Electricity Industry Participation Code Amendment (Real Time Pricing) 2022

Under section 38 of the Electricity Industry Act 2010, and having complied with section 39 of that Act, I make the following amendment to the Electricity Industry Participation Code 2010.

At Wellington on the 20th day of September 2022

Dr Nicola Lane Crauford
Chair
Electricity Authority

Certified in order for signature:

Mark Dunlop

Senior Legal Counsel

Electricity Authority

Simon Watt

Consultant

Bell Gully

15 September 2022

15 September 2022

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Final prices

Amendment

1   Title

This is the Electricity Industry Participation Code Amendment (Real Time Pricing) 2022.

2   Commencement

This amendment comes into force on 1 November 2022.

3   Code amended

This amendment amends the Electricity Industry Participation Code 2010.

4   Clause 1.1 amended (Interpretation)

(1)   In clause 1.1(1), insert in their appropriate alphabetical order:

"**binary load**, in relation to a **nominated dispatch bid**, means a quantity of **electricity** that corresponds to the **MW** specified in one or more entire price bands of the relevant **nominated dispatch bid**

"**dispatch marginal location factor** means the factor that is determined by dividing the **dispatch price** at any **grid exit point** or **grid injection point** by the **dispatch price** at the relevant **reference point**

"**dispatch notification** means a notification to a **dispatch notification purchaser** or **dispatch notification generator** made by the **system operator** under clause 13.72(1)(b)

"**dispatch notification generator** means a **generator** that is approved by the **system operator** under clause 13.3F to be a **dispatch notification generator**

"**dispatch notification purchaser** means a **dispatchable load purchaser** that is approved by the **system operator** under Schedule 13.8 to operate a **dispatch-capable load station** as a **dispatch notification purchaser**. For the purpose of this definition and for the purpose of all references to **purchaser** in relation to a **dispatch notification purchaser**, **purchaser** includes a load aggregator

"**dispatch price** means a price in dollars and cents for each **grid injection point**, each **grid exit point**, and each **reference point**, as specified in the **dispatch schedule**

"**dispatch reserve price** means a price in dollars and cents for **fast instantaneous reserve** and **sustained instantaneous reserve** for each **island**, as specified in the **dispatch schedule**

"**unsupplied demand situation** means a situation in which—

(a)   there is **demand** at a **GXP**—

    (i)   in a **price-responsive schedule**, for which price and quantity values have been assigned by the **system operator** under clause 13.58AA(1)(a); or

    (ii)   in a **non-response schedule**, for which price and quantity values have been assigned by the **system operator** under clause 13.58AA(1)(b); or

    (iii)   in a **dispatch schedule**, for which price and quantity values have been assigned by the **system operator** under clause 13.69AA; and

(b)   the **system operator** expects that the relevant **demand** will be unable to be supplied by **offers** in the relevant **price-responsive schedule**, **non-response schedule**, or **dispatch schedule**".

(2)   In clause 1.1(1), revoke the definitions of **annual consumption list, back-up metering information, bound, check metering information, constraint price, equivalent day, error claimant, final estimate, high spring washer price relaxation factor, high spring washer price situation, high spring washer price situation methodology, high spring washer price trigger ratio, historical annual consumption, infeasibility**

situation, initial estimate, input information, island GWAP, island scarcity pricing situation, island shortage situation, loss adjusted demand, metering situation, national GWAP, national scarcity pricing situation, national shortage situation, net grid exit point, net grid injection point, offer stack, pricing manager, provisional marginal location factor, provisional price, provisional price situation, provisional reserve price, real time price, real time pricing period, relevant registration factor, SCADA situation, scarcity pricing situation, shortage situation, and unconstrained cleared offer price.

(3) In clause 1.1(1), definition of **dispatch**,—

(a) after "issuing instructions", insert "and notifications"; and

(b) after "and **dispatching**", insert "and **dispatched**"; and

(c) replace "has" with "have".

(4) In clause 1.1(1), definition of **dispatch instruction**, replace "clause 13.72(1)" with "clause 13.72(1)(a)".

(5) In clause 1.1(1), definition of **dispatched purchaser**,—

(a) replace "clause 13.72(1)(b)" with "clause 13.72(1)(a)(iii)"; and

(b) replace "clause 13.81(2)" with "clause 13.81".

(6) In clause 1.1(1), replace definitions as follows:

(a) **final price** with:

"**final price** means an **interim price** that becomes a **final price** in accordance with clause 13.182A or 13.182B":

(b) **final reserve price** with:

"**final reserve price** means an **interim reserve price** that becomes a **final reserve price** in accordance with clause 13.182A or 13.182B":

(c) **forecast prices** with:

"**forecast price** means the price for **electricity** at each **grid exit point**, each **grid injection point**, and each **reference point** scheduled in the **price-responsive schedule** or the **non-response schedule** (whichever is the case) in dollars and cents":

(d) **gate closure period** with:

"**gate closure period**, in relation to a **trading period** for which a **generator** or **ancillary service agent** has submitted an **offer** or **reserve offer**, or for which a **dispatchable load purchaser** has submitted a **nominated dispatch bid**, means—

(a) the **trading period** to which the **offer** or **reserve offer** relates, and the **trading period** immediately preceding that **trading period** for—

   (i) an **embedded generator**:

   (ii) an **ancillary service agent** that is also an **embedded generator**:

   (iii) a **dispatch notification purchaser**:

   (iv) a **dispatch notification generator**; and

(b) the **trading period** to which the **offer**, **reserve offer**, or **nominated dispatch bid** relates, and the 2 **trading periods** immediately preceding that **trading period**, for—

   (i) any other **generator**:

   (ii) any other **ancillary service agent**:

   (iii) a **dispatchable load purchaser** (other than a **dispatch notification purchaser**)":

(e) **pricing error** with:

   "**pricing error** means an error in an **interim price** or **interim reserve price** as a result of—

   (i) a **dispatch price** or **dispatch reserve price** that was not made available on **WITS** being used to calculate the **interim price** or **interim reserve price**; or

   (ii) the **clearing manager** having followed an incorrect process in calculating that **interim price** or **interim reserve price**, in contravention of this Code".

(7) In clause 1.1(1), definition of **interim price**, replace "clause 13.135" with "clause 13.134A, and includes a revised **interim price** made available on **WITS** by the **clearing manager** under clause 13.177(b)".

(8) In clause 1.1(1), definition of **interim reserve price**,—

(a) after "in accordance with" insert "the"; and

(b) replace "clause 13.135" with "clause 13.134A, and includes a revised **interim reserve price** made available on **WITS** by the **clearing manager** under clause 13.177(b)".

(9) In clause 1.1(1), definition of **intermittent generating station**, after "that is not stored" insert "and in respect of which a **generator** has not been approved by the **system operator** under clause 13.3F as a **dispatch notification generator**".

(10) In clause 1.1(1), definition of **transmission security constraint**, replace "covered by clause 15(d)(i) or (iii) of Schedule 13.3" with "relating to the AC transmission system configuration, capacity and losses".

(11) In clause 1.1(1), definition of **wholesale market**, paragraph (a),—

(a) revoke subparagraphs (i) and (iii); and

(b) after subparagraph (v), insert:

"(vi) **dispatch prices** and **dispatch reserve prices**:"

5 Clause 3.1 amended (Appointment of market operation service providers)

Revoke clause 3.1(1)(c).

6 Clause 8.68 amended (Clearing manager to determine amounts owing)

In clause 8.68(2), delete "or the **pricing manager**".

7 Clause 8.69 amended (Clearing manager to determine wash up amounts payable and receivable)

In clause 8.69(3), delete "or the **pricing manager**".

8 Schedule 8.3, Technical Code B, clause 5 amended

(1) In Schedule 8.3, Technical Code B, after clause 5(1)(d), insert:

"(e) an **unsupplied demand situation**."

(2) In Schedule 8.3, Technical Code B, revoke clause 5(1A), (1B) and (1C).

(3) In Schedule 8.3, Technical Code B, clause 5(2), delete "or subclause (1A)".

9 Schedule 8.3, Technical Code B, clause 6 amended

In Schedule 8.3, Technical Code B, clause 6(1), replace "If insufficient generation", with "If an **unsupplied demand situation**, or insufficient generation".

10 Clause 9.14 amended (Supply shortage declaration)

In clause 9.14(2A),—

(a) revoke paragraphs (a) and (c); and

(b)   after paragraph (e), insert:

"(f)   **dispatch prices** and **dispatch reserve prices**."

11   Clause 13.1 amended (Contents of this Part)

(1)   Replace clause 13.1(b) with:

"(b)   the **system operator** prepares and **publishes** information from the **price-responsive schedules**, **non-response schedules**, and **dispatch schedules**, and formulates and issues **dispatch instructions** and **dispatch notifications**; and".

(2)   Replace clause 13.1(d) with:

"(d)   the **clearing manager** produces **interim prices**; and".

(3)   In clause 13.1, after paragraph (d), insert:

"(daa)   **pricing errors** are claimed, investigated, and resolved; and

  (dab)   **interim prices** become **final prices**; and".

(4)   In clause 13.1(j), after "**station**", insert "; and".

(5)   In clause 13.1, after paragraph (j), insert:

"(k)   **purchasers** are approved as **dispatch notification purchasers**; and

  (l)   **generators** are approved as **dispatch notification generators**."

12   New clauses 13.3E and 13.3F inserted

After clause 13.3D, insert:

"**13.3E Approval process for dispatch notification purchasers**

(1)   A **purchaser** may apply to become a **dispatch notification purchaser** by applying to the **system operator** for approval of the relevant device or group of devices as a **dispatch-capable load station** under Schedule 13.8.

(2)   If the **system operator** receives an application under subclause (1), the **system operator** must consider the application in accordance with Schedule 13.8.

(3)   If the **system operator** approves a **purchaser's** application to become a **dispatch notification purchaser**,—

    (a)   the **purchaser** is a **dispatch notification purchaser** in relation to the **dispatch-capable load station** to which the application relates; and

    (b)   the approval is valid until the date on which the approval is revoked under clause 10 of Schedule 13.8; but

(c)   the **purchaser** in respect of which approval is granted is not a **dispatch notification purchaser** while approval for the **relevant dispatch-capable load station** is suspended under clause 10 of Schedule 13.8.

(4)   The **system operator** may suspend or revoke an approval for a **dispatch notification purchaser** in accordance with clause 10 of Schedule 13.8 if the **purchaser** has repeatedly submitted revised **bids** under clause 13.19C(1) such that it is no longer appropriate for the **purchaser** to remain a **dispatch notification purchaser**, taking into account any criteria set out in the **policy statement**.

"**13.3F Approval process for dispatch notification generators**

(1)   A **generator** may, by notice in writing to the **system operator**, apply to become a **dispatch notification generator** in respect of a **generating station** that exports less than 30 **MW** to the **grid** or a **local network**.

(2)   The notice must specify the **generating station** in respect of which the **generator** wishes to be a **dispatch notification generator**.

(3)   The **system operator** must approve an application received under subclause (1) if the application—

(a)   relates to a **generating station** that exports less than 30 **MW** to the **grid** or a **local network**; and

(b)   meets any criteria for approval set out in the **policy statement**.

(4)   The **system operator** may revoke an approval for a **dispatch notification generator** if—

(a)   the **generator** no longer meets the approval requirements; or

(b)   the **generator** has repeatedly submitted revised **offers** under clause 13.19C(2) such that it is no longer appropriate for the **generator** to remain a **dispatch notification generator**, taking into account any criteria set out in the **policy statement**."

13   Clause 13.7AD amended (Submitting bid for last time)

In clause 13.7AD, delete ", the **pricing manager**,".

14   Clause 13.13 amended (Information to be contained in bids)

(1)   Revoke clause 13.13(1)(c).

(2)   Revoke clause 13.13(1A).

15   Clause 13.17 amended (Offers may be revised)

(1)   In clause 13.17(1), replace "beginning" with "end".

(2)   In clause 13.17(3), replace "or 13.19" with "13.19 or 13.19C".

16   Clause 13.18 amended (When revised offer to be submitted)

(1)   In clause 13.18(1), after "**system operator** if", delete ", at any time before the **trading period** to which the offer relates,".

(2)   Revoke clause 13.18(3).

17   Clause 13.19A amended (Bids may be revised)

(1)   In clause 13.19A(1), replace "beginning" with "end".

(2)   After clause 13.19A(1A)(b), insert:

"(c)   revise a **nominated non-dispatch bid** to being a **nominated dispatch bid**, unless the **system operator** declares a **grid emergency** in accordance with **Technical Code** B of Schedule 8.3."

(3)   In clause 13.19A(1B)(b), replace "issues a **formal notice** under clause 5 of **Technical Code** B of Schedule 8.3" with "has declared a **grid emergency**".

(4)   Revoke clauses 13.19A(3A), (3B), and (6).

18   Clause 13.19B amended (Bids must be revised)

In clause 13.19B(1), replace "beginning" with "end".

19   New clause 13.19C inserted (Dispatch notification purchasers and dispatch notification generators to submit revised bids and offers in certain circumstances)

After clause 13.19B, insert:

"**13.19C Dispatch notification purchasers and dispatch notification generators to submit revised bids and offers in certain circumstances**

(1)   If a **dispatch notification purchaser** does not intend to comply with a **nominated dispatch bid** that is the subject of a **dispatch notification**, the **dispatch**

notification purchaser must immediately revise the **nominated dispatch bid** to be a **nominated non-dispatch bid**.

(2) If a **dispatch notification generator** does not intend to comply with an **offer** that is the subject of a **dispatch notification**, the **dispatch notification generator** must immediately revise the **MW** specified in the **offer** to 0.

(3) A **dispatch notification purchaser** that submits a revised **bid** under this clause—

    (a) is deemed to have submitted a **nominated non-dispatch bid** for the **trading period** following the **trading period** to which the revised **bid** relates; and

    (b) despite clauses 13.19A and 13.19B, must not submit a revised **bid** for the **trading period** to which the revised **bid** relates or the next **trading period**.

(4) A **dispatch notification generator** that submits a revised **offer** under this clause—

    (a) is deemed to have submitted an **offer** in which the **MW** specified in the offer is 0 for the **trading period** following the **trading period** to which the revised **offer** relates; and

    (b) despite clauses 13.17 and 13.19, must not submit a revised **offer** for the **trading period** to which the revised **offer** relates or the next **trading period**.”

20 Clause 13.20 replaced (System operator advised of revised nominated bids or offers in certain circumstances)

Replace clause 13.20 with:

“13.20 System operator advised of revised nominated bids or offers in certain circumstances

(1) This clause applies to each **purchaser** or **generator** that submits a revised **nominated bid** or **offer** in the period commencing 15 minutes before the **trading period** to which the revised **nominated bid** or **offer** relates and ending at the end of that **trading period**.

(2) Subject to subclause (4), a **purchaser** or **generator** that submits a revised **nominated bid** or **offer** in the time frame described in subclause (1) must immediately advise the **system operator** of the revision.

(3) Subclause (2) does not apply to an **intermittent generator** submitting a revised **forecast of generation potential** under clause 13.18A.

(4) Despite subclause (2), if the **system operator** and a **purchaser** or **generator** have entered into a written agreement relating to the notification of revised **nominated bids** or **offers**, the **purchaser** or **generator**—

(a)   must submit a revised **nominated bid** or **offer** in accordance with that agreement; but

(b)   if the agreement provides that the **purchaser** or **generator** is not required to advise the **system operator** of revised **nominated bids** or **offers**, the **purchaser** or **generator** is not required to do so."

21   Clause 13.34 amended (Changes made within 1 hour before trading period)

(1)   In the heading to clause 13.34, replace "**within**" with "**later than**".

(2)   In clause 13.34(1),—

(a)   replace "later than" with "during the period commencing"; and

(b)   after "**trading period**" insert "and ending at the end of the relevant **trading period**".

22   New clause 13.40A inserted (Inter-relationship between reserve offers and nominated dispatch bids)

After clause 13.40, insert:

"**13.40A Inter-relationship between reserve offers and nominated dispatch bids**

Reserve offers and **nominated dispatch bids** made under clauses 13.38(1) and 13.7(1) to (3) respectively, if they are in respect of the same plant, are inter-related in that the lower the **demand dispatched** or **scheduled** the lower the **instantaneous reserve** may be. The **ancillary service agent** must not be **scheduled** by the **system operator** and a **dispatch instruction** from the **system operator** must not be given the effect of which is that the **instantaneous reserve** exceeds the **scheduled** or **dispatched demand** quantity of the **dispatch-capable load station**, as the case may be."

23   Clause 13.46 amended (Reserve offers may be revised)

(1)   In the heading to clause 13.46, replace "**offers**" with "**offer**".

(2)   In clause 13.46(1) and (3), replace "beginning" with "end" in each place.

(3)   In clause 13.46(3)(a), delete "; or".

(4)   Revoke clause 13.46(3)(b).

24 Clause 13.48 amended (System operator advised of revised reserve offers in certain circumstances)

Replace clause 13.48(1) with:

"(1)   This clause applies to each **ancillary service agent** that submits a revised **reserve offer** in the period beginning 15 minutes before the **trading period** to which the revised **reserve offer** relates and ending at the end of the relevant **trading period**."

25 Clause 13.56 amended (Contents of this subpart)

(1)   In clause 13.56(d), after "**dispatch instructions**", insert "and **dispatch notifications**".

(2)   Revoke clause 13.56(f).

26 New clauses 13.58AA and 13.58AB inserted

After clause 13.58, insert:

"13.58AA System operator to assign price and quantity values

(1)   In preparing each **price-responsive schedule** and each **non-response schedule**, the **system operator** must assign the price and quantity values set out in subclause (2) to the following **demand**:

(a)   in relation to a **price-responsive schedule**, forecast **demand** at a **conforming GXP** that is not the subject of a **bid**:

(b)   in relation to a **non-response schedule**,—

(i)   forecast **demand** at a **conforming GXP** that is not the subject of a **nominated bid**; and

(ii)   **demand** at a **GXP** that is the subject of a **nominated non-dispatch bid**.

(2)   The price and quantity values are as follows:

(a)   \$10,000 per **MWh** for the first 5% of the relevant **demand**:

(b)   \$15,000 per **MWh** for the next 15% of the relevant **demand**:

(c)   \$20,000 per **MWh** for the remaining 80% of the relevant **demand**.

(3)   In preparing each **price-responsive schedule** and each **non-response schedule**, the **system operator** must assign the price and quantity values set out in the following table to the constraints specified in clause 12(5) of Schedule 13.3:

Tranche	Fast instantaneous reserve contingent risk violation ($/**MWh**)	Sustained instantaneous reserve contingent risk violation ($/**MWh**)	Quantity (**MWh**)
1	3,500	3,000	50
2	4,000	3,500	100
3	4,500	4,000	No limit

(4)   In preparing each **price-responsive schedule** and each **non-response schedule**, the **system operator** must assign the price values set out in the following table to the model parameters specified in clause 1 of Schedule 13.2:

Tranche	6 second contingent risk violation ($/**MWh**)	60 second contingent risk violation ($/**MWh**)	Quantity (**MWh**)
1	3,500	3,000	50
2	4,000	3,500	100
3	4,500	4,000	No limit

"**13.58AB   Authority to review price and quantity values**

The **Authority** may review the price and quantity values specified in clause 13.58AA(2) and (3) at any time, and must do so no later than 5 years after the commencement of this clause, and at intervals of no more than 5 years after that."

27   Clause 13.58A amended (Inputs for price-responsive schedule and non-response schedule)

(1)   In clause 13.58A(1)(h), after "**procurement plan**", insert "; and".

(2)   After clause 13.58A(1)(h), insert:

"(i)   any price and quantity values assigned by the **system operator** under clause 13.58AA(1)(a)."

(3)   In clause 13.58A(2)(b), after "**nominated dispatch bid** quantities", insert "(where, in the case of a **nominated non-dispatch bid** submitted by a **dispatch notification purchaser**, the relevant quantity is 0 **MW**)".

(4)   In clause 13.58A(2)(g), after "**procurement plan**", insert "; and".

(5)   After clause 13.58A(2)(g), insert:

"(h)   any price and quantity values assigned by the **system operator** under clause 13.58AA(1)(b)."

28   Clause 13.59 replaced (Contents of each price-responsive schedule and non-response schedule)

Replace clause 13.59 with:

"**13.59 Contents of each price-responsive schedule and non-response schedule**

For each **trading period** in the **schedule length period**, each **price-responsive schedule** and each **non-response schedule** prepared by the **system operator** must contain the information specified in the table in Schedule 13.3B, as indicated by a X—

(a)   in the case of the **price-responsive schedule**, in column 1 of the table; and

(b)   in the case of the **non-response schedule**, in column 2 of the table."

29   Clause 13.63 amended (Trading period information to be made available to pricing manager and clearing manager)

(1)   In the heading to clause 13.63, delete "**pricing manager and**".

(2)   In clause 13.63, delete "**pricing manager** and".

30   Clause 13.67 amended (Transmission of information)

In clause 13.67(3),—

(a)   replace "**system operator**," with "**system operator** and"; and

(b)   delete ", and the **pricing manager**".

31   Clause 13.69A replaced (System operator to prepare dispatch schedule)

Replace clause 13.69A with:

"**13.69A System operator to prepare dispatch schedule**

(1) Except as provided in clause 13.72A, before each **trading period**, or as soon as practicable after the start of a **trading period**, the **system operator** must prepare a **dispatch schedule** for the **trading period**—

    (a) using the information described in clause 13.69B; and

    (b) in accordance with the methodology set out in Schedule 13.3.

(2) The **system operator** must prepare a new **dispatch schedule** for a **trading period** as frequently as the **system operator** considers is necessary during a **trading period** to meet the **dispatch objective**."

32 New clauses 13.69AA to 13.69D inserted

After clause 13.69A, insert:

"13.69AA System operator to assign price and quantity values

(1) In preparing each **dispatch schedule**, the **system operator** must assign the price and quantity values—

    (a) set out in clause 13.58AA(2) for the expected profile of **demand** under clause 13.69B(1)(d) for the demand at each **GXP** that is not the subject of a **nominated dispatch bid**; and

    (b) set out in clause 13.58AA(3) to the constraints specified in clause 12(5) of Schedule 13.3; and

    (c) set out in clause 13.58AA(4) to the model parameters specified in clause 1 of Schedule 13.2.

(2) The prices and quantities assigned in subclause (1) must be used in the **dispatch schedule** in accordance with the processes set out in Schedule 13.3AA.

"13.69AAA Grid owner to provide real time demand values to system operator

(1) Each **grid owner** must provide to the **system operator** real time net **demand** values (in **MW**) for each of its **GXPs** that are required by the **system operator** to calculate the expected profile of **demand** under clause 13.69B.

(2) A **grid owner** must, to the extent practicable, source the information required under subclause (1) from its **grid** revenue meters.

"13.69B Inputs for dispatch schedule

(1) The **system operator** must use the following inputs to prepare a **dispatch schedule**:

    (a) **offers** and **reserve offers**, excluding the following:

        (i) **offers** submitted by an **intermittent generator** under clause 13.6:

(ii) revised **offers** submitted by an **intermittent generator** under clause 13.18A:

(iii) **offers** submitted by a **type B co-generator** under clause 13.6:

(iv) revised **offers** submitted by a **type B co-generator** under clause 13.17; and

(b) the quantities and prices specified in **nominated dispatch bids** (clause 13.7) and the quantities and prices specified in revised **nominated dispatch bids** (clauses 13.19A and 13.19B):

(c) any price and quantity values assigned by the **system operator** under clause 13.69AA:

(d) the expected profile of **demand** until the next **dispatch schedule** is produced by the **system operator**, where in an **unsupplied demand situation**—

(i) the expected profile of **demand** used to calculate **dispatch instructions** and **dispatch notifications** must reflect the **demand** expected to be supplied by the available **offers**; and

(ii) the expected profile of **demand** used to calculate **dispatch price** must be adjusted for the **demand** that was unable to be supplied by the available **offers** that was assigned a value by the **system operator** under clause 13.69AA(a), in accordance with the processes set out in Schedule 13.3AA:

(e) the potential output of all **intermittent generating stations**, determined in accordance with subclause (4):

(f) the current output levels of each **generator** or, if no such data is available, a reasonable estimate of the current output levels of each **generator**:

(g) information from the **grid owner** (clauses 13.29 to 13.34) and revised information from the **grid owner** (clause 13.33) about—

(i) the AC transmission system configuration, capacity and losses; and

(ii) the capability of the **HVDC link** including its **configuration**, capacity, **losses**, the direction of any transfer limit, and any minimum or maximum transfer limits; and

(iii) transformer configuration, capacity and losses:

(h) information about **voltage support**:

(i) the price order in the current **dispatch schedule**:

(j) in relation to **intermittent generators**, any ramp rates agreed between the **intermittent generator** and the **system operator**.

(2) The **system operator** must incorporate, in each schedule prepared, any adjustments to the inputs described in subclause (1) that may be required to meet the **dispatch objective**.

(3) The **system operator** must use the information provided under clause 13.69AAA as part of its calculation of the expected profile of **demand**.

(4) The **system operator** must, in determining the potential output of an **intermittent generating station** for the purposes of subclause (1)(e), use the following information:

(a) if the most recent **dispatch instruction** to the relevant **intermittent generator** for the **intermittent generating station** was not flagged, the actual output in **MW** of the **intermittent generating station**:

(b) if the most recent **dispatch instruction** to the relevant **intermittent generator** for the **intermittent generating station** was flagged, the greater of—

(i) the forecast of generation potential specified in the **intermittent generator's** final **offer** for the relevant **intermittent generating station** submitted under clause 13.18A; and

(ii) the actual output in **MW** of the **intermittent generating station**:

(c) if the **intermittent generator** and the **system operator** have agreed in writing that an alternative estimate may be provided, the alternative estimate of the potential output of the **intermittent generating station** provided by the relevant **intermittent generator**.

"13.69C Contents of each dispatch schedule

Each **dispatch schedule** prepared by the **system operator** must contain the information specified in the table in Schedule 13.3B, as indicated by a X in column 3 of the table.

"13.69D System operator to verify accuracy of dispatch prices and dispatch reserve prices

The **system operator** must verify the accuracy of **dispatch prices** and **dispatch reserve prices** in each **dispatch schedule** using the method specified in the **policy statement**."

33 Clause 13.71 revoked (System operator to use certain things)

Revoke clause 13.71.

34 Clause 13.72 replaced (System operator to issue dispatch instructions)

Replace clause 13.72 with:

"13.72 System operator to issue dispatch instructions and dispatch notifications

(1) The **system operator** must implement each **dispatch schedule**, and any departure from a **dispatch schedule** under clause 13.70 by—

(a) issuing **dispatch instructions** to,—

(i) **generators**; and

(ii)   **ancillary service agents**; and

(iii)   **dispatchable load purchasers** (other than **dispatch notification purchasers**) that have submitted **nominated dispatch bids**; and

(b)   issuing **dispatch notifications** to **dispatch notification purchasers** and **dispatch notification generators**.

(2)   The **system operator** must issue each **dispatch instruction** and each **dispatch notification** in a reasonable and timely manner to enable the **participant** to which the **dispatch instruction** or **dispatch notification** is issued to comply with the **dispatch instruction** or **dispatch notification**.

(3)   Despite subclause (1), the **system operator** is not required to issue a **dispatch instruction** to a **participant** if—

(a)   the **dispatch instruction** is—

(i)   to provide a quantity of **active power** under clause 13.73(1)(a); or

(ii)   to provide a quantity of **instantaneous reserve** under clause 13.73(1)(b); and

(b)   the **dispatch instruction** would differ from the most recent **dispatch instruction** issued to the **participant** by 1 **MW** or less."

35   New clause 13.72A inserted (Dispatch schedule primary modelling system unavailable)

After clause 13.72, insert:

"**13.72A Dispatch schedule primary modelling system unavailable**

(1)   Where the **system operator's** primary modelling system for preparing and implementing a **dispatch schedule** is unavailable, the **system operator**—

(a)   must issue **dispatch instructions** and **dispatch notifications** using the backup procedure specified by it from time to time and using the inputs available to it at the relevant time; and

(b)   is not required to prepare a **dispatch schedule** that complies with the requirements set out in clause 13.69A(1)(a) and clause 13.69A(1)(b).

(2)   When the **system operator** issues **dispatch instructions** in accordance with clause 13.72A(1), such **dispatch instructions** will be deemed to comprise a **dispatch schedule** for the purposes of clause 13.72(1)."

36   Clause 13.73 amended (Content of dispatch instructions to generators, ancillary service agents, and dispatchable load purchasers)

(1)   In the heading to clause 13.73, replace "**to generators, ancillary service agents, and dispatchable load purchasers**" with "**and dispatch notifications**".

(2)   In clause 13.73(1), replace "each **dispatch instruction** it issues under clause 13.72(1)(a) instructs the **generator** or **ancillary service agent**" with "each **dispatch instruction** and **dispatch notification** it issues under clause 13.72(1) instructs the **generator**, **ancillary service agent**, or **dispatchable load purchaser**".

(3)   After clause 13.73(1)(k), insert:

"(l)   use a specified quantity of **electricity**."

(4)   In clause 13.73(1B), replace "clause 13.71(3)" with "clause 13.69B(4)".

(5)   Revoke clause 13.73(2).

37   Clause 13.75 replaced (Form of dispatch instruction)

Replace clause 13.75 with:

"**13.75 Form of dispatch instruction and dispatch notification**

(1)   When issuing a **dispatch instruction** or **dispatch notification** under clause 13.72(1), the **system operator** must specify—

(a)   the **generating plant**, **generating unit**, **block dispatch group**, **station dispatch group**, **interruptible load**, **dispatch-capable load station**, or **frequency keeping units** to which the **dispatch instruction** or **dispatch notification** applies; and

(b)   the desired outcome of the **dispatch instruction** or **dispatch notification**; and

(c)   if the start time for the **dispatch instruction** or **dispatch notification** differs from the issue time, the start time within the current **trading period** or the next **trading period**; and

(d)   if specific ramp rates are concerned, a specific target time to reach the desired outcome; and

(e)   the time at which the **dispatch instruction** or **dispatch notification** was issued; and

(f)   any **block security constraint** that occurs within a **block dispatch group** and how the **block security constraint** divides the **generating stations** or **generating units** of a **block dispatch group** into **sub-block dispatch groups** as part of such a **dispatch instruction** or **dispatch notification**; and

(g)   any **station security constraint** that occurs within a **station dispatch group** and how the **station security constraint** divides the **generating stations** or

generating units of a **station dispatch group** into **sub-station dispatch groups**; and

(h)   if it is a **dispatch instruction** or **dispatch notification** specified in clause 13.73(1)(i), the maximum reserve risk for the relevant **island**; and

(i)   when issuing a **dispatch instruction** or **dispatch notification** to a **dispatchable load purchaser**, the **trading period** for which the **dispatch instruction** or **dispatch notification** is issued.”

38   **Clause 13.76 replaced (System operator to issue and log dispatch instructions)**

Replace clause 13.76 with:

"13.76 System operator to issue and log dispatch instructions and dispatch notifications

(1)   The **system operator** must issue **dispatch instructions** and **dispatch notifications**—

(a)   to each **generator** (other than a **generator** receiving **dispatch instructions** in its capacity as an **ancillary service agent**) and each **dispatchable load purchaser**, using an **approved system**; and

(b)   to each **ancillary service agent**, using an **approved system** or as otherwise agreed in the relevant **ancillary service arrangement**.

(2)   The **system operator** must log and record each **dispatch instruction** and each **dispatch notification**.

(3)   Each **generator** and each **ancillary service agent** must log each **dispatch instruction** received from the **system operator**.

(4)   The **system operator** must provide a copy of each **dispatch instruction** and each **dispatch notification**—

(a)   to the **clearing manager**, by 1600 hours on the 7th **business day** of the **billing period** after the **billing period** in which the **system operator** issues and logs the **dispatch instruction** or **dispatch notification**; and

(b)   to the **Authority**, by 1600 hours on the first **business day** after the day on which the **system operator** issues and logs the **dispatch instruction** or **dispatch notification**.”

39   **Clause 13.79 replaced (Acknowledgement of dispatch instructions)**

Replace clause 13.79 with:

"13.79 Acknowledgement of dispatch instructions

If the **system operator** has issued a **dispatch instruction** or **dispatch notification** to a **participant** under clause 13.72(1), the **participant** must acknowledge to the **system operator** receipt of that **dispatch instruction** or **dispatch notification**—

(a)   within 4 minutes of receiving that **dispatch instruction** or **dispatch notification**; or

(b)   if the **system operator** and that person have entered into a written agreement relating to the person's acknowledgement of receipt of **dispatch instructions** or **dispatch notifications** that conflicts with paragraph (a), in accordance with that agreement, which may include an agreement that the person need not acknowledge receipt of some or all **dispatch instructions** or **dispatch notifications**."

40   Clause 13.80 revoked (Dispatch instructions provided to grid owner)

Revoke clause 13.80.

41   Clause 13.81 replaced (Backup procedures if communication not possible)

Replace clause 13.81 with:

"**13.81 Backup procedures if communication not possible**

The **system operator** must follow the back-up procedures specified by it from time to time for issuing **dispatch instructions** and **dispatch notifications** if—

(a)   the relevant mechanism described in clause 13.76(1)(a) or 13.76(1)(b) is not available to issue **dispatch instructions** or **dispatch notifications** under clause 13.72(1); or

(b)   subject to any agreement referred to in clause 13.79(b), the **system operator** does not receive an acknowledgement from a **participant** of receipt of a **dispatch instruction** or **dispatch notification** within 10 minutes after issuing the **dispatch instruction** or **dispatch notification**."

42   Clause 13.82 amended (Dispatch instructions to be complied with)

In clause 13.82(2), replace "clause 13.72" with "clause 13.72(1)(a)".

43   New clause 13.82A inserted (Compliance with dispatch notifications)

After clause 13.82, insert:

"**13.82A Compliance with dispatch notifications**

(1)   Each **dispatch notification purchaser** and **dispatch notification generator** that receives a **dispatch notification** issued by the **system operator** under clause 13.72(1)(b) must either—

(a)   comply with the **dispatch notification**; or

(b)　comply with clause 13.19C.

(2)　To avoid doubt, a **dispatch notification generator** is not prohibited from generating in a **trading period** for which it has submitted an **offer** of 0 **MW**."

44　Clause 13.83 amended (Generators to make staff or facilities available to meet dispatch instructions)

(1)　In the heading to clause 13.83, after "**dispatch instructions**", insert "**and dispatch notifications**".

(2)　In clause 13.83(1), after "**dispatch instruction**", insert "or **dispatch notification**".

45　Clause 13.83A amended (Dispatchable load purchasers to make staff or facilities available to meet dispatch instructions)

(1)　In the heading to clause 13.83A, after "**dispatch instructions**", insert "**and dispatch notifications**".

(2)　In clause 13.83A(1),—

(a)　replace "bid" with "**bid**"; and

(b)　after "**dispatch instruction**", insert "or **dispatch notification**".

46　Cross heading above clause 13.88 revoked

Revoke cross heading "*Real time prices*" above clause 13.88.

47　Clause 13.88 revoked (Preparation of schedule of real time prices)

Revoke clause 13.88.

48　Clause 13.89 revoked (Publication of schedule of real time prices)

Revoke clause 13.89.

49　Clause 13.90 revoked (Process for making real time prices available)

Revoke clause 13.90.

50   Clause 13.91 revoked (System operator to use backup procedures if WITS unavailable)

Revoke clause 13.91.

51   Clause 13.92 revoked (Transmission of information through publicly accessible approved system)

Revoke clause 13.92.

52   Clause 13.93 revoked (Authority to appoint person to monitor and assess demand side participation and real time prices)

Revoke clause 13.93.

53   Clause 13.94 revoked (System operator may suspend publication of real time prices)

Revoke clause 13.94.

54   Clause 13.95 revoked (Real time prices not binding)

Revoke clause 13.95.

55   Clause 13.96 revoked (Purchaser to co-operate with system operator to manage response to real time prices)

Revoke clause 13.96.

56   Clause 13.99A revoked (Effect of grid emergency on nominated dispatch bids)

Revoke clause 13.99A.

57   Cross heading above clause 13.103 amended

In the cross heading above clause 13.103,—

(a)   replace "*publish*" with "*provide and make*"; and

(b)   after "*information*", insert "*available*".

58   Clause 13.104 amended (System operator to make information available)

(1)   Replace clause 13.104(1) with:

"(1)   As soon as practicable after the **system operator** has completed preparing a **price-responsive schedule** and a **non-response schedule**, the **system operator** must make available on **WITS**, for each **trading period** in the **schedule length period**, the information specified in the table in Schedule 13.3B, as indicated by a X—

(a)   in the case of the **price-responsive schedule**, in column 4 of the table; and

(b)   in the case of the **non-response schedule**, in column 5 of the table."

(2)   In clause 13.104(3), replace "set out" with "referred to".

59   New clause 13.104A inserted (System operator to make information available in respect of dispatch schedule)

After clause 13.104, insert:

"13.104A System operator to make information available in respect of dispatch schedule

The **system operator** must, each time the **system operator** implements a **dispatch schedule**, make available on **WITS** the information specified in the table in Schedule 13.3B, as indicated by a X in column 6 of the table."

60   Clause 13.105A amended (Information to be made available to purchasers, generators, and ancillary service agents)

In clause 13.105A(1), replace "clause 13.104" with "clause 13.104(1)".

61   Clause 13.106 amended (Transmission of information)

In clause 13.106(3), delete "the **pricing manager**,".

62   Clause 13.131 replaced (Contents of this subpart)

Replace clause 13.131 with:

"13.131 Contents of this subpart

This subpart provides for the processes by which—

(a)   the **clearing manager** prepares and makes available on **WITS interim prices** and **interim reserve prices**; and

(b)　**interim prices** and **interim reserve prices** become **final prices** and **final reserve prices**.”

63　Clause 13.132 revoked (Purpose of the pricing process)

Revoke clause 13.132.

64　Clause 13.133 revoked (Trigger ratio for high spring washer price situation)

Revoke clause 13.133.

65　Clause 13.134 revoked (Methodology to resolve high spring washer price situation)

Revoke clause 13.134.

66　Cross heading below clause 13.134 amended

In the cross heading below clause 13.134,—

(a)　delete “*provisional,*”; and

(b)　delete “*, and final*”.

67　New clause 13.134A inserted (Methodology for calculating interim prices)

Before clause 13.135 insert:

“**13.134A Methodology for calculating interim prices**

The **clearing manager** must calculate **interim prices** and **interim reserve prices** for a **trading period** in accordance with the following formula:

$$I = \frac{\sum_{t=1}^{n} P_t \times (T_{t+1} - T_t)}{1800}$$

where

I　　is the **interim price** or **interim reserve price**

t　　is the sequential number of a **dispatch price** or **dispatch reserve price** in the set n in the **trading period**

n　　is the total number of **dispatch prices** or **dispatch reserve prices** that apply during the **trading period**

P_t　is the **dispatch price** or **dispatch reserve price** as made available on **WITS** that applies for the **trading period** at time T_t

T_t is the start time of the sequential numbered *t* **dispatch price** or **dispatch reserve price** for the **trading period**, as made available on **WITS**

but

if there is no **dispatch price** or **dispatch reserve price** for t = 1 in a **trading period**, the **dispatch price** or **dispatch reserve price** (as the case may be) for the t = 1 period is the **forecast price** or **forecast reserve price** in the most recent **price-responsive schedule** received by the **clearing manager** prior to the start of the **trading period**."

68 Clause 13.135 revoked (Methodology used to prepare provisional, interim, and final prices)

Revoke clause 13.135.

69 Clause 13.135A revoked (Notice of scarcity pricing situation)

Revoke clause 13.135A.

70 Clause 13.135B revoked (Methodology to prepare interim prices and interim reserve prices if scarcity pricing situation exists)

Revoke clause 13.135B.

71 Clause 13.135C revoked (Limitation on application of scarcity pricing provisions)

Revoke clause 13.135C.

72 Clause 13.136 amended (Offered embedded generators to provide half-hour metering information)

(1) Revoke clause 13.136(2)(b).

(2) After clause 13.136(2)(b), insert:

"(c)   a **dispatch notification generator**."

73 Clause 13.137 amended (Unoffered grid-connected generators and grid-connected type B industrial co-generation to provide half-hour metering information)

Revoke clause 13.137(2).

74   Clause 13.137A amended (Offered grid-connected intermittent generators to provide half-hour metering information)

Revoke clause 13.137A(3).

75   Clause 13.138 amended (Generator's half-hour metering information to be adjusted for losses)

(1)   In clause 13.138(1)(c), replace "0500" with "1000".

(2)   Replace clause 13.138(2) with:

"(2)   To avoid doubt, each **generator** must provide the **half-hour metering information** required under this clause—

    (a)   in accordance with the requirements of Part 15 for the collection of that **generator's volume information**; or

    (b)   from a source and in a manner agreed between the **generator** and the **grid owner**."

76   Clause 13.138A revoked (Dispatchable load purchaser's half-hour metering information to be adjusted for losses)

Revoke clause 13.138A.

77   Clause 13.138B revoked (System operator to give list of trading periods)

Revoke clause 13.138B.

78   Clause 13.139 amended (Half-hour metering information part of input information)

In clause 13.139,—

(a)   replace "13.138A" with "13.138"; and

(b)   replace "clause 13.141(1)(b)(i)" with "clause 13.141A".

79   Clause 13.140 amended (Generators and dispatchable load purchasers to advise grid owner of having provided half-hour metering information)

(1)   In the heading to clause 13.140, delete "**and dispatchable load purchasers**".

(2)   Revoke clause 13.140(1).

(3)   Replace clause 13.140(2) with:

"(2)   If a **generator** provides **half-hour metering information** to a **grid owner** under clauses 13.136 to 13.138, the **generator** must—

(a)   advise the relevant **grid owner** of this by 1000 hours on the day the **generator** provided the **half-hour metering information** to the relevant **grid owner**; and

(b)   at the same time, advise the relevant **grid owner** if any of the **half-hour metering information** provided under clauses 13.136–13.137A is missing information, incorrect and/or estimated."

80   New clause 13.140A inserted (Generators to resolve issues)

After clause 13.140, insert:

"**13.140A Generators to resolve issues**

If a **generator** cannot provide **half-hour metering information**, has provided incorrect **half-hour metering information**, or has provided estimated **half-hour metering information** under clauses 13.136–13.137A, the **generator** must, by 1200 hours on the 6th **business day** following the day the **generator** provided the **half-hour metering information** to the relevant **grid owner**,—

(a)   supply the missing information; or

(b)   replace incorrect information; or

(c)   replace estimated information with final information."

81   Clause 13.141 revoked (Pricing manager to use certain input information)

Revoke clause 13.141.

82   New clauses 13.141A and 13.141B inserted

After clause 13.141, insert:

"**13.141A Grid owner to calculate adjusted load information**

(1)   A **grid owner** must calculate the adjusted load for each **point of connection** to the **grid** that is advised by the **clearing manager** under clause 13.141B(1) using the following formula:

$$AL = SG + (Xgrid - Igrid)$$

where

AL   is the adjusted load information

SG   is the generation information provided under clauses 13.136–13.138

Xgrid   is the export from the **grid** at the **point of connection**

Igrid   is the injection into the **grid** at the **point of connection**

(2)   If there is no supplied generation then the adjusted load information will be the net flow at the **point of connection** as measured by the **grid owner**.

(3)   Where any of the inputs specified in subclause (1) are unavailable, the **grid owner** may estimate that input.

"13.141B Adjusted load information to be provided to the clearing manager

(1)   The **clearing manager** must advise a **grid owner** of the **points of connection** to the **grid** for which the **grid owner** must provide it with the adjusted load information.

(2)   A **grid owner** must use reasonable endeavours to provide the **clearing manager** with adjusted load information for the relevant **points of connection** to the **grid** advised by the **clearing manager** by 1200 hours on **a trading day** for each **trading period** on the previous **trading day**.

(3)   A **grid owner** and the **clearing manager** must agree the format and method of delivery for the adjusted load information."

83   Clause 13.142 revoked (Pricing manager to make interim prices available unless notice is given of provisional price situation or shortage situation)

Revoke clause 13.142.

84   Clause 13.143 revoked (Grid owners to give written notices of SCADA situation)

Revoke clause 13.143.

85   Clause 13.144 revoked (Pricing manager to give written notice of infeasibility situation, metering situation, high spring washer price situation, or shortage situation)

Revoke clause 13.144.

86   Clause 13.145 replaced (Grid owner to give written notice that estimated data given)

Replace clause 13.145 with:

"13.145 Grid owner to give written notice that estimated data given

(1)   If a **grid owner** gives the **clearing manager** estimated adjusted load information or is unable to provide adjusted load information under clause 13.141B, the **grid owner** must, by the time specified in clause 13.141B(2),—

    (a)   give written notice to the **clearing manager** of any adjusted load information that is estimated or unable to be provided; and

    (b)   give details in the notice of the **grid exit points** and **grid injection points** to which the estimated information relates or is unable to be provided; and

    (c)   specify in the notice the **trading periods** for which the adjusted load information is estimated or unable to be provided for each relevant **grid exit point** and **grid injection point**.

(2)   Where a **grid owner** is unable to deliver the adjusted load information or the adjusted load information contains estimates, the **grid owner** will deliver or provide replacement information within 7 business days following the day the **generator** provided the **half-hour metering information** to the **grid owner**."

87   Clause 13.146 revoked (Requirements if provisional price situation or shortage situation exists)

Revoke clause 13.146.

88   Clause 13.147 revoked (Revised data to be accompanied by written notice)

Revoke clause 13.147.

89   Clause 13.148 revoked (Failure to give revised data and notice not breach)

Revoke clause 13.148.

90   Clause 13.149 revoked (Pricing manager to make provisional prices and provisional reserve prices available if revised data and notice not given regarding provisional price situation arising on business day)

Revoke clause 13.149.

91   Clause 13.150 revoked (Pricing manager to make provisional prices and provisional reserve prices available if revised data and notice not given regarding provisional price situation arising on day other than business day)

Revoke clause 13.150.

92   Clause 13.151 revoked (Data to be used by pricing manager to determine provisional prices and provisional reserve prices)

Revoke clause 13.151.

93   Clause 13.152 revoked (Pricing manager to make interim prices and interim reserve prices available if revised data resolves provisional price situation)

Revoke clause 13.152.

94   Clause 13.153 revoked (Revised data gives rise to provisional price situation)

Revoke clause 13.153.

95   Clause 13.154 revoked (Grid owner, generators, dispatchable load purchasers, and system operator to give revised data if provisional prices and provisional reserve prices have been made available)

Revoke clause 13.154.

96   Clause 13.155 revoked (Revised data to be accompanied by written notice)

Revoke clause 13.155.

97   Clause 13.156 revoked (Pricing manager to make interim prices available after provisional prices and provisional reserve prices are made available unless further provisional price situation arises)

Revoke clause 13.156.

98   Clause 13.157 revoked (Requirements if infeasibility situation or high spring washer price situation exists)

Revoke clause 13.157.

99   Clause 13.158 revoked (Revised data to be accompanied by written notice)

Revoke clause 13.158.

100   Clause 13.159 revoked (Pricing manager to make interim prices available or give written notice that high spring washer price situation exists)

Revoke clause 13.159.

101   Clause 13.160 revoked (Prohibition on notice of high spring washer price situation)

Revoke clause 13.160.

102   Clause 13.161 revoked (System operator to apply high spring washer price relaxation factor and give notice)

Revoke clause 13.161.

103   Clause 13.162 revoked (Pricing manager to make interim prices available)

Revoke clause 13.162.

104   Clause 13.163 revoked (Revised data cannot be given or revised data gives rise to provisional price situation (other than high spring washer price situation))

Revoke clause 13.163.

105   Clause 13.164 revoked (If provisional price situation (other than high spring washer price situation) continues)

Revoke clause 13.164.

106   Clause 13.165 revoked (System operator or grid owner to give written notice to Authority if provisional price situation not resolved)

Revoke clause 13.165.

107 Clause 13.166 revoked (Generator, grid owner, or dispatchable load purchaser to give revised metering information following initial estimate)

Revoke clause 13.166.

108 Clause 13.166A revoked (Pricing manager to recalculate and make interim prices available if infeasibility situation caused by shortage of instantaneous reserve)

Revoke clause 13.166A.

109 Cross heading above clause 13.167 replaced

In the cross heading above clause 13.167, replace "*Interim pricing period*" with "*Publication of interim prices*".

110 Clause 13.167 replaced (Pricing manager to make interim prices available)

Replace clause 13.167 with:

"**13.167 Clearing manager to make interim prices available**

The **clearing manager** must make **interim prices** and **interim reserve prices** for a **trading period** available on **WITS** as soon as practicable after the end of that **trading period**."

111 New cross heading above clause 13.168 inserted

After clause 13.167, insert new cross heading:

"*Pricing error process*".

112 Clause 13.168 replaced (When pricing error may be claimed)

Replace clause 13.168 with:

"**13.168 When pricing error may be claimed or investigated**

After the **clearing manager** makes an **interim price** or **interim reserve price** available on **WITS**, but before the relevant price has become a **final price** or **final reserve price** (as applicable),—

    (a)   a person may make a **pricing error** claim to the **clearing manager** in respect of that price under clause 13.170; and

    (b)   the **clearing manager** may investigate a potential **pricing error** in respect of that price under clause 13.170A."

113 Clause 13.169 revoked (Error claimant materially affected by pricing error)

Revoke clause 13.169.

114 Clause 13.170 replaced (Method and timing for claiming pricing error has occurred)

Replace clause 13.170 with:

"**13.170 Method and timing for claiming pricing error has occurred**

To claim that a **pricing error** has occurred, an error claimant must—

(a)   submit a **pricing error** claim to the **clearing manager** in such manner and form as the **clearing manager** may specify from time to time; and

(b)   include information in its claim to demonstrate—

   (i)   that, except where the error claimant is the **Authority** or **system operator**, the error claimant has been affected by the claimed **pricing error**; and

   (ii)   the basis for the claim that a **pricing error** has occurred; and

   (iii)   the **trading periods** affected by the claimed **pricing error**; and

(c)   comply with paragraphs (a) and (b) no later than 1200 hours on the 1st **business day** following the **trading day** on which the **clearing manager** made available on **WITS** the **interim price** or **interim reserve price** in respect of which the **pricing error** has been claimed."

115 New clause 13.170A inserted (Clearing manager may investigate potential pricing errors)

After clause 13.170 insert:

"**13.170A Clearing manager may investigate potential pricing errors**

(1)   The **clearing manager** may investigate a potential **pricing error**.

(2)   If the **clearing manager** decides to investigate a potential **pricing error**, it must commence the investigation no later than 1200 hours on the 1st **business day** following the **trading day** on which the **clearing manager** made available on **WITS** the **interim price** or **interim reserve price** that is the subject of that investigation."

116 Clause 13.171 revoked (Pricing manager must make final prices available if no pricing error claimed)

Revoke clause 13.171.

117   Clause 13.172 revoked (Effect of pricing error being claimed)

Revoke clause 13.172.

118   Clause 13.173 replaced (Process when pricing error claimed)

Replace clause 13.173 with:

"**13.173 Process when pricing error claim received**

(1)   If the **clearing manager** receives a **pricing error** claim submitted under clause 13.170 by the time prescribed by that clause, the **clearing manager** must, as soon as practicable,—

   (a)   check that the information required by that clause is included in the **pricing error** claim; and

   (b)   confirm to the error claimant that it has received the **pricing error claim**; and

   (c)   either—

      (i)   confirm to the error claimant that the **pricing error** claim contains the required information; or

      (ii)   if the required information is not contained in the **pricing error** claim, request that the error claimant provide the **clearing manager** with the required information.

(2)   The **clearing manager** must, no later than 1300 hours on the 1st **business day** following the **trading day** on which the **clearing manager** made available on **WITS** the **interim price** or **interim reserve price** in respect of which a **pricing error** has been claimed (with such **pricing error** claim having been submitted under clause 13.170 by the time prescribed by that clause), give a written notice on **WITS** and to the **Authority**, any person that has requested notice and the error claimant advising—

   (a)   that a **pricing error** has been claimed; and

   (b)   the name of the error claimant; and

   (c)   the reasons the error claimant has given for the claim that a **pricing error** has occurred; and

   (d)   the **trading periods** that the error claimant claims have been affected by the **pricing error**.

(3)   The **clearing manager** must, no later than 1700 hours on the 2nd **business day** following the **trading day** on which the written notice referred to in subclause (2) was given, provide a report to the **Authority** that includes the following:

(a) whether, in the **clearing manager's** view, a **pricing error** has occurred:

(b) the reasons for the **clearing manager's** view:

(c) a copy of all of the information that the **clearing manager** considered or received in relation to the **pricing error** which has been claimed."

119 New clauses 13.173A to 13.173C inserted

After clause 13.173, insert:

"13.173A Process when pricing error investigation commenced

(1) If the **clearing manager** decides to investigate a potential **pricing error** under clause 13.170A by the time prescribed by that clause the **clearing manager** must, no later than 1300 hours on the 1st **business day** following the **trading day** on which the **clearing manager** made available on **WITS** the **interim price** or **interim reserve price** in respect of which the potential **pricing error** is being investigated, give a written notice on **WITS** and to the **Authority** and any person that has requested notice advising—

   (a) that the **clearing manager** has decided to investigate a potential **pricing error**; and

   (b) the reasons for the investigation; and

   (c) the **trading periods** that the **clearing manager** believes may have been affected by the potential **pricing error**.

(2) The **clearing manager** must, no later than 1700 hours on the 2nd **business day** following the **trading day** on which the written notice referred to in subclause (1) was given, provide a report to the **Authority** that includes the following:

   (a) whether, in the **clearing manager's** view, a **pricing error** has occurred:

   (b) the reasons for the **clearing manager's** view:

   (c) a copy of all of the information that the **clearing manager** considered or received in relation to the potential **pricing error** which was investigated.

"13.173B Clearing manager may request information from error claimant or participant when pricing error claim received or pricing error investigation commenced

After the written notice referred to in clause 13.173(2) or 13.173A(1) is given but prior to the **clearing manager** being required to provide a report to the **Authority** under clauses 13.173(3) or 13.173A(2) (as applicable)—

(a) the **clearing manager** may request that an error claimant or a **participant** provide the **clearing manager** with any information that the **clearing manager** reasonably requires in order to reach a view as to whether a **pricing error** has occurred; and

(b) each error claimant and **participant** must comply with any request made by the **clearing manager** under paragraph (a) within 1 **business day** of the request being received.

"**13.173C Authority to determine whether pricing error has occurred**

(1) No later than 1700 hours on the 2nd **business day** following the **trading day** on which the **Authority** receives a report from the **clearing manager** under clause 13.173(3) or clause 13.173A(2), the **Authority** must determine whether a **pricing error** has occurred.

(2) The **Authority** must, as soon as practicable after making its determination,—

(a) advise the **clearing manager** of the determination in writing; and

(b) give a written notice on **WITS** that includes the following information:

(i) the name of the error claimant (where a pricing error has been claimed):

(ii) in relation to a claim made under clause 13.170, the reasons the error claimant has given for the claim:

(iii) in relation to an investigation commenced by the **clearing manager** under clause 13.170A, the reasons the **clearing manager** has given for the investigation pursuant to clause 13.173A(1)(b):

(iv) the **trading periods** specified in the written notice given on **WITS** under clause 13.173(2) or clause 13.173A(1):

(v) the **Authority**'s determination made under subclause (1):

(vi) the **Authority**'s reasons for its determination:

(vii) in relation to a determination that a **pricing error** has occurred,—

(A) the **trading periods** affected by the **pricing error**; and

(B) the **dispatch prices** and **dispatch reserve prices** to be used to calculate the revised **interim price** or revised **interim reserve price** relating to the **pricing error**."

120 Clause 13.174 revoked (Recommendation to Authority)

Revoke clause 13.174.

121 Clause 13.175 revoked (Authority to accept or reject recommendations)

Revoke clause 13.175.

122 Clause 13.176 revoked (Pricing manager to give written notice)

Revoke clause 13.176.

123 Clause 13.177 replaced (Pricing manager to implement Authority's determination)

Replace clause 13.177 with:

"13.177 Clearing manager to implement Authority's determination

Where the **Authority** advises the **clearing manager** of its determination that a **pricing error** has occurred, the **clearing manager** must, as soon as practicable after receiving the determination,—

(a)   re-calculate the **interim price** or **interim reserve price** affected by the **pricing error** using—

    (i)   the methodology described in clause 13.134A; and

    (ii) the **dispatch prices** and **dispatch reserve prices** specified in the notice given on **WITS** under clause 13.73C(2); and

(b)   make the revised **interim price** or revised **interim reserve price** available on **WITS**."

124 Clause 13.178 replaced (Effect of making recalculated interim prices available)

Replace clause 13.178 with:

"13.178 Further pricing error may be claimed or investigated in respect of revised interim prices

A person may submit a **pricing error** claim to the **clearing manager** under clause 13.170, or the **clearing manager** may decide to investigate a potential **pricing error** under clause 13.170A, in respect of a revised **interim price** or revised **interim reserve price** made available on **WITS** under clause 13.177."

125 New clause 13.178A inserted (Pricing error claim in respect of trading periods prior to 1 November 2022)

After clause 13.178, insert:

"13.178A Pricing error claim in respect of trading periods prior to 1 November 2022

The **pricing error** claim process (including related definitions) that existed in the Code as at 31 October 2022 continues to apply to **trading periods** prior to 1 November 2022, except that the pricing manager's duties under that process are transferred to the **clearing manager**."

126 Clause 13.179 revoked (Timing for resolution of pricing error claim process)

Revoke clause 13.179.

127 Clause 13.180 revoked (Actions Authority may take to resolve pricing error)

Revoke clause 13.180.

128 Clause 13.181 revoked (Obligation to comply with pricing manager)

Revoke clause 13.181.

129 Clause 13.182 revoked (No pricing errors may be claimed after final prices calculated)

Revoke clause 13.182.

130 Cross heading below clause 13.182 replaced

Replace cross heading below clause 13.182 with:

"*Final prices*".

131 New clauses 13.182A and 13.182B inserted

After cross heading "*Making final prices available*", insert:

"**13.182A Interim prices become final prices if no pricing error claimed or investigated**

(1)   This clause applies if, by 1300 hours on the 1st **business day** following the **trading day** on which the **clearing manager** made an **interim price** or **interim reserve price** available on **WITS**, the **clearing manager** has not given a written notice under clause 13.173(2) or clause 13.173A(1) that a **pricing error** has been claimed or a potential **pricing error** is being investigated in respect of that **interim price** or **interim reserve price**.

(2)   If this clause applies, the relevant **interim price** or **interim reserve price** becomes a **final price** or **final reserve price** (as applicable) at 1400 hours on the 1st **business day** following the **trading day** on which the **clearing manager** made the **interim price** or **interim reserve price** available on **WITS**.

"**13.182B Interim prices become final prices if no pricing error exists**

(1) This clause applies if the **clearing manager** has given a written notice under clause 13.173(2) or clause 13.173A(1) that a **pricing error** has been claimed or a potential **pricing error** is being investigated**.**

(2) If this clause applies, the relevant **interim price** or **interim reserve price** becomes a **final price** or **final reserve price** (as applicable) as soon as practicable after the **Authority** has made available on **WITS** a notice under clause 13.173C(2) advising that no **pricing error** has occurred."

132   Clause 13.183 replaced (Pricing manager must not make recalculated final prices available)

Replace clause 13.183 with:

"**13.183 Final prices not to change**

Unless the **Authority** directs otherwise under clause 5.2, **final prices** and **final reserve prices** cannot be changed, despite the fact that a **final price** or **final reserve price** may contain an error."

133   Clause 13.184 replaced (Authority may order delay in making final prices available)

Replace clause 13.184 with:

"**13.184 Authority may order delay of interim prices becoming final prices**

(1) Despite clauses 13.134A to 13.191, the **Authority** may make available on **WITS** a notice preventing an **interim price** or **interim reserve price** from becoming a **final price** or **final reserve price** (as applicable) until such time as the **Authority** specifies in the notice.

(2) If the **Authority** makes a notice available on **WITS** under subclause (1), the **clearing manager** must not make available on **WITS** the relevant **final price** or **final reserve price** until the time specified in the notice."

134   Clause 13.185 revoked (Final prices for more than 1 trading day)

Revoke clause 13.185.

135   Clause 13.186 revoked (Revised data for more than 1 trading day)

Revoke clause 13.186.

136 Clause 13.187 revoked (Daylight saving to be observed)

Revoke clause 13.187.

137 Clause 13.188 revoked (Reconciliation manager to publish annual consumption list)

Revoke clause 13.188.

138 Clause 13.189 replaced (System operator to give pricing manager and Authority list of model variable values)

Replace clause 13.189 with:

"**13.189 System operator to give Authority list of model variable values**

(1)   If the value of the model parameters listed in Schedule 13.2 are to be changed, the **system operator** must immediately give the **Authority** an updated list of values in writing.

(2)   The **Authority** must acknowledge receipt of the updated list in writing.

(3)   Changes specified in any updated list must become effective from a date specified by the **system operator**, subject to agreement in writing from the **Authority**."

139 Clause 13.189A revoked (Pricing manager to give clearing manager information about dispatch-capable load station from schedule of final prices)

Revoke clause 13.189A.

140 Clause 13.191 replaced (Backup procedures if WITS or approved system is unavailable)

Replace clause 13.191 with:

"**13.191 Backup procedures if WITS or approved system is unavailable**

(1)   If **WITS** or the **approved system** is unavailable for the purposes of giving information or making information available under clauses 13.134A to 13.191, each **grid owner** and the **WITS manager** must follow the backup procedures specified by the **WITS manager**.

(2)   The backup procedures referred to in subclause (1) must be specified by the **WITS manager** following consultation with the **Authority**, **generators**, **purchasers**, **ancillary service agents**, the **grid owners** and the **clearing manager**."

141 Clause 13.192 replaced (Constrained off situations may occur)

Replace clause 13.192 with:

"**13.192 Constrained off situations may occur**

(1) A **constrained off situation** occurs when—

    (a) a **generator** (other than a **dispatch notification generator**) is not given a **dispatch instruction**, or is not dispatched by the **system operator** to the level expected based on the **generator's offer** compared to the relevant **final price**, for a **trading period** despite the **generator** having offered **electricity** at a price below the **final price** for that **trading period** at the relevant **grid injection point**; or

    (b) in relation to a **block dispatch group** or **station dispatch group**, a **generator** (other than a **dispatch notification generator**) is not given a **dispatch instruction**, or is not dispatched by the **system operator** to the level expected based on the **generator's offer** compared to the **final price**, for the **trading period**, despite the **generator** having offered **electricity** in the **trading period** at a **grid injection point** within the **block dispatch group** or **station dispatch group** below the **final price** at the relevant **grid injection point** in that **trading period**, and the aggregate quantity of those **offers** is greater than the dispatched quantity calculated in accordance with clause 13.194; or

    (c) all load to which a **nominated dispatch bid** (other than a **dispatch notification purchaser bid**) applies is not **dispatched**, despite the price in the **nominated dispatch bid** being above the **final price** at the relevant **GXP**.

(2) In this clause,—

    (a) an **offer** made by a **generator** means the last **offer** made by the **generator** which applied during the relevant **trading period**; and

    (b) a **bid** made by a **purchaser** means the last **bid** made by the **purchaser** which applied during the relevant **trading period**."

142 Clause 13.193 amended (Determining affected price bands for block dispatch groups and station dispatch groups)

(1) In clause 13.193(b), replace "or the dispatched quantity" with "or the **dispatched quantity**".

(2) In clause 13.193, insert as subclause (2):

"(2) In this clause, an **offer** made by a **generator** means the last **offer** made by the **generator** which applied during the relevant **trading period**."

143 Clause 13.194 replaced (Clearing manager to calculate constrained off amounts)

Replace clause 13.194 with:

"**13.194 Clearing manager to calculate constrained off amounts**

(1)   Despite clause 13.193, if a **constrained off situation** occurs, in relation to a **generator**, during a **trading period**, the **clearing manager** must calculate the **constrained off amounts** for each **generator**, for each affected price band, using the following formula:

$$COF_g = Q_{cof} * (P_f - P_o)$$

where

COF_g	is the **constrained off amount** for a **generator**
Q_{cof}	is the **dispatched** quantity in **MWh** (calculated under subclause (3)) from that price band in the **offer** that was constrained off during a **trading period**, or the positive difference between the **reconciliation information** and the **scheduled quantity**, whichever is less
P_o	is the price **offered** for that price band by that **generator** for the quantity of **electricity** from the **generating plant** that was constrained off
P_f	is the **final price** for that **trading period** at the **grid injection point**.

(2)   If a **constrained off situation** occurs in relation to a **dispatch-capable load station** during a **trading period**, the **clearing manager** must calculate the **constrained off amounts** for each **dispatch-capable load station**, for each affected **nominated dispatch bid** price band, using the following formula:

$$ConOffAmt_{disp} = ConOffQ * (P_b - P_f)$$

where

$ConOffAmt_{disp}$	is the **constrained off amount** for a **dispatch-capable load station** for the **nominated dispatch bid** price band
$ConOffQ$	is the amount in **MWh** by which Q_b exceeds the highest of Q_{disp} and Q_{rec}

where

Q_b	is the quantity, in **MWh**, in the **nominated dispatch bid** price band
Q_{disp}	is the **dispatched** quantity, in **MWh** in the **trading period**, calculated under subclause (3), **dispatched** for the **nominated dispatch bid** price band in the **trading period**

Q_{rec} is the **reconciled quantity** provided by the **reconciliation manager** under clause 15.20C allocated by the **clearing manager** to the **nominated dispatch bid** price band in the **trading period**

P_b is the price bid for the **nominated dispatch bid** price band for the **dispatch-capable load station** that was constrained off

P_f is the **final price** for the **trading period** at the **grid exit point**.

(3) For the purposes of clauses 13.192 to 13.201, **dispatched** quantity must be calculated taking into account—

  (a) the quantity in **MW** recorded in the log kept by the **system operator** in accordance with clause 13.76 and, if required, the **clearing manager** must aggregate such quantities for—

   (i) **generating stations** or **generating units** in the relevant **station dispatch group**; or

   (ii) **generating units**, if the **clearing manager** requires the **dispatched** quantity to be determined on a **grid injection point** basis; and

  (b) for an **offer**, the ramp rate applying to that **constrained off situation** that is specified in the **offer** submitted by that **generator**, or—

   (i) for a **block dispatch group** or a **station dispatch group**; or

   (ii) for **generating units**, if the **clearing manager** requires the **dispatched** quantity to be determined on a **grid injection point** basis—

  the fastest of the ramp rates applying to that **constrained off situation** that are specified in the **offers** submitted by the **generator** in that **block dispatch group**, that **station dispatch group** or those **generating units electrically connected** to the relevant **grid injection point** (as the case may be); and

  (c) plus or minus the **MW** bandwidth applicable for each **generator** affected by a **frequency keeping** requirement as advised by the **system operator** to the **clearing manager**, and, if required, the **clearing manager** must aggregate the **MW** bandwidth applicable to determine the **MW** bandwidth on a **grid injection point** basis.

(4) In this clause,—

  (a) an **offer** made by a **generator** means the last **offer** made by the **generator** which applied during the relevant **trading period**; and

  (b) a **bid** made by a **purchaser** means the last **bid** made by the **purchaser** which applied during the relevant **trading period**.”

144 Clause 13.196 amended (Calculation of constrained off amounts attributable to system operator)

In clause 13.196, replace "clauses 13.76 to 13.80" with "clause 13.76" in each place.

145 Clause 13.201A amended (Dispatched purchasers entitled to constrained off compensation and purchasers to pay constrained off compensation)

In clause 13.201A(1),—

(a)   replace "clause 13.192(c)" with "clause 13.192(1)(c)"; and

(b)   replace "clause 13.194(1A)" with "clause 13.194(2)".

146 Clause 13.202 replaced (Constrained on situations may occur)

Replace clause 13.202 with:

"**13.202 Constrained on situations may occur**

(1)   A **constrained on situation** occurs when—

    (a)   a **generator** is given a **dispatch instruction** by the **system operator** and the price **offered** by the **generator** for that **dispatched** quantity of **electricity** at the relevant **grid injection point** and **trading period** is higher than the **final price** at that **grid injection point** in the relevant **trading period**; or

    (b)   in relation to a **block dispatch group** or **station dispatch group**, a **generator** is given a **dispatch instruction** by the **system operator** and the price **offered** by the **generator** for that aggregate **dispatched** quantity of **electricity** from that **block dispatch group** or **station dispatch group** in the relevant **trading period** is higher than the **final price** in the relevant **trading period**; or

    (c)   an **ancillary service agent** is given a **dispatch instruction** by the **system operator** and the price **offered** by the **ancillary service agent** for the **dispatched instantaneous reserve** in the relevant **trading period** is higher than the **final reserve price** of the **dispatched instantaneous reserve** in the relevant **trading period**; or

    (d)   any load to which a **nominated dispatch bid** (other than a **dispatch notification purchaser bid**) applies is **dispatched**, despite the price in the **nominated dispatch bid** being below the **final price** at the relevant **GXP**.

(2)   In this clause,—

    (a)   an **offer** made by a **generator** means the last **offer** made by the **generator** which applied during the relevant **trading period**; and

(b) a **bid** made by a **purchaser** means the last **bid** made by the **purchaser** which applied during the relevant **trading period**."

147 Clause 13.203 amended (Determining affected price bands for block dispatch groups or station dispatch groups)

(1) In clause 13.203(b), replace "**pricing manager**" with "**clearing manager**".

(2) In clause 13.203, insert as subclause (2):

"(2) In this clause, an **offer** made by a **generator** means the last **offer** made by the **generator** which applied during the relevant **trading period**."

148 Clause 13.204 amended (Calculation of constrained on amounts)

(1) In clause 13.204(1)(a), replace "dispatched quantity in **MWh** (calculated as set out below)" with "**dispatched** quantity in **MWh** (calculated under paragraph (b))".

(2) Replace clause 13.204(1)(aa) with:

"(aa) the **clearing manager** must calculate the **constrained on amounts** for a **constrained on situation** described in clause 13.202(1)(d) for each **dispatch-capable load station** for each affected **nominated dispatch bid** price band, using the following formula:

$$\text{ConOnAmt} = \text{ConOnQ}* (P_f - P_b)$$

where

ConOnAmt   is the **constrained on amount** for a **dispatch-capable load station** for the **nominated dispatch bid** price band

ConOnQ   is the amount in **MWh** which is the smaller of Q_{disp} and Q_{rec}

where

Q_{disp} is the **dispatched** quantity in **MWh** in the **trading period**, calculated under paragraph (b), for the **nominated dispatch bid** price band in the **trading period**

Q_{rec} is the **reconciled quantity** provided by the **reconciliation manager** under clause 15.20C allocated by the **clearing manager** to the **nominated dispatch bid** price band in the **trading period**

P_f is the **final price** for the **trading period** at the **grid exit point**

P_b is the price bid for the **nominated dispatch bid** price band for the **dispatch-capable load station** that was constrained on; and"

(3) In clause 13.204(1)(b),—

(a)   replace "dispatched" with "**dispatched**" in each place; and

(b)   replace "clauses 13.76 to 13.80" with "clause 13.76".

(4)   In clause 13.204(1)(c),—

(a)   replace "clause 13.202(c)" with "clause 13.202(1)(c)"; and

(b)   replace "dispatched quantity of **instantaneous reserve** in **MW** (calculated as set out below)" with "**dispatched** quantity of **instantaneous reserve** in **MW** (calculated under paragraph (d))".

(5)   In clause 13.204(1)(d), replace "dispatched" with "**dispatched**" in each place.

(6)   After clause 13.204(2), insert:

"(3)   In this clause,—

(a)   an **offer** made by a **generator** means the last **offer** made by the **generator** which applied during the relevant **trading period**; and

(b)   a **bid** made by a **purchaser** means the last **bid** made by the **purchaser** which applied during the relevant **trading period**."

149   Clause 13.205 amended (Calculation of constrained off amounts attributable to system operator)

(1)   In clause 13.205, replace "clauses 13.76 to 13.80" with "clause 13.76" in each place.

(2)   In clause 13.205(c), replace "clause 13.76 to 13.80" with "clause 13.76".

150   Cross heading above clause 13.213 revoked

Revoke cross heading "*Pricing manager's reporting obligations*" above clause 13.213.

151   Clause 13.215 revoked (Generators and purchasers have right to information concerning pricing manager's action)

Revoke clause 13.215.

152   Clause 13.221 amended (Node and grid zone area information)

In clause 13.221(1)(a) and (b), replace "**pricing manager**" with "**clearing manager**" in each place.

153   Heading to Schedule 13.1 amended

After the heading to Schedule 13.1, in the list of incorporating provisions, replace "**13.38, 13.64, and 13.170**" with "**13.38 and 13.64**".

154   Schedule 13.1, Form 1 amended

In Schedule 13.1, Form 1, after "Maximum Generator Ramp Down Rate:

_____**MW**/hr", insert:

"Offer is submitted by dispatch notification generator: ☐".

155   Schedule 13.1, Form 4 amended

In Schedule 13.1, Form 4, after "Dispatch-capable load station identifier (if applicable): _____", insert:

"Bid is submitted by dispatch notification purchaser: ☐".

156   Schedule 13.1, Form 6 amended

In Schedule 13.1, Form 6, after "Grid Exit Point or interruptible load group GXP: _____", insert:

"Dispatch-capable load station identifier (if applicable): _____".

157   Schedule 13.1, Form 9 revoked

In Schedule 13.1, revoke Form 9.

158   Heading to Schedule 13.2 amended

After the heading to Schedule 13.2, in the list of incorporating provisions, replace "**cl 13.189**" with "**cls 13.58AA and 13.189**".

159   Schedule 13.2, clause 1 amended

In Schedule 13.2, clause 1, replace "**pricing manager**" with "**Authority**".

160   Heading to Schedule 13.3 amended

After the heading to Schedule 13.3, in the list of incorporating provisions, replace "**13.69, 13.83, 13.87, 13.88, 13.90, 13.135,**" with "**13.58AA, 13.58A, 13.69A, 13.69AA,**".

161 Schedule 13.3, clause 1 amended

(1)   In Schedule 13.3, revoke clause 1(2).

(2)   In Schedule 13.3, clause 1(2A), delete "Despite subclause (2),".

(3)   In Schedule 13.3, clause 1(4)(c), delete "; and".

(4)   In Schedule 13.3, revoke clause 1(4)(d) to (g).

162 Schedule 13.3, clause 2 revoked

In Schedule 13.3, revoke clause 2.

163 Schedule 13.3, clause 3 amended

(1)   In Schedule 13.3, clause 3, delete "; and" in each place.

(2)   In Schedule 13.3, clause 3(c), replace "clause 7" with "clause 13.69B."

(3)   In Schedule 13.3, revoke clause 3(d) to (e).

164 Schedule 13.3, clause 6 revoked

In Schedule 13.3, revoke clause 6.

165 Schedule 13.3, clause 7 revoked

In Schedule 13.3, revoke clause 7.

166 Schedule 13.3, clause 8 amended

(1)   In Schedule 13.3, clause 8(1), replace the definition of $D_{i,j}$ with:

"$D_{i,j}$ is the scheduled **demand** corresponding to price band i of the **bid** for **purchaser** j where the relevant **bids** used here are formed from a combination of the following, as appropriate to the schedule being calculated:

(a) **nominated bids**:

(b) the forecast prepared under clause 13.7A(1):

(c) **difference bids** (if **difference bids** are used, the quantities must be added or subtracted, as appropriate, from the forecast prepared under clause 13.7A(1)):

(d) the **system operator's** expectation of the profile of **demand** during the

relevant period covered by the schedule being calculated:"

(2) In Schedule 13.3, clause 8(1), after "is the **bid** prices corresponding to price band *i* of the **bid** for **purchaser** *j*", insert "where the relevant **bid** prices used here are formed from a combination of the following, as appropriate to the schedule being calculated:

(a) **nominated bids**:

(b) the values assigned under clause 13.58AA(1)."

167 Schedule 13.3, clause 9 amended

In Schedule 13.3, clause 9, delete "or the **pricing manager** (as the case may be)".

168 Schedule 13.3, clause 9A amended

In Schedule 13.3, revoke clause 9A(c)(v).

169 Schedule 13.3, clause 11 amended

In Schedule 13.3, clause 11(c), delete "provided that the capacity of transformers through which **electricity** is supplied to a **grid exit point** is not included in the model unless the transformer may carry flows of **electricity** other than **offtakes** from that **grid exit point**."

170 Schedule 13.3, clause 12 amended

In Schedule 13.3, after clause 12(4), insert:

"(5) The modelling system must use the price and quantity values set out in the table in clause 13.58AA(3) for the following model parameters:

(a) **fast instantaneous reserve** contingent event risk violation:

(b) **sustained instantaneous reserve** contingent event risk violation."

171 Schedule 13.3, clause 13 amended

(1) Replace Schedule 13.3, clause 13(1) with:

"(1) As soon as practicable after each **price-responsive schedule** and **non-response schedule** has been completed and each **dispatch schedule** has been implemented, the **system operator** must give notice on **WITS** to **participants** of any adjustments required to the **price-responsive schedule, non-response schedule** or **dispatch schedule** (as the case may be) to meet the **dispatch objective**, including adjustments for—

(a) **voltage support**; and

(b)   **frequency keeping** reserves; and

(c)   over-frequency arming; and

(d)   additional transmission **constraints**; and

(e)   **instantaneous reserve**.”

(2)   Revoke Schedule 13.3, clauses 13(3) and (4).

172   Schedule 13.3, clause 15 revoked

Revoke Schedule 13.3, clause 15.

173   Schedule 13.3, clause 16 amended

(1)   Replace Schedule 13.3, clause 16(2) with:

“(2)   The modelling system must assign—

(a)   a price for **electricity** at each **grid injection point** and **grid exit point** that is **electrically disconnected** in the modelling system; and

(b)   a 0 price for **electricity** at each **grid injection point** and **grid exit point** that is subject to a surplus bus generation infeasibility.”

(2)   Replace Schedule 13.3, clause 16(3) with:

“(3)   The prices described in subclause (1) must be used—

(a)   for a **price-responsive schedule** or a **non-response schedule**, as—

(i)   **forecast prices**; and

(ii)   **forecast reserve prices**:

(b)   for a **dispatch schedule** or for preparing the information referred to in Schedule 13.3B as—

(i)   **dispatch prices**; and

(ii)   **dispatch reserve prices**.

174   Schedule 13.3, clause 17 amended

(1)   After Schedule 13.3, clause 17(d)(ii), insert:

“(iii)   where the **system operator** has agreed to model a **nominated dispatch bid** for a **dispatch-capable load station** as a **binary load**, must only be scheduled to purchase the full quantity of **MW** specified in a price band in the **nominated**

dispatch bid (and not a quantity of **electricity** that corresponds to only part of the **MW** specified in a price band in the **nominated dispatch bid**) or 0 **MW**. This subparagraph applies despite anything in subparagraphs (i) and (ii); and"

(2)   After Schedule 13.3, clause 17(ea) insert:

"(eb) subject to the obligations of the **system operator** described in clause 13, a **purchaser** at a **conforming GXP** that does not submit a **difference bid** in relation to the **GXP**—

   (i)   must be scheduled to purchase a quantity of **electricity** from a price band if the price determined by the modelling system at the **reference point** multiplied by the relevant marginal location factor at the **grid exit point** is less than the relevant scarcity price band as described in clause 13.58AA(3); and

   (ii)   must not be scheduled to purchase a quantity of **electricity** from a price band if the price determined by the modelling system at the **reference point** multiplied by the relevant marginal location factor at the **grid exit point** is greater than the relevant scarcity price band as described in clause 13.58AA(3); and".

175   Schedule 13.3A revoked

Revoke Schedule 13.3A.

176   New Schedule 13.3AA inserted

After Schedule 13.3A, insert the Schedule 13.3AA set out in Schedule 1 of this amendment.

177   New Schedule 13.3B inserted

After Schedule 13.3AA, insert the Schedule 13.3B set out in Schedule 2 of this amendment.

178   Heading to Schedule 13.8 amended

In the heading to Schedule 13.8, in the list of incorporating provisions, after "**cl 1.1, 13.3A, 13.3B**" insert "**and 13.3E**".

179   Schedule 13.8, clause 1 amended

After Schedule 13.3, clause 1(1)(b) insert:

"(ba)   specify whether the applicant intends to operate the device or group of devices as a **dispatch notification purchaser**; and".

180   Schedule 13.8, clause 1A inserted

After Schedule 13.8, clause 1, insert:

"1A   Change to purchaser type

A **dispatchable load purchaser** may, with the approval of the **system operator** provided in accordance with the application process specified in this Schedule, change from operating a **dispatch-capable load station** as a **dispatchable load purchaser** (that is not a **dispatch notification purchaser**) to operating the **dispatch-capable load station** as a **dispatch notification purchaser**, or vice versa."

181   Schedule 13.8, clause 2 amended

In Schedule 13.8, revoke clause 2(b)(iii).

182   Schedule 13.8, clause 3 amended

(1)   In Schedule 13.8, clause 3(1)(b)(iii), after "**dispatch instructions**" insert "or **dispatch notifications** (as the case may be)".

(2)   In Schedule 13.8, clause 3(1)(c), after "**dispatch instruction**" insert "or **dispatch notification** (as the case may be)".

(3)   In Schedule 13.8, clause 3(1)(d), after "**dispatch instruction**" insert "or **dispatch notification** (as the case may be)".

(4)   In Schedule 13.8, clause 3(2), replace "In making a decision" with "When considering the matters".

183   Schedule 13.8, clause 11 amended

In Schedule 13.8, clause 11, replace "a **dispatchable load purchaser's** approval" with "an approval under this Schedule".

184   Clause 14.10 amended (Amounts owing for electricity)

(1)   In clauses 14.10(1) and (2), delete "determined by the **pricing manager**" in each place.

(2)   In clause 14.10(4), replace "13.135 and 13.171 to 13.185" with "13.182A to 13.184".

185   Clause 14.16 amended (Calculation of loss and constraint excess)

In clause 14.16(3), replace "**pricing manager**" with "**system operator**".

186   Clause 14.71 amended (Clearing manager to make block dispatch settlement differences available)

In clause 14.71(2)(a), replace "clauses 13.76 to 13.80" with "clause 13.76".

187   Schedule 14.3, clause 2 amended

(1)   In Schedule 14.3, clause 2(1), insert in their appropriate alphabetical order:

"**dispatch interval** means the period, within a **trading period**, during which a **dispatch instruction** issued by the **system operator** remains in effect"

"**dispatch schedule** also includes a **price-responsive schedule**, when it is used to calculate final prices in accordance with clause 13.134A".

(2)   In Schedule 14.3, clause 2(1) revoke the definition of **final pricing schedule**.

(3)   In Schedule 14.3, clause 2(1), definition of **scheduled**, replace "**final pricing schedule**" with "**dispatch schedule**".

(4)   In Schedule 14.3, clause 2(1), definition of **shadow price**, replace "**final pricing schedule**" with "**dispatch schedule**".

188   Schedule 14.3, clause 6 amended

(1)   In Schedule 14.3, clause 6(1), (3)(a) and (3)(e), replace "**trading period**" with "**dispatch interval**" in each place.

(2)   In Schedule 14.3, clause 6(1), replace "**input information** or revised data used to produce the **final pricing schedule**" with "inputs to the **dispatch schedule** described in clause 13.69B or clause 13.58A (as applicable)".

189   Schedule 14.3, clause 7 amended

In Schedule 14.3, clause 7(1), (3) and (4), replace "**trading period**" with "**dispatch interval**" in each place.

190 Schedule 14.3, clause 8 amended

(1) In Schedule 14.3, clause 8(1), replace "**trading period**" with "**dispatch interval**".

(2) In Schedule 14.3, clause 8(2), (4)(a) and (4)(b), replace "**final pricing schedule**" with "**dispatch schedule** relating to the **dispatch interval**" in each place.

191 Schedule 14.3, clause 9 replaced

Replace Schedule 14.3, clause 9 with:

"**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 **dispatch schedule** relating to each **dispatch interval**.

(2) The HVDC **loss and constraint excess** to be applied to the settlement of **FTRs** for each **dispatch interval** of the relevant **billing period** must be calculated in accordance with the following formula:

$$\max\left[0, \sum_{n(NI)} price_n \times \left(\sum_{l \in R_{HVDC}(n)} \left(HVDCLinkFlow_l - HVDCLinkLosses_l\right) - \sum_{l \in S_{HVDC}(n)} HVDCLinkFlow_l\right) + \sum_{n(SI)} price_n \times \left(\sum_{l \in R_{HVDC}(n)} \left(HVDCLinkFlow_l - HVDCLinkLosses_l\right) - \sum_{l \in S_{HVDC}(n)} HVDCLinkFlow_l\right)\right] \times \frac{IntervalDuration}{3600}$$

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**
IntervalDuration	is the duration of the **dispatch interval** in seconds

(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:

$$AssignedCapacity_k \times ShadowPrice_k \times \frac{IntervalDuration}{3600}$$

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
IntervalDuration	is the duration of the **dispatch interval** in seconds

(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:

$$AssignedCapacity_v \times ShadowPrice_v \times \frac{IntervalDuration}{3600}$$

where

$AssignedCapacity_v$	is the portion of the capacity of the **RHS** of **branch constraint** or **mixed constraint** v assigned under clause 8(1)

ShadowPrice$_v$	is the **shadow price** of **branch constraint** or **mixed constraint** v
IntervalDuration	is the duration of the **dispatch interval** in seconds

(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:

$$\min\left(ACLineFlowBlock_{k,j}, AssignedCapacity_{k,j}\right) \times ReceivingEndPrice_k$$

$$\times \left(ACLineLossFactor_{k,m\,arg} - ACLineLossFactor_{k,j}\right) \times \frac{IntervalDuration}{3600}$$

where

$$ACLineLossFactor_{k,m\,arg} = \min\left(ACLineLossFactor_{k,j}\right) \quad \text{for which}$$

$$ACLineFlowBlock_{k,j} < ACLineLossMW_{k,j}$$

ACLineFlowBlock$_{k,j}$	is the **MW** flow on the jth 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$_{k,j}$	is the portion of the capacity of the jth 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 jth block of the loss curve of **AC line** k
ACLineLossMW$_{k,j}$	is the **MW** capacity of the jth block of the loss curve of **AC line** k
IntervalDuration	is the duration of the **dispatch interval** in seconds

(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 **dispatch interval** of the **billing period**; and

   (b) determining the sum of the amounts calculated in accordance with paragraph (a) for all **dispatch intervals** of the **billing period**."

192 Clause 15.15 amended (Notice of points of connection subject to outages or alternative supply)

(1) In clause 15.15(a) replace "**system operator**" with "**WITS manager**".

(2) In clause 15(a)(i), after "connected to it in the" insert "**system operator's**".

(3) In clause 15.15(a)(ii),—

   (a) after "connected to it in the" insert "**system operator's**";

   (b) delete "; and".

(4) Revoke clause 15.15(b).

<div align="center">

Schedule 1

New Schedule 13.3AA inserted

Schedule 13.3AA cls 13.69AA and 13.69B

Managing an unsupplied demand situation in the dispatch schedule

</div>

1   **Contents of this Schedule**
This Schedule sets out the processes by which the **system operator**—
(a)   assigns price and quantity values as specified in clause 13.69AA:
(b)   adjusts the expected profile of **demand** in accordance with clause 13.69B(1)(d)(i) used in the preparation of the **dispatch schedule** under clause 13.69A.

2   **Calculating unsupplied demand quantity and price values**
(1)   For each **dispatch schedule** prepared under clause 13.69A, the **system operator** must assign the price and quantity values specified by clause 13.69AA to all non-dispatchable **demand** according to the methodology in subclause (3).
(2)   The methodology in subclause (3) applies at each **GXP** that is—
(a)   not the subject of a **nominated dispatch bid**; and
(b)   subject to a **nominated non-dispatch bid**.
(3)   The methodology for calculating the quantity of **demand** for each price tranche is—

$$demand\ (t) = demand\ (GXP)\ x\ fraction\ (T)$$

where

demand (t)   is the **demand** for one of the tranches specified by clause 13.58AA(2)

demand (GXP)   is the total non-dispatchable **demand** at the **GXP**

fraction (T)   is the percentage of the relevant **demand** tranche specified by clause 13.58AA(2).

3   **Adjusting expected profile of demand for demand that was unable to be supplied**
(1)   As soon as practicable after the **system operator** instructs the **electrical disconnection** of **demand** in accordance with Schedule 8.3, Technical Code B, clause 6(1)(d) or 6(2)(d), the **system operator** must—
(a)   calculate and record the **demand** limit for each relevant **GXP**; and
(b)   record the Short-Term Load Forecast values for the relevant load forecast regions for all available 5-minute market intervals in the future, being the linear interpolation across time of the load forecast prepared under clause 13.7A.

(2)   After the **system operator** has instructed the **electrical disconnection** of **demand** described in subclause (1), the expected profile of **demand** used in the **dispatch schedule**, for the purposes of calculating **dispatch prices**, is—

expected profile of demand (GXP) = current GXP demand + unsupplied demand (GXP)

where

current GXP demand   is the **demand** measured according to the information provided by the **grid owner** under clause 13.69AAA, or an appropriate substitute where information under clause 13.69AAA is unavailable

unsupplied demand (GXP)   is the quantity calculated in subclause (3).

(3)   The **system operator** must apply the following calculation to determine the quantity of **demand** that was unable to be supplied for the market interval 'i':

unsupplied demand (GXP, i) = predicted demand (GXP, i) – demand limit (GXP, i)

where

predicted demand (GXP, i)   is the quantity calculated in subclause (4)

demand limit (GXP, i)   is the limit recorded under subclause (1).

(4)   The predicted demand referred to in subclause (3) is the amount of **demand** that was expected to be present at a given **conforming GXP** in interval 'i' absent the instruction to **electrically disconnect demand** referred to in subclause (1), estimated at the time of the instruction referred to in subclause (1), calculated as follows:

predicted demand (GXP, i) = current GXP demand x [STLF(i) / STLF (0)]

where

current GXP demand   is the amount of **demand** at a given **GXP** at the time of the recording of the instruction referred to in subclause (1), determined according to the **system operator's** methodology made available under the **policy statement**

market interval '*i*'   is the period of time of 5-minute duration for which the relevant **dispatch schedule** is calculating the expected profile of **demand**

STLF(i)   is the Short-Term Load Forecast value for the relevant load forecast region in which the **GXP** is located, for market interval '*i*'

STLF(0)   is the Short-Term Load Forecast for the relevant load forecast region in which the **GXP** is located, for the market interval in which the instruction referred to in subclause (1) was recorded

in the case of a **GXP** which is subject to a **nominated non-dispatch bid**, *[STLF(i) / STLF(0)]* = 1.

New Schedule 13.3B inserted

Schedule 13.3B   cls 13.59, 13.69C, 13.104 and 13.104A

Information for schedules prepared by system operator

1   Purpose of this schedule

(1)   This Schedule sets out the information required to be contained in, and/or published by, the **dispatch schedule**, **price-responsive schedule** and **non-response schedule**.

(2)   Contents of schedules, columns 1, 2, and 3, are those values derived by the modelling system using the input information listed in clause 13.69B for the **dispatch schedule** and clause 13.58A for the **price-responsive schedule** and **non-response schedule**.

(3)   Published information, columns 4, 5, and 6, are those values that are required to be transmitted by the **system operator** to the **WITS manager** for public consumption at the time the schedules are published.

		1	2	3	4	5	6
Information required		**Contents of schedules**			**To be published**		
Row	**Schedule**	**PRS**	**NRS**	**Dispatch**	**PRS**	**NRS**	**Dispatch**
1	scheduled average level of **electricity** output for each **generating plant** or **generating unit**	X	X				
2	scheduled level of **electricity** output for each **generating plant** or **generating unit**			X			
3	scheduled average level of **instantaneous reserve** for each **generating plant** or **generating unit**	X	X				
4	scheduled level of **instantaneous reserve** for each **generating plant** or **generating unit**			X			
5	scheduled average level of	X	X				

Row	Schedule	Contents of schedules			To be published		
		1 PRS	**2** NRS	**3** Dispatch	**4** PRS	**5** NRS	**6** Dispatch
	interruptible load for each **ancillary service agent** for each **grid exit point** or **interruptible load group grid exit point**						
6	scheduled level of **interruptible load** for each **ancillary service agent** for each **grid exit point** or **interruptible load group grid exit point**			X			
7	scheduled **frequency keeping units** for each **island**	X	X			X	
8	expected average level of **demand** at each **grid exit point**	X	X		X	X	
9	expected level of **demand** at each **grid exit point**			X			X
10	**forecast prices**	X	X		X	X	
11	**dispatch prices**			X			X
12	**forecast reserve prices**	X	X		X	X	
13	**dispatch reserve prices**			X			X
14	start time (to the nearest second) for each **dispatch price** and each **dispatch reserve price**						X
15	**forecast marginal location factors** for each **grid injection point** and each **grid exit point**	X	X		X	X	
16	**dispatch marginal location factors** for each **grid injection point** and each **grid exit point**			X			X
17	scheduled largest single	X	X	X	X	X	X

		1	2	3	4	5	6
Information required		**Contents of schedules**			**To be published**		
Row	Schedule	PRS	NRS	Dispatch	PRS	NRS	Dispatch
	reserve risk in each **island**						
18	scheduled number of reserve risks for each **island**	X	X	X	X	X	X
19	for each **island**, the scheduled number of reserve risks subject to the **fast instantaneous reserve** contingent event risk violation and **sustained instantaneous** reserve contingent event risk violation model parameters set out in Schedule 13.2	X	X	X	X	X	X
20	scheduled level of **fast instantaneous reserve** and **sustained instantaneous reserve** in each **island**	X	X	X	X	X	X
21	separate stacks of **reserve offers** for **fast instantaneous reserve** and **sustained instantaneous reserve** for each **island** (ranking in price order from lowest to highest)	X	X	X	X	X	X
22	separate stacks of all **reserve offers** for **fast instantaneous reserve** and **sustained instantaneous reserve** for each **island** (ranking in price order from lowest to highest) adjusted for the expected level of energy output for each **generating plant** or **generating unit**	X	X	X	X	X	X
23	scheduled **HVDC component flows**	X	X	X	X	X	X
24	scheduled **HVDC risk offsets**	X	X	X	X	X	X
25	**expected near-constraint arc flows**	X	X	X	X	X	X

		1	2	3	4	5	6
Information required		**Contents of schedules**			**To be published**		
Row	Schedule	PRS	NRS	Dispatch	PRS	NRS	Dispatch
26	**expected near-group-constraint arc flows**	X	X	X	X	X	X
27	**group constraint formulas** relating to the **expected near-group-constraint arc flows**	X	X	X	X	X	X
28	scheduled deficit quantities for energy, **fast instantaneous reserve**, and **sustained instantaneous reserve** (if any)	X	X	X	X	X	X
29	whether the **HVDC link** is out of service	X	X	X	X	X	X
30	quantity of **demand** for which price and quantity values have been assigned by the **system operator** under clause 13.58AA(1)(a)	X					
31	quantity of **demand** for which price and quantity values have been assigned by the **system operator** under clause 13.58AA(1)(b)		X				
32	quantity of **demand** for which price and quantity values have been assigned by the **system operator** under clause 13.69AA(1)(a)			X			
33	quantities for each **bid** scheduled to be supplied	X					
34	expected **non-dispatch-capable load** at each **conforming GXP**		X				
35	expected **demand** for each **nominated bid**		X				
36	quantities for each **nominated dispatch bid** scheduled to be supplied			X			

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		1	2	3	4	5	6
Information required		**Contents of schedules**			**To be published**		
Row	**Schedule**	**PRS**	**NRS**	**Dispatch**	**PRS**	**NRS**	**Dispatch**
37	in the case of an **unsupplied demand situation**, the **demand** (in **MW**) unable to be supplied at each **grid exit point**	X	X	X	X	X	X
38	aggregate supply curve at each **reference point** incorporating all **offers** from **generators** with **offer** prices adjusted for **forecast marginal location factors,** and adjusted so that, for each **intermittent generating station**, the total offered quantity is no greater than the **forecast of generation potential** for that **intermittent generating station**, being the **forecast of generation potential** used as an input into the **price-responsive schedule** or the **non-response schedule** (whichever applies)				X	X	
39	aggregate supply curve at each **reference point** incorporating all **offers** from **generators** with **offer** prices adjusted for **dispatch marginal location factors**						X
40	**grid injection points** and **grid exit points** that are **electrically disconnected** in the modelling system				X	X	X
41	aggregate **demand** curve at each **reference point** incorporating the forecast prepared under clause 13.7A(1), and all **bids** from **purchasers** with **bid** prices adjusted for **forecast marginal location factors**				X		

		1	2	3	4	5	6
Information required		**Contents of schedules**			**To be published**		
Row	**Schedule**	**PRS**	**NRS**	**Dispatch**	**PRS**	**NRS**	**Dispatch**
42	aggregate **demand** curve at each **reference point** incorporating the expected profile of **demand**, and all **nominated dispatch bids** with **bid** prices adjusted for **dispatch marginal location factors**						X
43	number of transmission **lines** or transformers that have a **MW** arc flow equal to the maximum flow limit (in **MW**) on that transmission line or transformer set by the **grid owner** in accordance with clauses 13.29 to 13.32						X
44	number of groups of transmission **lines** or transformers, or both, that have a total **MW** arc flow equal to the relevant maximum flow limit (in **MW**) as set by the **system operator** in accordance with Schedule 13.3						X
45	aggregate of the following: (i) the number of occurrences at which energy (in **MW**) for a **generator** at a set of **grid injection points** is equal to the minimum and/or maximum generation (in **MW**) for that set of **grid injection points** set by the **system operator** in accordance with Schedule 13.3: (ii) the number of occurrences at which						X

		1	2	3	4	5	6
Information required		**Contents of schedules**			**To be published**		
Row	**Schedule**	**PRS**	**NRS**	**Dispatch**	**PRS**	**NRS**	**Dispatch**
	energy (in **MW**) and reserves (in **MW**) for a **generator** at a set of **grid injection points** is equal to the maximum generation (in **MW**) for that set of **grid injection points** set by the **system operator** in accordance with Schedule 13.3: (iii) the number of occurrences at which reserve (in **MW**) for a **participant** at a set of **grid exit points** is equal to the maximum reserve (in **MW**) for that set of **grid exit points** as determined under Schedule 13.3						
46	number of occurrences at which the ramp up rate is equal to the maximum ramp up rate specified in the relevant **offer**						X
47	number of occurrences at which the ramp down rate is equal to the maximum ramp down rate specified in the relevant **offer**						X

Explanatory Note

This note is not part of the amendment, but is intended to indicate its general effect.

This amendment to the Electricity Industry Participation Code 2010 comes into force on 1 November 2022.

The amendment amends the Code to settle the spot market for electricity on prices determined in real time. Amendments are made to Part 1 (Preliminary provisions), Part 3 (Market operation service providers), Part 8 (Common quality), Part 9 (Security of supply), Part 13 (Trading arrangements), and Part 14 (Clearing and settlement) to give effect to this. The amendments concern the following significant areas, being: (i) the process for calculating final energy and reserve prices based on the system operator's dispatch schedules; (ii) Energy and reserve deficit values (revision of the prices that would apply during an energy and/or instantaneous reserve shortfall); (iii) Pricing error claim process (the assumption by the clearing manager of responsibility for investigating an alleged pricing error, and the definition of pricing error is amended to specify the circumstances under which final prices can be considered in error); (iv) Real-time price calculation under a scarcity pricing situation (clause 13.69B is amended and a new schedule added to the Code that describes how scarcity pricing will be implemented in the real-time dispatch schedule); (v) Dispatchable demand enhancements (amendments made to reflect proposed enhancements to the dispatchable demand regime); (vi) the addition of dispatch notification participation for aggregated demand and generation resources in the wholesale electricity market; and (vii) Pricing publication when the system operator's primary modelling system is unavailable (amendments made to describe the system operator's change in obligations to produce dispatch prices when its primary modelling system is unavailable). In addition, the amendment contains a number of transitional provisions, and makes a number of technical and non-controversial amendments to the Code.