Hedge Market Review

A Quantitative and Qualitative Study

[April 2012]

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1. Introduction

1.1 Background

The Electricity Authority (the Authority) commissioned to undertake this research. This followed a review by the Authority of previous research conducted by the former Electricity Commission into the wholesale market. As a result, the Authority updated the survey and added additional questions on new initiatives that it has undertaken. This included the start up of trading on the Australian stock exchange (ASX).

1.2 Methodology

The methodology comprised two information gathering phases, an online survey and follow-up in-depth interviews. The first phase involved the distribution of a survey to 62 potential respondents. The survey maintains questions from the original benchmark as well as additional questions to reflect changes including those that cover initiatives being undertaken by the Authority. The following table (Table A) identifies respondent numbers by type for the 2012 survey.

RESPONDENT BY TYPE	SURVEYS DISTRIBUTED	RESPONSES
Small purchasers	18	6
Medium purchasers	16	9
Large purchasers	9	9
Sub-total purchasers		**24**
Generator/generator-retailers	12	11
Others	7	5
Total	**62**	**40**

TABLE A

Respondents were advised that their individual responses would be kept confidential to UMR and that only aggregated data would be reported. The survey is attached in Appendix 1. The response rate among the 62 respondents that received surveys was 65% compared to 69% in 2009, 60% in 2007 and 76% in the 2005 survey. All respondents (n=40) confirmed that they had provided their responses to UMR in confidence and half (n=20) also said they regarded the information they had provided as commercially prejudicial information.

The research also involved 30 in-depth interviews which were designed to better understand the reasons behind the responses given to some key questions in the survey. Most interviews were conducted face-to-face, though a few were conducted by telephone in the interests of saving costs due to their relative geographic isolation from other respondents. Requests for interviews were made to all generators and generator-retailers, all large purchasers and a selection of medium purchasers, small purchasers and a selection from the mixed category of distributors and traders. Similar assurances with respect to confidentiality were given to those who participated in the depth interviews. In order to preserve the confidentiality of all generators, we have aggregated the data for generators and generator-retailers and described this group throughout the report as gentailers.

This report comprises an executive summary which captures the main findings arising from both the survey and the depth interviews. This is followed by tables showing the responses to the survey questions and then the report on the depth interviews which includes extensive verbatim quotes.

2. Executive summary

2.1 Overview

2.1.1 Competition is improving, but polarised views remain

- For the first time since the 2005 survey, there was evidence that competition was improving even though some degree of polarisation between the views of purchasers[1] and gentailers[2] still existed as had been the case in previous surveys.

- Evidence that the competitiveness of the market was improving was based on the availability of:
  - ASX derivatives
  - larger volumes being traded on ASX
  - experience of more offers
  - tighter spreads
  - greater transparency
  - more activity in the South Island (though the dry conditions are limiting this activity now).

- In the survey, 10 of the 11 gentailers and three of the 'other'[3] said competitiveness had improved in the past 12 months. In the 2009 survey, only one gentailer and one 'other' expressed the same view.

- As purchasers were not involved in the ASX, their views were far less supportive of the view that competition had improved in the past 12 months with only four of 24 purchasers sharing this opinion. Most purchasers said they did not know enough about the ASX to say whether it was competitive though participants in that market were strongly of the view that it was.

- Indeed, while almost all gentailers (8 of 11) and most 'other' (3 of 5) said a competitive hedge market did exist, only a few purchasers (5 of 24) said it was. A similar pattern of responses emerged to the question whether there was confidence that the process for establishing bilateral contracts prices was 'competitive'.

- The main reasons given for there being limited competition were fewer and for the process being seen as uncompetitive were:
  - few offers at purchasers' locations
  - lack of a more active market
  - transmission constraints
  - dry conditions in the South Island
  - differences between hedge and retail prices (purchasers' perceptions)
  - a more conservative approach being taken by gentailers due to the Government's planned assets sales.

[1] Unless otherwise specified 'purchasers' refer to those who purchase hedges, but are not 'gentailers'.
[2] The term 'gentailer' is applied to all generators and all retailers and those who generate and retail. This is to protect the confidentiality of the very small number of gentailers (n=3) who only generate or do not sell hedges.
[3] 'Other' is the term applied to those who do not purchase or sell hedges for their own use.

2.1.2 Ways to improve competition

- The suggested solutions to improve competition showed that most felt that current initiatives were heading in the right direction. The main suggestions to improve competition were therefore to:
  - ensure a more active market and increased participation in the ASX, specially by independent traders and purchasers
  - complete transmission upgrades, particularly the commissioning of Pole 3
  - introduce financial transmission rights to address both inter-island and intra-island basis risk
  - greater transparency and disclosure.

  There were one or two who suggested splitting generators and retailer and to reduce the number of nodes.

2.1.3 Critical issues for the wholesale market and the industry

- The critical issues for the wholesale market and the wider electricity industry obtained from the depth interviews were:
  - transmission constraints
  - the need for greater liquidity
  - the difference between retail and hedge market prices
  - the impact of higher prices on export industries
  - the market's complexity (an issue for purchasers)
  - availability of future thermal capacity against the background of greater investment in renewable generation
  - regulatory certainty.

2.1.4 Key initiatives to create a more active market

- Two initiatives - market making for ASX futures products and improved publication of outage and fuel data - were rated particularly highly for promoting a more active market.

- Moderate ratings were provided for wholesale market settlement and prudential security provisions, market making for ASX options products, introducing exchange traded cap products, a standardised model master agreement and financial transmission rights (FTRs).

  Improvements to prudential arrangements were seen as improving access to the market and the range of products that might be on offer. While transmission constraints were identified as a critical issue, FTRs rated somewhat lower for contributing to a more active market because the need for them might be displaced by the grid upgrade and because they were proposed only for Otahuhu and Benmore.

- Two initiatives that were rated particularly poorly for promoting a more active market were the customer compensation scheme and stress testing disclosure regime. The former was viewed quite cynically and regarded as ineffective. Stress testing was viewed by several purchasers as irrelevant to them because they were already protected through their fixed price contracts or were already highly hedged. Gentailers took the view that they already managed risk anticipating extreme events.

- Poor ratings were also given for the contribution of dispatchable demand and scarcity pricing. Some users said they had a limited ability to respond to the dispatchable demand signals and others felt its prices were not sufficiently high to be attractive. Scarcity pricing drew criticism for putting in place price floors rather than maximum prices and for lack of consistency between the suggested prices and the decision by the Electricity Authority to set the prices arising from the 26 March 2011 undesirable trading situation to $3000 MW/hr.

2.2 Market competition

2.2.1 Little change in supply and demand side views

- Of 11 gentailers, eight (73%) believed a competitive market for hedges existed, two believed such a market did not exist and one was unsure. Of 24 hedge purchasers, who were not gentailers, 16 (67%) believed a competitive market for hedges did not exist. In 2009, 73% of gentailers believed the market was competitive while 61% of purchasers believed it was not competitive. From the interviews, it was evident that purchasers' views reflected their experience of the bilateral hedge market and that gentailers and 'other' views were influenced largely by the ASX experience.

2.2.2 Major improvement in competitiveness in past 12 months

- Of 11 gentailers, 10 (91%) believed the competiveness of the hedge contracts market had improved in the past 12 months and three of the five 'other' (60%) were of this view too. In 2009, only one gentailer and none from the 'other' group believed there had been an improvement. Of the 24 purchasers, only four of the 24 (17%) believed there had been an improvement, 13 (54%) said it was much the same, five (21%) were unsure and two (8%) believed it had got worse. In 2009, six of 31 purchasers (19%) believed there had been an improvement.

2.2.3 ASX derivatives a significant contributor to the improvement

- Of the 10 gentailers and 3 'other' who believed competitiveness had improved in the past 12 months, all believed the availability of ASX derivatives had been a significant contributor to this improvement. Of the four purchasers who believed there had been an improvement, two believed the ASX had been a significant contributor, one was unsure and the other did not believe so.

2.2.4 Gentailers confident about process for establishing ASX derivatives being competitive

- Nine of the 11 gentailers were confident the process for establishing ASX derivatives was competitive. Many of the others did not know with 17 of the 24 purchasers and three of the five 'other' saying they were unsure.

2.2.5 Gentailers confident about process for establishing ASX derivatives being competitive

- Although no purchasers were trading on the ASX, 10 said they were considering or about to trade on it, 8 did not intend to and six were unsure. Five gentailers were currently trading on the ASX and will continue to do so, but one who currently trades intends to cease trading. Five other gentailers said they were considering or about to trade on it. Of the 'other' group, one was already trading and would continue to do so, one was considering trading, one did not intend to and two were unsure.

2.2.6 Barriers to trading on the ASX

- Several of those not on the ASX were adopting a wait-and-see approach. While a desire to see a more active market was an important consideration, other issues were the management of prudential security requirements and the need for greater flexibility. In summary, the main barriers to entry were:
  - need for greater liquidity
  - prudential security requirements
  - compliance costs
  - narrow range of products offered
  - need for wider spread of locations than Otahuhu and Benmore.

- Another group of potential entrants to the ASX said they did not know enough about it to have an opinion. While some were educating themselves about the market, it was evident that the education process needed to be broader to include finance officers, the chief executive and in some instances the Board. The critical issue here was that the ASX presented additional risks that would require higher level approval. Purchasers who said electricity was a relatively small proportion of their overall costs pointed out that the benefits needed to significantly outweigh those risks. Nine of the purchasers said electricity represented less than 10% of the input costs to their business and for a further eight it represented between 10-24.9% of costs.

- The survey found that of the 24 purchasers, only two allocated the operational responsibility for electricity price risk management to a finance/treasury function and none had allocated it to a risk/portfolio manager function.

- The interviews showed that the potential of the ASX to replace the hedge market was some way off. All the issues listed above will need to be addressed before that day comes as at present it is largely seen as very useful risk management tool.

2.2.7 Generators and 'other' confident the bilateral contract process is competitive; several purchasers say otherwise

- Half the purchasers (12 or 50%) were not confident the process for establishing bilateral electricity contracts was competitive whereas eight (73%) of the 11 gentailers and four (80%) of the five 'other' said they were confident it was. In previous surveys, the question asked whether respondents were confident the process was 'fair' and most said it was fair.

- In-depth interviews showed that the reasons why purchasers were not confident in the process being competitive were much the same as the reasons they gave for the hedge market not being competitive - scarcity of offers at their nodes. There were a few reports of conditions being imposed over and above the model master agreement and additional FM requirements.

2.2.8 Lack of offers, low market activity and hedge price premiums

- The lack of offers in regions or the existence of few offers and wide spreads, a trend detected in previous surveys, continued to feature as a reason why the bilateral hedge market was not competitive. One reason for this was that as retail provided a natural hedge for much of a gentailer's generation, there was limited volume available for the hedge market.

- Flowing on from that, concerns was expressed that hedge prices commanded a premium well above retail prices. This was given as a reason by some why they remained on spot.

- A very few argued for splitting generation from retail to increase market activity. However, the balance of opinion was that greater competitiveness would arise with greater volumes being traded on the ASX, more participants going on the ASX, the grid upgrade and financial transmission rights being used to manage intra-island as well as inter-island risk.

- Aligned to the need to attract more participants, was the belief that better disclosure and transparency would draw more in and therefore increase competition.

- Critics of the complex nodal pricing system cited the need to reduce the number of nodes.

2.2.9 Basis risk critical

- As was the case in 2009, basis risk continues to be a factor constraining competition by limiting the number of competitive offers available to them at their preferred grid exit point. Of nine large purchasers, five said they had had difficulties getting hedges at some locations and this was the case for eight of nine gentailers when purchasing hedges.

- It was also an issue for four of the eight medium purchasers who said they had had difficulties getting hedges at some locations.

- Almost all gentailers as purchasers of hedges (n=8) and about half of the purchasers (n=11) said locational price risk was a significant problem. Also, four of eight gentailers who sell hedges said they had a policy not to provide prices for hedges at some locations though the issue was also managed by pricing in a premium at locations they would prefer not to sell at or purchased cross-hedges.

- In the interviews, the locations cited as problematic were those off the main transmission grid, Northland, the east of the North Island and the north of the South Island.

2.3 Information to forecast future prices

- While most gentailers (n=9 or 82%) said there was sufficient information available to develop a reasonable view of the market price of hedge contracts, less than half of purchasers (n=8 or 33%) were of this view with nine saying there was not enough information available.

- It was clear from the interviews that several purchasers outsourced the purchase of their hedges or opt for fixed price variable volume contracts on the basis that guaranteed supply was more important than the price premium they paid. The survey found that 19 of the 24 purchasers used parties as agents for their spot or hedge trading. And of those 19, eight used a gentailer as their agent.

- The ASX forward price curve was rated as the most useful source for forecasting prices. It was rated particularly highly by gentailers, 'other' and some large purchasers.

- Offers and indications were rated the second most useful source for forecasting prices of those tested. Internal modelling was a useful source for gentailers and some large purchasers while market commentary forums were useful for small purchasers.

- Other information that was thought to be useful for estimating future prices were:
  - hydrology and other fuel data
  - snow-pack data
  - planned outages
  - economic commentary
  - Ministry of Economic Development data
  - networking with the industry
  - websites like em6 and electrictycontract.co.nz.

- Although there was a high level of awareness of information available from the ASX, NZX, the Electricity Authority and Energy Link, several purchasers said they either lacked the internal capability to analyse all the information available or contracted that role out. Energy Link was commended for the way it packaged information together.

2.4 Risk management

- While all gentailers (n=11) said they had a risk management policy that guided their electricity price risk management, less than half (n=9) purchasers said they had including two large purchasers. And of the 24 purchasers, seven, including five large purchasers, said they purchased more than 75% of their electricity on spot.

- Again while all gentailers (n=11) said they had sufficient knowledge of the market and skills available to their organisation to make effective electricity risk management decisions, over one-third (n=9) of the purchasers said they did not or were unsure if they did. This included two large purchasers.

- In the interviews, those with risk management positions reviewed them annually or more frequently, for instance, whenever they went to market.

- The current rise in spot prices was persuading some of those on spot to review their positions.

- All gentailers and most large purchasers adopted staggered maturities to manage their contracts. In contrast, most small and medium purchasers had their contacts fall due at the same time.

2.4.1 Risk management training and information

- There was no sense from the interviews that there was a shortage of information available on how to manage risk. The reason why information was not taken up was due to issues like the relative cost of electricity to purchasers' total costs, the level within an organisation to which electricity purchasing was delegated and the perception that is better to pay a premium for a fixed price contract to guarantee physical supply than to cover risk by using other financial instrument.

- As noted earlier, it was not so much the availability of risk management information as the need to target the right people with information.

- Training needs ranged widely. There were those who needed quite basic training to demystify the hedge market with some plain English. There were those who thought training needed to target those with treasury functions in companies and there was also some demand for more sophisticated legal and financial training.

- The consensus view from the interviews was that the Authority should not be a provider of training as there were sufficient independent trainers available and because it might lead to distortions. However, it was felt appropriate for it to provide information to promote competition.

2.5 Duration becoming more of an issue

- The ability to obtain hedges for the duration required is a problem for a significant minority of gentailers and purchasers.

- In the survey, three gentailers as purchasers of hedges had had difficulty getting prices for the term of contract they wanted and six had not. Similarly, 11 purchasers had had difficulty. These results are broadly in line with the 2009 survey.

- Five gentailers had a policy to only offer hedges for certain durations. In the last survey, only one had that policy.

- In the interviews, there was some reluctance for gentailers to offer for durations beyond the ASX forward curve and some cited the unpredictability of dry years as a factor influencing their views. Longer term contracts also attracted particular concerns about credit risk.

2.6 Process used for negotiating contracts

- Tenders continued to be the most used process for negotiating hedge contracts, particularly among purchasers with 16 of 24 purchasers citing this approach. One-third of purchasers also cited renewal of contracts with existing counterparties and only four identified broker traded ASX derivatives. Gentailers made wider use of the approaches available to them with most making use of tenders, direct approaches to counterparties and the ASX.

2.7 FM and suspension clauses

- The interviews suggested that FM/suspension clauses in contracts were becoming less common though one purchaser felt they were making their way back in as a result of the legal advice sellers were getting.

- Only two purchasers and two gentailers said they considered that more than 10% of the electricity hedges they had purchased contained FM or suspension clauses that they considered to be unreasonable.

- There was general opposition to FM/suspension clauses in contracts when they were triggered by outages or due to failures at a gentailer's plant. In the view of most purchasers and their agents the onus was on the gentailer to meet any shortfall in supply from other sources. Purchasers regarded gentailers as in the best position to manage risk.

2.8 Credit arrangements

- All gentailers who sold hedges had policies that required purchasers to have credit arrangements. The survey found that only six purchasers had encountered problems entering into a hedge contract because the counterparty had been unhappy with their credit arrangements - four of the six were large purchasers.

- Three of nine gentailers as purchasers had encountered such problems while six of eight had encountered them as seller.

- Approaches to address such problems have included using ASX products.

2.9 Response to high spot prices

- Most purchasers were able to cut load at times of high spot prices and generally for a few hours though a few were quite limited in their ability to cut back citing small cuts or durations such as only a quarter hour and then only for four times in a 24-hour period. The amount of load cut back depended in part to the degree of exposure to the spot market and for some the time of the year as seasonal factors impacted on their production schedules.

- Some had the capacity to generate their own power to cover off spot exposure or even in one or two cases the capacity to sell power. For several purchasers, cutting load to cut production was not an option.

- There was a wide variation in the price threshold at which consumption would be cut ranging from $110-$500 per MW/hr.

- Those exporting into commodity markets who perceived the New Zealand dollar to be over-valued were particularly sensitive to price signals. Price signals were regarded as the primary influence on load reduction.

- As noted, several purchasers were on fixed price contracts and therefore immune to price signals at times of high spot prices. This was reflected in the survey finding that only 10 would respond by reducing consumption and most of these were large purchasers.

- In the interviews, those to whom the dispatchable demand scheme applied were positive about it though one or two said the prices were not high enough and that there might need to be an aggregator for small purchasers to take advantage of the scheme.

- Gentailers as purchasers for the main part responded by increasing their hedge cover.

2.10 Hedge seller performance

- Hedge sellers that were rated the best by 12 or more purchasers were:
  1= Mighty River Power
  1= Contact Energy
  3. Meridian Energy
  4= Genesis Energy
  4= Trustpower.

These results are in line with 2009 though performance ratings were not as good overall this year.

- Gentailers rated the best sellers of hedges in the following order:
  1. Genesis
  2= Meridian Energy
  2= Contact Energy
  4. Mighty River Power
  5. Trustpower.

Ratings did not change much from 2009 with the exception of Genesis which rose from the worst ranked hedge seller in 2009 to the best in 2012.

3. Quantitative research

3.1 Respondent profile

RESPONDENT PROFILE	
Small purchasers	6
Medium purchasers	9
Large purchasers	9
Sub-total purchasers	**24**
Generator-Retailers	11
Others	5
Total	**40**

3.2 Competitive hedge market

Opinions on whether there was a competitive hedge market were reasonably polarised. A majority of gentailers (8/11) said it was competitive and a majority of purchasers (16/24) said it was not. Other respondents were slightly more partial to believe the market was competitive. These results are mostly in line with those of the 2009 survey, though other respondents were less divided.

COMPETITIVE HEDGE MARKET

Many organisations enter into electricity hedge contracts ... in order to manage exposure to electricity spot prices. Do you believe a competitive electricity contracts market (hedge market) currently exists in New Zealand?

	Total purchasers		
	2007	2009	2012
Base (n=)	*25*	*31*	*24*
Yes	*5*	*9*	5
No	15	19	16
Unsure	5	3	3
	Generators/Retailers		
	2007	2009	2012
Base (n=)	*9*	*11*	*11*
Yes	*7*	*8*	8
No	2	3	2
Unsure	-	-	1
	Other		
	2007	2009	2012
Base (n=)	*9*	*7*	*5*
Yes	*4*	*2*	3
No	5	3	1
Unsure	3	2	1

Again, opinions were polarised on whether the competitiveness of the hedge market had improved over the past 12 months. Almost every gentailer (10/11) thought it had become more competitive but only four purchasers thought the same. About half of the purchasers (13/24) said competitiveness was about the same as it was 12 months ago, and five were unsure. Other respondents tended to think competitiveness had improved (3/5). Only two respondents thought competitiveness had gotten worse in the past 12 months.

IMPROVED COMPETITIVENESS

Do you believe the competitiveness of the electricity contracts market (hedge market) has improved over the past 12 months?

	Total purchasers	Generators/ Retailers	Other
Base (n=)	***24***	***11***	***5***
Yes, the competitiveness has improved	4	10	3
The competitiveness is about the same as 12 months ago	13	1	1
No, the competitiveness has gotten worse	2	-	-
Unsure / No answer	5	-	1

Every gentailer and 'other' respondent that believed competitiveness had improved also believed that the availability of ASX electricity derivatives were a significant factor to this improvement. Purchasers were once again somewhat divided with two of the four believing they were a significant factor, one believing they weren't and one more being unsure.

ASX ELECTRICTITY DERIVATIVES CONTRIBUTION

Do you believe the availability of ASX electricity derivatives has been a significant contributor to this improvement?

	Total purchasers	Generators/ Retailers	Other
Base (n=)	***4***	***10***	***3***
Yes	2	10	3
No	1	-	-
Unsure	1	-	-

3.3 Competitiveness of process

Gentailers were confident that the processes for establishing bilateral electricity contract prices were competitive this year (8/11), as were other respondents (4/5). In contrast, half of the purchasers expressed no confidence (12/24) and nine were unsure.

CONFIDENCE IN COMPETITIVENESS FOR BILATERAL ELECTRICITY CONTRACT PRICES

Do you feel confident that the processes for establishing bilateral electricity contract prices are competitive?

	Total purchasers	Generators/ Retailers	Other
Base (n=)	***24***	***11***	***5***
Yes	3	8	4
No	12	2	-
Unsure	9	1	1

Gentailers were again most confident with almost all of them (9/11) reporting that the process for establishing ASX electricity derivative prices was competitive; similar to the levels of those that felt the establishment of bilateral electricity prices were competitive. Purchasers were mostly unsure as to whether the process was competitive (17/24), with a divide amongst those that were and were not confident in the process. Other respondents followed along the lines of purchasers with most (3/5) being unsure.

CONFIDENCE IN COMPETITIVENESS FOR ASX ELECTRICITY DERIVATIVE PRICES

Do you feel confident that the processes for establishing ASX electricity derivative prices are competitive?

	Total purchasers	Generators/ Retailers	Other
Base (n=)	***24***	***11***	***5***
Yes	3	9	1
No	4	1	1
Unsure	17	1	3

Almost all gentailers reported that they were already trading and would continue or that they were considering or about to trade ASX derivatives (5/11 each). In contrast, none of the purchasers that responded had begun trading ASX derivatives. This explains the high level of those unsure that the processes for establishing ASX derivative prices were competitive, as seen in the previous table. Although no purchasers were trading at the time of questioning, 10 of the 24 were considering trading ASX derivatives in the future. Only one of the other respondents had experience trading ASX derivatives, which may explain why they follow similar levels of confidence to purchasers regarding the establishment process.

DESCRIPTION OF POSITION ON TRADING ASX ELECTRICTY DERIVATIVES

Which ONE of the following best describes your position on trading ASX derivatives?

	Total purchasers	Generators/ Retailers	Other
Base (n=)	***24***	***11***	***5***
Considering or about to trade ASX electricity derivatives	10	5	1
No intention of trading ASX electricity derivatives	8	-	1
Already trading and will continue to do so	-	5	1
Already trading, but intend to cease trading	-	1	-
Unsure / No answer	6	-	2

3.4 Short and medium term hedge prices

Estimations of future contract prices for the year to March 2013 were higher for gentailers than purchasers. Most gentailers (9/11) estimated prices would exceed $90MW/h, however, only 11 of the 24 purchasers expected this. In the medium term, the roles reversed with more purchasers and less gentailers estimating price rises above $90MW/h. By the end of March 2015, 15 of the 24 purchasers fell into this category compared to 5 of 11 gentailers. 'Other' respondents' price estimations were the highest overall with all three that answered the question estimating prices would exceed $90MW/h every year to March 2015.

FUTURE PRICE PATH - 2012

What is your current estimation of the energy component of electricity contract prices for the next 3 years given current market conditions?

Price $/MH	Total Purchasers to March 13	Generator-Retailers to March 13	Other to March 13	Total Purchasers to March 14	Generator-Retailers to March 14	Other to March 14	Total Purchasers to March 15	Generator-Retailers to March 15	Other to March 15
Base (n=)	*24*	*11*	*5*	*24*	*11*	*5*	*24*	*11*	*5*
Over $90 MW/h	11	9	3	12	2	3	15	5	3
$80 - $90 MW/h	7	2	-	7	9	-	4	6	-
$70 - $80 MW/h	1	-	-	1	-	-	1	-	-
$60 - $70 MW/h	2	-	-	1	-	-	1	-	-
$50 - $60 MW/h	-	-	-	-	-	-	-	-	-
Less than $50 MW/h	-	-	-	-	-	-	-	-	-
Unsure / No answer	3	-	2	3	-	2	3	-	2

3.5 Process for establishing hedges

Tendering was the most used process for negotiating electricity contracts for purchasers (16/24), followed by renewing contracts with counterparties and contracting counterparties directly (both 8/24). Most gentailers used all processes.

PROCESS USED FOR NEGOTIATING ELECTRICITY CONTRACTS

What processes do you use for negotiating electricity contracts?

	Total purchasers	
	2009	2012
Base (n=)	***31***	***24***
Tenders	25	16
Renew contracts with existing counterparties	11	8
Contract potential counterparties directly	10	8
Broker traded ASX electricity derivatives	-	4
Respond to tenders	8	2
Directly traded ASX electricity derivatives	-	-
Other	1	-
Unsure / No answer	1	-
	Generators/Retailers	
	2009	**2012**
Base (n=)	***11***	***11***
Tenders	4	8
Renew contracts with existing counterparties	7	6
Contract potential counterparties directly	8	9
Broker traded ASX electricity derivatives	-	6
Respond to tenders	5	6
Directly traded ASX electricity derivatives	-	5
Other	-	1
Unsure / No answer	1	-
	Other	
	2009	**2012**
Base (n=)	***7***	***5***
Tenders	2	3
Renew contracts with existing counterparties	1	-
Contract potential counterparties directly	1	-
Broker traded ASX electricity derivatives	-	-
Respond to tenders	-	1
Directly traded ASX electricity derivatives	-	1
Other	-	2
Unsure / No answer	3	-

* As this was a multiple response question the number of responses do not correspond to the number of respondents in each category.

The ASX electricity derivative forward price curve, offers/indications and internal modelling are regarded as being the most useful sources for forecasting electricity prices overall. All gentailers found the ASX electricity derivative to be useful, though the purchasers had a neutral stance on this method. Both purchasers and gentailers found offers and internal modelling to be somewhat useful. Although purchasers found market commentary forums to be useful, this opinion was balanced by the gentailers who found them to be not at all useful. Lastly, market forums were not found useful by anyone.

FORECASTING SOURCES (NET USEFULNESS)

Please rate each of the methods listed below in terms of their usefulness in forecasting electricity prices

	(VERY USEFUL + FAIRLY USEFUL) - (NOT THAT USEFUL + NOT USEFUL AT ALL)						
	TOTAL NET USEFULNESS	**Total Purchasers (excluding generator-retailers)**	**Small Purchasers**	**Medium Purchasers**	**Large Purchasers**	**Generator-Retailers**	**Other**
Base (n=)	***40***	***24***	***6***	***9***	***9***	***11***	***5***
ASX electricity derivative forward price curve	15	0	-1	-2	3	11	4
Offers/ indications	11	2	3	2	-3	7	2
Internal modelling	7	1	-1	-1	3	5	1
Market commentary forums	-3	5	4	-	1	-6	-2
Market forums	-17	-7	-2	-2	-3	-6	-4
Independent forecasts	-	1	-	-	1	-3	2

While most gentailers (9/11) and medium purchasers (4/9) said there was sufficient information available to develop a reasonable view of market prices for electricity contracts, small (3/6) and large (4/9) purchasers were more likely to say there was not sufficient information available. ‘Other’ respondents were slightly more likely to say there was sufficient information (3/5) with only one saying there wasn’t and one being unsure.

Results were only similar to 2007 and 2009 for gentailers, with a high number agreeing there was sufficient information each year. More small and medium purchasers said there was sufficient information this year proportionately, and less large purchasers thought this was true.

SUFFICIENT INFORMATION TO DEVELOP VIEW OF MARKET PRICE

Would you say there is sufficient information available to develop a reasonable view of market price for electricity contracts?

	Total Purchasers (excluding generator/retailers)		
	2007	**2009**	**2012**
Base (n=)	***25***	***31***	***24***
Yes	11	11	8
No	11	13	9
Unsure	3	7	7
	Small Purchasers		
	2007	**2009**	**2012**
Base (n=)	***10***	***9***	***6***
Yes	5	2	2
No	4	4	3
Unsure	1	3	1
	Medium Purchasers		
	2007	**2009**	**2012**
Base (n=)	***8***	***14***	***9***
Yes	3	4	4
No	3	6	2
Unsure	2	4	3
	Large Purchasers		
	2007	**2009**	**2012**
Base (n=)	***7***	***8***	***9***
Yes	3	5	2
No	4	3	4
Unsure	-	-	3
	Generator/Retailers		
	2007	**2009**	**2012**
Base (n=)	***9***	***11***	***11***
Yes	7	8	9
No	2	3	1
Unsure	-	-	1
	Other		
	2007	**2009**	**2012**
Base (n=)	***9***	***7***	***5***
Yes	4	2	3
No	3	3	1
Unsure	2	2	1

3.6 Risk management

All gentailers had a risk management policy in place this year, a similar position to 2009. Purchasers also had similar results to 2009 with most large purchasers having a risk management policy in place (6/9), and most small (4/6) and medium (6/9) purchasers not having one.

RISK MANAGEMENT POLICY *Do you have a risk management policy that guides your electricity price risk management?*		
	Total Purchasers (excluding generator/retailers)	
	2009	**2012**
Base (n=)	***25***	***24***
Yes	11	9
No	14	12
Unsure / No answer	-	3
	Small Purchasers	
	2009	**2012**
Base (n=)	***7***	***6***
Yes	2	1
No	5	4
Unsure / No answer	-	1
	Medium Purchasers	
	2009	**2012**
Base (n=)	***10***	***9***
Yes	4	2
No	6	6
Unsure / No answer	-	1
	Large Purchasers	
	2009	**2012**
Base (n=)	***8***	***9***
Yes	5	6
No	3	2
Unsure / No answer	-	1
	Generator/Retailers	
	2009	**2012**
Base (n=)	***10***	***11***
Yes	9	11
No	1	-
Unsure / No answer	-	-

Over half of the purchasers assigned electricity price risk management to either a specialist energy manager (8/24) or a procurement manager (7/24), with operational line managers also taking on a good proportion of this role (5/24). Small and medium sized purchasers were more likely to use procurement managers and large purchasers were more likely to use specialist energy managers. This is slightly different to 2009 with a larger proportion of the role being assigned to specialist energy managers for total purchasers in 2012. In contrast, similar to 2009 most gentailers (6/11) assigned this role to risk or portfolio managers.

RISK MANAGEMENT INFRASTRUCTURE

Risk management infrastructure - In what part of your organisation is the primary operational responsibility for electricity price risk management?

	Total Purchasers (excluding generator/retailers)	
	2009	2012
Base (n=)	***26***	***24***
Specialist energy manager function	5	8
Procurement manager function	7	7
Operational line manager function	7	5
Finance/ Treasury function	3	2
Risk/ portfolio manager function	1	-
Other	3	2
	Small Purchasers	
	2009	**2012**
Base (n=)	***8***	***6***
Specialist energy manager function	-	1
Procurement manager function	4	2
Operational line manager function	3	2
Finance/ Treasury function	1	1
Risk/ portfolio manager function	-	-
Other	-	-
	Medium Purchasers	
	2009	**2012**
Base (n=)	***10***	***9***
Specialist energy manager function	1	1
Procurement manager function	2	4
Operational line manager function	2	1
Finance/ Treasury function	2	1
Risk/ portfolio manager function	1	-
Other	2	2
	Large Purchasers	
	2009	**2012**
Base (n=)	***8***	***9***
Specialist energy manager function	4	6
Procurement manager function	1	1
Operational line manager function	2	2
Finance/ Treasury function	-	-
Risk/ portfolio manager function	-	-
Other	1	-

RISK MANAGEMENT INFRASTRUCTURE CONT…		
Risk management infrastructure - In what part of your organisation is the primary operational responsibility for electricity price risk management?		
	Generator/Retailers	
	2009	**2012**
Base (n=)	***10***	***11***
Specialist energy manager function	1	1
Procurement manager function	-	-
Operational line manager function	1	1
Finance/ Treasury function	1	-
Risk/ portfolio manager function	6	6
Other	1	3

3.7 Use of other parties for trading

Four of the 11 gentailers used other parties for energy trading this year, an increase from 2009 when only one gentailer used them. There has also been an increase proportionately of purchasers using other parties. This is driven by the medium sized purchasers, of whom every respondent this year used other parties (9/9), a large increase from 2009 when the majority didn't use other parties.

USE OF OTHER PARTIES FOR TRADING

Do you use other parties as agents for either your spot or hedge energy trading?

	Total Purchasers (excluding generator/retailers)	
	2009	2012
Base (n=)	*26*	*24*
Yes	12	19
No	14	5
Unsure	-	-
	Small Purchasers	
	2009	2012
Base (n=)	*8*	*6*
Yes	5	4
No	3	2
Unsure	-	-
	Medium Purchasers	
	2009	2012
Base (n=)	*10*	*9*
Yes	3	9
No	7	-
Unsure	-	-
	Large Purchasers	
	2009	2012
Base (n=)	*8*	*9*
Yes	4	6
No	4	3
Unsure	-	-
	Generator/Retailers	
	2009	2012
Base (n=)	*11*	*11*
Yes	1	4
No	10	7
Unsure	-	-

Of those purchasers who did use other parties as agents for trading, roughly equal amounts used specialised independent parties (10/19) and gentailers (8/19), although the small purchasers were more likely to use specialised independent parties (4/4) and the larger ones gentailers (5/6). Gentailers were more likely to use other gentailers as agents for trading (3/4).

USE OF OTHER PARTIES FOR TRADING

Is the party a generator/ retailer or an independent party?

	Total Purchasers (excluding generator/retailers)	
	2009	**2012**
Base (n=)	***12***	***19***
Generator/ Retailer	5	8
Independent party - specialised	-	10
Independent party - bank etc	-	1
Independent party (2009 ONLY)	7	-
	Small Purchasers	
	2009	**2012**
Base (n=)	***5***	***4***
Generator/ Retailer	-	-
Independent party - specialised	-	4
Independent party - bank etc	-	-
Independent party (2009 ONLY)	5	-
	Medium Purchasers	
	2009	**2012**
Base (n=)	***3***	***9***
Generator/ Retailer	2	3
Independent party - specialised	-	5
Independent party - bank etc	-	1
Independent party (2009 ONLY)	1	-
	Large Purchasers	
	2009	**2012**
Base (n=)	***4***	***6***
Generator/ Retailer	3	5
Independent party - specialised	-	1
Independent party - bank etc	-	-
Independent party (2009 ONLY)	1	-
	Generator/Retailers	
	2009	**2012**
Base (n=)	***3***	***4***
Generator/ Retailer	2	3
Independent party - specialised	-	-
Independent party - bank etc	-	1
Independent party (2009 ONLY)	1	-

3.8 Purchases at spot market price

Behaviour was divided for purchasers with 10 of the 24 having no spot market purchasers and 13 purchasing at least some of their electricity on the New Zealand spot market. Of those that did purchase electricity on the spot market, five purchased less than 50% of their total electricity and seven purchased over 75%.

Gentailers were more likely to purchase at least some of their electricity on the spot market with only three out of the 11 not making any spot market purchases. Of those that did purchase electricity, four purchased less than 25% of their total electricity and three purchased over 75%.

PURCHASE ON NZ SPOT MARKET

Approximately, how much of your electricity do you purchase on the New Zealand spot market?

	Total purchasers	Generators/ Retailers	Other
Base (n=)	*24*	*11*	*1*
No spot purchases	10	3	-
< 25%	3	4	-
26 - 50%	2	-	-
51 - 75%	1	-	-
> 75%	7	3	1
Unsure / No answer	1	1	-

3.9 Declared knowledge and skills

Results were similar to 2009. Most purchasers (15/24) and all gentailers (11/11) considered they had sufficient skills and knowledge of the market within their organisation to make effective electricity risk management decisions. Small purchasers were the only category this year more likely to believe they didn't have the sufficient skills and knowledge of the market to make decisions.

SKILLS FOR EFFECTIVE RISK MANAGEMENT *Do you consider you have sufficient knowledge of the market and its issues, and sufficient skills within your organisation, to make effective electricity risk management decisions?*		
	Total Purchasers (excluding generator/retailers)	
	2009	2012
Base (n=)	*25*	*24*
Yes	15	15
No	9	7
Unsure / No answer	1	2
	Small Purchasers	
	2009	2012
Base (n=)	*7*	*6*
Yes	5	1
No	2	5
Unsure / No answer	-	-
	Medium Purchasers	
	2009	2012
Base (n=)	*10*	*9*
Yes	4	8
No	5	-
Unsure / No answer	1	1
	Large Purchasers	
	2009	2012
Base (n=)	*8*	*9*
Yes	6	6
No	2	2
Unsure / No answer	-	1
	Generator/Retailers	
	2009	2012
Base (n=)	*10*	*11*
Yes	8	11
No	2	-
Unsure / No answer	-	-

3.10 Annual consumption hedged

The majority of purchasers (15/24) will hedge over 40% of their annual consumption between April 2012 to March 2013, with over a quarter hedging all of it. However, another quarter of purchasers will choose to hedge none of their annual consumption. Gentailers were slightly more likely to hedge their consumption with seven of the 11 planning to hedge over 80%. These findings continue in a similar fashion through the next two years to March 2015.

ANNUAL CONSUMPTION HEDGED

What percentage of your annual consumption will you hedge over the next three years? (If you are a retailer, include retail load)

Price $/MH	Total Purchasers to March 13	Generator-Retailers to March 13	Other to March 13	Total Purchasers to March 14	Generator-Retailers to March 14	Other to March 14	Total Purchasers to March 15	Generator-Retailers to March 15	Other to March 15
Base (n=)	*24*	*11*	*1*	*24*	*11*	*1*	*24*	*11*	*1*
0	6	1	-	4	1	-	3	1	1
1-19%	-	1	-	1	1	-	1	1	-
20-39%	-	-	-	-	-	-	-	-	-
40-59%	5	-	-	2	-	1	2	-	-
60-79%	2	-	-	4	-	-	4	1	-
80-99%	1	2	1	1	2	-	1	2	-
100%	7	5	-	7	5	-	7	4	-
Other	-	-	-	-	-	-	-	-	-
Unsure / No answer	3	2	-	5	2	-	6	2	-

The majority of gentailers plan to hedge at least 60% of their average annual generation, with at least seven of the 11 stating they would each year up to March 2015. None of them reported they would not hedge any of their annual generation and three were unsure.

ANNUAL GENERATION HEDGED

What percentage of your average annual generation will you hedge over the next three years?

Price $/MH	Total Purchasers to March 13	Generator-Retailers to March 13	Other to March 13	Total Purchasers to March 14	Generator-Retailers to March 14	Other to March 14	Total Purchasers to March 15	Generator-Retailers to March 15	Other to March 15
Base (n=)	*24*	*11*	*1*	*24*	*11*	*1*	*24*	*11*	*1*
0	2	-	-	3	-	-	2	-	-
1-19%	1	-	-	1	-	-	1	1	-
20-39%	-	-	-	-	-	-	-	-	-
40-59%	-	-	-	-	1	-	-	-	-
60-79%	-	3	-	-	2	-	-	2	-
80-99%	-	4	-	-	4	-	-	4	-
100%	2	1	-	2	1	-	2	1	-
Other	1	-	-	1	-	-	1	-	-
Unsure / No answer	18	3	1	17	3	1	18	3	1

3.11 Contract planning

Purchasers generally used shorter planning windows than gentailers, with most purchasers using planning windows of less than three years (14/24) and most gentailers using planning windows of over three years (6/11). This is slightly different from 2009, when gentailers were also more likely to use planning windows of less than three years.

TIME PERIOD FOR ASSESSING CONTRACT POSITION

How far ahead is your usual planning window for assessing your contract position?

	Total Purchasers (excluding generator/retailers)	
	2009	**2012**
Base (n=)	***25***	***24***
Less than 6 months	1	3
Between 6 months and 1 year	8	4
Greater than 1 year to 2 years	2	4
Greater than 2 years to 3 years	8	3
Greater than 3 years to 5 years	3	6
Greater than 5 years to 10 years	1	1
Greater than 10 years	1	-
Unsure / No answer	1	3
	Small Purchasers	
	2009	**2012**
Base (n=)	***7***	***6***
Less than 6 months	-	1
Between 6 months and 1 year	4	1
Greater than 1 year to 2 years	1	-
Greater than 2 years to 3 years	1	-
Greater than 3 years to 5 years	1	3
Greater than 5 years to 10 years	-	-
Greater than 10 years	-	-
Unsure / No answer	-	1
	Medium Purchasers	
	2009	**2012**
Base (n=)	***10***	***9***
Less than 6 months	-	1
Between 6 months and 1 year	2	3
Greater than 1 year to 2 years	1	1
Greater than 2 years to 3 years	5	2
Greater than 3 years to 5 years	1	1
Greater than 5 years to 10 years	-	-
Greater than 10 years	-	-
Unsure / No answer	1	1

TIME PERIOD FOR ASSESSING CONTRACT POSITION CONT… *How far ahead is your usual planning window for assessing your contract position?*		
	Large Purchasers	
	2009	**2012**
Base (n=)	***8***	***9***
Less than 6 months	1	1
Between 6 months and 1 year	2	-
Greater than 1 year to 2 years	-	3
Greater than 2 years to 3 years	2	1
Greater than 3 years to 5 years	1	2
Greater than 5 years to 10 years	1	1
Greater than 10 years	1	-
Unsure / No answer	-	1
	Generator/Retailers	
	2009	**2012**
Base (n=)	***10***	***11***
Less than 6 months	1	-
Between 6 months and 1 year	1	1
Greater than 1 year to 2 years	1	2
Greater than 2 years to 3 years	4	1
Greater than 3 years to 5 years	2	4
Greater than 5 years to 10 years	1	1
Greater than 10 years	-	1
Unsure / No answer	-	1

The most common practice for both purchasers overall and gentailers was to seek to contract between 6-12 months in advance of expiry, though large purchasers were a bit more likely than small and medium purchasers to seek to contract at least one year in advance. The period in advance of contract expiry that respondents seek to contract has increased since 2009, where 3-6 months in advance was a slightly more likely period in which respondents would seek to contract.

TIME PERIOD SEEK TO CONTRACT OR RE-CONTRACT		
How far in advance of contract expiry do you normally seek to contract (or re-contract)?		
	Total Purchasers (excluding generator/retailers)	
	2009	**2012**
Base (n=)	***25***	***24***
More than 1 year in advance of existing maturity date	3	7
More than 6 months in advance of existing maturity date	9	8
More than 3 months in advance of exiting maturity date	10	4
More than 1 month in advance of existing maturity date	2	2
Within 1 month in advance of existing maturity date	-	-
Upon maturity of existing hedge contract	-	-
Unsure / No answer	1	3
	Small Purchasers	
	2009	**2012**
Base (n=)	***7***	***6***
More than 1 year in advance of existing maturity date	-	1
More than 6 months in advance of existing maturity date	5	1
More than 3 months in advance of exiting maturity date	1	2
More than 1 month in advance of existing maturity date	1	1
Within 1 month in advance of existing maturity date	-	-
Upon maturity of existing hedge contract	-	-
Unsure / No answer	-	1
	Medium Purchasers	
	2009	**2012**
Base (n=)	***10***	***9***
More than 1 year in advance of existing maturity date	1	2
More than 6 months in advance of existing maturity date	2	6
More than 3 months in advance of exiting maturity date	6	-
More than 1 month in advance of existing maturity date	-	-
Within 1 month in advance of existing maturity date	-	-
Upon maturity of existing hedge contract	-	-
Unsure / No answer	1	1

TIME PERIOD SEEK TO CONTRACT OR RE-CONTRACT CONT…		
How far in advance of contract expiry do you normally seek to contract (or re-contract)?		
	Large Purchasers	
	2009	2012
Base (n=)	*8*	*9*
More than 1 year in advance of existing maturity date	2	4
More than 6 months in advance of existing maturity date	2	1
More than 3 months in advance of exiting maturity date	3	2
More than 1 month in advance of existing maturity date	1	1
Within 1 month in advance of existing maturity date	-	-
Upon maturity of existing hedge contract	-	-
Unsure / No answer	-	1
	Generator/Retailers	
	2009	2012
Base (n=)	*10*	*11*
More than 1 year in advance of existing maturity date	2	2
More than 6 months in advance of existing maturity date	2	6
More than 3 months in advance of exiting maturity date	4	-
More than 1 month in advance of existing maturity date	2	1
Within 1 month in advance of existing maturity date	-	-
Upon maturity of existing hedge contract	-	-
Unsure / No answer	-	2

The majority of purchasers normally seek to contract between either 1-2 years or 2-3 years (13/24). The majority of gentailers were more evenly spaced out among these durations (3/11 each) as well as the duration of 6 months to 1 year (also 3/11). This has changed slightly since 2009, when gentailers were more likely to choose a longer duration of 3-5 years to contract.

PROPOSED DURATION OF CONTRACT *For what duration do you normally seek to contract?*		
	Total Purchasers (excluding generator/retailers)	
	2009	**2012**
Base (n=)	***25***	***24***
Less than 6 months	-	1
Between 6 months and 1 year	2	2
Over 1 year up to 2 years	4	8
Over 2 years up to 3 years	11	5
Over 3 years up to 5 years	5	4
Over 5 years up to 10 years	-	-
Over 10 years	-	1
Unsure / No answer	3	3
	Small Purchasers	
	2009	**2012**
Base (n=)	***7***	***6***
Less than 6 months	-	-
Between 6 months and 1 year	1	-
Over 1 year up to 2 years	-	1
Over 2 years up to 3 years	3	2
Over 3 years up to 5 years	3	2
Over 5 years up to 10 years	-	-
Over 10 years	-	-
Unsure / No answer	-	1
	Medium Purchasers	
	2009	**2012**
Base (n=)	***10***	***9***
Less than 6 months	-	-
Between 6 months and 1 year	-	2
Over 1 year up to 2 years	1	3
Over 2 years up to 3 years	7	2
Over 3 years up to 5 years	1	1
Over 5 years up to 10 years	-	-
Over 10 years	-	-
Unsure / No answer	1	1

PROPOSED DURATION OF CONTRACT CONT…		
For what duration do you normally seek to contract?		
	Large Purchasers	
	2009	2012
Base (n=)	***8***	***9***
Less than 6 months	-	1
Between 6 months and 1 year	1	-
Over 1 year up to 2 years	3	4
Over 2 years up to 3 years	1	1
Over 3 years up to 5 years	1	1
Over 5 years up to 10 years	-	-
Over 10 years	-	1
Unsure / No answer	2	1
	Generator/Retailers	
	2009	2012
Base (n=)	***10***	***11***
Less than 6 months	1	-
Between 6 months and 1 year	-	3
Over 1 year up to 2 years	1	3
Over 2 years up to 3 years	3	3
Over 3 years up to 5 years	5	1
Over 5 years up to 10 years	-	-
Over 10 years	-	-
Unsure / No answer	-	1

All gentailers have adopted the practice of staggering the maturity of their contracts (11/11), but purchasers were polarised with 10 of 24 staggering the maturities and 11 having contracts falling due at the same time. This polarisation is due to small purchasers having more contracts fall due at the same time (4/6) and large purchasers preferring staggered maturities (5/9), with medium purchasers remaining evenly divided among both options (4/11 each). These results are almost identical to 2009.

OVERLAP OF CONTRACT PERIODS *The maturity of your electricity contracts could be best described as:*		
	Total Purchasers (excluding generator/retailers)	
	2009	**2012**
Base (n=)	***25***	***24***
Fall due at the same time	15	11
Staggered maturities	10	10
Unsure / No answer	-	3
	Small Purchasers	
	2009	**2012**
Base (n=)	***7***	***6***
Fall due at the same time	7	4
Staggered maturities	-	1
Unsure / No answer	-	1
	Medium Purchasers	
	2009	**2012**
Base (n=)	***10***	***9***
Fall due at the same time	5	4
Staggered maturities	5	4
Unsure / No answer	-	1
	Large Purchasers	
	2009	**2012**
Base (n=)	***8***	***9***
Fall due at the same time	3	3
Staggered maturities	5	5
Unsure / No answer	-	1
	Generator/Retailers	
	2009	**2012**
Base (n=)	***10***	***11***
Fall due at the same time	-	-
Staggered maturities	10	11
Unsure / No answer	-	-

3.12 Contract elements

Similarly to 2009, price was rated as significantly more important than any other contract element by all types of respondent. Force majeure/Suspension clauses were rated second most important by purchasers (excluding gentailers) and gentailers as both purchasers and sellers deemed location to be the second most important factor. Gentailers as purchasers and sellers also rated credit arrangements highly compared to purchasers.

IMPORTANCE OF CONTRACT ELEMENTS (MEAN RATING)

On a 0-10 scale, where 0 means Not important at all and 10 means Very important, please rate the importance of each of the following elements relating to electricity hedges…

	Total Purchasers (excluding generator/retailers)			
	2009		2012	
	n=	Mean	*n=*	Mean
Price	*28*	9.9	*21*	9.7
Force majeure/ Suspension clauses	*26*	6.3	*21*	7.4
Term	*28*	6.7	*21*	6.2
Location	*26*	6.9	*21*	6.2
Profile	*26*	6.0	*21*	6.0
Relationship with counterparty	*28*	6.0	*21*	5.4
Credit arrangements	*28*	4.6	*21*	4.4
Other service provided by counterparty	*28*	4.2	*21*	3.6
	Small Purchasers			
	2009		2012	
	n=	Mean	*n=*	Mean
Price	*8*	9.6	*5*	9.6
Force majeure/ Suspension clauses	*8*	6.4	*5*	6.0
Term	*8*	6.9	*5*	5.4
Location	*6*	7.3	*5*	3.0
Profile	*7*	5.9	*5*	4.4
Relationship with counterparty	*8*	6.0	*5*	4.2
Credit arrangements	*8*	2.3	*5*	1.6
Other service provided by counterparty	*8*	4.3	*5*	2.8
	Medium Purchasers			
	2009		2012	
	n=	Mean	*n=*	Mean
Price	*12*	9.9	*7*	9.9
Force majeure/ Suspension clauses	*10*	5.2	*7*	7.0
Term	*12*	6.9	*7*	6.7
Location	*12*	6.3	*7*	6.0
Profile	*12*	6.9	*7*	6.1
Relationship with counterparty	*12*	6.5	*7*	5.3
Credit arrangements	*12*	5.9	*7*	5.1
Other service provided by counterparty	*12*	4.7	*7*	3.6

IMPORTANCE OF CONTRACT ELEMENTS (MEAN RATING) CONT…

On a 0-10 scale, where 0 means Not important at all and 10 means Very important, please rate the importance of each of the following elements relating to electricity hedges…

	Large Purchasers			
	2009		2012	
	n=	Mean	*n=*	Mean
Price	*8*	10.0	*9*	9.7
Force majeure/ Suspension clauses	*8*	7.5	*9*	8.4
Term	*8*	6.1	*9*	6.2
Location	*8*	7.5	*9*	8.2
Profile	*8*	5.9	*9*	6.9
Relationship with counterparty	*8*	5.4	*9*	6.1
Credit arrangements	*8*	4.9	*9*	5.3
Other service provided by counterparty	*8*	3.5	*9*	4.0
	Generator/Retailers as sellers			
	2009		**2012**	
	n=	**Mean**	*n=*	**Mean**
Price	*8*	9.8	*10*	9.4
Force majeure/ Suspension clauses	*8*	6.6	*10*	5.1
Term	*8*	8.6	*9*	5.8
Location	*8*	8.0	*10*	8.2
Profile	*8*	7.6	*10*	6.8
Relationship with counterparty	*8*	6.6	*10*	4.9
Credit arrangements	*8*	7.4	*10*	7.1
Other service provided by counterparty	*8*	3.9	*10*	2.3
	Generator/Retailers as purchasers			
	2009		**2012**	
	n=	**Mean**	*n=*	**Mean**
Price	*8*	8.5	*9*	9.4
Force majeure/ Suspension clauses	*8*	6.4	*9*	6.7
Term	*8*	6.8	*9*	6.4
Location	*8*	6.9	*9*	7.8
Profile	*8*	5.8	*9*	6.9
Relationship with counterparty	*8*	4.8	*9*	4.1
Credit arrangements	*8*	5.6	*9*	6.9
Other service provided by counterparty	*8*	2.8	*9*	1.2

*Note: Not all respondents provided a rating for all elements; the column 'n=' is the number of respondents who provided ratings.

3.13 Market experience

■ Sellers - last six months

Gentailers made an offer to a purchaser in response to a request 37 times out of 45 on average. It was clear from the data that gentailers were not always successful as their offers, again on average, were only accepted 18 times for every 37 offers they made.

GENERATORS / RETAILERS AS SELLERS - LAST SIX MONTHS				
In the last 6 months how many times:				
	2012 (March)			
	Mean	Max	Min	Total
Were you asked to provide an offer to a purchaser?	45.3	100	1	362
Did you make an offer to a hedge purchaser in response to a request?	37	100	1	299
Were the offers accepted by the purchasers?	17.9	54	-	143
	2009 (December)			
	Mean	Max	Min	Total
Were you asked to provide an offer to a purchaser?	21.4	50	-	150
Did you make an offer to a hedge purchaser in response to a request?	20.7	50	1	145
Were the offers accepted by the purchasers?	9.4	21	-	66

Further interrogation of the data showed that the claimed response rate to requests and the success rate to offers made varied widely. Gentailers are designated by letters to protect confidentiality. There was quite a range of response and success rates.

INDIVIDUAL GENERATOR-RETAILER RESPONSE ACCEPTANCE RATE		
Generator-Retailer (n=11)	Response rate (% of responses to requests for offers)	Success rate (% of acceptance to offers made)
A	100	32
B	100	60
C	-	-
D	93	54
E	100	54
F	100	0
G	-	-
H	50	40
I	-	-
J	50	40
K	67	100

Experience of most recent occasions seeking a bilateral hedge

Most (58/81) approaches from all purchasers for a hedge contract received a response, a similar level to gentailers (21/31). Out of the 58 responses given to all purchasers, over half (33) had the terms sought, 23 had FM or suspension clauses, 36 had other clauses that were acceptable and 46 had responses at the grid exit points requested. From the 23 purchasers who received responses, 14 accepted an offer.

Gentailers had a larger number of responses than purchasers that had the terms originally sought (20/21), had FM or suspension clauses (11/21) and had the grid exit points requested (20/21), though they were less likely to have other clauses that were acceptable in the responses offered (6/21). Both purchasers and gentailers had a large difference in the range of prices offered, although large purchasers were offered a larger range of prices and small purchasers were more limited in the prices they were offered.

MOST RECENT OCCASION - 2012								
	Approaches	Responses	Had the Terms sought	Had FM/ Susp' clauses	Had other clauses that were acceptable	Had GXPs requested	Percentage of respondents who accepted a response %	Range of differences in prices ($/MW/hr)
All Purchasers	81	58	33	23	36	46	61 (14 of 23)	$0 - $30
Small Purchasers	23	16	13	4	6	12	67 (4 of 6)	$0.50 - $1.20
Medium Purchasers	17	12	1	1	2	6	38 (3 of 8)	$0 - $10
Large Purchasers	41	30	19	18	28	28	78 (7 of 9)	$12 - $30
Generator-Retailers	31	21	20	11	6	20	89 (8 of 9)	$0 - $20

The response rate has increased for all purchasers from 2009 and decreased for gentailers. Additionally, the number of offers for all purchasers that had the terms sought, as well as any clauses and grid exit points have decreased in 2012. Gentailers have also had a decrease in responses that offered the terms sought and FM or suspension clauses; however, there was a large increase in responses that contained other clauses. The range of difference in prices offered to all purchasers and gentailers was similar in 2012 to 2009.

MOST RECENT OCCASION - 2009								
	Approaches	Responses	Had the Terms sought	Had FM/ Susp' clauses	Had other clauses that were acceptable	Had GXPs requested	Percentage of respondents who accepted a response %	Range of differences in prices ($/MW/hr)
All Purchasers	72	47	31	26	16	38	70 (14 of 20)	$0 - $36
Small Purchasers	18	8	6	5	4	7	100 (4 of 4)	$0 - $26
Medium Purchasers	27	19	11	7	7	16	56 (5 of 9)	$0 - $17.50
Large Purchasers	27	20	14	14	5	15	71 (5 of 7)	$0.16 - $36
Generator-Retailers	27	21	17	8	15	13	63 (5 of 8)	$0 - $20

Large purchasers

Of the large purchasers that approached parties for an offer, almost three quarters (30/41) received responses. Of those 30 responses, 19 had the same conditions as those requested, 18 had acceptable FM or suspension clauses, 28 had other clauses that were acceptable and 28 had prices at the grid exit points requested.

LARGE PURCHASERS						
	How many parties did you approach for an offer?	Of the parties approached, how many responded?	How many of the offers contained the same terms as the terms you requested?	How many of the offers included FM/suspension clauses that were acceptable?	How many of the offers included other clauses that were acceptable?	How many offers had prices specified at GXPs that you had requested prices for?
	2 approached 3	6	6	4	6	6
	3 approached 4	8	6	4	8	6
	1 approached 5	4	-	3	5	5
	3 approached 6	12	7	7	9	11
Total	**41 approaches**	**30 responses**	**19 had same conditions as those requested**	**18 had acceptable FM/suspension clauses**	**28 had other clauses that were acceptable**	**28 had prices at GXPs requested**

UMR research

Medium purchasers

Of 17 approaches, medium purchasers received 12 responses. Of those 12 responses, only 1 had the same conditions as those requested and acceptable FM or suspension clauses, 2 had other clauses that were acceptable and 6 had prices at the grid exit points requested.

MEDIUM PURCHASERS						
	How many parties did you approach for an offer?	Of the parties approached, how many responded?	How many of the offers contained the same terms as the terms you requested?	How many of the offers included FM/suspension clauses that were acceptable?	How many of the offers included other clauses that were acceptable?	How many offers had prices specified at GXPs that you had requested prices for?
	1 approached 3	3	-	-	-	-
	1 approached 4	3	-	-	-	4
	2 approached 5	6	1	1	2	2
Total	**17 approaches**	**12 responses**	**1 had same conditions as those requested**	**1 had acceptable FM/suspension clauses**	**2 had other clauses that were acceptable**	**6 had prices at GXPs requested**

Small purchasers

Of 23 approaches, small purchasers received 16 responses. Of those 16 responses, 13 had the same conditions as those requested, four had acceptable FM or suspension clauses, 6 had other clauses that were acceptable and 12 had prices at the grid exit points requested.

SMALL PURCHASERS						
	How many parties did you approach for an offer?	Of the parties approached, how many responded?	How many of the offers contained the same terms as the terms you requested?	How many of the offers included FM/suspension clauses that were acceptable?	How many of the offers included other clauses that were acceptable?	How many offers had prices specified at GXPs that you had requested prices for?
	2 approached 4	4	4	4	1	4
	3 approached 5	12	9	-	5	8
Total	**23 approaches**	**16 responses**	**13 had same conditions as those requested**	**4 had acceptable FM/suspension clauses**	**6 had other clauses that were acceptable**	**12 had prices at GXPs requested**

3.14 Electricity as a proportion of input costs

Electricity costs were a more significant proportion of input costs for gentailers. Roughly half of gentailers as purchasers (5/9) said they comprised more than 25% of input costs, with four saying they comprised more than 50% of input costs. By contrast, electricity costs comprised less than 24.9% of input costs for 17 of the 23 purchasers. These results are in line with those of 2009.

PURCHASE OF PHYSICAL ENERGY AS A PROPORTION OF INPUT COSTS

Approximately what proportion of the input costs of your business/ organisation is the purchase of physical electricity (excluding interest, depreciation and tax)?

	Total Purchasers (excluding generator/retailers)	
	2009	2012
Base (n=)	*28*	*23*
More than 50% of input costs	1	2
25% - 50% of input costs	3	3
10% - 24.9% of input costs	7	8
Less than 10% of input costs	15	9
Unsure / No answer	2	1
	Small Purchasers	
	2009	2012
Base (n=)	*8*	*6*
More than 50% of input costs	-	1
25% - 50% of input costs	-	-
10% - 24.9% of input costs	2	-
Less than 10% of input costs	6	4
Unsure / No answer	-	1
	Medium Purchasers	
	2009	2012
Base (n=)	*12*	*8*
More than 50% of input costs	-	-
25% - 50% of input costs	-	-
10% - 24.9% of input costs	2	4
Less than 10% of input costs	8	4
Unsure / No answer	2	-
	Large Purchasers	
	2009	2012
Base (n=)	*8*	*9*
More than 50% of input costs	1	1
25% - 50% of input costs	3	3
10% - 24.9% of input costs	3	4
Less than 10% of input costs	1	1
Unsure / No answer	-	-

PURCHASE OF PHYSICAL ENERGY AS A PROPORTION OF INPUT COSTS CONT… *Approximately what proportion of the input costs of your business/ organisation is the purchase of physical electricity (excluding interest, depreciation and tax)?*		
	Generator/Retailers as purchasers	
	2009	2012
Base (n=)	*8*	*9*
More than 50% of input costs	2	4
25% - 50% of input costs	2	1
10% - 24.9% of input costs	1	1
Less than 10% of input costs	-	1
Unsure / No answer	3	2

Almost every gentailer that purchased electricity did so on the spot market via the clearing manager (8/9). Most purchasers (12/23) purchased from a retailer, although large purchasers preferred buying electricity on the spot market via an agent (5/9).

PLACE OF ELECTRICITY PURCHASE *Where does your organisation purchase electricity?*		
	Total Purchasers (excluding generator/retailers)	
	2009	2012
Base (n=)	*28*	*23*
Purchase electricity from a retailer	19	12
Purchase electricity on the spot market via an agent	5	9
Purchase electricity on the spot market via the clearing manager	3	1
Other	1	1
Unsure / Don't know	-	-
	Small Purchasers	
	2009	2012
Base (n=)	*8*	*6*
Purchase electricity from a retailer	8	5
Purchase electricity on the spot market via an agent	-	1
Purchase electricity on the spot market via the clearing manager	-	-
Other	-	-
Unsure / Don't know	-	-
	Medium Purchasers	
	2009	2012
Base (n=)	*12*	*8*
Purchase electricity from a retailer	9	5
Purchase electricity on the spot market via an agent	2	3
Purchase electricity on the spot market via the clearing manager	1	-
Other	-	-
Unsure / Don't know	-	-

PLACE OF ELECTRICITY PURCHASE CONT….		
Where does your organisation purchase electricity?		
	Large Purchasers	
	2009	2012
Base (n=)	***8***	***9***
Purchase electricity from a retailer	2	2
Purchase electricity on the spot market via an agent	3	5
Purchase electricity on the spot market via the clearing manager	2	1
Other	-	1
Unsure / Don't know	1	-
	Generator/Retailers as purchasers	
	2009	2012
Base (n=)	***8***	***9***
Purchase electricity from a retailer	-	1
Purchase electricity on the spot market via an agent	-	-
Purchase electricity on the spot market via the clearing manager	8	8
Other	-	-
Unsure / Don't know	-	-

3.15 Types of hedge contracts

Similar to 2009, contracts for differences and fixed priced variable volume were the types of electricity contracts most sought by purchasers overall. Almost all (8/9) gentailers also purchased contracts for differences, though the next most popular contract types were options and ASX electricity derivative products (7/9 each). The results are similar to 2009, though more gentailers purchase options and ASX derivative products in 2012.

PURCHASE OF ELECTRICITY HEDGES		
What types of electricity contracts do you purchase?		
	Total Purchasers (excluding generator/retailers)	
	2009	2012
Base (n=)	***28***	***23***
Contracts for differences (hedge contracts)	18	12
Fixed price variable volume (i.e. single price tariff)	15	12
Spot based contracts	15	9
Volume based time-of-use	9	3
Options (e.g. caps, collars, swaptions)	1	2
ASX electricity derivative products	-	1
Other	2	1
No answer	-	2

PURCHASE OF ELECTRICITY HEDGES CONT…

What types of electricity hedges do you purchase?

	Small Purchasers	
	2009	2012
Base (n=)	***8***	***6***
Contracts for differences (hedge contracts)	2	1
Fixed price variable volume (i.e. single price tariff)	4	4
Spot based contracts	2	1
Volume based time-of-use	5	2
Options (e.g. caps, collars, swaptions)	-	-
ASX electricity derivative products	-	1
Other	-	-
No answer	-	1
	Medium Purchasers	
	2009	**2012**
Base (n=)	***12***	***8***
Contracts for differences (hedge contracts)	9	4
Fixed price variable volume (i.e. single price tariff)	7	4
Spot based contracts	7	4
Volume based time-of-use	2	1
Options (e.g. caps, collars, swaptions)	-	-
ASX electricity derivative products	-	-
Other	1	-
No answer	-	1
	Large Purchasers	
	2009	**2012**
Base (n=)	***8***	***9***
Contracts for differences (hedge contracts)	7	7
Fixed price variable volume (i.e. single price tariff)	4	4
Spot based contracts	6	4
Volume based time-of-use	2	-
Options (e.g. caps, collars, swaptions)	1	2
ASX electricity derivative products	-	-
Other	1	1
No answer	-	-
	Generator/Retailers as purchasers	
	2009	**2012**
Base (n=)	***8***	***9***
Contracts for differences (hedge contracts)	8	8
Fixed price variable volume (i.e. single price tariff)	1	2
Spot based contracts	3	4
Volume based time-of-use	-	-
Options (e.g. caps, collars, swaptions)	4	7
ASX electricity derivative products	3	7
Other	1	1
No answer	-	-

* As this was a multiple response question the number of responses do not correspond to the number of respondents in each category.

All eight gentailers as sellers sell contracts for differences, six sell fixed price variable volume and spot based contracts, five sell volume based time of use contracts and four sell options. The findings are almost identical to those recorded in 2009.

SALE OF ELECTRICITY HEDGES *Which of the following types of electricity hedges do you sell?*		
	Generator/retailers as sellers	
	2009	2012
Base (n=)	*8*	*8*
Contracts for differences (hedge contracts)	8	8
Fixed price variable volume (i.e. single price tariff)	6	6
Spot based contracts	6	6
Volume based time-of-use	5	5
Options (e.g. caps, collars, swaptions)	4	4
ASX electricity derivative products	3	4
Other	1	2

* As this was a multiple response question the number of responses does not correspond to the number of respondents in each category.

3.16 Responsiveness to offers

Most purchasers (13/23) and gentailers as purchasers (8/9) said it took less than 14 days for suppliers to respond to their requests for contract prices, and only four purchasers said they took longer than 14 days. The proportion of purchasers that took longer than 14 days has decreased compared to 2009; however, the number of those unsure or with no straight answer has increased.

SUPPLIERS RESPONSE TO HEDGE REQUESTS		
How long does it typically take hedge suppliers to respond to your request for contract prices?		
	Total Purchasers (excluding generator-retailers)	
	2009	**2012**
Base (n=)	***28***	***23***
More than 14 days	9	4
8 - 14 days	8	4
2 - 7 days	7	6
Less than 2 days	1	3
Unsure / No answer	3	6
	Small purchasers	
	2009	**2012**
Base (n=)	***8***	***6***
More than 14 days	3	2
8 - 14 days	4	1
2 - 7 days	1	-
Less than 2 days	-	1
Unsure / No answer	-	2
	Medium purchasers	
	2009	**2012**
Base (n=)	***12***	***8***
More than 14 days	4	2
8 - 14 days	3	-
2 - 7 days	2	1
Less than 2 days	1	2
Unsure / No answer	2	3
	Large purchasers	
	2009	**2012**
Base (n=)	***8***	***9***
More than 14 days	2	-
8 - 14 days	1	3
2 - 7 days	4	5
Less than 2 days	-	-
Unsure / No answer	1	1
	Generator/retailers as purchasers	
	2009	**2012**
Base (n=)	***8***	***9***
More than 14 days	-	1
8 - 14 days	2	-
2 - 7 days	5	6
Less than 2 days	1	2
Unsure / No answer	-	-

Almost every gentailer as a purchaser (8/9) reports they took less than seven days to respond to an offer. In contrast purchasers were more evenly divided; six of the 23 took less than seven days, five took seven - 14 days and seven took 15 days - one month. The results are different to 2009 which found that purchasers were clearly more likely to take between 15 days - one month to respond to an offer.

PURCHASERS RESPONSE TO OFFER

How long does it typically take you to respond to an offer once provided?

	Total Purchasers (excluding generator-retailers)	
	2009	2012
Base (n=)	*27*	*23*
Over 1 month	3	2
15 days - 1 month	13	7
7 - 14 days	7	5
Less than 7 days	2	6
Unsure / No answer	2	3
	Small purchasers	
	2009	2012
Base (n=)	*8*	*6*
Over 1 month	1	1
15 days - 1 month	5	2
7 - 14 days	2	1
Less than 7 days	-	1
Unsure / No answer	-	1
	Medium purchasers	
	2009	2012
Base (n=)	*12*	*8*
Over 1 month	2	1
15 days - 1 month	5	1
7 - 14 days	3	1
Less than 7 days	-	3
Unsure / No answer	2	2
	Large purchasers	
	2009	2012
Base (n=)	*8*	*9*
Over 1 month	-	-
15 days - 1 month	3	4
7 - 14 days	2	3
Less than 7 days	3	2
Unsure / No answer	-	-
	Generator/retailers as purchasers	
	2009	2012
Base (n=)	*8*	*9*
Over 1 month	-	-
15 days - 1 month	1	-
7 - 14 days	2	1
Less than 7 days	5	8
Unsure / No answer	-	-

Seven of eight gentailers stated it took them less than seven days to provide an offer once requested; a result similar to 2009.

SELLERS PROVISION OF OFFER *How long do you typically take to provide offers once requested?*		
	Generator/retailers as sellers	
	2009	2012
Base (n=)	***8***	***8***
More than 14 days	1	-
8 - 14 days	1	-
2 - 7 days	5	3
Less than 2 days	1	4
Unsure / No answer	-	1

Five of eight purchasers said it typically took less than seven days for parties to respond to their requests and three said it took longer than that.

SELLERS RESPONSE TO OFFER *How long does it typically take for parties to respond to an offer you have made?*		
	Generator/retailers as sellers	
	2009	2012
Base (n=)	***8***	***8***
Over 1 month	-	1
15 days - 1 month	1	2
7 - 14 days	2	-
Less than 7 days	5	5
Unsure / No answer	-	-

3.17 Force majeure and suspension clauses

Almost every gentailer (7/8) had less than 49.9% of their hedge contracts include force majeure (FM) clauses - three of them had less than 10%. This is down from 2009, where three gentailers had over 90% of their hedge contracts contain FM clauses. Every gentailer also had less than 49.9% of their hedge contracts include suspension clauses, with four of the eight having less than 10% of their contracts contain suspension clauses.

FORCE MAJEURE AND SUSPENSION CLAUSES					
What proportion of your electricity hedge contracts contain Force Majeure - genuine Acts of God only, not including suspension clauses? (in % of GWh)			*What proportion of your electricity hedges contracts contain suspension clauses? (in % of GWh)*		
	Generator/retailers as sellers			Generator/retailers as sellers	
	2009	2012		2009	2012
Base (n=)	8	8	Base (n=)	8	8
90% and over	3	-	90% and over	1	-
75% - 89.9%	-	1	75% - 89.9%	-	-
50% - 74.9%	-	-	50% - 74.9%	1	-
25% - 49.9%	2	3	25% - 49.9%	-	3
10%-24.9%	-	1	10%-24.9%	-	1
Less than 10%	3	3	Less than 10%	6	4
Unsure	-	-	Unsure	-	-

Half of small and medium purchasers (7/14) said that over 90% of the hedges they purchased had FM and/or suspension clauses, with the rest stating they were unsure. Large purchasers (5/9) and gentailers (6/9) had less than 24.9% of the hedges they purchased include FM and/or suspension clauses. Compared to 2009, the proportion of total purchasers that have over 90% of their hedges contain FM and/or suspension clauses has increased by a small amount.

PROPORTION OF CONTRACTS WITH FM CLAUSES *What proportion of your electricity hedges purchased contain FM and/or suspension clauses? (in % of GWh)*		
	Total Purchasers (excluding generator-retailers)	
	2009	2012
Base (n=)	*28*	*23*
90% and over	9	9
75% - 89.9%	-	-
50% - 74.9%	1	-
25% - 49.9%	1	-
10%-24.9%	2	1
Less than 10%	7	4
Unsure / No answer	8	9

PROPORTION OF CONTRACTS WITH FM CLAUSES CONT…		
What proportion of your electricity hedges purchased contain FM and/or suspension clauses? (in % of GWh)		
	Small purchasers	
	2009	**2012**
Base (n=)	***8***	***6***
90% and over	5	4
75% - 89.9%	-	-
50% - 74.9%	1	-
25% - 49.9%	-	-
10%-24.9%	-	-
Less than 10%	1	-
Unsure / No answer	1	2
	Medium purchasers	
	2009	**2012**
Base (n=)	***12***	***8***
90% and over	3	3
75% - 89.9%	-	-
50% - 74.9%	-	-
25% - 49.9%	-	-
10%-24.9%	1	-
Less than 10%	2	-
Unsure / No answer	6	5
	Large purchasers	
	2009	**2012**
Base (n=)	***8***	***9***
90% and over	1	2
75% - 89.9%	-	-
50% - 74.9%	-	-
25% - 49.9%	1	-
10%-24.9%	1	1
Less than 10%	4	4
Unsure / No answer	1	2
	Generator/retailers as purchasers	
	2009	**2012**
Base (n=)	***8***	***9***
90% and over	-	-
75% - 89.9%	1	1
50% - 74.9%	2	1
25% - 49.9%	-	1
10%-24.9%	-	2
Less than 10%	5	4
Unsure / No answer	-	-

The majority of purchasers were unsure or could not answer what proportion of their electricity hedges contained FM and/or suspension clauses they considered unreasonable (12/23). However, a large proportion also stated that less than 10% had unreasonable clauses (9/23). The majority of gentailers also believed that less than 10% of their contracts had unreasonable clauses (7/9). These findings are similar to those in 2009.

PROPRTION OF CONTRACTS CONSIDERED UNREASONABLE

What proportion of your electricity hedges purchased contain FM and/or suspension clauses that you consider are unreasonable?

	Total Purchasers (excluding generator-retailers)	
	2009	**2012**
Base (n=)	***28***	***23***
90% and over	2	1
75% - 89.9%	-	-
50% - 74.9%	1	1
25% - 49.9%	-	-
10%-24.9%	-	-
Less than 10%	12	9
Unsure / No answer	13	12
	Small purchasers	
	2009	**2012**
Base (n=)	***8***	***6***
90% and over	1	-
75% - 89.9%	-	-
50% - 74.9%	1	-
25% - 49.9%	-	-
10%-24.9%	-	-
Less than 10%	3	4
Unsure / No answer	3	2
	Medium purchasers	
	2009	**2012**
Base (n=)	***12***	***8***
90% and over	-	1
75% - 89.9%	-	-
50% - 74.9%	-	-
25% - 49.9%	-	-
10%-24.9%	-	-
Less than 10%	4	1
Unsure / No answer	8	6

PROPORTION OF CONTRACTS CONSIDERED UNREASONABLE CONT…

What proportion of your electricity hedges purchased contain FM and/or suspension clauses that you consider are unreasonable? (in % of GWh)

	Large purchasers	
	2009	2012
Base (n=)	*8*	*9*
90% and over	1	-
75% - 89.9%	-	-
50% - 74.9%	-	1
25% - 49.9%	-	-
10%-24.9%	-	-
Less than 10%	5	4
Unsure / No answer	2	4

	Generator/retailers as purchasers	
	2009	2012
Base (n=)	*8*	*9*
90% and over	1	-
75% - 89.9%	-	-
50% - 74.9%	-	-
25% - 49.9%	1	1
10%-24.9%	-	1
Less than 10%	5	7
Unsure / No answer	1	-

3.18 Locational (basis risk)

Purchasers were polarised in their experience at having difficulties getting prices for hedges at some locations. Slightly more purchasers had difficulties (11/23) than those that had not experienced difficulties (9/11). Gentailers were more in agreement, with eight of the nine having difficulty at getting prices for hedges at some locations. The results are a little different to 2009, which had slightly more purchasers not having difficulties at getting prices for hedges.

PRICING AT DIFFERENTIAL LOCATIONS *Have you had difficulties getting prices for hedges at some locations?*		
	Total Purchasers (excluding generator/retailers)	
	2009	**2012**
Base (n=)	***28***	***23***
Yes	12	11
No	13	9
Unsure / No answer	3	3
	Small Purchasers	
	2009	**2012**
Base (n=)	***8***	***6***
Yes	1	2
No	5	3
Unsure / No answer	2	1
	Medium Purchasers	
	2009	**2012**
Base (n=)	***12***	***8***
Yes	5	4
No	6	2
Unsure / No answer	1	2
	Large Purchasers	
	2009	**2012**
Base (n=)	***8***	***9***
Yes	6	5
No	2	4
Unsure / No answer	-	-
	Generator/Retailers as purchasers	
	2009	**2012**
Base (n=)	***8***	***9***
Yes	5	8
No	3	1
Unsure / No answer	-	-

Almost half of purchasers overall (11/23) perceived locational price risk as a significant problem this year. Small purchasers were divided in their opinion; medium purchasers were convinced locational price risk was a problem (6/8), and large purchasers were more likely to believe it was not a significant problem (5/9). Gentailers as both purchasers (8/9) and sellers (5/8) were also more likely to believe locational price was a significant problem.

The findings are different to 2009 which found total purchasers as less likely to believe locational price risk was a problem, although opinions for gentailers as both purchasers and sellers were similar.

LOCATIONAL RISK *Do you perceive locational price risk (basis risk) as a significant problem?*		
	Total Purchasers (excluding generator/retailers)	
	2009	**2012**
Base (n=)	***28***	***23***
Yes	8	11
No	12	8
Unsure / No answer	8	4
	Small Purchasers	
	2009	**2012**
Base (n=)	***8***	***6***
Yes	-	2
No	5	2
Unsure / No answer	3	2
	Medium Purchasers	
	2009	**2012**
Base (n=)	***12***	***8***
Yes	3	6
No	4	1
Unsure / No answer	5	1
	Large Purchasers	
	2009	**2012**
Base (n=)	***8***	***9***
Yes	5	3
No	3	5
Unsure / No answer	-	1
	Generator/Retailers as purchasers	
	2009	**2012**
Base (n=)	***8***	***9***
Yes	7	8
No	-	1
Unsure / No answer	1	-
	Generator/Retailers as sellers	
	2009	**2012**
Base (n=)	***8***	***8***
Yes	8	5
No	-	3
Unsure / No answer	-	-

About half of the purchasers did not have to purchase hedges at locations that were not their preference due to a lack of offers (12/23), although a relatively large amount did (9/23). The opposite was true for gentailers with six of the nine having to purchase hedges at other than preferred locations.

PURCHASED HEDGES AT OTHER THAN PREFERRED LOCATIONS *Have there been situations where a lack of offers has meant that you had to purchase hedges at locations other than your preferred locations?*			
	Total purchasers	**Generators/ Retailers**	**Other**
Base (n=)	***23***	***9***	***1***
Yes	9	6	-
No	12	3	1
Unsure / No answer	2	-	-

In order to manage locational price risk problems, four of the five gentailers as sellers only sell at nodes for which locational price risk is not an issue for them and four also purchase cross-hedges from generators where locational price risk could be an issue. Three prices in a premium at nodes they would rather not sell at. Furthermore, gentailers as sellers were more likely to manage locational price risk this year compared to in 2009 (In 2009, 4.3 out of 8 was the mean to select a method of management compared to 3.7 out of 5 in 2012).

MANAGEMENT OF LOCATIONAL PRICE RISK *How do you manage locational price risk problems?*		
	Generator/retailers as sellers	
	2009	**2012**
Base (n=)	**8**	**5**
Only sell at nodes for which locational price risk is not an issue for you	4	4
Purchase cross-hedges from generators with generation at locations where locational price risk could be an issue	5	4
Price in a premium at nodes that you would rather not sell at	4	3
Other	1	-

* As this was a multiple response question the number of responses do not correspond to the number of respondents in each category.

3.19 Duration

Difficulty getting prices for hedges for the terms wanted has increased from 2009. This year purchasers were more likely to report having difficulty getting prices for the terms they wanted (11/23) than to report not having difficulty (9/23). By comparison, in 2009 purchasers were much more likely to report not having difficulty (18/28). Gentailers as purchasers were still more likely to have no difficulties getting prices for the terms they wanted (6/9) this year, however they were still more likely to have difficulties than in 2009.

DURATION *In the past three years, have you had difficulties getting prices for hedges for the term (length of contract) you want?*		
	Total Purchasers (excluding generator/retailers)	
	2009	**2012**
Base (n=)	***28***	***23***
Yes	8	11
No	18	9
Unsure / No answer	2	3
	Small Purchasers	
	2009	**2012**
Base (n=)	***8***	***6***
Yes	3	3
No	4	2
Unsure / No answer	1	1
	Medium Purchasers	
	2009	**2012**
Base (n=)	***12***	***8***
Yes	2	4
No	9	3
Unsure / No answer	1	1
	Large Purchasers	
	2009	**2012**
Base (n=)	***8***	***9***
Yes	3	4
No	5	4
Unsure / No answer	-	1
	Generator/Retailers as purchasers	
	2009	**2012**
Base (n=)	***8***	***9***
Yes	1	3
No	7	6
Unsure / No answer	-	-

There was an even split among gentailers that did and did not have a policy to provide prices for hedges at some locations (4/8 each). The likelihood of having a policy has increased since 2009, when only two of eight gentailers had policies not to provide prices.

SELLERS - LOCATIONAL PRICING POLICY *Do you have a policy not to provide prices for hedges at some locations?*		
	Generator/retailers as sellers	
	2009	2012
Base (n=)	*8*	*8*
Yes	2	4
No	6	4
Unsure / No answer	-	-

In 2012, the vast majority of gentailers (6/8) had a policy to only provide prices for hedges for certain durations. This is a large turnaround from 2009, where the clear majority did not have these policies (7/8).

SELLERS - DURATIONAL POLICY *Do you have a policy to only provide prices for hedges for certain durations (length of contract)?*		
	Generator/retailers as sellers	
	2009	2012
Base (n=)	*8*	*8*
Yes	1	6
No	7	2
Unsure / No answer	-	-

3.20 Credit arrangements

The majority of purchasers (15/23) and gentailers as purchasers (6/9) had no problems entering into hedge contracts due to the counterparty being unhappy with their credit arrangements. Although this was also the case in 2009, more purchasers encountered problems this year.

In contrast, the majority of gentailers as sellers had encountered problems entering into hedge contracts due to concerns regarding credit arrangements - six of the eight reported problems, a result identical to 2009.

CREDIT ARRANGEMENTS

[Asked of purchasers] *Have you ever encountered problems entering into a hedge contract because the counterparty has been unhappy with your credit arrangements?*

[Asked of sellers] *Have you ever encountered problems entering into a hedge contract because of concerns regarding credit arrangements?*

	Total Purchasers (excluding generator/retailers)	
	2009	2012
Base (n=)	***28***	***23***
Yes	5	6
No	21	15
Unsure / No answer	2	2
	Small Purchasers	
	2009	**2012**
Base (n=)	***8***	***6***
Yes	-	-
No	7	5
Unsure / No answer	1	1
	Medium Purchasers	
	2009	**2012**
Base (n=)	***12***	***8***
Yes	2	2
No	9	5
Unsure / No answer	1	1
	Large Purchasers	
	2009	**2012**
Base (n=)	***8***	***9***
Yes	3	4
No	5	5
Unsure / No answer	-	-

CREDIT ARRANGEMENTS CONT…

[Asked of purchasers] *Have you ever encountered problems entering into a hedge contract because the counterparty has been unhappy with your credit arrangements?*

[Asked of sellers] *Have you ever encountered problems entering into a hedge contract because of concerns regarding credit arrangements?*

	Generator/Retailers as purchasers	
	2009	2012
Base (n=)	*8*	*9*
Yes	2	3
No	6	6
Unsure / No answer	-	-
	Generator/Retailers as sellers	
	2009	**2012**
Base (n=)	*8*	*8*
Yes	6	6
No	2	2
Unsure / No answer	-	-

3.21 Load management

Most purchasers had been approached to reduce load during a crisis (13/23), albeit less than in 2009 (21/28). This is predominately due to less small purchasers being approached in 2012 (only 1/6) than in 2009 (6/8). This result contrasts with gentailers as purchasers, of whom almost no one (1/9) had been approached.

APPROACHED TO REDUCE LOAD

Have you ever been approached to enter into an arrangement regarding reducing load during a time of crisis?

	Total Purchasers (excluding generator/retailers)	
	2009	2012
Base (n=)	*28*	*23*
Yes	21	13
No	6	7
Unsure / No answer	1	3
	Small Purchasers	
	2009	2012
Base (n=)	*8*	*6*
Yes	6	1
No	2	4
Unsure / No answer	-	1
	Medium Purchasers	
	2009	2012
Base (n=)	*12*	*8*
Yes	9	5
No	2	1
Unsure / No answer	1	2
	Large Purchasers	
	2009	2012
Base (n=)	*8*	*9*
Yes	6	7
No	2	2
Unsure / No answer	-	-
	Generator/Retailers as purchasers	
	2009	2012
Base (n=)	*8*	*9*
Yes	2	1
No	6	8
Unsure / No answer	-	-

Purchasers predominately either reduced consumption (10/23) or just maintained it (9/10) during periods of high spot prices. Gentailers principally increased hedge cover during these periods (6/9). The results are similar to 2009.

RESPONSE TO HIGH SPOT PRICES

Which of the following are your responses to periods of high spot prices?

	Total Purchasers (excluding generator-retailers)	
	2009	2012
Base (n=)	*28*	*23*
Reduce consumption	13	10
Maintain consumption	10	9
Political response (lobby Government/ media)	6	4
Increase hedge cover	4	2
Unsure / No answer	5	2
Other	1	8
	Small purchasers	
	2009	**2012**
Base (n=)	*8*	*6*
Reduce consumption	2	1
Maintain consumption	2	1
Political response (lobby Government/ media)	-	1
Increase hedge cover	1	-
Unsure / No answer	1	1
Other	1	3
	Medium purchasers	
	2009	**2012**
Base (n=)	*12*	*8*
Reduce consumption	4	3
Maintain consumption	7	4
Political response (lobby Government/ media)	2	2
Increase hedge cover	1	1
Unsure / No answer	3	1
Other	-	1

RESPONSE TO HIGH SPOT PRICES CONT…		
Which of the following are your responses to periods of high spot prices?		
	Large purchasers	
	2009	2012
Base (n=)	***8***	***9***
Reduce consumption	7	6
Maintain consumption	1	4
Political response (lobby Government/ media)	4	1
Increase hedge cover	2	1
Unsure / No answer	1	-
Other	-	4
	Generator/retailers as purchasers	
	2009	2012
Base (n=)	***8***	***9***
Reduce consumption	2	1
Maintain consumption	1	2
Political response (lobby Government/ media)	2	-
Increase hedge cover	4	6
Unsure / No answer	3	-
Other	-	4

* As this was a multiple response question the number of responses do not correspond to the number of respondents in each category.

3.22 Hedge seller performance

Purchasers rated gentailers on their hedge seller performance on a 1-5 scale where 1 meant 'very good' and 5 'very poor'. Thus, the lower the average rating the better for the hedge sellers.

Of the five gentailers that were rated by 14 or more purchasers the best performing were Mighty River Power and Contact Energy, both with a mean rating of 2.5. Following them, in descending order of performance, were Meridian Energy (3.1), Trust Power (3.2) and Genesis Energy (also at 3.2).

When the gentailers rated each other Genesis rated the best (2.5), followed by Contact and Meridian Energy (both at 2.6), Mercury (2.8) and Trust Power (3.4).

Although purchasers rated Mighty River Power the best in both 2009 and 2012, respondents were less satisfied with their performance in 2012. This held true for the performance of each gentailer, with ratings either decreasing or remaining the same in 2012. When the gentailers rated each other performance ratings didn't change much with the exception of Genesis, which rose from the worst ranked hedge seller in 2009 to the best in 2012.

RATING OF GENERATOR-RETAILERS AS HEDGE SELLERS		
Using your personal experience please rate the following parties on their hedge seller performance.		
	Total Purchasers (excluding generator-retailers)	
	2009	**2012**
Base (n=)	***28***	***23***
Mercury Energy/ Might River Power	1.8 (17)	2.5 (15)
Contact Energy/ Empower	2.8 (21)	2.5 (19)
Pioneer Generation	-	3.0 (2)
Meridian Energy	2.7 (19)	3.1 (20)
Trust Power	2.4 (15)	3.2 (14)
Genesis Energy/ Energy Online	3.2 (16)	3.2 (19)
Tuaropaki Trust	3.0 (1)	3.3 (3)
Todd Energy	2.5 (2)	4.0 (5)
Other	-	3.5 (2)
	Small purchasers	
	2009	**2012**
Base (n=)	***8***	***6***
Mercury Energy/ Might River Power	2.0 (4)	2.5 (4)
Contact Energy/ Empower	3.3 (6)	2.0 (4)
Pioneer Generation	-	-
Meridian Energy	3.2 (5)	2.8 (4)
Trust Power	2.4 (5)	2.3 (3)
Genesis Energy/ Energy Online	2.6 (5)	2.6 (5)
Tuaropaki Trust	-	-
Todd Energy	4.0 (1)	4.0 (1)
Other	-	-
	Medium purchasers	
	2009	**2012**
Base (n=)	***12***	***8***
Mercury Energy/ Might River Power	1.6 (5)	2.5 (4)
Contact Energy/ Empower	2.8 (8)	2.7 (6)
Pioneer Generation	-	3.0 (2)
Meridian Energy	2.7 (6)	3.6 (7)
Trust Power	2.6 (7)	3.5 (6)
Genesis Energy/ Energy Online	3.5 (4)	4.0 (5)
Tuaropaki Trust	-	4.0 (2)
Todd Energy	1.0 (1)	4.0 (3)
Other	-	3.5 (2)

RATING OF GENERATOR-RETAILERS AS HEDGE SELLERS CONT...		
Using your personal experience please rate the following parties on their hedge seller performance.		
	Large purchasers	
	2009	**2012**
Base (n=)	***8***	***9***
Mercury Energy/ Might River Power	1.9 (8)	2.4 (7)
Contact Energy/ Empower	2.4 (7)	2.6 (9)
Pioneer Generation	-	-
Meridian Energy	2.4 (8)	2.9 (9)
Trust Power	2.0 (3)	3.4 (5)
Genesis Energy/ Energy Online	3.4 (7)	3.0 (9)
Tuaropaki Trust	3.0 (1)	2.0 (1)
Todd Energy	-	4.0 (1)
Other	-	-
	Generator/retailers as purchasers	
	2009	**2012**
Base (n=)	***7***	***9***
Mercury Energy/ Might River Power	2.7 (6)	2.8 (8)
Contact Energy/ Empower	2.8 (5)	2.6 (8)
Pioneer Generation	1.0 (1)	2.7 (3)
Meridian Energy	2.3 (6)	2.6 (8)
Trust Power	3.0 (3)	3.4 (7)
Genesis Energy/ Energy Online	4.2 (5)	2.5 (8)
Tuaropaki Trust	1.5 (2)	2.5 (4)
Todd Energy	3.0 (2)	3.5 (6)
Other	-	4.0 (1)

3.23 Awareness and ratings of initiatives to improve liquidity

Awareness that the Electricity Authority was considering a number of initiatives to promote hedge market liquidity was much higher among purchasers in 2012 (15/24) than 2009 (13/31), although it was still lower than gentailer awareness (11/11). Small purchasers were still the least aware (2/6), and were the only group to have more people unaware than aware.

AWARE OF INITIATIVES TO PROMOTE HEDGE MARKET LIQUIDITY

Are you aware that the Authority and the industry has implemented and is considering further initiatives in order to improve the hedge market?

	Total Purchasers (excluding generator/retailers)	
	2009	2012
Base (n=)	*31*	*24*
Yes	13	15
No	14	5
Unsure	4	4
	Small Purchasers	
	2009	2012
Base (n=)	*9*	*6*
Yes	2	2
No	6	4
Unsure	1	-
	Medium Purchasers	
	2009	2012
Base (n=)	*14*	*9*
Yes	4	6
No	7	1
Unsure	3	2
	Large Purchasers	
	2009	2012
Base (n=)	*8*	*9*
Yes	7	7
No	1	-
Unsure	-	2
	Generator/Retailers as purchasers	
	2009	2012
Base (n=)	*11*	*11*
Yes	10	11
No	1	-
Unsure	-	-
	Other	
	2009	2012
Base (n=)	*7*	*5*
Yes	6	5
No	-	-
Unsure	1	-

The number of respondents aware of initiatives to improve the hedge market has increased significantly since 2009. The initiatives: improved publication of outage and fuel data, promotion of training and advisors, regular survey of market participants and the publication of an education booklet had the highest awareness with 36 of the 40 respondents aware. This trend continued with the large majority of respondents across every category stating an awareness of each initiative. However, gentailers still recorded a higher level of awareness than purchasers with almost all of them stating awareness for every initiative (the lowest awareness recorded was 10/11).

INITIATIVES AWARE OF														
Which of the following initiatives are your aware of?														
	TOTAL AWARE		Total Purchasers (excluding generator-retailers)		Small Purchasers		Medium Purchasers		Large Purchasers		Generator-Retailers		Other	
	2009	*2012*	*2009*	*2012*	*2009*	*2012*	*2009*	*2012*	*2009*	*2012*	*2009*	*2012*	*2009*	*2012*
Base (n=)	*33*	*40*	*17*	*24*	*3*	*6*	*6*	*9*	*8*	*9*	*10*	*11*	*6*	*5*
Improved publication of outage and fuel data	**15**	**36**	7	21	1	6	1	7	5	8	7	11	1	4
Promotion of training and advisors	**11**	**36**	5	21	1	6	1	7	3	8	4	11	2	4
Regular survey of market participants	**18**	**36**	8	22	-	6	3	7	5	9	8	10	2	4
Publication of education booklet	**-**	**36**	-	21	-	6	-	7	-	8	-	11	-	4
Market making for ASX futures products	**-**	**34**	-	19	-	4	-	7	-	8	-	11	-	4
Market making for ASX options products	**-**	**34**	-	19	-	4	-	7	-	8	-	11	-	4
Customer compensation	**-**	**33**	-	18	-	4	-	6	-	8	-	11	-	4
Support for a standardised model master agreement	**16**	**33**	6	19	1	5	2	6	3	8	7	10	3	4
Risk management website	**4**	**32**	2	18	-	5	1	6	1	7	2	10	-	4
Locational hedges - Financial Transmission Rights (FTRs)	**21**	**32**	8	18	-	5	2	6	6	7	8	10	5	4
Dispatchable demand	**-**	**32**	-	17	-	4	-	6	-	7	-	11	-	4
Stress testing disclosure regime	**-**	**32**	-	18	-	3	-	7	-	8	-	10	-	4
Scarcity pricing	**-**	**30**	-	15	-	3	-	5	-	7	-	11	-	4
Introduction of exchange traded cap products	**-**	**30**	-	16	-	4	-	6	-	6	-	11	-	3
Wholesale market settlement and prudential security provisions	**-**	**28**	-	15	-	3	-	6	-	6	-	10	-	3
ASX (2009 ONLY)	**20**	**-**	8	-	-	-	2	-	6	-	9	-	3	-
None of the above	**5**	**-**	3	-	2	-	1	-	-	-	1	-	1	-

Two initiatives, market making for ASX futures products and improved publication of outage and fuel data, were rated significantly higher than the others as initiatives respondents thought would most contribute to promoting hedge market liquidity. Gentailers also thought the introduction of exchange traded cap products would help promote hedge market liquidity, though purchasers and other respondents did not share this viewpoint.

There were four initiatives that almost every category of respondents thought would not be useful in contributing to hedge market liquidity: customer compensation, a stress testing disclosure regime, the publication of an education booklet and a regular survey of market participants.

The main difference from 2009 is a drop in support for a standardised model master agreement, due mainly to a decrease in the number of gentailers that thought it would be useful.

INITIATIVES CONTRIBUTING TO HEDGE MARKET LIQUIDITY (NET CONTRIBUTION)

Please rate the initiatives in terms of how highly you think they will contribute to promoting hedge market liquidity:

	TOTAL NET USEFULNESS		Total Purchasers (excluding generator-retailers)		Small Purchasers		Medium Purchasers		Large Purchasers		Generator-Retailers		Other	
	2009	*2012*	*2009*	*2012*	*2009*	*2012*	*2009*	*2012*	*2009*	*2012*	*2009*	*2012*	*2009*	*2012*
Base (n=)	*33*	*40*	*17*	*24*	*3*	*6*	*6*	*9*	*8*	*9*	*10*	*11*	*6*	*5*
Market making for ASX futures products	**-**	**17**	-	4	-	-		3	-	1	-	10	-	3
Improved publication of outage and fuel data	**14**	**13**	11	6	-	1	-	2	2	3	2	4	1	3
Wholesale market settlement and prudential security provisions	**-**	**5**	-	2	-	1	-	-	-	1	-	3	-	-
Market making for ASX options products	**-**	**5**	-	3	-	-	-	2	-	1	-	3	-	-1
Introduction of exchange traded cap products	**-**	**3**	-	-1	-	-	-	1	-	-2	-	5	-	-1
Support for a standardised model master agreement	**9**	**3**	3	3	4	-1	1	2	-2	2	5	1	1	-1
Risk management website (www.electricitycontract.co.nz)	**-**	**1**	-	3	-	4	-	2	-	-3	-	-4	-	2
Locational hedges - Financial Transmission Rights (FTRs)	**-**	**1**	-	-	-	2	-	-1	-	-1	-	-1	-	2
Promotion of training and advisors	**3**	**-1**	4	2	-1	1	1	1	1	-	-2	-5	1	2
Scarcity pricing	**-**	**-2**	-	-3	-	-	-	-	-	-3	-	2	-	-1
Dispatchable demand	**-**	**-4**	-	2	-	1	-	-	-	1	-	-4	-	-2
Regular survey of market participants	**-4**	**-9**	-	-5	-	-1	-	-3	-2	-1	-2	-4	-2	-
Publication of education booklet	**-**	**-12**	-	-3	-	3	-	-2	-	-4	-	-8	-	-1
Stress testing disclosure regime	**-**	**-12**	-	-7	-	-	-	1	-	-8	-	-5	-	-
Customer compensation	**-**	**-14**	-	-3	-	-1	-	2	-	-4	-	-8	-	-3

3.24 Use of the electricity hedge website

The majority of purchasers did not use the electricity hedge contract website (17/24). In contrast, the vast majority of gentailers did make use of it (8/11).

USE OF THE ELECTRICITY HEDGE CONTRACT WEBSITE *Do you use the Electricity Hedge Contract (www.electricitycontract.co.nz) website?*	Total purchasers	Generators/ Retailers	Other
Base (n=)	***24***	***11***	***5***
Yes	7	8	2
No	17	2	3
Unsure / No answer	-	1	-

Most purchasers were unsure as to whether the electricity hedge contract website was still required given the ASX electricity derivative forward price curve - this is to be expected as the majority of them don't use the website. Gentailers, most of whom did use the website, were more positive that it still had a place - even with the existence of the forward price curve.

USEFULNESS OF THE ELECTRICITY HEDGE CONTRACT WEBSITE *Is the Electricity Hedge Contract website still required given the ASX electricity derivative forward price curve is now available?*	Total purchasers	Generators/ Retailers	Other
Base (n=)	***24***	***11***	***5***
Yes	7	6	2
No	3	3	-
Unsure / No answer	14	2	3

4. Qualitative research

4.1 Market competition

4.1.1 Section summary

For the first time since this research was first undertaken in 2005, there was an evident change in perceptions about the competitiveness of the market. Most believed market competitiveness was improving with the evidence for that primarily being based on experience of more offers, tighter spreads, increased trading on the ASX, greater transparency and more activity in the South Island (though the dry conditions are limiting this activity now).

Even so, it was clear that more needed to be done to improve competitiveness and critical to this will be the growth of trading on the ASX and addressing basis risk. Several purchasers remained unconvinced the hedge market was competitive citing concerns about differences between retail and hedge prices and the limited offers they received. These concerns seemed to arise due to the state of gentailers' books at any one time and transmission constraints.

4.1.2 The case that competition does exist

- **Availability of offers**

Several identified the ability to get a range of offers at most locations around the country as evidence of competition.

> *When I either go to the market in terms of the OTC* [Over the counter] *I know that I will generally get three or more offers. There is some tension there regardless of whether I like the prices or not like, as the case may be, the prices that are put before me I have multiple offers from independent parties and to me that generally means it is competitive.* (Gentailer)

> *There are lots of generators, there are lots of retailers. There's a lot of churn so people can move from one retailer to another no problem. And there's a lot of competition for domestic or industrial users. There aren't many regions in New Zealand now where you don't have more than one retailer.* (Other)

> *Competitive because we have alternatives. We do get interaction between parties, we can ask them to move - "you are close but will you change to get the business?". This time there was a bit more negotiation and who we ended up going with were quite flexible. They really wanted the business.* (Purchaser)

Some cited evidence of unsuccessful offers and the need to compete on other factors than price.

> *We compete to sell OTC product to consumers and other generators and we are not always successful so hence competition and that is not always on price, sometimes it is on other terms such as location, duration and those sorts of things. Futures contracts are priced at a level that is competitive with any sales channel that we see and we use that curve both to sell product and to buy firm price risk management outcomes.* (Gentailer)

Usually there is two that are sort of leading edge and then there are two that are completely out of it. Occasionally you will get all five of the major ones respond. Granted it is their load positions at the time so presumably if they are too high a price they will lose some and then want to capture some market back. (Other)

The market, if it was uncompetitive, would be represented by an inability to get offers, prices, terms, flexibility in structuring transactions and we don't see that. We see outside of the price criteria, which is normally a very hot topic. We have been able to develop quite flexible products and I don't think we would see that if there wasn't some competitiveness and ability to meet the market. (Gentailer)

One purchaser also mentioned getting unsolicited approaches from sellers.

I have had calls from companies saying you will need more electricity, we would be interested in talking to you about a hedge. So it leads me to believe that there is capacity in the market for hedges. (Purchaser)

And even at times when prices had spiked sharply due to a major outage it was still possible to trade hedges though at times spreads could be a little wide.

Whenever we look to short or long term hedges we always get prices, we always get responses. They are usually within what we would expect to pay and conditions we think are reasonable ... now that the market maker requirements are three megawatts either side there is certainly easy access to pretty significant volumes and the spreads are tight. Even at times when the Huntly stationed tripped, the big black-out, there were still hedges being traded on the day and things like that. (Gentailer)

I think it is definitely getting far more competitive. So it is definitely liquid, it has definitely got depth, spreads probably still a little bit wide. (Other)

Even so comparisons other markets where purchasers bought products and services seemed more competitive than that for electricity.

I believe it gives a semblance of competitiveness if you like only because you can get different prices from different participants. I don't think that you can get realistic or competitiveness in a context of maybe international competitiveness or what I would refer to as competitiveness in other consumables that we purchase where competition drives margins available to suppliers down to reasonable levels. I believe that margins being demanded by the offers of hedges are too great. (Purchaser)

Increased sellers in both islands

A few also mentioned increased availability of offers in the South Island and the re-entry into the market of a gentailer that had been absent from it.

Transactions have been happening at Benmore and Benmore has been growing. (Gentailer)

This view though was disputed by one purchaser who said that the asset swap between Genesis and Meridian had resulted only in increased volumes between gentailers and nothing was coming out to the market.

Peak pricing events like last year demonstrate a lack of competition, asset distribution doesn't seem to have provided any competitive tension in the market. Certainly, we've been in the market in the south of the South Island and there was a lack of interest except by one party. (Purchaser)

A further limiting factor to competition was that the drier summer and spring had meant that offers were not that forthcoming in the south of the South Island.

Even so, one respondent claimed that all major gentailers were making offers in the South Island, trades at Benmore had been growing and two banks were also providing products in the North Island.

There have been an increased number of offers in the South Island with all major gentailers in the market and the spreads are reasonably tight - not all the time because you do get outliers as the market is reasonably thin at times. It's not to say hedge prices reflect expected spot prices which is what the theory would say ... you can get negative and positive premiums creeping into even a competitive market depending on what's happening out there. In the North Island you've got ANZ and Deutsche Bank operating. (Other)

■ ASX

The growth of trading on the ASX was cited as a key development that had improved competitiveness. This had seen volumes traded increase as well as the range of risk products offered.

With the ASX coming online I think that it has helped a bit more and there are more and more volumes being traded and it supports that view that there is a competitive market out there. (Gentailer)

We see the ASX and the growth in the ASX certainly as an increase in the levels of competitiveness in terms of availability of products and options to transact and an appropriate market price. (Gentailer)

Greater transparency of what was happening in the market due to the availability of more information about trades was also contributing and providing more guidance about hedge price expectations.

There has been improved transparency, obviously with the Energy Hedge website that gives us the historical hedges although there is just not enough resolution to get a good feel for that. But also the ASX cloud that hangs over everyone now and the top end for which they can actually offer hedges for bilateral arrangements. We have used this quite a bit for recent hedges just as a reference point. (Gentailer)

However, more products and services were still needed to improve competitiveness.

So base load which is what is traded on the ASX is becoming more competitive, but there is a lot of other types of hedging that I require which includes things like peak load and caps. (Gentailer)

■ Indirect evidence

Third party sources had also persuaded some purchasers, who were on spot, that the hedge market was now more competitive than it had been.

There is, but it's not that visible to those who are not totally informed. We are totally on spot. It's based on third party sources. SmartPower and Trustpower give us their advice. (Purchaser)

I get the [deleted] *on a weekly basis and that talks about hedges having changed hands or being established in recent times and gives some of the indicative numbers around those. So it is kind of hard to know for sure but I take some solace from those things that they are out there.* (Purchaser)

4.1.3 The case that competition does not exist

■ Lack of offers

There were still purchasers though that said there were insufficient offers for them to regard the market as competitive or that purchasers had little choice but to take what gentailers offered.

I can't get good hedging in the regions. (Gentailer)

Of recent times we might go out to five generators and if we are lucky we get two replies. So that is not giving me confidence that it is highly competitive. [But it is not necessarily that they are exerting market power?] *No I don't think so … but I think from my view it is on the improve as far as different options and products available. The ASX will provide other solutions.* (Purchaser)

We get very few offers at our node or even an adjacent node. (Purchaser)

We went out - this was referring to some inquiries and eventual transaction of hedges that we did November/December last year, so the views are possibly a little bit dated but we went out for quite a wide spread of hedges. It was a relatively solid request and only one of the people we asked, and we asked all the generators, and only one came up with a quote that encompassed all of our requirements. Forgetting about how much the price was. So there was only one that complied with our request. One partially complied and the price spread was well over $10. (Purchaser)

Seasonal factors and the state of gentailers' books could mean the number of offers and hence the level of competition was variable.

Depending when you go out it depends on how competitive they are. Since those last two times we went out we have regarded them as pretty expensive and the Board hasn't agreed to accept any of them. So on that basis we would say they are not very competitive. (Purchaser)

And there was a view that it was uncompetitive for purchasers as gentailers were not true retailers.

No … because they are all gentailers they are not true retailers. And all they are actually doing is finding homes for their generation and so depending on what their risk is - and what they really want is good base load customers near their generation points … so you have got to match your behaviour to what they want to do. That is not competitive. (Purchaser)

Retail and hedge price differences

Concern was also expressed about the gap between gentailers' retail and hedge prices which indicated that the market was not competitive as it left purchasers having to accept a higher price.

> *There can be situations where what the generators are offering outside of the hedge market can be different to what is seen on the hedge market price … the key point is ensuring that there is consistency in pricing internally with organisations.* [And by organisations we can say gentailers?] *Yes.* (Other)

> *I think my only reservations about this are making sure that it is a true reflection of the market price. And that people don't look to price outside of that market.* (Other)

One purchaser argued that it was fair to have a premium built into the hedge price, but the premium was too high to warrant taking it on.

> *I think the premium between the hedge market, CFDs and the fixed price variable volume market is fair enough that they cover that as long as it is a sensible premium ... we modelled our actual off take in a year and what we paid at fixed price variable volume and we modelled that against a dry year, a wet year and a normal year ourselves just using that same profile and against the spot market ... and we paid on average 9% above spot. And I am told by the energy consultant companies that I network with regularly that the premium between CFD and fixed price is about five based on their experience. So that makes sense to me. And so to save 5% do we want to take on the extra risk - short answer is no and it is because of the nature of our business.* (Purchaser)

> *The price of hedges is seen to command too high a premium above spot price.* (Purchaser)

And another purchaser simply perceived prices as too high per se to be competitive and a gentailer regarded the spread of prices that were available as too wide.

> *I believe the margins being demanded are too high and I guess it is not too much related to whether there is a competitive market or whether the process is right, so I guess I don't believe that the way the hedge market participants perform gives us a competitive price.* (Purchaser)

> *We are not convinced at all that we get a fair market price and the pricing we have received from different parties varies incredibly and so you know it is not competitive.* (Gentailer)

The lack of market activity was cited as a cause of the lack of offers rather than lack of competitiveness.

> *It is probably more not liquid than not competitive. It is very hard answering questions with a yes/no. I think probably for the number of people who are using it, it probably couldn't be much better really but if we got involved and others got involved which we probably will that will help the whole thing.* (Purchaser)

Access to the hedge market

One gentailer felt that it was difficult for smaller companies to get access to the hedge market as it required a strong balance sheet which meant there was a lack of competition.

Unless you have a large balance sheet it's hard to get access to the hedge market. And there are currently not enough financial intermediaries to help those with a lighter balance sheet. (Gentailer)

4.1.4 Improving competitiveness

While it was suggested that more players in the market would increase competitiveness it was conceded that this was a structural issue and most unlikely to occur given that there was no policy to split gentailers.

If you can get nine parties all providing competitive prices then you are going to naturally have more competitive tension. That goes to a market structure issue though. Is that really practical? That is another issue. (Gentailer)

Some purchasers believed that splitting generation from retail operations was the only way to improve competition in the market.

The only solution is you separate out the retail and the generation but I don't believe that is going to happen. They are a generator and a retailer. If they were just a retailer there is no doubt in my mind that it would be a more balanced market because they would definitely be requiring hedges of at least some of their load they generate. (Purchaser)

Greater market activity was the key improvement that stood out to improve competitiveness. Indeed, this was something of a chicken-and-egg situation as some purchasers were waiting on greater liquidity in the market before entering it.

I think it is just getting the volumes up on the ASX and just trying to achieve those targets because we would certainly, if we have the opportunity, consider trading on the ASX rather than privately. (Gentailer)

The improvement will come from increased participation. You have got Deutsche Bank and ANZ anecdotally bragging about their engagement in the market so that is only a good thing. Over time with trust and participation you will get product evolution which will be great. So simple things like day night peak, off peak, weekend, better risk management product cap options. (Gentailer)

I think it just needs more involvement. We are contracted up. [How long are you contracted up to?] *I am not on the procurement side but I think it is probably at least two years.* [And are you considering?] *Yes definitely and my personal view is that I can't see why we can't be in there now because we could be buying hedges for the future.* (Purchaser)

Some saw competition increasing as more independent traders entered the market.

Possibly the only other way to get it more competitive is to have players other than generators involved, but then they are speculators, the underlying hedges always end up coming from generators. (Purchaser)

We will get more competitive tension if more non-incumbents are trading, financial intermediaries like ANZ etc, I believe it will happen naturally. (Gentailer)

Some saw the grid upgrade programme as providing the answers to improve regional competitiveness.

The usual bugbear is the transmission risk. I think that is the enemy of liquidity basically that unfortunately until the grid upgrades are complete it just creates high risk type areas that potentially restricts the number of sellers at certain times of the year and things like that. (Gentailer)

The big thing for us being in the South Island is to have North Island generators have some confidence to offer inter-island basis risk ... it has always been our view that an FTR market would help, but frankly once Pole 3 is commissioned and Pole 2 replaced we should see far fewer instances of the DC constraining, so there should be more confidence. (Purchaser)

Others focused on the introduction of financial transmission rights though as seen in section 4.6.2 some felt this should go beyond providing an inter-island financial transmission right to include them at other nodes.

The liquidity on the forwards exchange could be leveraged off particularly if the EA's proposed inter-island FTRs take off because then particularly large users that take directly from the grid would be able to use the inter-island FTRs to have access to the exchange. (Gentailer)

Another suggestion was to reduce the number of nodes.

I want to make that point really clearly that if we reduced the number of nodes then it would increase the competition because you would effectively have more generators putting their generation into that single node. So the problem is that 250 nodes is way too many. Australia has about five I think. (Gentailer)

There was also a belief that better disclosure and transparency in the market would encourage more participants which would increase competition.

The electricity market has less disclosure than the equity market, we would like more market information - disclosure on outages, maintenance, snow-pack, internal transfer pricing between generation and retail arms etc. A true hedge market should be transparent. (Gentailer)

4.1.5 Increased hedge market competitiveness over the past 12 months

- **ASX**

Only one of those interviewed said the market had become less competitive in the past year though several said there had been no change. This was attributed to higher prices, a push to use the ASX but a lack of liquidity in that market, and a conservative approach by gentailers due to the proposed partial asset sales.

Two elements - one is the pricing is worse that 12 months ago recognising where spot is, so market conditions are less favourable for the consumer. I think some of the generators are distracted by the Government asset programme sales. There has tried to be a push around liquidity in the ASX and that hasn't worked. When you ask for a CFD and they say look at ASX, there is not the liquidity or supply and demand in there. [Asset sales impact?] *It's like distracting generators from taking a risk in terms of providing some commercial tension in the market, everyone is being very conservative and playing it safe.* (Purchaser)

Those who said the competitiveness of the market had improved over the last 12 months were asked to give their evidence for that. Several generators referred to the growth in activity on the ASX.

I guess it is just a sense of the open interest and either the speed or easier access to hedges through the ASX. (Gentailer)

ASX growth is a certain part of it. (Gentailer)

Probably also the fact that the ASX is there for a fallback position. (Gentailer)

We are seeing a lot more responses to request for pricing and a lot tighter responses which I guess is reflecting the fact that through the ASX people are always thinking about prices particularly in that three year term. (Gentailer)

More active retail market

Others cited greater activity, including from non-generators, and more responsiveness in the hedge market as well as initiatives by the Authority to create more market activity.

I have seen an increase in the uptake of hedges which says to me there has been a bit more competition going on. There have been several initiatives by the Electricity Authority under its Section 42 obligations to get the hedge market volumes up and they seem to be effective. (Other)

We have had better responses from other players. (Gentailer)

ANZ seem to be fairly pro-active. You could probably say though that things have got better but from a very low base. (Purchaser)

We have found since we opened up some conversations around different types of products with some of our counterparties that we are actually making more headway. [What has brought that about?] *I think it is really having broader conversations around risk management and responsiveness of sellers and buyers to structure arrangements that are a bit more flexible. But at the same time there are always standard priced products which is quite common that you can get three prices for some standard products. So we are either talking about competitiveness in terms of getting contracts that are tailored to needs or we are talking about those standard contracts that are deep and there are many providers for it.* [So is that just people becoming more knowledgeable and knowing the market more?] *Yes absolutely.* (Gentailer)

Anecdotally, there were reports of one gentailer being active in the hedge market whereas previously it had not been and another was described as having been particularly aggressive in the market. This had made for greater activity and higher levels of responsiveness in the hedge market.

Definitely volumes have increased. Spreads have come in and depth has improved and a lot more external requests to access the hedge market because customers think that the pricing does look good. (Other)

The asset swap between Genesis and Meridian and scarcity pricing workstreams had also made a small contribution to increased activity but that was mainly among a small group of gentailers.

I think it has improved slightly and I think the Government's notional asset swap or their long term hedges that re-juggle with the SOEs has had a part to play in that. And also the scarcity pricing work streams, they have all contributed more internally within organisations a higher appetite in hedging risk management and the primary management tool for that is hedging. But again that is all about a small number of participants off-

laying risk on one another more so than actually consumers wanting to buy hedges as a primary means of managing their price risk rather than variable volume fixed price contracts. (Gentailer)

Changes to the market structure i.e. the asset swaps have probably tempered behaviour, now everyone operates across New Zealand. There used to be benefits for adverse behaviour, but this has tempered that. (Gentailer)

Increased volumes being traded and reducing spreads were also seen as evidence that competition has improved.

We've seen more volume traded and spreads reduced to $2, $3 or $4 when they were $8 to $10 so it has got more competitive. (Gentailer)

4.1.6 Whether the process for establishing bilateral contracts is competitive

■ Choice of offers and ability to negotiate

The presence of multiple players in the market, which had been given as evidence to support the perception that the market was competitive, was also cited as a reason why the process for establishing bilateral contracts was competitive.

People have choices of retailers and prices are competitive. (Other)

What we find is that if we go out to the hedge market some people will come along and say here is a five day offer and that is it, it is there for five days and others will work to our time frame. And that probably just reflects their risk positions, how we go through some of the processes I suppose. We have just got to work in to where other partners are. (Gentailer)

It is a highly competitive environment - people shop around. (Other)

Because we price everything and we don't win everything. (Gentailer)

We don't feel they are in collusion, so I guess they are competitive. Pricing does vary. Although prices are still too high. (Purchasers)

Flowing on from the availability of choice was the ability to negotiate terms between purchasers and sellers and to be offered different options.

There are some terms and conditions when we enter into transactions we don't like, but whenever we go out for a contract we always go out to multiple parties. We trade off attributes of any given offer. (Gentailer)

We've found the major players more willing in the past year to negotiate and work around the price than they have been in the past. Non-price terms also mean they are more likely to negotiate on. (Other)

When we do go to the market on these things we put what we want out there and what I do get back is different options and I do get back different positions and you can get quite a negotiated outcome based on terms and you can use that to leverage off it between parties. (Gentailer)

The presence of the ASX acted as reference point that ensured the process was competitive.

> *With the ASX in the background as well that tends to benchmark a lot of stuff too. It can't get too far from it otherwise it opens up an arbitrage opportunity.* (Gentailer)

■ Influence of IPOs

Looking to the future, one purchaser felt the partial sale of the State energy companies would see a more competitive approach applied to hedging by large gentailers.

> *I think it will change, I think maybe the changes that were driven through the market in the last 12 to 24 months with virtual asset swaps, with actual assets changing ownership and hey in the course of this year there is going to be a big focus on the mixed ownership model … where an IPO delivers value they are going to have to have a pretty exciting book or a well structured book.* (Purchaser)

■ Process not fair

A few took the view that the process was not fair with one purchaser, noting that they only received limited offers from the node they required hedges for. They had also experienced additional conditions being placed over and above the model master agreement that made the hedge worthless. A gentailer also cited limited offers, wide spreads and varying FM as evidence that processes were not competitive.

> *We ask for hedges and don't get a response or one may come back quickly but others are slow. We see a $20 spread for some instruments and terms on FM can be very different.* (Gentailer)

4.1.7 Whether the process for establishing ASX derivative prices is competitive

■ Most purchasers don't know enough

It was evident that most purchasers did not know enough about the ASX to be able to provide an informed answer about its competitiveness. There were though no indirect reports that the process was uncompetitive.

> *I don't know enough.* (Purchaser)

> *We don't monitor it closely enough to form a view.* (Purchaser)

Non-participants in the ASX, who had observed it, felt that it was competitive because it was a market that incentivised participants to maximise profitability.

> *It's a perception driven by the hedge volumes being significantly up and also presentations given by the Electricity Authority support that view.* (Other)

> *For establishing those prices yes absolutely. You have got the main gentailers trading. They are all incentivised to ensure they are maximizing their profitability.* (Other)

■ Most in the market or observing say it is competitive

Those who were involved in the ASX described how carefully they had to assess their bids and offers.

When we put up bids and offers we have to make pretty careful and rational judgments about where we are putting them because we don't want to end up on the wrong side of the track. We know that if we put up an offer that is too high someone will sell to us or an offer that is too low someone will buy. We have at times found ourselves where the market has moved and we have been caught out and we have had to go and transact again to try and stop out those transactions. (Gentailer)

The responsiveness of the ASX to spot market signals was offered as a further indication of competitive forces in play.

About a week and a half ago we were probably in the middle of a very volatile period for the ASX market and it showed those prices responding very rapidly and decisively to market information. Others would look at it and say they are volatile, they are not stable. [But it is competitive?] *Yes. That is something that has to be recognized about electricity markets is that they are very volatile anyway. So any contracts within an electricity market can be by virtue of the underlying market be very volatile themselves.* (Gentailer)

And watching the ASX every day you can see the ASX is responding to the market signals of the spot market. And, of course, the trend is as the ASX quarter moves to expiry then it converges to the average spot price. It becomes obvious where and when buy and sell is going to be in or out of the money. Excluding March 26 type events. (Gentailer)

The prices we see in the ASX and also in the OTC market appear to us to be quite rational given the circumstances. For example, this winter the prices have risen quite sharply quite quickly reflecting the dry year risk. Beyond that period once you get into Q4 this year and beyond that risk isn't there and the prices are more akin to what you would expect the market to drive to. We understand the cost of generating as much as anyone else and the hedge prices don't seem to be out of touch with that. (Gentailer)

And for some there was evidence of sufficient financial risk and market activity to give them confidence that the process was competitive.

Very because in a blind market with multiple players you have got different views ... so if you consider those open positions and how far the curve moves and the real money that is sloshing around margin accounts and moving to P and L through those transactions, if that is not competitive then Boards will be shooting people. (Gentailer)

I think there are enough people in the market trading. The liquidity is beginning to be there, I am confident of the price in a shorter term so probably six - nine months out and then I think the further you go out on the curve which is up to three years I think it is less liquid and I am less confident. (Gentailer)

A few felt that the small number of participants and barriers to entering the market indicated that the processes for establishing ASX electricity derivative prices were not competitive.

There are only a small number of market participants and it's hard to get access. There is only a 1MW contract size and there should have been a 0.25MW then more companies could access it. (Gentailer)

Some also viewed ASX pricing as high.

ASX reflects OTC prices which are both too high. They say they need to pay for new investments but we can't say the same to our customers. We feel like generators collude as they all act the same way. We need more players so that the market is not dominated by generators who set the price. (Purchaser)

A barrier to increased competitiveness was identified in the reluctance to provide hedging to smaller potential participants.

Part of the market design is that there is a belief that it needs to be extremely volatile and that is used as the basis of encouraging people to get hedging and generators so if everyone has to pay a really, really high price then everyone is going to hedge. The problem is that real volatility then makes these guys scared to provide hedging to companies like [deleted]. *It is quite a circular argument because they say you are a company that is at risk. And so it is around the market design.* (Gentailer)

This view was disputed by some that felt that there were ways for smaller participants to get the services they want out of the market.

[Any other evidence that it is competitive?] *Probably the absence of difficulties entering that market. So anybody can get into that market and trade it at any point in time but it is not in itself in evidence but it is lack of a barrier to competitiveness.* [Do you think it is hard for some smaller players to have the backing behind them?] *That is the nail on the head, the backing but because the market is volatile it needs backing.* [So there is no way around that?] *No, short of having more money available. And 4A around ASX electricity derivatives the reason that is very liquid is because it is very standardized and risk management is very sophisticated. But it is sophisticated because where risks emerge capital is put behind them. So short of reducing that advantage. You will have met with some end users.* [Who find it difficult yes?] *So we probably don't talk about their names but we have relationships with a couple of retailers and they do have concerns about their capital management.* [What do you think about their concerns, are they valid?] *If they don't have cash it is a concern absolutely but in terms of the trading they are undertaking they must have that capital backing.* [So you can understand both sides?] *Yes and we have conversations with these sorts of companies around how they can get the services they need out of a market with efficient capital use. Sometimes it is not a futures product that they want.* (Gentailer)

4.1.8 Barriers or concerns to trading on ASX

■ Need to know more

Those that were not on the ASX fell into two categories. There were those who did not know enough about it, but who were trying to educate themselves to form a view about it.

I would be first to acknowledge I don't know a lot about it yet, I have got a paper on it now to read. (Purchaser)

We are still trying to learn it and then we need to educate our customers on it. (Other)

Need to educate the right people

Some of the barriers that presented themselves included educating not only purchasers' procurement managers, but also more widely within the organisation key individuals like the chief finance officer, the chief executive and even the Board. The simpler alternative was to purchase a hedge.

> *If it is too small the hassle of going through all of that rigmarole once we educate my customers they would have to educate their financial officer. It seems a bit hard and then it is just as easy to get the price from a retailer which has got a standard contract and we have done it before. So that is probably the key determinant in stopping, it is just we go let's just ask the retailers first and if the price is pretty similar we will just do that.* (Other)

> *It is probably just the time and effort to establish those kind of connections like a bank, like a JP Morgan, or the like. I am just wondering if they can do it simpler than using a broker. But the services are up there probably the hardship is roping them altogether.* (Gentailer)

> *One of the key barriers is they can't get permission from the Board to transact.* (Gentailer)

Compliance costs

Some noted that processes would need to be set in place internally to be able to trade with associated compliance costs.

> *There is the administrative impact, there is a compliance component. Daily settlement etc. It is something we'd need to sort out. We don't run a trading desk here. It would need to be run from our parent company.* (Purchaser)

Need to justify perceived additional risk

The ASX also presented additional risk which meant that the savings from entry would need to offset the premium that might be paid for a bilateral hedge.

> *If the opportunity is for me to save some money and it has to be enough money to cover off the additional risks that I am taking. So you have to put a value on the risk premium that you already pay and back that out. Because if you don't get that by taking the risk yourself why would you bother. It is financial risk.* (Purchaser)

> *I don't believe the current hedge market offers me anything except for a small price reduction for a lot more risk and we choose to pay the premium and not have the risk.* (Purchaser)

Electricity costs for some purchasers were not sufficiently large in proportion to other costs to warrant taking the time and effort to enter.

> *In our particular business cost of electricity is probably about second tier, maybe even top of third tier ... certainty of supply is far more important. If we have for whatever reason an outage of supply it costs us a small fortune to restart the plant ... So our focus is less about how do we save money on electricity, that should not be interpreted as we don't care, we do, but it is not high on our agenda.* (Purchaser)

We have been to a number of training sessions and a number of mini conferences on the topic and the main issues for us would be the time that it would take us to participate and cost against a one, two or three year, one-off negotiation and file it away and get on with your business whereas the ASX would take up quite a bit of our time. (Purchaser)

For some though the risks were simply too large.

These contracts have a huge value attached to them and they could put us out of business in just one day. They are big boy's contracts. (Other)

It is board policy not to take risk positions in a market like ASX provides unless they are clearly tied to the underlying need of the [deleted]. (Purchaser)

Wait and see approach and need to remove some barriers

A few had formed the view that the ASX might be worth entering, but that it was too early to do so mainly because they regarded it as requiring more liquidity.

It would just need to be a liquid market for starters. (Purchaser)

It is not liquid enough yet for me to start considering it. (Purchaser)

Entry to the ASX though was still an issue.

Even though the ASX is starting to become competitive our ability to enter the ASX is very limited based on the fact that it doesn't reduce our prudential calculations with the clearing manager. And until that is resolved we have almost effectively exited the ASX. (Gentailer)

If we did participate it would be a treasury function because it is a financial derivative ... what we would have to see is that parties will look at that ASX structure and then repackage something that customers are used to. In other words fundamentally shape it into a CFD or whatever we are comfortable with ... [So it is like a secondary market?] *Yes it is. And not only that, there are colleagues of mine saying we are just adding another level of complexity which someone has to pay for. So that is why I said I am not sure.* (Purchaser)

Another issue is the prudential offsets in the market for new entrant retailers. It's one thing to have price certainty for a hedge, but to have to manage prudential security requirement or calls, currently ASX hedges can't be used for offsetting prudential in the physical market. This creates issues around treasury management. ASX future contacts settle on the underlying price of the physical market, but we can't use contracts as a mechanism in the physical market to offset prudential. Also, settlement timings, the ASX futures market settles on the 4th business day of the end of the contract term, but the physical market settles on 20th of the month, so using for price risk management or hedging can't use for financial offset to settle energy purchases in physical market. The physical market always going to settle on the 20th of the month, larger generators can manage this have the balance sheet. (Gentailer)

The range of products offered on the ASX was also viewed as quite narrow by some purchasers which limited its value.

It's also not particularly flexible. We have to buy our MW for a whole quarter but if we want something for a particular event and want a shorter period of time, there is no flexibility. It's a fairly basic market. (Purchaser)

Location of hedges on offer on the ASX was a particular barrier for some purchasers.

Location - we would trade on there probably if there was a location in the central North Island and we're not prepared to take the risk from Benmore to the central North Island. (Purchaser)

With hedging at Otahuhu there is a location issue. If it would make sense to get all our hedges at Benmore or Otahuhu we would be quite keen on the ASX. (Purchaser)

There was, however, evidence that some were working through the detail and intended to join in the next couple of years.

We will be in the position to in the next year or two. (Gentailer)

We are in discussion currently with a broker to be able to access ASX directly. (Gentailer)

[What has stopped the company entering it earlier?] *The people that do the procurement now probably feel that it is safer if we do fixed price variable volume. But personally I think that is probably an expensive way of doing it, it is a bit of a luxury … when I talk to our traders they say they would be surprised if they couldn't save us 5%.* (Purchaser)

And some envisaged working through a broker to access the ASX rather than participating directly themselves.

We need to prepare the company to enter the market, we need the corporate framework to manage these types of supply agreements. The company is used to straight contracts, so we need internal education. If we enter the market, I expect we'll use a broker as we will need guidance. But I feel we'll almost certainly be using the ASX within two years. (Purchaser)

I think we will take a gradual approach to it so it wouldn't surprise me if we do something in the ASX via an intermediary and see how it matures. We want stability in electricity prices we don't want to be players so to speak. (Purchaser)

4.1.9 Potential for ASX to replace hedge market

- **ASX a tweak to risk management**

The potential for the ASX to replace the hedge market is some way off. As noted above, it appears there will be a demand for traditional bilateral hedges for some time to come from purchasers. For some gentailers, the ASX was providing a useful way of tweaking their risk management, for instance, to cover seasonal fluctuations, but bilateral hedges remained the option for most risk management.

Basically we see bilaterals forming the bulk of our position, the ASX to tweak and for want of a better word shape our position. So we might be slightly along the back end but maybe we can flick out a couple of meg, possibly even sell hedges, we have contemplated that position or if we have shortfall say around our summer period then go out and pick up a megawatt or two off ASX. So we see some opportunity there. (Gentailer)

[Do you think it can replace other forms of hedging?] *Existing forms of hedging no. It forms part of a range, just as we were talking about end users who can't really access the futures market in a way that suits them there are other mechanisms for them to use and those will always have a place. So no.* [Is it easier to go directly to other parties?] *Can be. For some of these players where they do need something carefully tailored but they can only get that by bilateral discussion.* (Gentailer)

ASX limitations

Limitations with the ASX meant that it would not be an option to replace traditional hedging. A need to move to monthly trading and to move beyond using just Otahuhu and Benmore for prices were cited as enhancements that were required.

[So it is not going to replace other forms of hedging for you?] *Definitely not. No. The only way it will do that for most medium sized parties is if it is monthly trading.* (Gentailer)

The ASX product has its limitations as it stands for now one of which is Benmore or Otahuhu, it has to be a quarter hour long which is in itself a problem and their base load. (Gentailer)

One gentailer said the ASX's products would be sufficient once the core transmission grid was solid.

At certain times of the year they may want something a lot more targeted than a quarterly deal. But really I just keep coming back to transmission. As soon as that core grid is solid then those kind of products are good enough. (Gentailer)

ASX providing energy needs

Another saw the ASX as a source for acquiring more generation to retail in future.

I can see the future of ASX playing in our favour of securing energy needs rather than for us putting more generation on the market so I am quite excited about the ASX being available to us ... it makes it easier for me. (Gentailer)

We can sell into any of the mass market channels any of the commercial or industrial channels and the ASX is just another channel. To generators it is another channel. (Gentailer)

ASX just one product offering

Some felt that the ASX was seen as one product and that other products had their place in the market.

[Replace hedge market?] *No not a chance. Certainly not in my foreseeable tenure here.* [Is that because of the limited range of products?] *Not it is just because we are still finding a good use for almost all products we have got under management. I have got no philosophical bent to go with one or other types of markets, it is about having choices in markets.* (Gentailer)

[Do you think potentially the ASX hedging could replace all of your other hedges?] *No I don't think so. There are some synergies if you like in hedges directly with generators, we already have generator agents for us in the spot market and we already have a relationship with them in that respect so I would see that in the foreseeable future we would always ask* *the generators what they can do for us in the way of hedges.* [What is beneficial about dealing directly?] *We know them for a start. We have existing relationships with them from the spot market agents. We have even sold them the odd carbon credit. So it is just another corporate relation.* (Purchaser)

We would never move all to the ASX as we like that the market has options in contract types. This helps with risk management as different parts of the business are suited to different types of contracts. (Purchaser)

4.2 Forecasting and risk management

4.2.1 Section summary

Gentailers, agents for purchasers and some large purchasers have sufficient access to information and internal expertise to manage electricity price risk. Some purchasers though do not have the knowledge and skills to manage risk, but they tend to outsource that function and/or opt for fixed price variable volume contracts. They prefer to pay the premium in these contracts to ensure physical supply. In several instances, those responsible for electricity purchasing do not have a financial background and those that do within their organisation do not appear to be the target of risk management information.

4.2.2 Other sources of forecasting prices

Respondents were asked to identify any other information sources they used for forecasting prices other than independent forecasts, bilaterally traded bids and offers, the ASX forward curve, market forums and commentary and internal modelling. Few cited any other sources though some described how they came to a view about price by gathering information from a range of sources, not just one.

In this case, spot prices and independent analysts or internal analysis were the primary sources.

I have on quite a number of occasions gone online and looked at spot and then looked at spot histories and so on. And what we do is we engage a company called Expense Reduction Analysts who look at electricity for us when it comes time to renew our supply contract. So those are the tools we would use. (Purchaser)

I am sort of looking at the ASX pricing at the moment for forecast pricing just because I have got a customer who has got spot exposure and I was trying to do some scenario analysis on what it might cost them. So I have used it occasionally for that. What the market is actually thinking of. I suppose the independent forecasts I have said not particularly useful because to my mind they don't seem to reflect the short term very well. They are averaged out over a year. (Other)

- **Hydrology and other fuel data**

Some specifically mentioned hydrology information, other fuel data and drew on their own experience as opposed to internal modelling.

Basically the common hydro type stuff, outage plans, definitely transmission and major generation. And that is about it. We basically say the curve is the curve really. (Gentailer)

Probably just use our own experience in some ways. We might look at some of these things. [Is that internal modelling that you might do?] *No just looking at the situation and looking at the amount of water and how dry things are. It is not looking too good for this coming winter.* (Purchaser)

We have other conversations with parties that might not be directly involved in the electricity market but who by virtue of gas being a fuel we hear what is going on. So that sort of information is useful but it is sort of as a second order so to speak. All information is useful, some less so, some more so. (Gentailer)

Snow-pack

Information about snow-pack was also sought.

Snow-pack is information that we don't have but it is real fuel for the system. Gas storage what is in gas storage, what are firm and non firm energy contracts, fuel contracts. (Gentailer)

We want Snow-pack. (Gentailer)

Economic commentary and data

There was also input from a range of demand indicators from weather to bank commentaries and other economic data.

The single most important driver is weather. [So hydrology?] *Yes hydrology is fuel both for us and for the market and there is an important difference there. And weather is a key driver of demand. And the other demand indicators - anything that speaks to a recovery of the economy or a change in I guess our relativity as a source of energy to competitors for our industries ... it is MED through bank commentaries, personal contacts. We use this thing called the Web.* (Gentailer)

The trading banks are great, Deutsche Bank and Goldman Sachs those guys have pretty interesting market reports. (Gentailer)

A lot of our analysis will reference government views - MED, energy stats and price paths going forward for the longer term strategic view. (Purchaser)

Networking with the industry and obtaining a view from more than one retailer helped some form a view.

I network with energy consultant type companies, I talk to my retailer, in fact I can talk to more than one retailer because I have got two and I have got relationships with three. And there is only four in the game. And I take all of that plus what you can read etc and you get a pretty common thread amongst it and then decide which of it you believe. (Purchaser)

What we find as a company is we have a fairly diverse link to sources of information. So actually sitting down and pooling that knowledge we find extremely useful. (Gentailer)

We have interactions with Major Electricity Users Group, we don't hesitate to trawl through and explore what the Electricity Authority can provide in the way of expert opinion of knowledge of the market place. (Purchaser)

One purchaser admitted that there was a lot of information available, but they found it difficult to keep up to speed with things. In this case, the respondent was responsible for widespread procurement not just electricity and consequently was more reliant on information from a retailer.

> *There are screeds of information and technical data in this area and it is tough for us to keep up to be honest.* (Purchaser)

Another noted that they went for relatively long contracts and were not that interested in forecasting information until they were looking to renew their contract.

> *We're not that interested as we're locked into a contract for three years and don't really need to keep an eye on risk until then.* (Purchaser)

One gentailer said the cost of independent forecasts was high and expressed a hope that the electricity Authority would make more information available.

> *The independent forecasts are pretty expensive so we have approached them but it is a minimum of $20,000 per annum. We are certainly hoping that the Electricity Authority is going to do more reporting.* (Gentailer)

One purchaser was looking forward to the Authority putting up a water value model.

> *We work everything out ourselves. We get daily email on how hydrology is but no-one knows the future state of hydrology. The Electricity Authority is trying to put up a water value model on their website and that will be good - we're waiting for it as it's too expensive to buy.* (Purchaser)

4.2.3 Awareness of sources of information on electricity risk pricing

Almost all those interviewed were well aware of the prompted sources of information - ASX, NZX, Electricity Authority and Energy Link - on electricity price risk. However, not all used the information.

A few also admitted that they did not have the internal capability to analyse the information that was available.

> *You can see all the information that is out there, but it is just having the people internally that understand it.* (Purchaser)

The few that were not aware of these sources used external consultants to advise on the products they purchased. Outsourcing of this function was done because electricity costs were a relatively small proportion of total costs.

> *To be frank no not really. Again because of the level of importance of the price of electricity to our particular niche in the market I rely on our external consultants to do that for me.* (Purchaser)

While these sources were useful, it was more useful for some to know about planned transmission and hydrology.

[Do you look at things like Energy Link and stuff like that or NZX?] *Yes but it is more to find out if there is going to be constraints in the system or shuts. Like the Pole 3 commissioning is an issue. That is something you know in advance and then there is keeping an eye on hydrology and that sort of thing.* (Purchaser)

Energy Link was used by several companies who liked the way information was bundled together.

I get the Energy Link reports. I find them as good as anyone's as far as a snap shot once a month. Becoming far more useful now that they are starting to put the split between CFDs and Fixed Price Variable Volume in there, that is very useful for me for no other reason than to just look at the trend and compare that with what we have done. (Purchaser)

We use Energy Link, we have traditionally used them for about the last five years. So they provide a baseline for us but we are starting now to go back and question some of their modelling against known situations and say okay do you find their methodology conservative or optimistic, or should you be looking at different risk percentages rather than just average it. So yes that is where we find companies like Energy Link useful. [Do you get anything from the NZX at all?] *We get the daily reports from NZX so the current trades and use that for pricing reference.* [What about the Electricity Authority?] *No. Energy Link takes the energy hedge contract prices and put them in summary for us. They seem to bundle it up into a fairly good curve or fairly good model. And I suppose in terms of prices we tend to look at the weather a lot more than we look at prices.* (Gentailer)

Other sources of information were websites such as www.electricitycontract.co.nz and EM6.

There is also information available on the electricity contract website. (Other)

4.2.4 Frequency of reviewing risk management

All gentailers and some large purchasers reviewed their risk management positions at least annually with these being signed off at board level.

We have had a huge overhaul in the last 12 months. (Gentailer)
We review our risk management about every 12 months. [When was it last reviewed about a year ago or more recently?] *It is actually going to my board at the end of the month.* (Gentailer)

That is updated and signed off by the board annually. (Gentailer)

It is definitely looked at by the board every year at a minimum. (Purchaser)

Some appeared to be constantly reviewing their policy.

We last changed it in October. So it is a very active document. [Do you have a set time that you do it?] *No we don't have a set time. Definitely at least annually. I think it is just fundamentally inherent to our business that we continue to review the best method of mitigating our risk.* (Gentailer)

Too often, others review quite often, sometimes more than daily. It involves how much we consume and things can change depending on customer orders. [Official review date?] *Doesn't need to be, it's at the forefront of company thinking, we're not going to lose sight of it.* (Purchaser)

Some purchasers described how they tended to review their policy whenever they went to market to buy hedges.

> *We are continually looking at it from an electricity perspective, continually reviewing that. Last year we probably went out for tender two or three times. We went out in December and we have been out again this year and we are currently still looking at just getting some more tenders at the moment.* (Purchaser)

> [You say you have a risk management policy, how often is that reviewed?] *It is reviewed whenever we go out for more hedges.* [So every year?] *Yes so before I start going out for hedges I will make some enquiries and ascertain whether the risk policy remains the same or whether there is a change.* [So that was late last year?] *That was late last year. We effectively at the moment review it on an annual basis. We have been very conservative but it could be that there are more and more of these caps and options and what have you. We might try something along those lines.* (Purchaser)

Some though reviewed their position three or four times a year with some of the frequency driven by the availability of new products on the market.

> [When was the last time the process was reviewed prior to currently?] *You could probably say every board meeting, especially the ones I have been attending. The hedge position gets discussed quite considerably and I would probably say three times a year at board level. So it is a key feature of our reporting back to the board. It represents one of our largest expenditures.* (Gentailer)

> *Probably there is a chunk of it at least once a year. Every time there is a new product available, it will be reviewed when we get FTRs coming in to play*. (Gentailer)

> *We certainly visit it every quarter but we don't review it formally every quarter. We challenge it on an annual basis but we probably haven't actually fundamentally reshaped it in two years. It would be an annual review but it is actually under review right now.* (Purchaser)

The rise in spot prices was now influencing unhedged purchasers to review their positions.

> *It is currently being reviewed right now but it generally gets reviewed every 12 months, but we are now starting to think it should be reviewed every quarter mainly because of the upward trend in the spot. We monitor the spot monthly.* (Purchaser)

> *It's being reviewed now. Events in 2011 have made the company see the need for new procedures and have the ability to react at short notice and drop load or to increase hedging.* (Purchaser)

A few purchasers though did not have a risk management policy.

> [Do you have a risk management policy specifically for electricity?] *No we don't.* (Purchaser)

> *Not on electricity price risk yet. We are talking about it ... that will come I think in the next two or three years.* (Purchaser)

4.2.5 Provision of training and information on risk management

■ Basic training needed

There was virtually unanimous agreement that training and information needed to be available so participants had better knowledge of how to manage their risk. Some of this information was required at a quite basic level as it was evident that the jargon used to describe the market was in itself a barrier to taking the first steps for some purchasers.

> *Yes, I do. I believe that quite strongly. The challenge though is going to be people in the electricity market. Those who are well versed in the electricity market are shockers for jargon and three letter acronyms and that sort of thing as indeed are most people. The challenge is going to be putting that trading into words of one syllable or less that people that are not familiar with the market will understand and then help them make the decision.* (Purchaser)

> *A lot of people simply do not understand how a hedge works. They simply do not know what it is. So that is one area. Another area is about how the spot market actually works and why it works that way and so why you have the reason for last year's trading circumstances that arose and so on. But for me anyway, and this is only my personal opinion, it needs to be in relatively simple terms that everybody can understand and get their heads around.* (Purchaser)

There was also a need to target information and training at those who were not necessarily dealing with electricity issues, but those managing treasury or finance functions.

> *It is possibly not so much the education of the people we are dealing with day to day, but it might be the people who probably should be involved in those organisations like the chief financial advisor and stuff like that.* (Other)

> *There are lot of people in our organisation whose job is nothing to do with electricity but the more they know the better. We'd be pleased if there was training, there is from Energy Link and we've sent people along but if the Authority want to set up courses that are cheaper, or more convenient or better we would support that.* [What areas?] *How wholesale market works, risk management - a lot of people are confused about what a hedge really is.* (Purchaser)

This made it difficult to identify what aspects of training would be useful.

> [In terms of training and information that could be provided to manage electricity risk is that something that would interest you?] *Yes I think so, yes.* [Are there any specific areas of training or information that would be useful to be provided?] *Look I couldn't really comment on that in terms of formal risk management processes we are pretty ad hoc. Our foreign exchange hedging has a semi-advanced level of complexity if you like but we don't really apply the same strategy to electricity.* (Purchaser)

> *Might be, but most of the people it is not something they deal with all of the time.* (Purchaser)

One purchaser on a fixed price contract for most of their needs said they had limited need for risk management information as they took most of the risk of non-supply out of the equation with the contract they had.

We have just got a pretty blanket policy that we will hedge ¾ of our load year in and year out and take the lowest price we can find with the best terms. So from an overall point of view to a large extent I don't see that we require much risk management training if you like because we pretty much cover off risk in this area. I know the EA is very, very focused and the economist in them and the economists that run them believe that industry in general takes too much risk in this area and all the BS around this stress testing etc is meant to drive industry to manage risk better. We don't need much in the way of better risk management training because we don't take much risk in this area. (Purchaser)

More sophisticated training

Others though identified the need for a wide range of information needs apart from price risk management.

Absolutely. In our organisation there would probably be a group of about 10 people and we need a combination of the operational aspect as well as the legal and financial. I think they should. (Purchaser)

What probably is missing is that ASX education and like I say I am still a bit vague on it myself but we do have a couple of people in the company who have studied it in depth. (Other)

And gentailers recognised the need for purchasers to have a better understanding of the risks they faced so they could make better decisions. Most attempted to provide training and information to their customers directly.

Yes, training of the companies that have been sold these funny retail contracts that have market exposure in them. Where we get frustrated is actually the retail position. Our company takes a view that they are risk managers and we give the customer a single price, you know what you are going to pay for electricity and there is a risk and then, of course, what we find periodically is that we are losing out to other retailers and we found out later on that the customer has been stung because they have been exposed to spot and things like that. [Do you think the Authority should assist in terms of providing training or information around risk management?] *Yes, I think that would be extremely useful. Especially for those larger industrials.* (Gentailer)

[Do you think it would be useful if training information was provided to companies making risk management decisions?] *I certainly think that users of electricity products should gain training.* [Is that readily accessible?] *I would think so.* [Who is that through?] *NZX run some courses, Energy Link is another company that runs courses, there are a bunch of one man bands around that can run those courses. So there is no shortage of them. Even we send people on those courses.* [What are the key areas that they should get knowledge in?] *Nodal pricing, price volatility. Market operation and dispatch. The makeup of the New Zealand electricity sector.* (Gentailer)

Criticism though was levelled at some of the advice that was available.

As soon as they start introducing more risks into their portfolio they should understand absolutely what risks they are adding to their portfolio … there is some pretty poor advice in the market right now in my opinion in terms of is being on spot a good option or not. And obviously for those people who understand spot might be a good option if you have got cash to manage the high prices. And it might not be and you don't know whether it is a good option or not in advance. It is the most risky approach. (Gentailer)

Opposition to EA providing training

Some questioned whether the provision of training by the Authority was the best use of its resources.

> *Sure. If you think about competitiveness, reliability and efficiency and the EA mandate it probably does sit somewhere in there. The problem is where should the EA apply all of its attention, is what is my number more important than educating corporate New Zealand on how to write electricity price risk management policy into their treasury documents and probably get told to sod off I would imagine.* (Gentailer)

Some strong views were aired against the Authority having a role in providing training or information on the grounds that this was an issue for the market to address.

> *No, I don't. I think it is beholden on the electricity industry itself to take responsibility for this sort of thing and get it out there. I don't think it is something that an authority should have to do. It may well come down to that, that the industry doesn't want to, but I think as a gesture towards proving the ethics and the integrity of the market it would be better coming from the participants.* (Purchaser)

> *I think that is part of what the market will sort out like we are doing that so when we talk to customers we have got a very specific governance process around who is the customer, what is their risk, do they understand the risk, what products are they likely to use, do they understand the risks inherent in those, what internal decision making process do they have, how do they get it signed off.* (Other)

> *In training - I don't think so.* [What do you think EA's focus should be?] *I can't quote their objectives and things but I remember them about long term benefit of the consumer and all of that sort of stuff. I think if they keep their focus on that sort of thing they will do a dam good job.* [But it is not to provide training?] *Don't think so, no.* (Purchaser)

Concerns were raised that the Authority might distort the market by providing its view.

> *As soon as they get into it they distort the market. There's already training out there and it's well publicised and well known and there is not a lot more for the Electricity Authority to do other than promote what's out there*. (Other)

> *The Electricity Authority should make the rules and let the market play it out and shouldn't intervene so I would have thought that the ASX and the private market out there if you have the Electricity Authority out there doing training I would think it would be hard not to influence in what you do.* (Gentailer)

One purchaser was concerned it might lose its focus and others said there were enough trainers available. Although a few were interested if the Authority provided cheaper training options.

> *I think they will become a great provider of information and material and data … I think that they should not be in the training field myself.* [Why is that?] *I actually think they lose focus on what they are there for. There are enough providers out there in the form of Energy Link and others who already do that. So it would become a crowded space.* (Purchaser)

> *You have got to be careful about squeezing out the private sector that is certainly more than competent in providing what the market needs.* (Purchaser)

However, one gentailer pointed out that having independent advice even from the Authority would be helpful as they themselves were perceived to have a conflict of interest in advising on the purchase of a hedge.

> *It would certainly help. The trouble is if we are out there trying to sell hedges and say how potentially volatile the spot price can be I think it would certainly help to have the independent advice.* (Gentailer)

Electricity Authority role in providing information to promote competition

There was general agreement though that the Authority did have a role in providing information that helped promote competition and the positive achievements being made.

> *Information provision is fine in its role to promote competition and reliable supply of electricity that information comes within that, but to become a training provider would be step too far.* (Purchaser)

> *I tend to agree with what Carl Hansen has said that the electricity market could probably do with a little bit of good marketing because it all tends to be doom and gloom.* (Gentailer)

One purchaser also felt there was a role for the Authority to provide reliable information as there were so many varying opinions out there on electricity price risk.

The Authority could also provide a list of training providers, the types of training available and areas purchasers or new entrants could find useful.

> [Do you think the Electricity Authority should assist with training and info?] *I think there is a role but it is a limited role.* [Is it just providing a list of who is out there?] *I think that would be adequate, the opportunities for training to be received. Maybe a list of things you might want to consider as you inform yourself in the market.* (Gentailer)

> [Do you think the Electricity Authority should look at that area of information provision and training?] *Yes I think that would be quite useful if only to say we don't know what we don't know. And it would be useful to understand whether we have got something to learn or we haven't got a lot to learn I don't really know.* (Purchaser)

4.2.6 Attitudes toward risk management

Only very few purchasers expressed a low level of concern about electricity price management. Again this was due to the fact that purchase of electricity was outsourced, electricity was a relatively small proportion of costs and the main priority was continuity of continued supply. Thus, fixed price variable volume contracts with a premium built in for supply were quite acceptable to other alternatives.

> *No we are not. The only risk that we are really concerned about is that there is no outage because that is the single biggest impact on our business.* (Purchaser)

> *We are fixed price variable volume so we don't know but we would have to definitely. And that is what they are experts at.* (Purchaser)

This view was explained more fully by an agent for purchasers.

Electricity is relatively small for a lot of them, it is big dollars but relatively small in total and the margins of what you can affect, the difference between half a cent in their cents per kilowatt hour doesn't amount to that much a year. 10 cents a kilowatt hour is a fairly big number but then you are getting down to when you are starting to quibble between half a cent, 9.5 and 10 sort of thing. So that is probably where they feel it is probably better using us to try and get that half a cent down and pay us a few thousand dollars. (Other)

Lack of sophistication of those with responsibility for electricity purchases was likely to be misplaced and out of line with other risks taken by purchasers.

We are not dealing for the bigger ones with the chief financial officer. They may be a property manager or an engineer or senior engineer or something like that who we are dealing with and from a risk point of view they are looking to get the lowest cost, lowest risk product and that may not actually reflect the organisation's risk profile. They may be doing a lot riskier stuff in their banking trading or something like that. But the incentives are probably a bit skewed there in the day to day people we are dealing with. (Other)

The level of sophistication out there for electricity and risk management is really poor, even with the amount of users, really poor, incredibly poor. (Other)

Others in a similar position expressed concern about risk management and the premium they paid for being on a fixed price contract, but felt they had no alternative.

I am concerned. We are a company that deals with very small margins and quite high cash flows and we just can't afford to take risk in this area. We don't like the hedge premiums that we believe are being demanded today, but we have no choice really. (Purchaser)

It is an evil necessity - we can't sit back and push it across the fence and say it is someone else's fault. You have to make the right decision for the business itself. (Purchaser)

Risk averse. Very conservative. The electricity market is not there as an area of speculation. We have got enough issues going on to make our products and supply and deliver to our customers. (Purchaser)

The upward price trend for electricity gave rise to concern about managing risk at a more fundamental level. This was particularly so in the case of industrial exporters of commodities that were challenged also by a relatively high New Zealand dollar and/or for whom electricity costs were a high proportion of production.

Yes. We are concerned that the way electricity is going it could put us out of business. (Purchaser)

Yes, we are concerned because electricity is such a huge cost to us. (Purchaser)

It is very conservative and quite bluntly our risk is we need to be able to predict our electricity price. [So you tend to get the same response from them?] *In the last couple of years I have and even if I go this time and try and be a bit more adventurous I will probably get that same answer.* [That is just because the business environment is pretty tough at the moment?] *The environment is tough and there is a lot of pressure in our company for predictable results. The spot pricing jumping around doesn't go down well.* (Purchaser)

All gentailers were concerned about risk management.

> *Absolutely. I think one of our key concerns is the bits of it that we can't manage and the biggest one we can't manage is this locational risk. And no one can. It is a market design problem.* (Gentailer)

4.2.7 Awareness of risk management information and its availability

■ No shortage of information

There was no sense from any of the interviewees that there was a shortage of information available on how to manage risk with most citing independent, industry sources or forums and agents for purchasers.

> *We have had training with Energy Link and we have been to ASX forums.* (Gentailer)

> *Smart Power currently and we are looking at what other forums and organisations can assist us.* (Purchaser)

> *If you are talking about risk management methodology in this area we don't but we source information to help us make decisions.* [What sort of sources of information?] *I am really talking about pricing and forecasts and hydrology and fuel. Pretty basic stuff.* [And do you think there is enough information out there for you to manage that risk?] *I think so, it is there for the asking I guess and how valuable it is or how accurate it is, is questionable.* (Purchaser)

> *You get a bit of external advice but generally through MEUG and other associated in the industry we tend to get an overview of where we think everything is going.* (Purchaser)

One purchaser wanted to know the best source of forward price information as there appeared to be too many sources of information.

> *What is the best source of forward price signalling that is authoritative and the best we can have because at the moment there are all sorts of different options from short run dispatch price signals to different people speculating what the price might be next month or next week. And it is almost too many options.* (Purchaser)

Some purchasers particularly those managing forex risk had the confidence and in-house expertise to manage electricity price risk.

> *From a commercial risk point of view we would have all of that pretty well covered now and if we went into this sort of business it would be really professionally well managed, probably the best in the country I would imagine.* [And that would mainly be from in-house expertise?] *That part of it would be yes, setting all the boundaries and the rules that the traders are allowed to operate with.* [Because you have got trading area in the company already?] *Yes.* (Purchaser)

As the previous section indicated, the reason why information was not taken up tended to boil down to issues like the relative cost of electricity to other costs, the level at which electricity purchasing was delegated and the perception that it was better to pay a premium for guaranteed physical supply than to cover risk by using other financial instruments.

[Is there sufficient information out there?] *A qualified 'yes'. There are people out there that can assist them … but a lot of the time they don't know what they don't know.* (Other)

I think there is - you just have to get motivated people to find it. (Purchaser)

So I do think there is sufficient knowledge out there but I can also see some people get stuck and from a retailer point of view I can see some getting in trouble and it is probably not understanding all the risks 100% associated with what they do. Then again on the one hand it is probably the good thing about a free market system. Some people are going to do the job better than others because they do their homework better. (Gentailer)

➢ Need to target the right people with the right information

The more critical issue was not so much availability of information as the need to target the right people with information.

The people I network with are major users and I don't believe that it is a major issue with them. And I don't think the people below the major users group, usage levels below that, I don't think they even know that there are electricity issues. They don't need to know because they have got a fixed price from their retailer, they run whenever they choose to and the big boys are ramping up and down their production essentially to manage the demand side. (Purchaser)

There's a lot of people out there who do not have a finance background. They are probably engineers or they may be the operations manager and they get tasked with hedging, so they don't have background that is useful to the task. (Other)

When asked what additional information would be useful to obtain, suggestions focused on transmission outages and fuel costs.

Yes I do … the biggest one-off things comes from transmission outages … if there is a line out which is loaded for so many months the whole market has kind of shifted, everyone's view on risk has shifted too, it is basically too late to do things at that point. But it would be very costly to hedge every potential transmission outage. (Gentailer)

More clear information particularly transmission building, its impact and its timing, although there is some information out there and thermal fuel availability and cost would probably help complete that picture a bit better. (Gentailer)

➢ Unpredictable hydrology

Reliable weather forecasting was also suggested as highly desirable.

No one has been able to be an adequately reliable weather forecaster yet. Because that is the problem, if you could forecast the weather then it would be quite simple. (Purchaser)

However, as one purchaser pointed out, a fundamental problem for New Zealand was that its hydrology was unpredictable from a long way out.

It becomes very difficult to manage spot price risk in New Zealand simply because of the unpredictability of hydrology, so we might like to take a hedge for three years but we can't get an offer because hydrological risk is just so great at the volumes we look at. (Purchaser)

4.3 Hedging policy

4.3.1 Section summary

A few purchasers were entirely exposed to the spot price, but appeared to be reviewing their positions now with the prospect of a dry winter approaching. Gentailers operated more complex hedging positions operating within parameters that were adjustable in times of adverse hydrology. Purchasers who were hedged had at least half of their load hedged.

4.3.2 Hedging positions and qualifications to them

Respondents were asked in the online survey to outline their hedging positions for each of the next three years. Very few had no hedge position as they had decided to take spot prices though this was being reviewed by some with the rise in spot prices.

I put nil at this stage, but it doesn't actually mean we won't look at hedges because we are looking at it right now and the reason is because we have seen the price of electricity going upwards plus there is the low inflow into the southern lakes. It does mean that we are going to have to look and ultimately we will potentially put a certain amount on hedge. (Purchaser)

Another on spot believed spot prices averaged out in favour of the consumer in the long term and were relatively committed to staying on spot. They had focused on demand side reduction and put mechanisms in place to manage electricity usage more effectively.

This view contrasted with another purchaser who had undertaken the same calculation and felt that the cost was almost equal so they might as well hedge as this takes out any uncertainty.

I have kept a tally of where we are in respect of being on spot or hedged. [Are you better off hedged?] *We were up until about 2009 but we are a little bit in the red now but over a 10 year period you could argue six of one and half a dozen of the other. In practical terms you don't like to be explaining why your EBIT has done a big jump because the spot price changed. That is counterproductive.* [And paying for that risk to go away hasn't really cost you?] *It hasn't really cost us a heck of a lot.* (Purchaser)

Those that did provide data were asked whether they had any qualifications that applied to the responses they had given. Purchasers did not identify any. One gentailer said they as they regarded their generation portfolio as a hedge and had discounted that from their responses.

We had a struggle on that one because we consider the generation portfolio a hedge. So discounting the generation is how I think we ended up answering it. (Gentailer)

Other gentailers said their hedging positions assumed an 'average' view of the world without any extremes of hydrology or if there was any contractual position that might affect their projections that was entirely under their control.

We only have one large derivative which is callable but we basically did this on our current year forecast or budget so it is a very average view of the world and not at the extremes of extreme wet or extreme dry. And I guess the other big assumption in there is really around our perceived success in resigning or winning new time of use load which is the other large volume variable that can swing around. I think those are fine for general trends. (Gentailer)

We do have some arrangements which are designed for dry year support. And in each case the option whether to use them ultimately is up to our discretion. So there is none automatically kicking in. (Gentailer)

We have a dry year product with a competitor to give us a call on volume. (Gentailer)

Another gentailer said the only qualification on their projections was the rate of growth of retail demand.

The only thing that could change that forward curve is whether our retail business grows faster than what we planned to grow. So as our retail business grows those numbers will change into the future but that is what I can see how we will swap that for a retail book versus a hedge book. (Gentailer)

Some had caps in their contracts to provide some protection during periods of very high prices.

We have got caps so caps are things that protect us, they will be at a high price for significant short term peak events. (Gentailer)

I have got one contract that I called capped and in other words if the price exceeds a certain number it kicks in. [How much would that make the percentage go up?] *Not a lot, I am dabbling, I have just put my toe in the water. But I think it is an indication of where we might be in the future.* (Purchaser)

4.3.3 Firm hedging policies

Other than those without hedges, most had a firm policy on how much they would hedge, but some purchasers did not. This was mainly when electricity purchases were left to procurement and were a low input cost.

No, we don't. (Purchaser)

Gentailers had policy parameters that they had to operate within, but these were not hard and fast numbers so much as broad guidelines that recognised conditions might vary from year to year depending on hydrology.

We have a three year look ahead and that sets a range. [Can you tell me what your policy is in that respect?] *So basically current financial year - we establish two factors in terms of operation called Dry Year Generation obviously based on a dry year position and it is just a definition. And Forecast Retail Position. And for the current financial year, the sum of hedges and dry year generation must not be less than full cost retail load. The following year it must be between 75% and 100% and the year after that 50 - 85%. That is the annualized position. We have a monthly position that is effectively the same of the first one. In the current financial year we will have sufficient hedge cover so that our hedges in dry year generation are not less than retail load unless otherwise approved from the board.* (Gentailer)

> *There is a limit or certain tests on the amount of the width of the allowable earnings distribution which drives target hedge levels. But it is not a hard coded number it is dependent on the year. So if a particular year had some large thermal generation outages that might drive different hedge levels to other levels.* (Gentailer)

> *We do have a firm policy yes.* [Can you tell me what that is?] *That our customer demand obligations are no more than 85% of our generation and hedge capacity.* (Gentailer)

Not all were prepared to give details of their policy.

> *Do we have percentage hedged targets - yes we do.* [Are you willing to disclose those?] *No.* (Gentailer)

Purchasers tended to follow a simple hedge formula with most saying at least half of their potential exposure was hedged.

> *We have always maintained hedge cover of at least 70% and sometimes drifting up to 70% of our consumption ... so we choose to leave that last 25% at spot and we will adjust our load to that extent but we can't manipulate load or handle price exceedances.* (Purchaser)

> *Yes that is basically the 50% we have got in there.* (Purchaser)

Those on fixed price variable volume contracts looked to roll over their contracts though in the case of this purchaser the prospect of a liquid futures market looked an attractive alternative.

> *100%. Hedge as in fixed price variable volume.* [What about going out to the following year and the following year after that?] *100%.* [So you are fully contracted?] *No we are only fully contracted for the next year but the intention right now would be to do the same for those next two years after that ... but I would love for the day to come when we can just start buying it on a liquid futures market to be frank.* (Purchaser)

> *Our policy is consistent with what I gave you there - it is basically that we hedge in four 15% blocks, 60% of our total generation.* (Gentailer)

4.4 Hedge sellers' policies

4.4.1 Section summary

Most large generators say they will provide hedges at any location, but small generators do not offer hedges off the core grid. The futures market's forward curved seemed to set a three to four year limit for the duration of hedges, but some gentailers were prepared to contract out as far as 10 years subject to higher levels of internal approval and credit risks assurances. Credit risk is an issue and the inability of some participants to provide the required assurances to gentailers has led to deals not proceeding.

4.4.2 Policies not to provide hedges at some locations

Most gentailers who bought and sold hedges said they would provide hedges at all locations. However, some because of the location of their generation and size would not offer in some areas remote from their generation and off the core grid.

There are some locations that we would avoid mainly because of location and price risk. (Gentailer)

I won't name the hedges but areas that we are hesitant to hedge are upper South Island and selling hedges in the lower North Island. [Why?] *Around the price risk between those locations and our ability to get price cover whether it is generation or hedges. So upper South Island it is very hard to get realistic hedge pricing and lower North Island there is no generation.* (Gentailer)

4.4.3 Policies on duration of hedges

Sellers of hedges appeared to have two approaches to duration. There were those who would only sell for three or four years out because that was the duration for which there was an active market for futures.

Generally, we will only go out three years. We might make exceptions. You will find that if it is traded on ASX we would probably be comfortable pricing up to the end of the ASX forward curve. (Gentailer)

Three years because that is the duration that the futures contracts are liquid. (Other)

Yes a maximum of four years out. [And the reason for the four year time limit?] *I think that just gives us sufficient security to deal with our banks and our owners to make sure we can manage the income risk into the future.* (Gentailer)

And there were some that said they had no policy over duration, but did express concern about the risks of contracting long term and the higher levels of approval required for such contracts.

[Do you have a policy only to provide hedges for certain durations?] *No. It is just as the duration gets larger the face value of the deal gets larger and it goes higher and higher up the delegations chain. There is certainly no policy it is just an effort issue when you are trying to predict whether a node is going to even exist in 10 years time or something like that.* (Gentailer)

Short and long term, we would consider everything if the price is right and the terms. The longer the term of the hedge the more complex the transaction might be because you have to take into account a lot more potential scenarios that might arise and carbon taxes are just one. Taxes and levies and those sorts of things you never know what might happen down the track. (Gentailer)

However, longer term contracts attracted particular concerns about credit risks.

And usually long dated contracts will have credit risk. Having said that we have got contracts from one day to 10 years plus. (Gentailer)

4.4.4 Credit arrangements

All gentailers who sold hedges had policies that required purchasers to have credit arrangements in order to contract. On occasion deals had not proceeded because credit requirements had not been met.

We have a credit policy which is that based on various attributes including things like credit rating. You may ask for prudential security if we sell a CFD and we have had parties refuse which we didn't transact. We have also been asked to provide prudential at times and we have. (Gentailer)

Yes we have ... credit might drive the need for something like a letter of credit or something which may kill the deal. And that is why I think at times we have suggested ASX type products for people that we have trouble dealing with just as a way of getting access to hedges. (Gentailer)

There are counterparties with little or no credit rating who don't want to enter into support arrangements and that makes it hard to transact. (Gentailer)

[Credit arrangements where you have had problems with credit arrangements what are those issues?] *Just around counterparties credit risks. So it is not our credit arrangements it is others.* [Have you been able to get around those?] *The parties that* [deleted] *is talking about there, yes, we continue to have arrangements with them. What it means is that we just have to approach credit as a specific aspect of deal structuring whereas elsewhere it is not so much of an issue.* (Gentailer)

4.5 Hedge purchasers' perspectives

4.5.1 Section summary

The frequency of dry years over the past decade, particularly in 2008, had influenced most to take a more conservative approach to risk management. Although one or two gentailers attempted to include FM/suspension clauses into contracts to cover plant outages, these were generally disliked on the grounds that such risks were best managed by the suppliers not purchasers. Purchasers are able to cut load for a few hours though not all at times of high spot prices with the price at which this might be done ranging from as low as $100 MW/hr through to $500 MW/hr. Difficulties remain in obtaining a range of offers at locations off the main grid, particularly on the east coast of the North Island, Northland, the upper South Island and other areas in the South Island when there has been a dry summer as is the case now.

4.5.2 Other services offered by counterparties

Respondents were asked in the online survey to rate various aspects of hedge contracts, such as, price, term and duration in terms of their importance and then to rate any other aspects that counterparties offered. In most cases where additional offers to the contract were offered these were rated low.

The interviews sought to identify the kinds of additional services on offer. These included energy efficiency reviews and additional market intelligence information.

The only other services the counterparty offers is energy efficiency reviews and energy profile reviews. (Purchaser)

Information on general things about demand, future pricing curves, constraints around us and I guess just some market intelligence if you like. So in the big scheme of things relatively small but we do value them. We like our hedge counterparty to be a part of our business if you like to a certain extent understand us and we understand them. So a relationship and some level of interaction has some value. (Purchaser)

Probably the other service I see them providing is information on what is going on and they keep you informed about what is happening. [About the electricity market?] *About security of supply, everything to do with it.* (Purchaser)

> *I guess there is the spot marketing services contracts which we have with two of the generators. We get weekly reports, it is pretty public and we have regular get-togethers with our account managers etc. So I guess they are a source of market intelligence.* [But not that important still?] *Not that important because a lot of it is publically available but it is useful.* (Purchaser)

Others cited specific services such as gentailers who acted in the market on their behalf for the provision of ancillary products.

> *We have got things like frequency keeping or interruptible load and those sorts of things and also they do things like act as our agents in the market.* (Purchaser)

> *We might offer if people want to bid on ancillary products we might offer to do that at little or no cost.* (Gentailer)

One gentailer identified the wider range of hedge products that were on offer too.

> *Certainly there are a broader range of products available nowadays from those that are selling hedges. Some parties are very keen to sell more exotics in terms of caps and collars and so forth, so there is certainly a broader range of products available.* (Gentailer)

Other services also included the provision of ad hoc advice.

> *We can phone up and lean on them and say give us some advice but in actual fact I don't think it is appropriate. But because they are pretty nice people they tend to bear with us.* (Purchaser)

One purchaser had also been thinking of the provision of gas as 'other services' and another billing processes, however, in both cases these were considered relatively unimportant in their decision making.

4.5.3 Influence of dry years

The dry years had made several participants a lot more conservative in their approach to risk management. It had persuaded some purchasers to seek fixed price variable volume contracts to avoid price spikes.

> *Yes, I would say they have. We kind of like the fixed price variable volume because whilst it might be a more expensive way of buying electricity we can accrue ahead of time what we expect our costs to be and by having fixed price variable we are not getting hit by those huge peaks or potentially huge peaks of spot pricing. We always get nervous when we start seeing the hydrology going down as it has been in the past few weeks, but it is just the way it is. If we are able to renew or get another fixed price variable we will probably go with that because there is limited risk.* (Purchaser)

> *We have had these dry year events, once in 100, in 2001, 2003 and 2008, and we had some significant events basically measured in a price mechanism 26th March 2011. So those volatility episodes are still fresh in our mind.* [And that is why you probably will stay around the 80%.] *That is why we will stay at the higher level of cover, but what type of cover is the debate. It might not be that old fashioned vanilla CFD thing - it might be a mix of different products.* (Purchaser)

Another purchaser on a similar fixed price contract argued that the dry years had made no impact because the contracts took away the risk of other hedge products or spot price exposure.

No. [Why is that?] *Because we have hedged against it anyway. We are fixed price variable volume. If I was taking a mixture of spot and CFDs it would.* (Purchaser)

This line of thinking drew another purchaser to offer a cynical response to hedging saying not only had the company lost money hedging, but hedging meant that if no-one was exposed to spot prices there would be no market.

In the longer run hedges have always lost money and the issue is one of cash flow for very bad periods like in 08, I think we would have lost over a month's production. And one of the issues that I have especially and that we have is that the problem with the wholesale spot market is hardly anyone is exposed to it so in effect there is no response. And everyone seems to think that the problem with the market which I regard is because people are not exposed to the prices and therefore don't respond and the solution being proposed is let's make everyone on hedges so that no one is exposed to the spot prices so then there would be no reaction to wholesale prices in other words there wouldn't be a market at all. (Purchaser)

Another purchaser had sought to be more efficient in their use of power and to reduce their overall demand rather than have any impact on their hedging policy.

The dry years have driven us to reduce demand ... 2003 scared the hell out of us basically and we engaged in a pretty massive change in our business ... we have reduced our consumption by 36% and by the end of 2013 we will have reduced it 36% over what we were consuming in 2003. So it hasn't changed our approach to hedging policy we still hedge 70% but we are absolutely focused on energy reduction. (Purchaser)

The dry years had had a profound effect on gentailers and those managing risk for others forcing them to review their risk management strategies and to build in dry year scenarios as a matter of course.

We anticipate the possibility of dry years in our portfolios. (Gentailer)

I think as a hedger the current market conditions which are based on current forecasts is looking like it may be a dry year as a possibility has certainly highlighted the importance for risk management which respect to electricity. There was almost like the mythical one in 100-year dry year, it is one in three or four at least. (Other)

2008 that kicked off a long journey on the internal risk management. I would say that would be the prime reason of why we have a separate risk team which sits outside of the wholesale area. (Gentailer)

Definitely. We are more conservative. And I suppose what dry years do is ... highlight the need for risk management practices. (Gentailer)

We've had dry years in 2006, 2008, 2010, 2012 - but it doesn't impact our strategy, we have set our strategy to handle extremes. But it does impact on our ability to grow our business as need head room to handle the volatility. (Gentailer)

Gentailers though said that they had always taken a conservative approach.

No. We have effectively operated the same dry year position for the last eight or nine years. [So you have always taken a fairly prudent approach to it?] *Yes.* (Gentailer)

We are fundamentally conservative. We want to hedge all of it basically. We want to completely hedge. If we could hedge all of our risk we would do it. But the problem is we can't do it all the time locationally. (Gentailer)

[Impact of dry years?] *It is absolutely one of the risks we are hedging at all times but it is not like it has affected our strategy.* [Do you think the last 10 years have impacted it greatly?] *We have seen less frequency in the last 10 years to dry years than probably the 10 before that. I think other factors are coming into play around dry years which is around who pays, dry year management as a physical market rather than a hedge market.* (Gentailer)

Some purchasers had also taken a different approach too.

It is the reason for having risk management when you look at four dry years in the last nine or so. 2008 really focused the board on this ongoing exposure. (Purchaser)

[What could impact on that decision do you think? Is it if we have had lots of dry years?] *The last dry year was in 2008 so that was not long ago. If say, for example, we had wet years continuing and the forward spot price looked relatively flat that might involve us to be a little bit less conservative.* [Do dry years still factor in your decisions at the moment?] *To some degree yes.* [Which dry year in particular?] *We have had about three or four in the last 10 years. We were 100% hedged on the last one.* (Purchaser)

4.5.4 Data on last transaction

Almost all participants kept accessible records on their last hedge transactions. Also, most of those with hedges had taken the last one out in the past six months.

Yes it is. December last year, that was how I filled out the information - I just went to my folder. [So it was easy to access the information?] *Yes I just went straight to the report I sent to the hedge working group. That had all the prices of the GXPs offered, price converted to our base GXP and all that sort of thing. So that $14.23 represents a corrected position that is Tokomaru and shows you how variable it can be.* (Gentailer)

It is very easy to locate and the occasion was late 2011. (Purchaser)

[You obviously find records easy to access in terms of the deal that was done?] *Yes. It is all filed away with our Company Secretary.* (Purchaser)

We don't register every price on a register but I can generally dig them out of my email system. We certainly record all formal paperwork for hedges that we enter. (Gentailer)

We run a hedge book at our treasury now and we record there with people. (Purchaser)

[Do you always keep a record of the tenders?] *Yes I do a spreadsheet. That way I know I have got the information there if I want.* (Purchaser)

4.5.5 FM/suspension clauses

There was general opposition to FM/suspension clauses in contracts when they were triggered by outages or due to failures at a gentailer's plant. In the view of most purchasers and their agents the onus was on the gentailer to meet any shortfall in supply from other sources.

If you fall over you go and buy it from somewhere else and give it to me, I don't care which would be my approach. (Other)

They normally have some sort of force majeure somewhere. If they are unable to get a certain level of generation then sometimes that is a force majeure. (Purchaser)

Our expectation is, irrespective of what happens to their plant, they will provide us with electricity. So, for them to be able to call force majeure because their plant is broken then to us that is not acceptable. (Purchaser)

Not all gentailers supported FM/suspension clauses.

I suppose it is just unreasonable in a sense we can't dictate how our demand works but they can dictate their output. The whole reason for taking hedges is to cover yourself when the prices go extreme ... So to have these FM clauses that are linked to outages that are going to cause price spikes and all sorts of issues, I see that to be unreasonable. The whole reason people hedge is to protect themselves from those events. They want their cake and eat it. (Gentailer)

Some of the FM clauses that we have seen the sole discretion side of the thing is they get to decide after the fact whether it was in or out of the money and then decide whether or not a suspension event occurred. If a suspension event occurred for a physical reason that is why the suspension event clause is in the contract and right up front I don't like any suspension event clauses. We try and keep them out of the contract. (Gentailer)

There shouldn't be a suspension clause. [Why is that?] *Our risk isn't covered. Even if I have got 10% wholesale market exposure it is a huge amount of money.* (Gentailer)

It is not acceptable to have a force majeure class ... we are starting to add risk back into something we are trying to de-risk. (Purchaser)

Purchasers regarded gentailers as in the best position to manage risk.

It is the difference between what you think is fair and there is a big difference in what you can actually achieve in the current market because at the moment they put the risk on to me when they are in the best position to control the risk. So it is absolute nonsense that the party that is in the best position to control the risk contracts out of it. [What are the types of FM or suspension clauses that you consider to be unreasonable?] *Limitation of liability. Typically they are a fraction of what it actually costs us when we have an interruption.* (Purchaser)

[FM you said weather events shouldn't be Force Majeure why is that?] *Dry years, wet years that is what you insure yourself with hedges against.* [Do they actually have some of those FM in?] *No we wouldn't have that, we would negotiate that out.* [Do any of the hedges you offer have those in them anymore?] *Not weather events. There is the odd one about if all of our generators fall over or something, there is one that has got something like that.* [And you accept that one?] *I think we looked that it was a very remote possibility but in general hedges are supposed to hedge against all events so it is sort of a misnomer.* (Purchaser)

However, the counter view was that there were events over which gentailers had no control.

Being through a crack in the Maui pipeline and things like that we understand the need for them. (Gentailer)

Some took the view that FM clauses should be removed and that risk built into the price. If the risk carried a premium then this would create competitive tension and choice. Many felt FM clauses were becoming less common, although one purchaser felt that FM/suspension clauses were finding their way back and it was suggested this was as a result of legal advice sellers were receiving that led to non-market oriented behaviour.

> *We are aware of one party who does have them and I think that is just something you have to take into account when you are pricing the product and naturally versus someone who doesn't include that then there should be a discount. And that is just competitive tension and assessing that risk without it coming around to bite you.* (Gentailer)

> *That* [generator outages] *is a risk that the suppliers are in the best position to manage and to price it accordingly in what they offer. We can't be expected to manage that risk. It's ridiculous … they are coming back and I don't know why.* (Purchaser)

And one purchaser with co-generation capacity had the ability to take advantage of them.

> *Our co-generation plants can have take or pay clauses in them. So FM helps us because if this great act of God comes along and does something to us we can call FM and then we don't have to buy electricity that day.* (Purchaser)

4.5.6 Cutting load at times of high spot prices

Most purchasers were able to cut load at times of high spot prices and generally for a few hours though a few were quite limited in their ability to cut back citing only small cuts or durations such as only a quarter hour and then only for four times in a 24-hour period. The amount of load cut back depended in part to the degree of exposure to the spot market and for some the time of the year as seasonal factors impacted on their production schedules.

> *That 30% which is basically our spot exposure we will slow back on but in the last four years I would suggest we have only slowed back maybe a dozen times for periods not exceeding four or five hours.* (Purchaser)

> *It can be measured in hours not months … we will not run our customers out of product. So what we are basically doing is shutting down pieces of kit that makes stuff for our customers so what you have to do is plan it so you have plenty of product stored up to dispatch to our customers and then give these big pieces of plant some down time.* [How much planning time would you need?] *You would have to measure it in weeks to cover weeks.* (Purchaser)

> [There was a question we asked you how much could you easily cut off when spot prices are high and you said five to 10 megawatts.] *And that was stretching ourselves. There is not much we can drop without having a serious impact on our production.* [How long could you drop that for without causing too much?] *The small amount - hours. Long enough to cope with daily peak or if you see a sharp spike coming up.* (Purchaser)

Some had the capacity to generate their own power to cover off spot exposure or even in one or two cases the capacity to sell power. For several purchasers, cutting load to cut production was not an option.

> *We can cut about 50% plus of the load. We can convert those sites to generators. As long as we can keep topping up the generators with diesel we can keep load down, but it's not ideal.* (Purchaser)

We do because we can get paid to do it. They have consolidators now so we work with consolidators and we have put automatic systems into some of our plants. [So are you quite happy to cut that 10?] *If we get paid.* (Purchaser)

The price point at which self-generation or load cutting takes place appeared to range between $110 to $500 MW/hr.

$500 a MW/hr and we mobilise at $400 MW/hr and switch at $500 MW/hr. (Purchaser)

It would have to be massive, $500 a megawatt. (Purchaser)

[What is that price point?] *Roughly twice the average spot price.* (Purchaser)

We want to know seriously if it is going over $150, we want to review it at $200 and if it goes above that we are in a serious situation. [So you would look at trying to shut down bits at $200?] *Anything over $150. Whether or not we can for long periods but we can for short periods.* (Purchaser)

[What sort of price point would it be that you would think of doing that?] *It is usually $150 - $160 it depends to some degree what our production situation is. How long we are going to have it off for - it is no use having it at $120 at the moment because you wouldn't know if you were coming or going. But anything over $200 we would be looking really seriously.* (Purchaser)

Those exporting into commodity markets, where they were price takers, who faced the challenges of what appeared to be an over-valued New Zealand dollar, were particularly sensitive to price.

$110, but that depends on the [deleted] *price and the exchange rate because power price is a huge component of our total costs.* (Purchaser)

Price signals were seen as the primary way of encouraging load reduction in times of power scarcity which equally well encouraged increased production by those who could generate.

If the market influenced is by finance it always brings people's minds to attention. (Purchaser)

Increase our own internal generation. (Purchaser)

A financial incentive always gets people's attention. (Purchaser)

However, it was noted that steps were taken in any event by purchasers to be more efficient in the use of power for reasons other than high spot prices.

We have an ongoing short-term incentive to reduce our electricity price - trying to be a good corporate citizen, by trying to reduce the bottom line, so it's not just about the spot price. (Purchaser)

We've done as much economic as we could do. Not a lot left we could do, the incentive to do this is already there, it's not about doubling prices to do more, we've picked off all the low hanging fruit. Nothing much we can without shutting plant down. (Purchasers)

4.5.7 Difficulty in obtaining hedges at some locations

- **Off the core grid**

Purchasers identified difficulty in obtaining hedges in regional areas off the main grid. The difficulty did not necessarily mean the absence of offers, but that the prices offered were too high. Locations cited were Northland, the East Coast and central North Island, Wellington, and the upper and lower South Island this year particularly as a result of the dry conditions.

> *It is just transmission constrained areas, upper South Island, the lack of generation basically, the lack of willing sellers there.* (Gentailer)

> *East Coast North Island is bloody expensive.* (Purchaser)

> *I can barely get pricing down at Haywards. And I can barely get pricing in the upper South Island.* (Gentailer)

> *I couldn't go to Haywards or across the Hawkes Bay or the South Island because it is inappropriate risk.* (Purchaser)

One purchaser with plants in different parts of the country had sought to obtain a single contract and had hoped to secure a discount for volume as a result. They had found it so difficult obtaining a single contract for supply that they had disaggregated their load to a regional level in order to obtain competitive offers.

> *In more recent years no, because as I explained earlier I have disaggregated my load so that I have got a competitive environment hopefully because* [Gentailer name deleted] *will give me an offer on any location and I have disaggregated my load so that someone else will give me a competitive offer to that in each region.* (Purchaser)

Dry years had historically proved a problem in obtaining offers from other generators in the South Island.

> *Generally being able to buy off other generators in the South Island during the dry years is a bit tricky.* (Gentailer)

One participant noted that pricing off any nodes apart from Otahuhu and Benmore was reviewed carefully given the price spike of 26 March 2011.

> *Anything apart from Otahuhu and Benmore. So given New Zealand's nodal pricing system and given what happened March 26th there is a real focus on understanding a customer's node that they price their spot off versus what they hedge their price off.* (Other)

And one gentailer took the view that if they were not prepared to offer in some locations they had to accept compromise themselves when they could not obtain hedges in the locations they wanted. Their view was that this was not the fault of generators unwilling to make offers, but the absence of financial transmission rights.

> *We would like to get hedges at some locations but we just have to compromise. We have to accept that - we wouldn't sell ourselves and it is hard to expect others to take risk that we wouldn't take ourselves. So I think locational price risk is a problem but I don't think it is the fault of generators who won't transact at those locations. It is a consequence of having a nodal pricing system and there was always meant to be a mechanism for managing location price risk and even when the market was constructed there was always supposed*

to be an FTR market to go alongside it to assist parties to manage vocational price risk and that has never really been developed …. locational price risk tools or mechanisms should have been developed a bit quicker. But it is more of a market structure issue rather than a lack of competition issue. (Gentailer)

A few purchasers said that they had asked for offers and at times had only received one. This occurred in those areas where it was difficult to obtain offers.

Yes, back when the carbon pricing first came out. We had some very, very poor responses then and some pretty crap pricing as well to be honest. (Gentailer)

[Have you ever asked for an offer and not got one or only received one offer?] *Yes you get that situation.* [Say if you are going to market three or four times a year does that happen once a year?] *Probably twice a year I would tend to go in and we will be looking at the situation saying just get some prices. Because we are buying on a 10 year basis we need to be looking at the rolling over of that and trying to get a time when the prices are more advantageous than others. At the moment it is pretty hopeless buying anything for this winter.* (Purchaser)

A lot of the times the upper South Island would be an example. (Gentailer)

4.6 Initiatives

4.6.1 Risk management website

Those who used the electricity contract website tended to use a wide range of sources as input to their management of risk as well.

I think any source of information when you are a company as big as ours and you have analysts looking at this sort of stuff is good because they just piece it all together. (Purchaser)

It is just a point of reference, it is just one of many reference points. (Purchaser)

The emergence of the ASX, which was seen as a much clearer source of information, had raised questions about the site. Although one noted the ASX had relatively small volumes and was limited to Benmore and Otahuhu.

It is not as transparent as the ASX so I don't quite understand how to get really good information out of it. (Gentailer)

There was still a desire to have the site continue despite the availability of information from the ASX. Some respondents were keen for as much information as possible and the site was seen to provide information on fixed price variable and tariff pricing.

Analysing that is really quite complex and I have personally attempted to do that more than once to try and get a real forward curve of real hedges rather than just ASX numbers which are a bit flaky, I much prefer to see the real hedges and if that hedge disclosure system gave some statistical analysis on actual hedge forward curves that would be good. (Purchaser)

I don't look at it as much as I probably should but it can tell you a lot about the functioning of the market and I tend to think that it's a very useful tool. And it really served a purpose to be honest in the absence of a functioning ASX type hedge market. (Gentailer)

I think the continuation of that website is a good thing. Certainly while the market is essentially re-establishing itself. (Other)

[Is the Electricity Contract website still required given the ASX literacy derivative forward price curve is now available?] *I said yes just because the more information the merrier really. I am not using it to create any benefit. I use the location factor tables.* [But you find ASX better because you actually use that don't you?] *As a point to what the market price is yes.* (Gentailer)

A key area for improvement was to ensure the site was compliant in providing complete and up-to-date data.

I don't think it is fully published, fully complied with. [What improvements could be made to that website?] *Having uniform compliance across the various traders so full data. At the moment I don't feel that everybody's deals are listed so I look at it as why am I broadcasting my prices to the market and no one else is? If it was fully subscribed and you had all of the data and all of the transactions it would be a good thing. It is all or nothing in my view though.* [Do you use it much?] *Only to find out who isn't posting.* (Gentailer)

A high proportion of the contracts aren't verified, I am not sure if that is such a good thing. (Other)

For us it would be compliance. (Gentailer)

We have found lots of conflicts in deals, I understand they get uploaded and then the counterparty ticks them off and then they have since changed. (Gentailer)

Other areas for improvement sought to make the site less clunky and having the ability to filter the information.

If you put the counterparty as ASX you also have to tick a little box that says this is an ASX trade. Surely if the counterparty is ASX it is an ASX trade. So I wonder if there should be a little check mechanism that says you have put the counterparty as ASX did you want to tick this box. (Gentailer)

If you go and download a month's worth of transactions you see there are hundreds and if you are looking for the OTC stuff really it should be a subset of that. In terms of increased degree of disclosure I think the difficult balance between disclosing so much that you can begin to identify parties I wonder in terms of product type now there might be categories you can fit it into like business day days or peaking or cap and then in terms of options is it a cap, a floor and you can start to see what is being traded and I don't think that would disclose any more information in terms of who is trading. (Gentailer)

[So you do go there?] *Yes and you get huge spreadsheets and it is a nightmare of statistical analysis.* [So if it provided some tools on that to help you analyse that.] *Yes that would be really good if there was some sort of drop down menu tool. If somebody asked me I would be happy to come up with some ideas on that.* (Purchaser)

And one gentailer said it would be helpful if the site could provide location factors to the main node in each region.

They provide the location factors within each of the five regions. The problem is that they don't provide location factors to the main node in each one. So you can't correlate a price say from the top of the North Island to the top of the South Island. (Gentailer)

4.6.2 Financial transmission rights (FTRs)

- **To enable more offers in regions**

There was general acknowledgement that the introduction of FTRs would enable more offers to be made across all regions.

> *It will enable competition between regions and within regions, so it should alleviate that regional market power issue.* (Other)
>
> [Financial Transmission Rights?] *We are completely promoting FTRs we think they will be a valuable addition to correct a cash flow vacuum in the market.* [So you think they will have the effect that they are supposed to have?] *They could be better but it is an absolutely fine first step.* (Gentailer)

However, it was evident that purchasers might not take them up because they struggled now to understand the hedge market and this added another layer of complexity on top.

> *I don't know enough about it but unfortunately I get confused very quickly with the complexity and technicality of the issue is discussed.* (Purchaser)
>
> *Far too complicated for dumb engineers ... we will have to engage in the industry and it mightn't be us in the market ... we need to be taken by the hand and have it explained carefully. Don't know enough about it.* (Purchaser)
>
> *No not us. We haven't really looked into it that hard but at this stage no.* [Do you have any feeling that they might have the desired effect that they should have?] *Short answer no, probably not. I think the parties who probably need them the most have a much better understanding on how they are going to work for them and for us we haven't really delved into it that much to be honest.* (Gentailer)
>
> [Financial transmission rights, do you know much about those?] *Not really. I know they are under discussions for across North and South Island which doesn't really interest us. Too much complexity for the location risks we take.* (Purchaser)

One purchaser argued that if they were considering purchasing an FTR it would beg the question why a generator had not offered it already.

> *If I my analysis was such that I thought I was better offer purchasing the FTRs myself I would be concerned whether the suppliers had sufficient analytical capability to offer me the correct price themselves. I don't expect to do any better than any generators' trading team. If I can, then there's something wrong with their trading team.* (Purchaser)

One agent said purchasers might look for the retailers to take up the management of basis risk rather than themselves.

> *I think the part is enabling the retailers to be able to be competitive or provide offers in different islands so that is one effect it is hoping to do so yes in that aspect. The other aspect with the customers, end users looking to use them probably not.* [Why do you think

that is?] *Again if you are struggling to get them to understand and be interested in a hedge, financial transmission right is just another level of involvement in the electricity industry that they don't want. They would probably rather that element of their risk was undertaken by the retailer.* (Other)

It was also evident that not everyone saw they had a use for them.

They don't relate to locations where we can't get hedging. You can effectively buy a transmission right on the ASX today. [But not where you want it.] *That's right.* [You don't think they are going to have the desired effect?] *I don't think they are going to have any effect.* (Gentailer)

Our location typically has been pretty much a constraint-free region and bearing in mind that 90% of the hedges that we have taken over the past two decades have been at our grid exit point so we don't see the need at the moment. But if it is necessary in the future we would do. (Purchaser)

I am not sure how useful they will be to us … If we have to buy a transmission right for 12 months when New Zealand's peak is in the winter and we don't need it in the winter I am not sure how it will work but we might be able to make something out of that. It just depends. (Purchaser)

I think they're a waste of time. They're only trading on two nodes, Otahuhu and Benmore so don't give a hoot about Otahuhu and Benmore. Waste of effort as already have asset swaps between them. Don't agree with them - there is a difference between theory and practice. If they want to help the regions then they need FTRs to the regions. (Purchasers)

There was certainly weak commitment to taking up FTRs at present from purchasers that were interviewed until their value was proven.

Not right now. I will wait for the day that these things are up and running. I am not going to be one of the first cabs off the rank. But the moment that I get a sense that all the checks and balances are in place we will be in as quickly as we can. (Purchaser)

Depends on the final mechanism they will use. Depends if a secondary market develops. More impact if they had put in place before the hedge market. I understand there is going to be a Benmore-Otahuhu FTR. If they bring in a Benmore-Haywards or an Otahuhu-Haywards that may address lower North Island risk. But I do prefer keeping it simple to start and then rolling out. (Gentailer)

There was a counter-view though that once the FTRs were available participants would begin to use them.

I think they will. Some people they think they might be too complicated, but once they are out there people will definitely look at them specially with the ASX. The FTRs are between Otahuhu and Benmore and that is where the ASX trades, so immediately there are opportunities for arbitrage if the FTR is priced inefficiently. (Other)

■ Need for intra-island FTRs

Some gentailers felt that the current proposals to have FTRs between Otahuhu and Benmore did not go sufficiently far. While this would enable inter-island risk to be managed, it was also important to manage intra-island risk.

The caveat that we would also support is the development of interisland FTRs to add additional nodes to allow additional hedge against locational price risk. So obviously it is a start having Otahuhu and Benmore and I am sure they will be used but in terms of developing the market and allowing more players to gain advantage from the market we see the development of intra-island FTRs as important. (Gentailer)

I don't see that they do a hell of a lot more than the basic exchange you can receive through the ASX market the futures market because all they are is a basis product. As they evolve they may be useful but there is a hell of a lot of time, money and risk involved in setting up to trade them and I don't know what the problem is that they are trying to solve. (Gentailer)

They are currently looking at Benmore and Otahuhu but they should be going and resolving the regional issue because there is already a market for Benmore and Otahuhu. So they are not solving the problem. (Gentailer)

Some went further and said the current inter-island risk could already be covered by trading on the ASX.

The FTR product that is currently in play is not going to do the trick, it is too short term, it is non firm and also the locations haven't been well thought through. It only deals with intra-island risk which can equally be done by a buy and a sell trade on the ASX to achieve the same outcome. What I would have preferred to have done is seen if there would be locations for the FTRs, maybe have a couple of other different locations, Haywood, for example, in the lower North Island, central North Island, Whakamaru. FTRs are all about transmission risk and two points North Island and South Island is just not enough. There is intra-island risk as well as inter-island risk. (Gentailer)

[The financial transmission rights, FTRs do you think they will have the desired effect?] *No.* [Reasons for that?] *Initially FTRs are only going to be at Otahuhu and Benmore. You can synthetically create an FTR now. You can buy one and sell the other and that gives you your difference between the two, that is an FTR. So, initially I don't think FTRs are going to benefit the hedging industry one iota. If you had other nodes for the FTRs then that is going to add to people's ability to offer hedges at different locations.* (Other)

The extent that FTRs could be covered by the ASX would influence their uptake.

[Do you plan on using FTRs and do you think they will have the desired effect?] *The first part yes to the extent that they can be synthesized on the ASX by buying complimentary products we would weigh up at the time which was a better option.* (Gentailer)

Others questioned whether FTRs were being developed somewhat late in the piece now that a substantial amount of investment was going into upgrading the grid and putting in Pole 3.

We are still waiting on more meat about what these are actually going to be. It does seem very strange timing though having them in when transmission is built and there is a hedge market up and running. (Gentailer)

If we were going to have them we should have had these things years ago. The transmission is going to be built out and if it doesn't curb price separation then it is going to be billions of dollars poorly spent basically. If the transmission system behaves as it should then those FTRs will amount to trading losses which doesn't sound too interesting … part of me is worried that they take liquidity away from one hedge market and just push it into another just when the ASX seems to start getting going. (Gentailer)

It's possible it's the right product but the time is wrong because the constraints have been built out with a Pole 3 and a recommissioned Pole 2 running 1200 MW bi-directionally. (Purchaser)

One cynic questioned whether a competitive model could be applied effectively to the monopoly grid.

The monopoly will never be controlled by market forces. It is an absurd idea to use a competitive model on a non-competitive product. They are just in dream land. (Purchaser)

4.6.3 Scarcity pricing

There was limited support for scarcity pricing. At one level some purchasers had little understanding of the proposals and were therefore agnostic.

I've heard of it but I really don't know a huge amount about it. (Purchaser)

It is just on the periphery, heard about it, do I need to know about it? (Purchaser)

The case for scarcity pricing had not been made sufficiently strongly.

I have a very vague understanding of it. Without having too much understanding of it I do wonder at some of the logic of the initiatives, but I guess we will wait and see. (Purchaser)

It probably will once it comes out and we see what the impact is. But it hasn't showed me that anything has come up on our radar in terms of discussions about our position. (Gentailer)

One positive noted was that it provided signals to the market so that there could be a demand response to scarcity.

It is positive, it provides signals to the market and an ability to meet demand response to scarcity rather than getting to crunch time. It's an early indication. For some larger industrials it will look at impact, hopefully it will temper price movements. (Gentailer)

- **No point**

Purchasers on fixed price contracts were protected in any event and some failed to see the point of having the regime as it only applied in the most extreme situations that were highly unlikely to arise.

While we are on fixed price variable volume it is probably not a problem. (Purchaser)

Scarcity prices are almost pointless really and I don't know why they have wasted so much time on it. The ones they have ended up with only apply when there is an island wide or nationwide outage. When was the last time the lights went out across the whole of New Zealand. (Other)

There will be no impact, just means more paperwork. It may scare some into buying hedges but the $400 figure is not realistic. (Purchaser)

One purchaser described the idea as misguided, but the Authority had chosen the 'least worst option'. The minimum prices were seen to send the wrong messages to international investors.

They were designed to take care of a political risk and not to contribute to the market at all ... potentially it would create so much exposure that it would be counter-productive. (Purchaser)

Strong opponents

Scarcity pricing also had its strong opponents. In one case, it was opposed because if the regime were ever used it would reflect a failure of the market arising because much of the demand side was not exposed to high spot price signals. Another did not like the proposal because it put in place price floors rather than maximum prices which favoured generators.

What they are saying is that they are accepting that these outrageous extortionist prices are okay and therefore that is a real risk. And I don't accept that such extortionist prices as I regard them, as acceptable and I think I regard them as a total malfunctioning of the market and that is due to the inability of the market or the market side to respond because they are not exposed to those prices. (Purchaser)

We generally don't like it because the focus of it has been on price floors i.e. minimum prices rather than maximum prices… I think it will just make generators more money. Why would a generator argue against putting in a $5000 price minimum they are just going to make shit loads of money off it? (Gentailer)

[What about the scarcity pricing regime?] *It's a dog's breakfast. The particular part that doesn't impress us is the stress testing. We are not clear in our minds whether we are compelled to do it or not.* [So the stress test one is that because of the level of compliance you are going to have to provide information?] *Yes that is right and if it turns out that we do need to do this there a whole lot of questions. The realities of trying to comply with them I am not looking forward to that. We are busily trying to work that out at the moment.* [Will that impact on your risk management policy, will it impact if you go into hedges or not?] *It will just get all of the senior people's blood pressures up that is all it will do. It won't alter their risk activity at all.* (Purchaser)

It's administered pricing - either you have a market or not. You should let the market set the price. It's unlikely to happen and not worth worrying about in terms of risk strategy. (Purchaser)

There was comment that what was being proposed would have a quite muted effect.

The changes that have occurred between our original proposals and what is coming out now will have a far more muted effect on pricing. (Other)

[Scarcity pricing regime?] *I think that will be far less of an impact now than it was in its original form.* [Are you comfortable?] *I don't think it goes far enough. So the original scope has been pared back very sharply.* [Do you think again that it is a good first step?] *It will be fine yes. And in terms of our public stance on scarcity pricing we have yielded to some of the wider opinion in the market but the feeling is that it still needs to be a much sharper, pointier instrument than it is now.* [Would it change your approach to risk management?] *It will change it but not greatly.* [What sort of things will it make you do?] *We will just factor them into our financial considerations around shortages and localized non-supply.* (Gentailer)

Mixed signals

Criticism was levelled at the Electricity Authority for the mixed signals it was sending in terms of its decision to cap prices at $3000 MW/hr following the undesirable trading situation of 26 March 2011 and the $10,000 MW/hr prices indicated in the scarcity pricing consultation documents.

> *As prices go up and hydro positions decline there are minimum thresholds and things like that and there have been some really mixed signals in the last 12 months from the Electricity Authority because at the same time as they are promoting the minimum price thresholds they have got very high price thresholds for short term events. The most disconcerting thing is the mixed signals with the 26th of March UTS their position on that and their decision to cap prices basically at $3000 a megawatt hour when they have got consultation documents saying $10,000 and higher. I would have thought a logical position would have been at least $10,000 to be consistent with their other scarcity pricing views. So I thought they didn't do themselves a great service in mixing those messages.* (Gentailer)

More sophisticated already planned for extremes

Several of the gentailers already included within their risk management planning extreme events and were somewhat unsure about the extent to which it would affect their risk management strategies.

> *I think the test is when load has to be dropped scarcity pricing kicks in so to the extent that scarcity pricing will add to volatility then we will have to account for our modelling of the market.* (Gentailer)

> *At the moment we run kind of a risk management assuming pretty extreme prices when we have generation outages. So we are kind of aligned with the scarcity pricing already .... how it interplays with FTRs and things like that is going to be interesting.* (Gentailer)

There was though some support for the scheme to provide incentives for large users to cut load.

> *Scarcity pricing is important for industrial consumers who are making decisions around whether or not to curtail load and the big problem for them now is if they curtail load, spot prices fall accordingly so they don't get paid and in a scarcity pricing regime they can know with confidence that if they shut off their plant they will get paid between $10 and $20,000 a megawatt hour.* (Gentailer)

4.6.4 Customer compensation scheme

Cynicism

Several respondents were quite cynical about the scheme suggesting that it actually encouraged consumers to waste power in order to receive compensation.

> *Personally, during a dry year I am going to get paid for leaving all the heaters on and the doors open because the more power I use the more likely I am going to get my $10 a week. I think some market participants might offer something different to the default scheme which links payments to how much you reduce consumption. I think the customer compensation scheme is a dreadful mistake.* (Other)

Rubbish. Low because it is a free hit at $10.50 a week. No thought has been put into how do you actually get savings. The cynical customer should just turn on everything and collect their $10.50 a week. (Gentailer)

Some thought the compensation levels were so low that residential consumers would have no incentive to reduce consumption.

I think it is a bit of a crock if you want my opinion of it. [Why is that?] *The amount of money that is being offered I don't think most domestic consumers will be worried one way or another.* (Purchaser)

[The customer compensation scheme?] W*e have rated it pretty low, I think it is a very blunt instrument.* [Will it have much impact on your risk management strategy?] *At the margins it would.* [Do you think you would be subject to payments very often?] *No, not very often. We would rather and propose to develop more tailored customer packages to substitute. In terms of the blunt comment all customers get the same payment irrespective of their contribution to a savings campaign.* [Will that change your generation?] *It will change it but not in a way that I think is horribly helpful for customers.* [Will you factor it in to your pricing initially?] *We will factor it in to not so much pricing but product structure. We should be happy to pay more to customers who are actually saving more than others. So I would see it as a minimum requirement but not a sufficient requirement for getting the full benefit of what was intended through that programme.* (Gentailer)

One gentailer noted that even if consumers reduced consumption it would not affect their risk management strategy as any compensation costs they had to pay out would be covered as a result of the high prices they would obtain.

No. If the customers are going to reduce their demand, because we hedge for standardized customer demand, if they reduce their demand especially in times of high pricing it is more money on our books anyway. So that covers the appropriate cost anyway. So the short answer is no. (Gentailer)

Others felt the influence would be weak at best.

The customer compensation scheme will add I guess additional costs to retailers in those situations in terms of the $10.50 per week which we pay out. So I would say that is an added incentive but certainly not the primary one. (Gentailer)

How does the generators having to throw $10 a week at me at my house - what on earth is that going to do? (Purchaser)

Industrial purchasers took little interest in the scheme as they did not see it applying to them and consequently did not see it impacting on their risk management. Although one felt that it could negatively impact pricing in the wholesale market.

I am not too sure actually, in my mind it is aimed at residential rather than industrial. (Purchaser)

My understanding is that it is mostly aimed at the domestic market so no. (Other)

I haven't got a view on that one really. It is more consumer compensation rather than customer isn't it? (Purchaser)

> *Dumb move - there is no need. Now retailers will need to cost this risk into prices which may eventuate. This will flow through into the wholesale market.* (Purchaser)

One purchaser was critical because the market was developing a product that the scheme had cut across.

> *It looked like the industry was making progress in that space anyway, but the customer compensation scheme cut right across that and it was really sad. I have some sympathy with the Authority because it had this imposed on them by the Ministry.* (Purchaser)

Some gentailers felt the regime would affect their risk management as it would add risk to an already risky market.

> *What they are trying to do is they are trying to give the benefit of public conservation campaigns to the customer who saves the money. I think the sad thing is that it is typically the generators that are making the money in a dry year event not the retailers.* [So how will that affect your risk management strategy?] *We obviously can incorporate it into our stress tests. Again it increases the risk. This market is risky enough.* (Gentailer)

> *We're against it, someone like us will have to pay back and we have no control over how power is managed. It creates uncertainty for new entrants to enter the market.* (Gentailer)

However, another gentailer that had also been cynical at the outset felt it would have an impact on gentailer behaviour not to withhold capacity.

> *I initially thought it was a daft move … It doesn't create the right incentives for consumers to have a customer compensation scheme. But one of the side effects of it is, one of the things I think it does is, historically there has been a suggestion that in a dry year situation in particular that thermal generators and hydro generators have not necessarily been doing the right thing. With the risk, even if you withheld capacity, the risk is that even if you end up with your thermal capacity that suddenly you have driven the thing into such a hole that now you have to start paying your customers. So that is an incentive for all generators whether they have got a thermal plant or not, not to go there.* (Gentailer)

4.6.5 Dispatchable demand

This initiative was seen as applying to only a small number of large users only. However, these respondents were positive about the move.

> *That's a good thing but taken too long to come through. Good as any demand can say at such and such a price you want out and due to the inaccuracies of price forecasting systems at the moment you are never sure if you should or should not be in the game. But under dispatchable demand you are under no doubt as the dispatcher will send an instruction if you're in or out as your price has been reached. It will also help us manage our spot market exposure and increase the size of the price stack.* (Purchaser)

> *Smart metering provides opportunities for lines companies to control demand on behalf of its customers.* (Gentailer)

> [The dispatchable demand scheme what do you think of that?] *It has been a long time coming. I think it is essential that demand is able to participate in the market much more than it currently is.* [Can you see many of your clients using it?] *Yes.* [So that is a positive thing?] *Yes. We are actively trying to involve customers in demand response*

anyway so this is currently taking what we are currently doing bilaterally and looking to put it into a market. (Gentailer)

It was evident though that some users had a limited ability to respond to its signals.

We are not like some of our peers in the industry who have excess capacity in their plant and can load shed or load shift so not an easy thing. I guess we will use it to potentially cap, at ridiculously high spot prices we will probably use it if you like but I guess we will wait and see how that matures and pans out. (Purchaser)

We are a bit limited in our ability to do that because you can't just stop/start [deleted] *processing. But we are looking at it all the time and always trying to do better.* [Is that a good thing to have?] *Yes I think so. It is better to have that if it works, especially now with all of the technology and able to aggregate than to go and build another power station and put it on all of our power bills.* (Purchaser)

We're a base load operation ... we are likely to put bids in just to make sure we are dispatched. (Purchaser)

[What about the dispatchable demand scheme?] *We thought about it. It is a really big business to shut down any of our plants because they take such a long time to get going again. So we certainly couldn't do it every half hour, it wouldn't work for us. It is unlikely that we would be in a position to be able to do it.* (Purchaser)

One agent echoed the view that there was limited demand for the product because the prices were not sufficiently high.

The commercial area is not interested at all and we have talked to several commercial customers about that. It is just not big enough for them to worry about. And they haven't really a will to drop stuff off for the amount of money that is involved - the dollars just aren't significant enough at the moment. (Other)

It was suggested that there might need to be an aggregator in the market to enable smaller users to make use of it.

I think there is a lot more analysis needed to make that workable ... most of us are too small to make a difference unless you are a big factory and there is only a few, Pan Pac and maybe the steel plants. But the rest of us need to be aggregated together with a few others similarly and then you find because we are all diverse and different it is really hard to get us to act together so therefore you need an aggregator to come together and then they carry the risk and guess what you then have another player that will clip the ticket on the way through. (Purchaser)

There was a view that the benefits of dispatchable demand might evolve over time.

It is only going to be of use to a handful of large consumers. It will give them greater certainty around outcomes than they have now with their demand bids. It will get used and over time more people might get into it and try it. (Other)

The general impression was that dispatchable demand would only have a small influence over risk management decisions.

I have got no issue with it but I don't think it is a game changer either way. (Gentailer)

It has moved a little bit towards a market response from the demand side. The only thing of concern is probably how much of a bureaucratic burden it might place on us because that would be quite a concern. (Purchaser)

We have a whole ripple control. It will just be another mechanism by which we can manage whatever load into the market. It's just another option. (Other)

4.6.6 Prudential security

Although a number of purchasers were aware of the work being done on prudential security, they had insufficient understanding to comment on it.

I am not 100% sure of what that means. (Purchaser)

We've heard about it but don't know a lot about it. (Purchaser)

I am aware of the words but what it actually means I don't know. (Purchaser)

Those that were aware of the issues were clearly in favour of improvements being made as current requirements clearly limited access to the market and the range of products that might be on offer.

I use three main methods of hedging, ASX that would be my preferred. I use caps and I use generation following hedging. None of those three can be registered against the prudential calculation. [So you would want those to be included in that?] *Yes.* (Gentailer)

I don't think there is anything you can do around that anyhow. I suppose it limits smaller players getting in is the only thing and I think we have just had that recently with Pulse. (Other)

[Do you think there is a better means of utilizing hedge contracts as a form of prudential security?] *Could it be more liquid? Yes. It just comes back to that for me.* (Purchaser)

[What about prudential security are you aware of the wholesale market settlement and prudential security review by the Authority?] *Yes and if we were to be asked for our view on that we would say that since people that are hedged in reality the prudential requirements it zeros out. We pay prudential effectively prudential cover to our spot purchasers. And it does seem a little pointless when we are hedged and therefore the risk on an overall net basis is very little so why should you have to pay prudential. So welcoming that investigation, hoping that some of those things will be considered and a relaxation takes place.* (Purchaser)

One purchaser cited the problem that arose when a large amount of power had to be purchased which meant a huge amount of cash had to be stumped up. If this was a hedge with a State-owned gentailer then that could be seen as a fairly safe from a financial position and they would like to offset that against their prudential requirements.

If we were providing prudentials for our uncovered spot purchases that would be acceptable. The way it works at the moment is that you still have to provide cover for that hedge. (Purchaser)

The most common suggestion was to have some centralised way of running the prudential security system.

There should be a centralized prudential system...so the short answer is yes. (Gentailer)

Specific concerns were raised about having to lodge prudential security for multiple products.

> *You can already lodge CFDs and that is fine. I think a concern is having to lodge multiple prudential for multiple products, FTRs, ASX, NZM, CFDs, bilateral so you end up potentially - I think the greatest benefit would be potentially finding a way to amalgamate the risk from all of those products. I believe the Electricity Authority is working on that.* (Gentailer)

> *I don't think there is anything wrong with the mechanism of how hedges are applied to prudentials. This is separate from the discussion of whether prudential regime is effective and I guess we will focus only on how hedges can be used within it. The biggest gap and it is less of an issue for us, in fact it is not an issue for us but will be for others is the inability to use other non-hedge contracts as prudential security so that is futures.* [And do you think they should?] *I think it should be considered. There is a complexity there. If you have met with* [Gentailer name deleted] *they will give you the chapter and verse on that one.* [Do they do it in Australia?] *I think they do. In Australia 50% or so of physical sales are hedged in the futures market.* [Do you think that is just going to be developing?] *I don't think it is one of those that will emerge naturally because you are talking about separate parties with opposite interests. You have got the ASX operating the futures market in conflict with the NZX operating the New Zealand spot market. So don't know quite how you bridge that one.* [So does the Authority get involved in that?] *There is potential for them to interface the two different security regimes. But that would be around enabling a security in one location to be used against another which is by code.* (Gentailer)

And there was an identified role for the clearing manager.

> *If you have got a revenue stream that is coming from a hedge product then you should be able to assign it to the clearing manager and have an arrangement where if it is a hedge from a generator to someone else, a purchaser and the purchaser basically to assign that cheque, then why shouldn't that offset, that is a way to mitigate the clearing managers risk. It changes the risk from the purchaser to the generator.* (Gentailer)

> *They should have a look at automatically factoring futures into the prudential requirements.* (Other)

Questions were also raised about the extent of the scope of prudential security

> *If you are a purchaser you might register one or two hedges but what if you are a purchaser who has bought and sold hedges. I will claim all the purchase hedges and offset them against my prudential supervision requirements but I am not going to disclose all the hedges that I have sold. So I think credit risk for the clearing manager is not just about the activities of the purchaser in terms of direct to the clearing manager it is all of their activities ... who is to say they are not making a whole lot of losses on FX or they have compromised their ability to be a going concern. How far do you extend your reach in terms of your activities around prudential supervision?* (Gentailer)

4.6.7 Stress testing

Few thought stress testing would bring forth many benefits for themselves. As noted, several purchasers viewed themselves as already protected through their fixed price contracts or were already highly hedged and saw the regime really aimed at others.

No I don't think it will, no. Again we have avoided exposure to spot and therefore the hedge market for some time and I don't really see that changing in the near future. (Purchaser)

No, I don't think so because it is squarely aimed at industrials who in the opinion of Mr Hansen expose themselves to too much risk and then complain like hell when the prices go high. We are quite highly hedged and always have been and at this stage our hedge book goes out to 2016 so we are not one of the targets except we are just getting caught up in the bureaucracy. (Purchaser)

Some wanted to know more about it and were supportive because it would encourage better risk management because there was a much higher probability of higher prices sticking with set price floors.

We've heard about it and would be interested in learning more about it. (Purchaser)

Stress testing is part of good risk management. It will get people thinking what is the worst outcome and that's a healthy thing when it comes to risk management. (Other)

In our policy and we have a test called extreme test ... I just wonder if it is a perception thing after the 26th of March there is a feeling out there no matter how bad things get that someone will step in and revisit prices. But that is where things like scarcity pricing will, I think, help because there will essentially be a price floor when there is demand curtailment and this would be like a sanctioned, it can't be revisited price floor. So it just gives a higher probability of high prices actually sticking which we think is pretty key to moving the hedge market forward. There has to be a reason for people to hedge. (Gentailer)

[Stress test disclosure regime.] *We weren't a fan of it in its original form, it has been amended so it is slightly less invasive. The original regime really did breach commercial sensitivity in a huge way so I really had to scratch my head and wonder what they were thinking about when they proposed that. That said there are clearly parties in the market who don't manage their financial stress sufficiently and so to some extent it is a necessary evil. We can comply with the stress test pretty successfully and we have no problem with that. There is bureaucracy around it which probably doesn't add value to the process but if it means that other parties are actually looking at the results from their stress test and giving course for thought on how they manage risk then that will be sufficient benefit. But I don't think the actual outcome from the regime itself will be hugely useful. I think we are probably applying the test to hundreds of participants in order to get changes in behaviour from a handful.* [What could they have done instead?] *I don't know if there was an instead. I think there was a "but for." I think most of the other developments if we had got on with scarcity pricing to its fullest extent wouldn't be necessary. It would and could lead to financial failure of companies who didn't manage risk. So putting it another way it probably wouldn't have been necessary if some of the other measures had been applied a bit more fully.* [Does that impact on your risk management strategy?] *Stress test - no.* (Gentailer)

However, it appeared that major electricity users were opposed and saw no need for it.

Stress testing they [MEUG] *are absolutely dead against.* [Why is that?] *They just can't see the need for it and they have also put us on the list having to submit.* (Purchaser)

This is an extra bit of bureaucracy that we have to go to coming out of the scarcity pricing debate around a dry year. (Purchaser)

And one purchaser was strongly opposed to it describing it as a gagging order designed to silence complaints about high spot prices.

> *Won't make the slightly bit of difference. Because we already know all of that stuff. The stress test I call the 'gagging order', so one cannot complain about high spot prices because one should have taken out hedges. It is just so puerile and offensive it is unbelievable that people cannot complain about the market not working properly.* (Purchaser)

> *No help to us, another Big Brother thing. We have never complained about high spot prices. But it's like a punishment for those that have complained.* (Purchaser)

> *It's a waste of time, nanny state and not based on realistic scenarios. We feel the measures are not real measures of stress.* (Purchaser)

It was suggested that the Authority needed to market the concept better, particularly aiming it at those purchasers with large spot exposure.

> *The major players say we do this stuff and we do it every day or every week and so it doesn't do anything for the major players, but it is not meant for those that are already doing this, it is actually for the second tier parties that may not be doing it that should be doing it that are taking spot exposure but continually whine about what happens when prices do high. So I think the Authority probably hasn't sold the message about who it is actually targeting.* (Gentailer)

However, there was criticism aimed at the stress test's design because it did not require gentailers to disclose directly to the Authority their hedge position.

> *I think the Electricity Authority has been incredibly weak not receiving the information directly. So they don't even know after doing all of this what* [Deleted] *minimum hedge percentage is.* (Gentailer)

> *Their rationale is that in periods of public conservation campaigns or low hydrology where you tend to get an increase in lobbying and noise from gentailers based on their own financial positions, they believe that doing the stress test would assist them in being able to negate some of that lobbying. I don't know how they are able to negate it when they are not able to tell which party is doing what. So the whole thing just seems a bit of a joke.* (Gentailer)

> *I think if the intent of it is to be able to ward off lobbyists then it is not going to win ... We are not the ones that are going to come bleating when there are low lake levels and ask for a conservation campaign and you are not going to be able to hold up our disclosure and say you said you were fine because we are just not going to do it. So you have got a big disconnect there.* (Gentailer)

Gentailers said it would make little difference to their risk management as they already had well developed risk management strategies.

> *I guess our day-to-day business involves a high degree of risk so we already have I would say well developed risk management risk processes in place which are I guess endorsed from the board level down. This will have some influence basically in terms of risk management but probably not a major one*. (Gentailer)

[Will that affect your risk management?] *It shouldn't do no. I have similar tests running already. I am not convinced that it will have any affect on my risk management strategy.* (Gentailer)

4.7 Key issues

4.7.1 The hedge market

- **Hedge margin over retail price**

The premium of hedge prices over retail prices was a key concern for some.

> *One of the biggest issues is that we find that hedges when they are offered are sometimes higher than the retail position that those same parties are retailing electricity. That is the biggest issue, the mismatch between retail and hedges. And, of course, it makes sense they are going to sell the top end of their generation portfolios - if they value wind at $100 they are not going to retail that to the customer and give us the cheap hydro are they? I suppose the biggest issue is the price and the disparity between hedge pricing and retail position.* (Gentailer)

> *The biggest single issue is the margin that is demanded. I guess we would accept that at the end of the day there is a premium to be paid for price security and we believe historically has been in the 2-3% over and above spot and we think that is fair but we have just finished a 10 year hedge with a major SOE that had a CPI escalator in it and at the end of 10 years we have paid nearly 9% over and above spot and we think that is unfair and bad business. But we can't afford to run without spots, not with the volatility, in the New Zealand market.* (Purchaser)

Linked to this issue was a general worry about the upward price path that did not seem to correlate with the cost of new generation.

> *All we see is increasing prices. And we just don't see any way of stopping that. We can't understand why it is onwards and upwards.* [And it is not because of generation investment?] *That is the explanation, however, there is ongoing investment in the generation capacity but it is not huge. So it is a little bit of a mystery to us.* (Purchaser)

- **Market complexity**

For some purchasers, there was still a major challenge for them in understanding the market in order to be able to appreciate the need to manage risk better.

> *I am kind of struggling to answer that question to be honest. I think probably for us complexity. I probably try to avoid the hedge market because it is not something that I understand well and again as I said to you earlier the amount of time I would need to spend to understand the rules and the regulations and all of the jargon to get up to speed with it I am not sure it is good use of my time when I can get a consultant to do it for me.* (Purchaser)

> *I would say getting an understanding of how hedges truly work from a business perspective - which way should the organisation go. Should it stay on the spot or should it head into partially hedged and partially spot. Those are the curly ones for us and it depends who you talk to.* (Purchaser)

There is the information provision so people can see what is happening and understand the risk they are trying to manage much better. (Other)

A key aspect of the complexity was transmission pricing.

I am going to have to choose between people really understanding the risk of participating in the market; I think there is an element of that. There is probably an element of the complexity of the transmission system feeding into that locational pricing and feeding into that risk and people not necessarily understanding that. (Gentailer)

Transmission risk

Transmission risk was identified as the major issue for the market by some.

If the Authority was to focus on a particular subject I would say it was more about developing mechanisms for parties to deal with locational price risk. (Gentailer)

How they manage basis risk … they have an FTR for the HVDC and there is also going to be the inter-island locational risk management and for me that is going to be really quite important as a complement to whatever energy hedge you might have. (Other)

The 26th March 2011 event had highlighted locational pricing risk.

Location pricing I think is probably the biggest one. The 26th of March highlighted that. Having all of the hedges at one particular point, one particular node and, of course, having to trade elsewhere is fast becoming the biggest issue. (Gentailer)

Liquidity and broader range of players

Others saw the need to maintain pressure to make the market more active.

I think focus on keeping the pressure on the volumes on the ASX and making that happen that the ASX can be self fuelled. I strongly think that is a good initiative that will pay off long term to ensure competitiveness in the market. (Gentailer)

No liquid market. (Purchaser)

It's still liquidity. It's depth and breadth of market. It's still being able to have a variety of offers at key nodes. It's managing inter-island basis risk. FTRs should help, but Pole 3 and Pole 2 upgrades may do a lot of that anyway. (Purchaser)

Greater market activity was closely linked to encouraging more participants to the ASX and to obtaining more depth.

One of the things we think is required is a broader participation in the market so there are Market Maker requirements around the four major gentailers and they have supported strong growth and liquidity in the market. We think to continue that growth into the future we need a broader range of players involved and potentially the involvement of intermediaries participating on behalf of the smaller players. So that goes back to I guess some of the issues around prudentials and requirements they impose on smaller parties. (Gentailer)

The biggest issue has got to be the number of players in the market. At the moment the big four comprise 75-80% of the hedge market effectively. (Other)

Indeed, if the targets set for the market were not met, there was a risk that liquidity would dry up.

The biggest issue for the hedge market is really what happens if the 3000 gigawatt hour target is not met. Closely related to that is what would happen to the market if targets were removed altogether. Liquidity would just dry up in my mind. (Other)

There were those that were encouraged by the progress made by the ASX to date.

The market has reached a new level of maturity with the ASX which is growing all the time in terms of its acceptance in the overall market place and people trading on it. (Gentailer)

I don't think the depth is there quite yet but certainly there is a lot more liquidity. Depth helps if you want to do a large transaction. (Gentailer)

But now was the time for a change to focus on encouraging more market participation.

My view is that it has come a long way and it has benefited from Electricity Authority pressure so both section 42 and the pressure and push that has been on it from the Electricity Authority has undoubtedly benefited other markets so the benefits of the ASX have flowed through to the OTC market ... it is just a change management project to get players heads into the spaces that they are willing to take on the cost and risk. (Gentailer)

Other issues - clarity around key events and prudential security

Other issues that were raised included the need for greater clarity around critical events, the absence of which added greater risk to the market.

I suppose another issue is on a similar vain and that is the UTS that happened on the 26th of March. So the right result has to my mind come through but a year later and that sort of adds quite a level of doubt in the consumers mind. So probably a clearer definition on what a UTS or scenarios that could be considered a UTS might just help allay the market fears. (Other)

Another concern was the need to address how prudential security was managed.

The biggest one is the clearing and settlement, the prudential calculation. [Does that only really affect smaller companies?] *It affects all of them in different ways so yes. The biggest risk for this business is just massive prudentials required by the clearing manager. It is not the ability to pay our bills or our electricity purchases.* (Gentailer)

There was also seen to be a need for greater market disclosure information.

4.7.2 The electricity industry

Transmission

Transmission, which was identified as an issue for the market, was also a key concern for the industry as a whole. Although it was acknowledged that Transpower's investment decisions would start to address the problems and the need to remove constraints from the grid in order to support the market was still mentioned by several respondents.

> *The biggest issue that has held the industry back over the last decade has been the run-down of the transmission system. Now that is being remedied by Transpower, but if you have a constrained grid it is very difficult to sustain a competitive market and you get the regionalisation which we've seen amongst the major players.* (Other)

> *I would say transmission is the biggest factor at the moment. Just transmission constraints.* (Purchaser)

> *I think from a grid upgrade point of view Transpower are having to become more efficient so therefore they have to invest.* (Purchaser)

> [What about the electricity industry in general?] *The grid itself we have had some rather bad experiences lately with reliability. We have had some evidence that there is not as much accountability that we feel is necessary on the grid owner. And any contract we might have via our line company with the grid owner are pretty one-sided and take it or leave it.* [So you don't get compensation if it goes down or anything like that?] *You don't get compensation, they seem to escape – like, for example, the line company we have virtually completed a change to our transmission and distribution contact with a certain company up in Auckland and basically here is the contract take it or leave it. We have a couple of changes but they are only token changes. Basically there is nowhere else to go.* (Purchaser)

> [The grid?] *The question I would have is not about what they are doing in the next three or four years it is what they will do in the four to ten years after that.* [So you know the projects they are up to four years out?] *Yes.* [Do you know what they have got planned four to ten years out?] *No. There is little detail, lots of options so what I am talking to there is how do we align them in best interest so I am thinking about four major projects under way at the moment and then there are about three or four significant projects sitting in behind those.* (Gentailer)

In the same vein, there were calls for more certainty to be provided on transmission pricing.

> *There are some issues around financial transmission rights and that needs to have more certainty around those ... the other big uncertainty is transmission pricing methodology which needs to be finally out to bed and left alone.* (Other)

> *Transmission pricing is probably one thing ... as our generation grows we are more and more exposed to the transmission pricing ... as long as we all know what the rules are and the rules don't change on you every now and then that is more important than what the rules are almost. Because as long as you know the rules you can plan.* (Gentailer)

> *There is an intriguing question around whether renewables are being enabled by some of our transmission pricing arrangements but it is a very difficult question to answer in the current environment.* (Gentailer)

Thermal capacity

The mixed signals given to generation about the need for more renewable energy while at the same time maintaining sufficient thermal capacity to provide security and reliability was another major issue for the industry to address.

> *It is essentially the capacity payments or the standby payments for thermal capacity …* [So basically the issue is need for economic rent return for thermal?] *For firm capacity basically. It is our stance, having that firm capacity really helps enable wind, a high renewable percentage is contingent on having firm back up.* (Gentailer)

> *I think as we go towards more and more renewable the support of that renewable might be something that the industry needs to be very mindful of … we can't turn our factories off if the wind doesn't blow.* (Purchaser)

> [The electricity industry in general?] *A lot of change in the underlying infrastructure. So transmission build, market development we sometimes have conflicting policy objectives. So it is what a philosopher would call interesting times.* [Anything that can be done to address or is it being looked at?] *I think most of the issues are known and being managed to a greater or lesser degree of effectiveness. I do think there are some market evolutions in terms of different products in the system as they come up and will need to be given attention to but it is still relatively early days. Things like intermittency type markets so as wind generation increases and the uncertainty in the system increases a form of market arrangement to allow that risk to be managed.* (Gentailer)

This raised questions about future investment in thermal capacity unless prices rose.

> *For me the disconnect between security and reliability alongside that renewable and low emissions market coupled with increased focus from regulators and politicians on the price of electricity to the consumer. You don't get it like that. If you want renewables you need to pay for reliability and security and that has to go to consumers.* [So what will happen, the pressure is to keep prices low?] *The pressure is to keep prices low and to have renewables and to have reliability and security.* [So what is going to happen?] *Doesn't work, no one is going to invest.* [So that security and reliability downstream?] *It has to go to price.* [So prices are just going to go up?] *Have to.* (Gentailer)

One respondent voiced the need to have other than pure free market mechanisms available to ensure security of supply.

> *I just think the market itself, the dysfunctional electricity market. Because it doesn't behave correctly to the economic model on the same basis as why we accept to have an electricity market and the promise of lower prices or more competition would effectively police and ensure the most efficient prices … for a market to be two-thirds of the time inefficient and then for no one being prepared to accept that or deal with it seems quite extraordinary.* (Purchaser)

> *I think searching for a different solution other than pure free market for obtaining security of supply.* (Gentailer)

In that context, one respondent said the industry needed to do a lot more about taking consumers along with them so they understood the future price path for electricity.

I think we need to take the customer further with us on some of these things and it is very hard to take them with us, but ultimately they are the ones paying all the costs. I think there is a degree of scepticism around the industry and I think we can do more to show there is a large amount of supervision, that people are looking after their interests and it is not just a financial merry-go-round … because prices are only going to go in one direction. (Other)

Greater regulatory certainty

The theme of greater certainty also emerged as a wider issue for the industry.

The single biggest issue is going to be over regulation, too many fingers in the pie, too many changes going on rather than just letting industry participants and competitors get on and compete. (Gentailer)

There still seems to be quite a bit of fiddling with the market to try and improve it like the swapping of Tekapo and that type of stuff. And to my mind that has actually increased pricing. Initially it seems to have had the opposite effect. And it seems odd that forecasting pricing for the South Island is higher than the North Island now. For 10 to 15 years it was all thought to be the other way around. So the industry set up is for the long term. We have got it now and unless they are going to dismantle it and completely change it give it a chance to settle down and that might be 10 years. (Other)

This included greater certainty about the Resource Management Act processes.

Probably still RMA costs of finding out whether you can build generation … The easier it is to have generation around the place and just flows through all the way into reasonable pricing and customers having assurance that the market will perform. (Other)

Price

One purchaser echoed concerns about electricity prices that had been raised by others with respect to the hedge market.

For industrials in New Zealand it is price. Industrials are caught in a perfect storm - rising input costs, that is, energy coupled with depressed commodity prices internationally and a hugely over-valued dollar. (Purchaser)

5. Appendix 1: Quantitative survey

This survey is divided into 5 sections:

- Section A is for all respondents to answer
- Section B is for both purchasers and sellers of electricity contracts (hedges)
- Section C is for sellers of electricity contracts
- Section D is for purchasers of electricity contracts
- Section E is for all respondents to answer

Notes:

- If respondents both purchase and sell electricity contracts they should complete all sections.
- Agents who act on behalf of purchasers should complete sections A and E.
- The sale and purchase of electricity hedges refers to the sale and purchase of contracts for New Zealand electricity only.

Section A - All respondents

■ Demographics

1a Please select the section of the market you work in [Tick all relevant boxes].

- ☐ Purchaser of electricity contracts (hedges)
- ☐ Seller of electricity contracts (hedges)
- ☐ Seller and purchaser of electricity contracts (hedges)
- ☐ Agent for purchaser of electricity contracts (hedges)
- ☐ None of the above
- ☐ Other (please specify) ____

1b What is your type of business in relation to electricity? [Tick all relevant boxes].

- ☐ Consumer
- ☐ Generator
- ☐ Retailer
- ☐ Distributor
- ☐ Hedge market agent
- ☐ Other (please specify) ____

1c What is the ownership structure of your business? [Tick one box only].

- ☐ Publicly listed or private company
- ☐ State owned enterprise
- ☐ Trust
- ☐ Other

2 Your electricity consumption/retail business and/or generation could be predominantly described as: [Tick all relevant boxes].

Location	Consumption/ Sales	Generation
Upper North Island (Taupo North)		
Lower North Island (Turangi South, including Taranaki and Hawkes Bay)		
Upper South Island (Christchurch North, including the West Coast)		
Lower South Island (Ashburton South)		
New Zealand wide		
Distribution		
Unsure/ Don't know		
Not applicable		

Market perception

3a Many organisations enter into electricity hedge contracts (typically either contracts for differences or fixed-price variable-volume contracts and more recently Australian Securities Exchange (ASX) electricity derivatives) in order to manage exposure to electricity spot prices. Do you believe a competitive electricity contracts market (hedge market) currently exists in New Zealand?

- [ ] Yes
- [ ] No
- [ ] Unsure/ Don't know

3b Do you believe the competitiveness of the electricity contracts market (hedge market) has improved over the past 12 months? [Tick one box only].

- [ ] Yes, the competitiveness has improved
- [ ] The competitiveness is about the same as 12 months ago
- [ ] No, the competitiveness has gotten worse
- [ ] Unsure/ Don't know

4a If you answered yes to 3b, do you believe the availability of ASX electricity derivatives has been a significant contributor to this improvement?

5a Please tick the box that best reflects your current estimation of the energy component of electricity contract prices for the next 3 years (for year ending 31 March, base load with no force majeure (FM) at the Haywards node[4]) given current market conditions.

	1 April 12 - 31 March 13	1 April 13 - 31 March 14	1 April 14 - 31 March 15
$110 - $120 / MWh			
$100 - $110 / MWh			
$90 - $100 /MWh			
$80 - $90 /MWh			
$70 - $80 /MWh			
$60 - $70 /MWh			
$50 - $60 /MWh			
< $50 /MWh			
Unsure/ Don't know			

5b What processes do you use for negotiating electricity contracts? [Tick all relevant boxes].

☐ Tenders
☐ Respond to tenders
☐ Renew contracts with existing counterparties
☐ Contract potential counterparties directly
☐ Directly traded ASX electricity derivatives
☐ Broker traded ASX electricity derivatives
☐ Other (please specify)
____
☐ Unsure/ Don't know

5c Do you feel confident that the processes for establishing bilateral electricity contract prices are competitive?

☐ Yes
☐ No
☐ Unsure/ Don't know

5d Do you feel confident that the process for establishing ASX electricity derivative prices are competitive?

☐ Yes
☐ No
☐ Unsure/ Don't know

[4] The Haywards node is the major wholesale reference node located in Wellington.

5e Which ONE of the following best describes your position on trading ASX derivatives?

☐ already trading and will continue to do so
☐ considering or about to trade ASX electricity derivatives
☐ No intention of trading ASX electricity derivatives
☐ Already trading, but intend to cease trading
☐ Unsure/ Don't know

Market information

6a Please rate each of the methods listed below in terms of their usefulness in forecasting electricity prices.

	Very useful	Fairly useful	Not that useful	Not useful at all	Not applicable
a. Independent forecasts					
b. Bilaterally traded electricity contract offers/ indications					
c. ASX electricity derivative forward price curve					
d. Market commentary forums					
e. Market forums					
f. Internal modelling					

6b Would you say there is sufficient information available to develop a reasonable view of market price for electricity contracts?

☐ Yes
☐ No
☐ Unsure/ Don't know

7 What additional information do you believe would assist you in making electricity risk management decisions?

____
____
____

Section B - Purchasers and Sellers of Electricity Hedges

■ Risk management infrastructure

8a In what part of your organisation is the primary operational responsibility for electricity price risk management. [Tick one box only].

- ☐ Specialist energy manager function
- ☐ Risk/ portfolio manager function
- ☐ Finance/ Treasury function
- ☐ Operational line manager function
- ☐ Procurement manager function
- ☐ Other (please specify)
  ____
- ☐ Unsure/ Don't know

8b Do you use other parties as agents for either your spot or hedge energy trading?

- ☐ Yes
- ☐ No
- ☐ Unsure/ Don't know

8c If **YES** above, is the party a generator/ retailer or an independent party?

- ☐ Generator/ Retailer
- ☐ Independent party - specialised
- ☐ Independent party - bank etc
- ☐ Unsure/ Don't know

9a Do you have a risk management policy that guides your electricity price risk management?

- ☐ Yes
- ☐ No
- ☐ Unsure/ Don't know

9b Approximately, how much of your electricity do you purchase on the New Zealand spot market

- ☐ No spot purchases
- ☐ <25%
- ☐ 26-50%
- ☐ 51-75%
- ☐ >75%

9c Do you consider you have sufficient knowledge of the market and its issues, and sufficient skills available to your organisation, to make effective electricity risk management decisions?

- [ ] Yes
- [ ] No
- [ ] Unsure/ Don't know

Contract position/ Strategy

10 Please describe your current contract position for each of the next 3 years (for future years based on your most up-to-date forecasts of expected load and generation).[5] (All values in GWh/annum). [Please write 'na' if not applicable to your organisation].

	Apr 12 - Mar 13	**Apr 13 - Mar 14**	**Apr 14 - Mar 15**
What percentage of your annual consumption do you hedge? (if you are a retailer, include retail load)?			
What percentage of your annual generation do you hedge?			

11a How far ahead is your usual planning window for assessing your contract position?

- [ ] Less than 6 months
- [ ] Between 6 months to 1 year
- [ ] Greater than 1 year to 2 years
- [ ] Greater than 2 years to 3 years
- [ ] Greater than 3 years to 5 years
- [ ] Greater than 5 years to 10 years
- [ ] Greater than 10 years
- [ ] Unsure/ Don't know

11b How far in advance of contract expiry do you normally seek to contract (or re-contract)? [Tick one box only].

- [ ] More than 1 year in advance of existing maturity date
- [ ] More than 6 months in advance of existing maturity date
- [ ] More than 3 months in advance of exiting maturity date
- [ ] More than 1 month in advance of existing maturity date
- [ ] Within 1 month in advance of existing maturity date
- [ ] Upon maturity of existing hedge contract
- [ ] Unsure/ Don't know

[5] Note that all information provide in this survey will remain confidential in un-aggregated form.

11c For what duration do you normally seek to contract? [Tick one box only].

- [ ] Less than 6 months
- [ ] Between 6 months to 1 year
- [ ] Greater than 1 year to 2 years
- [ ] Greater than 2 years to 3 years
- [ ] Greater than 3 years to 5 years
- [ ] Greater than 5 years to 10 years
- [ ] Greater than 10 years
- [ ] Unsure/ Don't know

11d The maturity of your electricity contracts could be best described as: [Tick one box only].

- [ ] Fall due at the same time
- [ ] Staggered maturities
- [ ] Unsure/ Don't know

Section C - Sellers of Electricity Hedges

Relevant questions relate to the sale of hedges (floating price payer) only

Market experience

12 What types of electricity hedges do you sell? [Tick all relevant boxes].

- ☐ Contracts for differences (hedge contracts)
- ☐ Fixed price variable volume (i.e. single price tariff)
- ☐ Spot based contracts
- ☐ Volume based time-of-use
- ☐ Options (e.g. caps, collars, swaptions)
- ☐ ASX electricity derivative products
- ☐ Other (please specify) ____

If you only ticked the ASX electricity derivative products box, please continue to Section D if you purchase electricity hedges or Section E if you do not.

Offering of bilateral trading

13 On a 0-10 scale, where 0 means not important at all and 10 means very important, please rate the importance of each of the following elements relating to electricity hedges to be sold:

Contract element	Rating (0-10)
(a) Price	
(b) Term	
(c) Profile	
(d) Location	
(e) Force majeure/ Suspension clauses[6]	
(f) Credit arrangements	
(g) Relationship with counterparty	
(h) Other service provided by counterparty	

14 In the last 6 months how many times:

	Please specify number of times
(a) Were you asked to provide an offer to a purchaser?	
(b) Did you make an offer to a hedge purchaser in response to a request?	
(c) Were the offers accepted by the purchasers?	

[6] Force majeure clauses are “Acts of God”, whereas suspension clauses are those which enable the seller of the hedge to suspend the hedge if certain pre-defined events occur.

15a How long do you typically take to provide offers once requested? [Tick one box only].

- [ ] More than 14 days
- [ ] 8 - 14 days
- [ ] 2 - 7 days
- [ ] Less than 2 days
- [ ] Unsure/ Don’t know

15b How long does it typically take for parties to respond to an offer you have made? [Tick one box only].

- [ ] Over 1 month
- [ ] 15 days - 1 month
- [ ] 7 - 14 days
- [ ] Less than 7 days
- [ ] Unsure/ Don’t know

16a What proportion of your electricity hedge contracts contain Force Majeure (genuine Acts of God only, not including suspension clauses)? (in % of GWh) [Tick one box only].

- [ ] >90%
- [ ] 75%-89.9%
- [ ] 50%-74.9%
- [ ] 25%-49.9%
- [ ] 10%-24.9%
- [ ] <10%
- [ ] Unsure/ Don’t know

16b What proportion of your electricity hedges contracts contain suspension clauses? (in % of GWh) [Tick one box only].

- [ ] >90%
- [ ] 75%-89.9%
- [ ] 50%-74.9%
- [ ] 25%-49.9%
- [ ] 10%-24.9%
- [ ] <10%
- [ ] Unsure/ Don’t know
- [ ] Over 1 month

17a Do you have a policy not to provide prices for hedges at some locations?

- [ ] Yes
- [ ] No
- [ ] Unsure/ Don’t know

17b Do you have a policy to only provide prices for hedges for certain durations (length of contract)?

- [ ] Yes
- [ ] No
- [ ] Unsure/ Don't know

17c Have you ever encountered problems, in the last three years, entering into a hedge contract because of concerns regarding credit arrangements?

- [ ] Yes
- [ ] No
- [ ] Unsure/ Don't know

18 Do you perceive locational price risk (basis risk) as a significant problem?

- [ ] Yes
- [ ] No
- [ ] Unsure/ Don't know

19 If **YES** above, how do you manage it? [Tick all relevant boxes].

- [ ] Only sell at nodes for which locational price risk is not an issue for you
- [ ] Price in a premium at nodes that you would rather not sell at
- [ ] Purchase cross-hedges from generators with generation at locations where locational price risk could be an issue
- [ ] Other (please specify) ____

UMR research

Section D - Purchasers of Electricity Hedges

Relevant questions relate to the sale of hedges (fixed price payer) only

■ Nature of consumption

20a Approximately what proportion of the input costs of your business/ organisation is the purchase of physical electricity (excluding interest, depreciation and tax)? [Tick one box only].

- ☐ More than 50% of input costs
- ☐ 25% - 50% of input costs
- ☐ 10% - 24.9% of input costs
- ☐ Less than 10% of input costs
- ☐ Unsure/ Don't know

20b Does your organisation: [Tick one box only].

- ☐ Purchase electricity on the spot market via the clearing manager
- ☐ Purchase electricity on the spot market via an agent
- ☐ Purchase electricity from a retailer
- ☐ Unsure/ Don't know
- ☐ Other (please specify)

  ____

■ Market experience

21a What types of electricity contracts do you purchase? [Tick all relevant boxes].

- ☐ Contracts for differences (hedge contracts)
- ☐ Fixed price variable volume (i.e. single price tariff)
- ☐ Spot price
- ☐ Volume based time-of-use
- ☐ Options (e.g. caps, collars, swaptions)
- ☐ ASX electricity derivative products
- ☐ Other (please specify)

  ____

If you only ticked the ASX electricity derivative products box, please continue to Section E.

Bilateral trading

22a On a scale of 0-10, where 0 means not important at all and 10 means very important, please rate the importance of each of the following elements relating to your decision when purchasing electricity hedges.

Contract element	Rating (0-10)
Price	
Term	
Profile	
Location	
Force majeure/ Suspension clauses[7]	
Credit arrangements	
Relationship with counterparty	
Other service provided by counterparty	

22b In the last 24 months how many times did you seek to purchase hedges?

____

23 For the **most recent** occasion you sought to purchase bilateral hedges:

		Example	Most recent occasion
a)	How many parties did you approach for an offer?	**4**	
b)	Of the parties approached, how many responded?	**2**	
c)	How many of the offers contained the same terms as the terms you requested?	**1**	
d)	What was the difference in price (i.e. highest priced offer less lowest priced offer in $.MWh)?	**$4.20**	
e)	How many of the offers included FM/ suspension clauses that were acceptable?	**14**	
f)	How many of the offers included other clauses that were acceptable?	**1**	
g)	How many offers had prices specified at GXPs (Grid Exit Points) that you had requested prices for?	**1**	
h)	Did you accept an offer?	**Yes**	

[7] Force majeure clauses are "Acts of God", whereas suspension clauses are those which enable the seller of the hedge to suspend the hedge if certain pre-defined events occur.

24a How long does it typically take hedge suppliers to respond to your request for contract prices? [Tick one box only].

- [ ] More than 14 days
- [ ] 8 - 14 days
- [ ] 2 - 7 days
- [ ] Less than 2 days
- [ ] Unsure/ Don't know

24b How long does it typically take you to respond to an offer once provided? [Tick one box only].

- [ ] Over 1 month
- [ ] 15 days - 1 month
- [ ] 7 - 14 days
- [ ] Less than 7 days
- [ ] Unsure/ Don't know

25a What proportion of your electricity hedges purchased contain FM and/or suspension clauses? (in % of GWh) [Tick one box only].

- [ ] > 90%
- [ ] 75% - 89.9%
- [ ] 50% - 74.9%
- [ ] 25% - 49.9%
- [ ] 10% - 24.9%
- [ ] < 10%
- [ ] Unsure/ Don't know

25b What proportion of your electricity hedges purchased contain FM and/or suspension clauses that you consider are unreasonable? (in % of GWh) [Tick one box only].

- [ ] > 90%
- [ ] 75% - 89.9%
- [ ] 50% - 74.9%
- [ ] 25% - 49.9%
- [ ] 10% - 24.9%
- [ ] < 10%
- [ ] Unsure/ Don't know

25c What types of FM/ suspension clauses do you consider to be unreasonable?

____
____

26 Under normal business operations, how much load could you easily cut for a short period when spot prices are high? (in MW)

27a Have you had difficulties getting prices for hedges at some locations?

- [ ] Yes
- [ ] No
- [ ] Unsure/ Don't know

27b Do you perceive locational price risk as a significant problem?

- [ ] Yes
- [ ] No
- [ ] Unsure/ Don't know

27c Have there been situations where a lack of offers has meant that you had to purchase hedges at locations other than your preferred locations?

- [ ] Yes
- [ ] No
- [ ] Unsure/ Don't know

27d In the past three years, have you had difficulties getting prices for hedges for the term (length of contract) you want?

- [ ] Yes
- [ ] No
- [ ] Unsure/ Don't know

28a Have you ever encountered problems entering into a hedge contract because the counterparty has been unhappy with your credit arrangements?

- [ ] Yes
- [ ] No
- [ ] Unsure/ Don't know

28b Have you ever been approached to enter into an arrangement regarding reducing load during a time of crisis?

- [ ] Yes
- [ ] No
- [ ] Unsure/ Don't know

29 During periods of high spot prices, your responses are to: [Tick all relevant boxes].

- ☐ Reduce consumption
- ☐ Maintain consumption
- ☐ Increase hedge cover
- ☐ Political response (lobby Government/ media)
- ☐ Other (please specify) ____
- ☐ Unsure/ Don't know

Hedge seller performance

30 In your personal experience please rate the following parties on their hedge seller performance. If you are one of the listed parties, please **DO NOT** rate yourself.

	Very good	**Good**	**Average**	**Poor**	**Very poor**	**No opinion**
Contact Energy/ Empower						
Genesis Energy/ Energy Online						
Mercury Energy/ Might River Power						
Meridian Energy						
Pioneer Generation						
Trust Power						
Todd Energy						
Tuaropaki Trust						
Other (please specify)						

Section E - All Respondents

Hedge market initiatives

31a Are you aware that the Authority and the industry has implemented and is considering further initiatives in order to improve the hedge market?

- [ ] Yes
- [ ] No
- [ ] Unsure/ Don't know

32a If **YES** above, which of the following initiatives are you aware of? [Tick all relevant boxes].

- [ ] Risk management website (www.electricitycontract.co.nz)
- [ ] Locational hedges - Financial Transmission Rights (FTRs)
- [ ] Scarcity pricing
- [ ] Customer compensation
- [ ] Dispatchable demand
- [ ] Wholesale market settlement and prudential security provisions
- [ ] Market making for ASX futures products
- [ ] Market making for ASX options products
- [ ] Introduction of exchange traded cap products
- [ ] Support for a standardised model master agreement
- [ ] Improved publication of outage and fuel data
- [ ] Promotion of training and advisors
- [ ] Regular survey of market participants
- [ ] Publication of education booklet
- [ ] Stress testing disclosure regime
- [ ] Unsure/ Don't know

32b Please rate the initiatives you are aware of in terms of how highly you think they will contribute to promoting hedge market liquidity.

	Very high	High	Average	Low	Very low	No opinion
Risk management website (www.electricitycontract.co.nz)						
Locational hedges - Financial Transmission Rights (FTRs)						
Market making for ASX futures products						
Market making for ASX options products						
Introduction of exchange traded cap products						
Support for a standardised model master agreement						
Improved publication of outage and fuel data						
Promotion of training and advisors						
Regular survey of market participants						
Publication of education booklet						
Stress testing disclosure regime						

33a Do you use the Electricity Hedge Contract (www.electricitycontract.co.nz) website?

33b How could the Electricity Hedge Contract website be improved?

33c Is the Electricity Hedge Contract website still required given the ASX electricity derivative forward price curve is now available?

Confidentiality

34a Do you consider the information that you have provided in this survey contains commercially prejudicial information?

- ☐ Yes
- ☐ No
- ☐ Unsure

34b Do you confirm that you have provided this information to UMR in confidence?

- ☐ Yes
- ☐ No
- ☐ Unsure

6. Appendix 2: Qualitative interview guide

HEDGE MARKET SURVEY DEPTH INTERVIEWS

1. [**Refer Q3A**]

   You say a competitive hedge market does not/does exist in New Zealand.

   [**If DOES NOT exist**], please explain the problems [probe further if answer is market power of generators or vertical integration are referred to - any examples? Is the limited size of the NZ market and hedges available an issue? If so, is this linked solely to generator power or vertical integration or are there other factors?] What specific evidence is there that there are problems? What are the solutions?

   [If DOES exist], what is the evidence that one does exist? What, if any, improvements, could be made do you think?

2. [Refer Q3B]

   What has contributed to the competitiveness of the hedge market improving/getting worse over the past 12 months?

3. [**Refer Q5C**]

   You say you are/are not confident that the process for establishing bilateral contract prices is competitive. What is your evidence for that and, if not confident, what could be done about it?

   You say you are/are not confident that the process for establishing ASX derivative prices is competitive. What is your evidence for that and, if not confident, what could be done about it?

4. [Refer Q5E]

   [**If you answered b) to 5E**], please describe any barriers or concerns you might have that are preventing you form trading ASX electricity derivatives?

   [If you answered c) to 5e] please describe the reasons why you have chosen not to trade ASX electricity derivatives?

   [**If you answered a) or b) to 5E**] how do you see the ASX electricity derivative trading fitting with your management of your trading portfolio? Could it be a possible replacement for all other forms of hedging you use?

5. [**Refer Q6A**]

   Are there any sources you find useful in forecasting electricity prices that we may have missed in question 6A?

6. [Refer Q7A]

   What sources of information on electricity price risk are you aware of? e.g. NZX, ASX Electricity Authority, Energy Link.

7. [Refer Q9A]

   If yes to 9A, how often is your risk management policy reviewed? When was the last time it was reviewed?

   Do you think it would be useful if training and or information were provided to assist companies in making risk management decisions? If yes, in what areas? Do you think the Authority could/should assist?

8. What is your attitude towards risk management? Are you particularly concerned?

9. Are you aware of any sources of risk management information? have you sought/obtained any risk management information?

10. Is there sufficient material available to you to manage your risk effectively / create a risk management policy?

11. [**Refer Q10 A-F**]

    In Question 12 when you were asked to fill out your actual percentage hedged for each of the next 3 years, were there any qualifications you felt like putting around your answers when you completed the survey? What were they? Do you have any special contracts that are activated under special circumstances e.g. a dry year which may not have been covered in your initial response?

12. [**Refer Q11 A-C**]

    Do you have a firm policy that you should hedge to a certain level each year? What is your policy with respect to hedging?

SELLERS ONLY

13. [**Refer Q17A**]

    [If YES to Q17A] In question 17A you say you have a policy not to provide hedges for some locations. What locations and why?

14. [**Refer Q17B**]

    [If YES to Q17B] In question 17B you say you have a policy only to provide hedges for certain durations. What durations and why?

15. [**Refer Q17C**]

    [If YES to Q17C] In question 17C you say you have encountered problems entering into a hedge because of credit arrangements. What were the problems?

PURCHASERS ONLY

16. [**Refer Q22A**]

[If OTHER SERVICES to Q22A] What other services provided by the counterparty were you referring to in question 22A which referred to rating the importance of factors you weigh up when purchasing hedges?

17. [**Insert after Q22A**]

Have your experiences from dry years affected your approach to risk management? [If yes] In what way has your approach to risk management been affected?

18. [**Refer Q23**]

Question 23 asked you to answer some questions about the most recent occasions you had sought hedge contracts in the last 24 months When was the last occasion? Do you keep records/ was it easy or hard to find this information? Did you find it easy or difficult getting the prices and terms you sought? Was there anything you wanted to add to your answers which perhaps didn't fit the questions that were asked?

19. [**Refer Q25C**]

In question 25C you identified some types of FM/suspension clauses that you felt were unreasonable. What were you reasons?

20. [**Refer Q26A**]

You say you could cut some load in periods of high spot prices under normal business operations. How long would you be prepared to cut load for? Is this something you are quite relaxed about doing or would you be doing it under duress? Is there a particular price point where it gets to painful to continue without shedding load? What is that price point? Is there anything more that could be done to assist demand side reduction?

21. [**Refer Q27C**]

[if YES to Q27C] You say you have had difficulty getting hedges at some locations. What locations?

21. [**Refer Q27**]

Have you asked for an offer and didn't get one? Or were only offered one?

22. [**Refer Q29A**]

In question 29A you ticked "other" means of responding to high spot prices. Can you tell me a bit about those responses?

23. ALL

24. Finally, if you had to identify the single biggest issue for you around the issue of electricity hedges what would it be? What about in relation to the electricity industry in general? [possibly prompt on lack of certainty and new generation? voltage fluctuations? Transmission issues]

25. [**Refer Q32 if aware of risk management website**]

Do you use the Electricity Hedge Contract (www.electricitycontract.co.nz) website?

How could the Electricity Hedge Contract website be improved?

26. **[Refer Q33C]** If yes, what additional information/service does it provide?

27. **[Refer Q32 if aware of location hedges - financial transmission rights]**

Do you plan on using FTR's?

Do you think FTRs will have the desired effect?

28. [Refer Q32 if aware of scarcity pricing regime]

Are you aware of the intended effects scarcity pricing will have on the wholesale market?
Do you anticipate scarcity pricing will affect your risk management strategy? if so how?

29. [Refer Q32 if aware of customer compensation scheme]

Are you subject to making payments under the customer compensation scheme?

Are you subject to receiving payments under the customer compensation scheme?

Do you anticipate the customer compensation scheme will affect your risk management strategy? if so how?

30. [Refer Q32 if aware of dispatchable demand]

Do you intend to use the Dispatchable Demand Scheme?

31. **[Refer Q32 if aware of the Authority's review of the wholesale market settlement and prudential security provisions**]

Do you think there is a better means of utilising hedge contracts as a form of prudential security? If yes, how?

31. [Refer Q32 if aware of stress test disclosure regime]

Are you subject to the stress testing regime?

Do you anticipate that stress testing will affect your risk management strategy? If so, how?