

Wholesale Advisory Group

# Settlement and prudential security review recommendations paper

Report by the Wholesale Advisory Group

9 August 2012

**Note:** This paper contains the recommendations of the Wholesale Advisory Group. Content should not be interpreted as representing the views or policy of the Electricity Authority.

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## The Wholesale Advisory Group

Membership of the Wholesale Advisory Group (WAG) changes from time to time, as members resign, appointments expire and new members are appointed.

This paper is approved for the Electricity Authority Board's consideration by the current members of the WAG who had been involved in the development of this recommendations paper, as at 9 August 2012.

Those members are:

- James Moulder, Chair
- Neal Barclay
- John Carnegie
- Stephen Peterson
- Bruce Rogers
- Richard Spearman
- John Woods

At the time this recommendations paper was approved there were two members new to the WAG who had not taken part in the development of the paper.

Those members are:

- Graeme Everett
- Scott Harnett

## 1 Introduction

1.1.1 In July 2011 the Electricity Authority (Authority) asked the Wholesale Advisory Group (WAG) to review settlement and prudential security issues. This paper presents the results of that Settlement and Prudential Security Review (SPSR).

## 2 Conclusion and recommendations

2.1.1 The WAG identified a number of significant concerns with current arrangements, and outlined the concerns in a discussion paper which was published in May 2012 titled 'Settlement and Prudential Security Review' (Discussion Paper). The concerns revolve around two key issues:

- a) **inefficient prudential security methodology and mechanisms** - the existing prudential security methodology and mechanisms are imposing greater costs on parties than necessary, to achieve the current overall level of prudential security. For example, the current methodology leads to significant over-procurement of prudential security at times (and under-procurement at other times), and the range of acceptable security mechanisms appears unduly restrictive; and
- b) **overall level of prudential security appears low** - in aggregate, the level of prudential security in New Zealand appears low relative to that observed in other broadly comparable markets. In other words, if an electricity purchaser default event were to occur in New Zealand, there is a greater likelihood that prudential security held for such a contingency would be inadequate to cover the payment shortfall.

2.1.2 The WAG recommends a number of measures to improve the efficiency of the prudential security methodology and mechanisms. These measures will have the side effect of improving the overall level of prudential security. These measures will also establish a firm foundation for future development of prudential security and settlement arrangements, including the possibility of further improving the overall level of prudential security.

2.1.3 The WAG recommends the following measures:

- a) **weekly settlement:** Settlement should move to a weekly cycle, immediately following the billing week. Settlement would be on the basis of estimated quantities.
- b) **prudential security cover:** A purchaser's required prudential security should be changed to cover the following components:
  - i) **outstandings:** that is, the amount the purchaser already owes for the electricity it has used, or which its customers have used; and
  - ii) **an estimate of expected accruals** out to the end of the next settlement day; and
  - iii) **an 'initial margin'** to cover the liability expected to accrue during the exit of a defaulting purchaser (see further below).
- c) **frequency of assessing prudential security positions:** The clearing manager currently assesses each purchaser's prudential position weekly. The WAG understands that the clearing manager intends to move to daily assessments by the time financial transmission rights (FTRs) are introduced. The WAG supports that move, and regards daily prudential assessments as an important part of the package recommended in this paper.

- d) **setting the initial margin:** The initial margin would be set to cover the liability expected to accrue during the exit of a defaulting purchaser. The initial margin would be calculated as the product of:
- i) the time over which it is considered likely that a defaulting participant could be exited from the market, measured in days;
  - ii) the daily quantities expected to apply during that period; and
  - iii) the price (plus an adder) expected to apply during that period.

A key concept is that the initial margin should include an “adder”. Without an “adder” the initial margin based only on the expected cost of energy over the exit period would provide a PLGD of around 50%. The current prudential assessment system forecasts expected participant purchase costs, and consequently has a PLGD of around 50%. By including an “adder”, a target range is set for the PLGD of less than 50%. The WAG recommends a PLGD target of around 26%, a target drawn from Option 3 of the SPSR discussion paper. The WAG also recommended that this be achieved through an “adder” applied to the ASX futures price based estimation of the initial margin. This would provide an incremental move towards a lower PLGD.

The Authority considers it is likely that a defaulting participant could be exited from the market within 21 days (3 weeks). If that estimate changes, the length of time used for calculating the initial margin should also change.

The prices used to determine the initial margin should be set quarterly, one month in advance of each quarter.

**Appendix A** sets out further details of the WAG’s recommendations for the calculation of the initial margin.

**Appendix B** provides a diagrammatic illustration of the three components of the required prudential security level, which are:

- i) outstandings;
  - ii) forecast exposure out to the next settlement day; and
  - iii) the initial margin.
- e) **flexibility regarding initial margin:** The initial margin referred to in subparagraph (d) is calculated using a period of 21 days. It is considered likely that a defaulting participant would be exited from the market within that timeframe. The initial margin should be calculated using a lesser time period for any participants that:
- i) make a binding contractual commitment to exit the market within a number of days that is less than 21 days; or
  - ii) commit to satisfy any prudential calls in less than 3 business days (the current standard).
- f) **more flexible Hedge Settlement Agreements (HSAs):** The clearing manager should make the necessary changes to allow HSAs written over bilateral cap contracts to be recognised for prudential security purposes. The clearing manager should also be able to accept as prudential security any amount in futures margin accounts, provided appropriate legal arrangements are in place to enable the clearing manager to have priority access to those

funds in the event of a purchaser default. The WAG notes that purchasers who wish to lodge HSAs written over bilateral financial contracts should discuss this issue with the counterparty during the negotiations for the underlying financial contract. The Authority should educate hedge buyers to make them aware of this issue.

- g) **partial net settlement:** At present, settlement is performed on a gross basis so that parties pay for their purchases in full, and then receive their generation revenue. The WAG recommends that invoices be issued on a partial net basis so that generation revenues are netted off purchases up to the party's pro-rata share of the largest single potential net default.
- h) **settlement from prudential cash:** If a party maintains prudential security in the form of a cash deposit with the clearing manager, the party should be allowed to instruct the clearing manager to use the prudential cash deposit for settlement, provided that the party always retains a sufficiently high level of prudential security.
- i) **settlement timing:** The time by which payers are required to pay on settlement day should be changed from 2pm to the morning of settlement day to provide more time to resolve any transactional issues.
- j) **new participant class to facilitate use of HSAs:** A 'settlement class participant' should be introduced to allow parties (such as banks) to act as HSA counterparties without attracting other obligations under the Code which could deter them from that participation (e.g. disclosure obligations).
- k) **legal risks associated with insolvency:** Settlement and prudential systems should aim, as far as it is possible, to protect the clearing manager's priority access to settlement funds and to assets provided as prudential security. This should include protecting the clearing manager's right to:
  - i) retain settlement funds already received by the clearing manager (which in general will already have been distributed to generators);
  - ii) set-off unpaid amounts owed by a participant against amounts the clearing manager owes to that participant; and
  - iii) priority access to funds/assets (e.g. cash deposits, guarantees) held as prudential security in respect of a defaulting participant.

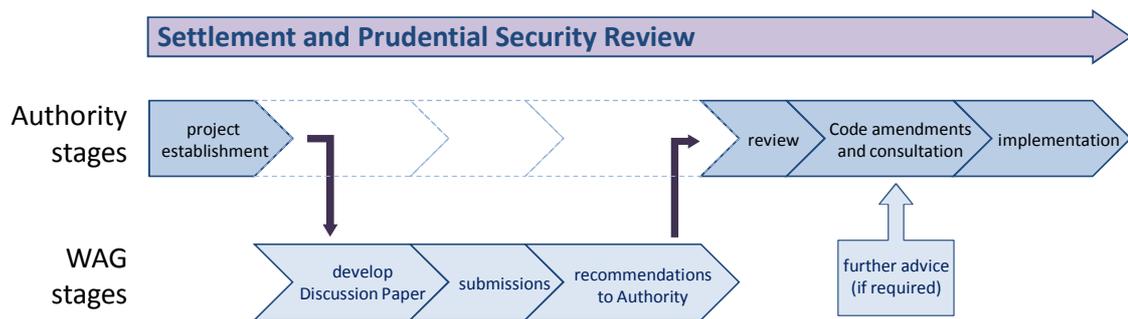
Risks associated with "claw back" should be minimised. Arrangements should recognise the existing law relating to insolvency. They should also recognise the length of time it could take for a participant to cease accruing liabilities to the clearing manager after insolvency (the exit period), and the legal risks associated with that timeframe.

### 3 Approach to the project

#### 3.1 Process

3.1.1 The WAG's involvement in the SPSR is one stage in a multi-stage project as illustrated below.

Figure 1 Approach to undertaking the SPSR



- 3.1.2 Prior to the release of the discussion paper, the WAG met seven times between July 2011 and April 2012 to discuss the SPSR. The WAG:
- met with staff from the Australian Energy Market Operator (AEMO) which has recently conducted a similar review;
  - received a presentation from Erich Livengood (NZX) on the clearing manager's views on shortcomings of the current settlement and prudential security arrangements, and enhancements to those arrangements;
  - received a presentation from representatives of Pulse Utilities, who described some of the problems they considered exist with the current prudential arrangements; and
  - received a presentation on insolvency and the legal risks relating to the clearing manager's priority access to prudential security and its right to exercise set off.
- 3.1.3 After the release of the discussion paper, on 20 June 2012, the WAG held a briefing for interested parties. The briefing was well attended and generated some thoughtful discussions.
- 3.1.4 The WAG has met twice following the receipt of submissions and is now making its recommendations to the Authority. Assuming the Authority accepts these recommendations, the WAG is happy to provide further advice if required (for example commenting on the proposed Code amendments or other detail needed to implement the recommendations).
- 3.1.5 As noted in paragraph 2.1.1, the WAG's analysis identified two broad concerns:
- inefficient prudential security methodology and mechanisms** - existing prudential security methodology and mechanisms are imposing greater costs on parties than necessary to achieve the current overall level of prudential security; and
  - level of prudential security** - in aggregate, the level of prudential security in New Zealand appears low relative to that observed in other broadly comparable markets.
- 3.1.6 Each of these is discussed further below.
- ## 3.2 Inefficient prudential security methodology and mechanisms
- 3.2.1 The WAG has carried out a detailed analysis of the existing settlement and prudential security arrangements. The WAG identified the following areas of potential inefficiency:

- a) **over-procurement of prudential security:** At times existing prudential security arrangements may require a purchaser to provide more prudential security than is reasonably necessary to cover the clearing manager's exposure to the purchaser;
- b) **under-procurement of prudential security:** Conversely, at other times the arrangements may require a purchaser to provide less prudential security than is reasonably necessary;
- c) **variable future margin:** The number of future days contained in the existing 57 day credit period changes over time resulting in changing prudential standards during a month;
- d) **uncertain exit period:** It is not clear how long it would take for a defaulting purchaser to exit from the market. The WAG notes that the Retail Advisory Group (RAG) has now considered this issue and has made a range of recommendations to the Authority. However, it seems that some uncertainty around exit times is likely to persist;
- e) **uncertain credit needs:** Purchasers face considerable uncertainty regarding the level of credit (or 'working capital') they could be required to procure to cover settlement and prudential security requirements. The requirements often change substantially and quickly which can be disruptive for purchasers;
- f) **lack of flexibility:** There are a number of ways in which existing arrangements are not particularly flexible. For example, the range of assets that can be recognised for prudential security purposes could be broader;
- g) **treatment of credit ratings:** Parties with an A- credit rating are effectively given unlimited unsecured credit by the clearing manager (although no purchaser currently achieves that standard). Arguably, some credit limit should apply. Furthermore, purchasers with a rating below A- are currently required to provide the same level of prudential security to the clearing manager, irrespective of their credit rating status. It could be argued that some degree of differentiation should apply, with some ratings below A- being recognised by the clearing manager, but at a lesser level, commensurate with their particular credit rating;
- h) **gross versus net settlement:** Gross settlement may arguably increase settlement risks so that the consequences of a default caused by administrative error (e.g. failure to pay by 2pm on settlement day) are larger; and
- i) **legal robustness:** There are some legal issues that could potentially impact on the clearing manager's priority access to funds in the event of a default by a purchaser.

### 3.3 Level of prudential security

- 3.3.1 One of the main metrics used by the WAG to analyse prudential arrangements is the probability of loss given default (PLGD). If we assume that a participant becomes insolvent on an arbitrary day, the PLGD measures the probability that the clearing manager will hold insufficient prudential security on that day for that purchaser to cover its exposure to the participant. The PLGD is the measure used by the Australian Energy Market Operator (AEMO) in its recent review to compare differing arrangements for the National Electricity Market (NEM) in Australia.
- 3.3.2 The WAG's analysis of current prudential arrangements applied to a standard purchaser, assuming a 21 day exit period, suggests that there is a PLGD of 57 percent. This is much higher than the 2 percent figure that AEMO proposes to target in the Australian NEM. It is also much higher than the PLGD figures that appear to be achieved in both the Northeastern Interconnection ("PJM") market and the Texas ("ERCOT") market in the United States. Those

figures appear to be around 6 percent and 4 percent respectively, although the figures should be treated with some caution.

- 3.3.3 The WAG has also developed another metric for analysing prudential arrangements called the maximum credit requirement (MCR). The MCR is an indicator of the maximum amount of funding a standard purchaser will require to fund both its settlement and prudential obligations. It is measured in a number of days' worth of average accruals. An assumption is made about the flow of income for the standard purchaser (e.g. funds from customers). The MCR measures the largest difference at any time during the sample period between the stock of income that has accrued since the beginning of the sample period and the stock of funds required over the same period to fund previous settlements plus the current prudential security requirement.
- 3.3.4 The MCR for existing prudential arrangements, assessed over the period from January 2007 to September 2011 is 332 days. In effect this means that a purchaser must be ready to obtain credit of an amount equivalent to 332 days of their average purchases to be able to meet settlement and prudential obligations. That figure is driven by the high winter prices in 2008. The figure may be higher if there is an event worse than the 2008 prolonged high price event.

### 3.4 Four options in the discussion paper

- 3.4.1 The WAG published a discussion paper in May 2012 setting out four broad options. The options are summarised in the following table.

**Table 1 The Four Options Put Forward in the Discussion Paper**

	Option 1 Status Quo	Option 2 Generator Secure	Option 3 Retailer Efficient	Option 4 Secure and Efficient
Settlement and prudential security methodology	No change	No change except higher prudential margin	Changes to improve efficiency (including weekly settlement which occurs immediately at the end of the week) but no ROLR*	Changes to improve efficiency (as for Option 3) plus ROLR* or similar
Mechanisms for providing prudential security	No change	No change		
Level of security	Current level	Increased significantly	Increased	Increased significantly

Notes: \* ROLR means retailer of last resort arrangements

- 3.4.2 **Option 1 Status Quo:** This represents existing arrangements. The clearing manager is currently in the process of implementing a small number of changes to prudential systems. Those changes are referred to as "quick wins". Option 1 assumes those changes have been made.

- 3.4.3 **Option 2 Generator Secure:** This option would leave all existing arrangements unchanged, except it would raise security to the level that AEMO is proposing for the NEM (a 2 percent PLGD) by means of an increase of the length of the 7 day prudential margin period at the end of the credit period from 7 days to around 49 days.
- 3.4.4 **Option 3 Retailer Efficient:** This option would focus on improving the efficiency of the methodology and mechanisms used to deliver prudential security. Two key changes would be the introduction of weekly settlement, and the introduction of an ‘initial margin’ into the calculation of the required prudential security level.
- 3.4.5 **Option 4 Secure and Efficient:** This option would combine the changes in Option 3 with changes designed to increase the overall level of security. The further changes could include a higher initial margin, and the introduction of a retailer of last resort (ROLR) type scheme to clarify and shorten the exit timeframe for defaulting retailers. A ROLR-type scheme would switch customers from the defaulting retailer to another retailer ‘automatically’; that is, without the need for explicit agreement from the customer, and without the need for agreement from the defaulting retailer.
- 3.4.6 Options 3 and 4 came in two variants, the difference being whether a ‘static’ or a ‘dynamic’ approach to the initial margin was used. The static approach would set the price component of the initial margin once, and maintain it over a substantial period of time while the dynamic approach would reassess the initial margin each day.
- 3.4.7 The following table shows the PLGD and MCR for each option.

**Table 2 Comparison of Options 1 to 4, including dynamic and static variants**

	Option 1: Status Quo	Option 2: Generator Secure	Option 3: Retailer Efficient (static)	Option 3: Retailer Efficient (dynamic)	Option 4: Secure and Efficient (static)	Option 4: Secure and Efficient (dynamic)
PLGD	57%	2%	26%	26%	2%	2%
MCR*	332 days*	491 days*	253 days*	322 days*	250 days*	267 days*

Notes: \* Figures given in “days” represent the number of days’ worth of average accruals during the period of the analysis.

### 3.5 Submissions and the WAG’s response

- 3.5.1 The WAG received 17 submissions on the discussion paper by the due date of Friday 29 June 2012 from the parties listed in Table 3

**Table 3 Submitting entities**

Purchasers/Generators/Users		Other
<ul style="list-style-type: none"> <li>• Contact</li> <li>• Genesis</li> <li>• Meridian</li> <li>• Major Electricity Users' Group (MEUG)</li> <li>• Mighty River Power (MRP)</li> <li>• Norske Skog</li> <li>• Opuha Water</li> </ul>	<ul style="list-style-type: none"> <li>• Opunake Hydro</li> <li>• Pacific Aluminium</li> <li>• Pulse Utilities (Pulse)</li> <li>• Simply Energy</li> <li>• TrustPower</li> <li>• Wensley, NL and CE</li> </ul>	<ul style="list-style-type: none"> <li>• NZX</li> <li>• OMF</li> <li>• Orion</li> <li>• Vector</li> </ul>

3.5.2 A full summary of submissions is attached as **Appendix A** to this report. The key issues raised in submissions are:

- a) support for Options 3 and 4 and the use of an initial margin ;
- b) comments on a retailer of last resort (ROLR) scheme;
- c) frequency of settlement;
- d) net settlement;
- e) hedge settlement agreements (HSAs); and
- f) credit ratings.

3.5.3 These issues are discussed below, along with the WAG's response.

**Support for Options 3 and 4 and the use of an initial margin**

***Strong support in submissions for arrangements with an initial margin***

3.5.4 There was strong support from almost all submitters for pursuing Option 3 and/or Option 4. Of the submissions that indicated an option preference, only one (Wensley) preferred neither Option 3 nor Option 4. Option 3 and Option 4 are similar in that both use an 'initial margin' as a component of the prudential requirement.

***The WAG's recommendations build on Option 3***

3.5.5 The WAG's recommendations in this paper have built on Option 3 from the discussion paper. The WAG considers that this will establish a much clearer and more efficient framework than exists at present, and will improve overall prudential security levels. In the future, the Authority may wish to consider making further changes to increase prudential security levels closer to the levels in other jurisdictions that have been examined (that is, achieving a PLGD at or below perhaps 6 percent). Those future changes would essentially represent a move towards option 4 from the discussion paper (although option 4 assumed a ROLR-like scheme could achieve a 1 week exit period).

3.5.6 The WAG considers that its proposals move prudential security in the right direction without necessarily achieving the optimal level of security. The WAG considers that this is consistent with

the Authority's Code Amendment Principles (CAPs), and in particular it appears to be consistent with tie-breaker principle 4 (Preference for Small-Scale 'Trial and Error' Options) which says:

"When considering possible amendments to the Code, the Authority and its advisory groups will give preference to options that are initially small-scale, and flexible, scalable and relatively easily reversible with relatively low value transfers associated with doing so."

***Fixed and variable approaches to the price component of the initial margin***

- 3.5.7 The initial margin would be calculated as the product of the exit period, an estimate of the participant's future quantities, and estimated future spot prices. The discussion paper outlined two broad alternative approaches to the determination of the price component of the initial margin. The discussion paper described these as 'static' and 'dynamic' approaches, but better terminology may be 'fixed' and 'variable' approaches (respectively). Under the fixed approach, the price used to calculate the initial margin would be reassessed infrequently. The advantage of the fixed approach is that purchasers have much greater certainty in advance of the size of their prudential obligation. The variable approach would allow the required prudential level to follow the clearing manager's exposure more closely on a day-by-day basis. When prices rise (e.g. during a dry year), purchasers would be required to procure higher prudential security.
- 3.5.8 Submitters had mixed views on these two opposing approaches. Genesis indicated an initial preference for the variable approach. Opuha Water, Opunake Hydro, and Pulse all indicated a strong preference for the fixed approach.

***The WAG recommends quarterly reassessment of the price component of the initial margin using ASX futures prices***

- 3.5.9 As noted above in paragraph 2.1.3(d), the WAG recommends that the prices used to determine the initial margin should be set quarterly, one month in advance of each quarter. The price should be based on average ASX futures prices, as described in **Appendix A**.
- 3.5.10 The WAG considers this approach balances the desire to provide certainty to purchasers (avoiding unduly frequent reassessments and volatility in the prudential requirement) against the goal of avoiding excessive under- or over-procurement.
- 3.5.11 The Authority has daily ASX data only from mid-January 2012, so the WAG's capability to model outcomes under the recommended approach has been limited. The WAG suggests that the Authority conduct further analysis of the performance of the recommended approach once a greater quantity of historical ASX price data has been obtained.

***An 'adder' may be applied to the ASX futures price***

- 3.5.12 The discussion paper analysed the different options presented showing how each option would perform when applied to a 'standard purchaser'.<sup>1</sup> The analysis used historical price information to show, for each day over (roughly) a 5 year period:
- a) how much prudential security the clearing manager would hold for the standard purchaser; and
  - b) the dollar value to which the clearing manager would have been exposed if the standard purchaser had become insolvent on that day.

<sup>1</sup> A standard purchaser was created for analytical purposes. The standard purchaser was assumed to purchase a fraction of national electricity demand at the Otahuhu node and had no generation or lodged hedges.

- 3.5.13 From this information the PLGD resulting from those arrangements could be determined.
- 3.5.14 Option 3 (static) produced a PLGD of 26 percent, which was a significant improvement on the existing PLGD (57 percent), but represented a lower standard of security than in the other jurisdictions examined (PLGD figures between 2 and 6 percent appear in other jurisdictions examined).
- 3.5.15 The WAG considers that a PLGD of around 26 percent is appropriate because:
- it is a considerable improvement on the existing PLGD which the WAG considers to be clearly too high; yet
  - given the lack of certainty about the optimal level of PLGD, the WAG considers a figure of 26 percent avoids the risk of overshooting the optimal PLGD level.
- 3.5.16 For the purpose of comparing the performance of other options against option 3 (static), an 'add' was applied to the other options. The add, measured in \$/MWh, was added to the price used to calculate the initial margin. The add was set for each option to achieve a PLGD of 26 percent so that the options were equivalent in terms of that measure.
- 3.5.17 The WAG's recommendation is a further substantial development of option 3 (static). Given the changes, the recommended approach may no longer deliver a PLGD of around 26 percent without an add. The WAG therefore recommends that an add be applied to the calculation of the initial margin with a view to delivering a PLGD of around 26 percent.
- 3.5.18 The WAG does not at present have access to a history of daily ASX prices going back several years, so the WAG has not been able to calculate the level of the add necessary to produce a PLGD of around 26 percent. The WAG considers that an add in the range of \$10 to \$20/MWh is likely to deliver the desired level of PLGD. The WAG suggests that the add could be reviewed from time to time; for example, annually.

***Working capital required to fund prudential security can be hedged***

- 3.5.19 One benefit of setting the price component of the initial margin on a quarterly basis based on ASX futures prices, is that participants may be able to use ASX futures to hedge themselves against movements in prudential requirements. A purchaser may hedge its prudential requirement for a particular quarter by purchasing an appropriate volume of futures contracts, perhaps 2 years before the quarter, with a view to selling that position prior to the beginning of the quarter. If the futures price for that quarter has increased, the participant may have higher prudential obligations, but will have an offsetting cash position from futures trading to fund those prudentials.

**Comments on a retailer of last resort (ROLR) scheme**

- 3.5.20 The issue of whether or not to introduce a ROLR is not part of the WAG's remit. However, by reducing the exit period and making it more certain, a ROLR-like scheme would have a profound effect on prudential security arrangements. The WAG's discussion paper identified that the Retail Advisory Group (RAG) has been examining wholesale market exit arrangements for retailers and will make proposals to the Authority in due course. However, it also presented analysis on the implications of a ROLR-like scheme for prudential arrangements and provided an opportunity for submitters to comment.

- 3.5.21 A number of submissions proposed that a ROLR-like scheme should be introduced to reduce the length of the exit period needed to be covered by prudential security to around 7 days. Those in favour of a ROLR-type scheme were Contact, OMF, TrustPower, Wensley, and Vector. Genesis indicated they were very concerned with the scale of regulatory intervention that would be needed to achieve a 7 day exit period.
- 3.5.22 Authority staff have provided the WAG with an indicative estimate of 21 days as the timeframe over which it is considered a defaulting participant would likely be exited from the market. Following a retailer insolvency, some time will be allowed for a commercial solution to be developed. If this is unsuccessful, the Authority would take steps to switch the customers even in the absence of agreement from the defaulting retailer. The RAG are currently consulting on a proposal along these lines. Authority staff expect that retailers will have provisions in their contracts with customers that would allow the Authority to switch the customers to one or more alternative retailers.
- 3.5.23 The WAG's recommendations in this paper are therefore based on an assumed 21 day exit period. If the Authority can have confidence that a defaulting participant is likely to be exited from the market within a shorter period, required prudential levels could be reduced.

#### **Frequency of settlement**

- 3.5.24 Submissions strongly supported more frequent settlement, particularly a move to weekly settlement as in many overseas electricity markets. Those in favour of this included Contact, Genesis, Meridian, MEUG, NZX, OMF, and Pulse. Two submissions opposed more frequent settlement: MRP and Wensley. MRP considered that this would merely require parties to pay cash into a settlement account rather than into a prudential account so there would be no net saving. MRP also noted there would be a mismatch with the settlement of bilateral financial contracts.
- 3.5.25 The WAG's recommendation is that settlement be conducted at weekly intervals. The WAG notes that weekly settlement will substantially reduce required levels of prudential security and will limit the size of the impact of any potential insolvency.
- 3.5.26 Three submissions also supported shortening the delay between the end of the billing period and the date on which the billing period is settled. They were Contact, OMF, and NZX. The submission from Wensley was opposed to this. The WAG considers that the 'settlement delay' can be shortened considerably and that the unreconciled estimates of participant quantities used for prudential purposes could be used for settlement. A wash up would be required once reconciled quantities became available.

#### **Net settlement**

- 3.5.27 Views on moving from the existing gross settlement arrangements to net settlement arrangements (as in many overseas markets such as Australia's NEM) were mixed. Submitters noted that prudential security requirements are already established on a net basis (that is, considering the purchaser's position vis-a-vis the clearing manager net of any generation provided by the purchaser). It is important to note that the possibility of moving to net settlement is therefore an issue relating to *settlement* rather than to *the determination of prudential security*.
- 3.5.28 A majority of submitters supported a move to net settlement, including Contact, Genesis, Opuha Water, Opunake Hydro, Pulse, and Wensley. Meridian and MRP opposed the proposal. Meridian had concerns as to whether net settlement will lead to fair and reasonable outcomes, while MRP considered the benefits of moving to net settlement were unclear.

- 3.5.29 NZX suggested a partial net settlement approach. Under this approach purchasers could net off their generation revenue from their payer invoice provided that enough generation revenue remains on the payee invoice to cover the participant's pro rata share of the single biggest net payer position in the market. This would achieve some of the advantages of moving to net settlement, including reducing circular cash flows and reducing the need for participants to procure creditor support for a few hours on settlement day between payments on payer and payee invoices. At the same time it would avoid the largest drawback of net settlement: the need to reconsider who bears the risk of a shortfall in payments from payers.
- 3.5.30 The WAG recommends this partial net settlement approach and considers that it addresses Meridian's concerns.

#### **Hedge settlement agreements (HSAs)**

- 3.5.31 Submitters broadly agree that some increase in flexibility should be allowed in terms of the range of financial contracts that can underpin an HSA. For example, the clearing manager should recognise cap contracts. However, many participants cautioned against extending this flexibility too far. For example, TrustPower considered the clearing manager should not act as a bank (e.g. in recognising accounts receivable). TrustPower noted that participants with non-standard hedges should encourage their banks to recognise these assets and thereby achieve a more favourable guarantee (etc) rather than expecting the clearing manager to value the asset for prudential purposes.
- 3.5.32 The WAG considers that some small increase in flexibility should be allowed. In general, financial contracts whose value can be determined without any particular expertise and that are reasonably prevalent in the market should be recognised by the clearing manager. However, contracts that are callable should not be accepted but should instead be processed through banks as outlined by TrustPower.
- 3.5.33 A number of parties suggested that ASX futures positions could be recognised for prudential purposes. In particular, it may be possible for a cash balance held in an account with a futures trader to be used as prudential security. The WAG supports this approach, provided that legal arrangements can be made to ensure the clearing manager has priority access to those funds in the event of default.
- 3.5.34 The WAG also notes the concerns of some purchasers about generators being unwilling to agree to HSAs. The WAG considers that most of these concerns are due to purchasers seeking the lodgement of an HSA over a contract *after* the contract has been negotiated and signed. The WAG notes that the appropriate time to discuss whether an HSA will be lodged is *during* the contractual negotiations. Generators may well seek a premium on hedge contracts that will be lodged since that may affect the generator's prudential position with the clearing manager. The Authority may have a role in educating purchasers to this effect.

#### **Credit ratings**

- 3.5.35 The discussion paper noted the following points about the approach of current arrangements to providing unsecured credit on the basis of a credit rating:
- a) purchasers with an A- credit rating or better are given unlimited unsecured credit. At present no purchasers meet this A- rating. (Transpower meets it but is not a purchaser: Transpower pays for ancillary services but not for electricity);

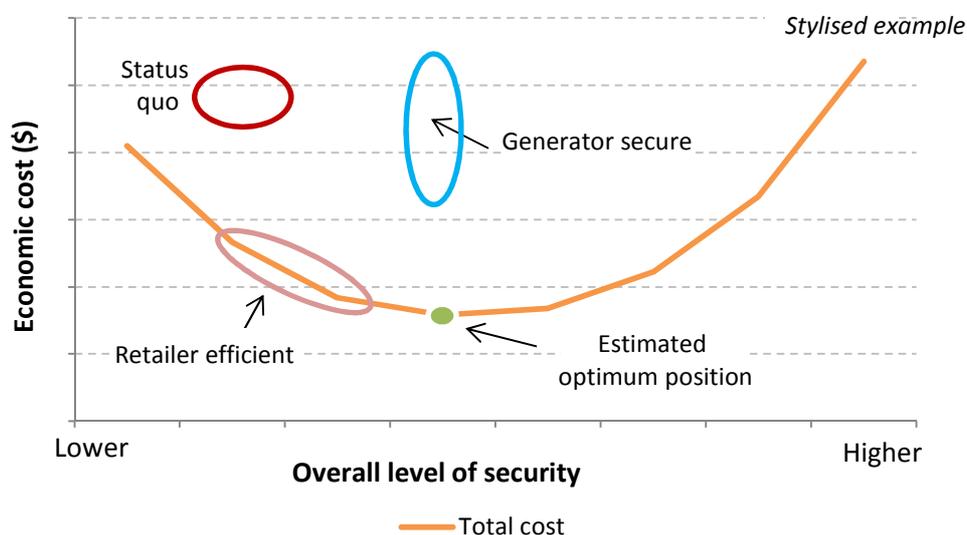
b) those with lower credit ratings are not given any unsecured credit, so the A- credit rating acts as a 'cliff edge' rather than following a graduated arrangement.

- 3.5.36 There were mixed views on whether the A- standard was too high. Genesis and Meridian considered it was an appropriately high standard while MRP considered it should be reduced. Contact, MRP, and Vector suggested a graduated approach would be more sensible. Contact and Orion also considered that a limit on the amount of unsecured credit should apply, even for parties with a very high credit rating.
- 3.5.37 The WAG considers that some kind of graduated system may be appropriate, but it also considers that this should not be a priority for the Authority at present. Consequently, the WAG is making no recommendation in relation to credit ratings.

### 3.6 Cost benefit analysis

- 3.6.1 The WAG has considered the relative costs and benefits of the four high level options described in section 3.4. Given the information uncertainties, the WAG's approach has been predominantly qualitative, although some quantitative factors (e.g. PLGD and MCR) have been used to rank the high level options.
- 3.6.2 In somewhat stylised terms, the WAG considers the total economic costs of managing prudential risks will be minimised at a particular level of security (measured for example by PLGD). The WAG has not determined what that optimal level is, although it is clear that it is a higher level of security than is currently being achieved. This is illustrated in Figure 2 by showing the status quo appearing to the left of the estimated optimum position.

Figure 2 Cost benefit framework



- 3.6.3 The 'Generator secure' option (Option 2) would increase security broadly to the optimal level, but it would do so in an inefficient way. This is illustrated in Figure 2 by showing the 'Generator secure' option appearing at the optimal level of security, but at a cost to the economy above the optimal point which lies on an efficient frontier (the orange curve in Figure 2).

- 3.6.4 The ‘retailer efficient’ option (Option 3) is likely to produce a level of security less than the optimum level, but it is not clear how far below the optimal level it would be (since the optimum level itself is not known). However, the retailer efficient option would at least achieve that overall level of security without imposing further unnecessary (inefficient) costs on participants, so would lie on the efficient frontier.
- 3.6.5 Finally, the ‘Secure and efficient’ option (Option 4) would lie at or to the right of the optimum point. The WAG is not able to determine how far away from the optimum point option 4 would lie, since the position of the optimum point is uncertain.
- 3.6.6 The WAG’s proposal to pursue Option 3 is unambiguously an improvement in the efficiency with which prudential security is delivered, and is unambiguously a move in ‘the right direction’ (that is, towards the optimum point). Once Option 3 is implemented, further consideration could be given to increasing overall security, although this would require greater confidence over the position of the optimum point.

#### **4 Explanation of how the WAG’s recommendations are consistent with the Authority’s statutory objective**

- 4.1.1 The WAG considers that its recommendations are consistent with the Authority’s statutory objective, which is to promote competition in, reliable supply by, and the efficient operation of, the electricity industry for the long-term benefit of consumers. In particular, the WAG’s recommendations promote efficiency by:
- a) improving the productive efficiency with which the overall level of security is being delivered. The ‘good’ being produced here is a given level of overall prudential security (e.g. a particular PLGD). Existing prudential arrangements deliver that good in a way that results in higher costs to participants than necessary (thus ‘productive inefficiency’). The WAG’s recommendations will enable a given overall level of prudential security to be achieved at a lower cost; and
  - b) improving the overall level of security. The existing arrangements appear to deliver a low level of certainty for generators that they will be paid in full should there be a default by a purchaser. Since purchasers can shift these costs onto generators, the purchasers are not facing the full cost of their decisions about risk. Consequently, purchasers may operate their businesses in overly risky ways (e.g. having insufficient hedging in place). The WAG’s recommendations will improve the overall level of security, creating better incentives for purchasers to manage their own business risks, and providing generators with increased certainty of payment.
- 4.1.2 In December 2010, the Authority published its Consultation Charter, which sets out a number of code amendment principles.<sup>2</sup> Code amendment principle 2 states:
- “Principle 2 – Clearly Identified Efficiency Gain or Market or Regulatory Failure: [T]he Authority and its advisory groups will only consider using the Code to regulate market activity when:*
- *it can be demonstrated that amendments to the Code will improve the efficiency<sup>3</sup> of the electricity industry for the long-term benefit of consumers; or...”*

<sup>2</sup> Refer to pages 4-6 of the *Consultation Charter* available on the Authority’s website at <http://www.ea.govt.nz/act-code-regs/code-regs/code-changes/>.

- 4.1.3 The WAG considers it has demonstrated that its recommendations (although not taken to the point where Code amendments have been developed) would improve the efficiency of the electricity industry for the long-term benefit of consumers .
- 4.1.4 Code amendment principle 3 states:
- “Principle 3 – Quantitative Assessment: When considering possible amendments to the Code, the Authority and its advisory groups will ensure disclosure of key assumptions and sensitivities, and use quantitative cost-benefit analysis to assess long-term net benefits for consumers, although the Authority recognises that quantitative analysis will not always be possible. This approach means that competition and reliability are assessed solely in regard to their economic efficiency effects. Particular care will be taken to include dynamic efficiency effects in the assessment, and the assessment will include sensitivity analysis when there is uncertainty about key parameters.”*
- 4.1.5 Section 3.6 of this paper sets out the cost-benefit analysis for the WAG’s recommendations. Given the information uncertainties, the WAG’s approach has been predominantly qualitative, although some quantitative factors (e.g. PLGD and MCR) have been used to rank the high level options (including the status quo). The WAG’s discussion paper sets out a sensitivity analysis based on different assumptions about the time it would take for the standard purchaser to exit the market following default.
- 4.1.6 Finally, the WAG notes that one of the ‘tie-breaker’ Code amendment principles states:
- “Principle 4 – Preference for Small-Scale ‘Trial and Error’ Options: When considering possible amendments to the Code, the Authority and its advisory groups will give preference to options that are initially small-scale, and flexible, scalable and relatively easily reversible with relatively low value transfers associated with doing so. In these circumstances the Authority will monitor the effects of the implemented option and reject, refine or expand that solution in accordance with the results from the monitoring.”*
- 4.1.7 The WAG considers its recommendations are aligned with this principle. The WAG’s recommendations improve the productive efficiency of arrangements and establish a solid foundation for future developments. The WAG’s recommendations would also improve the overall level of security, but do not aim for a level of security as high as in Australia’s NEM, or as high as US electricity markets like PJM (Northeastern interconnection) and ERCOT (Texas). Therefore the WAG can be confident that the overall level of security is moving “in the right direction”, but since the optimum overall level of security is not certain, the WAG has opted for an approach that avoids the risk of “overshooting” the optimum level, and keeps value transfers (between generators and purchasers) relatively small.

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<sup>3</sup> Where efficiency refers to allocative, productive and dynamic efficiency, and improvements to efficiency include, for example, a reduction in transaction costs or a reduction in the scope for disputes between industry participants.

## 5 Next steps

- 5.1.1 If the Authority concurs with the WAG's recommendations, then the Authority should prepare a more detailed consultation paper accompanied by proposed Code amendments. There is a wide range of detailed matters that will need some review in part 14 of the Code. The WAG undertakes to make itself available to provide advice to the Authority as required on the Authority's further work on the SPSR.

## 6 Appendices

- 6.1.1 This paper has three appendices attached:
- a) Appendix A: Calculation of the initial margin;
  - b) Appendix B: Components of required prudential security levels; and
  - c) Appendix C: Summary of submissions.

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James Moulder  
Chair, Wholesale Advisory Group

## Appendix A Calculation of the initial margin

- A.1.1 The WAG recommends the initial margin should be calculated as the product of:
- the time taken to exit a defaulting participant from the market (this is likely to take 21 or less days);
  - the daily quantities expected to apply during that period; and
  - the price (plus an adder) expected to apply during that period.
- A.1.2 The initial margin for each purchaser should be reassessed daily as part of the daily prudential assessment, although the price component should be reassessed quarterly. In effect, the daily reassessment of the initial margin would reflect only changes in the quantity component.
- A.1.3 The quantities used to determine the initial margin for a particular purchaser should be based on recent historical quantities for that purchaser. If a purchaser's business changes substantially (e.g. if a retailer acquires a major customer), that should be picked up relatively quickly in the calculation of the initial margin.
- A.1.4 The prices used to determine the initial margin should be set quarterly, one month in advance of each quarter. The price should be based on average ASX futures prices, measured over the previous month, for the quarterly product relating to the next quarter.<sup>4</sup> This will mean that, provided quantities are reasonably stable during a quarter, the initial margin will also be reasonably stable during the quarter.
- Note:** The WAG reached broad agreement on the recommendations in this paper, although different views were expressed on some matters of detail. With respect to the recommendation just stated, the Board should note that one member of the WAG considered that ASX futures prices for the next 4 quarters (rather than just for the next quarter) should be used for calculating the initial margin. This would make the initial margin more stable between quarters.
- A.1.5 An 'adder', measured in \$/MWh, may be applied to the price used to calculate the initial margin. If the price *before* the addition of the adder represents some kind of expectation of *average* prices in the upcoming quarter, the price *after* the addition of the adder represents a *conservatively high expectation* of price. The inclusion of the adder is likely to decrease the probability of loss given default (PLGD)<sup>5</sup> considerably. This would improve the level of prudential security in the market. The WAG recommends the adder be set so that it is broadly consistent with a PLGD of around 26 percent.<sup>6</sup> The WAG expects the adder would likely fall in the range of \$10 to \$20/MWh. The adder could be reviewed from time to time; for example, annually.
- A.1.6 Given that the ASX NZ electricity futures prices emerge from a private market not under the control of the Authority or the clearing manager, the WAG notes that it may be necessary to allow some flexibility for the clearing manager to use one or more alternative approaches for determining the price component the initial margin in some circumstances (e.g. if the ASX NZ

<sup>4</sup> At the beginning of September, the prices to use for initial margin calculations during the December quarter (October to December) should be published. They should be based on the average prices during August for ASX December quarter futures.

<sup>5</sup> The PLGD measure is explained from paragraph 3.3.1 of the paper.

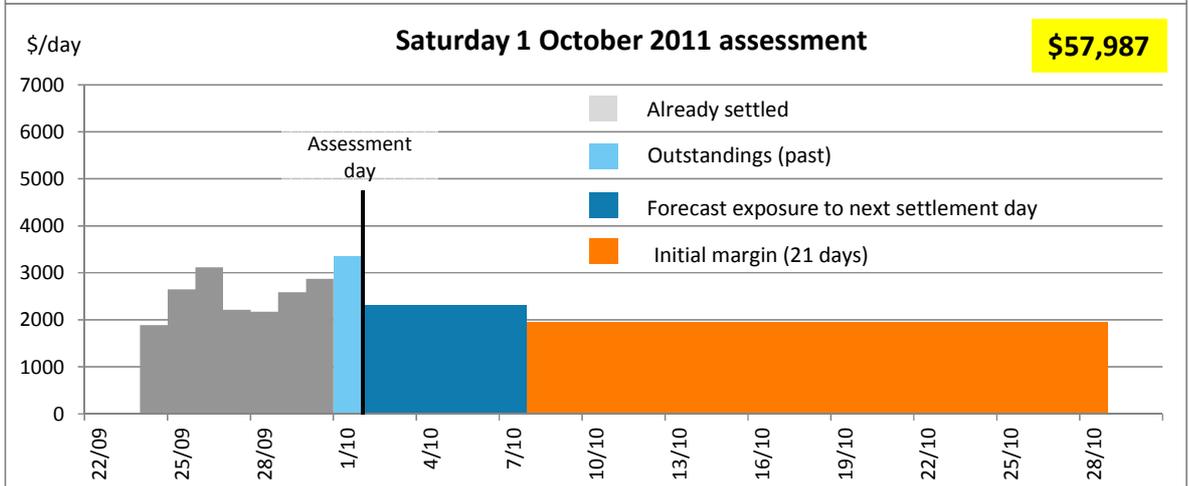
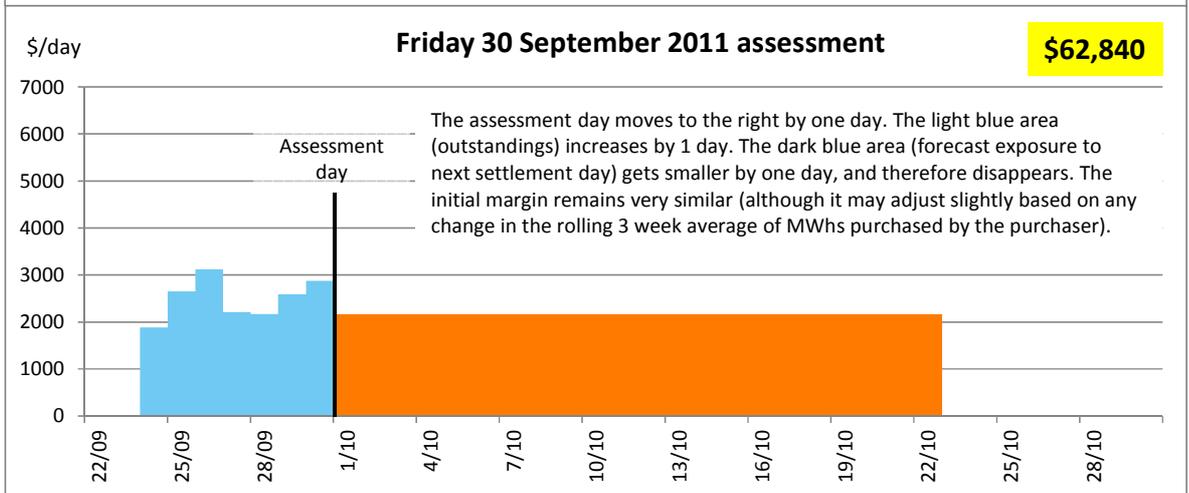
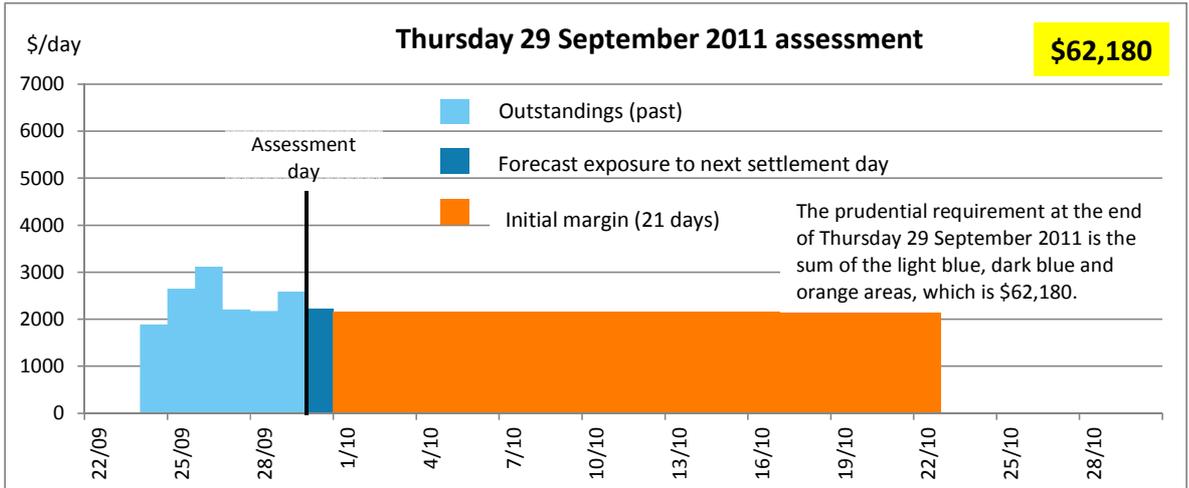
<sup>6</sup> The origin of the 26 percent figure is explained from paragraph 3.5.14 of the paper.

electricity futures product becomes infrequently traded). The Authority should consider this matter further.

- A.1.7 The WAG expects the Code will set out the key design features of the prudential security methodology, including the initial margin, along the lines proposed in this paper. The clearing manager should then be required to consult on and publish a more detailed methodology. The WAG notes that a similar process has been used recently for prudential arrangements for the trading of financial transmission rights (FTRs).

## Appendix B Components of required prudential security levels

- B.1.1 The following diagrams show how the required prudential security level is determined each day by adding:
- a) outstandings (covers electricity which has flowed but which has not yet been paid for);
  - b) forecast exposure to the next settlement day, modelled as Friday each week; and
  - c) the initial margin.
- B.1.2 The diagrams are based on a purchaser purchasing a constant 1MW of load. Since the quantity is unchanging, the dynamics in the diagrams reflect price movements only.



**Explanation of 1 October 2011 diagram:** The week ending Friday 30 September (grey area) has now been settled so is no longer relevant for calculating required prudential security levels. The assessment day has moved one further day to the right. There is now only one day of outstandings (Saturday 1 October) so the light blue area has only one day in it. There are six days remaining until the next settlement day (next Friday), so the dark blue area has 6 days in it. The height of that rectangle is determined by estimates of average prices and quantities for those six days. The initial margin (orange area) remains 21 days long. The height of the initial margin rectangle is lower than in the previous day's assessment because 1 October 2011 is the beginning of a new quarter, so a new (lower in this case) price is being applied to calculations of the initial margin in this quarter.

## Appendix C Summary of submissions

1. This summary of submissions arranges submitters' responses by question. Responses that cannot be associated with a particular question are presented at the end.

### Settlement and Prudential Security Review – Summary of Submissions

Submissions closed 29 June 2012

#### Submitters

Contact Energy	Genesis Energy	Meridian Energy	Major Electricity Users' Group	Mighty River Power
Norske Skog	NZX	OMF	Opuha Water Ltd	Opunake Hydro
Orion	Pacific Aluminium	Pulse Utilities	Simply Energy	Trustpower
Vector	Wensley			

#### Questions

The questions asked in the Wholesale Advisory Group's (WAG's) discussion paper were as follows:

2. To what extent have we defined the regulatory failures appropriately, and what other problems are there, if any?
3. What, if any, material issues have been missed from the description of current arrangements?
4. To what extent is this an accurate description of the failures around current arrangements? If not, what have we missed, how would you describe it and why is the issue material?
5. Have we identified the right measures of risk? If not, what would you use?
6. Do you agree with the assessment of the appropriate level of security? If not, what information do you have to support an alternative level of security?
7. Do you agree we have described the right set of solutions? Have we outlined the right mechanisms that highlight the different options? Are there other mechanisms?
8. To what extent do you agree with the proposed path for moving forward? Should other options be explored, and if so, why?

**Note:** This summary arranges submitter responses by question. Material in submissions that does not relate to a specific question is placed at the end of the summary.

1. To what extent have we defined the regulatory failures appropriately, and what other problems are there, if any?	
Submitter	Submitter response
Contact	<p>In Contact's view regulatory failures have been well defined by the WAG. To this we would add that from a practical perspective the settlement turnaround time (2pm – 4.30pm) is short and late in the day. This further amplifies issues in the case of a default by a purchaser. To address this</p> <p>Contact suggests that settlement is moved forward, for example 11.30am to 2.30pm.</p> <p>As a generator who (along with other generators) would ultimately bear any loss in the case of a default, Contact would like to see the following:</p> <ul style="list-style-type: none"> <li>• Regular audits of the clearing manager to ensure processes are sufficiently robust and any issues are identified quickly and resolved, with the audit reports being made available to market participants.</li> <li>• The clearing manager provide enough information on prudential securities so that if/when a breach occurs, we are able to identify that there has been a breach and are not reliant on the clearing manager to do so. In this regard Contact would ask that parties are provided on a weekly basis with the following information: <ul style="list-style-type: none"> <li>– Any calls for additional security made during the week.</li> <li>– A list of calls settled in the required time period.</li> </ul> </li> </ul>
Genesis	Questions not addressed individually – see response at end of this report
Meridian	<p>Meridian appreciates the way the WAG has sought to clearly frame its considerations around the Authority's statutory objective and Code amendment principles. We consider this approach provides an appropriate and solid basis for identifying potential deficiencies and assessing the case for modifying existing arrangements.</p> <p>At a high level, Meridian mostly agrees with the WAG's characterisation of <u>potential</u> regulatory failures. We note, however, that:</p> <ul style="list-style-type: none"> <li>• The lower priority applicable to generation payments on default relative to loss and constraint excess payments and socialisation of Hedge Settlement Agreement (HSA) risks should be highlighted as other potential inefficiencies. The current arrangements are difficult to justify, would appear to expose generators to unduly high risks, and may otherwise not be revisited for some time to come.</li> <li>• Meridian would like to understand the Clearing Manager's likely approach to implementing the proposed changes to the regime and how its approach is monitored. Delays in prudential calls, particularly in times of high prices, are another factor that could contribute to uncertainty in credit needs, excessive costs, and under-procurement. Because of this Meridian submits more frequent prudential calls needs to be further investigated. More frequent prudential assessments are also more compatible with a</li> </ul>

1. To what extent have we defined the regulatory failures appropriately, and what other problems are there, if any?	
Submitter	Submitter response
	<p>weekly settlement process.</p> <p>Please also see comments in Meridian’s response to question 2 below regarding the importance of taking into consideration changes in market structures that have occurred since the regime’s inception.</p>
MEUG	<p>Agree the existing settlement and prudential security arrangements have inefficiencies<sup>7</sup>.</p> <p>Aggregate level of prudential security is low compared to AEMO and PJM using PLGD though we are not sure the level of security measured by PLGD in those markets is appropriate for New Zealand. Our position is best summarised as stated in the Executive Summary of the paper that<sup>8</sup> <i>“Overall level of prudential security <u>appears low</u>”</i></p> <p>The underlined text is our emphasis. This leads MEUG to be cautious about increasing overall levels while very supportive of steps to improve efficiency.</p>
MRP	<p>The regulatory failures have been defined appropriately. However, while the potential theoretical issues have been identified the paper does not provide any meaningful analysis of their materiality. For example, while in theory under and over procurement of prudential can reduce incentives for generation investment, in practice the decision to invest is guided by a myriad of other factors such as wholesale prices, demand growth, cost of capital equipment, regulatory approvals and surveying costs to name but a few. In the context of these costs, prudential implications are likely to be minor.</p> <p>The historical analysis provided in the paper suggests that there have been some periods of not insubstantial over and under prudential procurement, particularly around 2008 which was a particularly dry year. We note that over this period the market did not observe any lessening of generation investment which would suggest that prudential impacts are not a significant factor influencing investment decisions. By comparison, the significant reduction in demand growth and softening of wholesale prices has resulted in several recent announcements for prospective generation projects to be cancelled or delayed.</p> <p>In Mighty River Power’s view, the current levels of prudential are not a materially prohibitive factor in investment. While we support the principle that the prudential regime should be as efficient as possible, we consider that managing the risks of under procurement should be given a higher priority than over procurement as ultimately the purpose of a prudential regime is provide security to sellers that credit risks are being managed appropriately.</p>

<sup>7</sup> Paragraph 3.2.3

<sup>8</sup> Paragraph 1.1.2 b)

1. To what extent have we defined the regulatory failures appropriately, and what other problems are there, if any?	
Submitter	Submitter response
Norske Skog	<p>The problems that the WAG has identified focus on retailer credit risk and inefficiency of the electricity industry – particularly for generators. WAG is concerned that generators may not invest. WAG should be more concerned that the productive sector may not invest. If NZ is to claw its way out of the current economic malaise then this can only be achieved by production of goods and export earnings.</p> <p>Currently the electricity market prudential security obligations are constraining significant amounts of capital from being invested in the productive sector. Given banks' current aversion for providing guarantees to businesses with less than investment grade credit ratings industrial customers dealing directly with the electricity market are forced to provide prudential security as cash. Right now cash is very hard to come by, and totally unproductive to have large amounts sitting in the clearing manager's bank account.</p>
NZX	<p>In Section 5 the paper presents the concepts of over-procurement and under-procurement, each of which is listed as an efficiency issue. Under procurement maps correctly to the concept of loss given default. We do not believe over-procurement as defined in the paper, is inefficient or excessive. Rather if the clearing manager held enough security to cover a default, the security should be considered sufficient. An appropriate system may rightly require a 'buffer' so that loss given default reaches acceptable levels. In this context, the term over procurement would better be applied to situations where shortcomings in a methodology result in differential levels of security for similar risks or where the prudential security assessment methodology leads to higher levels of security than designed.</p>
OMF	Questions not addressed individually – see response at end of this report
Opuha Water Ltd	Questions not addressed individually – see response at end of this report
Opunake Hydro	Questions not addressed individually – see response at end of this report
Orion	The failures have been appropriately defined.
Pacific Aluminium	There is an appropriate concern that the level of prudential security required of participants is much too great at times and it is therefore appropriate that this be reviewed. To that extent, and with a focus on a least-cost.

1. To what extent have we defined the regulatory failures appropriately, and what other problems are there, if any?	
Submitter	Submitter response
Pulse Utilities	<p>The WAG discussion focuses on economic inefficiency but Pulse believes there is also significant regulatory failure in the current market design that contributes to risk of participant failure.</p> <p>Current market design has no limits on wholesale price and no limits on the prudentials that may be required. A market without limits creates significant risk of discontinuous change outside normally anticipated boundaries and few investors are willing to rely on UTS provisions to save their investment.</p> <p>The market design and the regulatory created risk profile ensure very high barriers to entry. Investment and competition is stifled with lines companies, gentailers and the Clearing Manager demanding unreasonably high levels of security because the market design fails the non-vertically integrated retailer, not because the non-vertically integrated retailer fails the market.</p> <p>The current market design has no ability to account for the most common ways new entrant retailers hedge, including ASX futures, cap options or load following generation based hedges. This effectively places unlimited risk on a non-vertically integrated retailer even when they are well hedged.</p> <p>No matter how much money non-vertically integrated retailers pour into prudential securities (with 3 days warning) this does not help the retailer pay for its 20<sup>th</sup> of the month electricity purchases.</p> <p>In addition, a non-vertically integrated retailer is forced to fund the difference between payments required at 2pm and monies received at 4.30pm. Again, due to the unlimited nature of the wholesale market, this can be disproportionately large.</p> <p>Lines companies have the ability to increase their prudential securities from two weeks to two months within days and have proven over the last two months that they will do so when a dry winter event occurs.</p> <p>Systemically, the market design failures increase cash flow pressure and working capital demands on the non-vertically integrated retailer just when wholesale prices are high and at a time a company is most likely to need to manage its working capital to ensure it pays for wholesale electricity purchases on time.</p> <p>Pulse believes that any company that does fail will do so not because it is unable to pay for its 20<sup>th</sup> of the month electricity purchases but rather, because it is unable to fund what are in effect a series of undefinable, exorbitant and systemically crippling short term prudential and non-operating cash flow demands.</p> <p>In relation to regulatory failure, the WAG discussion paper is generally too neutral and Pulse encourages strong and clear communication to the Electricity Authority that nothing short of urgent change is required.</p>

1. To what extent have we defined the regulatory failures appropriately, and what other problems are there, if any?	
Submitter	Submitter response
Simply Energy	No material issues to comment on that would add to consultation.
Trustpower	The paper has properly defined the forms of “regulatory failure” that need to be addressed by the review. It is clear that any shortcomings in prudential and settlement systems can reduce efficiency, competition and security in the market.
Vector	Questions not addressed individually – see response at end of this report
Wensley	Questions not addressed individually – see response at end of this report

2. What, if any, material issues have been missed from the description of current arrangements?	
Submitter	Submitter Response
Contact	<p>A generator/retailer may choose to settle on a net rather than gross basis, if it is of the view that there is significant settlement risk. For example, a company that has purchases of \$10 million and sales of \$8 million could just deposit \$2 million by 2pm on settlement day. The first step of the clearing manager would be to net off purchases and sales. Such action would be a serious breach of the Code (for which the maximum penalty is \$200,000) however, there may be circumstances in which this makes sense from a company's point of view.</p> <p>The fact that to date, generators/retailers have chosen not to technically default on purchase payments (that is, by paying the net amount owing) should not provide any comfort that they will not do so in the future. As such, this should be looked at.</p> <p>Paragraph 4.8.4 notes that:</p> <p style="padding-left: 40px;">“...where a defaulting purchaser owes an amount in relation to an HSA, all generators share in that under-payment: the under-payment is not borne by the counterparty to the underlying financial contract.”</p> <p>Contact questions why the market should bear this risk, and why the risk should not sit with the generator who has entered into the bilateral agreement with the defaulting party.</p> <p>In Contact's view the situation outlined above drives behaviour that is detrimental to the market and results in the mispricing of credit risk. This is because the generator with whom they have entered into the bilateral agreement knows that the risk will ultimately be borne by all generators. As such, it could be said to be incentivising generators to enter into contracts that they would otherwise not enter into, and pricing the HSA more cheaply than if they were fully bearing the settlement risk.</p> <p>Contact notes that the inability of the clearing manager to appoint a receiver under the current Code means that generators have no protection from incurring losses, even when the insolvency of a market participant is well known. This is because consumers are likely to continue taking electricity from the grid irrespective of the solvency of their defaulting retailer. Contact believes this point needs to be addressed with urgency and that prudential security must be increased until a retailer of last resort regime is in place. In particular, there must be a clear exit process for a defaulting retailer and the defaulting party must not take on any new customers.</p> <p>Contact would also like to understand the powers of the clearing manager with regard to large users. Specifically, can the clearing manager “pull the plug” under a default or cross default situation?</p>
Genesis	Questions not addressed individually – see response at end of this report

2. What, if any, material issues have been missed from the description of current arrangements?	
Submitter	Submitter Response
Meridian	<p>Meridian recognises the complexity of the task and, in general, considers the WAG has done a commendable job in providing an accessible summary of existing arrangements.</p> <p>Meridian agrees that the consultation paper captures most of the main elements of current settlement and default arrangements. Another important aspect is the shift from voluntary to compulsory market structures that, as noted in background documentation published by the Authority<sup>9</sup>, was accompanied by only minimal changes to settlement and prudential arrangements. Meridian agrees with the comment made by the Authority that this adds to the importance of the WAG's review. This change needs to be taken into account when considering whether certain elements of the current regime remain necessary and appropriate. It also reinforces the need to apply appropriate weight to ensuring arrangements deliver adequate protection for generators.</p>
MEUG	No additional issues suggested.
MRP	<p>The issues have been described appropriately. We agree with the assessment that defining the period for exit of a defaulting party is a material factor in substantially reducing the probability that the clearing manager will have insufficient security to cover a loss. We support the WAG recommendation in this regard and the work of the RAG.</p> <p>We would support this option over bespoke exit arrangements being able to be negotiated between the clearing manager and participants. Having a single exit mechanism would provide a level playing field, be transparent to all and would be subject to clear enforcement provisions in the Code.</p> <p>We consider that a move to weekly settlements would result in issues that have not been considered in the paper and are outlined in our response below to Question 6.</p>
Norske Skog	<p>WAG has identified that there are few Hedge Settlement Agreements (HSAs) lodged with the Clearing Manager. WAG has not provided any analysis for the reasons behind this. WAG should do so.</p> <p>However we are happy to share our experiences. We have made requests to some of our hedge contract counter-parties for the HSA to be lodged with the Clearing Manager. These requests are generally refused. Counter-parties are concerned that lodging of an HSA will affect the amount of prudential security that they must provide.</p>

<sup>9</sup> Refer: <http://www.ea.govt.nz/document/12798/download/our-work/advisory-working-groups/mdag/10Feb11/>

2. What, if any, material issues have been missed from the description of current arrangements?	
Submitter	Submitter Response
NZX	No answer supplied.
OMF	Questions not addressed individually – see response at end of this report
Opuha Water Ltd	Questions not addressed individually – see response at end of this report
Opunake Hydro	Questions not addressed individually – see response at end of this report
Orion	Although probably more appropriately addressed by the Authority rather than WAG, we would have thought the paper could have discussed the relevance of the recent Code changes that have reduced distributors' ability to impose prudential requirements on retailers.
Pacific Aluminium	We have not formed a view on this at this time.
Pulse Utilities	<p>Overall this section is factual and well detailed.</p> <p>Whilst Pulse acknowledges that the primary purpose of prudential security is to manage credit risk associated with wholesale electricity purchases, we believe that credit risk issues associated with the over-the-counter hedge market need to be included. ASX Market and Clearing Manager registered hedges can be considered to be regulated/controlled and include credit risk management. However, the bulk of hedging occurs over-the-counter without regulation.</p> <p>Gentailer failure is the most significant risk to the market when likelihood, consequences of failure and risk of cascading failure are considered. Pulse is unable to exert market power and obtain any form of security against the risk of a generator failing to meet over-the-counter contract for difference commitments.</p> <p>In a constrained market, it is the generator that has to pay the retailer the difference between the spot price and the hedge strike price. Increasing market settlement frequency provides Pulse with reduced exposure to a generator that has overcommitted itself to hedge contracts in the market, particularly after becoming unable to offset these contracts against physical plant.</p> <p>Requiring generators to lodge over-the-counter hedges between market participants with the Clearing Manager would also ensure that hedge market risk was well managed. It would also assist in balancing prudential demands between buyers and sellers ensuring alignment of all parties' interests in making prudential levels efficient.</p>

2. What, if any, material issues have been missed from the description of current arrangements?	
Submitter	Submitter Response
Simply Energy	<p>The description and metrics developed to describe the performance of the prudential mechanism understate the maximum credit requirement.</p> <p>This is because the metrics are simulated assuming the Clearing Manager calls prudential perfectly. The reality is the Clearing Manager has less than perfect information and will have a tendency to call either more or less prudential than the mechanism would strictly imply.</p>
Trustpower	<p>The current arrangements are well described in the paper. We would add, however, that current prudential calculations are somewhat opaque and participants would benefit from a more transparent output being provided by the clearing manager to allow easier reconciliation of prudential calls.</p> <p>Clearly, the management of events of default, including a retailer's exit from the market is a primary material issue. TrustPower notes that the Retail Advisory Group is addressing this matter, and suggests that its resolution is a necessary prerequisite to any substantial revision of prudential security requirements and systems.</p> <p>TrustPower has argued for several years now that prudential requirements and the probability (and effects) of a retailer default are intrinsically linked, therefore the workstreams examining both issues require a considerable degree of collaboration.</p>
Vector	Questions not addressed individually – see response at end of this report
Wensley	Questions not addressed individually – see response at end of this report

3. To what extent is this an accurate description of the failures around current arrangements? If not, what have we missed, how would you describe it and why is the issue material?	
<b>Submitter</b>	<b>Submitter Response</b>
Contact	<p>The WAG has, overall, accurately described the failures around current arrangements. To this Contact would add that the ability of the clearing manager to access prudentials in a timely fashion has never been tested.</p> <p>It is Contact's understanding that a bank guarantee requires the clearing manager to take the original of the bank guarantee to the issuing branch in person. Depending on when a default occurs, and the location of the issuing branch, it could take up to three days to access prudential capital. Any delay imposes costs on generators who need to cover the shortfall in the meantime. These costs, which while small relative to a full retailer default, are not insignificant, as demonstrated by the August 2010 default.</p> <p>Additionally Contact notes that the current prudential estimation methodology will always lag the exposure as historical price movements are used to estimate future prices. As a result, in a period of rising prices the prudential level will generally be underestimated, and in a period of falling prices the prudential level will generally be overestimated.</p> <p><i>(continued...)</i></p>

3.	To what extent is this an accurate description of the failures around current arrangements? If not, what have we missed, how would you describe it and why is the issue material?												
<b>Sub mitt er</b>	<b>Submitter Response</b>												
	<p>In Contact's view the different estimates made, and their associated risks in the prudential calculation, are as follows:</p> <table border="1" data-bbox="465 518 1883 1198"> <thead> <tr> <th data-bbox="465 518 871 571"></th> <th data-bbox="871 518 1099 571">Estimation risk</th> <th data-bbox="1099 518 1883 571">Comments</th> </tr> </thead> <tbody> <tr> <td data-bbox="465 571 871 730">1. Price of obligations already entered into 2. Volume of obligations already entered into</td> <td data-bbox="871 571 1099 730">Low</td> <td data-bbox="1099 571 1883 730">Although not known with 100% certainty, these can be estimated with a relatively low margin of error.</td> </tr> <tr> <td data-bbox="465 730 871 954">3. Volume of obligations likely to be entered into between now and seven days after next settlement period</td> <td data-bbox="871 730 1099 954">Low / medium</td> <td data-bbox="1099 730 1883 954">Generally reasonably predictable based on historical trends. May be influenced by a growing customer base / significant new customers – but there is an obligation on retailers to inform the clearing manager of any significant changes in load.</td> </tr> <tr> <td data-bbox="465 954 871 1198">4. Price of obligations likely to be entered into between now and seven days after next settlement period</td> <td data-bbox="871 954 1099 1198">High</td> <td data-bbox="1099 954 1883 1198">Spot electricity prices are highly variable. The current methodology uses recent historical prices as an estimate of future prices. As a result, the prudential calculations will lag the exposure. That is, in a period of rising prices the prudential calculation will underestimate requirements, and in a period of falling prices the prudential calculation will overestimate requirements.</td> </tr> </tbody> </table> <p>Although Contact agrees that there should be some scaling of prudential requirements subject to a party's credit rating (and agrees that the scaling should extend down to investment grade credits), it does not believe any party should have a prudential requirement of zero.</p>		Estimation risk	Comments	1. Price of obligations already entered into 2. Volume of obligations already entered into	Low	Although not known with 100% certainty, these can be estimated with a relatively low margin of error.	3. Volume of obligations likely to be entered into between now and seven days after next settlement period	Low / medium	Generally reasonably predictable based on historical trends. May be influenced by a growing customer base / significant new customers – but there is an obligation on retailers to inform the clearing manager of any significant changes in load.	4. Price of obligations likely to be entered into between now and seven days after next settlement period	High	Spot electricity prices are highly variable. The current methodology uses recent historical prices as an estimate of future prices. As a result, the prudential calculations will lag the exposure. That is, in a period of rising prices the prudential calculation will underestimate requirements, and in a period of falling prices the prudential calculation will overestimate requirements.
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Genesis	Questions not addressed individually – see response at end of this report												

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<b>Sub mitt er</b>	<b>Submitter Response</b>
Mer idia n	As per our response to Q1 above, Meridian considers the socialisation of HSA risks and priority ranking for generator payments applicable on default should be referenced. While Meridian accepts that the potential overall impacts of these issues may not be as significant as those which have been focused on by the WAG, we do not consider them to be immaterial to the overall efficiency of the regime. Meridian also considers the WAG should undertake a further investigation of the frequency of prudential calls to inform their assessment, especially if a shift to weekly settlement is to be pursued. Meridian otherwise agrees that the WAG's description is accurate.
ME UG	Looks reasonable.

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MR P	<p>See responses to Q1 and Q2 above.</p> <p>Issue (f): We agree it is unclear as to whether assets such as accounts receivable should be recognised for prudential purposes and cannot see how this can be practically implemented. We agree with the conclusion that it is not appropriate for the Authority or Clearing Manager to assume a banking type role.</p> <p>In terms of recognition of future values, we agree that it is unclear whether this is an issue that needs to be addressed directly given the market appears to be moving to enable this outcome itself.</p> <p>Issue (g): We agree that recognition should be given to investment grade ratings. The A- threshold should be reconsidered as this is an artefact of investment ratings at the time of market commencement.</p> <p>Issue (h): We agree that the benefits of moving from gross to net settlement are unclear and do not consider this measure necessary at this time.</p> <p>Another issue that is not addressed specifically in the paper but we consider represents a material inefficiency in the current arrangements is the process for lodging a bank guarantee with the Clearing Manager.</p> <p>Currently the Clearing Manager requires a hard copy of any approval to changes in prudential security to be physically provided by its transactional bank. This can create significant delays. In MRPs experience the end-to-end process, from receipt of a notice to alter prudential security through to physical lodgement, can take up to six days. Against a weekly prudential requirement this can be a challenging process to manage efficiently, particularly with volatile prudential levels. This raises questions around the ability of prudential framework to respond efficiently in the case of default and is of particular concern with further consideration of reducing prudential assessment periods.</p> <p>We would support the WAG recommending that the Clearing Manager review its policy for physical delivery of prudential security approval and assess the ability to enable this verification to occur electronically via SWIFT which is an accepted, secure and modern transaction standard.</p>

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<b>Submitter</b>	<b>Submitter Response</b>
Norske Skog	<p>We believe there is a problem with the assessment of demand for industrial consumers. The Clearing Manager must forecast demand for all consumers, yet is obviously in a poor position to forecast an industrial plant's future demand – which may be affected by plant maintenance, order book and response to electricity prices. This is likely to be a material problem when electricity prices are high, as the Clearing Manager could impose onerous prudential security obligations on companies like ourselves, that are completely unnecessary.</p> <p>The Electricity Authority has recognised that industrial plants are best placed to predict their electricity consumption by requiring “non-conforming” loads to produce demand bids, whilst leaving forecasts of all conforming load to the System Operator<sup>10</sup>. The EA needs to be consistent with load forecasts for the purpose of calculating prudential security.</p>
NZX	Consideration should be given to performance of current methodologies for tail events. Is the system secure against cascading financial failure under a prolonged scarcity pricing event?
OMF	Questions not addressed individually – see response at end of this report
Opuha Water Ltd	Questions not addressed individually – see response at end of this report

<sup>10</sup> These changes are known as the Demand Side Bidding and Forecasting project, implemented on the 28<sup>th</sup> June 2012.

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Submitter	Submitter Response
Opunake Hydro	Questions not addressed individually – see response at end of this report
Orion	We consider this to be an accurate description.
Pacific Aluminium	The description appears to be reasonable.
Pulse Utilities	<p>Pulse does not agree with the emphasis placed on under procurement and over procurement in this section because it creates emphasis on micro level compared with macro level/systemic issues. At this point, we consider the discussion paper really needs to define the fundamental failings of the market design that need to be rectified. Quite a few of them are included in section 3 and 4. However, there is significant risk that key issues will not be focussed on unless incorporated into section 5.</p> <p>Pulse acknowledges that individual issues with the current design cannot be considered in isolation The prudential and settlement system is clearly broken and requires a complete re-design. However Pulse considers key systemic issues with the current design to include the following:</p> <p>a) There are no upper limits to prudential levels and on that basis the prudential securities are too high</p> <p>It is very difficult for a company to manage its prudential security requirements when there is effectively no upper limit. A boundary needs to be placed on prudential levels because at some point increasing prudentials simply increases systemic risk of failure and prevents a retailer focussing on</p>

3. To what extent is this an accurate description of the failures around current arrangements? If not, what have we missed, how would you describe it and why is the issue material?

Sub mitt er	Submitter Response
	<p>the payment of its 20th of the month purchases.</p> <p>b) Prudential levels are too volatile and uncertain</p> <p>Recent quick wins completed by the Clearing Manager were claimed to have reduce volatility. Whilst month to month prudential movements appear likely to have been smoothed, the maximum prudential payable has been increased. This is due to the fact the rolling average has been reduced to three weeks. In Pulse’s opinion, volatility has therefore increased and we find this absolutely unacceptable when so many systemic issues remain unresolved.</p> <p>c) Prudentials do not allow for payments made on the 20<sup>th</sup> of the month</p> <p>Prudentials are a protection against non payment on the 20<sup>th</sup> of the month. Prudentials should be able to be used to assist with 20<sup>th</sup> of the month payments or alternatively be reduced as part of the monthly invoicing and settlement process.</p> <p>d) Gross settlement is inefficient</p> <p>An additional level of security effectively exists in the market design by requiring retailers to fund the difference between payments made at 2pm and monies received at 4.30pm on the 20<sup>th</sup>. Due to the volatility of the wholesale market, the difference can be very large and a significant causal factor as to why a retailer may default.</p> <p>e) Hedging inadequately accounted for by Clearing Manager</p> <p>Cap options, ASX futures and generation following swaps cannot currently be used by the Clearing Manager in calculating prudential levels meaning actual prudentials are often higher than they should be.</p> <p>f) Compounding cash flow demands during constrained periods</p> <p>A retailer is likely to have compounding demands requiring funding including the potential for increasing lines company securities, increasing Clearing Manager securities, increasing volatility and movements in ASX futures trading account including initial margins, increasing wholesale market settlements and increasing requirements to cash flow 2pm payments before receiving monies at 4.30pm.</p> <p>g) Banks and financial markets don’t understand</p> <p>Telling a bank you have unlimited prudential and cash flow risk but that you’re managing your business responsibly appear mutually exclusive to them. The complexity of the electricity market and the current prudential and settlement system is not considered bankable without unreasonable</p>

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<b>Submitter</b>	<b>Submitter Response</b>
	<p>balance sheet support.</p> <p>h) Clearing Manager discretion not appropriate</p> <p>Clearing Manager discretion in setting prudentials increases uncertainty and risk and is not appropriate. Rules should be prescriptive in nature.</p>
Simply Energy	<p>There are two material omissions that should be considered:</p> <ul style="list-style-type: none"> <li>• A comparison of the expected cost of default and the cost of providing credit support in excess of that required by the prudential mechanism, and</li> <li>• A discussion of extreme events e.g. would a large generator-retailer called for material prudential during a period of low hydro storage, if they failed to make the call because of seizure of the international credit markets would they be pushed into default and receivership, need to ensure that the prudential mechanism does not push otherwise solvent organisations into receivership or a Government bailout.</li> </ul>

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Simply Energy	<p style="text-align: center;"><b>Table 1. Expected Cost of Default Calculation</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Expected Cost of Default</th> <th style="text-align: left;">Units</th> <th style="text-align: left;">Comment</th> </tr> </thead> <tbody> <tr> <td colspan="3"><b>Retailer short position</b></td> </tr> <tr> <td>MWh per day</td> <td>1 MWh/day</td> <td>Hypothetical short position of a retailer</td> </tr> <tr> <td></td> <td>365 MWh/year</td> <td>Daily MWh x 365 days per year</td> </tr> <tr> <td>Average price of energy</td> <td>\$ 80.00 \$/MWh</td> <td>Long term average energy prices</td> </tr> <tr> <td>Cost of energy per year</td> <td>\$29,200 \$/year</td> <td>MWh per year x long term energy price</td> </tr> <tr> <td colspan="3"><b>Cost of default - reasonable worst case scenario</b></td> </tr> <tr> <td>Price during period of loss</td> <td>500 \$/MWh</td> <td>Assumed average price leading up to default</td> </tr> <tr> <td>Days of loss</td> <td>20 days</td> <td>Paper Table 2. Current Arrangements with 21 day exit period</td> </tr> <tr> <td>MWh loss</td> <td>20 MWh</td> <td>Days x MWh per day</td> </tr> <tr> <td>Prudential shortfall</td> <td>\$ 10,000</td> <td>MWh x Peak Price</td> </tr> <tr> <td><b>Probability of default</b></td> <td>4.86% per year</td> <td>Between B and B+</td> </tr> <tr> <td></td> <td>0.41% per month</td> <td><math>1 - (1 - \text{Annual Probability})^{1/12}</math></td> </tr> <tr> <td><b>Expected cost of default</b></td> <td>\$ 41 \$/year</td> <td>Prudential shortfall x monthly probability of default</td> </tr> <tr> <td></td> <td>\$ 0.11 \$/MWh</td> <td>Expected cost of default / MWh per year</td> </tr> <tr> <td colspan="3"><b>Comparison with A- credit rating default rate</b></td> </tr> <tr> <td>Probability of default per year</td> <td>0.142% per year</td> <td>Expected cost of default / Value of energy per year</td> </tr> <tr> <td>Compare with A minus</td> <td>0.030% per year</td> <td></td> </tr> </tbody> </table> <p>This analysis suggests that for counterparties with a credit rating (risk) of between B and B+ the current prudential mechanism does not upgrade their credit risk to the level of A minus under a reasonable worst case scenario. However for counterparties with stronger credit the current prudential</p>			Expected Cost of Default	Units	Comment	<b>Retailer short position</b>			MWh per day	1 MWh/day	Hypothetical short position of a retailer		365 MWh/year	Daily MWh x 365 days per year	Average price of energy	\$ 80.00 \$/MWh	Long term average energy prices	Cost of energy per year	\$29,200 \$/year	MWh per year x long term energy price	<b>Cost of default - reasonable worst case scenario</b>			Price during period of loss	500 \$/MWh	Assumed average price leading up to default	Days of loss	20 days	Paper Table 2. Current Arrangements with 21 day exit period	MWh loss	20 MWh	Days x MWh per day	Prudential shortfall	\$ 10,000	MWh x Peak Price	<b>Probability of default</b>	4.86% per year	Between B and B+		0.41% per month	$1 - (1 - \text{Annual Probability})^{1/12}$	<b>Expected cost of default</b>	\$ 41 \$/year	Prudential shortfall x monthly probability of default		\$ 0.11 \$/MWh	Expected cost of default / MWh per year	<b>Comparison with A- credit rating default rate</b>			Probability of default per year	0.142% per year	Expected cost of default / Value of energy per year	Compare with A minus	0.030% per year	
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er**      **Submitter Response**

mechanism may procure more support than is required to meet an A minus rating.

### 3.12 Quantification of the Costs in Excess of Prudential Support requirements

While it is reasonable for counterparties to meet the cost of supporting their credit up to the level (reasonably) required by the market, the volatility in the prudential required and mechanisms for providing support mean that most of the time a retailer must procure credit support well in excess of their current requirement.

Typically credit support will be provided in the form of a letter-of-credit (LC) for which banks charge ~ 1% per year plus a risk premium for credit support (we have assumed a premium equal to the annual probability of default although in reality risk premiums will be greater than the probability of default). Letters of credit can take weeks to put in place (assuming the bank is willing to provide an LC at all) so a prudent retailer must seek an LC that covers a reasonable worst case prudential call well before a prudential call arises. This means it is not practical for a retailer to adjust their LC in line with actual market calls and most of the time they will provide excessive support to the market.

Using the same example retailer, the following table contrasts the cost of obtaining credit support where:

- \$3.13/MWh is the cost for the peak facility; where the peak facility is calculated from 2/3rds of the Maximum Credit Requirement to back out the working capital which does not form part of the prudential mechanism, and
- \$0.72/MWh is the cost for the average facility; representing the quantum of funds through time that require capital support

The difference in cost (\$2.41/MWh) between the peak and average facility represent the Excess Cost paid by the retailer to provide credit support over and above the market requirements.

3. To what extent is this an accurate description of the failures around current arrangements? If not, what have we missed, how would you describe it and why is the issue material?

Sub mitt er	Submitter Response				
Sim ply Ene rgy	<b>Table 2. Cost of Credit Support</b>				
	<b>Cost of Credit Support</b>	<b>Units</b>	<b>Comment</b>		
	<b>Retailer short position</b>				
	MWh per day	1 MWh/day	Hypothetical short position of a retailer		
	MWh per year	365 MWh/year	Daily MWh x 365 days per year		
	Average price of energy	\$ 80.00 \$/MWh	Long term average energy prices		
	Cost of energy per year	\$ 29,200 \$/year	MWh per year x long term energy price		
	<b>Cost of Facility</b>				
	Bank facility fee	1.0%	Bank cost to write LoC or provide facility		
	Risk premium for asset support	4.9%	Between B and B+		
	Total facility fee	5.9%	Facility fee + Risk premium		
	<b>Current Credit Facility Required</b>				
	Maximum Credit Facility Requirement	332 days			
	Facility requirement to meet Prudential	221.33 days	Remove working capital from cost of prudential support		
	Credit facility required to meet prudential calls	\$ 17,707	MWh per day x Price x Days of facility to meet prudential		
	<b>Average Facility Required</b>				
	Average days of prudential	56 days	Paper Table 2. Current Arrangements with 21 day exit period		
	Average facility required to meet prudential calls	\$ 4,480			
	<b>Cost of Prudential Support Summary</b>				
	<b>Facility cost per</b>	<b>Current</b>	<b>Average</b>	<b>Excess cost</b>	<b>Units</b>
	Year	\$ 1,038	\$ 263	\$ 775	\$/year
	MWh	\$ 2.84	\$ 0.72	\$ 2.12	\$/MWh
	Annual cost of energy	3.6%	0.9%	2.7%	% annual energy spend

3. To what extent is this an accurate description of the failures around current arrangements? If not, what have we missed, how would you describe it and why is the issue material?

**Submitter**  
**Submitter Response**

Simply  
Energy

This analysis shows that under the current arrangements the cost of providing prudential support over and above that required (\$2.12/MWh) is in the order of 20 x greater than the expected cost of default (\$0.11/MWh).

Therefore we submit that WAG should use this type of framework (or preferably a more refined version) for comparing the cost of the various options for modifying the settlement and prudential framework.

### **3.1.3 This is an insurance problem**

It is economically inefficient for retailers to pay \$2.12/MWh to provide credit support above that required by the market. This inefficiency is driven by the volatility in prudential requirements relative to the static nature of balance sheet support. Therefore an additional mechanism we would like to see considered to improve market efficiency is opt-in insurance where:

- A retailer would pay an insurance premium on each MWh of net short purchases where the insurance premium could be determined in part by the stress test disclosures and through the existing reconciliation participant audits
- The retailer would meet all prudential calls up to say \$100/MWh on their retailed volumes, and

The insurance provider (or pool of funds) would meet the amount of prudential called over and above that fixed price This type of policy would reduce prudential volatility on retailers enabling them to more efficiently meet the costs of supporting market prudential. We anticipate that once this type of framework is established it would be attractive for private sector insurers to step in.

#### **Volatility contributes to increased probability of default**

In 2008 the New Zealand electricity market experienced the highest sustained prices on record presumably resulting in significant prudential calls on hydro dominated generator-retailers. Shortly after the peak in prices Lehman Brother's collapsed as the inflection point for the global financial crisis creating severe constraints in the world's financial markets. Had Lehman's collapsed a month or two earlier these large generator-retailers could have found themselves in a position where they were not able to access funds to meet market prudential calls with the risk of default due to prudential call but with a sound underlying business.

Would it have made sense to push a large generator-retailer into receivership? We don't think so and believe that there would have been political intervention to prevent such an outcome.

The volatility of the current prudential mechanism increases the probability of default, not only by creating some very large short term calls on retailers, but also by allowing retailers to build up a retail position during periods of low price that requires minimal prudential which they are subsequently unable to support during short periods of high prices.

We therefore request that WAG test the design of any new prudential mechanism against edge case events to make sure that the design of the prudential mechanism doesn't become the cause of default rather than protection against market loss in the event of default.

3. To what extent is this an accurate description of the failures around current arrangements? If not, what have we missed, how would you describe it and why is the issue material?	
<b>Submitter</b>	<b>Submitter Response</b>
Trustpower	<p>The paper gives a very good description of potential failures around current arrangements. It introduces the concept of Probability of Loss Given Default (PLGD), which is a very useful one. The chart at Figure 6 and Table 2 in the paper are valuable illustrations of the sensitivity of PLGD (ie, under procurement of prudential security) to the assumed exit period for the defaulter's customers. It is clear that current prudential arrangements result in a significant PLGD assuming a 35 day exit period (82% across all days and 100% on settlements days only). Only if the exit period is reduced to around 7 days does the PLGD reduce to the more acceptable level of 12% (though remains at 51% for settlement days only).</p> <p>Clearly, exit periods need to be tightly defined and managed before meaningful reform of prudential systems can be undertaken.</p>
Vector	Questions not addressed individually – see response at end of this report
Wensley	Questions not addressed individually – see response at end of this report

3. Have we identified the right measures of risk? If not, what would you use?	
Submitter	Submitter Response
Contact	<p>In Contact’s view estimating the actual risk that eventuated compared with the level of prudential security is not an accurate measure of the risk that existed. The risk that needs to be covered is the reasonable likelihood of what could occur, not what actually does. Therefore, the under- and over-procurement charts in Figure 4 significantly underestimate the risk that generators are currently bearing. Our view is that the risk must be the risk of the unknown, not what occurred with the benefit of hindsight.</p> <p>Other risk measures that the Authority should consider are those that a professional clearing house uses, specifically ‘value at risk’, which looks at historical price volatility.</p>
Genesis	Questions not addressed individually – see response at end of this report
Meridian	<p>Meridian agrees paragraphs 5.2.2-5.2.8 capture the main potential options for measuring risk.</p> <p>Meridian considers the WAG’s probability of loss given default (“PLGD”) analysis provides a good starting point for evaluating potential risks inherent in current arrangements. As the WAG acknowledges, however, it is important its limitations are recognised. Meridian does not consider there will be one single “right” measure of risk and we would welcome some further sensitivity analysis that provides a better sense of the probability of loss given default in relation to different types of “synthetic” purchasers and the materiality of these potential losses.</p> <p>Meridian considers that further analysis of the probability of default, while attractive in theory, is unlikely to be able to be progressed in a robust way and should not be considered a priority for further work.</p>
MEUG	As the paper notes there is no internationally recognised single standard and there are pros and cons of alternative metrics. MUEG has no suggestions for better metrics.
MRP	The measures of risk provided in the paper are appropriate.
Norske Skog	Yes.

3. Have we identified the right measures of risk? If not, what would you use?	
Submitter	Submitter Response
NZX	<p>Loss given default is a good metric but should the industry should investigate using this metric as measured by participant. Certain participant profiles are more or less 'risky' than others and this should be recognised through analysis of the prudential systems performance. At the same time, it may be appropriate to design the system to cover the risks presented by a model purchaser.</p> <p>Some areas where risk profiles will vary:</p> <ul style="list-style-type: none"> <li>• Price sensitive industrial vs. pure play retailer (risk may not increase with industrial in proportion to price)</li> <li>• pure play retailer (unhedged) vs. 'balanced' gentailer (generation falls off and there is a time lag to incorporate in averages)</li> <li>• Unhedged retailer vs. hedged retailer - Easier to estimate exposure for unhedged retailer where hedged retailer may show no exposure but a surge in demand leads to un-forecast exposure.</li> </ul>
OMF	Questions not addressed individually – see response at end of this report
Opuha Water Ltd	Questions not addressed individually – see response at end of this report
Opunake Hydro	Questions not addressed individually – see response at end of this report
Orion	We believe so. Care needs to be taken to avoid the line of reasoning that <i>because</i> there has been no material default, the existing requirements are excessive or overly conservative.
Pacific Aluminium	<p>The WAG should look more widely through the financial markets to see how other sectors deal with similar risks and the tools that they use.</p> <p>Just because the NEM and PJM use PLGD does not strictly mean it is the best tool, or that the levels these markets are using are at the cost-minimising level.</p>

3. Have we identified the right measures of risk? If not, what would you use?	
Submitter	Submitter Response
Pulse Utilities	<p>Pulse has substantial concern with the focus on under procurement, over procurement and probability of loss given default. It measures the fact that there may not be enough money in the pot but it does not measure the likelihood of default occurring or the likely quantum of loss if that default occurs. Given that the pot may only be \$1 short, the probability of loss given default is skewed and certainly favours generators and the argument for increasing levels of security.</p> <p>Whilst the exact likelihood of default is hard to determine, it can be quantified in tabular form and includes various frequencies of retailer default, market share and level of under procurement in pool. For example, if a retailer defaults once every 10 years, the retailer has 10% market share, the market settles monthly and the prudentials are under procured by say 10% then the average bad debt ratio for the generators could be considered to be in the order of <math>(1/(10 \text{ years} \times 12 \text{ months} \times 10\% \text{ market share} \times 10\% \text{ under procurement}))</math> or 0.008% i.e. 99.99% secure. By increasing the frequency of settlement, market security increases further even though probability of loss given default may not change at all.</p> <p>Under no circumstance does Pulse support probability of loss given default as the primary KPI to measure improvement to market security nor any increase in prudential levels. It is the inefficiency of current prudential levels as well the systemic market design issues that primarily need to be resolved, not the probability of loss given default.</p> <p>Pulse also has concern with what appears to be a default view that the probability of loss given default should be 2% as it is an exceptionally skewed measure. Estimated bad debt ratios are clearly a much wider accepted measure of credit risk.</p>
Simply Energy	<p>We do not believe Probability of Loss Given default is the correct metric for risk – rather it is a proxy. When considering changes to the prudential and settlement mechanisms we would like to see the Expected Cost of Default used because Expected Cost of Default would:</p> <ul style="list-style-type: none"> <li>• Take into account the probability of default; the credit worthiness and overall hedge position of retailers, and</li> <li>• The magnitude of loss: <ul style="list-style-type: none"> <li>• If the prudential mechanism collected security that was always \$1 less than the outstanding's the Probability of Loss Given default would equal 100% while the expect cost of default would be \$1.</li> <li>• Conversely if the prudential mechanism collected security that was equal to or greater than actual exposure 999 times but the 1000th time was \$1M short, the Probability of loss given default would be <math>1/1000 = 0.1\%</math> albeit with an Expected Cost of Default of \$1,000.</li> </ul> </li> </ul> <p>Therefore permit a normalised comparison with the costs that the prudential mechanism imposes.</p>

3. Have we identified the right measures of risk? If not, what would you use?	
Submitter	Submitter Response
Trustpower	<p>TrustPower supports the idea of PLGD as a measure of market failure risk, and the use of MCR (maximum credit requirement) as a measure of the working capital required of a participant to contain that risk.</p> <p>PLGD is the appropriate measure because the prudential system should be designed to cover losses assuming a default has occurred. The actual probability of a default occurring is not considered relevant by TrustPower, because prudential security is the “safety net” in the settlement system. It would not make sense to allow a lower quality safety net just because it may have a low probability of being needed. It is almost certain that, at some unknowable time in the future, market conditions will combine with retailer exposure to trigger a default event. The safety net must then work as required, to a high level of assurance (ie a low PLGD).</p> <p>Regarding the risk of certain instruments being used as prudential security, the paper has fully covered these in Section 5.3. In general, TrustPower would caution against requiring the clearing manager to recognise a wider range of assets than currently allowed. The clearing manager should not be expected to assess the creditworthiness of a participant in the same manner as would a bank, because it is not their core function and would add to industry costs and inefficiencies. For the clearing manager to recognise current assets such as accounts receivable would certainly be on the wrong side of this line. Participants with non-standard hedges or other risk instruments should encourage their banks to recognise these assets and thereby achieve a more favourable bank guarantee or letter of credit to be lodged as approved prudential security.</p>
Vector	Questions not addressed individually – see response at end of this report
Wensley	Questions not addressed individually – see response at end of this report

4. Do you agree with the assessment of the appropriate level of security? If not, what information do you have to support an alternative level of security?	
Submitter	Submitter Response
Contact	Contact agrees with the WAG that the current level of security is not sufficient. However, Contact would add to this that the Authority should target a more clearly defined level that brings the New Zealand market into alignment with Australia's national electricity market ( <b>NEM</b> ) and the PJM market in America, for example 2- 8 per cent PLGD.
Genesis	Questions not addressed individually – see response at end of this report
Meridian	Meridian mostly agrees with the WAG's assessment but, as per our response to Q4, we consider some further sensitivity analysis is needed to inform assessment of the suitability of current levels of security. On the basis of the information provided, Meridian does, however, agree with the WAG's overall conclusion that an appropriate level of security would be higher than the levels typically achieved at present.
MEUG	See answer to Q1 above. We also agree with the statement in the paper <sup>11</sup> <i>"This (referring to the comparison of PLGD in NEM and PJM with New Zealand) suggests that there is a reasonable case for increasing the level of security, although there is less clarity about the magnitude of the increase that should be applied".</i>
MRP	We do not have a defined view on what the Probability of Loss Given Default (PLGD) threshold should be but as a principle support the threshold being as low as possible and consistent with international best practice, which from the paper is in the range of 2-6%. We note that proposals to reduce the exit period would substantially reduce the current PLGD and support this as the primary measure that should be considered.
Norske Skog	No we don't agree. Firstly a sample size of 3 does not seem to us to be representative of the population of electricity market jurisdictions in the world. Deliberately choosing two of the three to set the benchmark is not an approach that has much foundation in statistical theory. We do not see any reason why PJM or AEMO are "superior" to NZ – which is the implication of WAG's paper. Maybe NZ's current prudential security arrangements should establish the benchmark, and PJM and AEMO should change? In our view the WAG needs either to sample many more electricity markets, or find some other way to establish the appropriate level of prudential security for the NZ electricity market.

<sup>11</sup> Paragraph 7.3.1, bullet point 2

4. Do you agree with the assessment of the appropriate level of security? If not, what information do you have to support an alternative level of security?	
Submitter	Submitter Response
NZX	The industry needs to be confident that any default is contained to the defaulting participant.
OMF	Questions not addressed individually – see response at end of this report
Opuha Water Ltd	Questions not addressed individually – see response at end of this report
Opunake Hydro	Questions not addressed individually – see response at end of this report
Orion	Yes. The sensitivity to the assumed exit period is noted.
Pacific Aluminium	No – in our view the WAG has presented insufficient analysis to establish that a PLGD of around 5% is likely to be around the cost-minimising level for the NZEM. The Paper presents no evidence that the levels in the NEM and PJM approximate the cost minimising position for those markets and so any justification for translating these into the NZEM is largely guesswork.
Pulse Utilities	<p>Pulse does not support the assessment of the appropriate level of security and the effective assertion that quantitative assessments are difficult, therefore, we should just look at what other markets are doing.</p> <p>The most appropriate information to support an alternative level of security is New Zealand’s low historic levels of retailer default. In addition, objections in the market over recent years has come from new entrant retailers, which strongly suggests that current prudential and settlement arrangements already favour the gentailers. There has been a significant level of investment in generation by these companies and little new competition in the market, again suggesting that current market design favours gentailers.</p> <p>As per our response to question 4, Pulse does not support probability of loss given default as a measure and recommends bad debt ratios as an alternative. A clear benchmark is that the gentailers are happy to enter the retail market at a bad debt ratio of between 1 and 3%. They are also happy to enter the generation market at current security levels.</p> <p>Pulse does support reasonable levels of security being in place. However, the greatest challenge is not the 95% of time the market is operating normally but the 5% of time it is constrained. Under the current design prudential calculations should not unduly increase at times of constraint as it systemically increases risk of default. This means that probability of loss given default or any other KPI employed should not necessarily be the same at all times.</p>

4. Do you agree with the assessment of the appropriate level of security? If not, what information do you have to support an alternative level of security?	
Submitter	Submitter Response
	The assessment in section 6 also seems to miss the point that increasing settlement frequency will increase market security without any need to change the probability of loss given default. The probability of loss given default could be further relaxed yet the same level of overall market security exists.
Simply Energy	We do not agree with the assessment of the overall level of security because we think this cannot be set in isolation from the cost that the mechanism imposes on retailers and NZ Inc. as previously discussed.
Trustpower	TrustPower agrees with the assessment at para 6.5.4, that the prudential security standard being achieved in New Zealand falls short of the benchmark standards observed in a number of other jurisdictions. Again, the introduction of a robust exit arrangement for a defaulting retailer is a key prerequisite to further investigation. In general terms, we consider that the 2% PLGD benchmark standard as used in Australia is an appropriate starting point from which to examine the industry implications of prudential reform for the New Zealand market.
Vector	Questions not addressed individually – see response at end of this report
Wensley	Questions not addressed individually – see response at end of this report

5. Do you agree we have described the right set of solutions? Have we outlined the right mechanisms that highlight the different options? Are there other mechanisms?	
Submitter	Submitter Response
Contact	<p>An alternative solution for the Authority to consider is the use of a professional clearing house, or clearing house prudential methodology. Potential examples are the ASX clearing house and the NZX clearing house. In Contact's view, there are three potential advantages:</p> <ol style="list-style-type: none"> <li>1. More advanced and market-based estimates of risk and the prudential required using 'value at risk' modelling or SPAN. Under a professional clearing house arrangement, the clearing house calculates prudential, reflecting the risk that the clearing house is taking by agreeing to make good any default itself.</li> <li>2. The ability to include futures positions in calculations.</li> <li>3. Professional clearing participants / clearing methodology.</li> </ol> <p>It is likely that this would increase the estimated prudential level – especially if settlement were to remain monthly. However, this is a reflection of the level of risk that currently exists in the electricity market, which is being borne at present by the generators. It would also serve to signal the level of risk to the creditors of a net retailer.</p>
Genesis	Questions not addressed individually – see response at end of this report
Meridian	<p>With the exception of those highlighted in our response to Q1 above, Meridian considers the WAG has identified a relatively comprehensive range of potential policy options. We provide specific comments on the solutions identified by the WAG below.</p> <p>An area that does not appear to have been considered, however, is the potential for subsidiaries to be able to better leverage off the position of their parent companies for prudential purposes.</p> <p>Meridian would, in principle, support:</p> <ul style="list-style-type: none"> <li>• Requirements being set based on a combination of outstandings, assessed accruals out to settlement day and initial margins, subject to further testing of the precise parameters that should apply.</li> <li>• Weekly settlement, subject to further testing of compatibility with other energy settlement processes and provided this could be introduced at minimal disruption and cost for industry.</li> <li>• Allowing the use of prudential cash to settle where this can be accommodated under the methodology used to set prudential requirements, assuming the Clearing Manager has rights of priority access.</li> <li>• Broadening the range of hedge / derivatives contracts recognised for prudential purposes where those contracts involve secure parties (A- rated and above).</li> </ul>

5. Do you agree we have described the right set of solutions? Have we outlined the right mechanisms that highlight the different options? Are there other mechanisms?

Submitter	Submitter Response
	<ul style="list-style-type: none"> <li>• Allowing for direct purchasers to enter into agreements with the Clearing Manager for a timely exit process and to, in return, receive reduced prudential requirements, subject to confirmation of legal robustness and confirmation that such agreements could be accommodated under Transpower’s Benchmark Agreements.</li> </ul> <p>Meridian would also support further work to explore the feasibility of improving recognition of futures positions. We would only support greater recognition of accrued gains if priority access for the Clearing Manager can be assured.</p> <p>Regarding other options identified by the WAG:</p> <ul style="list-style-type: none"> <li>• Meridian has concerns as to whether net settlement will lead to fair and reasonable outcomes, given it may be difficult to incorporate protections to avoid net generators bearing excessive risks that do not overly complicate the arrangements. Since no overnight borrowing is involved, Meridian also considers this would suggest potential gains from moving from gross settlement may not, in practice, be large.</li> <li>• Meridian considers it would be prudent to impose a limit on the amount of unsecured credit offered to participants, to mitigate against high impact, possibly hydrology driven, events. In the interests of preserving confidence in the market, Meridian does not support any amount of unlimited credit being offered to participants with credit ratings of below A-.</li> <li>• Meridian agrees with the WAG’s concerns regarding the appropriateness and complexities of broadening the acceptable forms of security to include retailers’ accounts receivables and/or portfolios of customer contracts and does not support this proposal.</li> </ul> <p>Meridian appreciates the way the WAG has sought to clearly highlight and explain the importance of assumptions regarding exit timeframes for defaulting retailers to the modelling results presented. While Meridian understands the WAG’s rationale for proposing a “retailer of last resort” or other mechanism which ensures timely exit, we are concerned about the apparent divergence in the current timeframes and options that are considered reasonable by the RAG in terms of exiting a defaulting retailer and those assumed to be possible by the WAG. Meridian would, at this stage, like to reserve the right to provide our firm view on a preferred mechanism for dealing with retailer default until the Authority has formulated its recommendations based on the findings of the RAG and the WAG.</p> <p>Meridian appreciates the WAG’s attempt to “package up” options to simplify the analysis. However, as acknowledged by the WAG, understanding the impacts and expected benefits of the individual separable elements will be an important part of future work. Meridian submits that worked examples and diagrams illustrating how preferred proposals would work together as a package will be also important.</p>

5. Do you agree we have described the right set of solutions? Have we outlined the right mechanisms that highlight the different options? Are there other mechanisms?	
Submitter	Submitter Response
MEUG	This seems to be a reasonable assessment of feasible options that needed to be considered.
MRP	<p>We do not consider the implications of moving to a weekly settlement period have been fully evaluated in the paper and do not support this approach at this time for the following reasons:</p> <p>Under current arrangements prudential requirements are able to be covered by a line of credit with cash settlement at the end of the month. This is a more efficient mechanism as only a single cash payment is required to be made. Moving toward weekly settlement would effectively mean prudentials are being settled in the form of cash. The net outcome is that more regular settlement results in opportunity cost implications in terms of interest forgone or alternative productive uses for that capital.</p> <p>Further, moving toward weekly settlement would create a timing mismatch with CfD payments which could result in material cash-flow implications for retailers. Specifically, if wholesale prices increase substantially, retailers will be required to provide cash settlement and potentially wait for nearly a month to receive an offsetting CfD settlement. In the interim any shortfall would have to be funded by the retailer which could substantially increase the risk of default. It is unlikely weekly CfD settlements would be considered attractive to the market.</p> <p>The current paper does not explore these issues and we would support further analysis before a move to weekly settlements is considered.</p>
Norske Skog	<p>The WAG has identified some useful general solutions. We trust that the WAG is not thinking of a “one size fits all” solution. We don’t see any reason why there can’t be various options available to consumers – especially if the options result in lower prudential risk.</p> <p>The Retailer Efficient option can be even more efficient for the market and industrial consumers if bespoke arrangements are available for exit<sup>12</sup> and frequency of settlement. For instance there are benefits for all involved by moving to weekly settlements using metered quantities<sup>13</sup>, and a 1 day exit period. We would be quite happy to enter into commercial contracts on this basis. In our case we are the connected party at two Grid Exit points. In the event of default on our part we could open circuit breakers on our site, or Transpower could open theirs. The outcome would be the same. With a site like ours, there is no exit risk whatsoever. Note that retailers have no control at all over their load, but we have complete control over ours. Thus it is wrong to treat industrial consumers as if they are retailers. There needs to be separate arrangements available for the 30% of NZ electricity demand that is consumed by industrial plants.</p>

<sup>12</sup> Identified by the WAG in paragraph 8.4.7

<sup>13</sup> For grid connected consumers there is no need to estimate quantities, as is proposed by the WAG in paragraph 7.5.1

5. Do you agree we have described the right set of solutions? Have we outlined the right mechanisms that highlight the different options? Are there other mechanisms?	
Submitter	Submitter Response
NZX	We agree with many of the solutions proposed. For a complete set of supported solutions, please see the first portion of this document.
OMF	Questions not addressed individually – see response at end of this report
Opuha Water Ltd	Questions not addressed individually – see response at end of this report
Opunake Hydro	Questions not addressed individually – see response at end of this report
Orion	At a high level, yes. Obviously as these solutions are investigated in more detail further issues and options may arise.
Pacific Aluminium	Options 1 and 2 are not acceptable and Options 3 and 4 are improvements. However, we are unable to conclude whether Option 3 or 4 or a variant thereof is likely to be optimal.
Pulse Utilities	<p>Pulse agrees that the right set of solutions have been identified although we don't discount going to daily settlement. Once you've committed to the cash flow effects of moving from monthly to weekly then daily is not too much of a step if offset by prudential reductions. The challenge is in the detail so it is difficult to support a particular option without seeing the detailed design.</p> <p>In that regard, we are looking to see one of the outcomes from the WAG discussion paper as clearly defining the key problems with current arrangements that need to be resolved during the design stage. For example, it is absolutely fundamental to Pulse that volatility and maximum prudential levels be reduced.</p> <p>Pulse supports detailed design work being undertaken on both option 3 (Retailer efficient) and option 4 (Secure and efficient) as we believe the current system is broken. However Pulse's initial assessment of the move to weekly settlement is a negative cash flow effect of approximately \$5m based on the earlier payment of electricity purchases. For Pulse to support change, prudential securities would have to be reduced by at least this amount. Modelling of Pulse's level of hedging, cash flow effects and prudential levels between the current and proposed model will be required.</p> <p>As previous, Pulse does not support the probability of loss given default as measure nor the 2% as a pseudo default level and as per Table Five, we prefer a much broader definition of security level.</p>

5. Do you agree we have described the right set of solutions? Have we outlined the right mechanisms that highlight the different options? Are there other mechanisms?	
Submitter	Submitter Response
	<p>It is clear to us that if the generators are expecting a reduction in the probability of loss given default as well as the reduction in quantum of loss brought about by a move to weekly settlement, then the design process could be affected dramatically.</p> <p>Pulse prefers a level of static initial margin. As previous, we believe there is a point where increasing prudentials during dry years is counterproductive.</p> <p>Pulse would also like the possibility of auditing a company's level of hedging including ASX futures positions to be investigated. This could then be used as a minimum hedge level in calculating prudentials and is particularly important in dry winter scenarios.</p> <p>We support a move to a system that removes the compounding cash flow effects of the current design to one that focuses on paying for your electricity purchases and corrects the market design flaws which see new entrant retailers being considered the problem when they are not.</p>
Simply Energy	As per 3.1.3 above we have raised the issue of an industry insurance solution that may be more appropriate and cost effective to meet the Authority's objectives.
Trustpower	<p>In general, TrustPower supports the statement of solutions and mechanisms. Table 5 in the paper is a useful summary of the high level options.</p> <p>Option 4 "Secure + Efficient" appears the most sensible of the options identified, mainly because it is predicated on a Retailer of Last Resort (ROLR) arrangement which is a critical requirement for the future. We agree with the paper (para 7.6.1 (b)), that an exit period of 7 days should be targeted if possible.</p> <p>We note that the "bespoke exit arrangements" considered in the paper at para 7.5.1 (c) appear attractive in theory, and would certainly suit a direct purchaser with controllable load, but for a retailer to benefit from these in the form of reduced prudential, another retailer must be required to post more prudential to cover the contingency of the new customers being acquired.</p> <p>Potentially the EA should also consider including an option (Option 5?) that combines "Generator Secure" with a ROLR. This approach might be shown to be a "quicker win" than Option 4, ie might cover generator risks sufficiently without requiring the high degree of retailer credit management implied under Options 3 and 4.</p> <p>In terms of the paper's Figure 20, a "Generator Secure + ROLR" option would be expected to reduce significantly the economic cost of the "Generator Secure" option and thereby approach the estimated optimum tradeoff between cost and level of security.</p>

5. Do you agree we have described the right set of solutions? Have we outlined the right mechanisms that highlight the different options? Are there other mechanisms?	
Submitter	Submitter Response
Vector	Questions not addressed individually – see response at end of this report
Wensley	Questions not addressed individually – see response at end of this report

6. To what extent do you agree with the proposed path for moving forward? Should other options be explored, and if so, why?	
Submitter	Submitter Response
Contact	Contact agrees that option 4 should be the ultimate goal. However, until arrangements are in place for a retailer of last resort regime, in Contact's view prudential security must increase to better reflect the true market risk position.
Genesis	Questions not addressed individually – see response at end of this report
Meridian	<p>Subject to the comments set out in our response to Q6 above, Meridian broadly supports the WAG's proposal to focus its efforts on options 3 and 4, and/or variants of these options, but would like the WAG to also consider the issues highlighted in our responses to Q1 and Q6.</p> <p>Meridian strongly agrees with the statement at paragraph 5.3.12 that all legal issues will need to be resolved ahead of considering detailed Code changes.</p> <p>Consistent with Meridian's recent submission to inform the RAG's review of retailer default mechanisms<sup>14</sup>, Meridian submits it is critical that the RAG and WAG continue to work closely together to develop a coherent package of proposals and that no Code changes are pursued until such a time as both groups have concluded their work.</p>

<sup>14</sup> Refer: <http://www.ea.govt.nz/document/16246/download/our-work/consultations/advisory-group/retail-customers-default-situations/submissions-on-retail-advisory-group-discussion-paper-retail-customers-in-retailer-default-situations/>

6. To what extent do you agree with the proposed path for moving forward? Should other options be explored, and if so, why?

Submitter	Submitter Response
MEUG	<p>Agree with the paper that<sup>15</sup> “... <i>there is a clear case for moving away from the Status Quo and adopting a variant of Option 3 or 4</i>”.</p> <p>Weekly settlement, use of an initial margin and flexibility regarding exit arrangements are likely to be definite mechanisms<sup>16</sup> in any final package. MEUG suggests the EA could commence detailed design work on these immediately ahead of the WAG reporting a final package in September.</p> <p>More flexible HSAs<sup>17</sup> might be possible for some CfDs though we expect application to futures or more complex hedges might be better considered in a later second stage. MEUG would not wish to see a delay to implementing the above three efficiency improvement mechanisms to try and solve implementing more flexible HSAs.</p> <p>Similarly MEUG has no view on net settlement and the other possible efficiency improving mechanisms in paragraph 7.5.2 apart from endorsing the approach of undertaking further analysis as appropriate. As with more flexible HSAs we would not want that analysis to delay implementation of weekly settlement, use of an initial margin and flexibility regarding exit arrangements.</p> <p>Implementing a mechanism for a quick exit of a defaulting retailer is essential. That may be a be-spoke ROLR mechanism<sup>18</sup> or existing general receivership processes. RAG should tidy their work up and make a recommendation to the EA expeditiously.</p> <p>We do not support implementing a higher initial margin<sup>19</sup> until all of the mechanisms listed above in this answer to question 7 have either been implemented or considered and dismissed. After some experience with that set of mechanisms a further assessment should then be made as to whether a higher initial margin is needed.</p>
MRP	<p>We agree that the main focus should be on implementing tighter exit arrangements as this is likely to have the greatest impact on PLGD. We consider the existing arrangements could be incrementally evolved through the implementation of some of the proposed efficiency measure suggested in the paper as outlined above and progressing the earlier ‘quick wins’ suggested by the Clearing Manager.</p> <p>As a principle, where specific changes are proposed to the prudential frameworks the WAG should provide illustrative worked examples of how the changes would impact on a standardised market participant (e.g. vertically integrated generator retailer or stand-alone retailer). This approach would greatly enhance understanding of conceptual frameworks proposed and allow for more focussed feedback from participants.</p>

<sup>15</sup> Paragraph 8.7.2 that follows on from the logic in paragraph 8.7.1

<sup>16</sup> These three mechanisms are discussed in paragraphs 7.5.1 a), b) and c)

<sup>17</sup> Paragraph 7.5.2

<sup>18</sup> Paragraph 7.6.1 b)

<sup>19</sup> Paragraph 7.6.1 a)

6. To what extent do you agree with the proposed path for moving forward? Should other options be explored, and if so, why?	
Submitter	Submitter Response
Norske Skog	<p>We think that the WAG should consider industrial consumers separately from retailers. Paragraph 8.7.3 does not apply to industrial consumers. There is no need to wait for the RAG or the Authority to establish an exit process for retailers, before establishing an exit process for industrial consumers.</p> <p>The WAG should recommend that the Electricity Authority fast-track improvements to prudential security arrangements for industrial consumers.</p>
NZX	<p>Further information is required for informed decision making. One key piece of information is the actual time to exit a participant.</p> <p>In the mean time, the WAG could consider implementation options for further incremental improvements. It should be recognised that these incremental efforts do not remove the need for completing the first principles review.</p>
OMF	Questions not addressed individually – see response at end of this report
Opuha Water Ltd	Questions not addressed individually – see response at end of this report
Opunake Hydro	Questions not addressed individually – see response at end of this report
Orion	We are comfortable with the proposed path.
Pacific Aluminium	<p>Further analysis by the WAG is desirable and this should include:</p> <ul style="list-style-type: none"> <li>• an assessment of the metrics used in other financial markets to assess similar risks and their applicability in the NZEM;</li> <li>• if a superior metric is found, an assessment of the cost-minimising level in the NZEM; or</li> <li>• an assessment of the cost-minimising PLGD in both the NEM and PJM and the likely level in the NZEM;</li> </ul>

6. To what extent do you agree with the proposed path for moving forward? Should other options be explored, and if so, why?	
Submitter	Submitter Response
Pulse Utilities	<p>As above, Pulse is supportive of the WAG focusing on options 3 &amp; 4.</p> <p>Pulse believes that an additional round of quick wins is possible and is urgently required. This should include net settlements and increasing ability to register Hedge Settlement Agreements such as cap options and generation following swaps.</p> <p>Pulse is concerned that the Electricity Authority is yet to commit to providing the resource and the timelines to ensure prudential and settlement improvements are delivered. Some of this may be occurring behind the scenes but our perception is that the Electricity Authority is yet to commit to any change and this remains concerning.</p>
Simply Energy	<p>There are three key components that should be evaluated going forward;</p> <ul style="list-style-type: none"> <li>• The cost benefit framework should be established as an important process to move forward that captures quantification of default against quantifying the cost of additional prudential so that the right balance is struck.</li> <li>• Develop a process to test the proposed structures against outlier events to ensure that the mechanism does not become the cause of default due to short term treasury management issues for a fundamentally good business.</li> <li>• Evaluate an insurance mechanism by establishing a framework by the Authority that could be transitioned over to a commercial solution.</li> </ul>
Trustpower	<p>Yes, TrustPower agrees with the proposed path. In particular, we agree that the WAG “strongly encourages the Authority and the Retail Advisory Group to consider the benefits in the prudential security context of providing a swift and clear exit arrangement for any defaulting retailer”.</p> <p>Once such an exit arrangement is clearly identified by the EA, TrustPower recommends that the WAG revisit the options in the paper, including a consideration of a “Generator Secure + ROLR” option.</p> <p>Meantime, the existing prudential and settlement arrangements should be retained, and, in light of the current high Probability of Loss Given Default, and not reduced at this time.</p>
Vector	Questions not addressed individually – see response at end of this report
Wensley	Questions not addressed individually – see response at end of this report

Submissions that did not address the individual questions in the discussion paper	
Submitter	Submitter Response
Genesis	<p><b>Agree with the WAG approach to prudential security review</b></p> <p>The Review provides a good description and assessment of the current prudential situation for the New Zealand Electricity Market (“NZEM”). We agree that the current prudential methodology is not optimal and can be improved. We are concerned that the metric Probability of Loss Given Default (“PLGD”) does not correctly assess the potential exposure of market participants to retailer default. We consider that this assessment is an important factor for any consideration of changes to the prudential methodology.</p> <p>In regards to the options presented in the Review:</p> <ul style="list-style-type: none"> <li>• we agree that Option 2 would create an unreasonable prudential requirement for market participants, and is therefore unlikely to be in the best interests of consumers;</li> <li>• we prefer the combination of features presented in Option 3 to those in Option 4. We encourage the WAG to continue to develop the ‘features’ and in particular to provide more visibility on how the various improvements incorporated into Option 3 individually contribute to a more effective prudential security approach;</li> <li>• we are very concerned with the scale of regulatory intervention that may be required to create a seven day exit period, as suggested for Option 4. We consider that the costs to the overall market of a retailer of last resort scheme would likely outweigh the benefits. We do, however, agree that some form of legal mechanism is likely to be required to ensure that receivership processes are completed as efficiently as possible. We are concerned that this efficiency should not be at the expense of creating unnecessary regulatory barriers to entry to the market.</li> </ul> <p>We expand on these points below.</p> <p><b>Probability of risk should be taken into account in the metric</b></p> <p>We consider that establishing when a retailer is likely to default is a relevant factor for considering what prudential requirements may be required. This is an element that is notably absent from the PLGD metric.</p> <p>We agree with the paper that the prudential requirements must reflect the real underlying risk to the NZEM. However we do not understand how this risk can be properly considered without considering the likelihood of a default event taking place.</p> <p>We understand that identifying periods of highest risk of retailer default is a complicated task, given the variety of inputs that could create a default situation. Nonetheless, we consider that without this information any consideration of options will not be complete. In particular, we are concerned that not having this information may encourage assumptions about when defaults are likely to occur. For example, the Review shows that high price wholesale markets may be underprocured under Option 3(a). This could be interpreted as a period of higher risk of retail default. However, high price wholesale market periods may not be the trigger if participants manage their hedging correctly, as</p>

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	<p>this will be when hedging agreements get the greatest benefit.</p> <p><b>Option 2 “Generator Secure” is not in the best interests of consumers</b></p> <p>We do not support Option 2.</p> <p>We agree that Option 2 does not present an optimal approach to the issues with the prudential approach. The prudential requirements under Option 2 will significantly increase the financial pressure on existing retailers and will create an unreasonably high barrier to entry for new retail competitors. We consider that Option 2 will reduce retail competition and therefore is not in the long-term interest of electricity consumers.</p> <p><b>Assessment of features for Option 3 (and Option 4)</b></p> <p>The Review considers a number of features that are combined to form “Option 3”, and added to for “Option 4”. Although most of these features appear to be sensible improvements to the existing prudential security approach, it is not clear what market or regulatory failures they are seeking to address. Furthermore, as presented in the Review, it is impossible to ascertain what features provide the most benefit, and we are restricted to evaluating the two broad options. We therefore ask that the WAG provide further detail on how each individual feature contributes to a more efficient prudential security approach.</p> <p><b>Weekly settlement should be pursued</b></p> <p>We consider that moving to weekly settlements is an appropriate change for the NZEM.</p> <p><b>Support initial margin</b></p> <p>We agree that an initial margin is an appropriate tool for improving the prudential security arrangements. We consider that most major retailers will be familiar with initial margins, as they are a requirement for participants in the ASX energy futures market.</p> <p>It is clear from the Review that further work is required to establish whether the ‘static’ or ‘dynamic’ initial margin approach is preferable for the NZEM. However, our initial view is that the ‘dynamic’ approach is likely to provide the necessary level of surety to generators that prudential requirements are sufficient, whilst providing retailers with the benefit of more accurate prudential calculations that reduce over-procurement.</p> <p><b>Support net settlement</b></p> <p>We agree that net settlement would be an improvement to the current settlement arrangements. However, we note that it is unlikely to improve the prudential security arrangements in any marked way.</p>

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	<p><b>Support widening of acceptable prudential security</b></p> <p>We generally agree with the approach to widening the range of instruments or assets that can be provided as prudential security. However, we note that there are logistical difficulties with using futures contracts or similar instruments as prudential securities as they are subject to their own ASX prudential requirements and in the event of a default the participants contracted Clearer would have first call on any proceeds from closing those contracts. We suggest that this issue should be considered further by the WAG.</p> <p><b>Careful consideration required for widening exemption for credit secure Participants</b></p> <p>We consider that any exemption to the prudential requirements must provide a very high level of security for other participants on the solvency or credit risk of the exempt party. The current exemption threshold of A- or higher provides an appropriately high level of surety. We agree that the current threshold of A- could be reviewed. However, any lowering of this threshold must ensure that generators remain confident in the application of the exemption.</p> <p><b>Do not support a retailer of last resort</b></p> <p>As identified in the Review, a seven day exit period is not possible without substantial regulatory intervention. Even the 21 day exit period assumed for Option 3 is an ambitious timeframe under the current combination of market and statutory mechanisms that would be initiated by a retailer default.</p> <p>We are very concerned with any consideration of regulatory intervention, such as ‘retailer of last resort’ as suggested by the WAG, without first clearly defining the market failure to be addressed by the regulation, and secondly, without considering the costs and benefits of regulation. In our view the Review does not adequately define the market failure that regulation would be addressing, nor does it provide a clear assessment of the alternative options or costs and benefits of regulation on the wider NZEM.</p> <p>The Review notes that the PLGD metric is very sensitive to the assumption about the exit period, and that a shorter exit period will provide a lower PLGD rating. This is illustrated in the differences between the two favoured options: Option 3 with a 21 day exit period and a PLGD of 26%, and Option 4 with a regulated seven day exit period and a corresponding PLGD of 2%.</p> <p>We are aware that the 2% PLGD target originates from the Australian National Electricity Market (“NEM”). Our concern is that the 2% target does not reflect key differences between the Australian NEM and the NZEM. For example, we understand that retailers in the NEM are not only subject to a very short regulated exit process upon default, but are required to meet certain thresholds before entering the market. These pre-conditions facilitate the speedy exit of defaulting retailers from the NEM.</p> <p>In our view it is important that the costs of regulatory intervention should be commiserate with the benefits. We consider that, on balance,</p>

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	<p>the cost of imposing a retailer of last resort regime, or similar regulatory intervention, is likely to outweigh the benefits of providing improved security for participants.</p> <p>Notwithstanding our concerns above, we agree that a legal mechanism is likely to be required to ensure that the normal receivership process for a retailer in default can be implemented by the Clearing Manager.</p> <p>We suggest that the WAG works with the Retail Advisory Group to establish what measures or incentives could be implemented to ensure that defaulting retailers are exited as efficiently as possible using normal receivership processes. This may include allowing more flexibility around how a retailer exits from the market by way of bespoke agreement with the Clearing Manager. As part of this work, we suggest that the WAG will need to identify the likelihood of default occurring. Understanding this risk will be essential to any assessment of the potential cost of regulatory measures.</p>
OMF	<p>OMF is an active broker in NZ Electricity market. We have been working closely with the generators and users to help build open interest, liquidity and depth to the exchange traded and OTC market.</p> <p>We have also created CommTrade – <a href="http://www.commtrade.co.nz/electricity">www.commtrade.co.nz/electricity</a> - a platform for the trading of OTC electricity products.</p> <p>Our desire is to see a deep and transparent hedge market that generators, users and financial institutions can approach with confidence.</p> <p><b><u>Overview:</u></b></p> <p>While we at OMF are not experts in the intricacies of the wholesale electricity market we see three main issues that are slowing the development of the wider hedging market;</p> <ol style="list-style-type: none"> <li>1. Prudential requirements.</li> <li>2. Wholesale settlement.</li> <li>3. Exchange traded NZ Electricity hedges are not fungible with the wholesale market.</li> </ol> <p><b><u>Prudential Requirements:</u></b></p> <p>Prudential requirements in the wholesale market can cover up to 57 days of risk. Participants who are hedging via the futures also must maintain initial margin requirements. Together these requirements impose significant cash costs to retailers which ultimately form a barrier to competition and further development of the sector. The costs associated with this system eat into returns on investment there for reducing innovation and are ultimately passed on to the consumer.</p>

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	<p>In the financial sector initial margins (cash) taken to cover foreign exchange, futures, equities and various other derivatives is calculated to cover the maximum single days risk based on historical data. Positions are marked to market on a daily basis. If a position moves adversely against a participating party they are required to deposit cash funds immediately to cover any short fall. If they cannot meet this initial margin requirement they are forced to close their positions and exit the market. This continual and rigorous margin management creates an environment of confidence and security. We recommend that the Authority look to reduce the 'Security Period' in the wholesale market as much as practicable but certainly to 7 days or less to reduce the cash burden on market participants. The Retailer of Last Resort Scheme must play a big part in getting to this level. The Retailer of Last Resort Scheme would ensure that a participant who was not able to meet the required level of prudential margins could exit the market in a timely and orderly fashion.</p> <p><b><u>Wholesale settlement:</u></b></p> <p>Currently the wholesale electricity market is settled monthly. As I understand it this is due to a legacy procedure – it is the way it always been done.</p> <p>Once again if we look at the wider financial markets and the point that positions are marked to market on a daily basis, a monthly settlement seems excessive. As we see it settling an electricity position monthly inhibits the ability to mark to market on a daily basis. The lack of an effective daily mark to market means the maximum daily risk is very difficult to evaluate and increases the cost of excessive prudential requirements. Increased carrying costs once again eat into return on investments and reduce innovation. We recommend that the Authority look to reduce the Settlement Period to at most a week.</p> <p><b><u>Exchange Traded vs. Wholesale:</u></b></p> <p>As it stands the exchange traded futures on the ASX are not fungible with the wholesale electricity market at all. A retailer of Electricity who is hedged 100% in the futures market will still be required to cover 100% of their prudential requirements. The outcome of this is the retailer carries the cost of maintaining the initial margin for the futures and maintaining the required prudential levels despite the overall risk of their position being significantly reduced. This is a major barrier to entry for the futures market and is certainly slowing the markets development.</p> <p>A facility where market participants could use their futures to offset the prudential requirements of their underlying electricity position would go a long way in promoting the continual development of the Futures market. This could be done by the Pricing Manager having a security interest over the futures contract and the settlement account associated with this contract. OMF would be happy (with our clients consent) to be able to post this security to the clearing manager as potentially a new class of market participant (a Settlement Class Market</p>

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	<p>Participant [SCMP]).</p> <p><b><u>Recommendations:</u></b></p> <ol style="list-style-type: none"> <li>1. We recommend that the Authority look to reduce the 'Security Period' as much as practicable</li> <li>2. We recommend that the Authority look to reduce the Settlement Period to at most a week.</li> <li>3. We recommend a facility where market participants could use their futures to offset the prudential requirements of their underlying electricity position</li> </ol>
Opuha Water	<p>Our core business is the storage and release of water for irrigation and environmental enhancement. We own a storage dam with associated 7MW hydropower station in South Canterbury and our average annual generation is approximately 25 GWh.</p> <p>We commend the Wholesale Advisory Group on the Settlement and Prudential Security Review.</p> <p>In 2011 we investigated alternative options for the sale of our energy output and closely considered the option of retailing directly to our downstream irrigators. There appeared to be reasonable commercial advantage for both our company and our irrigators in this retailing option, however one of the factors that deferred us from moving ahead was the prudential requirements we faced as a retailer in the wholesale electricity market. Our Board agreed to revisit the retailing option in two years' time, with an expectation that the prudential requirements may be reviewed and present less of a hurdle to our entry. In the meantime we have negotiated an interim Power Purchase Agreement.</p> <p>As shown by the Review, the current structure the prudential mechanism requires current assets to support nearly 12 months average electricity purchases from the wholesale market. This is incredibly balance sheet inefficient and the single biggest barrier to our consideration of expanding our participation in the wholesale electricity market.</p> <p>Of the options presented, we favour the option that has the lowest 'maximum credit requirement' e.g. the static, retailer-efficient option with net (rather than gross) settlement.</p>

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Opunake Hydro	<p>Opunake Hydro Limited is a Purchaser and Generator Participant in the Electricity market.</p> <p>We commend the Wholesale Advisory Group on the Settlement and Prudential Security Review.</p> <p>As shown by the review the current structure of the prudential mechanism requires current assets to support nearly 12 months average electricity purchases from the wholesale market.</p> <p>This is incredibly balance sheet inefficient and the single biggest barrier to expanding our retail electricity business. Together with a lack of fairly priced hedging products available, it is a significant deterrent to bringing new retail entrants into the market.</p> <p>Of the options presented we favour the option that has the lowest 'maximum credit requirement' e.g. the static, retailer-efficient option with net (rather than gross) settlement.</p> <p>Other specific matters that we submit on include:</p> <ul style="list-style-type: none"> <li>• A need to widen the type of prudential posted to include: <ul style="list-style-type: none"> <li>○ ASX futures contracts, counter-partied with or without Participants</li> <li>○ Cap contracts, swaptions, collars and similar contract types, counter-partied with Participants</li> <li>○ OTC contracts with credit-worthy counterparts such as banks who may be active on the ASX but are not Participants</li> <li>○ Accounts receivable held in trust on behalf of the Clearing Manager</li> </ul> </li> <li>• the calculation methodology should account for differences in load or generation associated with large new customers or load coming on or off. In particular the adjustment for under-bidding related to the percentage difference between the bids submitted last month and the actual invoiced quantities and the adjustment should be moderated by reference to a person with the power to negate an under or over-bidding adjustment based on provable contract positions.</li> <li>• the calculation for the initial margin under the 'Retailer Efficient' model should be static. The primary reason for security relates to changes in the energy market (rather than capacity) from changing hydrology. This is slow and steady whereas there is significant 'noise' found in market prices as a result of bidding behaviour. Security should not attempt to predict bidding behaviour (both up and down) and so a static infrequent initial margin is preferred.</li> <li>• the three day period within which to meet a Call for Security is too short and disadvantages those Participants that may need to put in place secondary financing structures behind the Bond provided to the Clearing Manager.</li> </ul>
Vector	<b>Vector broadly supports the analysis and conclusions of the paper</b>

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	<p>Vector considers that the review and analysis conducted in the paper are robust and well-considered.</p> <p>Vector in particular supports the following views:</p> <ol style="list-style-type: none"> <li>The “credit rating test” for prudential security being staggered based on the credit rating. We would support an approach of gradually increasing/decreasing the security requirements as a company’s credit rating decreases/increases. In contrast, the current approach to setting prudentials within the electricity market is to (a) effectively provide unlimited credit to parties with a credit rating the minimum level and above and (b) to require the same level of prudential security from those parties with a credit rating of less than the minimum level, irrespective of how far below the minimum level the credit rating is.</li> <li>The setting of a prudential security requirement must explicitly and accurately consider the amount of time it will take for a defaulting retailer to exit the market. If this is not done, the impact on market participants will not be accurately assessed.</li> <li>As prudential security decreases, the moral hazard risk faced by participants increases and this in turn increases the likelihood of default. Any decision regarding prudential levels will need to consider the implications of the prudential requirements on the behaviour of participants.</li> <li>The implications of prudentials being too low (undue and unmanageable risk for the party receiving the prudentials) and too high (potential barriers to entry or inefficient allocation of capital) must be carefully considered.</li> <li>A “retailer of last resort” arrangement is desirable to handle market defaults.</li> <li>The WAG proposes to set prudentials at a level where there is no more than a 2% probability of a loss to the Clearing Manager (in reality, to generators) as a result of a retailer default. We consider this degree of caution and risk mitigation is appropriate.</li> </ol> <p>Vector considers that these issues apply equally to the distribution sector.</p> <p><b>Impacts on the wider electricity sector must be considered</b></p> <p>It is essential that the analysis regarding wholesale market prudential arrangements is not conducted in isolation. The overall effect on the electricity sector of any changes must be considered. It is already the case that the Clearing Manager is generally the last creditor of retailers to be defaulted; thus payments to the Clearing Manager will continue even while payments to other industry participants are missed.</p> <p>Vector is concerned that any increase in the prudential requirements for trading in the wholesale market is likely to further increase the incentive on defaulting retailers to pay the clearing manager before any other creditors, including distributors and metering providers.</p> <p>Vector is unable to support greater prudentials for payments to the Clearing Manager unless prudentials for other industry participants are similarly increased. Any arrangement that exacerbates the current imbalance between wholesale and other electricity market prudentials</p>

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	will simply make it even less likely that other participants will be paid by the retailer. Vector would be interested to see any quantified analysis that justifies greater protection for the Clearing Manager than other industry participants.
Wensley, NL & CE	<p>We -NL &amp; CE Wensley - own a small hydro electric generator rated at 200kW which generally produces between 1 and 1.5 GWHrs of electricity per annum. This electricity is sold to the Clearing Manager at spot price at the Motueka grid exit point. We also have two retail customers who consume approximately one half of the electricity generated at a fixed off-market agreed price. The balance (over or under generation) is sold or purchased at the spot market price at the Motueka Grid exit point. The arrangement has worked very well for almost 10 years.</p> <p>The entire issue of settlement and prudential security is about paying and being paid on time. It is my experience that the current system has worked reliable for us over the last ten years.</p> <p>We, as well as all, Generators are extremely fortunate in having an independent collection agency (the Clearing Manager) for their debtors and for that agency to be holding prudential security over those debtors. There are very few other industries that have such a favourable debtor's ledger. Retailers are not in such a fortunate position. Their costs (payables) must be settled in full on the 20th of each month and they must have prudential security in place to guarantee they do make their due payments. Retailer's income (receivables) is not so easily collected from their retail customer base.</p> <p>We have put up prudential security to cover our purchases so that if we fail to settle as required on the 20th of each month then the market can call in our prudential security requirements. Our prudential requirements are provided by a Westpac performance bond / guarantee in favour of Energy Clearing House Ltd for the amount of \$20,000 which represents typically more than four times the amount of our monthly purchases. We are charged by Westpac an annual interest of 1.5% and a quarterly charge of \$77.50 plus GST for the performance guarantee. This amounts to approximately 0.15 cents/kWhr of energy sold to retail customers. Westpac hold first mortgage security over land and assets to cover the amount of the performance bond.</p> <p>In our opinion the current system is simple and practical and provides more than adequate security if we as, a Retailer, were to default. It should also be noted that due to the proportion of electricity we retail against the generation we are typically owed more than we owe in any monthly settlement cycle. (Our off-market retail transaction for electricity does not have any performance guarantee from the end consumer and our only remedy is disconnection and the usual recover process available under law.)</p> <p>Having read the "Settlement and Prudential Security Review" 14th May 2012 prepared by the Wholesale Advisory Group we comment as follows:</p>

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	<ul style="list-style-type: none"> <li>The larger generators are also retailers or associated with retailers. It is unlikely that these generator retailers would want to increase their prudential security for their subsidiaries or associates without some other collateral benefit. We would see that increasing the prudential security requirements is a significant imposition to new entrance Retailers into the market.</li> <li>The executive summary 1.2 identifies that there have been “no overt problems” with the current arrangements since 2003 in which case it would not appear necessary to make any changes although we would welcome a reduction in the prudential requirements that we have put up to more closely reflect our net market position on settlement day.</li> <li>The changes to the existing system proposed in Option 3 and 4 would require increased complexity. For new entrance and small market participants this would become onerous and would work to increase barriers to market entry and hence reduce competition in the electricity market.</li> </ul> <p>In regard to options for change we support Option 1 - status quo. In regard to the other options:</p> <ul style="list-style-type: none"> <li><b>Option 2 generator secure:</b> we do not see that generators need any more security than they already have. The discussion paper identifies that there has not been any problems since 2003 so increasing prudential arrangements can only be more onerous on purchases for electricity from the market. This would have the effect of purchases seeking to buy directly off major retailers (without prudential requirements) as an alternative to market participation and this is perhaps what the generator retailers are hoping to achieve.</li> <li><b>Option 3 retailer efficient:</b> Any retailer must have sufficient working capital to settle their purchases. If they do not they would very quickly become non-participants and therefore we do not see any requirements to change prudential security requirements. Increasing the settlement payments to weekly will only serve to increase the workload and hence cost to participate in the market. We don't see how there can be historic unpaid amounts if there have had to put up security and this is being called in to pay for purchases. One of the costs of being in the market is to be able to provide the prudential requirements for monthly purchases and in my opinion this should be simple, straight forward, business as usual. In many other industries customers do not have to put up prudential requirements for their purchases.</li> <li><b>Option 4 Secure and Efficient:</b> There is no merit in combining Option 2 and 3 which can only increase the barriers to market participation. There may be some merit in a Retailer of Last Resort (ROLR) where in the case of default of a retailer the ROLR takes over on a temporary basis the defaulting retailers client base until this can be on-sold to a non-defaulting retailer (presumably to the highest bidder). I am suggesting if a retailer defaults then his prudential commitments are called upon and his client base is on sold – “one strike and you are out”</li> </ul> <p>One of our concerns is the volatility of the spot market in determining the prudential security requirements. For example in the periods of high spot pricing our prudential requirements might have to be increased. This could be difficult at short notice. However our risk is low</p>

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	<p>because we are receiving a higher spot price for generation at the same time as paying a higher price for purchases. For retailers that have no generation we understand this could be a problem to them.</p> <p>If a Retailer (or purchaser) has no generation and no long term supply arrangements then he is already in the classic business failure mode of selling long and buying short. It is only reasonable that they should carry full prudential cover for their electricity purchase activity. Prudential cover in fact appropriately serves to keep this risky sort of operation out of the market.</p> <p>We comment that over reliance on spot pricing to determine long term market trends is like trying to observe whether the tide is coming in or out based on the amount of turbulence on the ocean surface. We believe there is too much focus on the spot pricing market which we understand to be essentially and over and under market to provide balancing supply and demand and other operational issues.</p> <p>It is our view that</p> <ul style="list-style-type: none"> <li>• Essentially no change is required to prudential security requirements and that no further detail work needs to be carried out with the modifier that the ideas of:</li> <li>• calculation of prudential requirements based on net settlement</li> <li>• and a retailer of last resort so as to quickly remove defaulting retailers from the market have merit</li> </ul>