

# Proposed Code amendments relating to the system operator and alignment with the statutory objective

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Consultation Paper<sup>1</sup>

Submissions close: 5pm, 10 February 2016

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<sup>1</sup> Please note that on 12 January 2016, we made two revisions to proposed new clause 7.1A in this paper and added some accompanying explanation. We have **highlighted** the revisions and added explanation to distinguish them from the original content of this paper. We have also double-underlined wording that the revisions add to the proposed new clause 7.1A, and used ~~double strike through~~ for wording the revisions remove from this proposed new clause.

## Executive summary

The Electricity Authority (Authority) proposes making several amendments to the Electricity Industry Participation Code 2010 (Code) that relate to the system operator.

The proposals arise from the negotiations the Authority has held with Transpower for a revised system operator service provider agreement (SOSPA). In addition, the paper is proposing some amendments that are relevant to all market operator service providers.

Under section 8(3) of the Act, the Code must:

- specify the functions of the system operator
- specify how the system operator's functions are to be performed
- set requirements relating to transparency and performance.

The proposed Code amendments:

- place a general obligation on the system operator to act as a reasonable and prudent operator
- update the principal performance obligations to make them more transparent
- establish reporting obligations in relation to frequency fluctuations
- update and align the performance review requirements for the system operator
- reallocate responsibilities and functions relating to the process for determining the causer of under-frequency events
- require the system operator to provide dispatch instructions, once issued, to the Authority
- improve daily reporting requirements that the Authority considers unnecessary or inefficient.

The Authority considers that the proposed Code amendments that relate to the system operator's functions would better give effect to the requirements of section 8(3) of the Act.

To carry out its statutory objective, the Authority considers that as much as possible, market operation service providers' services, including system operator services, should align with the Authority's statutory objective. The paper therefore proposes a Code amendment that would require each market operation service provider, in performing its role, to assist the Authority to give effect to its statutory objective under section 15 of the Act (statutory objective alignment requirement).

The purpose of this paper is to consult with those the Authority considers represent the interests of persons likely to be affected by the proposed Code amendments.

## Glossary of abbreviations

Act	Electricity Industry Act 2010
Authority	Electricity Authority
Code	Electricity Industry Participation Code 2010
Enforcement Regulations	Electricity Industry (Enforcement) Regulations 2010
statutory objective alignment requirement	The proposed Code amendment that would require market operation service providers to perform their roles in a way that assists the Authority to comply with its statutory objective under section 15 of the Electricity Industry Act 2010
Transpower	Transpower New Zealand Limited

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# 1. What you need to know to make a submission

## 1.1 What this consultation paper is about

1.1.1 The Authority has developed a list of amendments that it proposes making to the Code<sup>2</sup> that largely relate to the system operator. Section 5 of the Act defines the 'system operator' as the person both who ensures the real-time coordination of the electricity system, and who is referred to in section 8 of the Act. Under section 8(1) of the Act, the system operator is Transpower.

1.1.2 In addition to the system operator's role of ensuring the real-time coordination of the electricity system, section 8(2) of the Act requires the system operator to:

- (a) provide information, and short- to medium-term forecasting on all aspects of security of supply; and
- (b) manage supply emergencies.

1.1.3 Under section 8(3) of the Act, the Code must:

- (a) specify the functions of the system operator
- (b) specify how the system operator's functions are to be performed
- (c) set requirements relating to transparency and performance.

1.1.4 This paper proposes Code amendments that relate to the system operator's functions. The proposed amendments seek to better give effect to the requirements of section 8(3) of the Act. These proposed amendments also include a number of minor drafting changes.

1.1.5 The paper also proposes a Code amendment that would require each market operation service provider (including the system operator), in performing its role, to assist the Authority to give effect to the Authority's statutory objective.

## 1.2 Purpose of this paper

1.2.1 The purpose of this paper is to consult with participants and persons that the Authority considers are representative of the interests of persons likely to be affected by the proposed Code amendments.

1.2.2 Section 39(1)(c) of the Act requires the Authority to consult on any proposed Code amendments and the regulatory statement for the proposed amendments. Section 39(2) of the Act provides that the regulatory statement must include a statement of the objectives of the proposed amendments, an evaluation of the costs and

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<sup>2</sup> More information about the Authority's Code amendment proposal process is available at: <http://www.ea.govt.nz/code-and-compliance/the-code/amendments/amending-the-code/>.

benefits of the proposed amendments, and an evaluation of alternative means of achieving the objectives of the proposed amendments.

- 1.2.3 The Authority invites submissions on the regulatory statement and proposed Code amendments, including drafting comments.

## **1.3 How to make a submission**

The Authority would prefer to receive submissions in electronic format (Microsoft Word). It is not necessary to send hard copies of submissions to the Authority, unless you are unable to do so electronically. Please email submissions in electronic form to [submissions@ea.govt.nz](mailto:submissions@ea.govt.nz) with "Consultation Paper— Code amendments relating to the system operator and alignment with the statutory objective" in the subject line.

If submitters do not wish to send their submissions electronically, they should post one hard copy of their submission to either of the addresses provided below.

Submissions  
Electricity Authority  
PO Box 10041  
Wellington 6143

Submissions  
Electricity Authority  
Level 7, ASB Bank Tower  
2 Hunter Street  
Wellington

Tel: 0-4-460 8860

Fax: 0-4-460 8879

- 1.3.1 If possible, please provide your submission in the format shown in Appendix B. We are likely to make your submission available to the general public on the Authority's website. Please indicate any documents attached, in support of your submission, in a covering letter and clearly indicate any information you are providing to the Authority on a confidential basis. However, all information you provide to the Authority is subject to the Official Information Act 1982.

## **1.4 Deadline for receiving a submission**

- 1.4.1 Please ensure we receive your submission by 5:00pm on Wednesday 10 February 2016. Please note that we are unlikely to consider late submissions.

- 1.4.2 The Authority will acknowledge receipt of all submissions electronically. Please contact the Submissions' Administrator if you do not receive electronic acknowledgement of your submission within two business days.



## **2. Background and structure of this paper**

### **2.1 Background**

2.1.1 Under section 16 of the Act, two of the Authority's functions are to:

- (a) make and administer the Code
- (b) contract for market operation services and system operator services.

2.1.2 The Authority carries out these functions in accordance with its statutory objective: to promote competition in, reliable supply by, and the efficient operation of, the electricity industry for the long-term benefit of consumers.

2.1.3 The Authority is working towards signing a new contract with Transpower for system operator services. The existing system operator service provider agreement and the current Code provisions were established under previous legislation and do not properly take account of the requirements of the Act.

2.1.4 In accordance with section 8(3) of the Act, the Code amendments this paper proposes would assist the system operator by:

- (a) clarifying what the system operator's functions are
- (b) clarifying how the system operator must perform those functions
- (c) setting requirements for the system operator relating to transparency and performance.

2.1.5 Alongside a new contract for system operator services, these Code amendments would better enable the system operator to perform its important role in the electricity industry.

2.1.6 In addition to renegotiating the system operator service provider agreement, the Authority has recently signed new contracts for four market operation service provider roles relating to the wholesale market; for the clearing manager, reconciliation manager, pricing manager and provider of the wholesale information and trading system.

2.1.7 The Authority likewise considers that a Code amendment establishing a requirement for market operation service providers to align their service performance with the Authority's statutory objective would complement the new market operation service provider agreements. This in turn will assist the Authority to perform its functions in accordance with the statutory objective – i.e. for the long-term benefit of consumers.

### **2.2 Structure of this paper**

2.2.1 The Authority proposes amendments to Parts 1, 3, 7, 8 and 13 of the Code. This paper first describes each of these proposed Code

amendments in numerical order by appearance in the Code; starting first with the proposed amendments relating to the system operator, and then moving to the proposed Code amendment to require all market operation service providers to align with the Authority's statutory objective.

2.2.2 The paper then sets out:

- (a) the proposed Code amendments (Appendix A)
- (b) a summary of the questions included in this paper and format for submissions (Appendix B)
- (c) two regulatory statements; the first concerns the proposed Code amendments relating to the system operator, and the second concerns the proposed Code amendment for a statutory objective alignment requirement (Appendix C)
- (d) assessments of the proposed Code amendments against the Code amendment principles and section 32(1) of the Act (Appendix D).

### **3. Proposed Code amendments relating to the system operator**

#### **3.1 Purpose of the proposed Code amendments**

3.1.1 As noted at paragraph 1.1.4, the proposed Code amendments that relate to the system operator's functions seek to better give effect to the requirements of section 8(3) of the Act.

#### **3.2 Amendments to Part 1**

3.2.1 The Authority proposes to amend clause 1.1(1) of the Code by:

- (a) revoking the definition of "frequency time error" because this definition only arises once in the Code (at clause 7(1)(b)(v)), and new clause 7.2C proposed in this paper incorporates the content of this definition back into a clause in the Code
- (b) revoking the definition of "reasonable and prudent system operator" because the proposed new clause 7.1A captures this definition and makes it a general obligation that applies to all aspects of the system operator's role, not only the principal performance obligations and other aspects of common quality
- (c) revising the definition of "momentary fluctuations" to simplify it
- (d) revising the definition of "principal performance obligations" to accommodate the proposed amendments to the provisions in Part 7 of the Code that reference this definition.

#### **3.3 Amendments to Part 3**

##### **Applying clause 3.11 and 3.12 to the system operator**

3.3.1 Part 3 of the Code establishes a number of requirements for market operator service providers, most of which apply to the system operator.

3.3.2 The Authority considers that clauses 3.11 (Disclosure to Authority) and 3.12 (Performance standards to be agreed) should apply to the system operator, along with the other market operation service providers. Currently, clause 3.1(3) lists clauses 3.11 and 3.12 as clauses that do not apply to the system operator (but which apply to all other market operation service providers). The Authority proposes to amend clause 3.1(3) by removing the reference to clauses 3.11 and 3.12, so that those clauses will then apply to the system operator. If clause 3.11 applies to the system operator, it would be entitled, as part of providing its services as a market operation service provider, to disclose to the Authority all information it

receives from a person under the Code (except for information received under Parts 6 and 9 of the Code) and specific parts of the Act.

- 3.3.3 If clause 3.12 applies to the system operator, the Authority and the system operator will be required to agree, at the beginning of each financial year, a set of performance standards against which the system operator's performance must be reported and measured at the end of the financial year.
- 3.3.4 Applying clauses 3.11 and 3.12 to the system operator will, respectively:
- (a) allow the system operator to pass on to the Authority information the system operator receives from a person under the Code (except for information received under Parts 6 and 9 of the Code). This would support the Authority's functions of industry and market monitoring, and undertaking and monitoring market facilitation measures
  - (b) increase the system operator's accountability by requiring it to agree performance standards with the Authority against which the system operator's performance must be reported and measured at the end of the financial year.

## **3.4 Amendments to Part 7**

### **Amend clause 7.1 (Contents of this Part)**

- 3.4.1 Clause 7.1 of the Code provides for:
- (a) high level, output-focussed performance obligations of the system operator in relation to the real time delivery of common quality and dispatch
  - (b) the system operator's functions in relation to security of supply and supply emergencies
  - (c) review of system operator performance.
- 3.4.2 The Authority proposes amending clause 7.1 to ensure that it accurately reflects the contents of Part 7, if the proposed amendments discussed below are made.

### **New clause 7.1A (Reasonable and prudent system operator standard)**

- 3.4.3 Currently, the "reasonable and prudent system operator" definition in Part 1 of the Code only applies to discrete aspects of the system operator's role (in which a particular Code provision refers to the definition and applies it to the system operator).
- 3.4.4 The Authority proposes adding a new clause 7.1A to put a general obligation on the system operator to carry out its role in accordance with a reasonable and prudent system operator standard. The proposed new

clause 7.1A would replace the “reasonable and prudent system operator” definition in Part 1 and references to that definition in clauses 7.2, 7.3, 8.5, 8.8, 8.14 and 8.27 of the Code.

3.4.5 The Authority considers that the proposed new clause 7.1A should also provide that the system operator does not breach a principal performance obligation if it complies with the reasonable and prudent system operator requirement. This reflects the Authority’s view that the principal performance obligations should be subject to the reasonable and prudent system operator requirement.

**Replace clause 7.2 (Principal performance obligations of the system operator in relation to common quality and dispatch) with new clauses 7.2A to 7.2E**

3.4.6 The Authority proposes to amend clause 7.2 by splitting the principal performance obligations in clause 7.2(1) into separate new clauses 7.2A to 7.2D. The Authority considers that doing so would increase the transparency and clarity of the principal performance obligations.

3.4.7 The proposed new clauses 7.2A to 7.2D differ from the current provisions in clause 7.2(1) as follows:

- (a) new clauses 7.2A(3) to 7.2A(7) incorporate, with minor drafting changes, the requirements of current clauses 1 (Reserve management objective) and 2 (Under-frequency standard) of Schedule 8.4 of the Code. Incorporating the requirements of Schedule 8.4 into new clauses 7.2A(3) to 7.2A(7) would simplify the Code by removing the need for the existing:
  - (i) reference to Schedule 8.4 in current clause 7.2(1)(b)(i)
  - (ii) Schedule 8.4
- (b) new clause 7.2B:
  - (i) sets out the content of current clause 7.2(1)(b)(iv) but replaces the references to “fluctuation” in clause 7.1(1)(b)(vi) with the revised defined term “momentary fluctuation”. A momentary fluctuation is when frequency deviates outside normal frequency bands. The effect of the proposed Code amendment would be that the requirement to restore frequency in this clause would only apply when a momentary fluctuation occurs, rather than when a fluctuation of any duration occurs
  - (ii) does not include the requirement at current clause 7.2(1)(b)(ii) that frequency stay between 47 and 52 Hertz during momentary fluctuations, because the Authority considers this requirement conflicts with the other frequency requirements for the system

operator in clause 7.2(1), which more precisely set out the frequency management requirements

(iii) does not include the requirement at current clause 7.2(1)(b)(iii) (or the associated column titled 'Maximum number of occurrences by period (commencing on and from 1 March 2004)' in the table below this clause) regarding the aggregated rate of occurrence of momentary fluctuations, because this requirement is outdated, is not able to be practically assessed and conflicts with the more precise frequency requirements for the system operator in current clause 7.2(1) (incorporated into new clause 7.2A)

(c) new clause 7.2C retains the requirements of current clause 7.2(1)(b)(v) and (vi), but incorporates minor drafting changes to clarify these requirements

(d) new clause 7.2D sets out the content of current clause 7.2(1)(c) but makes a drafting change to this content by replacing the references in current clause 7.2(1)(c) to the New Zealand Electrical Code of Practice (NZECP 36.1993) for harmonic levels, the Australian Standard (AS2279.4 1991) for voltage flicker levels, and negative sequence voltage with references to clauses 4.7, 4.8 and 4.9 of the Connection Code<sup>3</sup>

(e) as noted in paragraph 3.4.5, proposed new clause 7.1A would make it explicit that the system operator does not breach a principal performance obligation if it complies with the reasonable and prudent system operator requirement under proposed new clause 7.1A.

3.4.8 The Authority also proposes to include new reporting requirements regarding momentary fluctuations as a new clause 7.2E, which would not be a principal performance obligation. This would require the system operator to report on a monthly basis:

(a) for each of the North and South Islands, the number of any momentary fluctuations of frequency in each of the frequency bands set out in the column titled 'Frequency band (Hertz) (where "x" is the frequency during a **momentary fluctuation**)' in the table below current clause 7.2(1)(b)(iii)

(b) for the South Island, the number of any momentary fluctuations of frequency in each of the frequency bands set out in the column titled 'Frequency band (Hertz) (where "x" is the frequency during a **momentary fluctuation**)' in the table below current clause 7.2(2)(b)(ii). The Authority proposes one change to the frequency

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<sup>3</sup> The Connection Code is incorporated into the Code by reference under clause 12.16(2) of the Code. Clauses 4.7, 4.8 and 4.9 of the Connection Code set out the same standards and requirements as current clause 7.2(1)(c) of the Code: New Zealand Electrical Code of Practice (NZECP 36.1993) for harmonic levels, the Australian Standard (AS2279.4 1991) for voltage flicker levels, and negative sequence voltage.

bands from the table below current clause 7.2(2)(b)(ii) – the addition of the frequency band that sets out the momentary fluctuation band below which South Island momentary fluctuations cannot fall. The proposed reporting requirement replaces the exception for South Island frequency in current clause 7.2(2)(a)(ii) with:

$$47.00 > x \geq 45.00$$

**Amend clause 7.3 (Functions of the system operator in relation to security of supply and emergency management)**

3.4.9 The Authority proposes minor drafting amendments to clause 7.3 to simplify and clarify the wording of this clause. The Authority does not propose any change to the substance of this clause.

**Amend clause 7.5 (Approval of draft security of supply forecasting and information policy and emergency management policy)**

3.4.10 The Authority proposes revoking clause 7.5(2), which required the system operator to, within one year of the Code coming into effect, submit to the Authority for its approval a draft emergency management policy. The system operator complied with this requirement, and the clause is now redundant.

**Amend clauses 7.8, 7.9 and 7.11 regarding system operator performance reviews**

3.4.11 The Authority proposes several amendments to clauses 7.8, 7.9 and 7.11 regarding system operator performance reviews. These proposed amendments better align the timing and content of the system operator's self-review of its performance with the Authority's own review of the system operator's performance. The Authority proposes to:

- (a) amend clause 7.8 to:
  - (i) clarify at clause 7.8(1) by shifting some clauses currently in the Code under description of the delivery of the system operator self-review that the Authority's review of the system operator's performance must take place after the system operator submits its self-review under clause 7.11
  - (ii) add new clause 7.8(3) that shifts the previous obligation on the Authority to publish its review and assessment of system operator performance by requiring the Authority to publicise a report on its review of the system operator's performance no later than 10 business days after the Authority completes its annual review

- (b) amend clause 7.9 to require the Authority to take into account when conducting its review of the system operator's performance under clause 7.8:
  - (i) the system operator's self-review under clause 7.11
  - (ii) any responses from the system operator to reports or complaints from any person under clause 7.9(e)
- (c) amend clause 7.11 to:
  - (i) better align the system operator's self-review with the end of the financial year by:
    - (A) bringing forward the deadline in subclause (1) from 30 September to 31 August for the system operator to provide to the Authority the review and assessment of the system operator's performance
    - (B) in subclause (1), bringing forward the 12 month period that is the subject of the system operator's self-review from 1 September-31 August to 1 July-30 June
  - (ii) in subclause (2), adding items to the list of information that the Authority may reasonably require the system operator to include in its self-review. To more comprehensively assess the system operator's performance, the Authority proposes that this information include information relating not only to the system operator's functions, but also to:
    - (A) the work programmes agreed with the Authority under the system operator's market operation service provider agreement
    - (B) the system operator's engagement with participants and consumers
    - (C) delivery of the system operator's capital and business plans
    - (D) the financial and operational performance of the system operator
  - (iii) revoke subclauses (3) and (4), which respectively require the Authority to conduct a review of the system operator's performance and publish a report on the review. The amendments this paper proposes to clause 7.8 would effectively shift the content of subclauses (3) and (4) to clause 7.8. Clause 7.8 would better accommodate the content of subclauses (3) and (4) because clause 7.8 concerns the Authority's review of the system operator's performance. This would also help confine the content of clause 7.11 to the system operator's self-review, while ensuring that clauses 7.8

and 7.9 cover content relating to the Authority's own review of the system operator's performance.

## 3.5 Amendments to Parts 8 and 13

### Amend clause 8.5 (Restoration)

3.5.1 Part 8 of the Code relates to common quality and establishes:

- (a) performance obligations of the system operator
- (b) the performance obligations of asset owners
- (c) arrangements concerning ancillary services and extended reserve
- (d) technical codes.

3.5.2 The proposed amendments to Part 8 outlined below are all amendments to the Code relating to the system operator.

3.5.3 For the reasons outlined above at paragraphs 3.2.1(b), 3.4.3 and 3.4.4, the Authority proposes to amend clause 8.5 to remove the reference in clause 8.5(1) to "act as a **reasonable and prudent system operator**".

### Amend clauses 8.8, 8.11 and 8.14 regarding the policy statement

3.5.4 The Authority proposes the following amendments to clauses 8.5, 8.8 and 8.14 regarding the policy statement:

- (a) amend clause 8.8 to simplify its wording, align it with the proposed new clause 7.1A, and clarify that, subject to clause 8.14, the system operator must comply with the policy statement
- (b) amend clause 8.11(3)(c) to clarify that the draft policy statement must include a policy setting out how the system operator will manage any conflict of interest that arises in the performance of its obligations under the Code. This would be clearer than the current obligation that requires the draft policy statement to include the policies and means by which the system operator intends to address such conflicts of interest
- (c) amend clause 8.14 to:
  - (i) replace the reference in subclause (1) to "acting as a **reasonable and prudent system operator**" with a reference to the proposed new clause 7.1A for the reasons noted above at paragraphs 3.2.1(b), 3.4.3 and 3.4.4
  - (ii) remove the wording "because of a system security situation" from subclause (2),. This wording is unnecessary given the existing reference to subclause (1) in subclause (2).

### **Amend clause 8.27 (System operator to monitor compliance)**

- 3.5.5 For the reasons noted above at paragraphs 3.2.1(b), 3.4.3 and 3.4.4, the Authority proposes removing from clause 8.27(1) the reference to “acting as a **reasonable and prudent system operator**”.

### **Amend clauses 8.60 to 8.63 in relation to determining the causer of an under-frequency event**

- 3.5.6 Clauses 8.60 to 8.63 set out the process, functions and responsibilities in relation to determining the causer of an under-frequency event. The Authority proposes amendments to these clauses to:

- (a) better match the relevant functions and responsibilities with the respective institutional roles of the Authority as regulator and the system operator as the market operation service provider with access to the relevant data and the ability to analyse it
- (b) avoid potential conflicts of interest that can arise from causer determinations made by an industry participant (the system operator).

- 3.5.7 The Authority proposes the following amendments to clauses 8.60 to 8.63 in relation to determining the causer of an under-frequency event:

- (a) add new clause 8.60(5) to create an investigative role for the system operator to support the Authority to determine the causer of an under-frequency event. This new clause 8.60(5) would require the system operator to provide within 40 business days of receiving the information sought from participants under clause 8.60(2), a report to the Authority that includes:
  - (i) 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
  - (ii) the reasons for the system operator's view
  - (iii) all of the information the system operator considered in reaching its view
- (b) amend clauses 8.61 to 8.63 to replace all references in these clauses to “system operator” with references to “Authority”. This would make the Authority (as opposed to the system operator) responsible for determining the causer of an under-frequency event and the other associated obligations under these clauses.

### **Revoke Schedule 8.4**

- 3.5.8 The Authority proposes revoking Schedule 8.4 because, apart from minor drafting changes, proposed new clauses 7.2A(3) to 7.2A(7) reproduce the content of the Schedule.

### **Amend clause 13.76(5) (Dispatch instructions to be logged)**

- 3.5.9 The Authority proposes amending the requirement on the system operator under clause 13.76(5) to provide copies of each dispatch instruction it issues and records. The current clause 13.76(5) requires the system operator to provide this information seven business days after the end of the previous month to the clearing manager only for billing and reconciliation purposes. Under section 16(1)(g) of the Act, the Authority has the function of undertaking industry and market monitoring. Timely access to dispatch instructions would enable the Authority to better carry out this function. The proposed Code amendment would extend the requirement to require the system operator to provide a copy of each dispatch instruction to the Authority one business day after issuing the dispatch instruction.

### **Amend clause 13.102 (Reporting obligations of the system operator)**

- 3.5.10 Clause 13.102(1)(a) to (d) currently requires the system operator to report to the market administrator on each trading day:
- (a) breaches of the Code that the system operator reasonably believes have occurred
  - (b) details of any adjustment the system operator makes to the non-response schedule on the previous trading day
  - (c) any situations in which the system operator undertook discretionary action that resulted in divergence from the dispatch schedule during the previous trading day
  - (d) a summary of any block security constraint and station security constraint notices the system operator issued to generators during the previous trading day.
- 3.5.11 The Authority proposes amending clause 13.102(1) to:
- (a) revoke paragraph (a) because clauses 3.13 and 3.14 of the Code and regulations 7 and 8 of the Electricity Industry (Enforcement) Regulations 2010 (Enforcement Regulations) provide for the same requirements as paragraph (a)
  - (b) revoke paragraphs (b) and (d) because the market administrator does not use the information provided under these paragraphs. This indicates that the obligations under paragraphs (b) and (d) place an unnecessary administrative burden on the system operator
  - (c) amend the obligation in paragraph (c) so that the Authority would receive the same information under the amended paragraph (c), but the system operator would only provide it on a monthly basis rather than a daily basis, easing the administrative burden for the system operator.

3.5.12 The Authority also proposes:

- (a) revoking clause 13.102(2), which requires the market administrator to publish monthly reports of system operator Code breaches reported under clause 13.102(1)(a). This provision is unnecessary because:
  - (i) stakeholders very rarely access these monthly reports when the market administrator publishes them on the Authority's website
  - (ii) the Authority already publishes information relating to alleged Code breaches under investigation under regulation 17 of the Enforcement Regulations. After each meeting of its Compliance Committee, the Authority also voluntarily publishes (in its Compliance Update) summaries of Code breaches the Committee considered at the relevant meeting<sup>4</sup>
- (b) revoking clause 13.102(3) and (4), which enables a generator or a purchaser to request further information from the system operator relating to any system operator Code breach that materially affects the generator or purchaser. Under clause 13.102(4), the system operator must provide this information to the generator or purchaser, except to the extent the information includes another participant's confidential information. The Authority understands that generators and purchasers have not used these provisions to date, and notes that revoking these provisions would not prevent participants from seeking such information from the system operator.

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| <p><b>Q1. Do you agree that the proposed Code amendments relating to the system operator would better give effect to the requirements of section 8(3) of the Act? If not, please explain why not.</b></p> <p><b>Q2. What improvements, if any, should the Authority make to the proposed Code amendments relating to the system operator to better give effect to the requirements of section 8(3) of the Act?</b></p> <p><b>Q3. Do you have any comments regarding the proposed Code amendments relating to the system operator? Please provide comments and suggested drafting improvements with reference to the clauses set out in Appendix A.</b></p> |
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<sup>4</sup> <http://www.ea.govt.nz/about-us/media-and-publications/compliance-update/>.

## 4. Statutory objective alignment requirement

### 4.1 Increasing market operation service providers' alignment with the statutory objective

#### Carrying out functions to give effect to the statutory objective

- 4.1.1 The Authority's statutory objective is set out at section 15 of the Act. Section 15 states that the objective of the Authority is to promote competition in, reliable supply by, and the efficient operation of, the electricity industry for the long-term benefit of consumers.
- 4.1.2 The Authority interprets its objective as requiring it to carry out its functions under section 16(1) of the Act in ways that, for the long-term benefit of consumers, promote competition in, reliable supply by, and the efficient operation of, the electricity industry.<sup>5</sup>
- 4.1.3 One of the Authority's functions under section 16(1)(h) of the Act is to contract for market operation services and system operator services. To carry out its statutory objective in contracting for market operation services and system operator services, the Authority considers that as much as possible, these market operation services and system operator services should align with the statutory objective. In delivering their roles, each market operation service provider should assist the Authority to promote competition in, reliable supply by, and the efficient operation of, the industry for the long-term benefit of consumers.
- 4.1.4 In its *Statement of Intent 2013-2016*, the Authority signalled its intent to increase the alignment of system operator services with the Authority's statutory objective.<sup>6</sup>
- 4.1.5 In June 2014, the Authority considered a report on a review the Authority commissioned from PA Consulting Group Limited, regarding the ongoing suitability of the market operation service provider roles of reconciliation manager, pricing manager, clearing manager, wholesale information trading system manager, and registry manager. The report observed that the market operation service providers were not well aligned to the Authority's objective. The report recommended the Authority place a requirement on market operator service providers to have regard to the Authority's statutory objective.<sup>7</sup>

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<sup>5</sup> Electricity Authority (2011), *Interpretation of the Authority's statutory objective*, at p.10.

<sup>6</sup> Electricity Authority (May 2013), *Statement of Intent 2013-2016*, at p.28

<sup>7</sup> PA Consulting Group Limited (16 May 2014); Review of the market operation service provider roles undertaken by NZX and Jade Software Corporation; see for example p.100, available at: <http://www.ea.govt.nz/operations/market-operation-service-providers/market-operation-service-provider-tender/background/pa-consulting-group-report/>.

### **New clause 3.2A(1) – a statutory objective alignment requirement**

- 4.1.6 The Authority has considered this recommendation and proposes to add a new clause 3.2A(1) that requires all market operation service providers, including the system operator, to align their performance with the statutory objective for the Authority. Given their important roles in the industry, the Authority considers that market operation service providers should not justify breaching any other Code obligations by pointing to an obligation to comply with new clause 3.2A(1). Accordingly, to be clear, under proposed new clause 3.2A(4), complying with the statutory objective alignment requirement at new clause 3.2A(1), which is a broad provision that can be open to interpretation, would not permit a market operation service provider to breach any other provision of the Code.
- 4.1.7 The Authority considers that these amendments will result in each market operation service provider planning and delivering services that more closely align to the statutory objective. This in turn will promote all aspects of the statutory objective for consumers' long-term benefit.
- 4.1.8 The Authority also intends that the proposed amendments will result in market operation service providers developing, adapting and applying their operational policies and procedures in a manner that better aligns with the statutory objective.

## **4.2 Application of a statutory objective alignment requirement to the system operator**

### **New clauses 3.2A(2) and 3.2A(3) would apply only to the system operator**

- 4.2.1 The Authority proposes that new clause 3.2A(2) and (3) would apply to the system operator alongside the statutory objective alignment requirement under proposed new clause 3.2A(1).
- 4.2.2 Proposed new clause 3.2A(2) would require progressive steps to increase alignment by requiring the system operator to take steps to progressively increase the extent to which, in performing its role, it assists the Authority to give effect to the statutory objective. This requirement recognises that the system operator's alignment with the statutory objective is likely to be an incremental process
- 4.2.3 *Proposed new clause 3.2A(3)* establishes an exception for exercising discretion in real-time in the performance of its functions. *Clause 3.2A(3)* would exempt the system operator from complying with new clause 3.2A(1) when exercising discretion in real-time in performing its functions. This exception would recognise and accommodate the system operator's role under the Act as the real-time coordinator of the electricity system. Real-time coordination and operation of the electricity system often

involves managing rapidly changing circumstances and exercising discretion to achieve system security requirements. In the Authority's view, requiring the real-time coordinators when dealing with real-time events and exercising discretion to stop to consider whether or not they are assisting the Authority to give effect to the statutory objective complicates their obligations to achieve system security.

- 4.2.4 The Authority would expect that for the system operator to give effect to clause 3.2A(1); clause 3.2A(2) will apply and the system operator will be progressively updating its policies and procedures, including those setting out real-time operations by system operator co-ordinators, in a manner that provided for consistency with the Authority's statutory objective. It is anticipated that, over time, few circumstances within the real-time coordinator role will be handled as exceptional circumstances outside of clause 3.2A(1).
- 4.2.5 Under the proposed new clause 3.2A(4), the proposed alignment with the Authority's statutory objective in new clause 3.2A(1) would not compromise the system operator's principal performance obligations under Part 7 of the Code. The proposed statutory objective alignment requirement would require the system operator to assist the Authority to give effect to all three limbs of the statutory objective (competition, reliability and efficiency), while still complying with the principal performance obligations under Part 7 of the Code. The Authority anticipates that the proposed statutory objective alignment requirement would see market operation service providers giving equal consideration to all limbs of the statutory objective.

- Q4. What improvements, if any, should the Authority make to the proposed statutory objective alignment requirement to better promote the statutory objective?**
- Q5. Do you agree that the proposed new clause 3.2A(2) and (3) that would apply to the system operator alongside the statutory objective alignment requirement, promotes the statutory objective? If not, please explain why not.**
- Q6. Do you have any comments regarding the proposed new clause 3.2A? Please provide comments and suggested drafting improvements with reference to specific provisions of the proposed new clause 3A set out in Appendix A.**



# Appendix A Proposed Code amendments

## A.1. Proposed Code amendments relating to the system operator

~~**frequency time error** means a deviation from **New Zealand standard time** caused by variations in system frequency~~

~~**momentary fluctuations** means an momentary deviation in occurrence where the frequency of **electricity** deviates outside the **normal band** but is restored as soon as reasonably practicable. With respect to the frequency targets in clause 7(2)(b)(ii), the maximum and minimum frequency during a **momentary fluctuation** determine the frequency band in which the **momentary fluctuation** is recorded~~

~~**principal performance obligations and PPOs** means a **the system operator obligations** set out in any of clauses 7.2A to 7.2D~~

~~**reasonable and prudent system operator** means exercising that degree of skill, diligence, prudence, foresight and economic management, as determined by good international practice and that would reasonably and ordinarily be expected from a skilled and experienced **system operator** engaged in the co-ordination of an integrated transmission network under the same or similar circumstances as applied in New Zealand at the time~~

### **3.1 Appointment of market operation service provider**

...

- (3) The **system operator** is also a **market operation service provider**, but clauses 3.3, 3.10, ~~3.11, 3.12,~~ and 3.15 do not apply to the **system operator**.

## 7.1 Contents of this Part

This Part provides for—

- (aa) a reasonable and prudent **system operator** standard; and
- (a) high level, output focussed performance obligations of the **system operator** in relation to the real time co-ordination and delivery of **common quality** and **dispatch**; and
- (b) the functions of the **system operator** in relation to **demand** and supply forecasting, security of supply, and supply emergencies; and
- (c) review of the **system operator's** performance under the Act, this Code, and the relevant **market operation service provider agreement**.

### 7.1A Reasonable and prudent system operator standard

- (1) The **system operator** must carry out its role with skill, diligence, prudence, foresight, good economic management, and in accordance with recognised international **bestgood** 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** if the **system operator** complies with subclause (1).

## 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**.

- ~~(1) The **principal performance obligations** of the **system operator** are—~~
  - ~~(a) to act as a **reasonable and prudent system operator** with the objective of **dispatching assets** made available in a manner that avoids the cascade failure of **assets** resulting in the loss of **demand** and arising from—~~
    - ~~(i) frequency or voltage excursions; or~~
    - ~~(ii) **supply** and **demand** imbalances; and~~
  - ~~(b) with regard to the frequency of **electricity**—~~
    - ~~(i) subject to subparagraphs (ii) to (iv) and subclause (2), to act as a **reasonable and prudent system operator** with the objective of maintaining frequency in the **normal band** in accordance with Schedule 8.4, and~~
    - ~~(ii) subject to subclause (2), to act as a **reasonable and prudent system operator** with the objective of ensuring that during **momentary fluctuations** frequency stays between 47 Hertz and 52 Hertz (both inclusive); and~~
    - ~~(iii) subject to subclause (2), to act as a **reasonable and prudent system operator** with the objective of ensuring that the aggregated rate of occurrence of **momentary fluctuations** experienced in the North and South Islands of New Zealand does not exceed the statistical equivalent of the following levels:~~

Frequency band (Hertz) (where “x” is the frequency during a <b>momentary fluctuation</b> )	Maximum number of occurrences by period (commencing on and from 1 March 2004)
52.00 > x ≥ 51.25	7 in any 12 month period
51.25 > x ≥ 50.50	50 in any 12 month period
49.50 ≥ x > 48.75	60 in any 12 month period
48.75 ≥ x > 48.00	6 in any 12 month period
48.00 ≥ x > 47.00	1 in any 60 month period

- (iv) to act as a **reasonable and prudent system operator** with the objective of ensuring that when a fluctuation in frequency occurs, the frequency is restored to the **normal band** as soon as reasonably practicable having regard to all the circumstances surrounding the fluctuation; and
  - (v) to act as a **reasonable and prudent system operator** with the objective of ensuring **frequency time error** is not greater than 5 seconds of **New Zealand standard time**; and
  - (vi) to act as a **reasonable and prudent system operator** with the objective of ensuring that at least once every day the **frequency time error** is eliminated; and
- (c) if reasonably requested by a **participant**, to identify the cause of the problem if the following standards are not being met at any **point of connection** to the **grid**, and take any action available to it under this Code, as reasonably requested of the **system operator** by a **participant**, and practicable given the **assets** made available to it to resolve the problem:
- (i) New Zealand Electrical Code of Practice (NZECP 36.1993) for harmonic levels, as amended from time to time;
  - (ii) Australian Standard (AS2279.4 1991) for voltage flicker levels, as amended from time to time;
  - (iii) the requirement to use reasonable endeavours to maintain **negative sequence voltage** at less than 1% and to ensure that **negative sequence voltage** will be no more than 2% in any part of the **grid**.
- (2) The **principal performance obligations** in this clause are qualified as follows:
- (a) the frequency in the South Island may fall below 47 Hertz only if—
    - (i) the statistical equivalent of 1 **momentary fluctuation** below 47 Hertz in any 60 month period is not exceeded; and
    - (ii) the frequency does not fall below 45 Hertz;
  - (b) the frequency in the South Island may exceed 52 Hertz only if—
    - (i) the frequency does not exceed 55 Hertz; and
    - (ii) the rate of **momentary fluctuations** experienced does not exceed the statistical equivalent of the following levels:

Frequency band (Hertz) (where “x” is the frequency during a <b>momentary fluctuation</b> )	Maximum number of occurrences by period (commencing on and from 1 March 2004)
$55.00 > x \geq 53.75$	1 in any 60 month period
$53.75 > x \geq 52.00$	2 in any 12 month period

Compare: Electricity Governance Rules 2003 rules 2 and 3 section II part C

### **7.2A System operator to maintain frequency**

- (1) The **system operator** must **dispatch assets** in a manner that avoids cascade failure of **assets** 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 of 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 momentary fluctuation occurs**

If a **momentary 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 **momentary 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 request under subclause (1), the **system operator** must—
- (a) identify the cause of the problem; and
  - (b) take all reasonable and practical steps to resolve the problem.

### **7.2E System operator to report on momentary fluctuations**

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

<u>Frequency band (Hertz) (where “x” is the maximum or minimum frequency during a <b>momentary fluctuation</b>)</u>			
<u>52.00</u>	<u>≥</u>	<u>x</u>	<u>≥</u> <u>51.25</u>
<u>51.25</u>	<u>≥</u>	<u>x</u>	<u>≥</u> <u>50.50</u>
<u>49.50</u>	<u>≥</u>	<u>x</u>	<u>≥</u> <u>48.75</u>
<u>48.75</u>	<u>≥</u>	<u>x</u>	<u>≥</u> <u>48.00</u>
<u>48.00</u>	<u>≥</u>	<u>x</u>	<u>≥</u> <u>47.00</u>

- (2) By the 10<sup>th</sup> day of each month, the **system operator** must report to the **Authority** the number of **momentary fluctuations** in each of the following frequency bands, in the **South Island** in the previous month:

<u>Frequency band (Hertz) (where “x” is the maximum or minimum frequency during a <b>momentary fluctuation</b>)</u>			
<u>55.00</u>	<u>≥</u>	<u>x</u>	<u>≥</u> <u>53.75</u>
<u>53.75</u>	<u>≥</u>	<u>x</u>	<u>≥</u> <u>52.00</u>
<u>47.00</u>	<u>≥</u>	<u>x</u>	<u>≥</u> <u>45.00</u>

### 7.3 Functions of the system operator in relation to security of supply and emergency management

- (1) ~~The functions of the system operator must in relation to the provision of information and short- to medium-term forecasting on all aspects of security of supply are—~~
  - (a) ~~to~~ prepare and **publish** a **security of supply forecasting and information policy** that includes a requirement that the **system operator**—
    - (i) prepare and **publish** at least annually a security of supply assessment that contains detailed supply and demand forecasts for at least 5 years, which assists interested parties to assess whether the energy security of supply standard and the capacity security of supply standard set out in subclause (2) are likely to be met; and
    - (ii) consult with persons that the **system operator** thinks are representative of the interests of persons likely to be substantially affected by a security of supply assessment prepared under subparagraph (i) before **publishing** such an assessment; and
    - (iii) prepare and **publish** information that assists interested parties to monitor how hydro and thermal generating capacity, transmission assets, primary fuel, and **ancillary services** are being utilised to manage risks of shortage, including extended dry periods; and
    - (iv) **publish**, in connection with the information **published** under subparagraphs (i) and (iii), sufficient details of the modelling data, assumptions, and methodologies that the **system operator** has used to prepare that information as to allow interested parties to recreate that information (but without **publishing** information that is confidential to any **participant**); and
  - (b) ~~to~~ implement and comply with the **security of supply forecasting and information policy** prepared and **published** in accordance with paragraph (a).
- (2) For the purposes of subclause (1)(a)(i)—
  - (a) the energy security of supply standard is a **winter energy margin** of 14-16% for New Zealand and a **winter energy margin** of 25.5-30% for the South Island; and
  - (b) the capacity security of supply standard is a **winter capacity margin** of 630-780 **MW** for the North Island.
- (2A) The **Authority** may **publicise** a security standards assumptions document.
- (2B) Subject to subclauses (2C) and (2D), if the **Authority** has **publicised** a security standards assumptions document under subclause (2A), the **system operator** must use the assumptions set out in that document in preparing a security of supply assessment under the **security of supply forecasting and information policy**.
- (2C) The **system operator** may use different assumptions from those in a security standards assumptions document to prepare a security of supply assessment if—
  - (a) the **system operator** considers that there are good reasons to use different assumptions; and
  - (b) the **system operator** includes in the security of supply assessment—
    - (i) a detailed explanation of the assumptions used to prepare the security of supply assessment; and
    - (ii) a statement of reasons for using those assumptions instead of the assumptions **publicised** by the **Authority**; and

- (iii) a description of how the security of supply assessment prepared using those assumptions differs from a security of supply assessment prepared using the assumptions set out in the security standards assumptions document.
- (2D) Despite subclause (2C), the **system operator** is not required to include the information referred to in subclause (2C)(b) in a security of supply assessment if the **system operator** considers that it would have good reason to refuse to supply the information under clause 2.6.
- (3) The ~~functions of the system operator~~ must in relation to managing supply emergencies are—
- (a) ~~to prepare and~~ **publish an emergency management policy** that sets out the steps that the **system operator** must take, ~~as a reasonable and prudent system operator~~, and must encourage **participants** to take, at various stages during an extended emergency such as an extended dry sequence or an extended period of capacity inadequacy; and
  - (b) ~~within 2 years of this Code coming into force, to include in the emergency management policy~~ the steps that, at various stages in anticipation of and during a gas transmission failure or gas supply failure to **generators**, the **system operator** must—
    - (i) take as the a reasonable and prudent system operator; and
    - (ii) encourage **participants** to take, including, if appropriate, steps for relevant **participants** to take in conjunction with gas industry entities; and
    - (iii) encourage relevant gas industry entities to take; and
  - (c) ~~to implement and comply with the emergency management policy prepared and published in accordance with paragraph (a).~~
- (4) The **emergency management policy** is not required to include information that is already set out in—
- (a) the **system operator rolling outage plan** prepared under subpart 1 of Part 9; or
  - (b) the **policy statement**; or
  - (c) **Technical Code B** of Schedule 8.3.
- (5) The **system operator** may depart from the policies set out in an **emergency management policy** if an **EMP departure situation** arises and such departure is required to enable the **system operator** to comply with clause 7.1A. ~~act as a reasonable and prudent system operator.~~
- (6) If the **system operator** makes a departure under subclause (5) because of an **EMP departure situation**, the **system operator** must provide a report to the **Authority** setting out the circumstances of the **EMP departure situation** and the actions taken to deal with it. The **Authority** must **publish** the report within a reasonable time of its receipt.

Clause 7.3(2)(a): amended, on 3 January 2013, by clause 4(1) of the Electricity Industry Participation (Supply Standards) Code Amendment 2012.

Clause 7.3(2)(b): amended, on 3 January 2013, by clause 4(2) of the Electricity Industry Participation (Supply Standards) Code Amendment 2012.

Clause 7.3(2A), (2B), (2C) and (2D): inserted, on 3 January 2013, by clause 4(3) of the Electricity Industry Participation (Supply Standards) Code Amendment 2012.

Clause 7.3(4)(b): amended, on 10 January 2013, by clause 5 of the Electricity Industry Participation (Policy Statement and Procurement Plan Review Process) Code Amendment 2012.

Clause 7.3(5): amended, on 21 September 2012, by clause 7(1) of the Electricity Industry Participation (Minor Amendments) Code Amendment 2012.

...

### **7.5 Approval of draft security of supply forecasting and information policy and emergency management policy**

- (1) The **system operator** may submit to the **Authority** for approval a draft **security of supply forecasting and information policy** or a draft **emergency management policy** to replace an existing **security of supply forecasting and information policy** or **emergency management policy** as the case may be.
- ~~(2) The **system operator** must, within 1 year of this Code coming into effect, submit a draft **emergency management policy** to the **Authority** for approval.~~
- (3) In preparing the draft **security of supply forecasting and information policy** or the draft **emergency management policy**, the **system operator** must—
  - (a) consult with persons that the **system operator** thinks are representative of the interests of persons likely to be substantially affected by the policies; and
  - (b) consider submissions made on the policies.
- (4) The **system operator** must provide a copy of each submission received under subclause (3) to the **Authority**.
- (5) The **Authority** must, as soon as practicable after receiving the draft **security of supply forecasting and information policy** or the draft **emergency management policy**, by notice in writing to the **system operator**,—
  - (a) approve the relevant policy; or
  - (b) decline to approve the relevant policy.
- (6) If the **Authority** declines to approve the draft **security of supply forecasting and information policy** or the draft **emergency management policy**, the **Authority** must **publish** the changes that the **Authority** wishes the **system operator** to make to the relevant draft policy.
- (7) When the **Authority publishes** the changes that the **Authority** wishes the **system operator** to make to the relevant draft policy under subclause (6), the **Authority** must notify the **system operator** and interested parties of the date by which submissions on the changes must be received by the **Authority**.
- (8) Each submission on the changes to the draft policy must be made in writing to the **Authority** and be received on or before the date specified by the **Authority** under subclause (7). The **Authority** must provide a copy of each submission received to the **system operator** and must **publish** the submissions.
- (9) The **system operator** may make its own submission on the changes to the draft policy and the submissions received in relation to the changes. The **Authority** must **publish** the **system operator's** submission when it is received.
- (10) The **Authority** must consider the submissions made to it on the changes to the draft policy.
- (11) Following the consultation required by subclauses (7) to (10), the **Authority** may approve the draft policy subject to the changes that the **Authority** considers appropriate being made by the **system operator**.

...

## 7.8 Review of system operator

- (1) The **Authority** must review the performance of the **system operator** at least once in each **financial year**, after the **system operator** submits its self-review under clause 7.11.
- (2) The review must concentrate on the **system operator's** compliance with—
  - (a) its obligations under this Code and the **Act**; and
  - (b) the operation of this Code and the **Act**; and
  - (c) any performance standards agreed between the **system operator** and the **Authority**; and
  - (d) the provisions of the **system operator's market operation service provider agreement**.
- (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.

Compare: SR 2003/374 r 47

## 7.9 Additional matters to be taken into account in system operator review

The **Authority** must take into account the following matters when conducting a review under clause 7.8:

- (a) the terms of the **system operator's market operation service provider agreement**;
- (b) ~~the~~ reports from the **system operator** to the **Authority**, including the **system operator's** self-review under clause 7.11:
- (c) the performance of the **system operator** over time in relation to this Part and Part 8;
- (d) the extent to which the acts or omissions of other persons have impacted on the performance of the **system operator** and the nature of the task being monitored;
- (e) reports or complaints from any person, and any responses by the **system operator** to such reports or complaints:
- (f) the fact that the real time co-ordination of the power system involves a number of complex judgments and inter-related incidents;
- (g) any disparity of information between the **Authority** and the **system operator**;
- (h) any other matter the **Authority** considers relevant to assess the **system operator's** performance.

Compare: SR 2003/374 r 48

...

## 7.11 Review of performance of the system operator

- (1) No later than 31 August ~~30 September~~ in each year, the **system operator** must submit to the **Authority** a review and assessment of its performance in the previous 12 month period ending 30 June ~~31 August~~.
- (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: ~~in carrying out its functions with respect to—~~

- (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** and **consumers**:
  - (g) delivery of the **system operator's** capital and business plans:
  - (h) the financial and operational performance of the **system operator**.
- (3) ~~The **Authority** must review and assess the performance of the **system operator** in the period to which the self-review relates having regard to the self-review and such other matters as the **Authority** considers relevant.~~
- (4) ~~The **Authority** must **publish** its review and assessment of the **system operator** no later than 10 **business days** after the **Authority** completes the review and assessment.~~

Compare: Electricity Governance Rules rule 14 section II part C

Clause 7.11(4): amended, on 15 May 2014, by clause 6 of the Electricity Industry Participation (Minor Code Amendments) Code Amendment 2014.

#### **7.12 Authority must publicise system operator reports**

- (1) The **Authority** must **publicise** all self-review reports that are received from the **system operator** and that are required to be provided by the **system operator** to the **Authority** under this Code.
- (2) The **Authority** must **publicise** each report within 5 **working days** after receiving the report.

Compare: SR 2003/374 r 49

## 8.5 Restoration

- (1) If an event disrupts the **system operator's** ability to comply with the **principal performance obligations**, the **system operator** must act as a ~~reasonable and prudent system operator~~ to re-establish normal operation of the power system as soon as possible, given—
  - (a) the capability of **generation, ancillary services, and extended reserve**; and
  - (b) the configuration and capacity of the **grid**; and
  - (c) the information made available by **asset owners**.
- (2) When re-establishing normal operation of the power system under subclause (1), the **system operator** must have regard to the following priorities:
  - (a) first, the safety of natural persons;
  - (b) second, the avoidance of damage to **assets**;
  - (c) third, the restoration of **offtake**;
  - (d) fourth, conformance with the **principal performance obligations**;
  - (e) fifth, full conformance with the **dispatch objective**.

## 8.8 System operator to comply with Purpose of policy statement

- (1) ~~Subject to clause 8.14, the **system operator** must comply with t~~The **policy statement** sets out policies and means that are considered appropriate during the term of the **policy statement** for the **system operator** to observe in complying with the **principal performance obligations**.
- (2) ~~Subclause (1) is subject to the obligation of the **system operator** to act as a **reasonable and prudent system operator** and to therefore depart from the **policy statement**.~~
- (3) ~~The **policy statement** allows the **system operator** to use its discretion in operational matters in accordance with clause 8.14.~~

## 8.11 Content of draft policy statement

- (1) *[Revoked]*
- (2) *[Revoked]*
- (3) The **draft policy statement** must address the matters in, and must be prepared on the basis of, clause 8.8 and must include—
  - ...
  - (c) a policy setting out how the system operator will manage the policies and means by which the **system operator** intends to address any conflict of interest that arises in the performance of its obligations under this Code; and
  - ...

## 8.14 Departure from policy statement

- (1) The **system operator** may depart from the policies set out in a **policy statement** when a **system security situation** arises and such departure is required ~~in terms of the~~ for the **system operator** acting as a **reasonable and prudent system operator** to comply with clause 7.1A.
- (2) If the **system operator** departs from a **policy statement** under subclause (1) ~~because of a **system security situation**~~, the **system operator** must provide a report to the **Authority** setting out the circumstances of the **system security situation** and the actions taken to deal with it.

- (3) The **Authority** must **publicise** the report within a reasonable time after receiving it.

### 8.27 System operator to monitor compliance

- (1) To the extent possible, given the information made available by **asset owners**, the **system operator** must monitor, in the manner set out in the **policy statement**, the ongoing compliance of **asset owners** with the **asset owner performance obligations** and the **technical codes**. To avoid doubt, the **system operator** has no monitoring obligations under this subpart other than those set out in the **policy statement**.
- (2) The **system operator** has ~~the a~~ discretion, ~~acting as a reasonable and prudent system operator,~~ to not **dispatch** an **asset** or configuration of **assets**, if it is not satisfied that the **assets** or configuration of **assets** comply with the relevant **asset owner performance obligations** or provisions of the **technical codes**, or that the **asset owner** has and is complying with a valid **equivalence arrangement** or **dispensation** from the relevant **asset owner performance obligations** or provisions of the **technical codes**.
- (3) The **system operator** must immediately advise an **asset owner** if the **system operator** has reasonable grounds to believe that the **asset owner** is not complying with an **asset owner performance obligation, equivalence arrangement** or **dispensation**, and that the **asset owner**—
  - (a) does not have a valid **equivalence arrangement** or **dispensation** from the relevant **asset owner performance obligations** or provisions of the **technical codes**: or
  - (b) is not complying with a valid **equivalence arrangement** or **dispensation** from the relevant **asset owner performance obligations** or provisions of the **technical codes**.

### 8.60 System operator must investigate ~~Process for determining causer of under-frequency event~~

- (1) The **system operator** must promptly notify every **generator, grid owner**, and any other **participant** substantially affected by an **under-frequency event**, that an **under-frequency event** has occurred.
- (2) ~~The system operator~~ **system operator** may, by notice in writing to a ~~participant~~ **participant**, require a ~~participant~~ **participant** to provide information required by the ~~system operator~~ **system operator** for the purposes of this ~~rule clause~~.
- (3) A notice given under subclause (2) must specify the information required by the ~~system operator~~ **system operator** and the date by which the information must be provided (which must not be earlier than 20 ~~business days~~ **business days** after the notice is given).
- (4) A **participant** who has received a notice under subclause (2) must provide the information required by the **system operator** by the date specified by the **system operator** in the notice.
- (5) Within 40 **business days** of receiving the information, 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.

### **8.61 ~~System operator must determine causer of under-frequency event~~**

- (1) The ~~system operator~~ **Authority** must determine whether an **under-frequency event** has been caused by a **generator** or **grid owner**.
- (2) The ~~system operator~~ **Authority** must **publish** a draft determination that states whether the **under-frequency event** was caused by a **generator** or **grid owner** and, if so, the identity of the **causer**.
- (3) The ~~system operator~~ **Authority** must give reasons for its findings in the draft determination.
- (4) The ~~Authority system operator~~ must consult every **generator**, **grid owner** and other **participant** substantially affected by an **under-frequency event** in relation to the draft determination.
- (5) ~~At the time~~ When the ~~system operator~~ **Authority publishes** the draft determination under subclause (2), the ~~system operator~~ **Authority** must give notice to **generators**, **grid owners**, and other **participants** substantially affected by ~~an~~ the **under-frequency event** of the closing date for submissions on the draft determination.
- (6) The date referred to in subclause (5) must be no earlier than 10 **business days** after the date of **publication** of the draft determination.
- (7) The ~~system operator~~ **Authority** must **publish** submissions received under subclause (4) unless there is good reason for withholding information in a submission.
- (8) For the purposes of subclause (7), good reason for withholding information exists if there is good reason for withholding the information under the Official Information Act 1982.
- (9) Following the consultation under subclause (4), the ~~system operator~~ **Authority** must **publish** a final determination.

Compare: Electricity Governance Rules 2003 rule 11.5.1B section IV part C

### **8.62 Disputes regarding ~~Authority system operator~~ determinations**

- (1) ~~The Authority or a~~ **A participant** who is substantially affected by a determination may dispute the determination by referring the matter to the **Rulings Panel**.
- (2) A dispute is commenced by giving written notice to the **Rulings Panel** specifying the grounds of the dispute.
- (3) A notice under subclause (2) must be given within 10 business days after the determination is **published**.
- (4) The ~~system operator's~~ **Authority's** determination is suspended if a dispute is referred to the **Rulings Panel** within that time.
- (5) If a dispute is not referred to the **Rulings Panel** within that time, the determination is final.
- (6) If a dispute is referred to the **Rulings Panel**, the ~~system operator~~ **Authority** must provide the **Rulings Panel** with all information considered by the ~~system operator~~ **Authority** in making the determination.

Compare: Electricity Governance Rules 2003 rule 11.5.1C section IV part C

### **8.63 Decision of the Rulings Panel**

- (1) The **Rulings Panel** may—
  - (a) confirm the determination; or

- (b) amend the determination; or
  - (c) substitute its own determination; or
  - (d) refer the determination back to the ~~system operator~~ **Authority** with directions as to the particular matters that require reconsideration or amendment.
- (2) The ~~system operator's~~ **Authority's** determination has effect as confirmed, amended, or substituted by the **Rulings Panel** from the date of the **Rulings Panel's** decision.
  - (3) The **Rulings Panel** must give a copy of its decision to the ~~system operator~~ **Authority** as soon as reasonably practicable.
  - (4) The ~~system operator~~ **Authority** must **publish** the **Rulings Panel's** decision as soon as reasonably practicable.
  - (5) If the **Rulings Panel** refers the matter back to the ~~Authority~~ ~~system operator~~, the ~~system operator~~ **Authority** must have regard to the **Rulings Panel's** directions under subclause (1)(d).

Compare: Electricity Governance Rules 2003 rule 11.5.1D section IV part C

## **Schedule 8.4<sup>cl 7.2</sup>**

### **Reserve management objective**

#### **1—Reserve management objective**

- (1) ~~The objective of the reserves management process is to provide the scheduling, pricing and dispatching tool (SPD) with the information necessary to permit the SPD to schedule a minimum quantity of **instantaneous reserve**.~~
- (2) ~~Simultaneously, but subject to the availability of sufficient **offers** or **reserve offers**, the process must satisfy the requirement that sufficient **instantaneous reserve** is scheduled to maintain the power system frequency of the North and the South Islands within the limits of the under frequency standard specified below.~~

#### **2—Under-frequency standard**

- (1) ~~For a contingent event in any **island**, the frequency of the **island** where the event took place must—~~
  - ~~(a) stay at or above 48 Hz; and~~
  - ~~(b) return to or above 49.25 Hz within 60 seconds after the event.~~
- (2) ~~For an extended contingent event in the North Island the frequency must—~~
  - ~~(a) stay at or above 47 Hz; and~~
  - ~~(b) not drop to or below 47.1 Hz for longer than 5 seconds; and~~
  - ~~(c) not drop to or below 47.3 Hz for longer than 20 seconds; and~~
  - ~~(d) return to or above 49.25 Hz within 60 seconds after the event.~~
- (3) ~~For an extended contingent event in the South Island the frequency must—~~
  - ~~(a) stay at or above 45 Hz; and~~
  - ~~(b) return to or above 49.25 Hz within 60 seconds.~~

### 13.76 Dispatch instructions to be logged

- (1) The **system operator** must issue **dispatch instructions** using the electronic facilities specified in the **information system** to—
  - (a) each **generator**; and
  - (b) each **dispatchable load purchaser** that has submitted a **nominated dispatch bid**.
- (2) The **system operator** must use either voice communication or electronic communication (if such facility exists) to issue **dispatch instructions** to each **ancillary service agent**.
- (3) The **system operator** must log and record each **dispatch instruction**.
- (4) Each **generator** and each **ancillary service agent** must log each **dispatch instruction** received from the **system operator**.
- ~~(5) By 1600 hours on the 7th business day of each billing period, the **system operator** must provide to the **clearing manager** a copy of each **dispatch instruction** that the **system operator**—~~
  - ~~(a) issued during the previous **billing period**; and~~
  - ~~(b) has logged and recorded under subclause (3).~~
- (5) The **system operator** must provide a copy of each **dispatch instruction**—
  - (a) to the **clearing manager**, by 1600 hours on the 7<sup>th</sup> **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**.
- (6) For the purpose of subclause (5), if the **system operator** has issued more than 1 **dispatch instruction** for a **dispatch-capable load station** for the same **trading period**, the **system operator** must provide a copy of the latest **dispatch instruction**.

Compare: Electricity Governance Rules 2003 rule 4.9 section III part G

Clause 13.76: substituted, on 15 May 2014, by clause 29 of the Electricity Industry Participation (Modified Dispatchable Demand) Code Amendment 2013.

### 13.102 Reporting obligations of system operator

- (1) 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**. ~~On each **trading day** the **system operator** must report to the **market administrator** in writing. The report must include—~~
  - ~~(a) information on any situations in relation to which the **system operator** believes, on reasonable grounds, that it or another **participant** has breached this Code, including—~~
    - ~~(i) the time at which the alleged breach took place; and~~
    - ~~(ii) the nature of the alleged breach and of any **participant** alleged to be in breach; and~~
    - ~~(iii) the reason for the alleged breach, if the **system operator** is aware of the reason,—~~ unless exceptional circumstances exist (in which case the report is to be provided as soon as reasonably practicable) the report must be provided on each **trading day** even if the **system operator** has no adjustments or alleged breaches of this Code to report; and
  - ~~(b) details of any adjustment to the **non-response schedule** made by the **system operator** during the 48 trading periods beginning at 0700 hours of the previous **trading day**; and~~

- ~~(c) any situations in relation to which discretionary action under clause 13.70 required divergence from the **dispatch schedule** during any of the 48 **trading periods** beginning at 0700 hours of the previous **trading day**, during the previous month; and~~
- ~~(d) a summary of any **block security constraint** and **station security constraint** notices issued to **generators** in accordance with clauses 13.61(1), and 13.75(f) and (g) during the previous **trading day**.~~
- ~~(2) By the 15th business day of each calendar month, the **market administrator** must publish any sections of the reports of the **system operator** received in the previous calendar month under subclause (1)(a) that relate to breaches of this Code by the **system operator**. By the 15th business day of each calendar month the **market administrator** must refer the reports received in the previous calendar month under subclause (1) to the **Authority**.~~
- ~~(3) A **purchaser** or **generator** may, by notice in writing to the **system operator**, request further information from the **system operator** relating to any situation set out in a **system operator's** report **published** under subclause (2) that has materially affected that **purchaser** or **generator**.~~
- ~~(4) The **system operator** must provide information requested under subclause (3) to the **purchaser** or **generator**, except to the extent that the requested information includes another **participant's** confidential information.~~

Compare: Electricity Governance Rules 2003 rule 9 section III part G.

Clause 13.102(1)(b): amended, on 28 June 2012, by clause 45 of the Electricity Industry Participation (Demand-side Bidding and Forecasting) Code Amendment 2011

## A.2. Statutory objective alignment requirement

### 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 role 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.

## Appendix B Summary of the questions included in this paper and format for submissions

<b>Submitter</b>	
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Question	Comment
Q1. Do you agree that the proposed Code amendments relating to the system operator would better give effect to the requirements of section 8(3) of the Act? If not, please explain why not.	
Q2. What improvements, if any, should the Authority make to the proposed Code amendments relating to the system operator to better give effect to the requirements of section 8(3) of the Act?	
Q3. Do you have any comments or suggested drafting improvements regarding the proposed Code amendments relating to the system operator? Please provide comments and suggested drafting improvements with reference to the clauses set out in Appendix A.	
Q4. What improvements, if any, should the Authority make to the proposed statutory objective alignment requirement to better promote the statutory objective?	

Question	Comment
<p>Q5. Do you agree that the proposed new clause 3.2A(2) and (3) that would apply to the system operator alongside the statutory objective alignment requirement, promotes the statutory objective? If not, please explain why not.</p>	
<p>Q6. Do you have any comments or suggested drafting improvements regarding the proposed new clause 3.2A? Please provide comments and suggested drafting improvements with reference to specific provisions of the proposed new clause 3.2A set out in Appendix A.</p>	
<p>Q7. Do you agree with the objectives of the proposed Code amendments that relate to the system operator? If not, please explain why not.</p>	
<p>Q8. Do you agree with the Authority's evaluation of the costs and benefits of the proposed Code amendments that relate to the system operator? If not, please explain why not.</p>	

Question	Comment
<p>Q9. Do you agree with the Authority's evaluation of alternative means of achieving the objectives of the proposed Code amendments that relate to the system operator? If not, please explain why not.</p>	
<p>Q10. Do you agree with the objective of the proposed statutory objective alignment requirement? If not, please explain why not.</p>	
<p>Q11. Do you agree with the Authority's evaluation of the costs and benefits of the proposed statutory objective alignment requirement? If not, please explain why not.</p>	
<p>Q12. Do you agree with the Authority's evaluation of alternative means of achieving the objectives of the proposed Code amendments that relate to the system operator? If not, please explain why not.</p>	

Question	Comment
<p>Q13. Do you agree with the Authority's assessment of the proposed Code amendments against section 32(1) of the Act? If not, please explain why not.</p>	
<p>Q14. Do you agree that the Authority's proposed Code amendments comply with the Code amendment principles? If not, please explain why not.</p>	

## **Appendix C Regulatory statements**

# 1. Regulatory statement for proposed Code amendments relating to the system operator

## 1.1 Statement of the objectives of the proposed amendments

1.1.1 For the amendments that this paper proposes in relation to the system operator, the objectives are to better give effect to:

- (a) the requirements of section 8(3) of the Act
- (b) the Authority's statutory objective under section 15 of the Act.

**Q7. Do you agree with the objectives of the proposed Code amendments that relate to the system operator? If not, please explain why not.**

## 1.2 Evaluation of the costs and benefits of the proposed amendments

### Summary of evaluation

1.2.1 The Authority considers that the expected net benefits of the proposed Code amendments relating to the system operator are positive for the reasons set out below.

### **System operator assisting the Authority to give effect to the statutory objective (proposed new clause 3.2A(1))**

1.2.2 The Authority considers that the proposed amendment, for the system operator to deliver its services in a manner that assists the Authority to give effect to the Authority's statutory objective, will have a positive net benefit. The costs and benefits of this proposal are discussed below.

1.2.3 **Costs** - the main costs of this proposal will be the administrative costs that the system operator incurs in reviewing and updating the policies and procedures it applies to deliver its functions. The system operator would need to do this, to ensure that the manner in which it delivers the policies and procedures is consistent with the Authority's statutory objective.

1.2.4 It is anticipated that each year, as part of the service agreement requirements, the system operator will identify its priority policy and procedure reviews for the forthcoming year and will agree these with the Authority as part of its yearly deliverables. This would ensure that, over time, the system operator progressively moves to delivering its services in a manner consistent with assisting the Authority to give effect to the statutory objective.

- 1.2.5 The one-off costs of the reviews are captured within the existing fixed fee for the system operator. The system operator regularly reviews its policies and procedures to ensure its functions are up-to-date and being delivered to a professional standard.
- 1.2.6 The system operator's review and updating of its policies and procedures will be an additional part of the scope for future reviews and is not expected to add significant additional compliance costs as a result.
- 1.2.7 The Authority does not expect there would be any additional costs for any other industry participants.
- 1.2.8 **Benefits** - the main benefits of the proposal are considered to be the static and dynamic efficiency benefits that would result from the system operator delivering its service in a manner that is consistent with the Authority's statutory objective. This would mean that, in delivering its services, the system operator will give equal consideration to the competition, reliability and efficiency effects of the services and the policies and procedures employed to deliver the services.
- 1.2.9 When delivering its services, the system operator's key focus has been to deliver reliable electricity supply that complies with the system operator's principal performance obligations. The intention of the proposal is to ensure that when considering delivery of reliable supply, the system operator does so in a manner that:
- (a) considers and promotes competition effects where applicable
  - (b) provides reliable supply delivered efficiently.
- 1.2.10 In considering paragraph 1.2.9(b) the system operator would consider the options and costs for delivering reliable supply and ensuring that the system operator's choices are as efficient as possible. The Authority anticipates that this would provide net benefits from productive efficiency outcomes over time in relation to the costs of system operator services, and expected dynamic efficiency benefits for participants, as the system operator identifies and implements the best cost options of providing reliable supply.

**System operator's reasonable and prudent operator obligation (proposed new clause 7.1A and associated amendments)**

- 1.2.11 The Authority considers that the proposed amendments relating to the reasonable and prudent system operator standard will complement the requirement to assist the Authority to give effect to its statutory objective. The proposed Code amendment requires all services to be delivered to the objective standard of a reasonable and prudent operator, which includes a positive obligation to carry out its role with prudence and good economic management. The Authority considers

that the Code amendments will have positive net benefits, as discussed in the evaluation below.

1.2.12 **Costs** - the main costs of the proposed amendments will be the system operator's administrative costs to review and update its policies and procedures to ensure compliance with the reasonable and prudent operator standard.

1.2.13 In the past the Code has required the system operator to deliver a number of, but not all of its functions to this standard. It is anticipated that extending the obligation will be an additional component for the system operator's annual reviews of policies and procedures, and will be covered by the fixed fee for system operator services. The system operator has, as part of its new strategy, initiated a new review of policies and procedures.<sup>8</sup>

1.2.14 In addition, replacing various reasonable and prudent operator obligations in the Code, particularly in Parts 7 and 8, with one overarching obligation applying to all system operator functions would remove the uncertainties and costs associated with the variable application of the obligation and any potential costs to participants of testing that variability.

1.2.15 The Authority does not anticipate that the proposed amendment would add significant compliance costs to the system operator service. The Authority would not expect any additional costs on industry participants as a result of the amendment.

1.2.16 **Benefits** - the main benefits of implementing the proposed amendment would be, consistent with the assessment of the proposed statutory objective alignment, the delivery of the services in a manner that expressly considers not only the reliability of system operator services but also the efficiency of the services delivered. This should result in both static and dynamic efficiency gains.

1.2.17 The reasonable and prudent operator standard applied to the whole of the system operator's role would provide assurance to the industry that all services would be delivered to a consistent professional standard, befitting the significance and economic importance of the system operator role.

**System operator – principal performance obligation changes in relation to common quality and dispatch (proposed new clauses 7.2A-7.2E)**

1.2.18 The Authority considers the proposed amendments for improving the clarity of the principal performance obligations would deliver positive net benefits.

1.2.19 **Costs** – the Authority does not expect the proposed amendments to place any additional costs on industry participants. The proposed changes would improve

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<sup>8</sup> <https://www.systemoperator.co.nz/sites/default/files/bulk-upload/documents/TP%20System%20Operator%20Strategic%20Plan.pdf>

the clarity of the principal performance obligations in the Code and better express the system operator's requirements for frequency management and restoration. They would not change the manner in which the system operator currently provides its principal performance obligations.

- 1.2.20 The reporting requirements proposed at clause 7.2E would reduce the current costs of monthly reporting for the system operator by eliminating the need for the system operator to aggregate the island information into a national report that actually devalues the worth of the information provided and adds costs to the reporting.
- 1.2.21 **Benefits** – The proposed amendments should improve transparency and ensure that the principal performance obligations are easier to understand and are all effectively set out in one place in the Code. There is no change made to the principal obligations that in any way materially changes the performance obligations of the system operator.
- 1.2.22 Clause 7.2E proposes more transparent reporting requirements that the Authority expects would improve information access and understanding of the system operator's performance. Current reporting of frequency fluctuations is aggregated to reflect the existing Code requirements. However the current requirements are at odds with the actual practice of disaggregated frequency management on a per island basis. The proposed amendments would correct the Code and would provide more transparent information more efficiently.

**System operator performance self-reviews and Authority reviews (proposed amendments to clauses 7.8, 7.9 and 7.11)**

- 1.2.23 The Authority considers that the proposed amendments to these review provisions would deliver positive net benefits.
- 1.2.24 **Costs** – currently the Code requires the system operator to conduct a performance review for an operational year basis of 1 September to 31 August. This is inconsistent with the system operator's financial and contractual years. This results in administrative costs for both the system operator and the Authority, because they are required to conduct two review processes: one for the Code and one for the system operator service provider agreement that covers a contract year, which is also the financial year, of 1 July to 30 June.
- 1.2.25 The administrative costs for both parties preparing two reviews, which deal with similar matters, would be reduced and streamlined into one annual review framework.
- 1.2.26 The review and reporting focus on performance would remain. However, the drafting includes some additional relevant performance review matters. These matters have been reported on as a matter of practice but it is proposed that they

be specified in the Code. The drafting changes are not anticipated to add costs to the system operator or any other participants.

1.2.27 It is anticipated that the costs of performance reviews by the system operator and the Authority, respectively, would decrease if the current duplication of process is removed.

1.2.28 **Benefits** – the consolidation of performance reviews into one Code performance review process would be expected to improve the efficiencies for both the system operator and the Authority when conducting the reviews. The proposed amendment would enable the system operator and the Authority to follow a clear sequential process and employ a transparent publishing regime. It is intended this would provide participants with greater transparency regarding the system operator's performance. It is anticipated that net benefits would derive from one consistent performance review process that allows the system operator to better focus on performance improvement.

**System operator policy statement amendments (proposed amendments to clauses 8.8, 8.11, and 8.14)**

1.2.29 The Authority considers that the proposed key amendment in relation to the policy statement that expressly requires the system operator to manage conflicts of interest that may arise during the performance of its Code obligations will provide net benefits and is consistent with the system operator assisting the Authority to give effect to its statutory objective.

1.2.30 **Costs** - The Authority does not expect the proposed amendment to place any additional costs on industry participants generally or the system operator, specifically.

1.2.31 The system operator voluntarily includes a conflict of interest policy within the Policy Statement incorporated in the Code currently. The Authority considers that outside of its standard costs of reviewing the policy as a business as usual activity, the system operator should not incur any additional costs from the proposal.

1.2.32 **Benefits** – The Authority considers that net benefits do derive from this change as the Code would clearly signal to existing and future participants that the system operator is required to establish and manage conflicts of interest in a manner that will promote competition. The proposal would also likely support dynamic efficiency outcomes over time by providing added certainty regarding structural arrangements for the sector, attractive to new entrants and incumbents alike.

**System operator and evaluation of the causer of under-frequency events (proposed amendments to clauses 8.60-8.63)**

1.2.33 The Authority considers that the proposed amendments to the causer investigation and determination regimes would provide positive net benefits.

- 1.2.34 **Costs** - The Authority expects there to be a negligible amount of one-off administrative cost to separate the functions so that the Authority becomes the decision maker for causers of under-frequency events while the system operator remains the identifier, information gatherer and analysing party.
- 1.2.35 The Authority already performs the determinative role for all Code breaches and has a very well-established process for relevant compliance matters. It is anticipated that the Authority would need to make minor adjustments to its systems and processes to address the irregular under-frequency causer investigations that do occur over time.
- 1.2.36 The system operator should see a small reduction in cost and time associated with relinquishing the causer determination function. The majority of the other aspects of performing the work to determine under-frequency causers would remain and would be cost neutral for the system operator.
- 1.2.37 **Benefits** – The Authority considers that net benefits would derive from the proposed change. The proposed amendments to under-frequency causer determinations would result in a clear separation of roles and thereby promote static efficiency and dynamic efficiency benefits.
- 1.2.38 The Authority conducts a number of other determination functions, and therefore is well-equipped and adept at making neutral determinations on the basis of facts provided. Using the Authority’s existing systems and processes to determine under-frequency events is expected to be more efficient compared to the system operator continuing to deliver determinations.
- 1.2.39 The Authority is not a participant and has no interest in the outcome of such determinations. By contrast, the system operator and the grid owner are participants. The system operator can be placed in a difficult position depending on the participants identified as potentially causing an under-frequency-event. Changing the structure so that the determination itself is handled by a neutral party, would establish a more certain, transparent and coherent process that would provide competition and dynamic efficiency benefits.

**System operator - provision to the Authority of dispatch instructions (proposed amendment to clause 13.76(5))**

- 1.2.40 The proposal is that, after issuing dispatch instructions to participants, the system operator will provide a copy of all final dispatch instructions to the Authority. The Authority considers this will result in a positive net benefit.
- 1.2.41 **Costs** – The Authority does expect the system operator would incur some incremental costs in establishing and testing the provision of dispatch files to the Authority by way of daily feed. The daily feeds would be by electronic file to the Authority and are not expected to require any other changes of systems or support. The dispatch instructions would be in addition to the scheduling pricing

dispatch cases, which the Authority already receives, and from which the dispatch instructions are produced. The Authority does not anticipate any additional costs for participants.

- 1.2.42 **Benefits** - The Authority considers that the benefit of receiving the dispatch instructions is that it would augment the Authority's general market performance monitoring programme and provide better transparency between the schedule pricing dispatch cases and the instructions provided to participants. It would also provide greater information to allow the Authority to consider the operation of the dispatch objective and to develop objective metrics for the performance of dispatch and scheduling for the long term benefit of consumers. The development of dispatch objective metrics are expected to result in dynamic efficiency benefits for the electricity industry. The Authority considers that the proposal would have a positive net benefit.

**System operator – amending of reporting obligations (proposed amendments to clause 13.102)**

- 1.2.43 The Authority considers that the proposed amendments would have a positive net benefit.
- 1.2.44 **Costs** – currently the system operator is required to provide the information set out at clause 13.102 on a daily basis to the market administrator (the Authority). It is required to provide the information on alleged breaches in addition to the requirement to provide the same information under the Electricity Industry (Enforcement) Regulations 2010. The Authority does not use the remainder of the information supplied daily at all. The market administrator is then required to publish a small part of the daily supplied information and refer it to the Authority. The Authority considers that the proposed amendments will have no cost impacts on the system operator or other participants. Rather, the proposed amendments would have positive cost outcomes by reducing compliance and administrative costs for the system operator and the Authority in its role as market administrator.
- 1.2.45 The proposed retention of the discretionary action reporting obligation, and its conversion from a daily to a monthly obligation, would minimise the cost impact of the system operator providing that data. The proposed amendment aligns the data supply to how it is used and reported by the Authority.
- 1.2.46 The changes are expected to eliminate duplicate reporting requirements and to reduce the administrative costs for both the Authority and the system operator.
- 1.2.47 **Benefits** – the benefit of rationalising the daily reporting obligations is that it would improve static efficiencies for both the system operator's and the Authority's performance by eliminating duplicate or unnecessary reporting. It would allow the system operator to provide transparent information that is valued by the market and eliminate the provision of information that is either not used or is received by

more than one means. The Authority considers the proposal would provide positive net benefits.

**Q8. Do you agree with the Authority's evaluation of the costs and benefits of the proposed Code amendments that relate to the system operator? If not, please explain why not.**

### **1.3 Evaluation of alternative means of achieving the objectives of the proposed amendments**

- 1.3.1 Under section 8(3) of the Act, the Code must specify the system operator's functions, how the system operator is to perform its functions, and all requirements relating to transparency and performance. Under section 16(1)(h) of the Act, the Authority can negotiate a number of the service requirements under the service provider agreement. However, it cannot avoid ensuring that the system operator's functions and requirements relating to transparency and performance are set out in the Code.
- 1.3.2 Similarly, section 15 of the Act sets out the Authority's objective, and the Authority has no alternative but to adhere to it.
- 1.3.3 Accordingly, the Authority does not consider there are alternative means to achieve the objectives of the proposed amendments that would be consistent with the requirements of the Act.

**Q9. Do you agree with the Authority's evaluation of alternative means of achieving the objectives of the proposed Code amendments that relate to the system operator? If not, please explain why not.**

## 2. Regulatory statement for proposed Code amendment for statutory objective alignment requirement

### 2.1 Statement of the objective of the proposed amendment

2.1.1 The objective of the proposed statutory objective alignment requirement is to require each market operation service provider, in performing its role, to assist the Authority to give effect to the Authority's statutory objective.

Q10. **Do you agree with the objective of the proposed statutory objective alignment requirement? If not, please explain why not.**

### 2.2 Evaluation of the costs and benefits of the proposed amendment

#### **Market operation service providers' alignment to the statutory objective (proposed clause 3.2A)**

2.2.1 The Authority considers that the proposed amendment to require all market operation service providers to provide their services in a manner that will assist the Authority to give effect to its statutory objective will provide positive net benefits.

2.2.2 **Costs** – The Authority considers that any costs of giving effect to this requirement would be negligible for the market operation service providers. If any costs do arise they would relate to the market operation service provider being required to review and adjust any current policies and procedures. It is anticipated that explicitly requiring services to be provided in a manner that assists the Authority to give effect to its statutory objective would not impose any incremental costs on service providers or on industry participants more widely.

2.2.3 **Benefits** - The Authority considers that the proposed requirement to provide services in a manner that gives effect to the Authority's statutory objective would be consistent with productive efficiency requirements, as it would require services to be provided in a manner that explicitly considers efficiency. Moreover, the Authority anticipates that the proposed amendments would result in delivery of services that would have positive dynamic efficiency benefits as the services would be provided, over time, in a manner that promotes competition, does not impact on reliability of supply, and explicitly considers the efficient operation of the services supplied. The Authority expects the proposal will result in the Authority and its service providers avoiding unnecessary costs of service provision, and will

therefore have a positive net benefit.

**Q11. Do you agree with the Authority's evaluation of the costs and benefits of the proposed statutory objective alignment requirement? If not, please explain why not.**

## **2.3 Evaluation of alternative means of achieving the objective of the proposed amendment**

2.3.1 The Authority has a statutory obligation to give effect to its statutory objective. The Authority achieves this by carrying out a number of functions including by purchasing services from market operation service providers under section 16 of the Act. If market operation service providers' performance did not align with the statutory objective, the Authority would never achieve its statutory objective.

2.3.2 Since the Authority was created, market operation service providers have continued to provide their services without an explicit requirement to support the Authority to give effect to its statutory objective. As a result, market operations service provision may not consistently have been aligned with the statutory objective. The Authority therefore considers the proposed Code amendment would be in improvement on the status quo (continuing without an explicit statutory objective alignment requirement) and would enable consistent application of a statutory objective alignment requirement to market operation service providers in the future.

2.3.3 The only alternative to achieve the objective of the proposed Code amendment would be to place the obligation in the service provider agreements. However, this approach would likely be considerably less efficient than reliance on the Code and compliance processes.

**Q12. Do you agree with the Authority's evaluation of alternative means of achieving the objectives of the proposed statutory objective alignment requirement? If not, please explain why not.**

## **Appendix D Assessment of proposed Code amendments against the Code amendment principles and section 32(1) of the Act**

### **3. Assessment against section 32(1) of the Act**

#### **3.1 Assessment under section 32(1) of the Act**

- 3.1.1 Section 32(1) of the Act provides that Code provisions must be consistent with the statutory objective and be necessary or desirable to promote any or all of the following:
- (a) competition in the electricity industry
  - (b) the reliable supply of electricity to consumers
  - (c) the efficient operation of the electricity industry
  - (d) the performance by the Authority of its functions
  - (e) any other matters specifically referred to in the Act as a matter for inclusion in the Code.
- 3.1.2 The Authority's assessment of all of the Code amendments proposed in this paper against section 32(1) of the Act is set out in the following table:

Requirement	Comment
<p>The proposed Code amendments are consistent with the statutory objective.</p>	<p>The proposed Code amendments are consistent with the statutory objective because:</p> <ul style="list-style-type: none"> <li>(a) under the Act, the system operator’s role is to ensure the real-time coordination of the electricity system, to manage supply emergencies and to provide information and forecasts regarding security of supply. Enabling the system operator to carry out this role effectively will promote the statutory objective for the long-term benefit of consumers. The Code amendments relating to the system operator better enable the system operator to carry out its role (and therefore give effect to the statutory objective) by clarifying the system operator’s functions and how it must perform those functions, and setting requirements relating to transparency and performance for the system operator</li> <li>(b) the proposed statutory objective alignment requirement will require each market operation service provider, in performing its role, to assist the Authority to give effect to the statutory objective.</li> </ul>
<p>The proposed Code amendments are necessary or desirable to promote any or all of the following:</p>	

<p>(a) competition in the electricity industry</p>	<p>The proposed statutory objective alignment requirement is desirable to promote competition in the electricity industry because it will require each market operation service provider, in performing its role, to assist the Authority to give effect to its statutory objective. An aspect of the Authority giving effect to its statutory objective is promoting competition in the electricity industry.</p> <p>The proposed Code amendments relating to the system operator will not negatively affect competition in the electricity industry.</p>
<p>(b) the reliable supply of electricity to consumers</p>	<p>The proposed Code amendments are desirable to promote reliable supply of electricity to consumers because:</p> <p>(a) an aspect of the system operator's role under the Act is to provide information and short-to-medium-term forecasting regarding security of supply. The Code amendments relating to the system operator assist the system operator to carry out this aspect of its role by clarifying the system operator's functions, clarifying how the system operator must perform those functions and setting requirements relating to transparency and performance for the system operator. This is desirable to promote reliable supply of electricity to consumers</p> <p>(b) the proposed statutory objective alignment requirement will require each market operation service provider, in performing its role, to assist the Authority to give effect to its statutory objective – an element of which is to promote the reliable supply of electricity to consumers.</p>

<p>(c) the efficient operation of the electricity industry</p>	<p>The proposed Code amendments are desirable to promote the efficient operation of the electricity industry because:</p> <ul style="list-style-type: none"> <li>(a) an aspect of the system operator’s role under the Act is to ensure the real-time coordination of the electricity system, which is central to the operation of the electricity industry. Enabling the system operator to carry out this aspect of its role effectively promotes the efficient operation of the electricity industry. The Code amendments relating to the system operator better enable the system operator to carry out this aspect of its role by clarifying the system operator’s functions, clarifying how the system operator must perform those functions and setting requirements relating to transparency and performance for the system operator. This is desirable to promote the efficient operation of the electricity industry</li> <li>(b) the proposed statutory objective alignment requirement will require each market operation service provider, in performing its role, to assist the Authority to give effect to its statutory objective – an element of which is to promote the efficient operation of the electricity industry.</li> </ul>
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<p>(c) the performance by the Authority of its functions</p>	<p>The proposed Code amendments are desirable to promote the performance by the Authority of its function of contracting for market operation services and system operator services under section 16(1)(h) of the Act. This is because the proposed Code amendments would clarify the system operator’s functions and how it performs those functions, and set requirements for the system operator relating to transparency and performance. This gives the Authority and the system operator greater clarity in contracting for system operator services because the services, the manner by which the services must be performed, and related transparency and performance requirements would be clearly set out in the Code. For market operation service providers (including the system operator), the proposed statutory objective alignment requirement would also clarify how market operation service providers must provide their services, which would in turn simplify contracting for those services.</p>
<p>(d) any other matter specifically referred to in this Act as a matter for inclusion in the Code.</p>	<p>The proposed Code amendments will not materially affect any other matter specifically referred to in the Act for inclusion in the Code.</p>

**Q13. Do you agree with the Authority’s assessment of the proposed Code amendments against section 32(1) of the Act? If not, please explain why not.**

## 4. Assessment against the Code amendment principles

4.1.1 The Authority’s assessment of all of the Code amendments proposed in this paper against the Code amendment principles is set out in the following table:

Principle	Comment
1. Lawful	The proposed Code amendments are lawful, and consistent with the statutory objective and section 32(1) of the Act.
2. Provides clearly identified efficiency gains or addresses market or regulatory failure	<p>The proposed Code amendments would provide clearly identified efficiency gains, as set out in paragraphs 1.2 and 2.2 of Appendix C.</p> <p>Consistent with section 8(3) of the Act, the proposed Code amendments would assist the system operator and enable efficiency gains by:</p> <ul style="list-style-type: none"> <li>(a) clarifying the system operator’s functions</li> <li>(b) clarifying how the system operator must perform those functions</li> <li>(c) setting requirements for the system operator relating to transparency and performance.</li> </ul>
3. The Authority qualitative assessment is that the cost benefit of the proposed changes will be positive	As set out in paragraphs 1.2 and 2.2 of Appendix C, the Authority assesses the proposed Code amendments will give rise to net benefits, though they are not quantifiable.
<p><i>As the proposed Code amendments demonstrate that the clear qualitative cost benefit of the proposed changes would be positive and that the proposals are better than other options, there is no requirement to evaluate the amendments against Code amendment principles 4-9.</i></p>	

**Q14. Do you agree that the proposed Code amendments comply with the Code amendment principles? If not, please explain why not.**