nominators, is as follows:

Payer	Nameplate Capacity of Reference Unit (MW)	SRESS rank _P
Nominator B	$MW_1 = 22$	1
Nominator C	$MW_2 = 34$	2
Nominator A	$MW_3 = 55$	3

Calculating the SRESS share of Nominator B:

$$SRESS\ share_1 = \frac{MW_1 - MW_{(1-1)}}{[MW_3 - MW_0] \times (3 + 1 - 1)} = \frac{22 - 10}{(55 - 10) \times 3} = \frac{12}{135}$$

Calculating the SRESS share of Nominator C:

$$\begin{aligned} SRESS\ share_2 &= \frac{MW_1 - MW_{(1-1)}}{[MW_3 - MW_0] \times (3 + 1 - 1)} + \frac{MW_2 - MW_{(2-1)}}{[MW_3 - MW_0] \times (3 + 1 - 2)} \\ &= \frac{22 - 10}{(55 - 10) \times 3} + \frac{34 - 22}{(55 - 10) \times 2} = \frac{12}{135} + \frac{12}{90} = \frac{30}{135} \end{aligned}$$

Calculating the SRESS share of Nominator A:

$$\begin{aligned} SRESS\ share_3 &= \frac{MW_1 - MW_{(1-1)}}{[MW_3 - MW_0] \times (3 + 1 - 1)} + \frac{MW_2 - MW_{(2-1)}}{[MW_3 - MW_0] \times (3 + 1 - 2)} \\ &\quad + \frac{MW_3 - MW_{(3-2)}}{[MW_3 - MW_0] \times (3 + 1 - 3)} \end{aligned}$$

(Example Continued on Next Page)

(Example Continued)

$$= \frac{22 - 10}{(55 - 10) \times 3} + \frac{34 - 22}{(55 - 10) \times 2} + \frac{55 - 34}{(55 - 10) \times 1}$$
$$= \frac{12}{135} + \frac{12}{90} + \frac{21}{45} = \frac{93}{135}$$

Summarising the SRESS cost allocations:

Payer	Nameplate capacity of reference unit (MW)	SRESS rank _P	SRESS share
Nominator B	22	1	12/135 = 9%
Nominator C	34	2	30/135 = 22%
Nominator A	55	3	93/135 = 69%
Total			135/135 = 100%

6.6 SRESS Allocations for Changed Connections

See Rule [229]

6.6.1 When either –

- (a) a new generating unit connects to a covered network forming a new entry balancing point; or
- (b) a new generating unit is installed at, or a generating unit is removed from, an existing entry balancing point such that the reference unit of the Nominator associated with the entry balancing point changes,

then the new or changed entry balancing point shall be included in the SRESS allocation calculations from the start of the next financial year.

7. Collection of SRESS Standing Data

7.1 Purpose

- 7.1.1 The purpose of this section of the Procedure is to list the information collected and produced for allocation of SRESS costs as described in Subchapter 8.3 of the Rules. This information is referred to as "SRESS standing data".
- 7.1.2 To settle costs among Nominators of generating facilities for provision of SRESS by the contracted SRESS providers, the EBAS engine relies on a set of historical information relating to each relevant balancing point on covered networks. Refer to section 12.3 of this Procedure for further information on the EBAS engine.
- 7.1.3 This section of the Procedure outlines how the ISO collects, produces and otherwise manages the SRESS standing data for use in the EBAS engine.

7.2 ISO to Maintain SRESS Standing Data

Explanatory Note

This section does not create a new obligation on a party to collect the SRESS standing data because the data is being collected by and provided to the ISO under other Procedures.

- 7.2.1 The ISO must maintain an up-to-date list of SRESS standing data for use in the EBAS engine to execute the SRESS cost allocations as detailed in this Procedure.
- 7.2.2 Subject to Subchapter 11.2 of the Rules, the means that the ISO may use to maintain the SRESS standing data includes, but is not limited to, the following:
- (a) Registered standing data as collected under the Interim Registration and Standing Data Procedure;
 - (b) Other sections in this Interim EBAS Procedure.
 - (c) Any other Procedures.
- 7.2.3 The information collected under this section of the Procedure includes for each generating facility connected to covered networks, integrated mining networks and CPC networks:
- (a) Operational capacity of each generating unit, in MW;
 - (b) Nameplate capacity, as defined in paragraph 6.2.6 and 6.2.7 of this Procedure, of each generating unit, in MW;
 - (c) Date of energisation of connection point;
 - (d) Name and contact details of the controller of the facility; and
 - (e) Name and contact details of the Nominator.

8. Energy Balancing

8.1 Purpose

- 8.1.1 The purpose of this section of the Procedure is to describe the mechanism used to settle imbalances in energy generated and consumed by NWIS participants during each settlement period, as detailed in Subchapter 8.3 of the Rules.
- 8.1.2 The EBAS engine is a tool to execute energy balancing and settlement of ESS costs in arrears for each settlement period. Refer to section 12.3 of this Procedure for further information on the EBAS engine.
- 8.1.3 This section of the Procedure outlines how the ISO implements the mechanism for energy balancing in the EBAS engine.

8.2 Definitions

See Rule [231]

- 8.2.1 In accordance with Rule 231(a) of the Rules, the “administered price” (AP) for balancing energy is the price in \$/MWh to be paid for energy imbalances that fall within the positive and negative balancing tolerance quantities.
- 8.2.2 In accordance with Rule 231(b) of the Rules, the “administered penalty price” (APP) is the price to be paid for energy imbalances that fall outside the positive and negative balancing tolerance quantities.

8.3 Overview of the Energy Balancing Mechanism

See Rule [169]

- 8.3.1 Rule 169 of the Rules requires a balancing nominee in a covered network to use reasonable endeavours in accordance with GEIP to ensure that:
- (a) its imbalance for each trading interval is as close to zero as reasonably practicable; and
 - (b) within a trading interval maintain as close as practicable to a real time balance between injections and withdrawals.
- 8.3.2 In practise it is impossible for a generating facility to precisely follow the loads of its contracted consumers, due to factors such as uncontrollable fluctuations in equipment power demand, electrical and mechanical faults leading to instantaneous equipment disconnection, changes in electrical losses of transmission and distribution elements, disruptions to fuel supplies, and variations in weather conditions, to name a few. Consequently, for a particular period of time a generator may be supplying a shortfall in energy of another generator, or a consumer may consume more energy than it was contracted to consume.

8.3.3 The Rules seek to reconcile imbalances between generators and loads by obtaining payments from –

- (a) consumers that consumed more energy than was allocated by the relevant Nominators;
and
- (b) generators that produced less energy than was allocated by the relevant Nominators;

and passing these payments to generators that produced more energy than was allocated by the relevant Nominators.

8.3.4 The Rules also reimburses participants when, under a systems operation direction or during abnormal system conditions, they were required to produce or consume more or less energy than they were allocated by their Nominators.

8.4 Energy Balancing Variables

See Rule [233; 234]

8.4.1 Settlement for energy balancing uses the following variables:

<i>AP</i>	=	the administered price, in \$/MWh
<i>APP</i>	=	the administered penalty price, in \$/MWh
<i>NBTQ</i>	=	the balancing nominee's negative balancing tolerance quantity, in MWh
<i>PBTQ</i>	=	$ NBTQ $
	=	the absolute value of the negative balancing tolerance quantity, in MWh
<i>NIQ</i>	=	the balancing nominee's negative imbalance quantity, in MWh. This is zero if <i>PIQ</i> is non-zero.
<i>PIQ</i>	=	the balancing nominee's positive imbalance quantity, in MWh. This is zero if <i>NIQ</i> is non-zero.

8.5 Balancing Tolerance Quantity

See Rule [233]

8.5.1 The balancing tolerance quantity is calculated for each balancing nominee for each trading interval based on the following formula.

8.5.2 The Negative Balancing Tolerance Quantity (NBTQ) of a balancing nominee for a trading interval is calculated as follows:

$$NBTQ_{bn} = margin \times \sum negative\ metered\ quantities_{bn}$$

where –

$NBTQ_{bn}$ = the negative balancing tolerance quantity for balancing nominee b_n

$margin$ = the margin published by the ISO under Rule 233(3)(a) of the Rules

$negative\ metered\ quantities_{bn}$

= the sum of all negative metered quantities allocated to the balancing nominee b_n for the trading interval

- 8.5.3 A balancing nominee's Positive Balancing Tolerance Quantity (PBTQ) for a trading interval, expressed in MWh, is the absolute value of its NBTQ.

8.6 Tolerance Margin

See Rule [233; 239; 247]

- 8.6.1 The tolerance margin to calculate the NBTQ in paragraph 8.5 of this Procedure is published separately on the ISO website and the value does not form part of this Procedure.
- 8.6.2 The tolerance margin will initially be reviewed 6 months after the ISO has issued the first EBAS payment notice under Rule 239 of this Procedure.
- 8.6.3 A review recognises that the margin used to determine the Negative Balancing Tolerance Quantity (NBTQ) may have a substantial impact on the energy balancing settlement amounts. The margin is likely to interact with the performance of the primary FCESS provider, in that it may encourage behaviour among NWIS participants that could be detrimental to the primary FCESS provider if the setting is too broad. On the other hand, if set too narrow, the setting could be found to be impractical, leading to excessive imbalances outside the tolerance range.
- 8.6.4 Reviews of the tolerance margin described in this section 8.6.2 of this Procedure may be made under Rule 233 [ISO to publish tolerance margin] or Rule 247 [review of ESS, balancing and settlement arrangements].

8.7 Administered Price and Administered Penalty Price

See Rule [231; 235; 247]

- 8.7.1 The AP and APP are published separately on the ISO website and the values do not form part of this Procedure.
- 8.7.2 An explanation of how the AP and APP are calculated is set out in Appendix B of this Procedure.
- 8.7.3 The calculation of the AP includes an estimate on the gas price in the Pilbara region, in dollars per gigajoule. The calculation of the APP assumes a variable operating and maintenance cost (Variable O&M) for the reference machine, in dollars per MWh. Both these quantities may change over time. and therefore the ISO will review the AP and APP periodically.

- 8.7.4 Review of the AP and APP may be made under Rule 231 [ISO to determine the AP and APP] or Rule 247 [review of ESS, balancing and settlement arrangements].

8.8 Energy Balancing Payment Obligations

See Rule [235]

- 8.8.1 Any balancing nominee with a positive imbalance ($PIQ > 0$) is a "payee".

- 8.8.2 Payees are entitled to be paid as follows:

- (a) If payee is an FCESS provider:

$$\text{amount paid (\$)} = PIQ \times AP$$

- (b) If payee complied with a system operations direction during the trading interval (not including a constraint direction or a pre-contingent direction):

$$\text{amount paid (\$)} = PIQ \times AP$$

- (c) If the power system was in a non-normal EBAS state:

$$\text{amount paid (\$)} = PIQ \times AP$$

- (d) If none of the above applies:

$$\text{amount paid (\$)} = \begin{cases} PIQ \times AP, & \text{for } MWh \leq PBTQ \\ 0, & \text{for } MWh > PBTQ \end{cases}$$

- 8.8.3 Any balancing nominee with a negative imbalance ($NIQ < 0$) is a "payer".

- 8.8.4 Payers are required to pay as follows:

- (a) If the payer is an FCESS provider:

$$\text{amount paid (\$)} = \begin{cases} |NIQ| \times AP, & \text{for } MWh \leq |NBTQ| \\ 0, & \text{for } MWh > |NBTQ| \end{cases}$$

- (b) If the payer complied with a system operations direction during the trading interval:

$$\text{amount paid (\$)} = 0$$

- (c) If the power system was in a non-normal EBAS state:

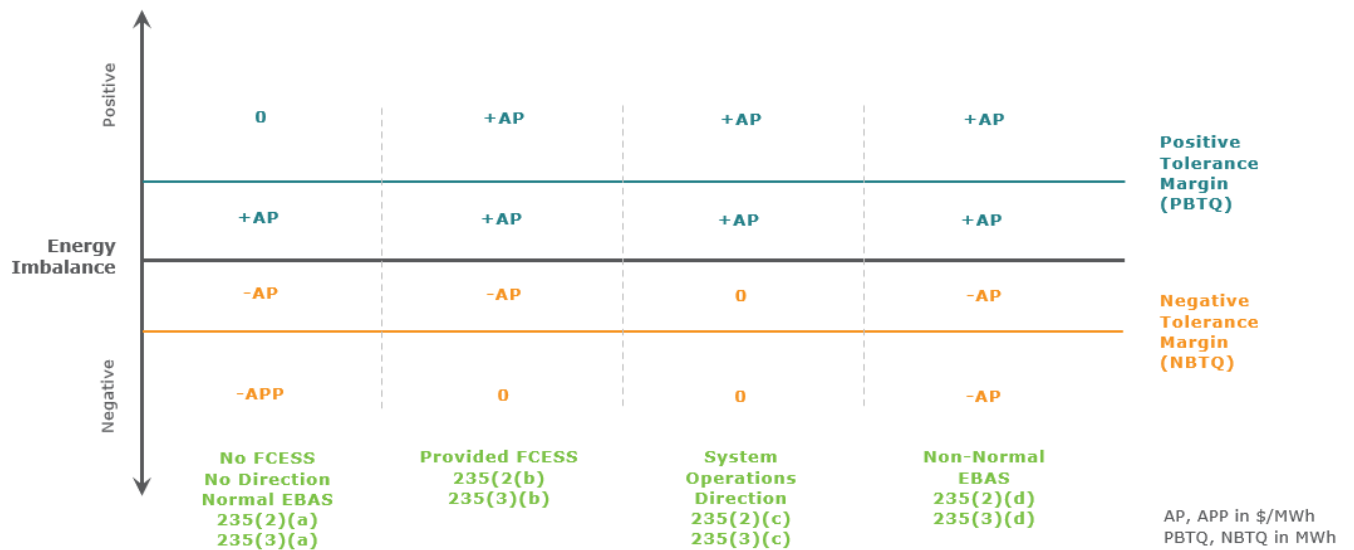
$$\text{amount paid (\$)} = |NIQ| \times AP$$

- (d) If none of the above applies:

$$\text{amount paid (\$)} = \begin{cases} |NIQ| \times AP, & \text{for } MWh \leq |NBTQ| \\ NIQ, \quad x APP & \text{for } MWh > |NBTQ| \end{cases}$$

8.8.5 Figure 1 provides a diagram demonstrating energy balancing payment obligations.

Figure 1: Energy balancing payment obligations



8.8.6 See section 8.11 for an example of how energy balancing payment obligations are calculated.

8.9 Shortfall of Balancing Payments

See Rule [236; 237]

8.9.1 If for a settlement period the aggregate amount to be paid by all payers under Rule 235(3) of the Rules and paragraph 8.8.4 of this Procedure falls short of the aggregate amount to be paid to all payees under Rule 235(2) of the Rules and paragraph 8.8.2 of this Procedure, then the ISO is to –

- make a pro rata reduction to the amount paid to each payee;
- record the amount of short payment for each short-paid payee, called the “outstanding balance”; and
- if in a subsequent settlement period there is a surplus under Rule 237(1) of the Rules, allocate the surplus between all previous short-paid payees, pro-rata by reference to their outstanding balances, in addition to any amounts otherwise payable to them for the settlement period.

8.10 Surplus of Balancing Payments

See Rule [235; 236; 237]

8.10.1 If, for a settlement period, the aggregate amount to be paid by all payers under Rule 235(3) of the Rules and paragraph 8.8.4 of this Procedure exceeds the aggregate amount to be paid to all

payees under Rule 235(2) of the Rules and paragraph 8.8.2 of this Procedure ("surplus"), then the surplus is payable –

- (a) first, to the short-paid payees under Rule 236 of the Rules and paragraph 8.10.1 of this Procedure; and
- (b) after all short-paid payees have had their outstanding balances reduced to zero, to the ISO as an additional payee.

8.10.2 The ISO must accumulate the amounts paid to it for a settlement periods (paragraph 8.10.1(b)) and distribute the total in equal shares to the registered NSPs.

8.10.3 See section 8.11 for an example of how shortfall and surplus payments are calculated.

8.11 Example – Balancing Payments, Shortfalls and Surpluses

Example – Energy Balancing Payments

For a single trading interval within a particular settlement period, Balancing Nominees A and B are the Nominators for balancing points with the following consumer facilities and generating units connected:

Balancing Point	Balancing Nominee	Loss-factor adjusted metered energy produced (+)/consumed (-) (MWh)
Generating Unit 1a	A	5
Generating Unit 1b	A	6
Consumer 1	A	-9
Consumer 2	A	-4
Generating Unit 2	B	18
Consumer 3	B	-16

Calculating Imbalances

The net energy balance (“imbalance”) of Balancing Nominee A is given by the sum of energy generated minus the sum of energy consumed:

$$\begin{aligned} \text{imbalance}_{ba} &= \sum \text{Generation} + \sum \text{Consumption} = [5 + 6] + [(-9) + (-4)] \\ &= -2 \text{ MWh} = NIQ_a \end{aligned}$$

Balancing Nominee A has a “negative imbalance” (NIQ_a) of 2 MWh, meaning that Balancing Nominee A is a “payer” for this trading interval.

Calculating the imbalance of Balancing Nominee B:

$$\text{imbalance}_{bb} = [18] + [-16] = 2 \text{ MWh} = PIQ_b$$

Balancing Nominee B has a “positive imbalance” (PIQ_b) of 2 MWh, meaning that Balancing Nominee B is a “payee” for this trading interval.

Calculating Balancing Tolerance Quantities

The negative metered quantities for Balancing Nominee A is given as follows:

$$\begin{aligned} \text{negative metered quantities}_{ba} &= \sum \text{Consumption} \\ &= (-9) + (-4) = -13 \text{ MWh} \end{aligned}$$

The margin for calculating the Negative Balancing Tolerance Quantity (NBTQ) is for this example 1.5%.

The NBTQ for Balancing Nominee A for this particular trading interval is given by:

$$\begin{aligned} NBTQ_{ba} &= \text{margin} \times \text{negative metered quantities}_{ba} \\ &= 0.015 \times (-13) = -0.195 \text{ MWh} \end{aligned}$$

The Positive Balancing Tolerance Quantity (PBTQ) for Balancing Nominee A is given by:

$$PBTQ_{ba} = |NBTQ_{ba}| = |-0.195| = 0.195 \text{ MWh}$$

(Example Continued on Next Page)

(Example Continued)

Repeating the above process for Balancing Nominee B:

$$\text{negative metered quantities}_{bb} = -16 \text{ MWh}$$

$$NBTQ_{bb} = 0.015 \times (-16) = -0.240 \text{ MWh}$$

$$PBTQ_{bb} = |-0.240| = 0.240 \text{ MWh}$$

Calculating Payments to Payees

The administered price is for this example = \$168 per MWh.

Balancing Nominee B, as the only payee, is entitled to be paid as follows:

Scenario	Payment formula	Payment amount
If the payee is an FCESS Provider for the trading interval	$PIQ_b \times AP$	$2 \times 168 = \$336$
If payee complied with a System Operations direction at any point in the trading interval	$PIQ_b \times AP$	$2 \times 168 = \$336$
If the power system was in a non-normal EBAS state at any point in the trading interval	$PIQ_b \times AP$	$2 \times 168 = \$336$
If none of the above was true for the trading interval	$\text{For } MWh \leq PBTQ_b, \\ PIQ_b \times AP$ $\text{For } MWh > PBTQ_b, \\ 0$	$\text{For } MWh \leq 0.240, \\ 0.240 \times 168 = \40.32 $\text{For } MWh > 0.240, \\ \0

Calculating Payments from Payers

The administered penalty price (APP) is for this example 130% of AP = $1.3 \times 168 = \$218.40$ per MWh.

Balancing Nominee A, as the only payer, is required to pay as follows:

Scenario	Payment formula	Payment amount
If the payer is an FCESS Provider at any point in the trading interval	$\text{For } MWh \leq NBTQ_a , \\ NIQ_a \times AP$ $\text{For } MWh > NBTQ_a , \\ 0$	$\text{For } MWh \leq 0.195, \\ 0.195 \times 168 = \32.76 $\text{For } MWh > 0.195, \\ \0
If payer complied with a system operations direction for all trading intervals within the subset	0	\$0

(Example continued on the next page)

(Example continued)

Scenario	Payment formula	Payment amount
If the power system was in a non-normal EBAS state at any point in the trading interval	$ NIQ_a \times AP$	$ -2 \times 168 = \336
If none of the above was true for the trading interval	$\text{For } MWh \leq NBTQ_a , \\ NIQ_a \times AP$ $\text{For } MWh > NBTQ_a , \\ (NIQ_a - NBTQ_a) \times APP$	$\text{For } MWh \leq 0.195, \\ 0.195 \times 168 = \32.76 $\text{For } MWh > 0.195, \\ (2 - 0.195) \times 218.40 \\ = \394.21

The total amount to be paid / owed for a settlement period is the sum of all the trading intervals (30 minutes) within a settlement period (one calendar month).

Example – Balancing Payments Short-Fall and Surplus

For the first of two consecutive settlement periods, a system with two NSPs has the following Balancing Nominees, consumer facilities and generating units connected:

Balancing Point	Balancing Nominee	Loss-factor adjusted metered energy produced (+)/consumed (-) (MWh)
Generating Unit 1a	A	4,000
Generating Unit 1b	A	5,000
Consumer 1	A	-6,500
Consumer 2	A	-3,000
Generating Unit 2	B	15,000
Consumer 3	B	-14,700
Generating Unit 3	C	8,200
Consumer 4	C	-8,000

At the start of the first settlement period, all Balancing Nominees have outstanding balances of zero. For this example, the balancing tolerance margin, AP and APP are 1.5%, \$168 and \$218.40 respectively.

In the first settlement period,

- Balancing Nominee A has a negative imbalance of -500 MWh and is a payer;
- Balancing Nominee B has a positive imbalance of 300 MWh and is a payee;
- Balancing Nominee C has a positive imbalance of 200 MWh and is a payee.

(Example continued on the next page)

(Example continued)

First Settlement Period – Short Fall

Across all intervals in the first settlement period, the parties must pay and/or receive the following net payments [See Example Energy Balancing Payments for example calculations]:

Payer/Payee	Scenario	Payment amount
Balancing Nominee A (payer) – must pay	Negative imbalance, primarily as a result of providing FCESS during the settlement period	\$24,024
Balancing Nominee B (payee) – must be paid	Positive imbalance. No FCESS provision, system operations direction or non-normal EBAS state during the settlement period	\$37,128
Balancing Nominee C (payee) – must be paid	Positive imbalance. No FCESS provision, system operations direction or non-normal EBAS state during the settlement period	\$20,160

Balancing Nominee A, as the payer, is required to pay \$24,024 because it provided FCESS for the whole settlement period resulting in a negative imbalance.

Balancing Nominee B and C, as payees, are entitled to be paid for their positive imbalances up to their Positive Balancing Tolerance Quantities, equal to \$37,128 and \$20,160 respectively.

The total payments to be paid out to payees is \$37,128 + \$20,160 = \$57,288, and the total payments to be made by payers is \$24,024.

The payments result in a shortfall of \$57,288 – \$24,024 = \$33,264.

The amount paid out to Balancing Nominee B and C is reduced on a pro-rata basis with reference to the magnitude of the unadjusted balancing payments.

The pro-rata reductions and resultant balancing payments are as calculated as follows:

Party	Pro-rata reduction %	Pro-rata reduction \$	New Balancing Payment
Balancing Nominee B	$\frac{\$37,128}{\$57,288} = 65\%$	$\$33,264 \times 65\% = \$21,558$	$\$37,128 - \$21,558 = \$15,570$
Balancing Nominee C	$\frac{\$20,160}{\$57,288} = 35\%$	$\$33,264 \times 35\% = \$11,706$	$\$20,160 - \$11,706 = \$8,454$

The first settlement period is settled as follows:

Party	Received/ (Paid)	Outstanding Balance
Balancing Nominee A	(\$24,024)	\$0
Balancing Nominee B	\$15,570	$\$37,128 - \$15,570 = \$21,558$
Balancing Nominee C	\$8,454	$\$20,160 - \$8,454 = \$11,706$

(Example continued on the next page)

(Example continued)

Second Settlement Period – Surplus

In the second settlement period, the outcome of the unadjusted imbalance payments is a surplus of \$50,000.

This surplus must be allocated first to short-paid payees of previous settlement periods, to bring their outstanding balances to zero, with the remainder paid out in equal measures to the two NSPs.

The surplus is allocated to short-paid payees on a pro-rata basis with reference to the magnitudes of outstanding balances:

Party	Outstanding Balance	Surplus Allocation %	Surplus Allocation \$
Balancing Nominee B	\$21,558	$\frac{\$21,558}{\$21,558 + \$11,706} = 43\%$	$\text{Min}(\$50,000 \times 43\%, \$21,558) = \$21,558$
Balancing Nominee C	\$11,706	$\frac{\$11,706}{\$50,000} = 23\%$	$\text{Min}(\$50,000 \times 23\%, \$11,706) = \$11,706$

The total surplus paid out to short-paid payees is $\$21,558 + \$11,706 = \$33,264$.

This leaves $\$50,000 - \$33,264 = \$16,736$ to be paid out to the NSPs at equal shares of \$8,368.

9. Collection of EBAS Standing Data

9.1 Purpose

- 9.1.1 The purpose of this section of the Procedure is to outline the responsibility, type, and management of the EBAS standing data to be provided to and managed by the ISO for use in the EBAS engine.
- 9.1.2 To settle costs among NWIS participants for energy imbalances, the EBAS engine relies on a set of historical information relating to each relevant balancing point on covered networks. Refer to section 12.3 of this Procedure for further information on the EBAS engine.
- 9.1.3 This section outlines how the ISO collects, produces and otherwise manages the EBAS standing data for use in the EBAS engine.

9.2 Content of EBAS Standing Data

- 9.2.1 EBAS standing data for each balancing point consists of the information² listed in Table 3.

Table 3: List of EBAS standing data and parties responsible for its submission

Item	EBAS standing data	Responsibility for provision to ISO
(a)	Balancing point or other point type, being one ³ of the points in Table 4 and Table 5	Covered NSP
(b)	National Meter Identifier (NMI) for physically metered balancing points, or an appropriate unique alphanumeric identifier for other types of balancing points	Covered NSP
(c)	Relevant Network Service Provider	Covered NSP
(d)	Loss factor	Covered NSP
(e)	Network user name	Covered NSP
(f)	Nominator	Network users, including Non-covered NSPs
(g)	Balancing Nominees	Nominator
(h)	Allocation methodology for each Balancing Nominee	Nominator
(i)	Allocated payer (optional)	Nominator, balancing nominee

² Contact details and other information for items (f), (g), (h) and (i) in Table 3 must be provided in accordance with section 3.7, 3.9 and 3.13 of this Procedure.

³ Connection points where storage works are connected to covered networks may be defined as either Generator or Consumer type balancing points, at the NSP's discretion. This may be done, for example, with reference to the type of service that is offered at the connection point.

9.2.2 The EBAS engine uses the type of balancing point or other network point in calculating settlements for ESS costs. The types of balancing points and other network points used in the EBAS engine are defined in the following tables.

Table 4: Balancing point types for use in the EBAS settlement tool

Balancing point type	Rule references	Definition for EBAS standing data
Generation facility balancing point	8(1), 218(1)(a)	Any connection point at which a generation facility is connected to the covered network, excluding facilities with combined injection capacity of generating works less than 10 MW.
Consumer facility balancing point	8(1), 218(1)(b)	Any connection point at which a consumer facility is connected to the covered network, and where the combined injection capacity of connected generating works is less than 10 MW.
Interconnection-NC balancing point	218(1)(c)	Interconnection point between a covered network and a non-covered network
Notional exit point (NEP)	218(1)(d)	stands for "notional exit point" as defined in Rule 218(2)
Notional wholesale meter (NWM)	218(1)(e)	stands for, and has the same definition as, "notional wholesale meter" in Rule 8(1) and Rule 218(1)(e)

Table 5: Other point types for use in the EBAS settlement tool

Other points with EBAS standing data	Definition for EBAS standing data
Interconnection-C balancing point	Interconnection point between two covered networks

9.3 Example – Balancing Point Types

9.3.1 Examples of different applications of balancing points are given in Figure . These are not exhaustive and other arrangements are possible.

9.3.2 Figure explains how balancing points work for network users connected to multiple covered networks.

Figure 2: Examples of different applications of balancing points

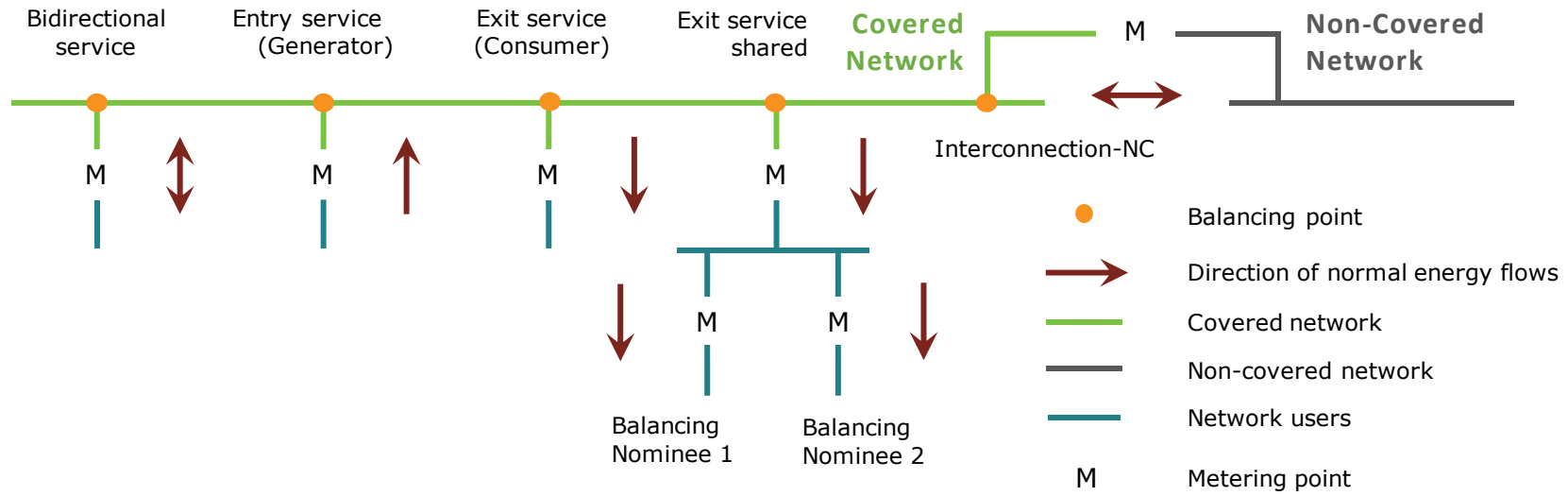
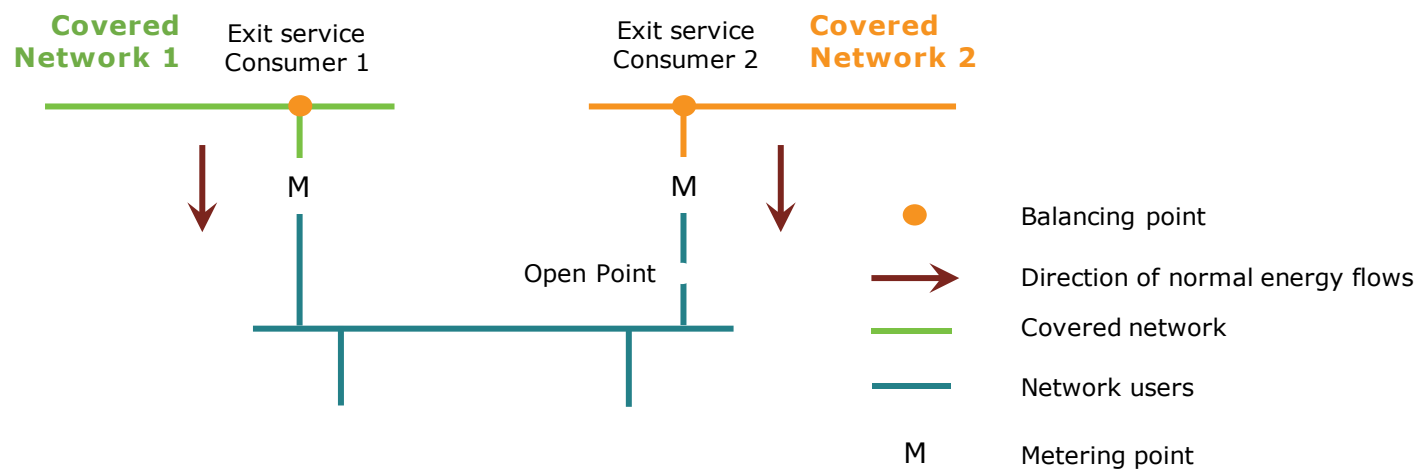


Figure 3: Example of balancing points for network users connected to multiple covered networks



9.4 Covered NSPs to Maintain List of Balancing Points

- 9.4.1 A covered NSP must maintain a list of balancing points on its covered network. This list must include for each balancing point the information for which the covered NSP is responsible as detailed in Table 3 of paragraph 9.2.1 of this Procedure.
- 9.4.2 For interconnections between covered networks, the relevant covered NSPs must decide and appoint amongst themselves which NSP will record the required information. The appointed NSP must include the relevant points in the list of balancing points in paragraph 9.4.1 of this Procedure.
- 9.4.3 The relevant covered NSPs must notify the ISO as soon as practicable of appointments made under paragraph 9.4.2 of this Procedure.

9.5 EBAS Standing Data from Covered NSPs

- 9.5.1 Covered NSPs must provide to the ISO, and ensure at all times that the ISO holds accurate and current information for the list of balancing points in paragraph 9.4.1.
- 9.5.2 The list of balancing points must include the following:
- (a) Settlement period to which the data relates⁴;
 - (b) Revision information that is sufficient for the ISO to identify the presence of new or changed information⁵.
- 9.5.3 The list of balancing points must be provided to the ISO before the start of the settlement period to which the data relates.
- 9.5.4 If no submission is received, it will be taken there was no change to the list of balancing points previously submitted.

9.6 EBAS Standing Data from Network Users and Nominators

- 9.6.1 The EBAS standing data for which network users and Nominators are responsible, as detailed in Table 3 of paragraph 9.2.1, is collected in under Chapter 3 of this Procedure.

⁴ This can be done for the entire list or for each item on the list, at the discretion of the NSP. For example, an NSP may wish to indicate the commencement of a new balancing point several months in the future. Regardless of the approach, it must be clear to the ISO which data relates to the next settlement period.

⁵ This can be done through a flag or commentary field for each item on the list that identifies the presence of new or changed information.

10. Collection of EBAS Metering Data

10.1 Purpose

- 10.1.1 The purpose of this section of the Procedure is to outline the responsibility, type, format, frequency and timing of the EBAS metering data to be provided to the ISO for use in the EBAS engine.
- 10.1.2 To settle costs among NWIS participants for energy imbalances, the EBAS engine relies on half-hourly metering data for each balancing point on covered networks (as defined in section 3.2 of this Procedure). Refer to section 12.3 of this Procedure for further information on the EBAS engine.
- 10.1.3 For the purposes of this Procedure, the metering data for monthly EBAS is referred to as "EBAS metering data".

10.2 Definitions

See Rule [8]

- 10.2.1 For the purpose of this Procedure, a settlement period is any calendar month, starting from 00:00 of the first day of the month, and ending at 24:00 (midnight) of the last day of the month.
- 10.2.2 In relation to metered data pertaining to half-hourly trading intervals, the end of a settlement period occurs at 24:00 (midnight) of the last day of the calendar month.
- 10.2.3 A trading interval is defined as a period of 30 minutes starting on the hour and each 30 minutes thereafter.

10.3 Responsibility for EBAS Metering Data

See Rule [135; 138; 218]

- 10.3.1 Covered NSPs must provide EBAS metering data to the ISO, for use in the EBAS engine, for all balancing points on the respective covered networks.

Explanatory Note – Interconnections with non-covered networks are balancing points

Under Rule 218, interconnections between covered and non-covered networks are defined as balancing points.

The combined effect of Rule 218 and paragraph 10.3.1 of this Procedure is that EBAS metering data for interconnections between covered and non-covered networks must be provided by the covered NSP.

- 10.3.2 Where two or more covered networks are interconnected, the NSPs of the covered networks must decide amongst themselves and notify the ISO which NSP will be responsible for provision of EBAS metering data relating to the balancing point at the interconnection.
- 10.3.3 If the NSPs in paragraph 10.3.2 of this Procedure cannot agree which NSP will be responsible, the ISO may appoint an NSP owning suitable meters (as defined under Rule 135) at the balancing point as the responsible NSP for the provision of EBAS metering data at the balancing point of the interconnection.
- 10.3.4 Where the ISO has made an appointment under paragraph 10.3.3 of this Procedure, it must notify the relevant NSPs as soon as practicable.

10.4 Metering Standards

See Rule [69; 135]

- 10.4.1 For the purposes of EBAS, where available registered NSPs must use revenue quality metering for all points listed under Table 4 and Table 5 in accordance with the Rule 135 and the Metering Code.
- 10.4.2 If revenue quality meters are not available the registered NSP and the ISO will develop an adequate solution to obtain EBAS metering data in accordance with GEIP.
- 10.4.3 If a NSP has been granted an exemption from the Electricity Industry (Metering) Code 2012 under Rule 69, arrangements put in place under paragraph 10.4.2 of this Procedure are to be the alternative arrangements the NSP has in place for EBAS for the purposes of Rule 69(1)(b) of the Rules.

10.5 Content of EBAS Metering Data

- 10.5.1 The EBAS metering data must be provided –
- (a) for each settlement period; and
 - (b) for each half-hourly trading interval; and
 - (c) for each balancing point as defined in section 3.2 of this Procedure.
- 10.5.2 The EBAS metering data must contain the following information:
- (a) National Meter Identifier (NMI);
 - (b) End-of-interval timestamp, including:
 - i. Year (yyyy);
 - ii. Month (MM);
 - iii. Day (dd);
 - iv. Hour (hh);
 - v. Minute (mm).
 - (c) Energy quantity withdrawn from the covered network, in kWh;

(d) Energy quantity injected into the covered network, in kWh;

10.5.3 The EBAS metering data must be submitted in the format stipulated by the ISO. If the NSP does not provide metering data in the format stipulated by the ISO, the ISO may reject the provision of metering data, and the NSP must resubmit the data within the format stipulated and the timeframe stipulated, or will be deemed to not be compliant with the Rules.

10.6 Timing of EBAS Metering Data

10.6.1 EBAS metering data must be provided to the ISO within 5 business days after the end of the settlement period to which the data relates.

11. Non-Normal EBAS States

11.1 Purpose

- 11.1.1 The purpose of this section of the Procedure is to define and describe the non-normal EBAS states for use in the EBAS engine to settle payments for energy imbalances, and to describe the way the ISO collects or receives this information.

11.2 Definition of Normal EBAS States in Rules

See Rule [234; Appendix 5]

- 11.2.1 The Rules define the power system to be in a non-normal EBAS state if it is not in a normal EBAS state.
- 11.2.2 According to Rule 234(1) of the Rules, the power system is in a normal EBAS state for a trading interval if, for the whole trading interval –
- (a) frequency is within the normal frequency tolerance band and being maintained there by the primary FCESS provider; and
 - (b) no islands have formed; and
 - (c) the primary FCESS provider, in providing the regulation service it was contracted to provide, was not required to use more than the levels of regulation reserve it was contracted to maintain.
- 11.2.3 Rule 234(1) of the Rules points to the Harmonised Technical Rules to define the normal frequency tolerance band (NFTB). The HTR in clause 2.2.1 defines the frequency operating standards for the power system under three conditions, extracted in Table 6.

Table 6: NWIS frequency operating standards⁶

Condition	Frequency Band	Target Recovery
No contingency event or load event	49.75 to 50.25 Hz	
Single contingency event	49.00 to 51.00 Hz	49.75 to 50.25 Hz within 25 minutes
Multiple contingency event	48.00 to 52.00 Hz	49.75 to 50.25 Hz within 25 minutes

⁶ Extracted from the Harmonised Technical Rules v1.

11.2.4 On the basis of Rule 234(1) of the Rules and HTR clause 2.2.1, the Normal Frequency Tolerance Band (NFTB) is defined in Table 7.

Table 7: Definition of Normal Frequency Tolerance Bands for non-normal EBAS states

Condition	Normal Frequency Tolerance Band	Start of NFTB period	End of NFTB period
No contingency event or load event	49.75 to 50.25 Hz	As soon as frequency recovers to the range of 49.75 to 50.25 Hz	As soon as frequency deviates outside the range of 49.75 to 50.25 Hz

11.3 Definition of Non-Normal EBAS States

See Rule [234]

11.3.1 For the purposes of this procedure the power system is in a “non-normal EBAS state” for a trading interval when, at any time during the trading interval –

- (a) Frequency is outside the Normal Frequency Tolerance Band as defined in Table 7; or
- (b) Frequency is inside the normal frequency tolerance band defined in Table 7 and is maintained there by one or more secondary FCESS providers, because the contracted regulation reserve capacity of the primary FCESS provider is, in part or in the whole, unavailable; or
- (c) One or more islands have formed; or
- (d) The primary FCESS provider, in providing the regulation service it was contracted to provide, was required to use more than the levels of regulation reserve it was contracted to maintain.

Explanatory Note – Non-Normal EBAS State Covers Whole Trading Interval

If the non-normal EBAS state lasts for less than a trading interval (e.g. 5 mins) then the whole trading interval is deemed to be in a non-normal EBAS state.

11.4 ISO Control Desk to Record Non-Normal EBAS States

11.4.1 The ISO Control Desk shall for each settlement period maintain records of all the trading intervals during which the system was in a non-normal EBAS state.

11.5 Content, Timing and Format of Non-Normal EBAS States

See Rule [79; 188; 189; 258]

- 11.5.1 The information provided by the ISO Control Desk to the ISO for settlement shall include, for each trading interval in the settlement period:
- (a) A flag indicating the presence or absence of non-normal EBAS state during the trading interval;
 - (b) Details of all pre-contingent, constraint or emergency directions, including:
 - i. The registered facilities being directed;
 - ii. The type of direction i.e. pre-contingent [Rule 79], constraint [Rule 258], system operations [Rule 188] or emergency [Rule 189];
 - iii. The reason for the direction;
 - (c) Identities of primary and secondary FCESS providers enabled during the trading interval; and
 - (d) The occasion for enablement of secondary FCESS providers (if applicable).
- 11.5.2 The ISO Control Desk must provide to the ISO the information described in paragraph 11.5.1 of this Procedure within 5 business days from the end of the settlement period to which the information relates.
- 11.5.3 The information shall be provided in a format suitable for use in the EBAS engine as agreed between the ISO and the ISO Control Desk.
- 11.5.4 The information is to be submitted to the ISO via email to ebas@pilbaraisoco.com.au.

11.6 NSPs to Record and Submit System Operations Directions

See Rule [188; 235]

- 11.6.1 Under Rule 188(1) and 188(3), a registered NSP may give directions to the controller of any facility connected to its network, and to any user of its network. Directions given under Rule 188 are classified as system operations directions, and affect payments made by and to the affected NWIS participants in accordance with Rule 235(2)(c) and 235(3)(c). These directions may not necessarily be collected by the ISO Control Desk, depending on the nature and purpose of the direction.
- 11.6.2 Registered NSPs must maintain records of the balancing points on their respective networks that were operating under system operations directions during each settlement period.
- 11.6.3 The records to be maintained must include, for each system operations direction:
- (a) NMI or facility name of the balancing point that was subject to the direction;

- (b) Date and time stamps of the beginning and end of the direction; and
- (c) Brief description of the reason for the direction.

- 11.6.4 The record of system operations directions for a given settlement period must be submitted to the ISO within 5 business days after the last calendar day of the relevant settlement period. If no submission is received, it will be taken there were no NSP system operations directions.
- 11.6.5 The information shall be provided in a format suitable for use in the EBAS engine as agreed between the ISO and registered NSPs.
- 11.6.6 NSP systems operations directions information is to be submitted to the ISO via email to ebas@pilbaraisoco.com.au.

12. Settlement

12.1 Purpose

- 12.1.1 The purpose of this section of the Procedure is to describe in detail the process that the ISO will carry out after every settlement period to execute energy balancing and settlement.
- 12.1.2 This section details the tools by which the ISO will carry out energy balancing calculations and produce payment notes for settlement of payments under the EBAS regime, as prescribed in Subchapter 8 of the Rules.

12.2 Definitions

See Rule [245]

- 12.2.1 For the purposes of this Procedure, the term "EBAS engine" refers to the calculation tool that implements the mathematical functions outlined in the Rules for allocating financial liabilities for FCESS (Rule 227), SRESS (Rule 229) and energy balancing (Rule 233).

12.3 EBAS Engine Overview

See Rule [245]

- 12.3.1 Under Rule 245 the ISO must develop and maintain a computer system for energy balancing and settlement in accordance with Subchapter 8.2 and Subchapter 8.3 of the Rules.
- 12.3.2 The EBAS engine implements and executes the cost recovery mechanisms for FCESS, SRESS and energy imbalances. Specifically, the tool performs the following functions:
- (a) Holds the information required to conduct energy balancing and ESS cost recovery by Rules Participants for each settlement period;
 - (b) Implements energy balancing described in Subchapter 8.2 of the Rules;
 - (c) Implements FCESS cost allocation described in Subchapter 8.3 of the Rules;
 - (d) Implements SRESS cost allocation described in Subchapter 8.3 of the Rules;
 - (e) Prepares payment notes to be issued to all relevant Rules Participants for settlement of ESS costs and energy balancing.
- 12.3.3 The input information for the EBAS engine is collected in accordance with the following sections of this Procedure:
- (a) (Chapter 3) Appointment of Responsible Parties;
 - (b) (Chapter 5) Collection of FCESS Standing Data;
 - (c) (Chapter 7) Collection of SRESS Standing Data;
 - (d) (Chapter 9) Collection of EBAS Standing Data;

- 12.3.4 The output of the EBAS engine is a set of payment notes, each payment note directing one balancing nominee (payer) or its allocated payer to make a payment to another balancing nominee (payee).
- 12.3.5 The EBAS engine rounds dollar figures to the nearest cent and percentage allocations to two decimal places.

12.4 ISO to Issue Payment Notes

See Rule [239]

- 12.4.1 The ISO targets issuing payment notes to all payers and payees within 10 business following the settlement period..

12.5 ISO to Determine Payment Order

See Rule [239]

- 12.5.1 Payment notes must direct payers to pay amounts to payees for settlement of energy imbalances as described in Rule 239(1) of the Rules and in paragraph 12.1.1 of this Procedure.
- 12.5.2 The instantaneous nature of electricity production and consumption makes it exceedingly difficult to determine with reasonable certainty the causer and supplier of each energy imbalance on the system.
- 12.5.3 Rule 239(1) of the Rules and the outworking of the EBAS mechanism requires the ISO to determine for each settlement period a payment order that describes which payer pays which payee.
- 12.5.4 The ISO must determine the payment order from time to time, being guided but not limited by the general locations of balancing nominees on the NWIS and the general directions of energy flow across the system.
- 12.5.5 The payment order must seek to minimise the number of transactions required to complete the settlement of the accounts in each settlement period.
- 12.5.6 Balancing nominees may request to see their own payment order at any time via email request to the ISO.

Explanatory Note – Why a Payment Order is Needed

The EBAS mechanism described in the Rules identifies payers and payees and calculates the payment amounts. A feature of the design is that it cannot identify who should pay who, since the calculations are based entirely on locational metering data of each participant.

The approach calculates for each Nominator the aggregate source and the aggregate destination of energy (adjusted for losses), producing an aggregate energy imbalance and an associated financial liability for negative imbalances or a credit for positive imbalances. The Nominator advises the ISO how it wishes to allocate the imbalance across its portfolio of balancing nominees.

The payment order simply specifies the transaction route to settle the accounts that the EBAS mechanism calculates. It does not represent the causation of the energy imbalances, nor does it affect total payment amounts.

12.6 Content of Payment Notes

See Rule [239]

12.6.1 Payment notes must contain the following information:

- (a) Settlement period start and finish, including time and date;
- (b) Payer identity;
- (c) Payee identity;
- (d) Payee bank account details;
- (e) Amount to be paid by the payer to the payee; and
- (f) Payment due date.

12.6.2 The ISO will give reasonable consideration to additional information requested by balancing nominees to allow for transparency in the calculation of cost allocations subject to Chapter 11.2 of the Rules (Confidential Information) and the administrative cost to the ISO.

12.7 When Payment Notes are Due

12.7.1 Payment notes are due for payment within 15 business days from the date that the ISO issued the payment notes.

12.8 Enforcement of Payment Notes

See Rule [240]

12.8.1 Under Rule 240 of the Rules, payment notes are enforceable.

12.8.2 In accordance with Rule 240(2) of the Rules, a payee may recover an amount payable under Rule 240(1) of the Rules as a debt.

- 12.8.3 In accordance with Rule 240(3) of the Rules a contract may limit Rule 240(2) of the Rules.
- 12.8.4 Under no circumstances shall the ISO be required to assist, or be held liable for, the enforcement of payment notes issued under this Procedure.
- 12.8.5 The ISO may, at its sole discretion, assist the payee and/or payer in any dispute relating to payment notes issued under this Procedure, by providing any information it is obligated to provide under the Rules or this Procedure, or any supporting information it deems appropriate, subject to the confidentiality requirements under Subchapter 11.2 of the Rules.

12.9 Corrections and Adjustments to Settlements

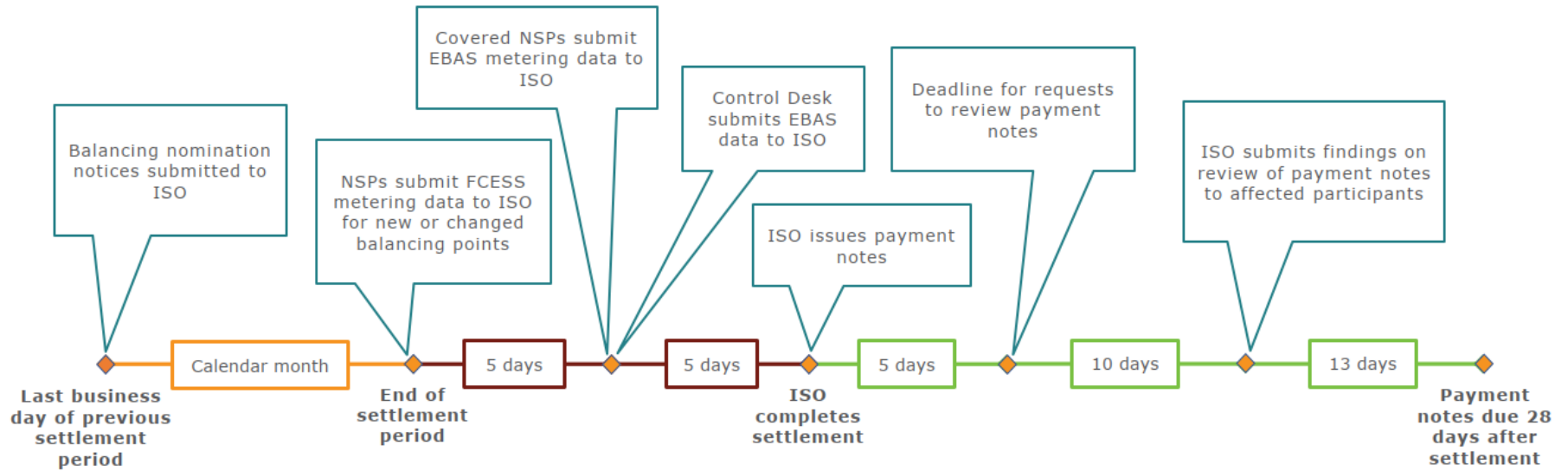
See Rule [242]

- 12.9.1 Any payee or payer identified in payment notes under this Procedure may request the ISO to review a payment note for any real or potential inconsistencies, errors or omissions identified by the participant.
- 12.9.2 Any request made under paragraph 12.9.1 of this Procedure must be –
- (a) submitted to the ISO within 5 business days from the issue date on the payment note;
 - (b) accompanied with a detailed description of the error or omission identified by the participant and, where possible, the correction that must be made in the opinion of the participant; and
 - (c) made in good faith.
- 12.9.3 The ISO must review any payment notes identified in a request made under paragraph 12.9.1 of this Procedure, provided the request was made in compliance with paragraph 12.9.2 of this Procedure, and submit in writing a summary of its findings to all affected payers and payees within 10 business days of receiving the request.
- 12.9.4 If the ISO has identified that a correction to previous payment notes is warranted, and which involves additional payments to and from multiple affected participants (potentially including the ISO itself), then it must include the correction payments as additional line items in the payment notes to the affected participants of the next settlement period.
- 12.9.5 If the ISO finds that the correction can be made by direct payments between two participants, then it may, in consultation and agreement with the two participants, issue additional payment notes to the two participants directing the relevant payment to be made.
- 12.9.6 When any correction in payment notes results in additional short-paid payees, the ISO must make the applicable adjustments to the additional short-paid payees using the pro-rata method outlined in section 8.9 of this Procedure.
- 12.9.7 The terms of any additional payment notes under paragraph 12.9.5 of this Procedure are the same as the terms of normal payment notes as described in this Procedure.

12.10 Settlement Timeline

- 12.10.1 The settlement timeline is summarised in the graphic on the next page. References to days in the graphic refer to business days.

Figure 3: Energy Balancing and Settlement Timeline



Appendix A. Relevant Rules

Table 8 details the Rules under which this Procedure has been developed and where an obligation, process or requirement has been documented in this Procedure.

Table 8 Relevant Rules

Pilbara Networks Rules
8
17
69
79
100
Subchapter 5.1
[135; 138; 139]
169
188
189
Subchapter 8.1
[199 – 217]
Subchapter 8.2
[218-225]
Subchapter 8.3
[226 – 243]
Subchapter 8.4
[244 – 247]
258
261
292
Appendix 5(HTR)
[Clause 2.2.1]
Sub-Appendix 4.14

Appendix B. Calculation of EBAS Administered Price

This appendix provides the methodology undertaken to set the Administered Price (AP) and Administered Penalty Price (APP) for energy balancing in accordance with Subchapter 8.3 of the Rules.

The values of the AP and APP are published separately on the ISO website and do not form part of this Procedure.

Basis of Methodology

Calculation of the AP is based on the industry standard concept of Short Run Marginal Cost of energy (SRMC). The SRMC, in \$/MWh, is the cost of procuring an additional 1 MWh of energy from the most expensive generator in the power system (that is, the generator with the highest cost of generating electricity relative to all other generators in the system).

The SRMC consists of three main components:

1. Variable operating and maintenance costs, in \$/MWh, specifically:
 - a. labour and material costs associated with running the power station i.e. wages of operational personnel, water and other consumable materials not including fuel; and
 - b. maintenance costs, commonly represented by the cost of starting the machine⁷.
2. Fuel costs, including transport and commodity costs, in \$/GJ; and
3. Fuel consumption rate, also known as heat rate, in GJ/MWh.

The variables comprising these components are typically assigned a probabilistic distribution and subjected to a Monte Carlo simulation to account for the uncertainty (risk) in the factors affecting the variables.

The Australian Energy Market Operator (AEMO) each year calculates and publishes the SRMC for the Wholesale Energy Market (WEM) in the South-West of Western Australia, as part of the Procedure to set the price limits of the Short Term Energy Market.

This EBAS Procedure uses the SRMC calculations published in the 2020-2021 version of AEMO's report⁸ as a basis for the calculation of the Administered Price. The ISO deems this as a reasonable basis for the following reasons:

- AEMO's calculations use the Parkeston LM6000 aero-derivative gas turbine with a maximum unit capacity of 37 MW⁹ as the basis for one of two price limits it calculates. The LM6000 is a popular generating machine commonly used in the NWIS.
- The mean and median nameplate capacity of utility-scale generating units in the NWIS are 40.9 MW and 43.2 MW respectively. This makes the 37 MW reference machine used in AEMO's calculations comparable in terms of average heat rate.

⁷ Maintenance cycles of synchronous generating machines are determined predominantly by the number of starts. More frequent starting brings forward maintenance cycles, increasing maintenance costs.

⁸ https://aemo.com.au/-/media/files/stakeholder_consultation/consultations/wa_wem_consultation_documents/2020/2020-energy-price-limits/aemo-energy-price-limits-review-202021-final-report-public.pdf?la=en

⁹ Table 1: Candidate OCGT units for setting upper Energy Price Limits, AEMO Energy Price Limits Review 2020-2021

- The ISO deems the use of AEMO’s calculations a prudent and efficient approach to fulfilling its obligations under Rule 231 while achieving the Pilbara electricity objective, avoiding the need for extended third-party consultation by utilising existing studies conducted in a similar technical and economic context.

The detailed calculation methodology is given in AEMO’s report on the AEMO website. This Interim EBAS Procedure uses the component results in Table 14 of the report to calculate the Administered Price and Administered Penalty Price.

Calculation – Use of Starting Costs

The methodology in AEMO’s report bases the variable operating and maintenance (Variable O&M) costs entirely on the starting costs of the reference machines. This assumes that the generator must first be started to provide 1 MWh of additional energy.

This assumption is not appropriate for determination of the AP in the NWIS, since the AP is used to represent the cost of energy imbalances that generally arise from minor fluctuations in supply and demand. In other words, the AP is most commonly applied to energy imbalances that occur under normal operation of the system when generators are already running.

Rule 231 recognises that persistent energy imbalances of one balancing nominee may cause an unrelated generating unit to be started, and it does so by implementing a penalty price that applies to imbalances outside a tolerance range (the Balancing Tolerance Quantities defined in Rule 233).

Consequently, only the fuel cost and heat rate components are used to calculate the AP for the NWIS. The Variable O&M component is also used to calculate the penalty price uplift of 130%.

Calculation – Administered Price

The formula for determining the AP is given as

$$AP (\$/MWh) = Heat Rate (GJ/MWh) \times Unit Fuel Cost (\$/GJ)$$

Calculation – Administered Penalty Price

The Administered Penalty Price (APP) is an uplift of 130% on the AP.

In other words, the APP is given by:

$$transitional APP = 1.3 \times AP$$

As discussed above, the APP must consider the starting costs of the representative generating unit. Using AEMO’s report, the uplift percentage of 130% has been calculated by considering the Variable O&M cost component of AEMO’s SRMC calculation.

Appendix C. Templates

These forms may be used to submit information required by this Procedure. Accessible versions are available on the website or by request to ebas@pilbaraisoco.com.au

C.1 Template for Balancing Nomination Notices



BALANCING NOMINATION NOTICE

This form is used by a Nominator to make balancing nominations for balancing points in its portfolio.

This form may make nominations for some or all balancing points. Where the form is used to update the nominations for specific balancing points, only the updated nomination needs to be included.

Only light-grey cells are unlocked for editing.

SECTION 1 - Nominator
Enter the details of the Nominator submitting this notice.

Business name:

Name of person submitting this notice:

Email:

Phone:

Date of submission:

SECTION 2 - Balancing Nominees

2.1 Details of Balancing Nominees
Enter the details of each Balancing Nominee for which balancing nominations are being made in this notice. Leave blank if unused.

Balancing Nominee (BN)	Business Name	Bank Account Number	Bank Account BSB	Email address for payment notes
BN 1				
BN 2				
BN 3				
BN 4				
BN 5				
BN 6				
BN 7				
BN 8				
BN 9				
BN 10				

2.2 - Additional network users
If more Balancing Nominees are involved in this notice, attach the relevant details to this notice by labelling the attachment with "2.2". This can also be done by adding sheets to this workbook.

SECTION 3 - Certification of Consent from Balancing Nominees
I, the Nominator listed on this notice, hereby certify that I have received consent from the Balancing Nominees identified in this notice to be nominated for the balancing points, metered quantities, and time frames specified in this notice.

SECTION 4 - Nominations

4.1 Balancing point nominations
Enter the nominations for each balancing point and each Balancing Nominee identified in Section 2. Leave blank if unused. Scroll below for notes.

Item	REQUIRED						IF NOT 100% ALLOCATED		IF NOT STANDING NOMINATION			
	Balancing Point			Balancing Nominee	100% allocated?	Standing nomination for all future settlement periods?	Allocation of Metered Quantities		Nomination Commencement		Nomination Expiration (OPTIONAL) [NOTE 2]	
	Facility / Customer / Controller name	National Meter Identifier (NMI)	Covered NSP				Allocation type [NOTE 1]	Nominated amount [NOTE 1]	Date (dd/mm/yyyy)	Time (hh:mm)	Date (dd/mm/yyyy)	Time (hh:mm)
(enter)	(enter)	(select)	(select)	(select Yes/No)	(select Yes/No)	(select)	(enter)	(enter)	(enter)	(enter)		
4.1.1												
4.1.2												
4.1.3												
4.1.4												
4.1.5												
4.1.6												
4.1.7												
4.1.8												
4.1.9												
4.1.10												
4.1.11												
4.1.12												
4.1.13												
4.1.14												
4.1.15												
4.1.16												
4.1.17												
4.1.18												
4.1.19												
4.1.20												

4.2 - Additional nominations
If more nominations are being made, attach the relevant details to this notice by labelling the attachment with "3.2". This can also be done by adding sheets to this workbook.

NOTE 1
The following allocation methods are available. Each method is applied to each trading interval in the settlement period.
Alternative methods may be proposed to better reflect underlying commercial arrangements. To propose alternative allocation methods, email the proposed method to submissions@pilbaraisoco.com.au.

Type	Description and Application	Instruction
Swing Up to	Supplier is allocated the full metered amount up to the nominated amount.	Must be used with Swing Above allocation method for one (1) other Balancing Nominee.
Swing Above	Supplier is allocated the full metered amount minus the nominated amount.	Must be used with the Swing Up to method for one or more other Balancing Nominees. Nominated amount must match the sum of all nominated amounts for allocations using the Swing Up to method. If the metered amount is less than the sum of all nominated amounts for allocations using the Swing Up to method, the Swing Above supplier is allocated 0.
%	Supplier is allocated a percentage of the meter reading.	If nominated amount is less than 100, this method must be used with the % method for at least one (1) other Balancing Nominee. Total nominated amounts must add to 100.
Fixed	Supplier is allocated a fixed amount.	Must be used with the Swing method for another Balancing Nominee.
Swing	Supplier meets any metered amount not met by the Fixed method.	Must be used with the Fixed method for at least one (1) Balancing Nominee.

NOTE 2
The allocation expiration date is optional. If the ISO does not receive a new notice replacing the expired allocations, then the Nominator will become the default Balancing Nominee. The Balancing Nominee will be replaced by the Nominator, while the allocation method and nominated amounts are left the same.

C.2 Template for Notice for Appointment of Nominator – Single Balancing Point, Multiple Users

NOTICE FOR APPOINTMENT OF NOMINATOR

SINGLE BALANCING POINT, MULTIPLE NETWORK USERS

This form is used to appoint a Nominator for a single balancing point at which multiple network users are connected to a covered network in the North West Interconnected System.

SECTION 1 - Balancing Point Balancing point National Meter Identifier: _____ Covered Network Service Provider: _____	
SECTION 2 - Network Users Enter the details of each Network User connected to the balancing point specified in Section 1.	
2.1 - Network User 1 Business name: _____ Facility name: _____	2.4 - Network User 4 Business name: _____ Facility name: _____
2.2 - Network User 2 Business name: _____ Facility name: _____	2.5 - Network User 5 Business name: _____ Facility name: _____
2.3 - Network User 3 Business name: _____ Facility name: _____	2.6 - Network User 6 Business name: _____ Facility name: _____
2.7 - Additional network users If more network users are involved, attach the relevant details to this notice by labelling the attachment with "1.7".	
SECTION 3 - Nominator 3.1 - Details of Nominator appointed under this notice Business name: _____ Email address for payment notes: _____ Email address for other communication: _____ Postal address: _____	
3.2 - Nominator bank account details for settlement of payment notes: BSB: _____ Account number: _____	
SECTION 4 - Commencement and Expiration of Appointment Commencement date of appointment: _____ Optional - Expiration date of appointment: _____	
NOTE: unless the ISO receives a new appointment notice at least 10 business days before the given expiration date, the ISO will appoint one of the users listed on this notice as the default Nominator after the expiration date. See the EBAS Procedure for further details on appointment of default Nominators.	
SECTION 5 - Certification of Consent from Nominator We, the Network Users listed on this notice, hereby certify that we have received consent from the Nominator identified in this notice to be appointed as the Nominator for the balancing point, network users, and time frames specified in this notice.	
SECTION 6 - Submission This notice is submitted on behalf of the Network Users listed in Section 1.	
Name of person submitting this notice: _____ Email: _____ Phone: _____ Date of submission: _____	

C.3 Template for Notice for Appointment of Nominator – Single User, Multiple Balancing Points

NOTICE FOR APPOINTMENT OF NOMINATOR

SINGLE NETWORK USER, MULTIPLE BALANCING POINTS v1

This form is used by single network users, or by network user groups, to appoint a Nominator for a one or more balancing points at which network user is connected to a covered network in the North West Interconnected System.

Fill in the grey cells for each section. Leave unused spaces blank.

SECTION 1 - Network User	
Business name:	
Name of person submitting this notice:	
Email:	
Phone:	
Date of submission:	
SECTION 2 - Balancing Points	
Enter the details of each balancing point for which the Nominator is being appointed in this notice.	
2.1 - Balancing Point 1	2.5 - Balancing Point 5
Facility name:	Facility name:
NMI:	NMI:
2.2 - Balancing Point 2	2.6 - Balancing Point 6
Facility name:	Facility name:
NMI:	NMI:
2.3 - Balancing Point 3	2.7 - Balancing Point 7
Facility name:	Facility name:
NMI:	NMI:
2.4 - Balancing Point 4	2.8 - Balancing Point 8
Facility name:	Facility name:
NMI:	NMI:
2.9 - Additional network users	
If more balancing points are being allocated, attach the relevant details to this notice by labelling the attachment with "2.7".	
SECTION 3 - Certification of Consent from Nominator	
We, the Network User listed on this notice, hereby certify that we have received consent from the Nominator identified in this notice to be appointed as the Nominator for the balancing point, network user, and time frames specified in this notice.	
SECTION 4 - Appointed Nominator	
4.1 - Details of Nominator appointed under this notice	
Business name:	
Email address for payment notes:	
Email address for other communication:	
Postal address:	
4.2 - Nominator bank account details for settlement of payment notes:	
BSB:	
Account number:	
SECTION 5 - Commencement and Expiration of Appointment	
Commencement date of appointment:	
(Optional) Expiration date of appointment:	
NOTE: unless the ISO receives a new appointment notice at least 10 business days before the given expiration date, the ISO will appoint the Network User listed on this notice as the default Nominator after the expiration date. See the EBAS Procedure for further details on appointment of default Nominators.	