Summary Response to the Electricity Commission's Consultation Papers on:

Scarcity Pricing & Compulsory Contracting

Managing Locational Price Risk; and

Transmission Pricing Review; and

Response to questions on Scarcity Pricing & Compulsory Contracting

From

Contact Energy Limited

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Summary

Contact relies on efficient and competitive electricity and gas markets to attract and retain customers and earn acceptable returns for its owners, including 81,000 New Zealand investors. Contact supports initiatives that will enhance the efficiency and competitiveness of our key markets.

Contact believes that these initiatives to introduce scarcity pricing, locational hedging and improve hedge markets and transmission pricing if implemented well could increase investor confidence, enhance competition and improve security.

Contact therefore believes more work is needed on how these 3 key initiatives link before advancing to preferred options in either scarcity pricing, locational hedging or transmission pricing. The Electricity Commission (EC) should properly enumerate all its locational hedging options, as it did with its earlier simple LRA approach, before advancing work on a preferred option. There are alternatives that also need to be properly fleshed out. Addressing inter-island price separation caused by transmission constraints must also be a part of the package. This requires issues such as how the HVDC is funded and who receives the constraint rentals to be addressed.

The objective should be to improve security and provide greater opportunities for competition by devising an integrated package of initiatives so that the selected options complement each other. Contact believes that the scarcity pricing and hedge market development can proceed ahead of the more complex location and transmission pricing issues.

Scarcity Pricing

Contact strongly supports a focus on strengthening incentives to invest in generation and energy conservation by ensuring that prices reflect scarcity. The current reserve energy policy must be changed because it has distorted prices, and has reduced incentives to invest in plant or demand side management, that could improve security. This has affected all generation but undermined the economics of thermal generation in particular. If left unchanged this will bring forward the closure of existing hydro firming plant and reduce incentives to invest in hydro and wind backing

thermal mid merit and peaking plant. The existing reserve energy policy has also loaded extra costs on customers; indirectly through the taxpayer funding the capital cost of Whirinaki and directly through customers paying EC levies to fund the net costs of running Whirinaki.

Contact believes that there are changes that can be made today that will improve security and investment incentives as well as initiatives that will take longer to develop and integrate with locational hedging and transmission pricing options. Contact therefore recommends immediate action on the following scarcity pricing initiatives:

1. Change Whirinaki's offer strategy. When there is no shortage of hydro storage, i.e. hydro storage is above the 4 per cent hydro risk curve and Whirinaki is ordered to run on low load by the System Operator to provide extra security (constrained on), final prices should reflect this. Final prices in the periods in which Whirinaki operated should be based on the total cost of operating Whirinaki - including start up, fuel and other operating costs and a return on invested capital. The same approach should apply when any other generation is constrained on for example to support unpredictable fluctuations in wind generation.

2. Whirinaki's current offer strategy of running at the reserve energy trigger price (RETP), a proxy for the short run marginal cost, if the average of dispatch prices for the next 4 hours at Whirinaki's node exceeds the RETP should also be dropped. If Whirinaki is run outside of a hydro shortage situation its offer strategy should reflect its total costs – including start up, fuel and other operating costs and a return on invested capital.

3. When there is high demand and a shortage of supply causing the reserves market to be suspended, prices should reflect this scarcity rather than drop as currently occurs. This could also be addressed by reducing reserves in blocks as this will have a less distortionary effect on the market. .

4. The intermittent operation of Pole 1 of the HVDC link also has a strong effect on the market and is difficult to predict. Clearer rules and better signalling of how Pole 1 is going to be used would be beneficial.

Other scarcity pricing initiatives will of course take longer to select and implement. Contact believes that scarcity pricing will provide development and innovation in the provision of secure electricity. Contact believes that both Option A (applying value of lost load (VoLL) pricing during actual shortages only) and Option B (price floors for pre shortage as well as actual shortage situations) should be explored. The design of rules for price floors in Option B would need careful attention to avoid unintended consequences.

Contact believes there would be significant challenges in designing and implementing compulsory contracting in a hydro dominated market that is subject to many transmission constraints. It would also be very difficult to put sustained downward pressure on costs because of the one way incentives on the regulator to ensure security of supply. Costs to end consumers could be higher than in a scarcity pricing approach because the regulator in compulsory contracting markets is strongly incentivised to avoid any outages. This tends to push the total cost of energy above where a scarcity market would settle because the regulator is pressured to overvalue lost load.

Also capacity or availability contracting can have a domino effect in that it can displace other thermal generation that could have run. It is better to have the correct pricing in the market that would provide economic incentives for the generation to be available than to try to pick capacity "winners".

Enhanced Hedging

Implementing these scarcity pricing initiatives will increase the risk associated with peak periods and increases the importance of a robust market for hedging energy price and locational price risk. Contact is committed to encouraging further development of the hedge market - so that market participants are able to hedge the energy price risks that scarcity pricing will engender. Contact supports development of EnergyHedge to include cleared trading, one sided participants and new retail

oriented products. Contact believes that this can be effectively achieved by market participants without regulatory intervention.

An enhanced hedge market would also need to provide location hedge arrangements. This could be relatively easily achieved through extending the existing forward market to include additional nodes (Otahuhu and Benmore in the first instance). With these arrangements in place industrials and new entrant retailers would be able to access hedge product through a transparent and credit risk managed market.

Location Pricing and Financial Transmission Rights

Contact is concerned that these location hedge arrangements are complex, poorly understood and, if poorly designed, could increase market power concerns. This complexity would make these arrangements difficult to introduce and potentially costly. Moreover, with the development of improved location hedging through a more robust forward market the value of these arrangements is significantly reduced. Contact, therefore, considers that an appropriate cost – benefit analysis is required.

Contact finds the proposed solutions complex even for those that are actively involved in the market at a detailed level. Contact believes that the same level of material provided by Concept/M-co on the previous consultation should be provided for this consultation. Transpower has acted to help fill the gap in this area - and has raised some important questions about the EC's preferred hybrid model. Contact is not able to make an informed decision from the material that has been provided. While supporting action on this issue, Contact believes that it is premature to suggest a preferred locational price risk option at this point.

In its September 2008 submission Contact proposed the use of the simplified LRA methodology, rather than using a more complex SPD derived participation factor methodology which the EC is supporting in the current consultation. To be effective, participants need to understand the benefits of a mechanism to manage locational price risk so that decisions can be made in real time with confidence. For this reason, Contact believes that the simple LRA option should be enumerated along with other options as part of the next step. More time and effort needs to go into

communicating, by providing simplified examples, and discussing the pros and cons of the different options.

As the EC stated at its Market Development Programme workshop these consultations are interdependent. It is therefore important that the different options are presented in a way that shows this interdependency so that the costs and benefits can be assessed.

Contact recommends:

1. EC or its replacement to provide another round of consultation with more numerical analysis of all options. This needs to clearly address the links to the other key consultations - scarcity pricing and the TPM). They are interrelated and options need to be evaluated together.

2. Include as one of the options the simple LRA approach as well as a zonal approach with tradable links between zones. While the current HVDC TPM is in place it is important to ring fence HVDC rentals so that they continue to be treated like a connection asset ,so the benefit of the HVDC rentals goes to those participants who pay for the asset until the completion of the transmission pricing review.

3. The industry progresses the EnergyHedge proposal of increasing the nodes at which hedges are traded as this will complement a mechanism to address locational price risk.

Improved Transmission Pricing

Contact supports a thorough review of the TPM and would support any changes that result in a material improvement in the overall efficiency of transmission pricing arrangements in the NZ electricity market. These should encourage efficient transmission and generation investment. Contact would be concerned if any change put at risk the current grid upgrade programme.

Location signals are provided at present through (i) nodal pricing, (ii) the HVDC charge to South Island generators, (iii) the definition of "deep" connection assets, and

(iv) investments approved by the Grid Investment Test. Any change to the Transmission Pricing Methodology would need to provide a better outcome than this combination of measures. Any proposed change, therefore, needs to be supported by an analysis that demonstrates that it will result in an overall lower cost of supply to end use customers.

A locational price signal would only be effective (and fair to existing sunk investments) if participants were able to practically respond to it. Choice of location may be possible for certain new generation developments (if the signal is strong enough and is sustained) but a location based signal is unlikely to be a major component driving the location of investments by demand-side participants (regardless of the strength of the signal). Contact believes that demand side pricing signals are best left to more operational signals such as coincident peak and seasonal signals which encourage better use of assets by lowering demand peaks (and improving load factors).

Changing price signalling to generation or major load may result in major reallocations of sunk transmission costs between participants. This in itself may increase the risk premium associated with investment and so caution should be taken before making any substantive change.

Contact recommends:

1. No fundamental change to the definition of existing local Connection assets (substations) but Contact believes a more "shallow" definition of load spurs would provide greater price stability over the longer term, reduce the potential for higher overall costs to consumers.

2. No fundamental change to the definition and allocation of Interconnection assets as these costs are more efficiently and practically recovered from load on a postage stamp basis.

    - An allocation of interconnection costs to generators may improve the long run efficiency of the NZ electricity system but it should not disrupt the maximum usage of sunk assets, be clearly signalled before

implementation and be implemented under the clear understanding that locationally enhanced energy generation costs will flow through to consumers as is normal in any market.

- Maintaining a postage stamp interconnection charge on load – as the most practical and efficient way of recovering interconnection charges. A tilted charge to load would be unlikely to achieve any major change in behaviour and could cause price shocks to many New Zealanders.

3. Further consideration of the mechanisms for the allocation of the HVDC charge by treating HVDC assets as interconnection and recovering equivalent HVDC revenue from all generators. Replacing the charge with either:

   - A more sophisticated broader locational price signal (tilt) to generators (increasing south from OTA) that is adjusted periodically based on power-flow characteristics.

   - Or a capacity based market that balances transfer between the North and South Islands.

These options need to be coordinated with the approach taken to managing North Island and South Island locational price risk.

Submission on Scarcity Pricing & Compulsory Contracting

Question Number	Question	Response	General comments in support of response
1	What concerns do you have with regard to security of supply under existing arrangements?	Yes. See our general comments.	The issues that the EC believes are exacerbating energy adequacy and capacity adequacy are key problems that need to be addressed. Contact is concerned that current operation of the market is leading to an inappropriate suppression of energy prices in periods when capacity is in short supply. This price suppression dampens the incentive for thermal operators to commit units, which risks creating additional periods when capacity is in short supply. In turn this risks more intervention. Contact is concerned that these problems will become severe before the current scarcity pricing proposals can be implemented. These issues arise at a time when the cost of maintaining CCGT capacity has increased sharply due to rising gas and maintenance costs. Moreover, the development of the Ahuroa gas storage project is increasingly reducing the need to operate plant to meet contractual minimums. Finally, the capacity limitations of the Northern Pipeline create a risk to the operation of Otahuhu over next winter. Contact strongly supports a focus on strengthening incentives to invest in generation and energy conservation by ensuring that prices reflect scarcity. The current reserve energy policy must be changed because it has distorted prices, and has reduced incentives to invest in plant or demand side management, that could improve security. This has affected all generation but undermined the economics of thermal generation in particular. If left unchanged this will bring forward the closure of existing hydro firming plant and reduce incentives to invest in hydro and wind backing thermal mid merit and peaking plant. The existing reserve energy policy has also loaded extra costs on customers; indirectly through the taxpayer funding the capital cost of Whirinaki and directly through customers paying EC levies to fund the net costs of running Whirinaki. Contact believes that there are changes that can be made today that will improve security and investment incentives as well as initiatives that will take longer to develop and integrate with locational hedging and transmission pricing options. Contact therefore recommends immediate action on the following scarcity pricing initiatives:

			1. Change Whirinaki's offer strategy. When there is no shortage of hydro storage, i.e. hydro storage is above the 4 per cent hydro risk curve and Whirinaki is ordered to run on low load by the System Operator to provide extra security (constrained on), final prices should reflect this. Final prices in the periods in which Whirinaki operated should be based on the total cost of operating Whirinaki - including start up, fuel and other operating costs and a return on invested capital. The same approach should apply when any other generation is constrained on for example to support unpredictable fluctuations in wind generation. 2. Whirinaki's current offer strategy of running at the reserve energy trigger price (RETP), a proxy for the short run marginal cost, if the average of dispatch prices for the next 4 hours at Whirinaki's node exceeds the RETP should also be dropped. If Whirinaki is run outside of a hydro shortage situation its offer strategy should reflect its total costs – including start up, fuel and other operating costs and a return on invested capital. 3. When there is high demand and a shortage of supply causing the reserves market to be suspended, prices should reflect this scarcity rather than drop as currently occurs. This could also be addressed by reducing reserves in blocks as this will have a less distortionary effect on the market. . 4. The intermittent operation of Pole 1 of the HVDC link also has a strong effect on the market and is difficult to predict. Clearer rules and better signalling of how Pole 1 is going to be used would be beneficial.. Contact does not support "warming contracts" as Contact believes that the cost offered to thermal units is likely to be significant. Moreover, it would be necessary to contract with all units on the system, which risks creating a de-facto capacity purchase mechanism.
2	What, if any, other underlying issues lead to the potential for cost shifting among market participants?	See general comments in support of answer to question 1	
3	What is your assessment of pros and cons of scarcity pricing approaches versus compulsory contracting?	Contact supports scarcity pricing and opposes compulsory contracting.	Contact believes there would be significant challenges in designing and implementing compulsory contracting in a hydro dominated market that is subject to many transmission constraints. It would also be very difficult to put sustained downward pressure on costs because of the one way incentives on the regulator to ensure security of supply. This tends to push the total cost of energy above where a scarcity market would settle because the regulator is pressured to overvalue lost load. The consultation paper argues that scarcity pricing may result in greater wholesale price risk

			which may increase barriers for new entrant retailers and for non-portfolio generators. We note that while this may be so, scarcity pricing should also encourage growth in the hedge market which could mitigate this effect. Contact believes that scarcity pricing will provide more room for the development and innovation in the provision of secure electricity. Compulsory contracting is likely to be more inflexible as it will be based on the workings of a complex set of rules with some resetting of the regime as new ideas and practices are introduced. This is likely to involve some increase in time and costs. While the consultation paper argues at various points, including in Figure 4, that there is potential for scarcity pricing to cause increased exercise of market power in the spot market and potentially some accompanying increase in price volatility, the greater impetus for the development of a greater demand side response should help to mitigate this effect in comparison to the compulsory contracting option. In the compulsory contacting option market power could be exercised through the compulsory contracting rules. There is often an asymmetry of information between market participants and the regulator. The view that the regulator can effectively mitigate market power assumes that the regulator can set the compulsory contracting rules in such a way that market power is effectively addressed. But the regulator is incentivised to protect security of supply and strongly incentivised to avoid outages. The incentives on the regulator to err towards more security at higher cost and away from the risk of outages could materially increase overall costs over time compared to a scarcity pricing approach. This risk would be heightened compared to other markets due to the risk and volatility inherent in a hydro dominated and transmission constrained market such as New Zealand. Contact therefore disagrees that scope for market power increases in the scarcity pricing approaches compared to a compulsory contracting regime.
4	What other options should be considered to improve security performance?	Contact believes that action is required now to address detrimental effects the current reserve energy policy. See general comments in support of question 1 and question 4.	See response to question 1. Contact believes that Whirinaki's operating instructions should be changed to reflect scarcity pricing as soon as possible. This will also help to address the incentive problems that occur when the reserves market is suspended. Some solutions are needed quickly to deal with the distortions to price signalling occurring in the market now when it is facing capacity adequacy challenges. Other initiatives will need to be on a slower timetable to allow participants time to adjust contracts etc. The consultation document argues at paragraph 5.1.8 that: *As regards the scarcity pricing/compensation approach, the key issue is the trade-off between the security benefits versus its potential impact on the exercise of market power/undue price volatility*.

			Contact does not agree that this is a key trade off between the scarcity pricing and compulsory contracting approaches. Contact believes that there is a high likelihood of increased costs and administration and reduction in innovation and demand side opportunities under compulsory contracting compared to a scarcity approach.
5	What approach to scarcity pricing should be preferred?	Contact believes that both options A and B should be explored.	Contact agrees that scarcity pricing would strengthen incentives on generator/retailers to ensure that they effectively hedge their retail demand as well as improve incentives for peaking investment and demand side response during conservation campaigns or forced outages. The certainty that this will provide to demand side response is particularly important. These participants will now be able to offer savings or alternative smaller scale generation into the market during a conservation campaign and be sure that they will be suitably rewarded. Currently a savings campaign can cause the prices to fall, thereby negating the efforts of demand side participants to offer their resources to the market. The net effect of these improved incentives will be to make the system more secure and resilient in dry periods. Contact believes that both options A and B should be explored. The design of rules for price floors in Option B would need careful attention to avoid unintended consequences. Key questions to be considered are the periods over which the price floors would apply, for example; • Would they apply during off peak periods where supply may significantly exceed demand? • Does the floor apply to reserve as well? • What happens with a transmission constraint - do the upstream and downstream prices both need to be at or above the floor? • What if upstream there is an abundance of water and downstream there is a shortage of water? • Is the floor inside the Scheduling Pricing and Dispatch (SPD) model? These and other questions need to be carefully considered. Difficulties of designing a workable and non distortionary B could make A more practical.
6	Do you agree with the	Contact supports	Contact believes that compulsory contracting should not be pursued due to the risk that it

	outlined approach whereby the Commission will progress with a detailed proposal for a scarcity pricing regime and for a default buy-back arrangement? If not, what would be the best approach for moving forward?	progressing to detailed design of the scarcity pricing approach and the default buy-back subject to the conditions laid out in our general comments to this question.	will stifle innovation and increase overall costs to consumers. Both option A and B need to be investigated to see which scarcity pricing approach should prevail Contact also supports further investigation of the recommendation to require retailers to make payments to consumers in the event of public conservation campaigns or enforced power cuts. This measure appears logical as scarcity pricing in an energy only market means that customers are paying for all available capacity. Accordingly an argument may be made that customers should be compensated if they are required to save. However, this is only reasonable if the market permits retailers to charge customers for the full costs of capacity the remainder of the time – if generators are rewarded for investing in capacity then customers should be entitled to be protected from interruptions. However if the market does not allow full recovery then customers are not paying for the full cost of security of supply and therefore should not be compensated. Contact notes that while the HVDC link and the lower North Island AC grid into Wellington remains a transmission bottleneck in high south transfer, the tangible risk of hydrology sequences causing South Island shortages remains. In this context it is not appropriate to impose a compensation obligation on generator/retailers for a security issue caused by withdrawal of, or underinvestment in, transmission capacity. Once Pole 3 is commissioned and lower North Island constraints solved, this problem should be alleviated. Any compensation should take account of such externalities. Contact believes that some standardised savings benchmarks should be developed for customers using standard meters to ensure that aggregate savings are being achieved before any compensation is paid. Contact notes that the roll out of smart metering should allow much more individualised and accurate responses by retailers to customer savings during conservation campaigns. Contact also believes that it is important to ensure that any compensation measures preserve flexibility for retailers to use smart meters to innovate with specific price plans covering periods of energy shortage rather than imposing flat rate across standard metering and smart metered customers. Contact notes that the finding portrayed in Figure 2, Page 18 of the Scarcity Pricing and Compulsory Contracting consultation paper that scarcity pricing and default buy back are required and drive a zero saving to a hedged and 20% unhedged retailer is very sensitive to the hedging and pricing assumptions. A result that is not neutral only requires a small change in these preset assumptions.