

# Review of the stress test regime

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## Consultation paper

Submissions close: 5pm on 29 November 2016

18 October 2016



## Executive summary

This paper reviews the design and scope of the stress test regime, the obligations for which are contained in subpart 5A of Part 13 of the Electricity Industry Participation Code 2010 (Code). The review also considers whether to retain the stress test regime.

The purpose of this paper is to consult with interested parties on the Authority's findings from the review of the stress test regime.

The stress test regime requires disclosing participants (directly connected consumers and parties buying electricity from the clearing manager) to calculate their exposure to high spot prices in pre-defined scenarios each quarter. Disclosing participants must disclose their quarterly stress test reports to their own Boards and to an independent party appointed by the Authority (the stress test registrar). The Authority receives summary information from the registrar – quarterly stress test reports – which must not identify any individual participant. The Authority publishes the quarterly stress test reports on its website.

### The stress test regime was introduced to achieve three objectives

We identified three objectives for a stress test regime in our original consultation paper when the regime was introduced in 2011:<sup>1</sup>

- a. reduce the scope for opportunistic lobbying by adversely affected participants to socialise the cost of poor risk management decisions
- b. enhance incentives for participants to appropriately manage their spot price exposure
- c. enhance access to information on spot price exposure for participants and for the Authority.

Fulfilling these objectives promotes the Authority's statutory objective by supporting better risk management decision making, which leads to a more efficient level of reliability.

### Recent developments led the Authority to review the stress test regime

Recent developments in the market raised concerns that the security of supply outlook may be deteriorating. Total supply declined, with the withdrawal of thermal generation at Otahuhu B (400 MW) and Southdown (140 MW). In August 2015 Genesis also announced its intention to close the two remaining Huntly Rankine units (totalling 500 MW). At the same time, the unclear future of the Tiwai aluminium smelter makes electricity demand growth uncertain, potentially reducing market participants' willingness to forward contract for new investment. Modelling by the system operator suggested an elevated risk of energy shortage conditions in the event of a dry year in 2019.

While closely monitoring these concerns and other unfolding structural shifts in the market—most notably the potential uptake of emerging technologies such as electric vehicles, solar photovoltaic generation, and battery storage, as well as evolving business models—we decided to review the customer compensation scheme and the stress test regime. While we were conducting these reviews, Genesis announced that it had entered into commercial arrangements with other participants that will keep the two Huntly Rankine units operational until 2022.

Despite Genesis announcing it would prolong the life of the Rankine units, we decided to complete the review of the stress test regime.

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<sup>1</sup> <https://ea.govt.nz/dmsdocument/11096>

**The rationale for the stress test regime remains valid and it helps to ensure efficient security of supply**

We have reviewed the rationale for the stress test regime and consider that it remains valid. The regime encourages wholesale market participants to take accountability for their risk management decisions. Appropriate risk management helps underwrite investment in generation and demand response capacity. The regime therefore contributes to meeting the second limb of our statutory objective — promoting a reliable supply of electricity.

**After considering improvement options, the Authority proposes to retain the stress test regime largely in its current form**

Having concluded that the stress test regime should be retained, the Authority has considered whether any action is required to improve the regime. We identified thirteen potential options, and consider two to be beneficial:

Option 2: Improve quarterly stress test report content and format

Option 10: Simplify reporting for disclosing participants not exposed to spot prices.

Option 2 is a relatively minor operational change that does not require any Code amendment. Option 10 would reduce compliance costs for disclosing participants not exposed to spot prices, such as those with a fixed price variable volume contract. A fuller description of this option is set out in Appendix A starting at paragraph A.124. Because this change is of a technical nature and not expected to be controversial, the Authority proposes to address it as a minor Code amendment.

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# 1 What you need to know to make a submission

## What you need to do

- 1.1 Please deliver your submissions by **5pm** on **29 November 2016**.
- 1.2 Please send your submission (using Microsoft Word in the format shown in Appendix B) by email to [submissions@ea.govt.nz](mailto:submissions@ea.govt.nz) with “Consultation Paper—Review of stress test regime” in the subject line.
- 1.3 If you cannot email your submission, post one hard copy to either of the addresses below, or fax it to 04 460 8879.

### Postal address

Submissions  
Electricity Authority  
PO Box 10041  
Wellington 6143

### Physical address

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

## What we will do

- 1.4 We will acknowledge receipt of all submissions. If you do not receive acknowledgement of your submission within two business days, please contact the Submissions Administrator by sending an email to [submissions@ea.govt.nz](mailto:submissions@ea.govt.nz) or phoning 04 460 8860.
- 1.5 We will publish all submissions. If you do not want us to publish part of your submission, please:
  - (a) indicate which part should not be published
  - (b) explain why you consider we should not publish that part
  - (c) provide a version of your submission that we can publish (if we agree not to publish your full submission).
- 1.6 If you tell us you do not want us to publish part of your submission, we will talk to you before deciding whether we will publish that part.
- 1.7 However, please note that under the Official Information Act 1982, any person can request copies of submissions we receive, including any parts that we do not publish. This means we would be required to release material that we did not publish unless good reason existed under the Official Information Act to withhold it. We would normally consult with you before releasing any material that you did not want us to publish.

## 2 The stress test regime is a component of the security of supply framework

### The regime was designed to meet three objectives

- 2.1 We identified three objectives for the stress test regime in our original consultation paper:<sup>2</sup>
- (a) reduce the scope for opportunistic lobbying by adversely affected participants to socialise the cost of poor risk management decisions
  - (b) enhance incentives for participants to appropriately manage their spot price exposure
  - (c) enhance access to information on spot price exposure for participants and for the Authority.

### The stress test regime came into force in late 2011

- 2.2 The Authority published the original consultation paper in July 2011. After receiving feedback on the proposal, the Authority released another consultation paper on 11 October 2011.<sup>3</sup> That paper confirmed the three objectives while also making it clear that accountability for risk management choices should remain with participants.
- 2.3 For that reason, the October 2011 paper proposed that the Authority would not receive information on the financial impact of the stress tests from individual disclosing participants as previously proposed. Instead, disclosing participants would provide that information to a third party (the stress test registrar) appointed by the Authority. The registrar would use the disclosed information to calculate and publish a set of summary risk measures that would not identify individual participants.
- 2.4 The Authority gazetted the amendment to the Code to introduce the stress test regime on 3 November 2011. Disclosing participants provided their first spot price risk disclosure statements to the registrar for the July – September quarter of 2012.

### The Code requires purchasers to assess the consequences of higher spot prices

- 2.5 The Code<sup>4</sup> requires disclosing participants to calculate their exposure to high spot prices in each of the predefined risk scenarios. Each disclosing participant is required to report its results (referred to as disclosure statements) to its own Board and to the stress test registrar.<sup>5</sup>

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<sup>2</sup> <https://ea.govt.nz/dmsdocument/11096>

<sup>3</sup> <http://www.ea.govt.nz/dmsdocument/11660>

<sup>4</sup> Refer to subpart 5A of Part 13 of the Code.

<sup>5</sup> To preserve anonymity, the Code requires that the Authority appoint an independent person to receive and analyse spot price risk disclosure statements (clause 13.236B of the Code). This person is known as the registrar, and the function is currently performed by NZX under a service provider agreement with the Authority.

- 2.6 The Authority publishes details of the stress test scenarios.<sup>6</sup> Although the Authority reviews the scenarios every quarter, they have remained unchanged since the first disclosures in the third quarter (Q3) of 2012. The stability of the tests makes it possible to compare results over time. These scenarios are:
- (a) E1 (an energy test): spot prices are \$250/MWh for the entire quarter (time weighted average at Otahuhu) compared to a base case of \$100/MWh. This represents one hypothetical scenario of possible prices during a sustained period when generation is in short supply.
  - (b) C1 (a capacity test): spot prices are \$10,000/MWh for eight peak hours during the quarter (time weighted average at Otahuhu) compared to a base case of \$100/MWh. This represents one hypothetical scenario of possible prices in an unexpected short term (ie several hours) capacity shortage.
- 2.7 The Authority monitors three ratios, each of which is a different measure of stress arising from the stress test scenarios:
- (a) the change in cash flow caused by the scenario, divided by last reported shareholders' funds
  - (b) the change in cash flow caused by the scenario, divided by last reported annual cash flow
  - (c) the revenue caused by the scenario, divided by the costs caused by the scenario (also referred to as the cover ratio).
- 2.8 Disclosing participants must submit their disclosure statements, which relate to the coming quarter, no later than five working days before the quarter they cover. The Authority receives summary information from the registrar – quarterly stress test reports – which must not identify any individual participant. The Authority publishes the quarterly stress test reports on its website.
- 2.9 Every year, a disclosing participant must certify to the Authority that:
- (a) its Board has considered every disclosure statement submitted that year
  - (b) it has provided all of its customers that have spot price exposure with information to enable them to consider the outcomes of applying the stress tests to their own situations.
- 2.10 More details on the stress test regime are available on the Authority's website.<sup>7</sup>

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<sup>6</sup> See <http://www.ea.govt.nz/operations/wholesale/spot-pricing/stress-tests/scenarios/>

<sup>7</sup> See <http://www.ea.govt.nz/operations/wholesale/spot-pricing/stress-tests/>

### 3 New concerns around security of supply risks led us to review the stress test regime

#### **A number of factors raised concerns around security of supply**

- 3.1 Recent developments in the market created an outlook of heightened security of supply risk (ie, risk of supply being insufficient to meet demand). These developments included:
- (a) withdrawal of thermal generation at Otahuhu B (400 MW) and Southdown (140 MW) and Genesis' announcement it would decommission the two remaining dual fuel (coal and gas) Huntly Rankine units (250 MW each). The announcements reduced the margin by which available capacity exceeds typical demand levels
  - (b) uncertainty around demand growth and the future of the New Zealand Aluminium Smelter at Tiwai Point. This uncertainty could reduce forward contracting activity and new capacity investment.
- 3.2 Modelling undertaken by the system operator as part of a specific investigation into the impacts of decommissioning thermal plant indicated heightened risk that the country could experience energy shortage conditions should a dry year occur in 2019.<sup>8</sup>
- 3.3 At the same time, some participants have suggested that demand for electricity is rising again after many years of limited or no growth. The uptake of evolving technologies such as electric vehicles, solar PV, and battery storage could add to (electric vehicles) or soften (solar PV) this growth.
- 3.4 The magnitude and timing of these developments create the potential for New Zealand to move rapidly from the recent history of flat demand and over supply to a reduced supply margin as generating capacity is withdrawn from the market and demand growth returns.
- 3.5 These developments also increase uncertainty about future spot prices. This uncertainty may make it harder for market participants to justify long-term investments in new generation or demand response capacity or hedging arrangements with other suppliers. While deferred or shelved investment may be a prudent strategy under the present circumstances, decisions around the future of significant capacity—most notably the two remaining Rankine units at Huntly (totalling 500 MW)—take on greater importance. Such decisions have the potential for sizeable regrets, which could then lead to attempts to shift blame and request political intervention.
- 3.6 The Authority had been closely monitoring these developments. While we consider that the security of supply framework is effective, we decided that it would be prudent to review these arrangements in the circumstances. In particular, we decided to review the CCS and stress test regime to ensure that these mechanisms remain effective in this developing market environment.

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<sup>8</sup>

See <http://www.systemoperator.co.nz/activities/current-projects/impact-thermal-generator-decommissioning>.

## **We reviewed the stress test regime as a component of the security of supply framework**

- 3.7 We decided to complete the review of the stress test regime despite Genesis' announcement that it would prolong the life of the Huntly Rankine units until 2022. The stress test regime has now been in operation for more than four years. Over that period, participants, the Authority, and the registrar have all gained experience with the regime and the results.
- 3.8 It is timely for the Authority to consider whether the stress test regime is still required, and if so, whether any improvements are needed to ensure it remains effective and fit for the evolving market conditions described above.
- 3.9 This paper reviews the stress test regime on that basis, in concert with the companion review of the customer compensation scheme.<sup>9</sup> The two reviews are accompanied by an explanation of how each of these mechanisms contributes to security of supply.<sup>10</sup>

## **The Authority is separately reviewing the obligations on retailers to provide spot price risk information to customers**

- 3.10 The Authority notes that there are some parties that can have significant exposure to the spot market but are not captured by the current stress test regime because they are a customer of a retailer, but are not directly connected to the grid. These customers should already receive some information from their retailer – the Code requires disclosing participants to inform their spot price-exposed customers of the stress tests, so that they can consider this information in their decision making.
- 3.11 The Authority is reviewing, as a separate project, whether the existing Code obligations on retailers offering spot price tariffs are sufficient to ensure that spot-exposed consumers are aware of the risks they face. As part of that review, the Authority is surveying retail customers to understand the extent to which residential, commercial and industrial consumers are aware of the risks of being on a spot tariff and how they would manage such risks. The Authority will assess the survey results and then determine the appropriate next steps.

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<sup>9</sup> The paper appears on this webpage: <http://www.ea.govt.nz/development/work-programme/risk-management/review-of-the-customer-compensation-scheme-ccs/consultation/#c16203>

<sup>10</sup> The paper appears on this webpage: <http://www.ea.govt.nz/development/work-programme/risk-management/review-of-stress-testing-regime/consultation/#c16205>

## 4 We consider the stress test regime should be retained

### **The rationale for the stress test regime remains valid and it helps to ensure efficient security of supply**

- 4.1 We have reviewed the rationale for the stress test regime<sup>11</sup> and consider that it remains valid. The regime encourages wholesale market participants to take accountability for their risk management decisions. Appropriate risk management helps underwrite investment in generation and demand response capacity. The regime therefore contributes to meeting the second limb of our statutory objective — promoting a reliable supply of electricity.

### **We should continue to limit the scope for opportunistic lobbying**

- 4.2 Prices on the spot electricity market are typically more volatile than other spot prices, such as equity, currency and other commodity prices. The volatility of spot electricity prices, combined with the fact that electricity is an essential and significant input for many consumers, provides the potential for opportunistic lobbying for intervention and for arguments that ‘the electricity market isn’t working’ during periods when supply is tight (ie spot prices are high).
- 4.3 In tight market situations, it can be difficult for parties to accept responsibility for the risks they took (knowingly or not) and it is natural for them to question the market rules. It is equally hard for external commentators to appreciate that financial difficulties faced by participants might be due to earlier choices they made, rather than a market or regulatory failure.<sup>12</sup>
- 4.4 Therefore, the Authority continues to support the objective of reducing the scope for opportunistic lobbying, as it helps ensure parties’ choices remain time consistent.

### **We should continue to reinforce incentives on participants to appropriately manage their spot price exposure**

- 4.5 Participants already have an incentive to hedge their exposure to spot prices. Buyers (retailers and consumers) in the spot electricity market want to reduce the volatility of their purchasing costs and sellers (generators) equally want to reduce the volatility of their revenue. However, as discussed in paragraphs 4.2 and 4.3, participants may credibly believe that lobbying for intervention during an extreme event will be an effective substitute for pro-active risk management actions.
- 4.6 Therefore, the Authority continues to support the objective of enhancing the existing incentive on parties to appropriately manage their spot exposure as it should help individual parties to make better decisions than they might have otherwise.

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<sup>11</sup> This section draws on the Authority’s consultation paper “Proposed refinements to the stress test Code amendments”, 11 October 2011 <http://www.ea.govt.nz/dmsdocument/11660>.

<sup>12</sup> This issue is widely recognised in economic literature as the problem of ensuring time consistency.

### **We should continue to enhance access to information on spot price exposure for participants and for the Authority**

- 4.7 Decisions by participants and the Authority are more likely to be efficient if they are based on sound information. Providing better access to information relevant to people's decision-making is particularly important for risk management as the consequences of poor decisions can involve large costs to participants and the economy.
- 4.8 Therefore, the Authority continues to support the objective of enhancing access to information on spot price exposure for participants and the Authority.

### **Recent history supports retention of stress test regime**

- 4.9 To illustrate the continued validity of the objectives of the stress test regime, it is useful to consider what might happen if the regime were removed. Past evidence shows that, before the Authority introduced the stress test regime, the spot market was prone to parties making claims for redress and intervention during market conditions that caused prices to rise above their normal levels.
- 4.10 These dynamics undermine participants' decision making and the security of supply framework, to the detriment of consumers. The stress test regime is a necessary mechanism within the security of supply framework, working to support the reliability limb of the Authority's statutory objective.
- 4.11 Indeed, the Authority considers the experience of 2012 is instructive; ie, after the Authority introduced the customer compensation, scarcity pricing, and stress testing regimes, coupled with an increasingly active and liquid hedge market, South Island hydro storage lake inflows in 2012 were the lowest on record;<sup>13</sup> yet the market was able to manage these conditions effectively, without claims for redress or ad hoc policy interventions, without an official conservation campaign, and without disruption to consumers. In fact, the Authority is not aware of any lobbying for political intervention at all. While this outcome cannot be attributed to any one factor, we consider the incentives put in place through the stress test regime were likely to be an important influence on participant behaviour.

**Q1. Do you agree that the rationale for the stress test regime remains valid and that the regime contributes to efficient security of supply?**

<sup>13</sup> Electricity Authority, Electricity market performance: *A review of 2012*, March 2013, p. 33.

## 5 The Authority has considered options to improve the stress test regime

- 5.1 Having concluded that the stress test regime should be retained, the Authority has considered whether any action is required to improve the regime.

### **Thirteen potential improvement options have been identified**

- 5.2 Thirteen options with the potential to improve the stress test regime have been identified. These options fall into three broad categories:

- (a) five options to better inform participants of the outcomes of stress tests
- (b) four options to improve the coverage of stress tests
- (c) four options to improve the efficiency and effectiveness of the regime.

- 5.3 Each option is described and discussed in Appendix A of this paper.

### **We identified five options (options 1-5) with potential to better inform participants of outcomes**

- 5.4 The Authority has identified five options (options 1 to 5) aimed at giving it greater assurance that participants are making informed choices, and are conscious of the consequences of those choices.

### **We identified four options (options 6-9) with potential to improve the coverage of stress tests**

- 5.5 The Authority has, to date, adopted generic stress test scenarios that are intended to be broadly representative of possible outcomes under an energy or capacity shortage. We have warned participants that spot prices could be lower or higher than those set out in the tests, even if events similar to the stress tests occurred.
- 5.6 Before settling on these two generic stress test scenarios the Authority originally considered a range of more specific scenarios aimed at illustrating particular risks, such as major thermal plant shutdown or an increasingly severe hydro shortage. However, the Authority was also mindful of the need to ensure participants retained full responsibility for making choices about their own risk positions.
- 5.7 The Authority has identified four options (options 6 to 9) aimed at improving the coverage of stress tests.

### **We identified four options (options 10-13) with potential to improve the efficiency and effectiveness of the regime**

- 5.8 Over the last four years of its operation, participants, the Authority, and the registrar have gained experience with the regime and its outcomes. This has provided useful insights into the efficiency and effectiveness of the regime at meeting the original objectives, and identified areas where there is opportunity for improvement.
- 5.9 The Authority has identified four options (options 10 to 13) aimed at improving the efficiency and effectiveness of the stress test regime.

**We assessed each option against five criteria derived from the stress test regime objectives**

- 5.10 The Authority's qualitative assessment of each option is based on five key considerations (three of these are based on the underlying objectives of the stress test regime (set out in paragraph 2.1 above) and the remaining two take into account the cost of implementing the options:
- Does the option reduce the scope for opportunistic lobbying by adversely affected participants to socialise the cost of poor risk management decisions?
  - Does the option reinforce existing incentives on participants to manage their spot price exposure appropriately?
  - Does the option enhance access to information on spot price exposure for participants and the Authority?
  - Are there any significant implementation risks or impediments associated with the option?
  - Is the option likely to deliver a net benefit?
- 5.11 The Authority's qualitative assessment of each option is set out alongside the description of each option in Appendix A.
- 5.12 A tabular summary of the options and assessment is set out in Table 1 (below), drawing on the material in Appendix A.

**Table 1: Summary of options the Authority has considered**

Description ↑ = improvement over status quo ↓ = detriment over status quo ↑↓ = positive and negative effects — = no change to status quo	Reduce scope for opportunistic lobbying to socialise cost of poor decisions	Incentive for participants to prudently manage spot market risk exposure	Access to information on spot price exposure for:		Risks or limitations	Net benefit
			Participants	Authority		
1. Provide quarterly 'You are here' reports to each disclosing participant	↑	↑	↑	—	some	no
2. Improve quarterly stress test report content and format	↑	↑	↑	—	none	yes
3. Lift anonymity - publish individual disclosures	↑↓	↑↓	↑	↑	significant	no
4. Increase visibility of quarterly reports by sending them to disclosing participants	↑	—	↑	—	none	no
5. Include 'risk meter' to indicate likelihood of stress test scenarios	↓	↑	—	—	significant	no
6. Add qualitative questions into the stress test regime	↑	↑	↑	↑	significant	no
7. Add a scenario for a specific plant-related event such as Huntly closure, sustained HVDC outage or gas supply disruption	↑↓	↑↓	↑↓	↑	significant	no

Description	Reduce scope for opportunistic lobbying to socialise cost of poor decisions	Incentive for participants to prudently manage spot market risk exposure	Access to information on spot price exposure for:		Risks or limitations	Net benefit
			Participants	Authority		
↑ = improvement over status quo ↓ = detriment over status quo ↑↓ = positive and negative effects — = no change to status quo						
8. Incorporate dynamic stress test parameters	↑↓	↓	↑	↑	significant	no
9. Extend reporting requirement beyond coming quarter – e.g. report on next 2 years	—	↑	—	—	some	no
10. Simplify reporting for disclosing participants not exposed to spot prices	—	—	—	—	none	yes
11. Increase or decrease frequency of disclosure	—	—	—	—	some	no
12. Remove qualitative aspects of stress test regime	↓↓↓	↓↓↓	↓↓↓	↓↓↓	some	no
13. Introduce threshold for being subject to stress test reporting	↓	↓	↓	↓	some	no

**After considering options, the Authority proposes to retain the stress test regime largely in its current form**

- 5.13 The Authority has identified two refinements to the stress test regime that it considers would be beneficial:
- (a) improve quarterly stress test report content and format
  - (b) simplify reporting for disclosing participants not exposed to spot prices.
- 5.14 Refinement (a) is a relatively minor operational change that would not require any Code amendment. Refinement (b) would reduce compliance costs for disclosing participants not exposed to spot prices, such as those with a fixed price variable volume contract. A fuller description of this proposal is set out in Appendix A starting at paragraph A.124.
- 5.15 Because refinement (b) is of a technical nature and not expected to be controversial, the Authority proposes to address it as a minor Code amendment.
- 5.16 The Authority is seeking feedback on its assessment of potential changes to the stress test regime.

**Q2. Do you agree with the proposed improvements we have identified? If you disagree, please explain your reasoning in terms consistent with the Authority's statutory objective in section 15 of the Electricity Industry Act 2010.**

## Appendix A Assessment of options to improve stress test regime

A.1 This appendix:

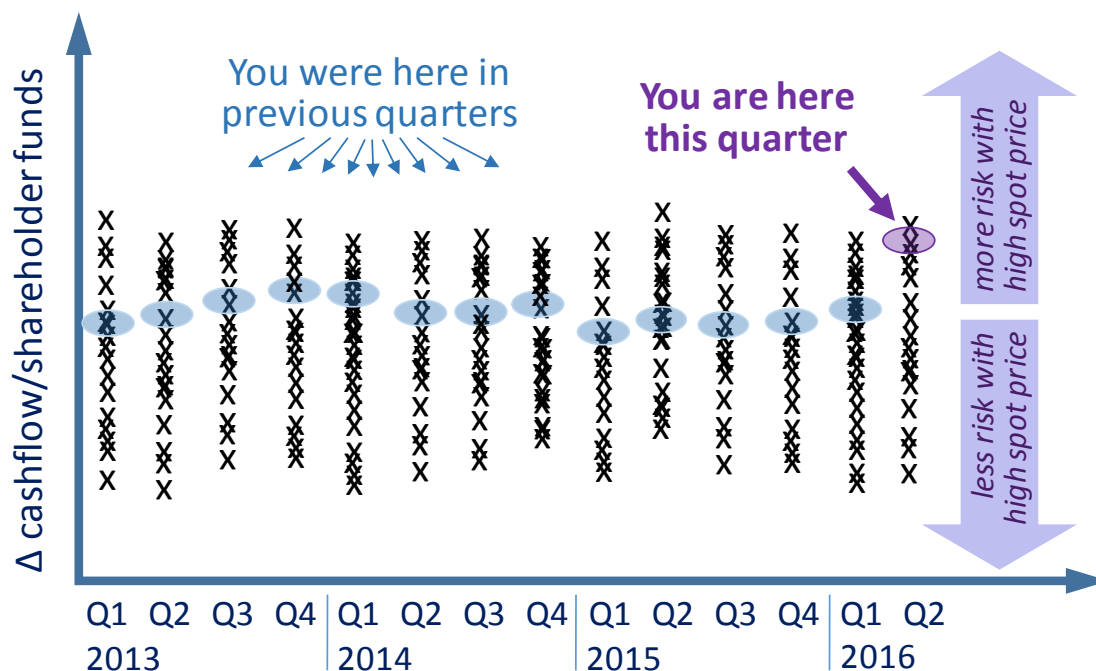
- (a) describes the thirteen options the Authority has considered for improving the stress test regime in each category
- (b) sets out the Authority's evaluation of each option against the five assessment criteria (paragraph 5.10 above).

### Option 1: Provide quarterly 'You are here' reports to each disclosing participant

#### Description

- A.2 Provide each disclosing participant with an individualised 'You are here' report each quarter, that shows its position relative to other disclosing participants' positions. A stylised report is illustrated in Figure 1.
- A.3 Disclosing participants could also be required to include the quarterly 'You are here' reports in the list of items the participant's Board is required to annually certify that it has considered.

Figure 1: Illustrative 'You are here' report



#### Situation and potential opportunity

- A.4 Applying the stress test scenarios provides disclosing participants with information about their risk exposure. The annual certification requirement ensures this information is seen at board level in each organisation. However, a disclosing participant may not be aware of how its exposure level compares to that of other disclosing participants unless it

undertakes further analysis of the published results. Smaller or less well-resourced disclosing participants may not be disposed to undertake this analysis.

- A.5 Information on how a disclosing participant's risk exposure position compares to other spot-exposed parties may be of value to it in its decision-making. While every participant will have its own view of the risks associated with spot market exposure and its own risk appetite, knowing how its risk position differs from other participants might prompt further consideration as to whether its risk assessment is appropriate. Providing each disclosing participant with its individualised 'You are here' report would enable it to more readily see where it sits in comparison to others and make more informed decisions about its risk management.

### Consideration and assessment

#### **Scope for opportunistic lobbying to socialise cost of poor decisions**

- A.6 This option would reduce disclosing participants' ability to undertake opportunistic lobbying, as each would know its exposure position relative to other disclosing parties, as well as its absolute exposure, for each stress test scenario. Having been provided with this information, it would be more difficult for a participant to claim it was not aware of the potential implications of its decisions. Including these reports in the existing list of items the participant's Board is required to annually certify that it has considered would further enhance this.

#### **Incentive for participants to appropriately manage spot market exposure risks**

- A.7 Knowing how its risk position differs from other participants might prompt a participant to further consider whether its risk assessment is appropriate. This information could enhance the incentive for each disclosing participant to appropriately manage its spot market exposure risk.

#### **Access to information on spot price exposure risks**

##### ***For participants***

- A.8 Receiving its individual risk exposure position shown relative to that of other parties would enhance each disclosing participant's access to information every quarter. This could enable each participant to make more informed decisions about its risk management policies.
- A.9 Including these reports in the existing list of items the participant's Board is required to annually certify that it has considered would further enhance the distribution of relevant information, providing the opportunity for wider internal discussions about risk management.

##### ***For the Authority***

- A.10 The Authority receives aggregated reports, but the anonymity constraints in the Code would prohibit the Authority receiving each individualised 'You are here' report. Thus, there is no material change in the Authority's access to information. However, even now, anyone (the Authority, a politician, a journalist) can ask a disclosing participant to reveal the outcomes of its disclosure statements. They might feel they have to do so if the participant is attempting to reduce or recover losses it has incurred due to what have turned out to be poor risk management decisions.

### **Risks and limitations**

- A.11 The software changes to produce ‘You are here’ reporting would need to preserve the anonymity of the disclosing participant’s exposure positions. Although the registrar could prepare and distribute the report without any Code amendments, it could require changes in the contract between the Authority and the registrar. There would be some additional cost in compiling each report and distributing these to the relevant participants. The registrar would need to have robust processes to ensure that each disclosing participant received the correct report.
- A.12 The Authority has held preliminary discussions with the registrar about the changes to the stress test software and systems that would be required to implement and administer ‘You are here’ reporting. The registrar has indicated that there are a few software development approaches for achieving this, some of which could also deliver other technical and compliance improvements for the regime. Depending on the approach adopted, implementation costs are estimated to be in the range of \$25,000 to \$250,000.
- A.13 A Code amendment would be required if this option were extended to include these reports in the existing list of items the participant’s Board is required to annually certify that it has considered.
- A.14 The cost of this extended option would be slightly higher due to the need to amend the Code and the need for disclosing participants to submit additional information to their boards. However, the Authority expects these incremental costs would be modest:
- (a) The drafting to give effect to this amendment is minor, and the incremental cost of making the Code amendment is not significant.
  - (b) The Code already requires disclosing participants’ boards to receive quarterly disclosure reports and to annually certify that they have considered them. The incremental cost of including the ‘You are here’ report in this material is expected to be minor.

### **Net benefit**

- A.15 While providing quarterly ‘You are here’ reports could contribute towards better attainment of the stress test regime design objectives, it would involve some additional cost – principally for the changes required by the registrar. There is also a risk that a process error could lead to one participant receiving the confidential ‘You are here’ report of another participant. Based on current information, the Authority is not satisfied that there would be net benefits.

### **Conclusion**

- A.16 The Authority does not intend pursuing this option.

## **Option 2: Improve quarterly stress test report content and format**

### **Description**

- A.17 Improve quarterly stress test report content, format and presentation to make the information in the reports more easily understood and user-friendly. Examples might include clearer descriptions on axes on summary charts to show zones such as ‘adversely affected by higher spot prices’, and ‘adversely affected by lower spot prices’.

### Situation and potential opportunity

- A.18 A key objective of the stress test regime is to provide disclosing participants with information about their spot price exposure to assist them making efficient risk management decisions. The Authority considers that the current quarterly reports may not be conveying information in a manner that is user-friendly and readily accessible for the range of audiences that receive the reports. This may be particularly so for smaller and less well-resourced participants.
- A.19 There may also be other ways of presenting the information so that disclosing participants can more easily see the implications of their risk management and be in a better position to make informed decisions about their spot price exposure.
- A.20 The Authority recently made a number of relevant improvements to the quarterly stress test reporting arrangements in its Electricity Market Information system (EMI).<sup>14</sup>
- A.21 The Authority welcomes feedback on the new reporting arrangements, and suggestions of other improvements that it could consider.

### Consideration and assessment

#### **Scope for opportunistic lobbying to socialise cost of poor decisions**

- A.22 There would only be a minor, if any, reduction in the scope for opportunistic lobbying.

#### **Incentive for participants to appropriately manage spot market exposure risks**

- A.23 Improved reporting may result in disclosing participants having a better understanding of the implications of their current spot price exposure. This could deliver a modest improvement in disclosing participants' incentives to appropriately manage their spot market exposure risks.

#### **Access to information on spot price exposure risks**

##### ***For participants***

- A.24 The Authority considers that there is potential to make the reports more accessible, user-friendly and informative, thereby improving participants' access to information on spot price exposure risks.

##### ***For the Authority***

- A.25 The Authority's access to this information would be unchanged.

#### **Risks and limitations**

- A.26 The Authority has not identified any risks with this option. It acknowledges that the current provisions in the Code, particularly around anonymity, do impose some limits on what the registrar can include in the reports. However, the Authority considers that the current Code provisions are appropriate and therefore it does not propose any Code amendments as part of this option to improve the stress test report's content and format.

#### **Net benefit**

- A.27 The Authority anticipates that the incremental costs of improving quarterly stress test report content and format would be relatively modest. In fact, stress test information is

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<sup>14</sup> [Insert link to relevant page of EMI, once active]

already being moved onto the EMI website and database as part of a pre-existing initiative to improve the provision of market information and operational efficiency. The incremental cost of further refining information content and format is therefore expected to be low.

- A.28 As noted above, the Authority considers that this option would deliver benefits for two of the three design objectives:
- (a) improvement in disclosing participants' incentives to appropriately manage their spot market exposure risks
  - (b) improvements in participants' access to information on spot price exposure risks.
- A.29 The Authority has not attempted to quantify the benefits of improving stress test reports. However, it considers that the benefits of improved information for disclosing participants are likely to outweigh the modest incremental costs of implementing the changes. It is also consistent with the Authority's Code amendment principles, because it is small-scale and readily reversible, and non-prescriptive as regards participant behaviour.

### Conclusion

- A.30 The Authority intends to pursue this option. No Code amendment is required, and it can be implemented within the Authority's broader programme to provide market information and improve operational efficiency. The Authority welcomes suggestions from interested parties on improvements to the stress test report's content and format.

## Option 3: Lift anonymity to allow publication of individual disclosure statements

### Description

- A.31 Lift the anonymity constraint to allow publication of individual participant disclosure statements.

### Situation and potential opportunity

- A.32 At present, disclosing participants provide their stress test disclosure statements to the independent registrar and the registrar only provides anonymised summary information to the Authority, which is then published. Anonymity became a feature of the regime following consideration of submissions during the consultation process when the regime was introduced, after a number of parties raised concerns about making the disclosure statements public.<sup>15</sup>
- A.33 Notwithstanding those concerns, it could be argued that publication of individual disclosure statements would provide further discipline on participants' risk management decisions, because it would allow greater scrutiny from capital providers, customers, and other commercial counterparties.

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<sup>15</sup> Authority consultation paper 'Proposed refinements to the stress test Code amendments', 11 October 2011, section 3.

## Consideration and assessment

### **Scope for opportunistic lobbying to socialise cost of poor decisions**

- A.34 Making all disclosures public would be expected to reduce the scope for opportunistic lobbying, by allowing greater external scrutiny of participants' risk management positions.
- A.35 However, the Authority does not consider this option to be of net benefit, because it could significantly compromise disclosing participants' competitive positions in spot and hedge contract markets.

### **Incentive for participants to appropriately manage spot market exposure risks**

- A.36 Lifting anonymity might enhance incentives on disclosing participants to take more appropriate risk management positions. However, their ability to negotiate efficient risk management contracts may be significantly compromised by publication of their disclosure statements.

### **Access to information on spot price exposure risks**

#### ***For participants***

- A.37 The information available to participants could be improved, as they could compare their risk positions to all other disclosing participants.

#### ***For the Authority***

- A.38 Having access to individual disclosing participants' disclosure statements would increase the information available to the Authority.

### **Risks and limitations**

- A.39 Publication of individual disclosure statements would be likely to compromise the competitive position of disclosing participants in the spot and hedge contract markets.
- A.40 It may also increase the risk that participants perceive the Authority as having some responsibility (albeit tacit) for participant's risk management decisions, since the Authority would become aware of individual positions. This is inconsistent with one of the key features of the security of supply arrangements: that accountability for risk management decision-making lies entirely with participants.

### **Net benefit**

- A.41 The Authority considers that the risks and limitations of this option are likely to outweigh the possible benefits.

### **Conclusion**

- A.42 The Authority does not intend pursuing this option.

## Option 4: Send quarterly stress test reports to disclosing participants

### Description

- A.43 Increase the visibility of quarterly stress test reports by sending them to disclosing participants. Visibility could be further enhanced by including a notice in the Market Brief advising that the Authority had published the stress test reports on its website.<sup>16</sup>

### Situation and potential opportunity

- A.44 The registrar receives quarterly stress test disclosure statements from disclosing participants, prepares the quarterly stress test reports, and submits them to the Authority. The Authority publishes these on its website and incorporates key information into EMI.
- A.45 Current practice is not to send the quarterly stress test reports (or a link to them) directly to disclosing participants.
- A.46 Although everyone has access to the quarterly stress test reports from the Authority's website, the effort of doing so may be a disincentive for some participants, albeit a modest one.

### Consideration and assessment

#### **Scope for opportunistic lobbying to socialise cost of poor decisions**

- A.47 Making quarterly reports more readily available to disclosing participants could modestly reduce the scope for disclosing participants to claim ignorance of the consequences of their decisions.

#### **Incentive for participants to appropriately manage spot market exposure risks**

- A.48 There would only be a very limited, if any, improvement in risk management incentives.

#### **Access to information on spot price exposure risks**

##### ***For participants***

- A.49 Reducing a possible barrier (albeit a modest one) to accessing the quarterly reports may result in improved information for some disclosing participants, particularly for smaller parties. Improved visibility of the stress testing information may result in more informed risk management decision-making in some cases.

##### ***For the Authority***

- A.50 The Authority's access to this information is unchanged.

#### **Risks and limitations**

- A.51 The Authority has not identified any risks or limitations with this option.

#### **Net benefit**

- A.52 The Authority notes that the quarterly reports are readily available on its website. It considers that any potential benefits of also sending them to disclosing participants would be very modest. The incremental administrative costs, although minor, are therefore difficult to justify.

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<sup>16</sup> Stress test report publication notices were included in the Market Brief until early 2014, but not since.

## Conclusion

- A.53 The Authority does not intend pursuing this option.

## Option 5: Risk meter indicating likelihood of stress test scenarios

### Description

- A.54 Publish a 'risk meter' (or similar qualitative risk assessment) to indicate over time the increasing or decreasing likelihood of stress test parameters coming to fruition in the market.

### Situation and potential opportunity

- A.55 As noted earlier, the current stress test scenarios are intentionally hypothetical, and don't necessarily portray a particular event or its probability. There is potential that some participants might attach an unrealistically low probability of occurrence to the stress test scenarios and/or fail to realise that changing market conditions have heightened the probability of a stress test scenario coming to fruition. This might result in those participants adopting a greater level of spot price exposure risk than they realised.
- A.56 The converse is also true – some participants may over-estimate the probability and therefore adopt a lower spot price exposure than they realised.
- A.57 A risk meter or similar mechanism could provide a mechanism for the Authority to signal to participants (and other stakeholders) its assessment of the likelihood of each stress test scenario.

### Consideration and assessment

#### **Scope for opportunistic lobbying to socialise cost of poor decisions**

- A.58 Giving participants further information through a 'risk meter' might reduce the scope for opportunistic lobbying, if the meter correctly signalled the likelihood of events that later come to pass.
- A.59 However, futures contract prices already provide signals about spot price risks. These signals will be further enhanced with the planned introduction of cap contracts. It is not clear why the Authority would have better information about risks than market participants. Furthermore, if participants rely on a 'risk meter', the Authority may take on some responsibility for participants' subsequent decisions if they rely on the risk meter. This is inconsistent with the goal of ensuring participants are accountable for their risk management decisions.
- A.60 For these reasons, the use of a 'risk meter' could increase rather than reduce the likelihood of participants lobbying to socialise the cost of decisions they subsequently regret.

#### **Incentive for participants to appropriately manage spot market exposure risks**

- A.61 There is potential for participants' risk management incentives to be undermined by a 'risk meter', for the reasons discussed in the previous paragraphs.

## **Access to information on spot price exposure risks**

### ***For participants***

- A.62 It is not clear why the Authority's view on the prevailing risk outlook would be any better than the collective market view, as expressed through futures contract prices. For this reason, no improvement in information is expected.

### ***For the Authority***

- A.63 The Authority's access to information would be unchanged.

### **Risks and limitations**

- A.64 It is not clear that the Authority would have better information about risks than market participants. Thus there is a significant difficulty inherent in the Authority setting the risk meter at the appropriate level over time.
- A.65 There is also an increased likelihood that, by publishing a risk meter, the Authority becomes partially responsible for risk management decisions, rather than this accountability remaining with participants.

### **Net benefit**

- A.66 The Authority considers that the costs and risks associated with this option outweigh any potential benefits.

### **Other considerations**

- A.67 Ensuring that participants are aware of the dynamic nature of spot price risks is important. However, there are other tools to further this objective. These include futures contract prices, and provision of physical security of supply information by the system operator.

### **Conclusion**

- A.68 The Authority does not intend pursuing this option.

## **Option 6: Add qualitative questions into the stress test regime**

### **Description**

- A.69 As well as reporting on each of the stress test scenarios, the Code could require disclosing participants to respond to specified qualitative risk questions. As with the scenarios, the Authority would publish the qualitative questions at least 30 business days before the reporting period.
- A.70 These qualitative questions could be targeted at specific risks, for instance "confirm you have considered a possible Huntly closure scenario in your risk management planning". Alternatively, the qualitative questions could be more generic, for instance "confirm you have considered the future supply/demand outlook in the most recently published System Operator Annual Assessment of Security of Supply in your risk management planning".

### **Situation and potential opportunity**

- A.71 As noted below (refer Option 7: add a specific plant-related event stress test), it may be difficult to design a stress test that adequately simulates a particular shortage event.

- A.72 Including qualitative questions alongside the existing quantitative stress test scenarios would provide the Authority with a more flexible mechanism to address a broader range of possible spot price drivers. It would enable the Authority to bring key information to participants' attention without needing to set specific parameters.

### Consideration and assessment

#### **Scope for opportunistic lobbying to socialise cost of poor decisions**

- A.73 Publishing a set of qualitative questions could reduce the scope for opportunistic lobbying in relation to the specific risks and/or information that the questions point to. Participants could not reasonably claim that the risks and/or information the questions addressed were unknown to them.

#### **Incentive for participants to appropriately manage spot market exposure risks**

- A.74 Drawing disclosing participants' attention to the specific risks and/or information could potentially deliver a small improvement in their incentives to appropriately manage risk. The magnitude of the improvement would depend on the nature of the questions and how they were framed. For instance, a disclosing participant could confirm that it had considered a piece of information, but not necessarily take appropriate account of that information in its risk management decision-making.

#### **Access to information on spot price exposure risks**

- A.75 There could be some improvement in the information available to participants and the Authority, but the magnitude of the effect would depend on the nature of the qualitative questions, and if/how the responses to the questions were aggregated and published.

#### **Risks and limitations**

- A.76 This option would require a Code amendment to establish the qualitative questions mechanism and require participants to answer the questions as part of their disclosure statements.
- A.77 As with other options that draw attention to specific risks, there is a potential risk that the Authority is increasingly seen as defining future scenarios for participants' risk management framework. Although it might be possible to manage this through careful design of the qualitative questions, the Authority remains concerned that drawing attention to specific risks may dilute participants' responsibility for making their own risk management decisions. This would be inconsistent with one of the key features of the security of supply arrangements: that accountability for risk management decision-making lies entirely with participants.

#### **Net benefit**

- A.78 This option could provide a flexible mechanism to address a broad range of possible spot price drivers. However, the Authority considers that the associated benefits are unlikely to outweigh the risk of diluting participants' responsibility for making their own risk management decisions. Accordingly, the Authority considers that this option is unlikely to deliver a net benefit.

### Conclusion

- A.79 On balance, the Authority does not intend pursuing this option.

## Option 7: Add a scenario for a specific plant-related event such as Huntly closure, sustained HVDC outage or gas supply disruption

### Description

- A.80 Add a new stress test scenario that represents a specific plant-related event such as full closure of the remaining Huntly units, sustained HVDC<sup>17</sup> outage or significant disruption to gas supplies.

### Situation and potential opportunity

- A.81 The occurrence of a specific plant-related event such as unanticipated thermal retirement, a major transmission outage or gas supply disruption could lead to prices that are more extreme than the current assumptions in the stress test. Arguably, this could provide an opportunity for participants to lobby the Authority or Minister to intervene to reduce spot prices on the basis that such an event was unexpected and unforeseeable.
- A.82 In the case of Huntly closure, the recent bilateral contracts between Genesis and a number of market participants have extended the availability of the Huntly units for four more years. The emergence of these commercial arrangements in the face of a heightened security of supply risk suggests that participants already have incentives sufficient to make appropriate risk management decisions. Nevertheless, the Huntly closure situation, now hypothetical in the short to medium term, is a useful example of an option to address a particular concern with coverage of the stress test regime – add a stress test scenario that simulates the particular outcome that is of potential concern.
- A.83 Significant sustained outages in the electricity transmission system or the gas supply chain are also examples of specific events that could be added as a separate stress test.

### Consideration and assessment

#### **Scope for opportunistic lobbying to socialise cost of poor decisions**

- A.84 The introduction of scenarios to address specific plant-related outages or withdrawals could reduce the scope for opportunistic lobbying for that specific event. This is because parties would be less able to credibly argue that there were unaware of the potential of the plant-related event occurring and the associated financial risk.
- A.85 On the other hand, creating highly specific stress tests could create an expectation that sources of stress not formally identified by the Authority are less credible, and do not necessarily need to be considered. Disclaimers could be used to address this, but arguably have less effect as the number of stress tests increases. In addition, the effect of plant failures or withdrawals is to increase the likelihood of events that the existing generic stress tests are designed to emulate.
- A.86 In addition, futures contract prices already provide signals about the likelihood of spot price risks in coming periods. The planned introduction of cap contracts will further enhance the quality of these signals.
- A.87 Finally, we expect that participants making decisions substantial enough to affect the market will typically announce them well in advance. The announcement about the Huntly closure was signalled years in advance, and creating a stress test to represent

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<sup>17</sup> The High Voltage Direct Current transmission link connecting Benmore in the South Island and Haywards in the North Island.

the event occurring in the next quarter would not be an appropriate representation of the potential risk.

**Incentive for participants to appropriately manage spot market exposure risks**

- A.88 Arguably, disclosing participants' consideration of events identified in specific stress tests could be enhanced. On the other hand, participants may give less consideration to events that are not specifically identified. They may also be more likely to perceive the assumed spot prices in specific stress tests as guidance from the Authority – even though this would clearly not be the intent. These factors in turn could weaken rather than reinforce participants' incentives to appropriately manage their spot price exposure risks.

**Access to information on spot price exposure risks**

- A.89 Inclusion of a scenario to address a specific plant-related event could provide disclosing participants with improved information. However, this presumes that the Authority has better information than the market as a whole – which is highly questionable.

**Risks and limitations**

- A.90 There are several risks and limitations with this option. Firstly, there is a potential difficulty in devising a stress test scenario that would adequately represent the specific plant-related event. In general, they are events that increase the likelihood of the existing scenarios, rather than being suitable scenarios themselves. Moreover, unsuitable scenarios could lead to misleading and inaccurate signals and could thereby do more harm than good.
- A.91 There is also an increased risk that the Authority, through its role in selecting stress test parameters, becomes implicitly responsible for some risk management decisions.
- A.92 Finally, adding more scenarios consumes more of each participant's limited analytical resources. It risks crowding out participants' own assessments of other scenarios and may make it more likely that they inappropriately discount other risks.

**Net benefit**

- A.93 The Authority considers that the risks and limitations of this option outweigh the potential benefits.

**Conclusion**

- A.94 The Authority does not intend pursuing this option.

**Option 8: Dynamic stress test parameters**

**Description**

- A.95 The stress test scenarios applied for each reporting period would become dynamic and be designed to reflect the specific risks that are most relevant at the time the tests are applied.
- A.96 For example, the scenario for an extended drought could take account of the latest information regarding demand, lake storage levels, forecasts of inflows, hydro risk curves, thermal fuel availability, and plant and transmission outage schedules.

### Situation and potential opportunity

- A.97 To date the Authority has required disclosing participants to apply two ‘generic’ stress tests – an energy shortage scenario where spot prices are \$250/MWh on average for an entire quarter, and a capacity shortage scenario where spot prices are \$10,000/MWh for 8 hours in a quarter.<sup>18</sup> The Authority does not assign a likelihood to each of the tests and the tests have remained unchanged since we introduced the regime in 2012.
- A.98 There is a chance that, if a new significant risk emerged, or the risk outlook materially worsened (i.e. the probability of shortfall increased), participants might seek to claim that the conditions are unprecedented and that not even the Authority could have foreseen them. That could increase pressure on the Authority to intervene in such an event.

### Consideration and assessment

#### Scope for opportunistic lobbying to socialise cost of poor decisions

- A.99 At one level, the inclusion of more specific stress tests could reduce the scope for opportunistic lobbying because key risks may be more clearly identified in advance (rather than being presented in fairly generic terms). This could reduce participants’ ability to credibly argue they were unaware of risks and the need to appropriately manage them.
- A.100 However, futures contract prices already provide signals about spot price risks. These signals will be further enhanced with the planned introduction of cap contracts.
- A.101 It is not clear why the Authority would be better than the market at identifying and assessing future risks – and incorporating them in dynamic stress tests.
- A.102 Further, the more events the Authority includes for participants to consider, the more credible participants’ arguments would be – that they should not have to consider events that are not included. For this reason, it is not clear that using dynamic stress tests would necessarily reduce the scope for opportunistic lobbying. It is possible that it might increase the opportunity for lobbying if an event proved to be more likely than we expected and it did not make it onto our list of stress tests.

#### Incentive for participants to appropriately manage spot market exposure risks

- A.103 The current stress test scenarios are deliberately framed as generic representations of possible system stress events. The documentation with the tests states that “the scenarios are completely hypothetical - spot prices could be higher or lower than those set out in these tests - even if events similar to the stress tests occurred.”<sup>19</sup>
- A.104 If stress tests were to be more dynamic to reflect current conditions, participants may be more likely to perceive the assumed spot prices as guidance from the Authority – even though this is clearly not the intent. That in turn could weaken rather than reinforce the view that it is participants’ responsibility to manage their spot price exposure risks.

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<sup>18</sup> These are time weighted average spot prices at the Otahuhu node. The tests also specify how these average prices are to be adjusted to derive nodal prices for each half hour.

<sup>19</sup> See [www.ea.govt.nz/operations/wholesale/spot-pricing/stress-tests/scenarios/](http://www.ea.govt.nz/operations/wholesale/spot-pricing/stress-tests/scenarios/)

## **Access to information on spot price exposure risks**

### ***For participants***

- A.105 In principle, providing more dynamic stress tests could improve the information available to participants, because the tests may be more relevant to prevailing conditions. However, as noted above, this would rely on the Authority being able to identify material risks and reliably predict spot price outcomes, both of which have some inherent challenges.

### ***For the Authority***

- A.106 The use of more dynamic stress tests has the potential to deliver a modest increase the information available to the Authority about participants' aggregate exposure to spot price risk. However, assuming the information continued to be reported on an anonymous basis, any improvement would be relatively limited.
- A.107 In addition, it is important to note that, while the two stress tests have remained unchanged since 2012, disclosing participants' individual disclosure statements must account for dynamic changes in their portfolios. In particular, the statements must reflect the latest available information on how the participant's portfolio is impacted by any thermal fuel constraints, planned plant retirements or outages, current hydro storage levels etc.
- A.108 A potential downside of dynamic changes to the stress test parameters would be the reduced ability to track changes and trends over time against a consistent baseline.
- A.109 Overall, while the use of more dynamic stress tests could increase the information available to the Authority, we do not expect the benefit to be large.

### **Risks and limitations**

- A.110 The key risk with introducing more dynamic stress tests is that participants could see them as firmer guidance on the nature of risks to plan for, and the spot price outcomes that should be expected if the risks were to crystallise. This would create tension with Authority's policy that participants retain full responsibility for managing their exposure to spot prices.
- A.111 There is a timing practicality which would also limit the scope for using dynamic settings in stress test scenarios. Under the current Code provisions, the Authority must publish the scenarios at least 30 business days before the relevant quarter. Although we could extend this limitation by amending the Code, a shorter timeframe may impose administrative difficulties for disclosing participants.

### **Net benefit**

- A.112 Overall, it is not clear that introducing dynamic stress tests would have a net beneficial effect.

### **Other considerations**

- A.113 Ensuring that participants are aware of the dynamic nature of spot price risks is important. However, there are tools other than stress tests that are being used to further this objective. These include futures contract prices and the system operator providing physical security of supply information.

## Conclusion

A.114 The Authority does not intend pursuing this option.

## Option 9: Extend the stress test reporting horizon

### Description

A.115 Extend the stress test reporting horizon beyond the coming quarter and report on, say, the next two years.

### Situation and potential opportunity

A.116 At present, the stress test reporting horizon only covers the coming three months. This means that the stress test regime does not address a potential security of supply situation that is anchored in a particular time period beyond the current horizon. For instance, advance notice of a planned closure of a major thermal power station.

A.117 Extending the stress test reporting horizon to two years, for instance, might improve the regime's coverage of future security of supply risks, such as decisions around major plant closures.

### Consideration and assessment

#### **Scope for opportunistic lobbying to socialise cost of poor decisions**

A.118 Extending the horizon is unlikely to materially alter the likelihood of lobbying relative to current arrangements. This is because uncertainty about demand and generation increases as the horizon is extended and the appropriate level of cover decreases, accordingly. For example, a participant may have a large apparent risk exposure in two years based on forward projection of existing demand. However, this may be prudent if the participant was very uncertain about its level of future demand. The current regime avoids this issue by only considering the next quarter.

#### **Incentive for participants to appropriately manage spot market exposure risks**

A.119 There is potentially a small improvement in incentives due to the explicit requirement for participants to certify that they have considered the risks over a longer timeframe. However, the magnitude of this improvement may not be very large.

#### **Access to information on spot price exposure risks**

A.120 Information on longer term exposure risk is likely to be of limited value, particularly as future uncertainties may obscure outcomes. For instance, given the range of other uncertainties (such as demand, plant availability), what is the appropriate level of spot price risk exposure two years from now?

#### **Risks and limitations**

A.121 When we designed the stress test regime there was debate about the appropriate reporting horizon. We recognised that, given the number of factors that influence spot prices and the significant uncertainty associated with many of these, a longer reporting horizon may not yield useful stress test information toward the edge of the horizon.

#### **Net benefit**

A.122 The Authority considers that the risks and limitations of this option are likely to outweigh the potential benefits. It concludes that this option is unlikely to deliver a net benefit.

## Conclusion

A.123 The Authority does not intend pursuing this option.

## Option 10: Simplify reporting for disclosing participants not exposed to spot prices

### Description

A.124 Simplify the disclosure reporting regime for parties that are not exposed to spot prices. Examples are customers who have all their load covered by fixed price variable volume (FPVV) contracts.

### Situation and potential opportunity

- A.125 Some parties subject to the current disclosure regime have no exposure to spot prices, for instance because they buy all their load under an FPVV contract. These parties are nevertheless required to prepare and submit full disclosure statements.
- A.126 Providing a simplified reporting regime for these parties would reduce the administrative costs they face.
- A.127 Under this option, such a disclosing participant would not be required to apply the stress tests and report the quantitative results. Instead, the disclosing participant would be required to submit a simplified disclosure statement that formally stated that a change in spot prices would not affect its cash flow from operating activities in that quarter. The Code requirements for signing, dating and submitting the disclosure statement would be unchanged. In addition, if the disclosing participant had submitted a simplified disclosure statement in all four quarters of a year, it would not be required to submit an annual certificate under clause 13.236F, further simplifying its reporting obligations under the Code.

### Consideration and assessment

#### **Scope for opportunistic lobbying to socialise cost of poor decisions**

A.128 This would be unchanged as the participants concerned have no exposure to spot prices.

#### **Incentive for participants to appropriately manage spot market exposure risks**

A.129 This would be unchanged as the participants concerned have no exposure to spot prices.

#### **Access to information on spot price exposure risks**

A.130 This would be unchanged as the participants concerned have no exposure to spot prices.

#### **Risks and limitations**

A.131 The Authority has not identified any risks or limitations. A minor Code amendment would be required to implement this option. The associated cost would be small. The registrar would also need to make very minor changes to its quarterly stress test disclosure statement template.

### **Net benefit**

- A.132 The Authority acknowledges that this option would reduce administrative costs for affected disclosing participants, for a minor one-off implementation cost and without adversely affecting any other aspect of the regime. It therefore considers that there is a clear net benefit.

### **Conclusion**

- 5.17 The Authority proposes pursuing this option. The Authority considers that this Code amendment would be technical and non-controversial because:
- (a) the participants in question have no exposure to spot prices and therefore the Code amendment would have no practical effect on the outcome of applying the stress test regime and the quality of the quarterly reports
  - (b) the Code amendment would materially reduce administrative costs for these participants through the simplified reporting.
- 5.18 Accordingly, the Authority proposes addressing it as a minor Code amendment under section 39(3)(a) of the Electricity Industry Act 2010 (Act). Accordingly, this paper does not include a regulatory statement for this proposed Code amendment.
- 5.19 The Authority also notes that this consultation paper provides an opportunity for the parties likely to be affected by the possible amendment to make submissions to the Authority.

## **Option 11: Increase or decrease frequency of disclosure**

### **Description**

- A.133 Increase the frequency of disclosure reporting to, say, every two months OR decrease the frequency to, say, every six months.
- A.134 If we reduced the frequency to twice a year *and* the reporting horizon was extended to six months, then the description and assessment described in Option 9 above (extend the reporting horizon) would also be relevant here.

### **Situation and potential opportunity**

- A.135 The Authority settled on quarterly stress test reporting, but acknowledged that there were pros and cons for more or less frequent disclosure. In essence, there is a trade-off between providing up-to-date information in disclosure statements and the administrative costs of the disclosure process for disclosing participants, the registrar and the Authority.

### **Consideration and assessment**

#### **Scope for opportunistic lobbying to socialise cost of poor decisions**

- A.136 Increasing the disclosure frequency from quarterly to, say every two months, is unlikely to make any material difference in the scope for opportunistic lobbying, even if an event suddenly occurred that resulted in extreme spot prices.
- A.137 Decreasing the frequency from quarterly to, say, six-monthly, may increase the scope for lobbying if an event occurred suddenly that resulted in extreme spot prices – participants might be able to credibly claim they were meeting their regular disclosure obligations yet the event was unforeseen and occurred between reporting periods. However, the effect

is likely to be minimal, particularly as the Code enables the Authority to require submission of a new spot market disclosure at any time.

**Incentive for participants to appropriately manage spot market exposure risks**

A.138 The Authority would not expect a change in the frequency to have any discernible impact on incentives, particularly as the Code enables the Authority to require submission of a new spot market disclosure at any time.

**Access to information on spot price exposure risks**

A.139 Increasing the frequency from quarterly to, say every two months, would be unlikely to deliver any material improvements in the information on spot price exposure risks.

A.140 Decreasing the frequency could reduce information, but the Authority could require submission of a new spot market disclosure at any time.

A.141 In either case, there are tools other than stress tests that can provide information on spot price exposure risks. These include futures contract prices, the system operator providing physical security of supply information, and the Authority releasing information via the weekly market briefs, periodic market commentaries, and targeted educational material.

**Risks and limitations**

A.142 Changing the disclosure frequency would require a Code amendment.

A.143 The Authority considers that increasing the frequency would add substantial cost for very little benefit, and would be hard to justify under the Authority's Code amendment principles.

A.144 Reducing the frequency could reduce participant compliance costs, but would also be expected to weaken the regime for the reasons outlined above.

**Net benefit**

A.145 The Authority considers that the costs of either increasing or decreasing the disclosure frequency are likely to significantly outweigh any potential benefits. It therefore concludes that this option is unlikely to deliver a net benefit.

**Conclusion**

A.146 The Authority does not intend pursuing this option.

**Option 12: Remove quantitative aspects of Stress Test regime**

**Description**

A.147 Remove the requirement on disclosing participants to submit quantitative stress test results and rely solely on the annual certification that the disclosing participant's board has adequately considered spot market risks.

**Situation and potential opportunity**

A.148 Some stakeholders argue that because test scenarios are generic they are unrepresentative and therefore add little value to the disclosing participant's decisions about risk management. Amending the Code to remove the quantitative aspects of the disclosure regime would reduce the administrative costs associated with quarterly reporting.

## Consideration and assessment

### **Scope for opportunistic lobbying to socialise cost of poor decisions**

- A.149 The Authority considers that requiring participants to consider their risk position in quantitative terms and disclosing this to their Boards is critical to the objective of reducing the scope for opportunistic lobbying. If the quantitative measure was discontinued, parties that intended to rely on opportunistic lobbying could simply certify that their risks were appropriately managed, based on their assessment. There would be no indication in their disclosure statement that they had a significant financial exposure to spot prices.

### **Incentive for participants to appropriately manage spot market exposure risks**

- A.150 The absence of measurable spot market exposure risks would undermine the effectiveness of the regime, as participants would not be required to consider the financial implications for their businesses of extreme spot price situations.

### **Access to information on spot price exposure risks**

- A.151 The Authority acknowledges that the existing stress test scenarios are generic in nature. However, it nevertheless considers they are sufficiently representative to provide useful quantitative information. Removing the quantitative aspects of the stress test regime would significantly reduce participants' access to information. This effect is likely to be more pronounced for smaller less well-resourced participants who may not be well-placed to undertake their own robust analysis.

### **Risks and limitations**

- A.152 This option would weaken the stress test regime.

### **Net benefit**

- A.153 The Authority considers that the detriments and risks are likely to significantly outweigh any potential administrative and compliance cost savings. It therefore concludes that this option is unlikely to deliver a net benefit.

## Conclusion

- A.154 The Authority does not intend pursuing this option.

## Option 13: Introduce threshold for being subject to stress test reporting

### Description

- A.155 Introduce a threshold so that smaller disclosing participants are excused from some or all stress test disclosure obligations.

### Situation and potential opportunity

- A.156 Some participants suggest that the stress test disclosure regime imposes costs on smaller parties with arguable little benefit given their relative size.

## Consideration and assessment

### **Scope for opportunistic lobbying to socialise cost of poor decisions**

- A.157 Excusing smaller disclosing participants from some or all of the stress test disclosure obligations has the potential to adversely affect the scope for opportunistic lobbying. This is because even small participants can be materially adversely affected by poor spot market risk exposure decisions, and any opportunistic lobbying, even from a small participant, can undermine the credibility of the broader market.

### **Incentive for participants to appropriately manage spot market exposure risks**

- A.158 Narrowing the scope of the disclosure regime would reduce the incentives on those participants to appropriately manage their spot market exposure risks.

### **Access to information on spot price exposure risks**

- A.159 Excusing smaller participants would reduce the information available to participants and to the Authority.

### **Risks and limitations**

- A.160 Introducing a threshold would require a Code amendment.
- A.161 It would be difficult to establish a suitable threshold in the Code that did not diminish the effectiveness of the overall regime. A participant's annual electricity consumption is not a good measure of its ability to withstand a range of spot price exposure risks.
- A.162 The exemption regime under the Act provides an alternative mechanism for excusing a disclosing participant from some or all of the stress test disclosure obligations.

### **Net benefit**

- A.163 The Authority considers that the potential cost savings for some disclosing participants is unlikely to outweigh the adverse implications for the effectiveness of the regime overall. It therefore considers there is unlikely to be a net benefit.

### **Conclusion**

- A.164 The Authority does not intend pursuing this option.

## Appendix B Format for submissions

Submitter	
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Question	Comment
<p>Q1. Do you agree that the rationale for the stress test regime remains valid and that the regime contributes to efficient security of supply?</p> <p>Q2. Do you agree with the proposed improvements we have identified? If you disagree, please explain your reasoning in terms consistent with the Authority's statutory objective in section 15 of the Electricity Industry Act 2010.</p>	

## Glossary of abbreviations and terms

<b>Act</b>	Electricity Industry Act 2010
<b>Authority</b>	Electricity Authority
<b>Code</b>	Electricity Industry Participation Code 2010
<b>Disclosing participants</b>	the set of participants (directly connected consumers and parties buying from the clearing manager) required by the Code to submit spot price disclosure statements to the registrar each quarter
<b>FPVV</b>	a fixed price variable volume contract between a retailer and a customer for the customer's electricity purchases
<b>HVDC</b>	the high voltage direct current transmission link connecting Benmore in the South Island with Haywards in the North Island
<b>Registrar</b>	The independent person appointed by the Authority to receive spot price disclosure statements from disclosing participants (currently NZX)
<b>Stress test regime</b>	The spot price risk disclosure regime set out in subpart 5A of Part 13 of the Code