


**Electricity Industry Participation Code Amendment
(System Operator and Alignment with Statutory Objective) 2016**

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 15th day of April 2016



Dr Thomas Brent Layton
Chairperson
Electricity Authority

Certified in order for signature:



Barbara Sole
Senior Legal Counsel
Electricity Authority



Tony Dellow
Partner
Buddle Findlay

18 April 2016

18 April 2016

Contents

1	Title	2
2	Commencement	2
3	Code amended	3
4	Clause 1.1 amended (Interpretation)	3
5	Clause 3.1 amended (Appointment of market operation service provider)	3
6	New clause 3.2A inserted (Market operation service providers to assist Authority to give effect to Authority's statutory objective)	3
	3.2A Market operation service providers to assist Authority to give effect to Authority's statutory objective	3
7	Clause 7.1 amended (Contents of this Part)	3
8	New clause 7.1A inserted (Reasonable and prudent system operator standard)	3
	7.1A Reasonable and prudent system operator standard	3
9	Clause 7.2 replaced (Principal performance obligations of the system operator in relation to common quality and dispatch)	4
	7.2 Principal performance obligations of the system operator in relation to common quality and dispatch	4
10	New clauses 7.2A, 7.2B, 7.2C, 7.2D and 7.2E inserted	4
	7.2A System operator to maintain frequency	4
	7.2B System operator to restore frequency if frequency fluctuation occurs	5

	7.2C System operator to manage frequency time error	5
	7.2D System operator to identify and resolve problems	5
	7.2E System operator to report on frequency fluctuations	5
11	Clause 7.3 amended (Functions of the system operator in relation to security of supply and emergency management)	6
12	Clause 7.5 amended (Approval of draft security of supply forecasting and information policy and emergency management policy)	6
13	Clause 7.8 amended (Review of system operator)	6
14	Clause 7.9 amended (Additional matters to be taken into account in system operator review)	7
15	Clause 7.11 amended (Review of performance of the system operator)	7
16	Clause 8.3 amended (Recovery of costs from causes of harmonic and voltage non-compliance)	7
17	Clause 8.5 amended (Restoration)	7
18	Clause 8.8 replaced (Purpose of policy statement)	7
	8.8 System operator to comply with policy statement	7
19	Clause 8.11 amended (Content of draft policy statement)	7
20	Clause 8.14 amended (Departure from policy statement)	8
21	Clause 8.18 amended (Contributions by purchasers to overall frequency management)	8
22	Clause 8.20 amended (Contributions by grid owners to frequency support)	8
23	Clause 8.27 amended (System operator to monitor compliance)	8
24	Clause 8.31 amended (Grant of dispensations)	8
25	Clause 8.60 amended (Process for determining causer of under-frequency event)	8
26	Clause 8.61 amended (System operator must determine causer of under-frequency event)	8
27	Clause 8.62 amended (Disputes regarding system operator determinations)	9
28	Clause 8.63 amended (Decision of the Rulings Panel)	9
29	Schedule 8.3, Technical Code A, clause 5 amended	9
30	Schedule 8.4 revoked	9
31	Clause 13.76 amended (Dispatch instructions to be logged)	9
32	Clause 13.102 replaced (Reporting obligations of system operator)	9
	13.102 Reporting obligations of system operator	9

Amendment

1 Title

This is the Electricity Industry Participation Code Amendment (System Operator and Alignment with Statutory Objective) 2016.

2 Commencement

This amendment comes into force on 19 May 2016.

3 Code amended

This amendment amends the Electricity Industry Participation Code 2010.

4 Clause 1.1 amended (Interpretation)

- (1) In clause 1.1(1), revoke the definitions of **frequency time error**, **momentary fluctuations**, and **reasonable and prudent system operator**.
- (2) In clause 1.1(1), insert in its appropriate alphabetical order:
"**frequency fluctuation** means a deviation in frequency outside the **normal band**".
- (3) In clause 1.1(1), replace the definition of **principal performance obligations** and **PPOs** with:
"**principal performance obligation** and **PPO** mean a **system operator** obligation set out in any of clauses 7.2A to 7.2D".

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

In clause 3.1(3), delete "3.11, 3.12,".

6 New clause 3.2A inserted (Market operation service providers to assist Authority to give effect to Authority's statutory objective)

After clause 3.2, insert:

"3.2A Market operation service providers to assist Authority to give effect to Authority's statutory objective

- "(1) Each **market operation service provider** must perform its obligations under this Code in a way that assists the **Authority** to give effect to the **Authority's** statutory objective.
- "(2) The **system operator** must progressively increase the extent to which it assists the **Authority** to give effect to the **Authority's** statutory objective.
- "(3) The **system operator** is not required to comply with subclause (1) when exercising discretion in real time in performing its functions.
- "(4) This clause does not permit a **market operation service provider** to contravene any other provision of this Code."

7 Clause 7.1 amended (Contents of this Part)

- (1) Before clause 7.1(a), insert:

"(aa) a reasonable and prudent **system operator** standard; and".

- (2) In clause 7.1(a), after "real time", insert "co-ordination and".
- (3) In clause 7.1(b), replace "security of supply" with "**demand** and supply forecasting, security of supply,".
- (4) Replace clause 7.1(c) with:
"(c) review of the **system operator's** performance under the **Act**, this Code, and the relevant **market operation service provider agreement**."

8 New clause 7.1A inserted (Reasonable and prudent system operator standard)

After clause 7.1, insert:

"7.1A Reasonable and prudent system operator standard

- "(1) The **system operator** must carry out its obligations under this Code with skill, diligence, prudence, foresight, good economic management, and in accordance with recognised international good practice, taking into account—

- "(a) the circumstances in New Zealand; and
 - "(b) the fact that real-time co-ordination of the power system involves complex judgements and inter-related events.
- "(2) The **system operator** does not breach a **principal performance obligation** or clause 8.5 of this Code if the **system operator** complies with subclause (1)."

9 Clause 7.2 replaced (Principal performance obligations of the system operator in relation to common quality and dispatch)

Replace clause 7.2 with:

"7.2 Principal performance obligations of the system operator in relation to common quality and dispatch

The obligations in clauses 7.2A to 7.2D are **principal performance obligations**."

10 New clauses 7.2A, 7.2B, 7.2C, 7.2D and 7.2E inserted

After clause 7.2, insert:

"7.2A System operator to maintain frequency

- "(1) The **system operator** must **dispatch assets** made available in a manner that avoids cascade failure of **assets** resulting in a loss of **electricity** to **consumers** arising from—
- "(a) a frequency or voltage excursion; or
 - "(b) a **supply** and **demand** imbalance.
- "(2) Except as provided in this clause and clause 7.2B, the **system operator** must maintain frequency in the **normal band**.
- "(3) The **system operator** must ensure that the scheduling, pricing, and dispatch tool has the information necessary to schedule a minimum quantity of **instantaneous reserve**.
- "(4) Subject to the availability of **offers** or **reserve offers**, the **system operator** must schedule sufficient **instantaneous reserve** to meet the **system operator's** obligations in subclauses (5) to (7).
- "(5) During a contingent event, the **system operator** must ensure that, for the **island** in which the contingent event takes place—
- "(a) frequency remains at or above 48 Hertz; and
 - "(b) frequency returns to or above 49.25 Hertz within 60 seconds after the contingent event.
- "(6) During an extended contingent event in the North Island, the **system operator** must ensure that, for that **island**—
- "(a) frequency remains at or above 47 Hertz; and
 - "(b) frequency does not drop to or below 47.1 Hertz for longer than 5 seconds; and
 - "(c) frequency does not drop to or below 47.3 Hertz for longer than 20 seconds; and
 - "(d) frequency returns to or above 49.25 Hertz within 60 seconds after the extended contingent event.
- "(7) During an extended contingent event in the South Island, the **system operator** must ensure that, for that **island**—
- "(a) frequency remains at or above 45 Hertz; and
 - "(b) frequency returns to or above 49.25 Hertz within 60 seconds after the extended contingent event.

"7.2B System operator to restore frequency if frequency fluctuation occurs

If a **frequency fluctuation** occurs, the **system operator** must ensure that frequency is restored to the **normal band** as soon as reasonably practicable having regard to all circumstances surrounding the **frequency fluctuation**.

"7.2C System operator to manage frequency time error

- "(1) The **system operator** must ensure that any deviations from **New Zealand standard time** in the power system, caused by variations in system frequency, do not exceed 5 seconds.
- "(2) At least once in each day, the **system operator** must eliminate from the power system any deviations from **New Zealand standard time** caused by variations in system frequency.

"7.2D System operator to identify and resolve problems

- "(1) A **participant** may request that the **system operator** investigate and resolve a security of supply or reliability problem arising from non-compliance with a standard in clause 4.7, 4.8, or 4.9 of the **Connection Code**, at any **point of connection** to the **grid**.
- "(2) If the **system operator** receives a reasonable request under subclause (1), the **system operator** must, given the **assets** made available to it at the relevant time—
 - "(a) identify whether there is a security of supply or reliability problem arising from non-compliance with a standard in clause 4.7, 4.8, or 4.9 of the **Connection Code**, at any **point of connection** to the **grid**; and
 - "(b) if there is such a problem—
 - "(i) identify the cause of the problem; and
 - "(ii) resolve the problem to the extent reasonable and practical.

"7.2E System operator to report on frequency fluctuations

- "(1) By the 10th **working day** of each month, the **system operator** must report to the **Authority** the number of **frequency fluctuations** in each of the following frequency bands, in each **island** in the previous month:

Frequency band (Hertz) (where "x" is the maximum or minimum frequency during a frequency fluctuation)			
52.00	>	x	≥ 51.25
51.25	>	x	≥ 50.50
49.50	>	x	≥ 48.75
48.75	>	x	≥ 48.00
48.00	>	x	≥ 47.00

"(2) By the 10th **working day** of each month, the **system operator** must report to the **Authority** the number of **frequency fluctuations** in each of the following frequency bands, in the South Island in the previous month:

Frequency band (Hertz) (where "x" is the maximum or minimum frequency during a frequency fluctuation)				
55.00	>	x	≥	53.75
53.75	>	x	≥	52.00
47.00	>	x	≥	45.00

11 Clause 7.3 amended (Functions of the system operator in relation to security of supply and emergency management)

- (1) In clause 7.3(1), replace "The functions of the **system operator** in relation to the provision of information and short- to medium-term forecasting on all aspects of security of supply are" with "The **system operator** must".
- (2) In clause 7.3(1)(a), replace "to prepare" with "prepare".
- (3) In clause 7.3(1)(b), replace "to implement" with "implement".
- (4) In clause 7.3(2B), replace "subclause (2C)" with "subclauses (2C)".
- (5) In clause 7.3(3), replace "The functions of the **system operator** in relation to managing supply emergencies are" with "The **system operator** must".
- (6) In clause 7.3(3)(a),—
 - (a) replace "to prepare" with "prepare"; and
 - (b) replace "take, as a **reasonable and prudent system operator**, and encourage **participants** to take at" with "take, and must encourage **participants** to take, at".
- (7) In clause 7.3(3)(b), delete "within 2 years of this Code coming into force, to".
- (8) In clause 7.3(3)(b)(i), replace "as a **reasonable and prudent**" with "as the".
- (9) In clause 7.3(3)(b)(ii), after "take", insert ", ".
- (10) Replace clause 7.3(3)(c) with:

"(c) implement and comply with the **emergency management policy**."
- (11) In clause 7.3(5), replace "act as a **reasonable and prudent system operator**" with "comply with clause 7.1A(1)".
- (12) In clause 7.3(6), delete "because of an **EMP departure situation**".

12 Clause 7.5 amended (Approval of draft security of supply forecasting and information policy and emergency management policy)

Revoke clause 7.5(2).

13 Clause 7.8 amended (Review of system operator)

- (1) In clause 7.8(1), after "**financial year**", insert ", after the **system operator** submits its self-review under clause 7.11".
- (2) After clause 7.8(2), insert:

"(3) The **Authority** must **publicise** a report on the performance of the **system operator** no later than 10 **business days** after the **Authority** completes its review."

14 Clause 7.9 amended (Additional matters to be taken into account in system operator review)

- (1) Replace clause 7.9(b) with:
"(b) reports from the **system operator** to the **Authority**, including the **system operator's** self-review under clause 7.11:".
- (2) In clause 7.9(e), after "person", insert ", and any responses by the **system operator** to such reports or complaints".

15 Clause 7.11 amended (Review of performance of the system operator)

- (1) In clause 7.11(1),—
 - (a) replace "31 August" with "30 June"; and
 - (b) replace "30 September" with "31 August".
- (2) Replace clause 7.11(2) with:
"(2) The self-review must contain such information as the **Authority** may reasonably require from time to time to enable the **Authority** to review the **system operator's** performance during the period in relation to the following:
 - "(a) the **policy statement**;
 - "(b) the **security of supply forecasting and information policy**;
 - "(c) the **emergency management policy**;
 - "(d) the joint development programme prepared under clause 7.7(1):
 - "(e) the work programmes agreed with the **Authority** under the **system operator's market operation service provider agreement**;
 - "(f) the **system operator's** engagement with **participants**;
 - "(g) delivery of the **system operator's** capital and business plans;
 - "(h) the financial and operational performance of the **system operator**."
- (3) Revoke clauses 7.11(3) and 7.11(4).

16 Clause 8.3 amended (Recovery of costs from causes of harmonic and voltage non-compliance)

- (1) In the heading to clause 8.3, replace "causes" with "causers".
- (2) In clause 8.3(1), replace "clause 7.2(1)(c)" with "clause 7.2D".

17 Clause 8.5 amended (Restoration)

In clause 8.5(1), delete "act as a **reasonable and prudent system operator** to".

18 Clause 8.8 replaced (Purpose of policy statement)

Replace clause 8.8 with:

"8.8 System operator to comply with policy statement

Subject to clause 8.14, the **system operator** must comply with the **policy statement**."

19 Clause 8.11 amended (Content of draft policy statement)

- (1) In clause 8.11(3), delete "must address the matters in, and must be prepared on the basis of, clause 8.8 and".
- (2) In clause 8.11(3)(c), replace "the policies and means by which the **system operator** intends to address" with "a policy setting out how the **system operator** will manage".

20 Clause 8.14 amended (Departure from policy statement)

- (1) In clause 8.14(1), replace "in terms of the **system operator** acting as a **reasonable and prudent system operator**" with "for the **system operator** to comply with clause 7.1A(1)".
- (2) In clause 8.14(2), delete "because of a **system security situation**".

21 Clause 8.18 amended (Contributions by purchasers to overall frequency management)

In clause 8.18, replace "clause 7.2(1)(b)" with "clauses 7.2A to 7.2C".

22 Clause 8.20 amended (Contributions by grid owners to frequency support)

In clause 8.20, replace "clause 7.1(1)(b)(ii) and, for South Island **assets**, clause 7.2(2)(b)" with "clause 7.2A".

23 Clause 8.27 amended (System operator to monitor compliance)

In clause 8.27(2), replace "the discretion, acting as a **reasonable and prudent system operator**," with "a discretion".

24 Clause 8.31 amended (Grant of dispensations)

In clause 8.31(1)(c), delete "established in accordance with clause 7.2(2)".

25 Clause 8.60 amended (Process for determining causer of under-frequency event)

- (1) In the heading to clause 8.60, replace "Process for determining" with "System operator must investigate".
- (2) In clause 8.60(1), replace "every **generator**," with "the **Authority**, every **generator**, every".
- (3) In clause 8.60(2),—
 - (a) replace "system operator" with "**system operator**" in each place; and
 - (b) replace "participant" with "**participant**" in each place; and
 - (c) replace "rule" with "clause".
- (4) In clause 8.60(3),—
 - (a) replace "system operator" with "**system operator**"; and
 - (b) replace "business days" with "**business days**".
- (5) After clause 8.60(4), insert:

"(5) Within 40 **business days** of receiving the information, or such longer period as may be agreed by the **Authority**, the **system operator** must provide a report to the **Authority** that includes the following:

 - "(a) whether, in the **system operator's** view, the **under-frequency event** was caused by a **generator** or **grid owner**, and if so, the identity of the **causer**;
 - "(b) the reasons for the **system operator's** view;
 - "(c) all of the information the **system operator** considered in reaching its view."

26 Clause 8.61 amended (System operator must determine causer of under-frequency event)

- (1) In the heading to clause 8.61, replace "System operator must" with "Authority to".
- (2) In clause 8.61, replace "**system operator**" with "**Authority**" in each place.
- (3) In clause 8.61(1), after "**grid owner**", insert "and, if so, the identity of the **causer**".
- (4) In clause 8.61(5),—

- (a) replace "At the time" with "When"; and
- (b) replace "an **under-frequency event**" with "the **under-frequency event**".

27 Clause 8.62 amended (Disputes regarding system operator determinations)

- (1) In the heading to clause 8.62, replace "system operator" with "Authority".
- (2) In clause 8.62(1), replace "The **Authority** or a" with "A".
- (3) In clause 8.62(4), replace "system operator's" with "Authority's".
- (4) In clause 8.62(6), replace "system operator" with "Authority" in each place.

28 Clause 8.63 amended (Decision of the Rulings Panel)

- (1) In clause 8.63, replace "system operator" with "Authority" in each place.
- (2) In clause 8.63(3), replace "system operator" with "Authority".

29 Schedule 8.3, Technical Code A, clause 5 amended

In Schedule 8.3, Technical Code A, clause 5(4), replace "clause 7.2(1)(c)(iii)" with "clause 4.9 of the **Connection Code**".

30 Schedule 8.4 revoked

Revoke Schedule 8.4.

31 Clause 13.76 amended (Dispatch instructions to be logged)

Replace clause 13.76(5) with:

- "(5) The **system operator** must provide a copy of each **dispatch instruction**—
- "(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**; 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**."

32 Clause 13.102 replaced (Reporting obligations of system operator)

Replace clause 13.102 with:

"13.102 Reporting obligations of system operator

By the 10th **business day** of each calendar month, the **system operator** must inform the **Authority** in writing of any discretionary action the **system operator** has taken under clause 13.70, in the previous calendar month, that required departure from the **dispatch schedule**."

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 (Code) comes into force on 19 May 2016.

The amendment amends Parts 1, 3, 7, 8 and 13 of the Code to better give effect to section 8(3) of the Electricity Industry Act 2010.

The amendment also amends Part 3 of the Code to require market operation service providers to assist the Authority to give effect to the Authority's statutory objective.

Date of notification in the *Gazette*: 21 April 2016