

# Electricity Industry Participation Code 2010

## Part 14 Clearing and settlement

### Contents

- Subpart 1—Sale and purchase of electricity
- 14.1 Contents of this Part
- 14.2 Sale and purchase of electricity
- 14.3 Sale by generators with point of connection to grid
- 14.4 Sale by generators with point of connection to local network or embedded network
- 14.5 On sale by participants
- 14.6 Purchase of offtake through point of connection to grid
- 14.7 Purchase of offtake through local network by embedded generator
- Subpart 2—Hedge settlement agreements
- 14.8 Hedge settlement agreement lodgement
- 14.9 Cancellation of hedge settlement agreement
- Subpart 3—Amounts owing
- 14.10 Amounts owing for electricity
- 14.11 Amounts owing for constrained on compensation
- 14.12 Amounts owing for washup amounts
- 14.13 Amounts owing for auction revenue
- 14.14 Amounts owing for ancillary services
- 14.15 Amounts owing for hedge settlement agreements
- 14.16 Calculation of loss and constraint excess
- 14.17 Amounts owing for FTRs
- Subpart 4—Notification of amounts owing and payable
- Advising participant of amounts owing and payable*
- 14.18 Time for advising participant of amounts owing and payable
- Information about amounts owing and payable*
- 14.19 Clearing manager must advise participant of amounts owing and payable
- 14.20 Amounts owing to clearing manager
- 14.21 Amounts owing by clearing manager
- 14.22 Methodology for determining prudential risk management amount
- 14.23 Net amount owing by or to participant
- 14.24 Calculation of amount payable

*Procedure for advising participants of amounts owing and payable*

- 14.25 Procedure for advising participant of amounts owing and payable
- 14.26 Participant to confirm receipt

*Disputes about amounts*

- 14.27 Participant may dispute amount
- 14.28 Resolution of dispute about amount
- 14.29 Dispute about amount may be referred to Rulings Panel
- 14.30 Correction of information about amount as result of dispute

Subpart 5—Payments

- 14.31 Payment of amounts payable
- 14.32 Prepayment of amounts payable
- 14.33 Deadlines for payment
- 14.34 Methods of payment
- 14.35 Allocation of payments
- 14.36 Payments by clearing manager
- 14.37 Payment of residual loss and constraint excess

Subpart 6—Washups

- 14.38 Clearing manager must conduct washups
- 14.39 Clearing manager must advise participants of washup amounts
- 14.40 Washup amounts
- 14.41 Washups for grid owners
- 14.42 Payment where no longer participant

Subpart 7—Events of default

*Types of default*

- 14.43 Definition of an event of default

*Procedure for event of default*

- 14.44 Anticipated events of default must be referred to Authority
- 14.45 Procedure upon event of default

*Remedies and rights of recovery*

- 14.46 Event of default gives clearing manager remedies
- 14.47 Remedies for settlement default
- 14.48 Remedies for other types of default
- 14.49 Application to take possession of FTR
- 14.50 Cancellation of hedge settlement agreement in event of default
- 14.51 Disconnection of direct purchaser

- 14.52 Clearing manager to exercise rights to recover amounts outstanding
- 14.53 Participants assigned or subrogated to all clearing manager's rights of recovery
- 14.54 Rights of participants to exercise rights

*Publication of information about event of default*

- 14.55 Authority may publicise information about event of default

Subpart 8—Payments in event of settlement default

- 14.56 Application of this subpart
- 14.57 Allocation of amounts received to settlement of general amounts and FTRs
- 14.58 Calculation of revised amount owing for general amounts
- 14.59 Calculation of revised amount owing for FTR amounts
- 14.60 Excess amount available for settlement of general amounts or FTRs
- 14.61 Calculation of interim and revised amount payable
- 14.62 Payment of revised amount payable
- 14.63 Payment by participant with negative interim amount payable
- 14.64 Application of payment by participant with negative interim amount payable
- 14.65 Further funds paid according to priority
- 14.66 Interest payable to participants
- 14.67 Participant to remain in default

Subpart 9—Administrative obligations of clearing manager

*Clearing manager operating account*

- 14.68 Clearing manager must establish operating account
- 14.69 Payment by clearing manager

*Reporting obligations of the clearing manager*

- 14.70 Monthly divergence reports to be prepared by clearing manager
- 14.71 Market administrator must publish clearing manager reports
- 14.72 Right to information concerning clearing manager's action
- 14.73 Clearing manager to publish block dispatch settlement differences
- 14.74 Clearing manager to publish block dispatch settlement differences later if information system is unavailable
- 14.75 Clause 14.[73] applies to block dispatch groups
- 14.76 No washup calculation under clause 14.[73] if revised

reconciliation information is received

*Notices*

14.77 Notices

**Schedule 14.1**

**Formula for scaling amount owing in respect of FTRs**

**Schedule 14.2**

**Consultation and approval requirements for methodologies**

**Schedule 14.3**

**Calculation of amount of loss and constraint excess to be applied to the settlement of FTRs**

**Schedule 14.4**

**Form of hedge settlement agreement**

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**14.1 Contents of this Part**

This Part provides for—

- (a) the sale and purchase of **electricity** to and from the **clearing manager**; and
- (b) the calculation and invoicing of amounts owing to and by the **clearing manager** for **electricity, ancillary services, FTRs**, and other payments that may be received or paid by the **clearing manager**; and
- (c) the settlement of amounts payable under this Part; and
- (d) processes and remedies for an **event of default**; and
- (e) obligations of the **clearing manager** in relation to clearing and settlement, including reporting obligations and requirements for the **operating account** that must be established and held by the **clearing manager**.

Subpart 1—Sale and purchase of electricity

**14.2 Sale and purchase of electricity**

- (1) The **clearing manager** must—
  - (a) purchase **electricity** sold to the **clearing manager** in accordance with clauses 14.[3] to 14.[5]; and
  - (b) sell **electricity** purchased from the **clearing manager** in accordance with clause 14.[6].
- (2) Each **generator** must sell **electricity** in accordance with clauses 14.[3] and 14.[4].
- (3) Each **purchaser** must purchase **electricity** in accordance with clause 14.[6].
- (4) Each **participant** who sells or purchases **electricity** through

a **local network** or **embedded network** must sell and purchase the **electricity** in accordance with clauses 14.[4], 14.[5], and 14.[7].

- (5) The amount owing for **electricity** purchased under this Part must be determined in accordance with clause 14.[8].

#### **14.3 Sale by generators with point of connection to grid**

- (1) This clause applies to each **generator** who has a **generating station** or **generating unit** with a **point of connection** to the **grid**.
- (2) Each **generator** to whom this clause applies must sell to the **clearing manager** all **electricity** generated by the **generator's generating station** or **generating unit** injected through a **point of connection** to the **grid**.

#### **14.4 Sale by generators with point of connection to local network or embedded network**

- (1) This clause—
  - (a) applies to each **generator** who has an **embedded generating station**; but
  - (b) does not apply to a **generator** in respect of an **embedded generating station** in relation to a **point of connection** for which a notification under clause 15.14 is in force.
- (2) Each **generator** to whom this clause applies must sell all **electricity** generated by the **embedded generating station** and injected through a **point of connection** with the **local network** or **embedded network** to—
  - (a) the **clearing manager**; or
  - (b) a **participant** trading on the **local network** or **embedded network**.
- (3) Despite anything to the contrary in this Code, the relevant **point of connection** to the **grid** is, for the purposes of reconciliation under this Code, deemed to be a **grid injection point**.

#### **14.5 On sale by participants**

If an **embedded generator** sells **electricity** to a **participant** under clause 14.[4], the **participant** must at the same time on-sell that **electricity** to the **clearing manager**.

#### **14.6 Purchase of offtake through point of connection to grid**

Each **purchaser** must purchase from the **clearing manager** the **electricity** allocated to the **purchaser** under Part 15 in respect of a **point of connection** to the **grid**.

**14.7 Purchase of offtake through local network by embedded generator**

- (1) A **generator** who purchases **electricity** at the same **point of connection** with a **local network** at which it sells **electricity** in accordance with clause 14.[4] must purchase the **electricity** from the same **participant** to whom it sold its **electricity** under clause 14.[4].
- (2) The **participant** from whom electricity is purchased under subclause (1) must sell the **electricity** as set out in this Code.

Subpart 2—Hedge settlement agreements

**14.8 Hedge settlement agreement lodgement**

- (1) If a **hedge settlement agreement** that is signed by 2 **participants** is submitted to the **clearing manager**, subject to subclause (2), it is validly lodged when it is signed by the **clearing manager**.
- (2) A **hedge settlement agreement** must be in the form set out in Schedule 14.[4], or in an alternative form approved by the **Authority**.
- (3) When a **participant** lodges a **hedge settlement agreement** with the **clearing manager**, the **participant** must also provide any other information relating to the **hedge settlement agreement** that the **clearing manager** requires.
- (4) A **participant** must provide information under subclause (3) in a form prescribed by the **clearing manager** and notified to **participants**.

**14.9 Cancellation of hedge settlement agreement**

- (1) A party to a **hedge settlement agreement** may only cancel it in the following situations:
  - (a) if neither of the parties to the **hedge settlement agreement** has committed an **event of default** that has not been remedied, in accordance with subclause (2):
  - (b) if a party to the **hedge settlement agreement** has committed an **event of default** that has not been remedied, in accordance with clause 14.[52].
- (2) A party to a **hedge settlement agreement** may cancel the **hedge settlement agreement** under subclause (1)(a) if—
  - (a) the parties give the **clearing manager** at least 90 days' notice of the cancellation and both parties to the **hedge settlement agreement** agree in writing to the cancellation; or
  - (b) the parties give the **clearing manager** less than 90 days' notice of the cancellation and the **clearing manager** agrees to the cancellation in accordance with subclause (3).

- (3) The **clearing manager** may agree to the cancellation of a **hedge settlement agreement** under subclause (2)(b) only if the clearing manager is satisfied that—
- (a) immediately following the cancellation of the **hedge settlement agreement**, each party will—
    - (i) continue to meet the requirements in [clause 14A.4(1)]; or
    - (ii) meet the requirements in [clause 14A.3]; and
  - (b) the cancellation of the **hedge settlement agreement** is not otherwise contrary to the interests of **participants** to whom an amount is payable under this Part.

### Subpart 3—Amounts owing

#### 14.10 Amounts owing for electricity

- (1) The **clearing manager** must determine the amount owing for **electricity** purchased under clauses 14.[2] to 14.[7] using the following formula:

$$Q * P_f$$

where

Q is the quantity of **electricity** allocated to the **participant** for each **trading period** for each **point of connection** to the **grid** determined in accordance with **reconciliation information**

P<sub>f</sub> is the **final price** determined by the **pricing manager** for each relevant **point of connection** to the **grid** for each **trading period**

- (2) The **clearing manager** must determine the amount owing for **electricity** sold under clauses 14.[2] to 14.[7] using the following formula:

$$Q * P_f$$

where

Q is the quantity of **electricity** allocated to the **participant** for each **trading period** for each **point of connection** to the **grid** determined in accordance with **reconciliation information**

P<sub>f</sub> is the **final price** determined by the **pricing manager** for each relevant **point of connection** to the **grid** for each **trading period**

- (3) The quantity of **electricity** bought by a **purchaser** or sold by a **generator** under [subpart 1] must be determined in accordance with clauses 15.21 to 15.26.
- (4) The **final price** of **electricity** bought by a **purchaser** or sold by a **generator** under [subpart 1] must be determined in accordance with clauses 13.135 and 13.171 to 13.185.

**14.11 Amounts owing for constrained on compensation**

The **clearing manager** must determine amounts owing in respect of **constrained on compensation** in accordance with clauses 13.202 to 13.212.

**14.12 Amounts owing for washup amounts**

The **clearing manager** must determine amounts owing in respect of **washup** amounts in accordance with [subpart 6].

**14.13 Amounts owing for auction revenue**

The **clearing manager** must determine amounts owing in respect of **auction revenue** in accordance with clauses 13.111 and 13.112.

**14.14 Amounts owing for ancillary services**

The **clearing manager** must determine amounts owing in respect of **ancillary services** in accordance with clauses [8.6, 8.31, 8.55, and 8.68].

**14.15 Amounts owing for hedge settlement agreements**

The **clearing manager** must calculate amounts owing under a **hedge settlement agreement** in respect of the current **billing period** in accordance with the terms of the **hedge settlement agreement**.

**14.16 Calculation of loss and constraint excess**

- (1) A **loss and constraint excess** accrues for a **billing period** when the total of the amounts owing by the **clearing manager** to **generators** for that **billing period** for the **electricity** sold and purchased in accordance with clause 14.[3] is less than the total amount owing to the **clearing manager** for that **billing period** for the **electricity** sold and purchased in accordance with clause 14.[6].
- (2) The **FTR manager** must—
  - (a) determine the amount of **loss and constraint excess** that must be applied to the settlement of **FTRs** in accordance with Schedule 14.[3]; and
  - (b) advise the **clearing manager** of that amount no later than 1600 hours on the 7<sup>th</sup> **business day** of the month following the relevant **billing period**.
- (3) Each **grid owner** and the **pricing manager** must provide



information to the **FTR manager** in accordance with Schedule 14.[3].

- (4) Subject to [subpart 8], the **clearing manager** must apply the amount advised under subclause (2) to the settlement of **FTRs**.
- (5) Subject to [subpart 8], if the amount that the **FTR manager** advises the **clearing manager** under subclause (2) exceeds the amount of the **loss and constraint excess** for the **billing period**, the **clearing manager** must apply all of the **loss and constraint excess** to the settlement of **FTRs**.
- (6) The **Authority** must advise the **clearing manager** of the proportion of the **loss and constraint excess** and **residual loss and constraint excess** owing to each **grid owner**.
- (7) Unless the **Authority** has directed otherwise under this clause, the amount owing to each **grid owner** in the proportions advised under subclause (2) is—
  - (a) the amount of any **loss and constraint excess** less the amount to be applied to the settlement of **FTRs** under [subclause (4) or (5)]; and
  - (b) the amount of any **residual loss and constraint excess**.

#### **14.17 Amounts owing for FTRs**

- (1) The **clearing manager** must calculate the total amount owing by the **clearing manager** and to the **clearing manager** in respect of **FTRs** for the current **billing period**.
- (2) The **clearing manager** must **publish** the amount owing by a person or to a person per **MW** in respect of **FTRs** in respect of the current **billing period**.
- (3) Subclause (4) applies if, in respect of a **billing period**, the total amount to be advised as owing by the **clearing manager** under clause [14.21(2)(g) and (h)] exceeds the sum of the following amounts:
  - (a) the total amount to be advised as owing to the **clearing manager** under clause [14.20(2)(g)];
  - (b) any amount available under clause 13.249(6) for the settlement of **FTRs** in the **billing period**;
  - (c) the amount of the **loss and constraint excess** to be applied to the settlement of **FTRs** under clause [14.16(4) or (5)].
- (4) The **clearing manager** must, in calculating the amount owing in respect of each **FTR** under clause [14.20(2)(g) or clause 14.21(2)(g)], use an amended **FTR hedge value** scaled according to the formula specified in Schedule 14.1.

## Subpart 4—Notification of amounts owing and payable

### *Advising participant of amounts owing and payable*

#### **14.18 Time for advising participant of amounts owing and payable**

- (1) Each month the **clearing manager** must advise each **participant** of any amount calculated as owing and any amount payable to or by the **clearing manager** under this Code.
- (2) The **clearing manager** must advise each **participant** of any amount owing and any amount payable no later than—
  - (a) the 9<sup>th</sup> **business day** of the month; or
  - (b) if the **clearing manager** has not received **reconciliation information** in respect of the prior **billing period** from the **reconciliation manager** in accordance with clause 28(c) of Schedule 15.4, 2 **business days** after the **clearing manager** receives the **reconciliation information**.
- (3) A **participant** must not issue a **GST** invoice for supplies of **electricity** or **ancillary services** or **ancillary service administrative costs** to the **clearing manager**.

### *Information about amounts owing and payable*

#### **14.19 Clearing manager must advise participant of amounts owing and payable**

The **clearing manager** must advise each **participant** who owes any amount to the **clearing manager** or is owed any amount by the **clearing manager** of the following:

- (a) amounts owing to the **clearing manager** by the **participant** in accordance with clause 14.[20];
- (b) amounts owing by the **clearing manager** to the **participant** in accordance with clause 14.[21];
- (c) the amount of the prudential risk management amount calculated in accordance with the methodology **published** by the **clearing manager** under clause 14.[22];
- (d) the net amount owing by or to the **participant** in accordance with clause 14.[23];
- (e) the amount payable by the **participant** to the **clearing manager** or by the **clearing manager** to the **participant** under subpart 5 in accordance with clause 14.[24].

#### **14.20 Amounts owing to clearing manager**

- (1) When advising a **participant** of amounts owing under clause 14.[19(a)], the **clearing manager** must specify any

amount owing by the **participant** to the **clearing manager** for—

- (a) the relevant **billing period**, to the extent that the **clearing manager** has received the necessary information; and
  - (b) any prior **billing period** if the **clearing manager** receives the necessary information for that **billing period** after the date that amounts owing for that **billing period** were required to be advised by the **clearing manager**.
- (2) The **clearing manager** must specify any amount owing by the **participant** to the **clearing manager** for the following:
- (a) **electricity** purchased under clauses 14.[2] to 14.[7] for every **trading period** in the **billing period**:
  - (b) **constrained on compensation** under clause 13.212:
  - (c) a **washup** amount and any interest on that amount under [subpart 6]:
  - (d) **auction revenue** under clause 13.110:
  - (e) **ancillary services** under clauses 8.6, 8.31(1)(a), and 8.68:
  - (f) payment of an amount under any **hedge settlement agreement**:
  - (g) for each **FTR** applying to the **billing period** in respect of which the **participant** is registered as the holder of the **FTR**, the net amount of the **FTR acquisition cost** for the **FTR** minus the **FTR hedge value** for the **FTR**, if that net amount is positive:
  - (h) any amount owing in respect of the assignment of any **FTR** under clause 13.249(4):
  - (i) **GST**.
- (3) The **clearing manager** must specify the sum of the amounts referred to in subclause (2).

#### 14.21 Amounts owing by clearing manager

- (1) When advising a **participant** of amounts owing under clause 14.[19(b)], the **clearing manager** must specify any amount owing by the **clearing manager** to the **participant** for—
  - (a) the relevant **billing period**, to the extent that the **clearing manager** has received the necessary information; and
  - (b) any prior **billing period** if the **clearing manager** receives the necessary information for that **billing period** after the date that amounts owing for that **billing period** were required to be advised by the **clearing manager**.
- (2) The **clearing manager** must specify any amount owing by the **clearing manager** to the **participant** for the following:

- (a) **electricity** sold under clauses 14.[2] to 14.[7] for every **trading period** in the **billing period**:
  - (b) **constrained on compensation** under clause 13.212:
  - (c) a **washup** amount and any interest on that amount under [subpart 6]:
  - (d) **auction revenue** under clause 13.112:
  - (e) **ancillary services** under clause 8.55(a):
  - (f) payment of an amount under any **hedge settlement agreement**:
  - (g) for each **FTR** applying to the **billing period** in respect of which the **participant** is registered as the holder of the **FTR**, the net amount of the **FTR hedge value** for the **FTR** minus the **FTR acquisition cost** for the **FTR**, if that net amount is positive:
  - (h) any amount owing in respect of the assignment of any **FTR** under clause 13.249(7):
  - (i) **GST**.
  - (j) **loss and constraint excess** and **residual loss and constraint excess** under clause 14.[16(7)].
- (3) The **clearing manager** must specify the sum of the amounts referred to in subclause (2).

#### **14.22 Methodology for determining prudential risk management amount**

- (1) The **clearing manager** must formulate and **publish** a methodology for determining the prudential risk management amount to be advised to a **participant** in accordance with clause 14.[19].
- (2) The methodology formulated by the **clearing manager** under subclause (1) must comply with the principle that the prudential risk management amount is set to ensure that the **clearing manager** has sufficient funds to pay each non-defaulting **participant** the amount payable to that **participant** under [subpart 5] if both of the following occur:
  - (a) a **settlement default** that results in the largest percentage reduction in payments that would be made in the absence of the prudential risk management amount in respect of amounts other than **FTRs**; and
  - (b) a **settlement default** that results in the largest percentage reduction in payments that would be made in the absence of the prudential risk management amount in respect of **FTRs** (other than in respect of the **residual loss and constraint excess**).
- (3) For the purposes of subclause (2), multiple **settlement defaults** by parties related in any way specified in the methodology must be treated as 1 **settlement default**.
- (4) The consultation and approval requirements set out in Schedule 14.[2] apply to the methodology.

**14.23 Net amount owing by or to participant**

The net amount owing by or to a **participant** for a **billing period** is determined in accordance with the following formula:

$$AO_T = AO_P - AO_{CM}$$

where

$AO_T$  is the net amount owing

$AO_P$  is the sum of the amounts owing by the **participant** to the **clearing manager**, calculated under clause 14.[20]

$AO_{CM}$  is the sum of the amounts owing by the **clearing manager** to the **participant**, calculated under clause 14.[21]

**14.24 Calculation of amount payable**

- (1) The amount payable by a **participant** to the **clearing manager** is determined in accordance with the following formula:

$$AO_T + PRMA$$

where

$AO_T$  is the net amount owing by or to the **participant**, calculated under clause 14.[23]

PRMA is the prudential risk management amount, calculated in accordance with the methodology **published** by the **clearing manager** under clause 14.[22]

- (2) If the amount calculated under subclause (1) is positive, that amount is payable by the **participant** to the **clearing manager** in accordance with clauses 14.[33] and 14.[34].
- (3) If the amount calculated under subclause (1) is negative or 0, no amount is payable by the **participant** to the **clearing manager**.
- (4) Subject to [subpart 8], the amount payable by the **clearing manager** to a **participant** in accordance with clause 14.[36] is determined in accordance with the following formula:

$$AP_{CM} = AO_{CM} - AO_P + AP_P$$

where

$AP_{CM}$  is the amount payable by the **clearing manager** to the **participant**

$AO_{CM}$  is the sum of the amounts owing by the **clearing manager** to the **participant**, calculated under clause 14.[21]

$AO_P$  is the sum of the amounts owing by the **participant** to the **clearing manager**, calculated under clause 14.[20]

$AP_P$  is the amount payable under subclause (2) (if any)

*Procedure for advising participants of amounts owing and payable*

#### **14.25 Procedure for advising participant of amounts owing and payable**

- (1) When advising a **participant** of amounts owing and payable under this subpart, the **clearing manager** must—
  - (a) post the information to each relevant **participant** through the electronic facility contained in the **information system** for this purpose; and
  - (b) if the **participant** requests, post or hand deliver the information to the **participant**.
- (2) Proof of dispatch by the electronic facility contained in the **information system** for this purpose is deemed to be proof of the advice under subclause (1), despite the procedures set out in this clause and in clause 14.[26].

#### **14.26 Participant to confirm receipt**

- (1) Each **participant** who receives information from the **clearing manager** under this subpart must immediately confirm, through the electronic facility contained in the **information system** for the purpose, receipt of the information sent by the **clearing manager** under clause 14.[25(1)(a) or (b)].
- (2) If the **clearing manager** has not received a confirmation that the information has been received by a **participant** by 1200 hours on the **business day** after the day of dispatch of the information, the **clearing manager** must telephone the **participant** to check if the information has been received.
- (3) If the information has not been received by the **participant**, the **clearing manager** must resend the information.
- (4) Delayed confirmation by a **participant** that the information has been received does not extend the payment period set out in clause 14.[33].

*Disputes about amounts*

**14.27 Participant may dispute amount**

- (1) A **participant** may dispute information about an amount that is provided by the **clearing manager** under this subpart by notice in writing to the **clearing manager**.
- (2) A **participant** may not—
  - (a) dispute the information under subclause (1) after the expiry of 2 years after the date that the information is provided; or
  - (b) commence a dispute under subclause (1) if the **participant** has commenced a dispute in relation to the **volume information** on which the information is based under clause 15.29.
- (3) The **clearing manager** must advise all **participants** materially affected by the dispute and the **Authority** of the dispute no later than 1 **business day** after the dispute is notified to the **clearing manager** under subclause (1).
- (4) On receiving a notification of a dispute that relates to **volume information** under subclause (3), the **Authority** may direct that no further action be taken in respect of the dispute.
- (5) If the **Authority** gives a direction under subclause (4), clauses [14.28 to 14.30] cease to apply to the dispute.
- (6) A direction under subclause (4) does not affect the validity of information provided under clause 14.[28(2)] or clause 14.[39] before the direction was given.

**14.28 Resolution of dispute about amount**

- (1) The disputing **participant** and the **clearing manager** must attempt to resolve the dispute.
- (2) The **clearing manager** must revise the disputed amount and any other affected amount if—
  - (a) the dispute is resolved by the parties advised of the dispute agreeing that information used to determine the amount is incorrect; and
  - (b) the dispute is resolved 2 **business days** or more before the disputed amount is due to be paid or received by the disputing **participant**; and
  - (c) the **clearing manager** has received all information necessary to revise the amount and any other affected amount (including revised **volume information** if necessary).
- (3) If the **participant** and the **clearing manager** do not resolve the dispute 2 **business days** or more before the disputed amount is due to be paid or received, the disputing **participant** must pay or receive the amount in accordance with clauses 14.[33] and 14.[36].

**14.29 Dispute about amount may be referred to Rulings Panel**

- (1) If the dispute is not resolved within 15 **business days** after the date on which the dispute was notified to the **clearing manager** under clause 14.[27(1)], the disputing **participant** or the **clearing manager** may refer the dispute to the **Rulings Panel** for resolution.
- (2) The **Rulings Panel** may make such determination as it thinks fit.
- (3) The **Rulings Panel** must give notice of its determination to the parties to the dispute and affected **participants**.

**14.30 Correction of information about amount as result of dispute**

- (1) If a dispute (other than a dispute resolved 2 **business days** or more before the disputed amount is due to be paid or received) is resolved by the parties to the dispute agreeing, or the **Rulings Panel** determining, that information used to determine the amount is incorrect, the **clearing manager** and the **reconciliation manager** must correct the information as follows:
  - (a) if the information to be corrected is **volume information**, the information must be corrected in accordance with subclause (2):
  - (b) if the information to be corrected is not **volume information**—
    - (i) the **clearing manager** must either correct the information, or advise the appropriate **market operation service provider** or the **Authority** so that the information may be corrected; and
    - (ii) if a **market operation service provider** or the **Authority** corrects the information, the **market operation service provider** or the **Authority**, as the case may be, must provide the corrected information to the **clearing manager**.
- (2) The **reconciliation manager** must correct **volume information** as follows:
  - (a) if a revised **seasonal adjustment shape** must be issued in order for the **volume information** to be corrected—
    - (i) the **reconciliation manager** must provide each **reconciliation participant** whose **submission information** is required to be corrected with a revised **seasonal adjustment shape**; and
    - (ii) each **reconciliation participant** must provide corrected **submission information** to the **reconciliation manager** no later than 4 **business days** after being provided with the



revised **seasonal adjustment shape**:

- (b) if a revised **seasonal adjustment shape** is not required to be issued in order for the **volume information** to be corrected, each **reconciliation participant** whose **submission information** is required to be corrected must provide corrected **submission information** to the **reconciliation manager** no later than 4 **business days** after being notified of the resolution of the dispute:
  - (c) the **reconciliation manager** must provide the corrected **volume information** to the **clearing manager**.
- (3) If corrected information is provided to the **clearing manager** under [subclauses (1) or (2)], the **clearing manager** must conduct **washups** in accordance with [subpart 6].

## Subpart 5—Payments

### 14.31 Payment of amounts payable

- (1) If the calculation under clause 14.[24] provides for a **participant** to pay an amount to the **clearing manager**, the **participant** must pay that amount to the **clearing manager** in accordance with clauses 14.[33] and 14.[34].
- (2) If the calculation under clause 14.[24] provides for the **clearing manager** to pay an amount to a **participant**, the **clearing manager** must pay that amount to the **participant** in accordance with clause 14.[36].

### 14.32 Prepayment of amounts payable

- (1) A **participant** may elect to pay an amount to the **clearing manager** before the **participant** incurs the amount owing to the **clearing manager**.
- (2) If a **participant** prepays an amount to the **clearing manager** under subclause (1),—
  - (a) the **participant** must advise the **clearing manager** of 1 or more **billing periods** to which the payment relates; and
  - (b) the **clearing manager** must deduct the amount paid by the **participant** from the amount advised to the **participant** as owing to the **clearing manager** under subpart 4.
- (3) Any amount paid to the **clearing manager** under this clause must not be returned to the **participant**, except as provided in subclause (4).
- (4) If an amount prepaid by a **participant** is more than the actual amount payable by the **participant** for the relevant **billing periods**, the **clearing manager** must—

- (a) apply the amount to the amount payable in the next **billing period**; or
  - (b) if the **participant** requests the **clearing manager** to pay the residual amount to the **participant** and satisfies the **clearing manager** that it will continue to comply with the prudential requirements in Part 14A, pay the residual amount to the **participant** in accordance with clause 14.[36].
- (5) The **clearing manager** must credit to a **participant** who has prepaid an amount under this clause all interest received by the **clearing manager** on the prepaid amount, less any applicable deduction for tax purposes.

#### 14.33 Deadlines for payments

- (1) Subject to subclauses (3) and (4), each **participant** must pay the **clearing manager** the amount advised to the **participant** under [subpart 4] as payable by the **participant** to the **clearing manager** by—
  - (a) 1300 hours on the 20th calendar day of the month following the **billing period** in respect of which the amount was advised; or
  - (b) if that day is not a **business day**, 1300 hours on the next **business day**.
- (2) If the **clearing manager** does not advise a **participant** of an amount payable by the time specified in clause 14.[18(2)], payment may, if the **participant** so elects, be delayed for a period corresponding to the period of delay in advising the **participant** of the amount payable.
- (3) In the case of advice of an amount payable being delayed, the **clearing manager** must advise the **participant** of the new payment date.
- (4) If the **clearing manager** revises an amount advised to the **participant** 2 **business days** or more before the amount is due to be paid, the **participant** must pay the amount by the date for payment under subclause (1).

#### 14.34 Methods of payment

- (1) Subject to subclause (2), each **participant** must pay the **clearing manager** in **cleared funds** into the **operating account**.
- (2) A **participant** may instruct the **clearing manager** to pay all or part of an amount payable by the **participant** under clause 14.[33] from a **cash deposit** held by the **clearing manager** in respect of the **participant** in accordance with clause 14A.[13].

#### **14.35 Allocation of payments**

- (1) Subject to [subpart 8], the allocation by the **clearing manager** of a payment received from a **participant** under this Part must be dealt with in accordance with this clause.
- (2) The **clearing manager** must hold each amount paid into the **operating account** by or on behalf of a **participant** in payment or part payment of an amount payable under [this subpart] upon trust for those persons who are entitled to receive payment from the **clearing manager**.
- (3) A **participant** may not direct the **clearing manager** to apply any funds paid under this Part other than in accordance with this clause.
- (4) The **clearing manager** must separately account for any amount received under clause 14.[33] in respect of an amount referred to in clause 14.[20(2)(g) and (h)].

#### **14.36 Payments by clearing manager**

- (1) Subject to [subpart 8], the **clearing manager** must pay each **participant** the amount advised to the **participant** under [subpart 4] as payable by the **clearing manager** to the **participant** by 1600 hours on the final **business day** for payment under clause 14.[33].
- (2) The **clearing manager** must pay each **participant** in **cleared funds**.
- (3) A **participant** may instruct the **clearing manager** to treat all or part of an amount payable to the **participant** under this clause as a **cash deposit** under Part 14A.

#### **14.37 Payment of residual loss and constraint excess**

Each **grid owner** must treat **residual loss and constraint excess** paid to it under this Part as **loss and constraint excess**.

### Subpart 6—Washups

#### **14.38 Clearing manager must conduct washups**

If the **clearing manager** receives corrected information in accordance with clauses 8.68, 8.69, 14.[30], 15.26(4), 15.29, or clause 28 of Schedule 15.4, it must conduct **washups** and advise **participants** of amounts owing in accordance with this subpart.

#### **14.39 Clearing manager must advise participants of washup amounts**

The **clearing manager** must advise relevant **participants** of amounts owing in respect of **washup** amounts in accordance with [subpart 4] and clauses 14.[40] to 14.[42], except that the **clearing manager** must, if requested by a **participant**

affected by the **washup**, issue corrected information covered by the **washup** to the **participant**.

#### 14.40 Washup amounts

- (1) All **washup** amounts and interest accrued in accordance with subclause (2) must be expressed as an amount owing by the **participant** or an amount owing by the **clearing manager** to the **participant** in respect of the current **billing period**.
- (2) Daily interest (less any deduction for resident withholding tax) on the **washup** amount, calculated at the **bank bill bid rate**, accrues from the date that payment of the amount based on the incorrect information to which the **washup** relates was due as set out in clauses 14.[33] and 14.[36] (as applicable) until the date of advice of the revised **washup** amount in accordance with clause 14.[18], and must be compounded at the end of each calendar month.

#### 14.41 Washups for grid owners

If a **washup** has occurred due to incorrect **consumption information** being used to determine amounts owing in accordance with [subpart 4] that affects **grid owners**, the **clearing manager** must credit or debit a **washup** amount to or from each **grid owner** as follows:

- (a) if a **grid owner's washup** amount is a credit, the **clearing manager** must add the credit to any amount owing to that **grid owner** in accordance with clause 14.[16(7)] in respect of the current **billing period**:
- (b) if a **grid owner's washup** amount is a debit, the **clearing manager** must subtract the debit from any amount owing to the **grid owner** in accordance with clause 14.[16(7)] in respect of the current **billing period**:
- (c) if the **washup** amount is greater than the amount owing, the **clearing manager** must advise the **grid owner** of any amount owing for the **washup** amount concurrently with advising **participants** of any amount owing under clause 14.[16], and payment of the **washup** amount must be made by the **grid owner** by the time for payment set out in clause 14.[33]:
- (d) daily interest (less any deduction for resident withholding tax) on the **washup** amount, calculated at the **bank bill bid rate**, must be debited or credited (as the case may be) to the amount owing to the **grid owner** in accordance with clause 14.[16(7)], and accrues from the date that payment based on the incorrect information to which the **washup** relates was made until the date of advice in accordance with

clause 14.[18] resulting in the **grid owner's washup** amount, and must be compounded at the end of each calendar month.

#### **14.42 Payment where no longer participant**

- (1) Despite clauses 14.[40] and 14.[41], if a **washup** amount affects a person who is no longer a **participant**, the **clearing manager** must advise the person of the **washup** amount owing and payable in accordance with clauses 14.[33] and 14.[34].
- (2) The person remains liable for outstanding obligations in accordance with section 30(3) of the **Act**.
- (3) Daily interest (less any deduction for resident withholding tax) on the **washup** amount, calculated at the **bank bill bid rate**, must be added to the **washup** amount and accrues from the date that payment of the amount based on the incorrect information to which the **washup** relates was due as set out in 14.[33] and 14.[36] (as applicable) until the date of advice of the revised **washup** amount in accordance with clause 14.[18], and must be compounded at the end of each calendar month.

### Subpart 7—Events of default

#### *Types of default*

#### **14.43 Definition of an event of default**

Each of the following events constitutes an **event of default**:

- (a) failure of a **participant** to provide security for the minimum amount required in accordance with clause [14A.6]:
- (b) a **settlement default** [*To be defined in Part 1 as failure of a participant to pay the full amount payable in accordance with Part 14*]:
- (c) any action taken for, or with a view to, the declaration of a **participant** who is required to comply with Part 14A as a corporation at risk under the Corporations (Investigation and Management) Act 1989:
- (d) appointment of a statutory manager in respect of **participant** who is required to comply with Part 14A under the Corporations (Investigation and Management) Act 1989 (or a recommendation or submission is made by a person to the Financial Markets Authority supporting such an appointment):
- (e) appointment of a person under section 19 of the Corporations (Investigation and Management) Act 1989 to investigate the affairs or run the **business** of a **participant** who is required to comply with Part 14A:

- (f) if a **participant** who is required to comply with Part 14A is (or admits that it is or is deemed under any applicable law to be) unable to pay its debts as they fall due or is otherwise insolvent, or stops or suspends, or threatens to stop or suspend, or a moratorium is declared on, payment of its indebtedness, or makes or commences negotiations or takes any other steps with a view to making any assignment or composition with, or for the benefit of, its creditors, or any other arrangement for the rescheduling of its indebtedness or otherwise with a view to avoiding, or in expectation of its inability to pay, its debts:
- (g) a holder of a security interest or other encumbrancer taking possession of, or a receiver, manager, receiver and manager, liquidator, provisional liquidator, trustee, statutory or official manager or inspector, administrator or similar officer being appointed in respect of the whole or any part of the assets of a **participant** who is required to comply with Part 14A or if the **participant** requests that such an appointment be made.

**[Note – the proposed retailer default Code amendments include a new event of default relating to termination of a retailer's use of system agreement]**

*Procedure for event of default*

**14.44 Anticipated events of default must be referred to Authority**

If the **clearing manager** believes that an **event of default** is likely to occur, the **clearing manager** must refer the matter to the **Authority** for its urgent consideration and instruction of an appropriate course of action to minimise the risk of default occurring.

**14.45 Procedure upon event of default**

- (1) If a **participant** commits an **event of default**, the **participant** must immediately advise the **clearing manager** and the **Authority** of the **event of default**.
- (2) If the **clearing manager** becomes aware that a **participant** has committed an **event of default** and the **participant** has not advised the **clearing manager** of the **event of default**, the **clearing manager** must advise the person in default that it has committed an **event of default**.
- (3) The **clearing manager** must refer an issue concerning an **event of default** to the **Authority**.

*Remedies and rights of recovery*

**14.46 Event of default gives clearing manager remedies**

- (1) If an **event of default** has occurred, the **clearing manager** has the power to exercise, as appropriate, all or any of the following remedies without prejudice to any other remedy it may have at law:
  - (a) apply the balance of the **cash deposit** of the defaulting **participant** in accordance with clauses 14A.[13(a)] and 14A.[13(b)]:
  - (b) make a demand under a guarantee, letter of credit, or bond provided under Part 14A in respect of the defaulting **participant**:
  - (c) if the defaulting **participant** has not paid an amount due under this Part by the due date for payment, set-off any amount payable by the **clearing manager** to the **participant** against the unpaid amount payable by the **participant** to the **clearing manager**:
  - (d) take possession of any **FTR** held by the defaulting **participant** in accordance with clause 14.[49].
- (2) If an **event of default** is not remedied by the expiry of the **participant's** post-default exit period registered under clause 14A.[22],—
  - (a) the **clearing manager** must cancel a **hedge settlement agreement** to which the defaulting **participant** is a party in accordance with clause 14.[50]:
  - (b) the **Authority** may direct a **grid owner** or **distributor** to exercise any contractual right the **grid owner** or **distributor** has to disconnect a defaulting **participant** who is a **direct purchaser** in accordance with clause 14.[51].

**14.47 Remedies for settlement default**

- (1) If the **clearing manager** elects to exercise any of the remedies specified in clause 14.[46] in the event of a **settlement default**, the **clearing manager** must exercise the remedies in the following order:
  - (a) apply the balance of the **cash deposit** of the defaulting **participant**:
  - (b) if the amount applied under paragraph (a) is not sufficient to remedy the default, make a demand under a guarantee, letter of credit, or bond provided under Part 14A in respect of the defaulting **participant** that can be satisfied by 1500 hours on the final day for payment under clause 14.[33]:
  - (c) if the amounts applied under paragraphs (a) and (b) are not sufficient to remedy the default, set-off the

amount payable by the defaulting **participant** to the **clearing manager** against any amount that is payable by the **clearing manager** to the defaulting **participant** in respect of the current **billing period** or any other prior **billing period**:

- (d) if the amounts applied under paragraphs (a) to (c) are not sufficient to remedy the default,—
  - (i) make a demand under any other guarantee, letter of credit, or bond provided under Part 14A in respect of the defaulting **participant**;
  - (ii) take possession of any **FTR** held by the defaulting **participant** in accordance with clause 14.[49].
- (2) If, after exercising the remedies specified in subclause (1), there is any residual amount payable by the **clearing manager** to the **participant**, that amount must be credited to the balance of the defaulting **participant's cash deposit**.

#### **14.48 Remedies for other types of default**

If a **participant** commits any **event of default** other than a **settlement default**, the **clearing manager** must exercise all or any of the remedies specified in clause 14.[46] to ensure that it has sufficient funds for the next settlement date.

#### **14.49 Application to take possession of FTR**

- (1) The **clearing manager** on application to the **FTR manager** is entitled to be registered on the **FTR register** as the holder of any **FTR** that the **clearing manager** takes possession of under clause 14.[46(1)(d)] without any further authorisation than this subclause.
- (2) If the **FTR hedge values** or estimated **FTR hedge values** of the **FTRs** held by the defaulting **participant** exceed the amount required to remedy the **event of default**, the **clearing manager** may exercise its discretion in deciding which **FTRs** are transferred to the **clearing manager**.
- (3) If the amount received by the **clearing manager** on settlement or sale of an **FTR** taken possession of under clause 14.[46(1)(d)] exceeds the amount required to remedy the **event of default**, the **clearing manager** must repay the excess amount to the defaulting **participant**.
- (4) If the **clearing manager** holds an **FTR** in respect of which an amount would be owing if the **FTR** was held by another person, no amount is owing by the **clearing manager**.

#### **14.50 Cancellation of hedge settlement agreement in event of default**

- (1) If the defaulting **participant** is a party to a **hedge settlement agreement** and the **event of default** is not remedied at the



expiry of the **participant's** post-default exit period registered under clause 14A.[22], the **clearing manager** must cancel the **hedge settlement agreement**.

- (2) The **clearing manager** must give written notice to the parties to the **hedge settlement agreement** if a **hedge settlement agreement** is cancelled under this clause.

#### **14.51 Disconnection of direct purchaser**

- (1) Each **direct purchaser** must at all times ensure that the terms of each of its contracts that provide for connection of the **direct purchaser** to the **grid** or a **local network** permit the relevant **grid owner** or **distributor** to disconnect the **direct purchaser** on the direction of the **Authority** if the **direct purchaser** has committed an **event of default** and has not remedied the default by the expiry of its post-default exit period registered under clause 14A.[22].
- (2) Each **grid owner** or **distributor** must at all times ensure that the terms of each its contracts that provide for the connection of a **direct purchaser** to the **grid** or a **local network** permit the **grid owner** or **distributor** to disconnect the **direct purchaser** on the direction of the **Authority** if the **direct purchaser** has committed an **event of default** and has not remedied the default by the expiry of its post-default exit period registered under clause 14A.[22].
- (3) If a **direct purchaser** has committed an **event of default** and has not remedied the default by the expiry of its post-default exit period registered under clause 14A.[22], the **Authority** may direct a **grid owner** or **distributor** to exercise any contractual right the **grid owner** or **distributor** has to disconnect the defaulting **direct purchaser**.
- (4) A **grid owner** or **distributor** who receives a direction under subclause (2) must comply with the direction.

#### **14.52 Clearing manager to exercise rights to recover amounts outstanding**

The **clearing manager** must exercise such rights, including those rights under the **Act** and this Code, as is reasonable to recover any amounts outstanding from a **participant** who is in default.

#### **14.53 Participants assigned or subrogated to all clearing manager's rights of recovery**

- (1) If a **participant's** default means that the **clearing manager** is unable to pay **participants** the full outstanding amount that would otherwise be payable to them so that any amount paid to **participants** is reduced under [subpart 8], the **participants** are entitled to be assigned or subrogated to the rights of the **clearing manager** in respect of amounts

payable to the **clearing manager** by the relevant defaulting **participant** which, if paid, would have been required to be held on trust by the **clearing manager** for the **participants** in accordance with this Code.

- (2) The **clearing manager** must do all that is reasonably necessary, including the granting of a power of attorney in favour of the **participants**, to assist the **participants** in the exercise of the rights.
- (3) The **participants** may—
  - (a) in the name of the **clearing manager** (if requested), take any step to enforce repayment or exercise any other rights of the **clearing manager** in respect of money for the time being due to the **clearing manager** from a **participant** in default or a guarantor of any **participant** or any person that has provided a letter of credit or bond in favour of the **clearing manager** in respect of the **participant**; and
  - (b) directly or indirectly, in the name of the **clearing manager** (if requested), prove in, claim, share in or receive the benefit of any distribution, dividend or payment arising out of any insolvency of a **participant** in default or a guarantor of a **participant** in default or any person that has provided a letter of credit or bond in favour of the **clearing manager** in respect of a **participant** in default.

#### **14.54 Rights of participants to exercise rights**

- (1) Any 1 or more **participants** is entitled to exercise rights under clause 14.[53], if—
  - (a) the **clearing manager** has not, within 3 **business days** of receiving notice of, or otherwise becoming aware of, the occurrence of an **event of default**, taken any action under clauses 14.[46] to 14.[48]; or
  - (b) the **clearing manager** has failed within 2 months of an **event of default** to collect all amounts due from the defaulting **participant**.
- (2) Nothing in subclause (1) or [this subpart] limits the statutory right of the **clearing manager** to apply to the Court for the appointment of a receiver, interim liquidator, or liquidator.

#### *Publication of information about event of default*

#### **14.55 Authority may publicise information about event of default**

- (1) The **Authority** may **publicise** information about an **event of default** if the **Authority** considers it is appropriate.
- (2) If an **event of default** results in a reduction in payments under subpart 8, the **Authority** must **publicise** information

about the following:

- (a) the nature of the **event of default**;
- (b) the extent of the **event of default**;
- (c) the identity of the defaulting **participant**.

## Subpart 8—Payments in event of settlement default

### 14.56 Application of this subpart

- (1) This subpart applies if—
  - (a) a **participant** commits a **settlement default**; and
  - (b) the amount received from the defaulting **participant** and recovered or set-off under clause 14.[47] by 1500 hours on the final day for payment under clause 14.[33] is less than the amount payable by the **participant** [and any amount required to cover **GST** obligations].
- (2) In this subpart a reference to 1 or more general amounts is a reference to any amount that is not required to be applied to the settlement of **FTRs** or paid to the **grid owner** as **residual loss and constraint excess**.

### 14.57 Allocation of amounts received to settlement of general amounts and FTRs

- (1) The **clearing manager** must apply any amount received from the defaulting **participant** and recovered under clause 14.[47] to the settlement of general amounts and **FTRs** in accordance with this clause.
- (2) The amount that must be applied to the settlement of general amounts is the total amount received from the **participant** and recovered under clause 14.[47], less the amount that must be applied to the settlement of **FTRs** in accordance with subclause (3).
- (3) The amount that must be applied to the settlement of **FTRs** is determined in accordance with the following formula:

$$C_{\text{FTR}} = C_{\text{TOT}} \times (O_{\text{FTR}}/O_{\text{TOT}})$$

where

$C_{\text{FTR}}$  is the amount that must be applied to the settlement of **FTRs**

$C_{\text{TOT}}$  is the total amount received from the **participant** and recovered under clause 14.[47]

$O_{\text{FTR}}$  is the total amount owing in respect of **FTRs** held by the defaulting **participant** as specified under clause 14.[20(2)(g) and (h)]

$O_{TOT}$  is the total amount owing by the defaulting **participant** as specified under clause 14.[20(3)]

- (4) If the total amount owing by the **participant** as specified under clause 14.[20(3)] includes an amount owing in respect of the assignment of any **FTR** under clause 14.[20(2)(h)] that relates to a future **billing period** or **billing periods**, a portion of the amount that must be applied to the settlement of **FTRs** under subclause (3) must be allocated to each future **billing period** in accordance with the following formula:

$$F_{FTR} = C_{FTR} \times (O_{FTR (future)} / O_{FTR})$$

where

$F_{FTR}$  is the amount that must be applied to the settlement of **FTRs** in the future **billing period**

$C_{FTR}$  is the amount that must be applied to the settlement of **FTRs**, calculated under subclause (1)

$O_{FTR (future)}$  is the amount owing in respect of the assignment of an **FTR** under clause 14.[20(2)(h)] that relates to the future **billing period**

$O_{FTR}$  is the total amount owing in respect of **FTRs** held by the defaulting **participant** as specified under clause 14.[20(2)(g) and (h)]

#### 14.58 Calculation of revised amount owing for general amounts

- (1) Any amount owing by the **clearing manager** to the defaulting **participant** must be set to the sum of the following amounts:
- (a) the amount owing by the **clearing manager** to the defaulting **participant** minus the amount owing by the defaulting **participant** to the **clearing manager**, if that amount is positive:
  - (b) any amount payable by the **clearing manager** to the **participant** that has not been set-off against the unpaid amount payable by the **participant** to the **clearing manager**.
- (2) If the amount calculated under subclause (1)(a) is a negative amount, the amount must be set to 0.
- (3) The **clearing manager** must apply any amount available for the settlement of general amounts in accordance with the following order of priority:

- (a) to satisfy any liability to pay **GST** and other governmental charges or levies, that are payable by the **clearing manager** in respect of the amounts owing and payable under [subparts 4 and 6], taking into account any **GST** input tax credits available to the **clearing manager** in respect of payments under paragraphs (b) to (e):
  - (b) to satisfy any amount owing to the **system operator** for **ancillary services** under clauses 8.6, 8.31(1)(a), and 8.55 to 8.67:
  - (c) to satisfy any amount of the **loss and constraint excess** to be applied to the settlement of **FTRs** under clause 14.[16(4) or (5)]:
  - (d) to satisfy any amount owing to each **grid owner** for any **loss and constraint excess** in accordance with clause 14.[16(7)(a)]:
  - (e) to satisfy any other general amount owing to a **participant**.
- (4) If there is an insufficient amount available for the settlement of general amounts, the **clearing manager** must calculate the revised amounts owing by the **clearing manager** to **participants** in respect of general amounts as follows:
- (a) first apply the full amount available to satisfy each amount owing in the order of priorities in subclause (3):
  - (b) if there is an insufficient amount to satisfy the full amount owing under any of paragraphs (a) to (e) of subclause (3), calculate the revised amount owing to each **participant** under that paragraph according to the following formula:

$$AO_{CM (revised)} = AO_{CM (general)} \times (A_{General}/G_{Required})$$

where

$AO_{CM (revised)}$  is the revised amount owing by the **clearing manager** to the **participant** in respect of the general amounts

$AO_{CM (general)}$  is the amount owing by the **clearing manager** to the **participant** in respect of that **billing period** under the relevant paragraph in subclause (3)

$A_{General}$  is the total amount available for the settlement of amounts owing by the **clearing manager** in the relevant **billing period** under the relevant

paragraph in subclause (3)

$G_{\text{Required}}$  is the sum of all amounts required to settle those amounts in respect of the **billing period**

**14.59 Calculation of revised amount owing for FTR amounts**

- (1) Any amount owing by the **clearing manager** to the defaulting **participant** in respect of **FTRs** must be set to the sum of the following amounts:
  - (a) the amount owing by the **clearing manager** to the defaulting **participant** in respect of **FTRs** minus the amount owing by the defaulting **participant** to the **clearing manager** in respect of **FTRs**, if that amount is positive;
  - (b) any amount payable by the **clearing manager** to the **participant** that has not been set-off against the unpaid amount payable by the **participant** to the **clearing manager**.
- (2) If the amount calculated under subclause (1)(a) is a negative amount, the amount must be set to 0.
- (3) The **clearing manager** must apply any amount available for the settlement of **FTRs** in accordance with the following order of priority:
  - (a) to satisfy any amount owing to a **participant** in respect of **FTRs**;
  - (b) to satisfy any amount owing to each **grid owner** for any **residual loss and constraint excess** under clause 14.[16(7)(b)].
- (4) If there is an insufficient amount available for the settlement of **FTRs**, the **clearing manager** must calculate the revised amount owing in respect of **FTRs** as follows:
  - (a) first apply the amount available for the settlement of **FTRs** in the relevant **billing period** to satisfy each amount owing to a **participant** in respect of an **FTR**;
  - (b) if there is an amount remaining for the settlement of **FTRs** in the relevant **billing period** after the **clearing manager** has satisfied each amount owing to a **participant** in respect of an **FTR**, the **clearing manager** must allocate that amount to each **grid owner** under clause 14.[16(7)(b)];
  - (c) if there is an insufficient amount to satisfy each amount owing under paragraph (a), the **clearing manager** must adjust each amount owing to a **participant** in respect of an **FTR** according to the following formula:

$$AO_{\text{CM (revised)}} = AO_{\text{CM (FTRs)}} \times (C_{\text{FTR}}/FTR_{\text{Required}})$$

where

$AO_{CM (revised)}$  is the revised amount owing by the **clearing manager** to the **participant** in respect of **FTRs**

$AO_{CM (FTRs)}$  is the amount advised to the **participant** under clause 14.[21] as being owing to the **participant** in respect of that **billing period** in respect of an amount specified in clause 14.[21(2)(g) or (h)]

$C_{FTR}$  is the total amount available for the settlement of **FTRs** in the relevant **billing period**

$FTR_{Required}$  is the sum of all amounts required to settle **FTRs** in respect of the **billing period**

#### **14.60 Excess amount available for settlement of general amounts or FTRs**

- (1) If, after revising the amounts owing under clauses 14.[58] and 14.[59], there is an excess amount available for the settlement of **FTRs**, the **clearing manager** must undertake the process set out in clause 14.[58] again using a revised amount available for the settlement of the general amounts that includes the excess amount for the settlement of **FTRs**.
- (2) If, after revising the amounts owing under clauses 14.[58] and 14.[59], there is an excess amount available for the settlement of general amounts, the **clearing manager** must undertake the process set out in clause 14.[59] again using a revised amount available for the settlement of **FTRs** that includes the excess amount for the settlement of general amounts.

#### **14.61 Calculation of interim and revised amount payable**

- (1) The **clearing manager** must calculate an interim amount payable to each **participant** to whom an amount is payable by the **clearing manager** under subpart 5 in accordance with the following formula:

$AP_{\text{interim}} =$  For any non-defaulting participant:  
 $AO_{\text{CM (revised)}} - AO_{\text{P}} + P$

For any defaulting participant:  
 $AO_{\text{CM (revised)}}$

where

$AP_{\text{interim}}$  is the interim amount payable to the **participant**

$AO_{\text{CM (revised)}}$  is the sum of the revised amounts owing by the **clearing manager** to the **participant**, calculated under clauses 14.[58] and 14.[59]

$AO_{\text{P}}$  is the sum of the amounts owing by the **participant** to the **clearing manager**, calculated under clause 14.[20]

$P$  is any amount paid by the **participant** under clause 14.[33] and, in the case of a defaulting **participant**, any amount recovered under clause 14.[47(1)(a) or (b)]

- (2) If the application of the formula in subclause (1) results in an interim amount payable that is positive or 0 for every **participant** to whom an amount is payable by the **clearing manager**, the interim amount payable is the revised amount payable by the **clearing manager** under clause 14.[62].
- (3) If the application of the formula in subclause (1) results in an interim amount payable that is negative for 1 or more **participants** to whom an amount is payable by the **clearing manager**, the **clearing manager** must calculate the revised amount payable by the **clearing manager** under clause 14.[62] as follows:
  - (a) for each **participant** for whom the application of the formula in subclause (1) results in an interim amount payable that is negative, set the revised amount payable for the **participant** to 0:
  - (b) for each **participant** for whom the application of the formula in subclause (1) results in an interim amount payable that is positive, calculate the revised amount payable to the **participant** in accordance with the following formula:

$$AP_{\text{revised}} = AP_{\text{interim}} + AO_{\text{negative}} (AO_{\text{CM (revised)}} / AO_{\text{positive}})$$

where



$AP_{\text{revised}}$  is the revised amount payable to the **participant**

$AP_{\text{interim}}$  is the interim amount payable to the **participant**, calculated under subclause (1)

$AO_{\text{negative}}$  is the sum of all revised amounts owing by the **clearing manager** to a **participant** for every **participant** for whom the application of the formula in subclause (1) results in an interim amount payable that is negative

$AO_{\text{CM (revised)}}$  is the sum of the revised amounts owing by the **clearing manager** to the **participant**, calculated under clauses 14.[58] and 14.[59]

$AO_{\text{positive}}$  is the sum of all revised amounts owing by the **clearing manager** to a **participant** for every **participant** for whom the application of the formula in subclause (1) results in an interim amount payable that is positive

- (4) If the application of the formula in subclause (3)(b) results in a **participant** having a revised amount payable that is negative, the **clearing manager** must recalculate the revised amount payable for each **participant** under subclause (3) using the revised amount payable to the **participant** as the interim amount payable to the **participant**.

#### 14.62 Payment of revised amount payable

The **clearing manager** must pay each **participant** the revised amount payable in accordance with clause 14.[36] as if references to the amount payable were references to the revised amount payable.

#### 14.63 Payment by participant with negative interim amount payable

- (1) If the application of the formula in clause 14.[61(1)] results in an interim amount payable for a **participant** that is negative, the **participant** must pay an amount that is equal to the **absolute value** *[To be defined in Part I]* of the interim amount payable in accordance with this clause.

- (2) The **clearing manager** must advise the **participant** of the amount payable.
- (3) If the **clearing manager** holds a **cash deposit** for the **participant**, the **clearing manager** must apply such amount of the **participant's cash deposit** as is available in order to satisfy the amount payable by the **participant** under this clause. [*This subclause and subclause (4) are to be reconsidered in light of discussion at the 18 April SPSTG meeting*]
- (4) If the **clearing manager** does not hold a **cash deposit** for the **participant** or the amount of the **cash deposit** is not sufficient to satisfy the amount payable by the **participant** under this clause, the **participant** must pay that amount to the **clearing manager** by 1300 hours on the next **business day** after the day on which the **clearing manager** advises the **participant** of the amount.
- (5) Clause 14.[34] applies to a payment under this clause.
- (6) If the **clearing manager** receives further funds from the defaulting **participant**, the **clearing manager** may revise or cancel the amount payable under this clause to reflect the need for the amount payable.

#### **14.64 Application of payment by participant with negative interim amount payable**

- (1) The **clearing manager** must allocate the funds received under clause 14.[63] to each **participant** for whom the application of the formula in clause 14.[61(1)] results in an interim amount payable that is positive.
- (2) The amount allocated to each **participant** under this clause is the difference between the interim amount payable and revised amount payable for the **participant**.
- (3) The **clearing manager** must pay each **participant** the amount allocated under this clause.
- (4) If there are insufficient funds to pay each **participant** the amount allocated under this clause, the **clearing manager** must adjust the amount payable for each **participant** based on the proportion that the amount payable to the **participant** bears to the total amount payable to all **participants** under this clause.

#### **14.65 Further funds paid according to priority**

- (1) As further funds are received or recovered from the defaulting **participant** by the **clearing manager**, those funds must be allocated to the settlement of general amounts and **FTRs** and paid in accordance with [this subpart] as if—
  - (a) the further funds had been paid by the defaulting **participant** on the final day for payment under clause 14.[33]; but

- (b) with the amount already paid to a **participant** under this subpart deducted from the amount calculated as payable to the **participant**.
- (2) If funds received or recovered by the **clearing manager** are identifiable as relating to a specific **billing period**, the **clearing manager** must apply those funds in satisfaction or part satisfaction of amounts payable by the **clearing manager** in respect of that **billing period**.
- (3) If it is not clear to which **billing period** the funds relate, the funds must be applied in satisfaction or part satisfaction of amounts payable by the **clearing manager** in respect of the earliest **billing period** in respect of which amounts are outstanding to the extent that full payment has not been received by the relevant **participants** in respect of that **billing period**.

#### **14.66 Interest payable to participants**

- (1) If a **participant** does not receive the full amount payable under [this Part], the **clearing manager** is liable to pay interest on the unpaid amount.
- (2) The interest must be calculated daily from the date payment would otherwise have been due, at the **default interest rate**, until the date that payment is actually made by the **clearing manager** to the **participant** and compounded at the end of each calendar month.
- (3) If a **participant** has not paid any amount payable under [this Part] after the due date for payment, the **participant** must pay interest on the unpaid amount.
- (4) The interest must be calculated daily from the date on which the payment was due, at the **default interest rate**, until the date that full payment is received in **cleared funds** and compounded at the end of each calendar month.

#### **14.67 Participant to remain in default**

Despite anything else in this Code, the application of money under [this Part] that does not satisfy the full amount payable by a **participant** does not—

- (a) satisfy the obligation of the **participant** to pay the full amount payable together with the interest due on that amount to the **clearing manager** or to a **participant** acting in accordance with clause 14.[53]; or
- (b) prejudice any remedy available to the **clearing manager** in an **event of default** or to a **participant** under clause 14.[53].

## Subpart 9—Administrative obligations of clearing manager

### *Clearing manager operating account*

#### **14.68 Clearing manager must establish operating account**

- (1) The **clearing manager** must establish, in its name, an **operating account** with a **bank**.
- (2) The **operating account** must—
  - (a) be held by the **clearing manager** as a trust account for the benefit of the persons who are entitled to receive payment from the **clearing manager** under this Part; and
  - (b) be clearly identified as such; and
  - (c) subject to this Code, be entirely separate from the **cash deposit accounts** and any other account of the **clearing manager**.
- (3) The **clearing manager** must obtain an acknowledgement from the **bank** with which the **operating account** is held that—
  - (a) the funds in that account are held on trust for the purposes set out in clause 14.[35]; and
  - (b) the **bank** has no right of set-off or combination in relation to the funds.

#### **14.69 Payment by clearing manager**

- (1) Each payment required to be made by the **clearing manager** to the person entitled to the payment must be made by direct payment to the **bank** account that the person entitled to the payment may advise the **clearing manager** in writing from time to time.
- (2) Except as expressly permitted by this Code or as required by law, all payments by the **clearing manager** under this Part must be free and clear of any withholding or deduction and without any set-off or counter claim.

### *Reporting obligations of the clearing manager*

#### **14.70 Monthly divergence reports to be prepared by clearing manager**

- (1) The **clearing manager** must report to the **market administrator** in writing under this clause.
- (2) The **clearing manager** must give the report to the **market administrator**—
  - (a) on the 10th **business day** of each calendar month; or
  - (b) if exceptional circumstances prevent the **clearing manager** from providing the report by that day, as soon as reasonably practicable after that day.

- (3) The report must include—
- (a) information on any situations where the **clearing manager** believes, on reasonable grounds, that the **clearing manager**, or another **participant**, has breached this Code in the previous calendar month; and
  - (b) the date and time at which each alleged breach took place; and
  - (c) the nature of each alleged breach, including—
    - (i) details of the person alleged to be in breach; and
    - (ii) any **participants** believed to be affected by the alleged breach; and
    - (iii) in the case of a delay in advising a **participant** of an amount owing under clause 14.[18] the part of the process that was delayed; and
  - (d) the reason for the alleged breach occurring if the **clearing manager** is aware of the reason; and
  - (e) situations in which information about an amount owing was or will be issued late and whether or not the delay was caused by the **clearing manager**.

**14.71 Market administrator must publish clearing manager reports**

- (1) By the 15th **business day** of each calendar month, the **market administrator** must **publish** the sections of the report, received in the previous calendar month from the **clearing manager** in accordance with clause 14.[70], that relate to any breaches of this Code by the **clearing manager**.
- (2) By the 15th **business day** of each calendar month the **market administrator** must also refer the report received in the previous calendar month to the **Authority**.

**14.72 Right to information concerning clearing manager's action**

- (1) A **participant** may, by notice in writing to the **clearing manager**, request further information related to a situation set out in a **clearing manager's** report **published** under clause 14.[71] that has materially affected that person.
- (2) The **clearing manager** must provide the requested information to that person, but the information provided must not include any information that is confidential in respect of any other person.

**14.73 Clearing manager to publish block dispatch settlement differences**

- (1) By 0900 hours on the 2nd **business day** after the **clearing manager** has advised **participants** of amounts owing under clause 14.[18], the **clearing manager** must **publish** the

following information for **participants** on the **information system**:

- (a) the maximum block dispatch settlement difference for each **block dispatch group** for the previous **billing period** as determined by the following formula:

$$\text{Settlement Difference} = \text{Max} \left\{ \sum_{\text{gip}=1}^{\text{gip}} P_{\text{gip}} \left\{ \text{Gen}_{\text{gip}} - \text{Set}_{\text{gip}} \left\{ \frac{\sum \text{Gen}_{\text{gip}}}{\sum \text{Set}_{\text{gip}}} \right\} \right\} \right\}$$

- (b) the total block dispatch settlement differences for each **block dispatch group** for the previous **billing period** as determined by the following formula:

$$\text{Settlement Difference} = \sum_{i=1}^i \left\{ \sum_{\text{gip}=1}^{\text{gip}} P_{\text{gip},i} \left\{ \text{Gen}_{\text{gip},i} - \text{Set}_{\text{gip},i} \left\{ \frac{\sum \text{Gen}_{\text{gip},i}}{\sum \text{Set}_{\text{gip},i}} \right\} \right\} \right\}$$

where

$P_{\text{gip}}$  is the **final price** at the relevant **grid injection point** for the **generating plant** or **generating unit** that forms part of the **block dispatch group** for the relevant **trading period** of the **billing period**

$\text{Gen}_{\text{gip}}$  is the final quantity of **electricity** sold by that **generator** to the **clearing manager** at the relevant **grid injection point** for the **generating plant** or **generating unit** that forms part of the **block dispatch group**, obtained from the **reconciliation information** for the relevant **trading period** of the **billing period**

$\text{Set}_{\text{gip}}$  is the generation quantity at the **relevant grid injection point** for the **generating plant** or **generating unit** that forms part of the **block dispatch group** for the relevant **trading period** of the **billing period**

$P_{\text{gip},i}$  is the **final price** at the relevant **grid injection point** for the **generating plant** or **generating unit** that forms part of the

**block dispatch group** for the relevant **trading period** of the **billing period**

$Gen_{gip,i}$  is the final quantity of **electricity** sold by that **generator** to the **clearing manager** at the relevant **grid injection point** for the **generating plant** and **generating units** that form part of the **block dispatch group**, obtained from the **reconciliation information** for the relevant **trading period** of the **billing period**

$Set_{gip,i}$  is the generation quantity at the relevant **grid injection point** for the **generating plant** and **generating units** that form part of the **block dispatch group** for the relevant **trading period** of the **billing period**.

- (2) For the purposes of this clause “generation quantity” means the time-weighted average quantity of **electricity** for that **generating plant** or **generating unit** for the relevant **trading period**, taking into account—
- the quantity in **MW** provided to the **clearing manager** by the **system operator** in accordance with clauses 13.76 to 13.80; and
  - the ramp rate applying to the relevant **trading period** that is specified in the **offer** submitted by that **generator**.

**14.74 Clearing manager to publish block dispatch settlement differences later if information system is unavailable**

- If the **information system** is unavailable to **publish** the information set out in clause 14.[73] in accordance with that clause, the **clearing manager** is not obliged to follow any backup procedures in respect of **publishing** the information.
- The **clearing manager** must **publish** the information as soon as reasonably possible on the **information system** after the **information system** becomes available.

**14.75 Clause 14.[73] applies to block dispatch groups only**

The calculation of the block dispatch settlement differences under clause 14.[73] must be completed on a **block dispatch group** basis, even if a **block dispatch group** has been divided into **sub-block dispatch groups** during one or more **trading periods** of the relevant **billing period**.

**14.76 No washup calculation under clause 14.[73] if revised**

**reconciliation information is received**

Following the calculation and **publication** of the information relating to block dispatch settlement differences in a **billing period** under clause 14.[73], the **clearing manager** is not required to recalculate any block dispatch settlement differences as a result of subsequently receiving revised **reconciliation information**.

*Notices*

**14.77 Notices**

- (1) Except as expressly provided in this Code, a notice or demand given or required to be given under this Part may be given by being delivered or transmitted to the intended recipient at its address or electronic address as last advised in writing to the sender and may be posted to such address by prepaid post.
- (2) Subject to subclause (3),—
  - (a) a notice or demand delivered by hand is deemed to be delivered on the date of such delivery; and
  - (b) a notice or demand delivered by post is deemed to be delivered on the 2<sup>nd</sup> **business day** following the date of posting; and
  - (c) a notice or demand transmitted through the **information system** is deemed to be delivered on the date it was transmitted.
- (3) Any notice or demand delivered, or deemed to be delivered, on a day that is not a **business day**, or after 1600 hours on a **business day**, is deemed to have been delivered on the next **business day**.



cl 14.[17]

## Schedule 14.1

### Formula for scaling amount owing in respect of FTRs

**1 Purpose of this Schedule**

The purpose of this Schedule is to set out the formula for scaling the amount owing in respect of **FTRs** if clause 14.[17(4)] applies.

**2 Formula**

- (1) The formula for scaling the **FTR hedge value** under clause 14.[17(4)] is as follows:

$$HV_{\text{Scaled}} = HV \times (C/D)$$

where

$HV_{\text{Scaled}}$  is the scaled **FTR hedge value**

$HV$  is the original **FTR hedge value** that would be owing if this subclause did not apply

$C$  is the amount calculated in accordance with the formula in subclause (2)

$D$  is the amount calculated in accordance with the formula in subclause (3)

- (2) The value for  $C$  in the formula in subclause (1) is as follows:

$$C = LCE_{\text{FTR}} + AC_{\text{P}} + A_{\text{P}} - AC_{\text{CM}} - A_{\text{CM}}$$

where

$LCE_{\text{FTR}}$  is the amount of the **loss and constraint excess** to be applied to the settlement of **FTRs** under clause 14.[16(4) or (5)]

$AC_{\text{P}}$  is the sum of any **FTR acquisition costs** owing to the **clearing manager**

$A_{\text{P}}$  is the sum of any amounts owing to the **clearing manager** under clause 13.249(4)

$AC_{CM}$  is the sum of any **FTR acquisition costs** owing by the **clearing manager**

$A_{CM}$  is the sum of any amounts owing by the **clearing manager** under clause 13.249(7)

(3) The value for D in the formula in subclause (1) is as follows:

$$D = HV_{CM} - HV_P$$

where

$HV_{CM}$  is the sum of any **FTR hedge values** owing by the **clearing manager**

$HV_P$  is the sum of any **FTR hedge values** owing to the **clearing manager**

## Schedule 14.2

### Consultation and approval requirements for methodologies

#### 1 Purpose of this Schedule

This Schedule sets out the consultation and approval requirements that apply to the following methodologies formulated and **published** by the **clearing manager**:

- (a) the methodology for determining the prudential risk management amount under clause 14.[22];
- (b) the methodology for determining the forward estimate of the minimum amount for which security will be required to be provided by a **participant** under clause [14A.5];
- (c) the methodology for determining the general prudential requirement under clause [8] of Schedule 14A.1;
- (d) the methodology for determining the minimum security required in respect of **FTRs** under clause [13] of Schedule 14A.1.

#### 2 Approval of methodology

- (1) The **clearing manager** must submit to the **Authority** for approval a draft methodology.
- (2) In preparing the draft methodology, the **clearing manager** must—
  - (a) consult with persons that the **clearing manager** thinks are representative of the interests of persons likely to be substantially affected by the methodology; and
  - (b) consider submissions made on the methodology.
- (3) The **clearing manager** must provide a copy of each submission received under subclause (2) to the **Authority**.
- (4) The **Authority** must, as soon as practicable after receiving the draft methodology, by notice in writing to the **clearing manager**—
  - (a) approve the methodology; or
  - (b) decline to approve the methodology.
- (5) If the **Authority** declines to approve the draft methodology, the **Authority** must **publish** the changes that the **Authority** wishes the **clearing manager** to make to the draft methodology.

### **3 Consultation on proposed changes to methodology**

- (1) When the **Authority publishes** the changes that the **Authority** wishes the **clearing manager** to make to the draft methodology under clause 2(5), the **Authority** must **notify** the **clearing manager** and interested parties of the date by which submissions on the changes must be received by the **Authority**.
- (2) Each submission on the changes to the draft methodology must be made in writing to the **Authority** and be received on or before the date specified by the **Authority** under subclause (1).
- (3) The **Authority** must—
  - (a) provide a copy of each submission received to the **clearing manager**; and
  - (b) **publish** the submissions.
- (4) The **clearing manager** may make its own submission on the changes to the draft methodology and the submissions received in relation to the changes.
- (5) The **Authority** must **publish** the **clearing manager's** submission when it is received.
- (6) The **Authority** must consider the submissions made to it on the changes to the draft methodology.
- (7) Following the consultation required by subclauses (1) to (6), the **Authority** may approve the methodology subject to the changes that the **Authority** considers appropriate being made by the **clearing manager**.

### **4 Variations to methodology**

- (1) A **participant** or the **Authority** may submit a proposal for a variation to the methodology.
- (2) The **clearing manager** must provide a copy of each proposed variation received from a **participant** under subclause (1) to the **Authority**.
- (3) The **clearing manager** must consider a proposed variation to the methodology submitted under subclause (1).
- (4) The **clearing manager** may submit a request for a variation to the methodology to the **Authority**.
- (5) The consultation and approval requirements under clauses 2 and 3 apply to a request for a variation submitted under subclause (4) as if references to the draft methodology were a reference to the requested variation.
- (6) If the **clearing manager** does not submit a request for a variation submitted under subclause (1) to the **Authority** under subclause (4), the **Authority** may consider the proposal and require the **clearing manager** to submit a request for a variation based on the proposal to the **Authority**, and subclause (5) applies accordingly.

- (7) The **Authority** may approve a variation requested under subclause (4) or subclause (6) without complying with the provisions referred to in subclause (5) if—
  - (a) the **Authority** considers that it is necessary or desirable in the public interest that the requested variation be made urgently; and
  - (b) the **Authority publishes** a notice of the variation and a statement of the reasons why the urgent variation is needed.
- (8) Every variation made under subclause (7) expires on the date that is 9 months after the date on which the variation is made.

cl 14.[16(2)]

### Schedule 14.3

#### Calculation of amount of loss and constraint excess to be applied to the settlement of FTRs

##### 1 Purpose

The purpose of this Schedule is to set out the formulae and process for the calculation under clause 14.[16(3)] of the amount of the **loss and constraint excess** to be applied to the settlement of **FTRs**.

##### 2 Interpretation

(1) In this Schedule, unless the context otherwise requires,—

**AC line** means any **AC branch**

**balanced**, in relation to an **FTR injection pattern**, means that the total positive and negative **hub injections** sum to 0. A **balanced FTR injection pattern** is consistent with a **grid** in which **losses** are not modelled

**binding**, in relation to a **constraint**, means that the **constraint** has a non-zero **shadow price**

**branch constraint** means a **constraint** in which all the **LHS** variables are branch flows

**canonical form** means a linear programming problem that is expressed in the following form:

$$\begin{aligned} &\text{maximise } c^T x \\ &\text{subject to } Ax \leq b \end{aligned}$$

where

$x$  is the vector of variables to be determined

$c$  and  $b$  are vectors of constants

$A$  is a matrix of coefficients

$c^T x$  is the objective function to be maximised

$Ax \leq b$  is the set of **constraints**, each row of  $Ax$  being the **LHS** of a **constraint** and each element of  $b$  being the corresponding **RHS**

Minimum **constraints** are assumed to have been multiplied through by  $-1$  to form an equivalent maximum **constraint**

Equality **constraints** are assumed to have initially been represented by a pair of minimum and maximum **constraints** with the same **LHS** and **RHS**, and then the resulting minimum **constraint** is assumed to have been multiplied through by  $-1$  to form an equivalent maximum **constraint**

**closed**, in relation to a **branch**, means that the **branch** is connected at both ends

**feasible region**, in relation to an n-dimensional linear programming problem, means the n-dimensional solution space filled by the set of all possible feasible solutions

**final pricing schedule** means the schedule that the **pricing manager** uses to produce the **interim prices** on which **final prices** are based

**FTR injection pattern** means the combination of positive or negative net **hub injections** implied by a combination of **FTRs**

**hub injection** means the actual or notional flow of **electricity** into the **grid**, if positive, or out of the **grid**, if negative, at any **hub**

**HVDC link** has the same meaning as in the **model formulation**

**LHS** means the left hand side of a **constraint** expressed in **canonical form**

**mixed constraint** has the same meaning as in the **model formulation**

**open**, in relation to a **branch**, means that the **branch** is disconnected at 1 or both ends

**operational system split** means an instance where a **grid owner** chooses to operate with a switch or **branch open** for reasons such as—

- (a) breaking loops that would otherwise constrain flows;  
or
- (b) reducing the size of the maximum fault duty that switchgear needs to withstand

**RHS** means the right hand side of a **constraint** when expressed in **canonical form**

**scheduled**, in relation to a variable, means the value of the variable in the **final pricing schedule**

**shadow price**, in relation to an **AC line** capacity, **branch constraint** or **mixed constraint**, means the absolute value of the shadow price in \$/MWh for the **AC line** or **constraint** reported in the **final pricing schedule**

**simultaneously feasible**, in relation to an **FTR injection pattern**, means that the implied flows can be carried by the transmission system, subject to the **constraints** as defined by clause 5(2)

- (2) For the purposes of this Schedule, **constraints** that are not expressed in **canonical form** in the **model formulation** must be translated into the equivalent **canonical form**.

**3 Amount of loss and constraint excess to be applied to settlement of FTRs**

The amount of the **loss and constraint excess** that must be applied to the settlement of **FTRs** under clause 14.[16(5)] is the amount calculated under clause 9(6)(b).

**4 Grid owner must determine normal grid configuration**

- (1) Each **grid owner** must determine a normal **grid** configuration for the **grid owner's grid**.
- (2) The normal **grid** configuration determined under subclause (1) must be a **grid** configuration with all existing **branches** and switches **closed** except where the **grid owner** has implemented **operational system splits** and the **grid owner** considers that the normal state of those **operational system splits** is for the relevant **branch** or switch to be **open**.
- (3) Each **grid owner** must provide to the **FTR manager** the model data describing the normal **grid** configuration for the **grid owner's grid** determined under subclause (1).
- (4) Each **grid owner** must determine a new normal **grid** configuration for the **grid owner's grid** if the **grid owner** considers it necessary because, for example, any of the following occur:
- (a) some **grid** equipment is commissioned or decommissioned;
  - (b) there is a change in the capacity or impedance of some **grid** equipment;
  - (c) the **grid owner** considers that the normal state of any **operational system split** has changed.



- (5) Each **grid owner** must provide new model data to the **FTR manager** if the **grid owner** determines a new normal **grid** configuration for the **grid owner's grid** under subclause (4), unless otherwise agreed with the **FTR manager**.

**5 FTR manager must determine FTR injection patterns**

- (1) The **FTR manager** must determine a set of **balanced extreme FTR injection patterns**.
- (2) Each **balanced extreme FTR injection pattern** determined under subclause (1) must be **simultaneously feasible** assuming—
- (a) the normal **grid** configuration determined under clause 4; and
  - (b) the absence of all other **grid** flows; and
  - (c) all **AC line** and **HVDC link** capacity limits applied; and
  - (d) all risk and reserve **constraints** disabled; and
  - (e) all **branch** variable **losses** set to 0; and
  - (f) all **branch** fixed **losses** set to 0.
- (3) The set of **balanced extreme FTR injection patterns** determined under subclause (1) must, in the reasonable opinion of the **FTR manager**, be the set of **FTR injection patterns** that best represents the extreme limits of the **feasible region** of **FTR injection patterns** as defined by the assumptions listed under subclause (2).
- (4) The **FTR manager** must determine a new set of **balanced extreme FTR injection patterns** if—
- (a) a **grid owner** provides the **FTR manager** with new model data under clause 4(5) that results in a change to the **feasible region** of **FTR injection patterns**; or
  - (b) there is a change to the **hubs** or set of **hubs** specified in the **FTR allocation plan**.

**6 FTR manager must determine matrix of lossless shift factors**

- (1) For each **trading period** of the relevant **billing period**, following the **publication** of **final prices**, the **FTR manager** must determine a matrix of lossless shift factors referenced to a set of reference **nodes**, from the **input information** or revised data used to produce the **final pricing schedule**, in accordance with the following:
- (a) one reference **node** must be chosen within each electrical island;
  - (b) **nodes** are in the same electrical island if a transmission path exists between them.
- (2) The matrix of lossless shift factors determined under subclause (1) must be calculated in accordance with the following matrix formula:

$$[\text{ShiftFactor}] = [\text{AdmittancePrimitive}] \times [\text{Inc}] \times [\text{Impedance}]$$

where

- [ShiftFactor] is the  $m$  by  $n$  matrix of lossless shift factors, which defines the increment in flow in the conventional forward flow direction on any **branch** in the transmission **network** resulting from an increment in net **injection** at any **node** together with an equal decrement in net **injection** at the reference **node** in the electrical island in which the **node** resides, while neglecting the effect of **losses**
- [AdmittancePrimitive] is the  $m$  by  $m$  diagonal matrix formed from the set of  $m$  **branch** susceptances
- [Inc] is the  $m$  by  $n$  lossless **branch-node** incidence matrix, which denotes the conventional from and to **nodes** for a **branch** by matrix entries of 1 and  $-1$  respectively
- [Impedance] is the  $n$  by  $n$  matrix formed from the inverse of [AdmittanceNodal] with the columns and rows associated with the reference **nodes** reinserted and filled with zeroes
- [AdmittanceNodal] is the  $n-r$  by  $n-r$  matrix obtained from [AdmittanceNodalComplete] by deleting the column and row associated with each of the reference **nodes**
- [AdmittanceNodalComplete] is the  $n$  by  $n$  matrix =  $[\text{Inc}]^T \times [\text{AdmittancePrimitive}] \times [\text{Inc}]$

$[\text{Inc}^T]$  is the  $n$  by  $m$  matrix transpose of  $[\text{Inc}]$

- (3) For the purposes of subclauses (1) and (2) —
- (a) the set of inter-island **HVDC links** must be replaced by a single **AC line** with a nominal susceptance value between the Benmore and Haywards HVDC terminal **nodes**, whether or not any **HVDC link** is actually in service during the relevant **trading period**; and
  - (b) the nominal susceptance value determined under paragraph (a) may be any suitable value that will avoid numerical difficulties; and
  - (c) any switches between the Benmore HVDC terminal **node** and other Benmore **nodes** operating at the same nominal voltage that are normally **closed** must be treated as **closed**; and
  - (d) any switches between the Haywards HVDC terminal **node** and other Haywards **nodes** operating at the same nominal voltage that are normally **closed** must be treated as **closed**; and
  - (e) in any **trading period** in which any of the **hubs** reside in different electrical islands (as defined in subclause (1)(b)), the shift factor matrix for the previous **trading period** in which all the **hubs** resided in the same electrical island must be used.

**7 FTR manager must determine branch participation loading and constraint participation loading**

- (1) For each **trading period** of the relevant **billing period**, the **FTR manager** must determine a **branch** participation loading for each **AC line**  $k$ .
- (2) Each **branch** participation loading determined under subclause (1) must be calculated—
  - (a) in accordance with the following formula if the **scheduled** flow on the **AC line** is in the conventional forward flow direction:

$$\max \left( \sum_{h \in \text{Hubs}} SF_{k,h} \times Inj_{h,p} : p \in 1, \dots, P \right); \text{ and}$$

- (b) in accordance with the following formula if the **scheduled** flow on the **AC line** is in the conventional reverse flow direction:

$$- \min \left( \sum_{h \in Hubs} SF_{k,h} \times Inj_{h,p} : p \in 1, \dots, P \right)$$

where

$SF_{k,h}$  is the shift factor relating flows on **AC line**  $k$  to **injections** at **hub**  $h$ , determined under clause 6(1)

$Inj_{h,p}$  is the positive or negative **hub injection** at **hub**  $h$  in **FTR injection pattern**  $p$  in the set of  $P$  **balanced extreme FTR injection patterns** determined under clause 5(1)

- (3) For each **trading period** of the relevant **billing period**, for each **binding branch constraint**  $v$  involving **AC line** flows, the **FTR manager** must determine a **constraint** participation loading in accordance with the following formula:

$$\max \left( \sum_{k \in ACLineGroup_v} \sum_{h \in Hubs} weight_{k,v} \times SF_{k,h} \times Inj_{h,p} : p \in 1, \dots, P \right)$$

where

$SF_{k,h}$  and  $Inj_{h,p}$  are as defined in subclause (2)

$ACLineGroup_v$  is the set of **AC lines** involved in **branch constraint**  $v$  (any **HVDC link** flow terms in the **constraint** must be excluded from this calculation)

$weight_{k,v}$  is the weight associated with **AC Line**  $k$  in **branch constraint**  $v$  expressed in **canonical form**

- (4) For each **trading period** of the relevant **billing period**, for each **binding mixed constraint**  $v$  (if any) involving **AC line** flow terms or **AC line** variable loss terms, the **FTR manager** must determine a **constraint** participation loading in accordance with the following formula:

$$\max \left( \sum_{k \in ACLineGroup_v} (flowweight_{k,v} \times flow_{k,p} + lossweight_{k,v} \times loss_{k,p}) : p \in 1, \dots, P \right)$$

where

*ACLineGroup<sub>v</sub>* is the set of **AC lines** whose flows or variable **losses** are involved in **mixed constraint v** (all other terms in the **mixed constraint v** must be excluded from this calculation)

*flowweight<sub>k,v</sub>* is the weight associated with the flow on **AC Line k** in **mixed constraint v** expressed in **canonical form**

*lossweight<sub>k,v</sub>* is the weight associated with the variable **losses** on **AC Line k** in **mixed constraint v** expressed in **canonical form**

*flow<sub>k,p</sub>* is the flow on **AC Line k** due to **FTR injection pattern p**, which equals  $\sum_{h \in Hubs} SF_{k,h} \times Inj_{h,p}$

*loss<sub>k,p</sub>* is the variable **losses** on **AC Line k** due to *flow<sub>k,p</sub>*

*SF<sub>k,h</sub>* and *Inj<sub>h,p</sub>* are as defined in subclause (2)

- (5) For the purposes of this clause, if **hub h** is a group of **nodes**, the positive or negative **hub injection** at **hub h** must be split into its individual nodal components in a manner consistent with the **hub** definition in the **FTR allocation plan**, and each nodal component must be treated as a separate **hub injection**.

## 8 FTR manager must assign portions of capacities

- (1) For each **trading period** of the relevant **billing period**, the **FTR manager** must assign a portion of the capacity of each **AC line**, **AC line loss curve block**, **binding branch constraint RHS** and **binding mixed constraint RHS** (if any) for the purpose of determining amounts to be applied to the settlement of **FTRs** under clause 9(3) to (5).
- (2) The portion of the capacity of each **AC line** to be assigned under subclause (1) must be the minimum of—

- (a) the line capacity applicable in the **trading period** in the **final pricing schedule**; and
  - (b) the relevant **branch** participation loading determined under clause 7(1).
- (3) The portion of the capacity of each **AC line** loss curve block to be assigned under subclause (1) must be the portion of the loss curve block that would be utilised by a flow at the level of the capacity of the associated **AC line** assigned, as determined under subclause (2), assuming that loss curve blocks are utilised in order from lowest to highest **loss factor**, in the direction of flow.
- (4) Subject to subclause (5), the portion of the capacity of each **binding branch constraint RHS** or **binding mixed constraint RHS** (if any) to be assigned under subclause (1) must be the minimum of—
- (a) the **constraint RHS** applicable in the **trading period** in the **final pricing schedule**, minus the contribution of any **LHS** terms not involving **AC line** flows or **AC line** variable losses, calculated assuming the values of the relevant variables applicable in the **trading period** in the **final pricing schedule**; and
  - (b) the relevant **constraint** participation loading determined under clause 7(3) or clause 7(4).
- (5) If the capacity determined under subclause (4) for any **constraint** is negative, the capacity to be assigned for that **constraint** must be 0.

**9 FTR manager must calculate amounts to be applied to settlement of FTRs**

- (1) The amounts calculated under this clause must be calculated using the flow quantities, nodal prices and **shadow prices** from the **final pricing schedule**.
- (2) The HVDC **loss and constraint excess** to be applied to the settlement of **FTRs** for each **trading period** of the relevant **billing period** must be calculated in accordance with the following formula:

$$\max \left( \begin{array}{l} 0, \sum_{n(NI)} price_n \times \left( \sum_{l \in R_{HVDC}(n)} (HVDCLinkFlow_l - HVDCLinkLosses_l) - \sum_{l \in S_{HVDC}(n)} HVDCLinkFlow_l \right) \\ + \sum_{n(SI)} price_n \times \left( \sum_{l \in R_{HVDC}(n)} (HVDCLinkFlow_l - HVDCLinkLosses_l) - \sum_{l \in S_{HVDC}(n)} HVDCLinkFlow_l \right) \end{array} \right) \div 2$$

where

$price_n$  is the energy price at AC node  $n$

$n(NI)$  is the set of North Island AC **nodes** to which any **HVDC links** are connected

$n(SI)$  is the set of South Island AC **nodes** to which any **HVDC links** are connected

$HVDCLinkFlow_l$  is the **MW** flow at the sending end **scheduled** for **HVDC link  $l$**

$HVDCLinkLosses_l$  is the variable **MW losses** for **HVDC link  $l$**

$S_{HVDC}(n)$  is the set of **HVDC links** for which  $n$  is the sending AC **node**

$R_{HVDC}(n)$  is the set of **HVDC links** for which  $n$  is the receiving AC **node**

- (3) The amount of the **loss and constraint excess** generated by each **AC line** that is to be applied to the settlement of **FTRs** must be calculated in accordance with the following formula:

$$AssignedCapacity_k \times ShadowPrice_k \div 2$$

where

$AssignedCapacity_k$  is the portion of the capacity of **AC line  $k$**  assigned under clause 8(1)

$ShadowPrice_k$  is the **shadow price** of the line capacity on **AC line  $k$**

- (4) The amount of the **loss and constraint excess** generated by each **binding branch constraint** and **binding mixed**

**constraint** (if any) involving **AC line** flow terms or **AC line** variable loss terms to be applied to the settlement of **FTRs** must be calculated in accordance with the following formula:

$$AssignedCapacity_v \times ShadowPrice_v \div 2$$

where

*AssignedCapacity<sub>v</sub>* is the portion of the capacity of the **RHS** of **branch constraint** or **mixed constraint** *v* assigned under clause 8(1)

*ShadowPrice<sub>v</sub>* is the **shadow price** of **branch constraint** or **mixed constraint** *v*

- (5) The amount of the **loss and constraint excess** generated by each **AC line** loss curve block that is to be applied to the settlement of **FTRs** must be calculated in accordance with the following formula:

$$\min(ACLineFlowBlock_{k,j}, AssignedCapacity_{k,j}) \times ReceivingEndPrice_k \times (ACLineLossFactor_{k,marg} - ACLineLossFactor_{k,j}) \div 2$$

where

$$ACLineLossFactor_{k,marg} = \min(ACLineLossFactor_{k,j}) \text{ for which } ACLineFlowBlock_{k,j} < ACLineLossMW_{k,j}$$

*ACLineFlowBlock<sub>k,j</sub>* is the **MW** flow on the *j<sup>th</sup>* block of the loss curve of **AC line** *k* in the direction of **scheduled** positive flow, assuming that loss curve blocks are utilised in order from lowest to highest **loss factor**, in each direction

*AssignedCapacity<sub>k,j</sub>* is the portion of the capacity of the *j<sup>th</sup>* block of the loss curve of **AC line** *k* assigned under



clause 8(1)

$ReceivingEndPrice_k$  is the nodal energy price at the receiving end of the **scheduled** flow on **AC line  $k$**

$ACLineLossFactor_{k,j}$  is the **loss factor** of the  $j^{th}$  block of the loss curve of **AC line  $k$**

$ACLineLossMW_{k,j}$  is the **MW** capacity of the  $j^{th}$  block of the loss curve of **AC line  $k$**

- (6) The **FTR manager** must calculate the amount of the **loss and constraint excess** that must be applied to the settlement of **FTRs** for each **billing period** by—
- (a) determining the sum of the amounts calculated in accordance with subclauses (2) to (5) for each **trading period** of the **billing period**; and
  - (b) determining the sum of the amounts calculated in accordance with paragraph (a) for all **trading periods** of the **billing period**.

cl 14.[8]

## Schedule 14.4 Form of hedge settlement agreement

Date: [Enter date]

Party A	
Party B	

### 1 Lodging of hedge settlement agreement

1. Party A and Party B (the **parties**) hereby lodge this **hedge settlement agreement** with the **clearing manager**, as contemplated by clause 14.8 of the Electricity Industry Participation Code 2010 (the **Code**). Terms that are used in this agreement but not defined bear the meaning given to them in the **Code**.
2. By lodging this **hedge settlement agreement** with the **clearing manager** in accordance with clause 14.8 of the **Code**, the **parties** agree to be bound by the terms set out below from the time at which the **clearing manager** counter-signs it.
3. If the **clearing manager** counter-signs this document then, from the time it counter-signs, it has obligations relating to it under the **Code**. However, the **parties** acknowledge the **clearing manager** is not bound by this document and that its obligations in relation to it are limited to those set out in the **Code**.

### 2 Definitions

The following definitions apply in this document:

**aggregate fixed amount** means, in relation to a **billing period**, the sum of the **fixed amounts** for each **calculation period** in that **billing period**

**aggregate floating amount** means, in relation to a **billing period**, the sum of the **floating amounts** for each **calculation period** in that **billing period**

**calculation period** means a **trading period** during the **term**

**commencement date** means the date specified as such in the schedule

**expiry date** means the date specified as such in the schedule

**fixed amount** means, in relation to a **calculation period**, an amount calculated using the following formula:

$$\text{fixed amount} = \text{notional quantity} \times \text{fixed price}$$

**fixed price** means, in relation to a **calculation period**, the amount specified as such for that **calculation period** in the schedule

**fixed price payer** means, in relation to a **hedge settlement agreement**, the party specified as such in the schedule

**floating amount** means, in relation to a **calculation period**, an amount calculated using the following formula:

$$\text{floating amount} = \text{notional quantity} \times \text{floating price}$$

**floating price** means, in relation to a **calculation period**, the **final price** per **MWh** for that **calculation period** by reference to the **hedge reference point**[, rounded to two decimal places]

**floating price payer** means, in relation to a **hedge settlement agreement**, the party specified as such in the schedule

**hedge reference point** means the **grid exit point** specified as such in the schedule

**hedge settlement amount** means, in relation to a **billing period**, the absolute value of the amount calculated by subtracting the **aggregate floating amount** from the **aggregate fixed amount**

**notional quantity** means, in relation to a **calculation period**, the number of **MWhs** specified as such in the schedule for that **calculation period**

**term** means the period from 00.00 hours on the **commencement date** until 23.59 hours on the date on which the **hedge settlement agreement** terminates.

### 3 Payment of hedge settlement amounts

In relation to a **billing period**:

- (a) if the **aggregate floating amount** exceeds the **aggregate fixed amount**:
- (i) the **floating price payer** must pay the **clearing manager** an amount equal to the **hedge settlement amount** in relation to that **billing period**; and
  - (ii) the **clearing manager** must pay the **fixed price payer** an amount equal to the **hedge settlement amount** in relation to that **billing period**,
- on the relevant [**settlement date**]; and
- (b) if the **aggregate fixed amount** exceeds the **aggregate floating amount**:
- (i) the **fixed price payer** must pay the **clearing manager** an amount equal to the **hedge settlement amount** in relation to that **billing period**; and
  - (ii) the **clearing manager** must pay the **floating price payer** an amount equal to the **hedge settlement amount** in relation to that **billing period**,
- on the relevant [**settlement date**].

*[Note: The "settlement date" is the date on which payments are made under the Code. There is currently no defined term for this date, but if one is introduced into the drafting, that term will be used here rather than "settlement date". If no such term is introduced to the drafting, we will introduce a new definition above to describe this date.]*

#### **4 Termination**

This **hedge settlement agreement** terminates on the earlier of:

- (a) the **expiry date**; and
- (b) the date on which it is cancelled under the **Code**.

**5 Other provisions**

The **fixed price** is inclusive of any additional costs arising due to carbon charges.

**EXECUTION**

[Execution Block Party A]

[Execution Block Party B]

The **clearing manager** hereby accepts the lodgement of this **hedge settlement agreement** by counter-signing it.

[Execution Block Clearing Manager]

**SCHEDULE  
TERMS OF HEDGE SETTLEMENT AGREEMENT**

<b>Hedge settlement agreement terms</b>	
Commencement Date	[Insert date]
Expiry Date	[Insert date]
Fixed Price Payer	[Party A] [Party B]
Floating Price Payer	[Party A] [Party B]
Notional Quantity	[insert number] <b>MWhs</b> [for each <b>calculation period</b> ]
Fixed Price	[\$[insert amount] [for each <b>calculation period</b> ]
Hedge Reference Point	[insert <b>grid exit point</b> ]