

Improving the efficiency of prices in pivotal supplier situations

Consultation Paper

Submissions close: **5pm on 22 April 2014**

18 February 2014

Executive summary

This paper seeks feedback on a proposal to amend the Electricity Industry Participation Code 2010 (Code) (the proposal) to require parties making offers and reserve offers under Part 13 of the Code to observe high standards of trading conduct (conduct provision).

The primary purpose of the proposal is to address concerns about offer behaviour in pivotal supplier situations. Pivotal supplier situations are periods where the competitive forces in wholesale market are temporarily reduced, generally due to a short-term transmission constraint. While pivotal supplier situations are relatively rare, a pivotal supplier can set the price in a market (or a region of a market) and may have a financial incentive to set it to a high level.

Events in the wholesale electricity spot market in 2011 and 2012 showed that some suppliers have been willing to set prices to a high level in a local region (e.g. Cobb, Tekapo) when they are pivotal. The Electricity Authority (Authority) is concerned that this behaviour could inefficiently discourage retail competition and business investment in the general economy.

In response to a request from the Authority, the Wholesale Advisory Group (WAG) reviewed the efficiency of prices during pivotal supplier situations, published a discussion paper, and made recommendations to the Authority Board.¹ The WAG recommended the Authority introduce a tightly defined trading conduct provision and 'safe harbour' principles.

In keeping with these recommendations, the Authority's proposal requires a generator or ancillary service agent to make offers and reserve offers in a manner consistent with a high standard of trading conduct at all times. The proposal also defines specific behavioural principles which together form a 'safe harbour'.² If a party adheres to these safe harbour principles, it will be guaranteed (i.e. deemed) to have met the required high standard of conduct. To qualify for the 'safe harbour', a generator or ancillary service agent must:

1. offer all its available capacity (energy and reserve) that is able to operate in a trading period, and
2. give as much notice of its intentions as possible when submitting, revising, or cancelling energy or reserve offers, and

¹ The WAG also made a number of other recommendations that have been addressed separately, such as altering the Outage Protocol. See <http://www.ea.govt.nz/dmsdocument/15953>

² The mechanism is similar to the 'safe harbour' provisions for mergers and acquisitions under competition law, where the Commerce Commission sets out indicators to describe when it would expect to receive an application for clearance for a business acquisition. An important distinction between the "safe harbours" as used by the Commerce Commission and as used by the Authority in this proposal is that within the Commerce Commission safe harbours, an acquisition could still be challenged. In contrast, the safe harbours under the Code will provide complete assurance if the conduct requirements are met.

3. when a generator or ancillary service agent is pivotal either:
- a. prices and quantities in its offers or reserve offers do not result in a material increase in the prices at which electricity or reserve is supplied in the region where it is pivotal, compared with the prices in the immediately preceding trading period or other comparable trading periods in which it was not pivotal, or
 - b. its offers or reserve offers when it is pivotal are generally consistent with its offers or reserve offers in other comparable trading periods in which it was not pivotal, or
 - c. it does not benefit financially from an increase in the final price of electricity at the node(s) at which it is pivotal.

While a generator or ancillary service agent that acts in a manner that is consistent with the safe harbour principles is deemed to meet the high standard of trading conduct, it is not necessarily in breach if its behaviour is outside the safe harbour. A generator or ancillary service agent may still be able to demonstrate that it has observed a high standard of trading conduct even if it has not met the conditions for being in the safe harbour.

The Authority considers the proposal would advance its statutory objective to promote competition in, and efficient operation of, the industry for the long-term benefit of consumers. Specifically, it would:

- promote competition in the wholesale spot and retail electricity markets by improving confidence in the efficiency of prices in pivotal supplier situations, and hence encouraging:
 - retailers to compete in areas where pivotal supplier situations occur
 - new retailers to enter the retail market
 - more business investment in the general economy
 - more consumers to participate in the spot market, or to purchase power at a price linked to the spot price, where it is efficient to do so
- promote efficient operation of the industry by:
 - reducing the risk of inefficiently high prices, which can cause productive and allocative efficiency losses during pivotal supplier situations
 - supporting dynamic efficiency by supporting competition in the retail and wholesale markets.

The benefits of the proposal are expected to outweigh the costs.

The Authority invites interested parties to make submissions on the proposal and the regulatory statement.

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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 is proposing an amendment to the Code to introduce a market conduct provision to improve confidence in the efficiency of pricing in pivotal supplier situations. The proposed amendment is attached as Appendix A.
- 1.1.2 The Authority's proposal is largely based on the recommendations made by the WAG on the introduction of a conduct provision. Parties making submissions on this consultation paper are encouraged to consider the earlier work by the WAG.³
- 1.1.3 The purpose of this paper is to consult with participants and persons that the Authority thinks are representative of the interests of those likely to be affected by the proposed amendment.
- 1.1.4 Section 39(1)(c) of the Electricity Industry Act 2010 (Act) requires the Authority to consult on any proposed amendment to the Code and corresponding regulatory statement. Section 39(2) provides that the regulatory statement must include a statement of the objectives of the proposed amendment, an evaluation of the costs and benefits of the proposed amendment, and an evaluation of alternative means of achieving the objectives of the proposed amendment. The regulatory statement is set out in Section 5 of this paper.
- 1.1.5 The Authority invites you to make a submission on the proposal and the regulatory statement.

1.2 How to make a submission

- 1.2.1 Your submission is likely to be made available to the general public on the Authority's website. If necessary, please indicate any documents attached in support of your submission and any information that is provided to the Authority on a confidential basis. However, you should be aware that all information provided to the Authority is subject to the Official Information Act 1982.
- 1.2.2 The Authority's preference is to receive submissions in electronic format (Microsoft Word) in the format shown in Appendix B. Submissions in electronic form should be emailed to submissions@ea.govt.nz with "Consultation Paper—Improving the Efficiency of Prices in Pivotal Supplier Situations" in the subject line.
- 1.2.3 Do not send hard copies of submissions to the Authority unless it is not possible to do so electronically. If you cannot or do not wish to send your submission electronically, you should post one hard copy of the submission to either of the

³ See www.ea.govt.nz/our-work/consultations/advisory-group/pivotal-supplier-situations/

addresses provided below or you can fax it to 04 460 8879. You can call 04 460 8860 if you have any questions.

Postal address

Submissions
Electricity Authority
PO Box 10041
Wellington 6143

Physical address

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

1.3 Deadline for receiving a submission

- 1.3.1 Submissions should be received by **5pm** on **22 April 2014**. Please note that late submissions are unlikely to be considered.
- 1.3.2 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. Improving the efficiency of prices in pivotal supplier situations

2.1 A pivotal supplier can set the price in a market

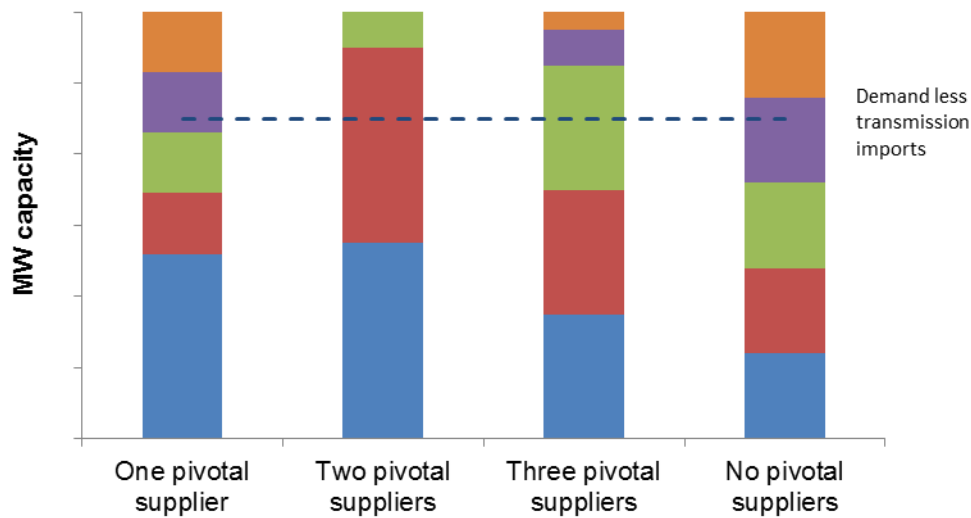
2.1.1 A supplier is pivotal in a market if, without at least some of the supplier's production, demand cannot be met. In principle, a pivotal supplier can unilaterally raise prices because it will not be possible to serve customer demand without using some of that supplier's capacity.⁴

2.1.2 Figure 1 illustrates pivotal supplier situations, in which:

- A. only one supplier is pivotal – only the blue supplier can withhold its capacity to an extent that could cause total output to be less than demand
- B. two suppliers are pivotal – both the red and the blue suppliers can each unilaterally withhold their capacity to an extent that could cause total output to be less than demand
- C. three suppliers are pivotal – the red, green and blue suppliers can each unilaterally withhold their capacity to an extent that could cause total output to be less than demand.
- D. no individual suppliers are pivotal – it is possible for the remaining suppliers to satisfy demand if any one supplier unilaterally withholds their capacity.

⁴ In that situation, a supplier's ability to raise the market price will be dependent on the extent to which customers can reduce their demand. In theory, a pivotal supplier may also be able to reduce prices (to some extent depending on competitor offers) and may benefit at times from a lower market price, depending on its net sales position. This type of situation has not raised concern to date, and is not explored further in this paper.

Figure 1 Different types of pivotal situation



- 2.1.3 Competition is strongest in markets where no supplier is pivotal (case D in Figure 1) – i.e. if any one supplier withholds its entire generating capacity, demand can still be met by the combined output of the others. The presence of one or more pivotal suppliers could reduce the level of competitive tension in the market if they were net pivotal. Furthermore, a market with a single pivotal supplier (case A) is likely to have lower competitive tension than one with multiple pivotal suppliers. This is because a single pivotal supplier could reduce its output by a smaller proportion to exert market power, as compared to the situation with multiple pivotal suppliers.
- 2.1.4 In addition, a single pivotal supplier faces a lower likelihood of successful countervailing action by other parties, such as retaliation by another pivotal supplier in a later period when the first supplier becomes a net purchaser (for example because its generation plant is offline for maintenance).
- 2.1.5 Finally, where a single supplier is pivotal, it is probably in a better position to predict the outcome of its actions (i.e. whether raising its offer price will increase its profit) than a situation of multiple pivotal suppliers, where each supplier must account for the possible actions and reactions of other parties.

Not all pivotal suppliers have an incentive to increase the spot price

- 2.1.6 A *gross* pivotal supplier can set the price in a market (or a region of the market) to a high level but may or may not profit from doing so. There are various factors that can affect the potential for pivotal suppliers to profit (in the short term) from raising prices, including:
- (a) the minimum quantity the pivotal supplier must offer in order for the market to clear

- (b) the minimum amount of generation that the supplier must run (for instance, to meet resource consent requirements)
- (c) the extent to which the supplier is exposed to spot prices (which depends on its hedge position and retail commitments).

2.1.7 A *net* pivotal supplier is a pivotal supplier that can profit (in the short term) by setting the price to a high level, because its generation volume will still exceed its hedging transactions and retail commitments.

Pivotal supplier situations in the electricity market

2.1.8 Pivotal supplier situations arise from time to time in the New Zealand wholesale electricity spot market, especially as a result of temporary transmission constraints. For example:

- (a) a market performance review carried out by the Authority in 2012 indicated a generator can currently be pivotal in various local areas, including in the Tekapo A / Albury area, Cobb / Motueka area, Karapiro / Cambridge / Te Awamutu area, East Cape area and the Greymouth area⁵
- (b) using capacity and demand data for 2009-2011 (and assuming Pole 3 of the HVDC inter-island transmission link had been commissioned), the Authority estimated that one or more generators would have been gross pivotal:⁶
 - (i) nationally, in about 5% of trading periods
 - (ii) in the North Island, in about 5% of trading periods
 - (iii) in the South Island, in around 9% of trading periods.

2.1.9 Other analysis suggests that net pivotal situations are rarer still. The Authority has used data from the reconciliation manager in combination with public sources (such as public information on the virtual asset swaps, hedge disclosure data and the Meridian NZAS contract) to estimate how often each major supplier was net pivotal. This analysis indicated that one or more suppliers were net pivotal at an island level in around 1-2% of trading periods in 2013. It is important to note this analysis did not extend to 'local' pivotal supplier situations, where a party might become net pivotal due to a temporary constraint in the HVAC transmission system.

⁵ <http://www.ea.govt.nz/dmsdocument/13478>

⁶ This analysis compared total nameplate generation capacity, adjusted to account for outages at major thermal plants, and for must-run generation. This was compared to demand for energy plus IR and frequency keeping requirements. The WAG undertook similar analysis using the actual (lower) HVDC capacity. This resulted in a much higher proportion of periods in the South Island with a pivotal supplier – as shown in Table 10 of <http://www.ea.govt.nz/dmsdocument/15049>.

2.2 The Authority reviewed instances of high prices in pivotal supplier situations and found the issue warranted further attention

2.2.1 The Authority's review of locally net pivotal generation,⁷ published in July 2012, examined events in 2011 and 2012 showed that some suppliers were both able and willing to temporarily set prices to high levels in a local region.

2.2.2 The review concluded that *"the growing issue of net pivotal generation warrants the Authority's immediate attention to determine whether Code amendments can address [these] concerns in ways that deliver long-term benefits to consumers."*

The Wholesale Advisory Group recommended that the Authority should consider amending the Code

2.2.3 This conclusion led the Authority to request the WAG to consider issues associated with pivotal supplier situations. The request stated that the objective of the WAG's investigation was to make recommendations to the Authority that would *"... improve confidence in the efficiency of prices when competitive pressures in the wholesale market are weak, thereby contributing to the Authority's statutory objective by improving wholesale and retail market competition"*.⁸

2.2.4 The WAG published a discussion paper in May 2013.⁹ Analysis in the discussion paper found that no specific efficiency losses could be directly identified from the Tekapo A and Cobb events. However, the paper noted this was not surprising as the events were relatively recent. The WAG also considered the potential for future efficiency losses to arise and stated that: "this analysis indicates credible potential for material efficiency losses to arise from pivotal supplier situations in some scenarios – particularly in relation to dynamic efficiency effects".

2.2.5 The majority of submitters on the WAG's discussion paper broadly agreed with the WAG's assessment of potential efficiency losses.¹⁰

2.2.6 The WAG's recommendation to the Board said that:

"the WAG believes that concerns about pivotal supplier situations are sufficiently serious to warrant consideration of potential changes to the Code."

⁷ Report available at: <http://www.ea.govt.nz/industry/monitoring/enquiries-reviews-investigations/2012>

⁸ Correspondence – letter to WAG Chair, 22 June 2012, WAG work plan: <http://www.ea.govt.nz/our-work/advisory-working-groups/wag/5Jul12>

⁹ Available here: <http://www.ea.govt.nz/our-work/consultations/advisory-group/pivotal-supplier-situations/>

¹⁰ <http://www.ea.govt.nz/our-work/consultations/advisory-group/pivotal-supplier-situations/submissions/>

*However, in light of the uncertainty around the extent of potential efficiency losses, the WAG recommends the Authority focus at this point on options that have a relatively low risk of unintended consequences, and which are flexible and relatively easily reversed.*¹¹

¹¹ <http://www.ea.govt.nz/dmsdocument/15953>

3. The Authority has considered options and proposes introducing a conduct provision

3.1 The WAG has already considered options to address the problem

3.1.1 The WAG discussion paper considered a range of options to address pivotal supplier situations. The WAG proposed, and the majority of submitters agreed, that the Authority should:

- (a) consider adding conduct provisions to the Code
- (b) consider amending the net benefit test in the Outage Protocol to include competition effects
- (c) consider temporary price or offer capping as a fall-back measure, if the above options are unsuccessful
- (d) not progress the other options at this time.

3.2 The Authority agrees with WAG and has developed a conduct provision for consultation

3.2.1 After considering submissions, the WAG recommended the Authority should:

- A. consider the introduction of a trading conduct provision¹²
- B. clarify the net benefit test used in the Outage Protocol to ensure that competition effects can be taken into account when scheduling transmission outages
- C. consider the publication of information to participants on expected upcoming pivotal supplier situations
- D. continue the active monitoring of market performance during pivotal supplier situations
- E. consider other options if these measures don't adequately address concerns – in particular, temporary capping mechanisms on pivotal supplier offers or affected prices, and/or making Transpower responsible for increased spot market costs arising from local pivotal supplier situations during grid outages.

¹² The Authority notes the WAG's report indicates that while a minority of members were sceptical about the effectiveness of a conduct provision, the balance of members considered it could be effective and appropriate for current circumstances. By consensus, the group agreed to support a conduct provision on the basis that it had potential benefits and low risk of harm.

3.2.2 In response to the WAG's recommendations, the Authority Board:

- (a) approved work by staff to develop a tightly defined conduct provision and 'safe harbour' principles and other reasonably practicable alternatives to address pricing in pivotal supplier situations for consultation
- (b) directed the development of a conduct provision and 'safe harbour' principles specifically to take into account the mechanics of how the principles would work in practice and address any implications for the undesirable trading situations regime
- (c) noted, in relation to the WAG's other recommendations, that:
 - (i) the Board had previously agreed to amend the Code to explicitly provide for Transpower to take competition effects into account when scheduling transmission outages, as per recommendation B (see Appendix C)
 - (ii) Authority staff were working on calculations that would indicate which generators are pivotal in final pricing cases, rather than in advance of real time as per recommendation C
 - (iii) the Authority's market performance team would continue to maintain close scrutiny of the offer behaviour of pivotal suppliers as per recommendation D
 - (iv) the Authority would not pursue the "other options" as per recommendation E but supported consideration of other options should a conduct provision and principles prove to be unworkable or ineffective.

3.2.3 See Appendix D for an evaluation of all the options considered by the WAG against the Authority's objectives.

3.3 The Authority has considered the concerns of some submitters that a conduct standard may be insufficient

3.3.1 Some submissions on the WAG discussion paper expressed concern that a conduct-based approach might not be effective. For instance:

- (a) Norske Skog commented that *"our view is that a code of conduct provision is unlikely to make any difference, if the experience from NZEM is anything to go by."*
- (b) MEUG commented that *"Adding conduct provisions might be, rather than would be, effective. ... Given experience to date with suppliers' behaviour we do not view that adding conduct provisions will necessarily be clearly beneficial"*
- (c) Devon Funds Management commented that: *"in general we favour enforceable rules rather than codes of conduct. Investors are less willing*

to commit significant capital to opportunities if returns are dependent on the good behaviour of another market participant.”

- 3.3.2 The Authority acknowledges the reservations expressed by these parties. However, the Authority takes the view that a well-designed conduct provision, enforceable under the Code and supported by a rigorous market monitoring programme, could be effective.
- 3.3.3 The Authority also acknowledges that the approach is more light-handed than some participants would prefer. However, the Authority believes the proposal is appropriate in the current situation. Furthermore, the Authority would consider introducing more stringent measures if required. This is in accord with the WAG’s recommendation to “consider other options if these measures don’t adequately address concerns about pricing in pivotal supplier situations”.

4. Design features of a conduct provision

4.1 WAG's recommended approach to conduct provision

- 4.1.1 The WAG recommended the Authority consider placing “a positive obligation on suppliers when they are gross pivotal to observe a high standard of trading conduct. This would be coupled with principles (set out in the Code, guidelines or some other form) which provide guidance on behaviour by a gross pivotal supplier that would be consistent with the standard”.
- 4.1.2 Although the WAG did not recommend precise wording for a Code amendment, it suggested that the principles could “for example provide that a supplier is deemed to be compliant with the positive conduct provision for a trading period if:
- (a) Principle 1 – all generating capacity expected to be physically available is offered when a plant has been committed to generate
 - (b) Principle 2 – intentions to make changes to offers (prices and/or quantities) should be submitted at the earliest opportunity (to minimise late changes that provide little chance for others to respond)
 - (c) Principle 3 – price and quantity pairs in offers are not materially different between adjacent trading periods, except where there is a bona fide physical factor that alters the gross pivotal supplier's capability to generate electricity between those periods.”¹³
- 4.1.3 The WAG also suggested that the Authority undertake some analysis of historical data to assess whether these principles would work in the intended manner, and make any adjustments as necessary.

4.2 Authority supports WAG's broad approach

- 4.2.1 The Authority has undertaken the analysis suggested by WAG, and believes that the WAG proposals are robust and require relatively little adjustment.
- 4.2.2 In developing its proposed Code changes, the Authority has considered its statutory objective and how this is likely to be advanced by:
- (a) providing consumers with confidence about the efficiency of prices during pivotal supplier situations (when normal competitive forces in the wholesale electricity market may be temporarily reduced)
 - (b) providing suppliers with confidence that they will earn sufficient revenue to justify efficient investment in capacity.

¹³ Paragraph 6.2.3, see www.ea.govt.nz/dmsdocument/15953.

- 4.2.3 The following subsections describe the key design judgements that the Authority has made in preparing the draft Code amendment. However, before considering those specific judgements, Table 1 sets out a high level comparison of the WAG's recommended approach and the Authority's proposal.

Table 1: Comparison between the WAG's recommendation and the Authority's proposal

Design issue	WAG recommendation	Authority proposal
General form of conduct provision	Positive obligation on suppliers to observe a high standard of trading conduct	Same
Specific guidance re conduct provision	Define a safe harbour within which participants are deemed to be compliant with general conduct provision Provide that safe harbour is not mandatory – i.e. a participant may still be able to demonstrate that it has met general conduct provision even though it is outside safe harbour	Same
Parties subject to the provision	Generators and IR providers	Same
Circumstances in which parties are subject to the general conduct provision	When a supplier is gross pivotal	At all times
Circumstances in which parties must comply with the first and second safe harbour principles if they are to be in the safe harbour	When a supplier is gross pivotal	At all times
Circumstances in which parties must comply with the third safe harbour principle if they are to be in the safe harbour	When a supplier is gross pivotal	Same (Or when a supplier is <i>locally gross</i> pivotal – see section 4.10)
Safe harbour principle 1	All generating capacity expected to be physically available is offered	Same and equivalent obligation for reserve offers

Design issue	WAG recommendation	Authority proposal
Safe harbour principle 2	Changes to offers should be signalled as soon as possible	Same
Safe harbour principle 3	Price and quantity pairs in offers are not materially different between adjacent trading periods, except where there is a bona fide physical factor that alters the participant's capability to generate electricity	There are three ways to comply: (a) market price does not increase materially when a supplier is pivotal or (b) offers when a supplier is pivotal are generally consistent with offers when it is not or (c) the supplier can demonstrate it has not benefited financially.

4.3 Authority supports form of conduct provision proposed by WAG

4.3.1 The Authority considered five different forms of conduct provision:

- (a) a positive obligation to adhere to a high standard of trading conduct, coupled with well-defined safe harbour principles, within which a participant is deemed to be compliant (WAG proposal)
- (b) a general requirement to adhere to a high standard of trading conduct (without providing any definition of what this entails)
- (c) a general prohibition on bad and/or manipulative trading conduct (without providing a definition of bad or manipulative)
- (d) a prohibition on specific, well-defined bad behaviours
- (e) a requirement to adhere to specific, defined high standards of behaviour.

4.3.2 The Authority favours the first approach, which was also supported by the WAG. In the Authority's view, this approach best meets the objectives in section 4.2.2 because:

- (a) The general obligation and safe harbour principles are expected to constrain the ability of pivotal suppliers to set prices to inefficient levels (see the following sections for reasoning). The safe harbour principles provide a high degree of certainty for suppliers, and therefore reduce the risk of unintended adverse consequences that could arise if there was no codification of what constitutes acceptable market conduct. By contrast, most of the other approaches provide very limited clarity to participants and increase the risk of unintended inefficient outcomes.¹⁴
- (b) The non-exhaustive nature of the safe harbour principles allows participants to make the case that they meet the general conduct provision by other means – should this be relevant. This also reduces the risk of unintended adverse consequences.
- (c) A similar type of approach based on a positive conduct obligation has been used in some other situations/markets. For example, the NZEM Rules required market participants and service providers to “observe high standards of trading conduct”. The NordPool Rules require members to “not apply unreasonable business methods when carrying out trading, but always seek to act in accordance with good business conduct”. The NZX Participant Rules require each market participant or advisor to observe “good broking practice”.

¹⁴ The Authority is mindful of Genesis's concerns, stated in its submission on the WAG discussion paper, that “a prohibition on manipulative conduct ... has a high risk of unintentionally capturing normal market behaviour (such as managing demand and load as a portfolio)”.

- 4.3.3 The Authority recognises there is a potential downside in providing a safe harbour, as a pivotal supplier may try to circumvent the intent of the conduct provision while maintaining strict compliance with the safe harbour itself. While such actions cannot be ruled out, they would be expected to create some cost or risk for the participant due to their ‘artificial’ nature. Moreover, if the proposed Code amendment is enacted and a party subsequently acts in a way to circumvent its intent, the Authority could consider a further revision to the Code at that time.
- 4.3.4 In light of these factors, the Authority prefers to adopt an obligation to observe a high standard of trading conduct, coupled with a safe harbour provision, as this should address the issues of concern while providing a reasonable degree of clarity to participants.

Question 1 Do you agree that if the Authority enacts a conduct provision, this provision should take the form of a general requirement to adhere to a high standard of trading conduct, in conjunction with a defined safe harbour? If not, what approach would be preferable and why?

4.4 Authority agrees with WAG that conduct provision should apply only to wholesale electricity spot market

- 4.4.1 A trading conduct provision could potentially apply to one or more of:
- (a) the wholesale electricity spot market, which covers both energy and IR
 - (b) the national frequency keeping market (once the market arrangements for it are included in Part 13 of the Code)
 - (c) hedge markets, including the financial transmission rights (FTR) market
 - (d) retail electricity markets.
- 4.4.2 The WAG recommended that, in order to minimise the risk of unintended consequences, a trading conduct provision should only *“apply to the energy and reserves markets, as issues in the former market triggered this work, and it would be impractical to exclude reserves as they are co-optimised with energy. It should not apply to the frequency keeping market at this point.”*

- 4.4.3 The Authority agrees with the WAG's recommendation. The conduct provision needs to cover the wholesale electricity spot market because this is the market in which concerns have arisen (as set out in section 2.2). No specific concerns have been raised in relation to the other markets listed above. Moreover, extending the coverage of the provision to other markets would increase the risk of unintended adverse consequences. Finally, if behaviour in other markets was to become a concern in future, the provision could be amended to cover those other markets.

Question 2 Do you agree that if the Authority enacts a trading conduct provision, it should apply to the wholesale electricity spot market only? If you consider the provision should also apply to other markets, explain which markets and why.

4.5 Authority agrees with WAG that a conduct provision should apply to energy and reserve offers

- 4.5.1 The WAG recommended that, in order to minimise the risk of unintended consequences, a trading conduct provision should apply only to *"suppliers and exclude any application to bidders"*. The WAG further recommended that the provision should cover both energy and reserve offers.
- 4.5.2 The Authority agrees and considers this coverage best meets the objectives in section 4.2.2 because:
- (a) It is not aware of any information to suggest that actions by pivotal bidders (i.e. demand-side parties that place price-sensitive bids in the energy market) have given rise to concerns about inefficient price outcomes. Including them at this time could therefore provide no benefit but would increase the risk of unintended adverse consequences.
 - (b) If bidder behaviour were to become a problem in future, the provision could be amended to cover bidders.

Question 3 Do you agree that if the Authority enacts a trading conduct provision, it should apply to offers and reserve offers? If you consider the provision should also apply to other ancillary services, explain which and why.

- 4.5.3 The Authority has also considered an alternative where coverage would include only generators (i.e. exclude interruptible load (IL) providers). The key arguments in favour of this option are that IL providers (such as lines companies or major industrial users) may be less able to influence market prices because of their smaller size, and could face greater incremental costs to monitor their compliance because they are typically less focused on spot market

trading activity compared to generators. Accordingly, the relative net benefits of including them in the regime may be lower for IL providers than for generators.

- 4.5.4 However, this option would mean that IL providers and generators would be treated differently, even though they can both supply IR. Furthermore, in at least one instance in the past, the concern about a pivotal supplier related to an IR participant that was controlling rights to both spinning reserve and IL (Meridian in the South Island IR market as set out in section 2.2).
- 4.5.5 Finally, complying with the provision is not expected to be onerous.
- 4.5.6 For these reasons, the Authority currently favours applying the conduct provision to all parties that make energy and reserve offers, but seeks specific submitter views on the matter.

Question 4 If the Authority enacts a conduct provision that covers the IR market, should it apply to generators and IL providers, or generators only, and what is your reasoning?

4.6 Authority proposes that general conduct provision should apply at all times

- 4.6.1 The WAG recommended the conduct provision should apply to suppliers only when they are gross pivotal. The Authority's understanding is that the WAG's proposal was intended to limit the risk of unintended consequences that might otherwise arise if the provision applied to all suppliers, whether they were pivotal or not.
- 4.6.2 However, having reviewed this recommendation, the Authority considers the general conduct obligation should apply at all times, and the safe harbour principles more appropriately described to reduce the risk of unintended adverse consequences.
- 4.6.3 The details of the Authority's proposal are discussed in the following sections, but the key changes relative to the WAG proposal are:
- (a) All suppliers would be covered by the general conduct provision. Given the safe harbour provisions, this would mean all suppliers are generally expected to post offers for all of their available capacity (Principle 1), and signal changes to their offers at the earliest opportunity (Principle 2). The Authority considers this appropriate because:
 - (i) both of these requirements contribute to efficient pricing outcomes, and neither is expected to impose any material cost on participants
 - (ii) the non-exhaustive nature of the safe harbour principles means that these provisions would not be strictly mandatory, and it would be open to participants to demonstrate that they met the general 'high

standard' provision despite a specific departure from Principles 1 and 2

- (b) Principle 3 would apply when a supplier is pivotal and be altered to better describe offer behaviour that is consistent with a high standard of trading conduct in a situation where competitive forces are weaker than usual. This change is proposed after reviewing historical offer data (as suggested by the WAG) and more accurately targets the proposed Code change to the issues of concern.

Question 5 Do you agree that if the Authority enacts a trading conduct provision, the general provision should apply to all suppliers? If not, why not?

4.7 To be in the safe harbour, generators and ancillary service agents should offer all their available energy and reserve capacity

- 4.7.1 The WAG recommended that Principle 1 for defining a safe harbour should be that "all generating capacity expected to be physically available is offered when a plant has been committed to generate".
- 4.7.2 The WAG explained that this condition was *"directed toward precluding the deliberate withholding of capacity. If a plant is committed and available to generate in a future trading period, the full potential MW capacity of that plant should be offered, in price bands determined by the relevant participant. Conversely, if a supplier has not committed a plant for a particular trading period, there [should] be no obligation for all of that plant's capacity to be offered."*
- 4.7.3 The Authority supports the rationale of deterring the physical withholding of plant. The only change proposed by the Authority is to make it clear that the provision covers the offering of both energy and reserve. It proposes the condition should be redrafted as follows: a generator or ancillary service agent is in the safe harbour if (among other conditions) it *"makes offers or reserve offers in respect of all of its capacity that is able to operate in a trading period"*. Importantly, the supplier would determine the prices at which capacity is offered in all cases.
- 4.7.4 For example, a cold thermal generation unit that would not have time to reach operating temperature by a future a trading period would not be deemed to be "able to operate" in that trading period. However, a generator placing offers for a slow-start thermal unit that was currently 'cold' (but otherwise available) would need to place offers for those trading periods where the unit would have had sufficient time to start up.
- 4.7.5 Further, thermal generators would not be expected to offer any output:

- (a) from duct-firing
- (b) from uncertain balance of plant performance.

4.7.6 Likewise, hydro generators would not be expected to offer any output:

- (a) that could not operate due to unavailability of water
- (b) that would require spill
- (c) that would place them into the 'rough running' range.

4.7.7 No generator would be expected to offer any output:

- (a) in excess of a unit's normal rated capacity
- (b) unavailable due to maintenance outages
- (c) reserved for frequency keeping
- (d) that would place it in breach of resource consent conditions
- (e) that would not be normally available because of risks to equipment or personnel.

4.7.8 Where a supplier can provide energy or IR from a generating unit, it would be in the safe harbour if the combination of offers for energy and IR are equal to the available capacity in that trading period. However, as a general rule, such a generating unit should be offered simultaneously for energy and IR so the optimal mix can be determined by the market software.

Question 6 Do you agree that it is preferable for generators and ancillary service agents to offer all energy and reserve capacity that is able to operate?

4.8 To be in the safe harbour, suppliers should give as much notice of their offer intentions as it is possible to give

4.8.1 The WAG recommended that Principle 2 of the conditions for being in the safe harbour should be that *"intentions to make changes to offers (prices and/or quantities) should be submitted at the earliest opportunity (to minimise late changes that provide little chance for others to respond)"*.

4.8.2 The WAG explained that this condition was *"designed to ensure that the market is well informed about upcoming supply conditions and prices. The market should not be surprised by participants deliberately altering their offers to increase spot prices close to real time, when there will be fewer options available for other participants to respond to such an action. This principle would not preclude decisions made by suppliers about committing generating units based on profits implied by prices in forecast schedules."*

- 4.8.3 The Authority supports the WAG’s rationale for this principle, and considers that timely signalling of offer intentions by all suppliers contributes to efficient pricing outcomes. While part 13 of the Code contains similar obligations for making offers and reserve offers, the Authority considers the principle should be explicitly included in the criteria for the safe harbour. The only change to the WAG’s recommendation proposed by the Authority is to align the wording with the intention of covering all IR providers (as discussed in section 4.5).

Question 7 Do you agree that generators and ancillary service agents should give as much notice of their intentions to submit, revise or withdraw an offer or reserve offer as they are able to give?

4.9 To be in the safe harbour, pivotal suppliers should satisfy one of three conditions

- 4.9.1 In addition to the other two principles (described in sections 4.7 and 4.8), which would apply to all suppliers, it is proposed that *pivotal* suppliers be required to comply with one further principle in order to satisfy the safe harbour requirements.
- 4.9.2 This principle is based on the approach recommended by the WAG, which was that the *“price and quantity pairs in offers [for a pivotal supplier] are not materially different between adjacent trading periods, except where there is a bona fide physical factor that alters the gross pivotal supplier’s capability to generate electricity between those periods”*.
- 4.9.3 The WAG explained that this condition was *“designed to reduce the scope for suppliers to modify their offers markedly across adjacent trading periods, solely because they expect to be pivotal in one of the periods. Thus, a supplier that offered much of its capacity at (say) \$70/MWh when it was not pivotal, and at a much higher price in the subsequent period (when it expected to be pivotal) would not meet principle 3, unless there was a physical reason that explained the change in its capability to supply between the periods (e.g. a change in fuel cost)”*.
- 4.9.4 The Authority agrees with the WAG’s rationale but considers the proposed wording for Principle 3 could impact more widely than intended as it is framed in terms of material changes in “price and quantity pairs in offers”, irrespective of whether or not this has any effect on market prices. It would also deny safe harbour coverage to pivotal suppliers that have no incentive to raise prices because their retail or hedge sales exceed their generation volumes.

- 4.9.5 To address these concerns, the Authority proposes that a pivotal supplier would be in the safe harbour if it meets any one of the following (as well as meeting the conditions in sections 4.7 and 4.8):
- prices and quantities in its offers and reserve offers do not result in a material increase in prices at the node(s) where the supplier is pivotal, compared with the prices in the immediately preceding trading period or other comparable trading periods in which it was not pivotal (Branch a)
 - its offers and reserve offers when it was pivotal are consistent with its offers and reserve offers in comparable periods when it was not pivotal (Branch b)
 - it does not benefit financially in the trading period from an increase in the final price of electricity at the node(s) where it is pivotal (Branch c).
- 4.9.6 Branch a would mean that pivotal suppliers need not be constrained in making material changes to their offers, per se. It is only if their offer behaviour results in a material increase in prices (as compared with the most recent trading period when they were not pivotal) that they would be outside of the safe harbour and open to a challenge that they had not observed high standards of trading conduct. Whether or not an increase in prices is material would be up to an affected party to challenge and for the Authority's Compliance Committee, and ultimately the Rulings Panel, to decide.
- 4.9.7 Branch b would mean that, even if market prices did materially increase, a pivotal supplier would be in the safe harbour if its offers or reserve offers when it is pivotal were generally consistent with the offers it has made when it was not pivotal. This means a supplier that regularly offers 'last resort' plant at a high price would qualify for the safe harbour. Conversely, a supplier that changes its offer solely because it is pivotal would not qualify.
- 4.9.8 Branch c would mean that even if a pivotal supplier does not satisfy branches a and b, it could still be in the safe harbour if it could show it had no incentive to raise prices for the relevant nodes and trading period - i.e. it was not net pivotal.
- 4.9.9 The main rationale for branch c is to provide a more objective criterion than branches a and b. A pivotal supplier satisfying branch c need not be concerned about the interpretation of:
- (a) the phrases "material price increase" and "comparable trading period" in branch a
 - (b) the word "consistent" or the phrase "in comparable trading periods in which it was not pivotal" (which is very broad and not time-bound) in branch b.
- 4.9.10 The main concern with branch c is that it would require the pivotal supplier to disclose commercially confidential information to the Authority if it sought to rely on branch c to be in the safe harbour. However, pivotal suppliers with those concerns can choose to rely instead on branches a or b if they're comfortable with the interpretations of key words in those branches.

- 4.9.11 While the safe harbour criteria have been developed to provide guidance for participants, the Authority (and the WAG) consider it undesirable to fully prescribe the meaning of some terms, such as "material price increase".
- 4.9.12 The Authority holds this view because the proper interpretation of such terms can depend upon the context. For example, a 20% price increase could be material in some circumstances, but not others, such as if prices increase from \$1.00/MWh to \$1.20/MWh. It would require a very extensive definition to account for all of the factors that affect materiality. Furthermore, the Authority is concerned that providing a specific threshold in the Code for such terms could become a target for pivotal suppliers.
- 4.9.13 The absence of precise thresholds for some terms may encourage participants to err on the side of caution. In particular, they may be less inclined to make offers that result in materially higher prices unless they are confident that they are inside the safe harbour, or otherwise have a good explanation as to why their behaviour is consistent with a high standard of trading conduct. However, erring on the side of caution is arguably beneficial from the perspective of improving the confidence for consumers in the efficiency of prices, and ultimately also for investor confidence.
- 4.9.14 Finally, as with the WAG's proposed approach, the safe harbour criteria are not mandatory for suppliers. Behaviour that falls outside the safe harbour would not necessarily be a breach of the conduct provision. The supplier concerned may still be able to demonstrate that it is observing high standards of trading conduct.

Question 8 Do you agree that a pivotal supplier should be deemed to be in the safe harbour if its offers do not result in a material increase in prices? If not, what is your preferred alternative and reasoning?

Question 9 Do you agree that a pivotal supplier should be deemed to be in the safe harbour if its offers are generally consistent with offers it has made when it has not been pivotal? If not, what is your preferred alternative and reasoning?

Question 10 Do you agree that a pivotal supplier should be deemed to be in the safe harbour if it is not net pivotal (has no financial incentive to raise prices in the trading period)? If not, what is your preferred alternative and reasoning?

Question 11 Do you agree that some thresholds in the safe harbour provision should not be precisely defined? If not, what is your preferred alternative and reasoning?

4.10 Possible variation to Principle 3 of safe harbour

Treatment of 'local' and 'wider' pivotal supply situations

- 4.10.1 A possible variation to the proposed form of Principle 3 would be to distinguish between 'local' and 'wider' pivotal supplier events. This would differ from the approach proposed by the Authority in section 4.9 (and implicit in the corresponding WAG proposal), where the same provisions would apply to the offers of pivotal suppliers, irrespective of whether they are pivotal at a local, island or national level. Limiting the application of principle 3 by introducing a demand threshold would have a similar effect to, and consequently reduce the value of, branch C of the same principle.
- 4.10.2 Concerns to date have largely centred on local pivotal supplier situations that have arisen due to temporary transmission constraints. Indeed, aside from the South Island energy and IR market event noted in section 2.1, none of the recent pivotal supplier events of concern have been at the island or national level.
- 4.10.3 While the cost of compliance for suppliers to meet the conduct provisions is not expected to be high, there is more uncertainty to this presumption in relation to Principle 3 when its scope is extended beyond regional areas.
- 4.10.4 In light of this uncertainty, there could be merit in more narrowly defining Principle 3 of the safe harbour requirements. The most straightforward way to achieve this would be to incorporate a demand threshold to the region over which a supplier becomes pivotal. A supplier would automatically satisfy Principle 3 if the total demand in the region in which it was pivotal was over the threshold. Analysis indicates that a 500 MW threshold for energy demand would capture all of the situations of concern identified to date and listed in section 2.1 (apart from the South Island energy and IR market situation).
- 4.10.5 If a 500 MW threshold was adopted, it would effectively mean that all suppliers would need to meet Principle 1 (offer all available capacity) and Principle 2 (provide timely notice of offer intentions), but Principle 3 would only apply to pivotal suppliers that affect demand of 500 MW or less.
- 4.10.6 Again, whether or not a specific MW should apply to Principle 3 involves a degree of judgment about the relative benefits of broadening the coverage of pivotal supplier situations, versus the risk of unintended consequences. The Authority seeks submitter views on this specific issue.

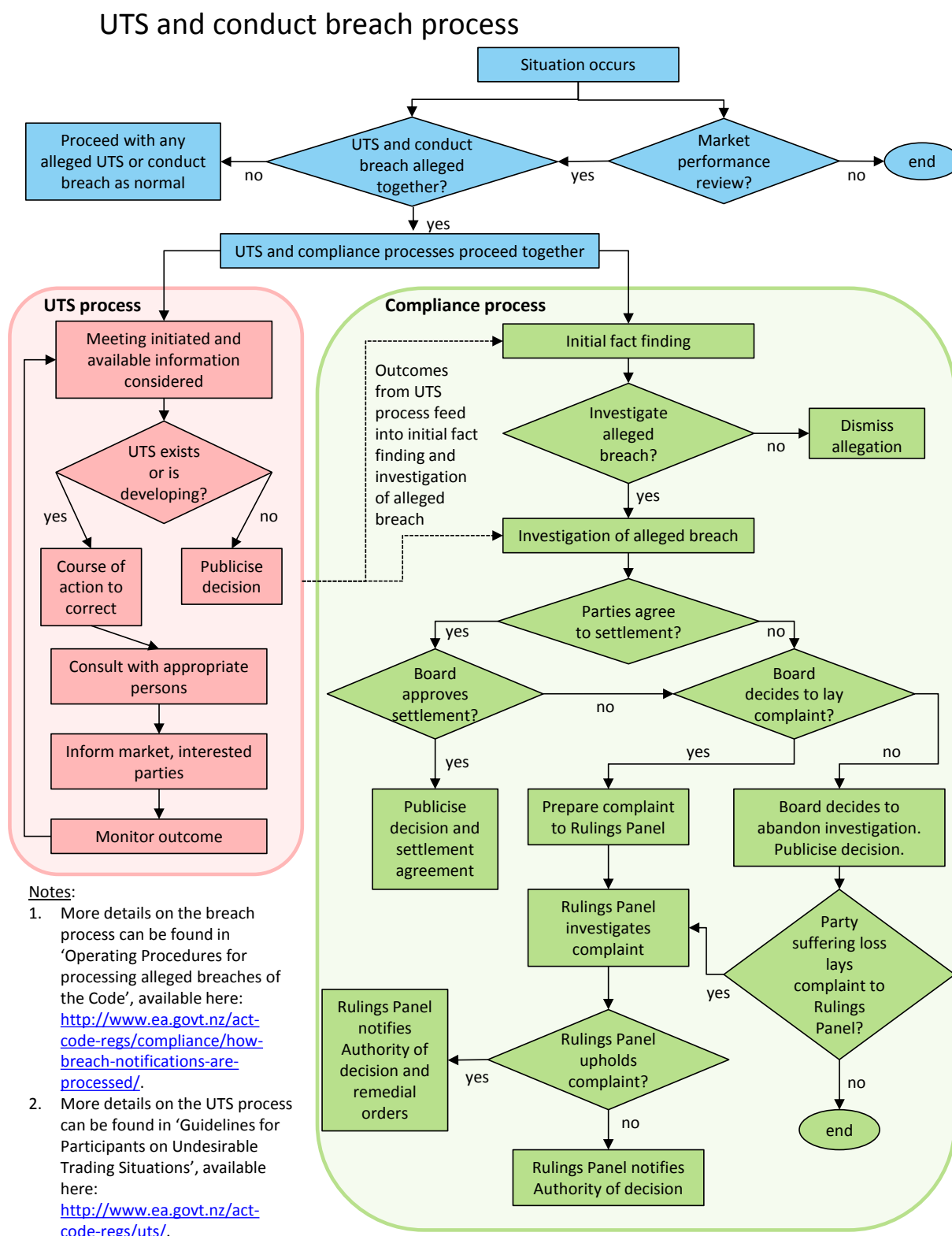
Question 12 Do you believe that the requirement to meet Principle 3 of the safe harbour should apply to any pivotal supplier, or only locally pivotal suppliers, and what is your reasoning?

4.11 Relationship between the conduct provision and UTS provisions

- 4.11.1 Some submitters on the WAG discussion paper asked how a conduct provision would interact with the existing undesirable trading situation (UTS) provisions in the Code. For example, Meridian queried whether confusion could arise as to how the provisions will interact. Similarly, Mighty River Power commented that a conduct provision should not compromise the UTS provisions as an effective backstop.
- 4.11.2 The Code states that an event or circumstance can only be a UTS if “in the reasonable opinion of the Authority, [it] cannot satisfactorily be resolved by any other mechanism available under this Code”.¹⁵ An alleged breach of the conduct provision would not be a mechanism available under the Code, because enforcement activities operate under the Electricity Industry Act 2010 and its subsidiary Enforcement Regulations 2010.
- 4.11.3 However, given the ramifications of declaring a UTS, participants could be incentivised to challenge the Authority’s ability to act. To remove any uncertainty and ensure the Authority can take timely action in respect of a UTS, the Authority proposes to amend the Code to make it clear that enforcing the conduct provision is not a “mechanism available under this Code” for the purposes of determining whether or not a UTS exists.
- 4.11.4 More generally, it would not be problematic if a single event or circumstance were to trigger parallel actions under the UTS and conduct provisions. Indeed, it is not uncommon for parties to allege a Code breach when seeking to invoke the UTS provisions, and such cases have been satisfactorily resolved to date.
- 4.11.5 The Code sets a relatively high bar for a UTS, since the situation must threaten, or may threaten, confidence in, or the integrity of, the wholesale market. This means the Authority would likely first determine whether a situation is a UTS, and if so, pursue that process to a conclusion.
- 4.11.6 Enforcement action under the conduct provision would commence in parallel under the Code compliance framework, whether or not the situation is found to be a UTS. Authority staff would investigate and make a recommendation to the Authority Board as to whether to refer the complaint to the Rulings Panel, approve a settlement among the affected parties, or abandon the investigation. An overview of the possible pathways is set out in Figure 2.

¹⁵ Part 1 of the Code, definition of UTS.

Figure 2: Interaction of UTS and conduct provision processes



Question 13 Do you agree that the Code amendment should make it clear that enforcement of the conduct provision is not a “mechanism available under this Code” for the purposes of determining whether a UTS exists? If not, what is your reasoning?

4.12 There is no need for annual compliance statements

4.12.1 The WAG discussion paper suggested that *“to reinforce the introduction of conduct provisions, participants could be required to provide an annual compliance statement to the Authority. This would require relevant participants’ Boards to certify that they were satisfied that the steps taken by the participant were likely to result in its employees being aware of the conduct provisions. ... Board oversight of conduct provisions can be an important factor in influencing compliance. For this reason, an annual compliance statement would require the signature of two directors, or a director and either the chief executive or chief financial officer (the same requirement as for stress testing).”*

4.12.2 Submitters had mixed views on the value of annual compliance statements, and after considering these views the WAG did not include a requirement for annual compliance statements in its recommended approach.

4.12.3 Based on present information, the Authority does not see any particular benefit in requiring participants to provide annual compliance statements.

Question 14 Do you agree that, if a conduct provision is added to the Code, then it should not require participants to provide annual compliance statements? If you do consider that annual compliance statements should be required, state your reasons.

5. Regulatory Statement for the proposed amendment

5.1 Objectives of the proposed amendment

- 5.1.1 The specific objective of the proposed amendment is to improve confidence in the efficiency of prices when competitive pressures are temporarily weakened in the electricity market, contributing to the competition limb of the Authority's statutory objective.
- 5.1.2 In order for an option to achieve the objective, the amendment should:
- (a) deter suppliers from raising their prices simply because they are temporarily pivotal in the spot market
 - (b) allow suppliers to charge prices needed to justify efficient investment in capacity
 - (c) not create undue compliance costs.

Question 15 Do you agree that the objective for the amendment set out in Section 5.1 is appropriate and consistent with the Authority's statutory objective? If not, why not?

5.2 The proposed amendment

- 5.2.1 The proposed amendment (included as Appendix A) requires generators making offers and ancillary service agents making reserve offers to observe high standards of trading conduct in the spot market.
- 5.2.2 The proposed amendment provides that a generator or ancillary service agent's behaviour will be deemed to be consistent with a high standard of trading conduct if it satisfies the following 'safe harbour' principles:
1. it offers all its available capacity (energy and reserve) that is able to operate in a trading period, and
 2. it gives as much notice of its intentions as possible when submitting, revising, or withdrawing energy or reserve offers, and
 3. when a generator or ancillary service agent is pivotal either:
 - a. prices and quantities in its offers or reserve offers do not result in a material increase in the prices at which electricity or reserve is supplied in the region where it is pivotal, compared with the prices in the immediately preceding trading period or other comparable trading periods in which it was not pivotal, or

- b. its offers or reserve offers when it is pivotal are generally consistent with its offers or reserve offers in other comparable trading periods in which it was not pivotal, or
- c. it does not benefit financially from an increase in the final price of electricity at the node(s) at which it is pivotal.

5.2.3 These principles define a safe harbour and are intended to provide certainty for participants and compliance with the principles is not mandatory. A supplier may be able to demonstrate that it has observed a high standard of trading conduct even if it acts in a manner inconsistent with one or more of the safe harbour principles.

5.2.4 If a breach of the conduct provision is alleged, the matter would be investigated by the Authority under the enforcement provisions of the Electricity Industry Act 2010 and subsidiary Electricity Industry (Enforcement) Regulations 2010 (Enforcement Regulations). If an alleged breach is not dismissed or settled in the investigation process, it would be referred to the Rulings Panel. If the Rulings Panel determines that a breach has occurred, it can take a number of actions which include:

- (a) issuing a warning or reprimand to the participant
- (b) ordering the participant to pay a penalty to the Crown of up to \$200,000
- (c) ordering the participant to pay compensation to another person
- (d) requiring the participant to take any action necessary to restore it to a position of compliance with the Code
- (e) recommending to the Authority that a change should be made to the Code or regulations.

5.3 The proposed amendment is expected to meet the objectives

Deter suppliers from significantly increasing their offer prices simply because they are temporarily pivotal

5.3.1 A pivotal supplier can respond to the temporary weakening of competitive pressures in the spot market by significantly increasing the prices at which it makes capacity available. This can in turn lead to efficiency losses due to a fall in confidence and retreat of trading activity in the wider market. For example, retail competition may suffer if retailers constrain their geographic coverage due to concerns about exposure to pivotal supplier risk.

5.3.2 To significantly increase the prices it receives when it is pivotal, a supplier would need to employ one or more of the following mechanisms:

- (a) physically withholding some capacity that is available causing other higher priced capacity to be dispatched and increasing market prices

- (b) failing to signal its offer intentions in a forthright and timely way, creating increased uncertainty for purchasers about possible spot price outcomes and incentivising them to buy their power at contracted price in advance to avoid paying a higher price on the day
- (c) offering tranches of capacity at higher prices in trading periods where it is pivotal, causing the market price to rise.

5.3.3 The proposed Code amendment requires suppliers to observe a high standard of trading conduct and defines a safe harbour for such conduct. If a supplier is pivotal and it undertook any of the actions in the previous paragraph it would not be in the safe harbour because:

- (a) physically withholding any capacity would breach Principle 1 of the safe harbour provisions
- (b) failing to signal its offer intentions in a timely way would breach Principle 2 of the safe harbour provisions
- (c) offering tranches of capacity at a higher price simply because it is pivotal would breach Principle 3 of the safe harbour provisions if it resulted in a material increase in the market price.

5.3.4 Furthermore, while compliance with the safe harbour provisions is not mandatory, a supplier is only likely to act outside these provisions if it is confident about its ability to demonstrate compliance with the obligation to observe a high standard of trading conduct.

5.3.5 In summary, for the reasons set out above, the proposed amendment is expected to deter pivotal suppliers from significantly increasing their offer prices *simply* because they are temporarily pivotal and they can profit from doing so.

Allow suppliers to charge the prices needed to justify efficient investment in capacity

5.3.6 The proposed Code amendment would not alter the right of suppliers to unilaterally determine their offer prices for energy or IR. For this reason, it is not expected to have any direct adverse effect on incentives to invest in or otherwise make capacity available (whether supply-side or demand response capacity).

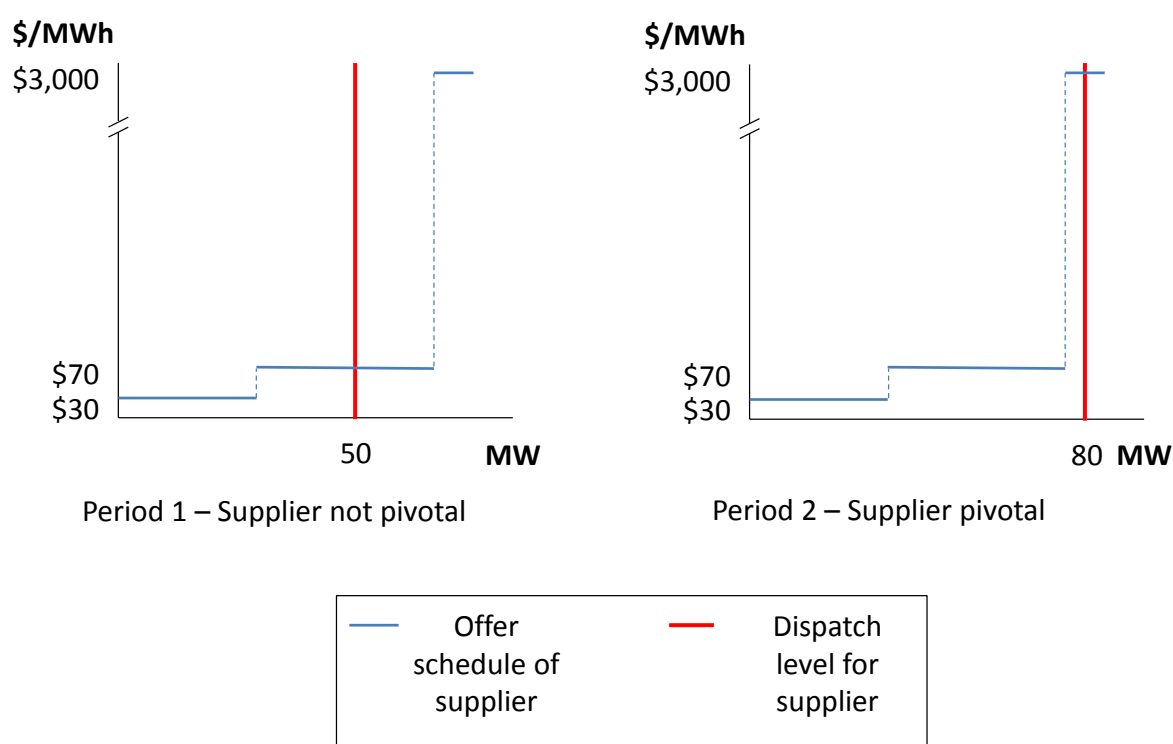
5.3.7 Nor is the proposed Code amendment expected to have any adverse indirect effect on incentives to provide capacity. Rather, the amendment recognises that in an energy-only market (such as operates in New Zealand), spot prices need to be able to reach high levels at times. For example, spot prices may need to reach high levels to pay for 'last resort' capacity needed to cover an extreme demand peak, or to make up for supply capacity that is suddenly lost with little or no notice.

5.3.8 Although one or more suppliers is likely to be pivotal in these situations (because the supply margin will be tight), the proposed Code amendment is not

expected to undermine suppliers' ability to offer 'last resort' capacity at high prices if required.

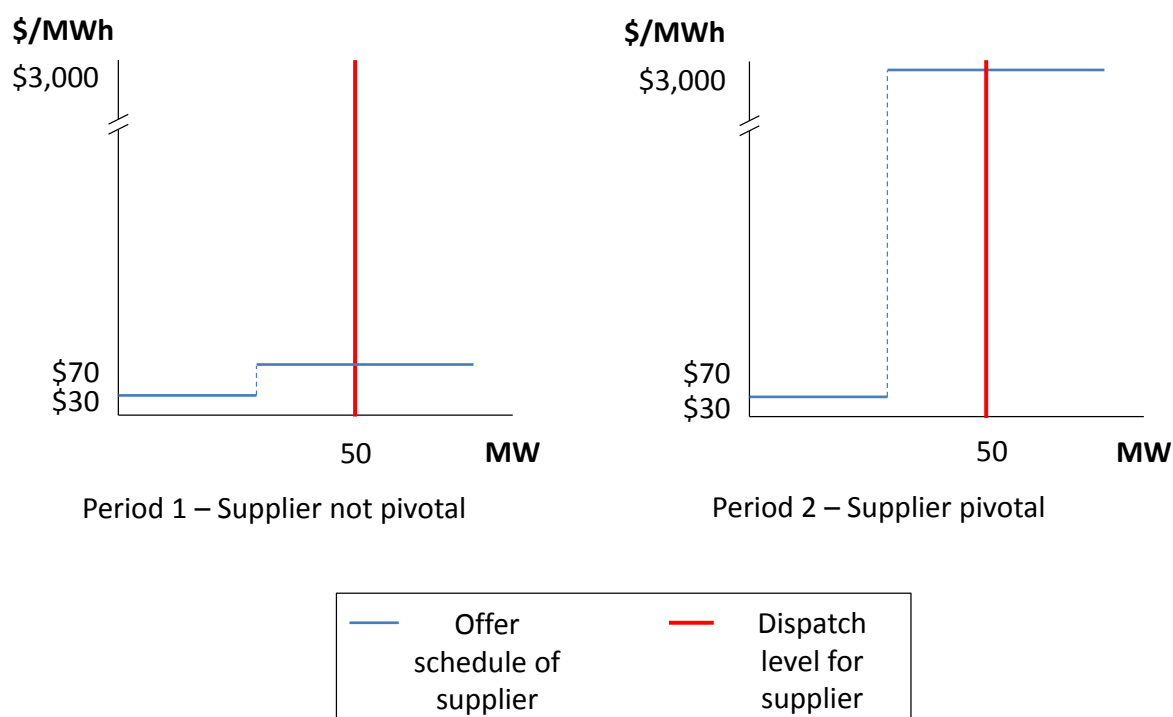
- 5.3.9 The reasoning for this is illustrated in Figure 3. The chart shows the offer curve and dispatch level for one supplier in two adjacent trading periods. In this example, there is a rise in demand between two adjacent trading periods which makes the supplier pivotal in the second period. The higher demand also triggers the need to dispatch a tranche of capacity which has been consistently offered at a higher price by the supplier. The illustrative example shows that the presence of higher prices associated with the offer of a pivotal supplier does not fall outside the safe harbour.

Figure 3: Supplier conduct meets safe harbour provisions



- 5.3.10 The supplier would fall outside the safe harbour only if it had used its pivotal supplier position to raise prices for financial benefit in the trading period. An example of this type of behaviour is shown in Figure 4.

Figure 4: Supplier conduct does not meet safe harbour provisions



5.3.11 In this instance, the supplier is not pivotal in period 1 (e.g. due to competition across a transmission circuit) but becomes pivotal in period 2 because the circuit is out of service. The supplier has increased the offer price for some of its capacity in the trading period when it is pivotal. This increase in its offer price results in an increase in the market price. Under the proposal, the supplier would be outside the safe harbour if it was unable demonstrate that it did not financially benefit because:

- (a) its offer has resulted in a material increase in the market price
- (b) its offer when pivotal is not generally consistent with the other trading period.

5.3.12 To further illustrate how Principle 3 of the safe harbour provision would operate, Table 2 describes a number of scenarios where 'last resort' capacity is required.

Table 2: Scenarios where last resort capacity is needed

Scenario	Potential approach for last resort provider	Consistent with Principle 3?
Unexpected loss of transmission circuit leads to need to call upon additional capacity from local last resort plant	Parties with last resort capacity can offer 'emergency' tranches at higher prices on a consistent basis expecting this higher cost capacity to be cleared only if the need arises. Changes are made in	Yes – offers when pivotal are consistent with other periods

	advance of such a need.	
Scheduled outage of HVDC link leads to need to run last resort plant in North Island	Parties with last resort plant can offer tranches at higher prices on a consistent basis expecting to be cleared if the need arises. Changes are made in advance of such a need.	Yes – offers when pivotal are consistent with other periods
Extreme dry year leads to need to run last resort plant	'Last resort provider' could maintain consistent offer structure (high price tranche would be cleared if the situation was sufficiently severe).	Yes – offers when pivotal are consistent with other periods

- 5.3.13 In summary, the proposed Code amendment is not expected to directly or indirectly undermine suppliers' ability to charge prices needed to justify efficient investment in capacity.

Avoid undue compliance costs

- 5.3.14 The inclusion of explicit safe harbour provisions in the Code amendment is expected to limit compliance costs by providing clear benchmarks for suppliers when conducting their trading activity in the spot market. The explicit safe harbour provisions should also reduce the likelihood of major compliance costs being incurred in the enforcement process from pursuing and defending alleged Code breaches.
- 5.3.15 In terms of the safe harbour provisions themselves, the Authority does not expect any material incremental cost to arise in relation to meeting Principle 1 (offer full available capacity) or Principle 2 (signal offer intentions in timely manner) as participants are thought to already operate in this way in most cases.
- 5.3.16 Likewise, it does not anticipate material compliance costs to arise in relation to Principle 3, although it acknowledges there is less certainty on this issue. There are three reasons why the Authority does not anticipate material compliance costs to arise:
- (a) Adherence to this Principle is only required for gross pivotal suppliers – this is a subset of the participants affected by the conduct provision, and it applies for a subset of trading periods.
 - (b) Suppliers that become gross pivotal at times are likely to be the larger participants that already have sophisticated trading systems. This means they likely have reasonable access to the tools and information needed to monitor and maintain compliance with Principle 3.

- (c) The safe harbour criteria are fairly broadly defined and should allow suppliers with the flexibility to optimise their operations and eliminate any instances where they might have otherwise sought to exploit temporary pivotal supplier situations.

5.3.17 For these reasons, the Authority does not expect the proposed Code amendment to create significant compliance costs.

Question 16 Do you agree that the proposed amendment would achieve the objectives set out in Section 5.1? If not, why not?

5.4 The benefits of the proposed amendment are expected to outweigh the costs

5.4.1 The Authority has assessed the expected benefits and costs associated with the proposed Code amendment.

Nature and size of expected benefits

5.4.2 The key benefit of the proposed Code amendment is that it reduces the scope and likelihood of efficiency losses that could otherwise arise from pivotal supplier situations.

5.4.3 The WAG discussion paper contained estimates of the size of these potential efficiency losses. The detailed methodology and assumptions used to compile the estimates is set out in Appendix B of the WAG discussion paper.¹⁶

5.4.4 In broad terms, the efficiency loss estimates were based on:

- (a) Assessing the scope (load affected and frequency) for pivotal supplier situations to arise based on historic and forecast system data.
- (b) Considering a range of scenarios for how suppliers could behave when they are pivotal. The scenarios were based on historic data but also considered sensitivity cases given that behaviour can change swiftly, and because other participants face uncertainty as to how suppliers might behave.
- (c) Identifying the likely responses that participants would make where they face a risk of a pivotal supplier significantly increasing its offer price. For example participants might alter their load, invest in back-up generation, or reduce their retail service coverage.
- (d) Assessing the size of efficiency loss that could arise for each of the responses in (c) based on the information and assumptions in (a) and (b).

¹⁶ See www.ea.govt.nz/our-work/consultations/advisory-group/pivotal-supplier-situations/

- (e) Comparing the resulting estimates to other data as a cross-check for reasonableness.

5.4.5 It is important to emphasise that the WAG analysis considered *potential* efficiency losses. The WAG paper noted that no specific efficiency losses from recent pivotal supplier events had been identified, but added this was not surprising given the limited timeframe for such effects to emerge and the difficulty in measuring them.

5.4.6 The WAG paper also noted that:

“offer prices in some recent local pivotal supplier situations have been much higher than in the past, and it is not clear whether the upward movement will continue, recede, or stabilise. Because offer behaviour can change rapidly history may not provide a reliable guide to the future”

“this analysis indicates credible potential for material efficiency losses to arise from pivotal supplier situations in some scenarios – particularly in relation to dynamic efficiency effects”.

5.4.7 The Authority has reviewed the WAG’s analysis and is satisfied its findings are a reasonable estimate of the potential benefits. Therefore, the Authority considers that the proposed amendment has the potential economic benefits set out in Table 3.

Table 3: Potential economic benefits

Source of benefit	Nature of benefit	Potential scale of benefit
Reducing the exercise of market power in <i>locally</i> pivotal supplier situations	Productive efficiency – removing the incentive for purchasers to use less efficient generation, network or demand-side response options to manage their exposure to pivotal supplier situations	The WAG estimated the potential productive inefficiency arising from locally pivotal supplier situations to be \$1-24M PV. The Authority has reviewed this estimate and considers it to be reasonable. The proposed amendment should be able to largely prevent such an efficiency loss.
	Allocative efficiency – avoiding price distortions associated with pivotal supplier situations	The WAG estimated the potential allocative inefficiency associated with locally pivotal supplier situations to be less than \$1M PV. The Authority has reviewed this estimate and considers it is reasonable.
	Dynamic efficiency – supporting innovation and efficient investment, by promoting competition and lessening the perception of wholesale market price risk	The WAG considered the dynamic inefficiency associated with locally pivotal supplier situations was likely to be relatively small. The Authority has reviewed this estimate and considers it is reasonable in relation to first round impacts. However, it considers that participants are likely to view the response to localised pivotal supplier situations as a 'litmus test' for the wider market. The dynamic efficiency effects could therefore be significantly greater when indirect effects are taken into account.

Source of benefit	Nature of benefit	Potential scale of benefit
Reducing the exercise of market power in <i>widespread</i> pivotal supplier situations	Productive efficiency – remove the incentive for purchasers to use generation, network or demand-side response options to manage their exposure to pivotal supplier situations	The WAG estimated that if inefficiently high prices became common in widespread pivotal supplier situations, this could give rise to <i>productive</i> efficiency losses of \$10-90M PV. The proposed amendment should be able to largely prevent such an efficiency loss.
	Allocative efficiency – avoid price distortions associated with pivotal supplier situations	The WAG estimated that if inefficiently high prices became common in widespread pivotal supplier situations, this could give rise to <i>allocative</i> efficiency losses of \$1-7M PV. The proposed amendment should be able to largely prevent such an efficiency loss.
	Dynamic efficiency – support innovation and efficient investment, by promoting competition and lessening the perception of wholesale market price risk	The WAG estimated that if inefficiently high prices became common in widespread pivotal supplier situations, this could give rise to <i>dynamic</i> efficiency losses of \$60-120M PV. The proposed amendment should be able to largely prevent such an efficiency loss.

5.4.8 In summary, the Authority considers that the Code amendment would reduce the scope and likelihood of efficiency losses that could otherwise arise from pivotal supplier situations. These efficiency losses are estimated at being up to \$140 million.¹⁷

¹⁷ This figure has been derived by adding the mid-points of the estimates for efficiency losses for the wider pivotal supplier situations, and rounding these results to the nearest \$10 million. The avoided efficiency losses from the local pivotal supplier events are assumed to be included in the estimates for wider events.

Nature and size of expected costs

5.4.9 The Authority has considered several categories of direct costs that might be incurred as a result of the proposed amendment. These are set out in Table 4.

Table 4: Direct costs that could be incurred as a result of the proposed amendment

Category	Expected incremental cost (\$M PV over ten years)	Rationale
Systems development costs	Nil	The amendment should not require market participants, the Authority or its service providers to change their software systems materially.
Staffing costs incurred by the Authority in the process of monitoring compliance with the conduct provision	Nil	The Authority already monitors generator behaviour and the proposal is not expected to materially affect the resources it needs to do so.
Staffing costs incurred by participants in their trading and risk management functions	Nil	Costs are not expected to change materially for the reasons set out in paragraphs 5.3.14 to 5.3.17.
Costs incurred by the Authority and participants in the process of pursuing alleged breaches of the conduct provision	0.2	Based on the assumptions that: • there is nil incremental cost for cases handled through the normal settlement process • the average incremental cost per case going before the Rulings Panel is \$40K for the Authority (based on previous experience) and the same for participants (by assumption) • breaches of the conduct provision go before the Rulings Panel at a rate of one per three years.¹⁸

¹⁸ For reference, the Rulings Panel has considered cases at a rate of slightly less than one per year, to date.

- 5.4.10 The Authority has also considered whether the proposed Code amendment could give rise to economic inefficiencies, such as weakening incentives for efficient investment in capacity. For the reasons set out in paragraphs 5.3.6 to 5.3.11, the Authority does not consider that the proposed amendment will constrain efficient market behaviour.
- 5.4.11 In summary, the economic costs associated with the proposed Code amendment are expected to be close to nil.

Net impact of expected benefits and costs

- 5.4.12 The key expected benefit of the Code amendment is that it would reduce the scope and likelihood of efficiency losses that could otherwise arise from pivotal supplier situations. At the low end of the spectrum, these benefits could be very small or even nil. On the other hand, the benefits could credibly be up to \$140 million depending on the behaviour of pivotal suppliers and likely responses by participants.
- 5.4.13 The cost impact of the proposed Code is more certain, and is expected to be very modest (less than \$1 million).
- 5.4.14 While the size of the benefit is uncertain, the proposed Code amendment appears desirable because:
- (a) the estimated benefit range is much higher than the expected costs – so that on an expected value basis, there is a higher likelihood of net benefits than net costs
 - (b) the expected gross cost is small, so that even in a worst case scenario where there is no gross benefit, there would be relatively little net cost.

Question 17 Do you agree with the assessment of benefits and costs, and net benefits? If not, what is your reasoning.

5.5 The Authority has identified other options for addressing the objectives, but considers the proposed amendment is preferable

- 5.5.1 The Authority considered factors that might restrain trading behaviour in pivotal supplier situations. Appendix C lists existing arrangements and planned initiatives by the Authority and examines the degree to which they might reduce the inefficiency arising from pivotal supplier situations. They include:
- (a) gate closure provisions

- (b) the maximum price at which offers can currently be submitted in the spot market
- (c) UTS provisions
- (d) the Commerce Act
- (e) FTRs
- (f) demand-side response
- (g) proposed changes to the outage planning process.

5.5.2 The Authority's conclusion is that these arrangements and initiatives are complementary to, rather than substitutes for, a conduct provision and do not provide sufficient confidence to consumers about the efficiency of pricing in pivotal supplier situations. It does not believe any of the other measures will achieve the Authority's objective.

5.5.3 The Authority has also considered other forms of a conduct provision. Section 4 sets out the Authority's reasons for preferring the proposed amendment over alternative forms of conduct provision.

5.5.4 The Authority also considered other options for addressing the objectives (such as temporary offer caps). Appendix D sets out the Authority's reasons for preferring a conduct provision over the other options considered.

Question 18 Do you agree that the proposed amendment is preferable to other options? If not, please explain your preferred option in terms consistent with the Authority's statutory objective.

5.6 The proposed amendment complies with section 32(1) of the Act

5.6.1 Table 5 demonstrates how the proposal complies with section 32(1) of the Act.

Table 5: How the proposal complies with section 32(1) of the Act

Requirement	Comment
The proposed amendment is consistent with the Authority's objective under section 15 of the Act, which is to promote competition in, reliable supply by, and the efficient operation of, the electricity industry for the long-term benefit of consumers.	The proposed amendment is expected to: • promote competition in the wholesale spot and retail electricity markets • support productive, allocative and dynamic efficiency • not undermine incentives for efficient investment in capacity.
The proposed amendment is necessary or desirable to promote any or all of the following:	
(a) competition in the electricity industry;	The proposed amendment is expected to improve confidence in the efficiency of prices in pivotal supplier situations, and hence: • encourage retailers to compete in areas where local pivotal supplier situations are not uncommon • encourage new retailers to enter the retail market • encourage consumers to participate in the spot market, or to purchase power at a price linked to the spot price where it is efficient to do so.
(b) the reliable supply of electricity to consumers;	The proposed amendment is not expected to undermine reliable supply of electricity to consumers.

(c) the efficient operation of the electricity industry;	The proposed amendment is expected to: • reduce the risk of inefficiently high prices, which can cause productive and allocative efficiency losses, during pivotal supplier situations • support dynamic efficiency by supporting competition in the retail and wholesale markets • support dynamic efficiency by reducing the perception of risk in the wholesale market.
(d) the performance by the Authority of its functions;	The proposed amendment will not materially affect the performance of the Authority.
(e) any other matter specifically referred to in this Act as a matter for inclusion in the Code.	The proposed amendment will not materially affect any other matter specifically referred to in the Act for inclusion in the Code.

Question 19 Do you agree that the Authority's proposed amendment complies with section 32(1) of the Act?

5.7 The Authority has given regard to the Code amendment principles

5.7.1 When considering amendments to the Code, the Authority is required by its Consultation Charter¹⁹ to have regard to the Code amendment principles, to the extent that the Authority considers that they are applicable. Table 6 describes the Authority's consideration of the Code amendment principles in the preparation of the proposal.

Table 6: Regard for Code amendment principles

Principle	Comment
1. Lawful	The proposal is lawful, and is consistent with the statutory objective and with the empowering

¹⁹ The Consultation Charter is one of the Authority's foundation documents and is available at <http://www.ea.govt.nz/about-us/documents-publications/foundation-documents/>.

	provisions of the Act.
2. Provides clearly identified efficiency gains or addresses market or regulatory failure	The expected efficiency gains are set out in the evaluation of the costs and benefits (Section 5.4). The proposal addresses a market failure – that is, the lack of effective competition in pivotal supplier situations.
3. Net benefits are quantified	The Authority expects that the proposal would provide a net economic benefit (Section 5.4).

Question 20 Do you agree that the Authority's proposed amendment complies with the Code amendment principles?

Glossary of abbreviations and terms

Act	Electricity Industry Act 2010
Authority	Electricity Authority
Code	Electricity Industry Participation Code 2010
FTR	Financial transmission rights
HVAC	High Voltage Alternating Current
HVDC	High Voltage Direct Current – refers to transmission line between the North and South Islands
IR	Instantaneous reserve
NZAS	New Zealand Aluminium Smelter at Tiwai Point
Offers	Energy offers – defined in part 1 of the Code
Pivotal	A supplier is pivotal in a market if, without the supplier's production, the market can only partially clear (i.e. some demand is unmet)
Pivotal supplier situation	A situation (trading periods and region) in which a supplier is pivotal
Reserve offers	IR offers – defined in part 1 of the Code
PRS	Price-responsive schedule
PV	Present value
UTS	Undesirable Trading Situation
WAG	The Wholesale Advisory Group

Appendix A Proposed amendment

Proposed conduct provision for generators – revised drafting

Insert in Part 1:

pivotal means—

- (a) in relation to a **generator**, that the total **demand** in a **trading period** at any 1 or more **nodes** would not have been met if the **generator** had not submitted **offers** for all or any of its **generating plant**; and
- (b) in relation to an **ancillary service agent**, that the total **demand** in a **trading period** for an **ancillary service** supplied by the **ancillary service agent** in an **island** would not have been met if the **ancillary service agent** had not submitted **reserve offers** for all or any of its capacity to provide **instantaneous reserve** in the **island**

Amend in Part 1:

undesirable trading situation means any situation—

- (a) that threatens, or may threaten, confidence in, or the integrity of, the **wholesale market**; and
- (b) that, in the reasonable opinion of the **Authority**, cannot satisfactorily be resolved by any other mechanism available under this Code (but for the purposes of this paragraph a proceeding for a breach of clause 13.5A is not to be regarded as another mechanism for satisfactory resolution of a situation)

Insert after clause 13.5:

13.5A Conduct in relation to generators' offers and ancillary service agents' reserve offers

- (1) Each **generator** and **ancillary service agent** must ensure that its conduct in relation to **offers** and **reserve offers** is consistent with a high standard of trading conduct.
- (2) Subclause (1) applies when—
 - (a) a **generator** submits, revises, or cancels an **offer**; or
 - (b) an **ancillary service agent** submits, revises, or cancels a **reserve offer**.

13.5B Safe harbours for clause 13.5A

- (1) A **generator** complies with clause 13.5A if—
 - (a) the **generator** makes **offers** in respect of all of its generating capacity that is able to operate in a **trading period**; and
 - (b) the **generator** gives as much notice of its intention to submit, revise, or cancel an **offer** as it is able to give; and
 - (c) in the case of a **generator** that is **pivotal**,—
 - (i) prices and quantities in the **generator's offers** do not result in a material increase in the **final price** at which **electricity** is supplied in a **trading period** at any **node** at which the **generator** is **pivotal**, compared with the **final price** at the **node** in an immediately preceding **trading period** or other comparable trading period in which the **generator** is not **pivotal** at that **node**; or
 - (ii) the **generator's offers** are generally consistent with **offers** it has made when it has not been **pivotal**; or

- (iii) the **generator** does not benefit financially from an increase in the **final price** at which **electricity** is supplied in a **trading period** at a **node** at which the **generator** is **pivotal**.
- (2) A **generator** does not breach clause 13.5A only because the **generator** does not comply with subclause (1) of this clause.
- (3) An **ancillary service agent** complies with clause 13.5A if—
 - (a) the **ancillary service agent** makes **reserve offers** in respect of all of its capacity to provide **instantaneous reserve** that is able to operate in a **trading period**; and
 - (b) the **ancillary service agent** gives as much notice of its intention to submit, revise, or cancel a **reserve offer** as it is able to give; and
 - (c) in the case of an **ancillary service agent** that is **pivotal**—
 - (i) prices and quantities in the **ancillary service agent's reserve offers** do not result in a material increase in the **final reserve price** in a **trading period** in an **island** in which the **ancillary service agent** is **pivotal**, compared with the **final reserve price** in the **island** in an immediately preceding **trading period** or other comparable trading period in which the **ancillary service agent** is not **pivotal**; or
 - (ii) the **ancillary service agent's reserve offers** are generally consistent with **reserve offers** it has made when it has not been **pivotal**; or
 - (iii) the **ancillary service agent** does not benefit financially from an increase in the **final reserve price** in a **trading period** in an **island** in which the **ancillary service agent** is **pivotal**.
- (4) An **ancillary service agent** does not breach clause 13.5A only because the **ancillary service agent** does not comply with subclause (3) of this clause.

Question 21 Do you have any comments on the drafting of the proposed amendment?

...

Appendix B **Format for submissions**

Submitter	
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Question	Comment

Appendix C Existing arrangements, and planned initiatives, are insufficient to address pivotal supplier situations

- C.1.1 Pricing in pivotal supplier situations may be addressed in part by arrangements that limit:
- (a) a pivotal supplier's *ability* to raise the price
 - (b) a pivotal supplier's *incentive* to raise the price
 - (c) the frequency and extent of pivotal supplier situations.
- C.1.2 There are a range of existing arrangements, and planned initiatives, that fall into each of these categories. However, as will be shown, none are sufficient to prevent the efficiency losses that can arise as a result of pivotal supplier situations.
- C.2 **Gate closure provisions may limit a pivotal supplier's ability to raise the price**
- C.2.1 Under gate closure provisions in the Code, a generator may revise or cancel any of its offers for any trading period up to two hours before the beginning of the relevant trading period.²⁰ A generator may only cancel or revise an offer within two hours of the start of the relevant trading period (or within 30 minutes in the case of an embedded generator) if there is a bona fide physical reason.²¹
- C.2.2 These provisions prevent a pivotal supplier from changing its offers immediately prior to real time – but the pivotal supplier can still set the price through offers submitted prior to the gate closure period.
- C.3 **The caps on energy and IR offers limit a pivotal supplier's ability to raise the price**
- C.3.1 Unlike other wholesale electricity markets, generators in New Zealand's wholesale electricity spot market are relatively free to price their energy and IR offers. The only price limits are provided by violation parameters that ensure the solver used to clear the market can always find a solution (if these were not included the solver could iterate without end). The lowest priced violation penalty is \$100,000/MWh.
- C.4 **Undesirable trading situation provisions may limit a pivotal supplier's incentive to raise the price**
- C.4.1 Undesirable trading situation (UTS) provisions in the Code may limit a pivotal supplier's incentive to raise the price.

²⁰ Clauses 13.17(1)(a) and 13.17(1)(b) of the Code.

²¹ An offer may also be cancelled or revised within two hours if the system operator has issued a formal notice under clause 5 of the Technical Code B of Schedule 8.3 or the generator is an intermittent generator submitting revised offers under clause 13.17. See clause 13.19(1) of the Code.

- C.4.2 A UTS is an extraordinary event in the market place that provides the Authority with wide powers to correct any particular situation permanently, or, when appropriate, temporarily until a new provision is put in place to rectify the problem.²²
- C.4.3 A UTS is defined as follows in Part 1 of the Code:
- (a) **undesirable trading situation** means any situation—
 - (i) that threatens, or may threaten, confidence in, or the integrity of, the **wholesale market**; and
 - (ii) that, in the reasonable opinion of the **Authority**, cannot satisfactorily be resolved by any other mechanism available under the Code.
- C.4.4 Clause 5.1(2) of the Code lists examples of what the Authority may consider to constitute a UTS. These examples are:
- (a) manipulative or attempted manipulative trading activity
 - (b) conduct in relation to trading that is misleading or deceptive, or is likely to mislead or deceive
 - (c) unwarranted speculation or an undesirable practice
 - (d) material breach of any law
 - (e) a situation that threatens orderly trading or proper settlement
 - (f) any exceptional or unforeseen circumstance that is contrary to the public interest.
- C.4.5 However, these examples are not an exhaustive list and the examples listed do not constitute a UTS unless the example falls within the definition of a UTS (see paragraph C.4.3).
- C.4.6 The Authority has demonstrated its willingness to declare a UTS and correct prices when:
- (a) a generator's offers set the price to a high level in a region, and parties exposed to the spot price in that region had good reason to believe that the high offer prices would not translate into high market prices, until it was too late for them to take action
 - (b) the resulting high interim prices, if they were allowed to become final prices, would threaten to undermine confidence in, and damage the integrity and reputation of, the electricity spot market.²³

²² Paragraph 1, *Guidelines for Participants on Undesirable Trading Situations*, <http://www.ea.govt.nz/act-code-regs/uts/>

²³ <http://www.ea.govt.nz/dmsdocument/10844>

C.4.7 However, there have been other situations where a pivotal supplier has driven the price to a high level but the criteria for declaring a UTS have not been met.

C.5 The Commerce Act is unlikely to limit a pivotal supplier's incentive to raise the price

C.5.1 The Commerce Act contains a number of provisions to promote competition, and might therefore be expected to affect a pivotal supplier's incentives.

C.5.2 However, the Commerce Act is unlikely to apply to a pivotal supplier situation unless it involves the coordinated action of two or more parties, or a pivotal supplier is acting with a clear anti-competitive purpose beyond simply raising prices. For these reasons, the Commerce Act is unlikely to be effective in addressing most pivotal supplier situations.²⁴

C.6 Financial transmission rights may limit a pivotal supplier's incentive to raise the price

C.6.1 Interactions between financial transmission right (FTR) holdings and pivotal supplier situations are discussed in the Authority's consultation paper "Within-island basis risk: proposed approach".²⁵

C.6.2 FTRs can be used to mitigate the consequences of pivotal supplier situations. A purchaser in a constrained region may be able to acquire FTRs into that region, which would reduce its exposure to any increases in the local energy price.

C.6.3 FTR holdings can also affect the incentives on a pivotal supplier:

- (a) a supplier that expects to be locally pivotal in a region can acquire FTRs out of that region, and then has less incentive (all else being equal) to raise the energy price
- (b) on the other hand, a supplier that expects to be locally pivotal can also acquire FTRs into the constrained region, and then has more incentive (all else being equal) to raise the energy price. This practice can be thought of as "doubling up" and could be expected to attract the attention of the Authority's market monitoring function.

C.6.4 Overall, FTRs may not prevent, and may in some cases exacerbate, efficiency losses arising from localised market power.

C.7 Increased demand-side response may help to reduce the frequency of pivotal supplier situations

C.7.1 The introduction of dispatchable demand²⁶ may help to reduce the frequency of pivotal supplier situations. Each 1 MW of dispatchable demand that is

²⁴ See Appendix C of the WAG discussion paper

²⁵ <http://www.ea.govt.nz/our-work/consultations/priority-projects/within-island-basis-risk/>

²⁶ <http://www.ea.govt.nz/our-work/programmes/priority-projects/dispatchable-demand/>

offered in a potentially pivotal region will reduce the pivotal quantity by 1 MW.²⁷ In some cases this may be sufficient to render one or more suppliers no longer pivotal.

- C.7.2 The Authority also seeks to facilitate demand-side response through improving the alignment between forecast and settlement prices.²⁸ This initiative has the potential to:
- (a) make pivotal supplier situations less frequent, again by reducing the pivotal quantity
 - (b) mitigate the consequences of pivotal supplier situations, by providing advance notice of high prices and allowing consumers with discretionary load to decide whether or not they wish to consume at that price.
- C.7.3 Despite these initiatives, it is likely that pivotal supplier situations will still occur – and not all consumers will be equipped to manage the resulting price risks through participation in the wholesale market.
- C.8 The outage planning process may help to reduce the frequency of pivotal supplier situations**
- C.8.1 Most local pivotal supplier situations arise because of planned transmission outages.
- C.8.2 When planning an outage, Transpower may be required to apply a net benefit test (NBT). In practice, the NBT is carried out if an interested participant notifies Transpower that it believes the proposed outage may not meet the net benefit principle. If the NBT is negative then Transpower does not include the proposed outage in its outage plan.
- C.8.3 The Code was recently amended (16 December 2013) to require Transpower to consider competition effects in its NBT (see clause 12.43(b)(iv)(J)).²⁹
- C.8.4 The inclusion of competition benefits in Transpower's NBT may help to reduce the frequency of pivotal supplier situations. However, there will still be the potential for locally pivotal supplier situations to occur:
- (a) as a result of planned outages, where consideration of competition benefits does not cause the outage to fail the NBT
 - (b) as a result of unplanned outages
 - (c) as a result of normal constraints, in the absence of any transmission outages.

²⁷ The pivotal quantity is the minimum amount of capacity which the pivotal supplier must offer into the relevant market, in order for that market to clear.

²⁸ See e.g. <http://www.ea.govt.nz/our-work/consultations/advisory-group/wag-aligning-forecast-and-final-prices/>

²⁹ As part of the Electricity Industry Participation (Urgent Temporary Grid Reconfiguration) Code Amendment 2013 (<http://www.ea.govt.nz/dmsdocument/15997>)

Appendix D Evaluation of the conduct provision against alternative options

D.1.1 Table 7 evaluates the conduct provision against various alternative options considered, using the objectives set out in section 5.1.

D.1.2 The Authority concludes that the conduct provision is preferable to the other options considered.

Table 7: Evaluation of the conduct provision against alternative options

Option	Deter suppliers from significantly increasing their offer prices simply because they are temporarily pivotal in the spot market	Allow suppliers to charge the prices needed to justify efficient investment in capacity	Not create undue compliance costs
Conduct provision (see Section 5.3 for the rationale for the Authority's evaluation of this option).	✓✓ The proposed amendment would largely prevent generators from increasing spot prices to an inefficiently high level in pivotal supplier situations.	✓✓ The proposed amendment would allow investors to fund efficient investment in capacity.	✓✓ The proposed amendment would not create significant costs.
Provide advance information about when a generator is expected to be net pivotal, and require net pivotal generators to 'lock down' their offers well in advance.	✓ Under this option, a pivotal supplier would still be able to set the price to a high level simply because it is pivotal (providing it did so well in advance).	✓✓	✓ Under this option, a net pivotal supplier may not be able to change its offers at a late stage, even if it had a bona fide reason for doing so.

Option	Deter suppliers from significantly increasing their offer prices simply because they are temporarily pivotal in the spot market	Allow suppliers to charge the prices needed to justify efficient investment in capacity	Not create undue compliance costs
Make the grid owner accountable for increased spot market costs during outages.	✓ This option might be effective with regard to pivotal supplier situations resulting from transmission outages – but not all pivotal supplier situations come about in this way.	✓✓	x Likely to require significant change to current transmission arrangements – especially to establish appropriate incentives for grid owner.
Introduce a general cap on offers or prices.	? The effectiveness of this option would depend on the level of the cap – and could also act as target for pivotal suppliers.	X If the cap was set to a level that prevented material efficiency losses in pivotal supplier situations, then it would probably also dampen efficient investment.	? Costs are unclear.
Apply a temporary cap on pivotal supplier offer prices.	✓ The effectiveness would depend upon the design – and could work in principle.	✓ The extent to which this option would prevent a return on efficient investment would depend on the conditions under which the cap applied and the level of the cap.	X Likely to involve a high degree of prescription for it to be effective.

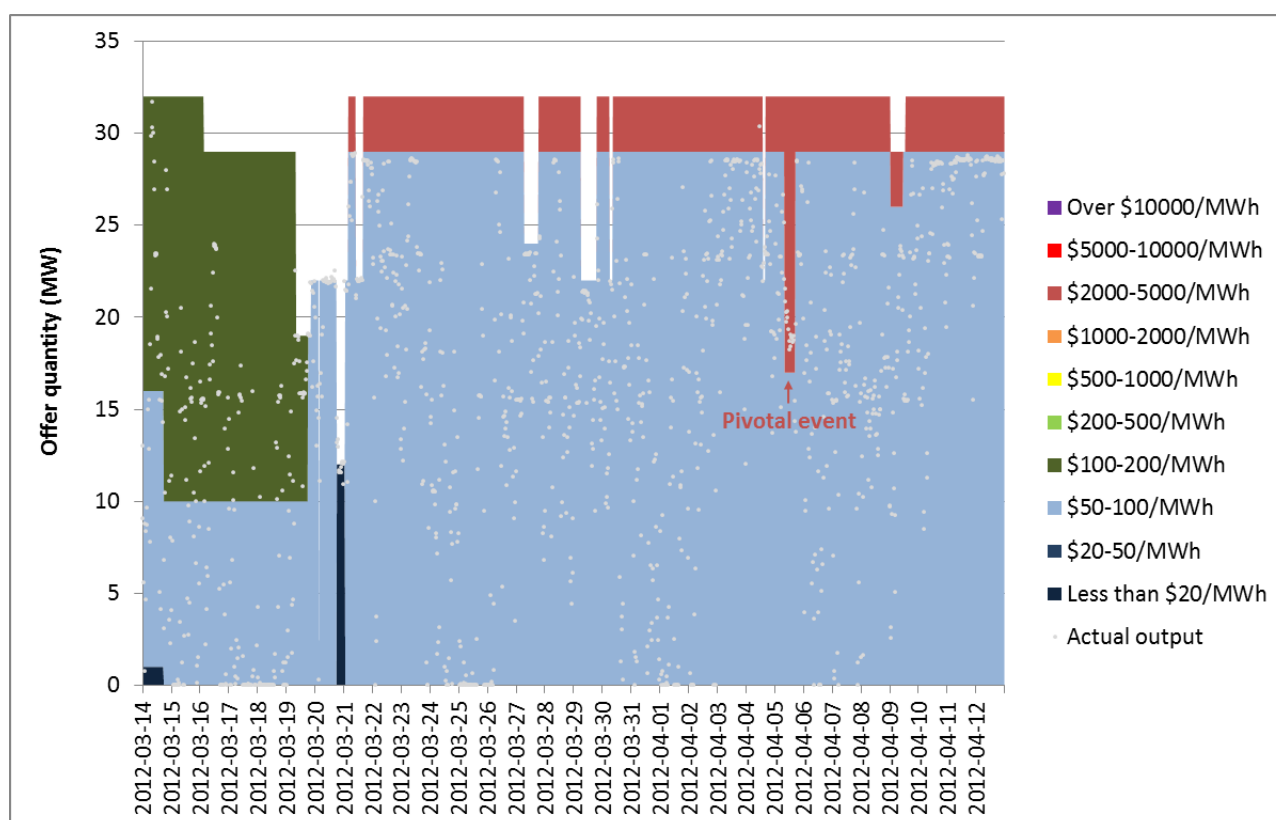
Option	Deter suppliers from significantly increasing their offer prices simply because they are temporarily pivotal in the spot market	Allow suppliers to charge the prices needed to justify efficient investment in capacity	Not create undue compliance costs
Requiring suppliers that are expected to be pivotal to offer contracts to affected parties.	X Under this option, pivotal suppliers would still be able to benefit by exercising market power – the benefit would simply shift from the spot market to the contract market.	✓✓	✓✓

Appendix E Application of the conduct provision to previous pivotal supplier situations

- E.1.1 This Appendix considers how the conduct provision might have applied to previous pivotal supplier situations, if it had been in effect at the time.
- E.1.2 The offer behaviour in these situations would not be consistent with the third “safe harbour principle” (Figure 5, Figure 6, Figure 7) unless the suppliers could demonstrate they did not benefit financially.

Figure 5: Offer behaviour observed on 5 April 2012 which was not consistent with the third “safe harbour principle”

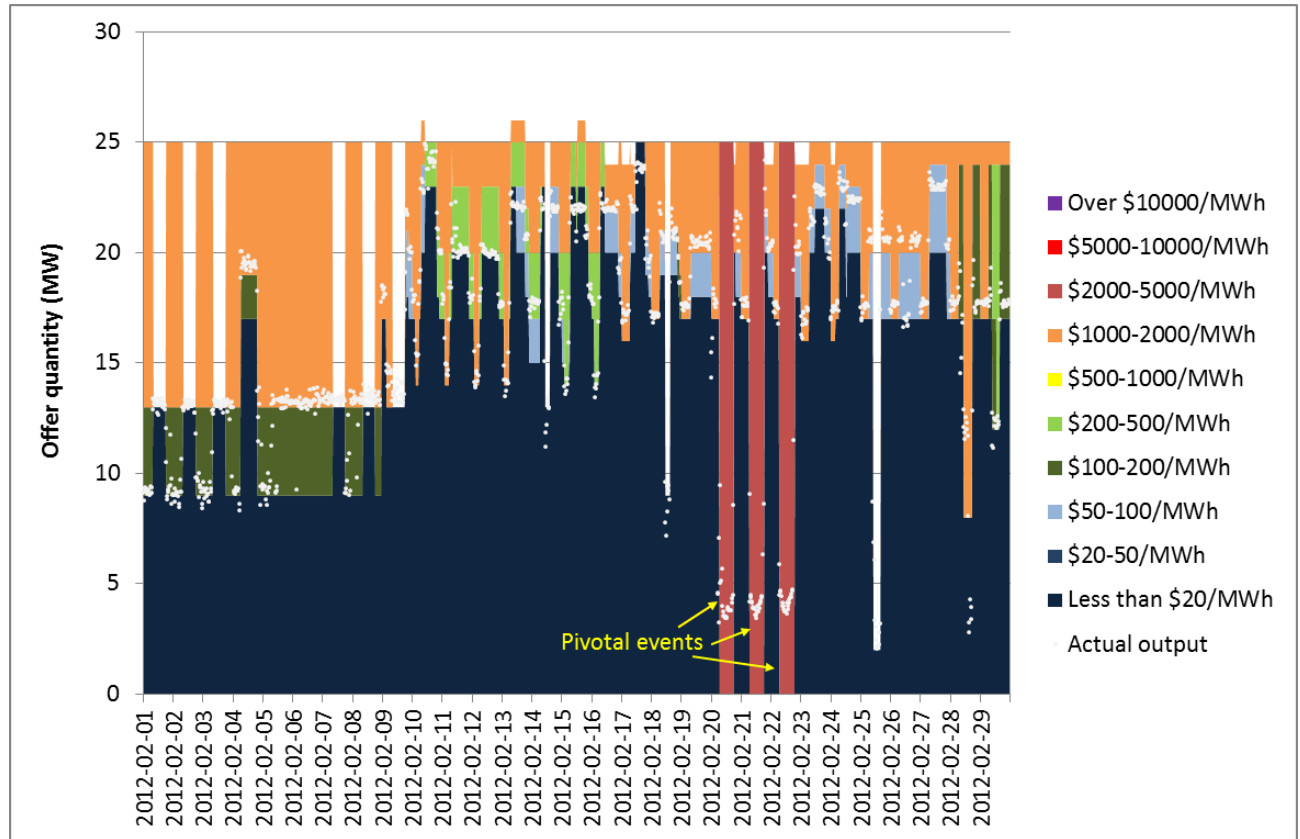
Offer quantities by price band vs actual dispatched quantities



- E.1.3 During the pivotal supplier event of 5 April 2012 (arrowed), the pivotal supplier offered more high-priced energy than it had in preceding periods. Its offers when it was pivotal resulted in a material increase in the market price and they were inconsistent with its offers when it was not pivotal, which means this offer behaviour would not have been compliant with the third “safe harbour principle”, if it had been in place at that time.

Figure 6: Offer behaviour observed on 20-22 February 2012 which was not consistent with the third "safe harbour principle"

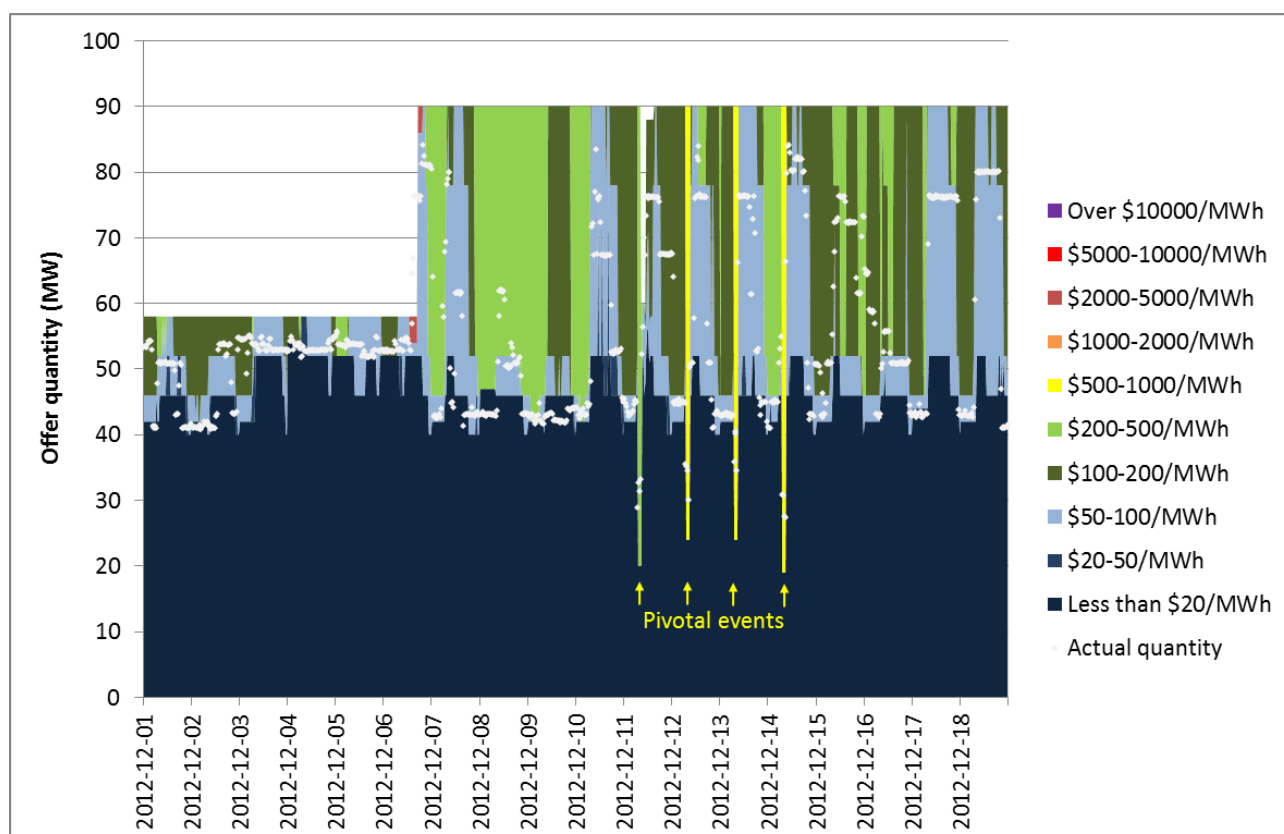
Offer quantities by price band vs actual dispatched quantities



E.1.4 During the pivotal supplier events of 20-22 February 2012 (arrowed), the pivotal supplier offered more high-priced energy at Tekapo A than it had in preceding periods. Its offers when it was pivotal resulted in a material increase in the market price and they were inconsistent with its offers when it was not pivotal, which means this offer behaviour would not have been compliant with the third "safe harbour principle", if it had been in place at that time.

Figure 7: Offer behaviour observed on 11-14 December 2012 which was not consistent with the third "safe harbour principle"

Offer quantities by price band vs actual dispatched quantities



E.1.5 During the pivotal supplier events of 11-14 December 2012 (arrowed), the pivotal supplier offered more high-priced energy than it had in preceding periods. Its offers when it was pivotal resulted in a material increase in the market price and they were inconsistent with its offers when it was not pivotal, which means this offer behaviour would not have been compliant with the third "safe harbour principle", if it had been in place at that time.