MERIDIAN ENERGY LIMITED

Submissions on the Electricity Authority's Consultation Paper on Scarcity Pricing Proposed Design (28 March 2011)

29 April 2011

A. INTRODUCTION

1. The Authority is requesting feedback on the issues and proposals discussed in its Consultation Paper on the design of scarcity pricing arrangements, which is a specific matter to be covered by the Code by 1 November 2011 under section 42(2) of the Electricity Industry Act 2010 ("**EIA**").

2. The scarcity pricing proposal is designed to address situations where price may be suppressed during a genuine shortage of capacity or energy due to the various mechanisms used to manage such emergencies.

3. Meridian's key points in response to the Authority's Consultation Paper are that:

   (a) Meridian agrees that there is a problem, although it is very difficult to assess and quantify its extent.

   (b) Market-generated price signals are important for resource allocation, build decisions and demand response. Furthermore, net generators will stand to make substantial revenues from the proposed price floors, which may create unintended behaviours which are hard to predict in advance. Accordingly, the Authority should only cautiously move away from allowing price to be discovered by the interaction of supply and demand.

   (c) As illustrated by the events of 26 March, prices at $500, $3,000 or $10,000 per MWh for days or weeks would have substantial effects on purchasers who are exposed to the spot market.[1] The risk of extended periods with prices at these levels could cause retailers to retrench and users to avoid contracts with spot exposure. In order to mitigate the risk of such unintended consequences, Meridian believes that it is essential that the following initiatives are implemented alongside scarcity pricing:

      (i) increased scrutiny of the process for calculating and changing hydro risk curves;

      (ii) increased real time information disclosure so that participants and users can act in response to high prices; and

      (iii) market monitoring and enforcement initiatives with clear rules as to what behaviour is permissible and what behaviour is not.

   (d) It is normal for market rules to evolve as new problems emerge. Particular care should be taken in relation to market interventions which will be difficult or impossible to reverse. As part of the purpose of scarcity pricing is to induce long term reliance by new investors in high price demand and supply options, it will be difficult to remove such rules even if they turn out to have undesirable

[1] Assuming monthly spot volumes of the order of 3000GWh spot settlements from month-long $500/MWh prices would be roughly $1.5bn; $9bn from $3,000/MWh prices; and $30bn from $10,000/MWh prices.

side effects. Accordingly, a cautious approach should be taken to implementing the scarcity pricing proposals. In Meridian's view cumulative price thresholds should be introduced at least for a transitional period. This will assist in mitigating price risks from, among other things, weak competition.

(e) It is essential that the Emergency Management Policy is updated to reflect decisions made following this consultation (and the subsequent Code revisions), and to reflect changes to the Code that have already occurred in relation to the Customer Compensation Scheme.

4. The following table summarises Meridian's position:

Situation	Proposed intervention	Meridian's response	Meridian's position if the intervention is implemented			
			$ value	**Geographic extent**	**Visibility**	**Transition**
Public conservation campaigns	**Disclosure of hedge position**	Supports, disclosure should be on a voluntary basis for both supply/demand side participants.	N/a	Nationwide	Disclosure should be on an aggregated basis and only historic data made publicly available.	Can be introduced without any transition.
	Penalties for "insufficient" hedges	Opposes - inappropriate for Authority to determine what level of hedging is "sufficient".	N/a	N/a	N/a	N/a
	$500/MWh price floor	Supports, must be tied to 10% Hydro Risk Curve.	$500/MWh is reasonable.	Island/NZ wide, triggered by 10% hydro risk curve	Authority to consider increased real time information disclosure to assist response for entities exposed to spot market.	Should consider developing stop loss mechanism (ie. cumulative price threshold).
Rolling outages if energy shortage	**$3,000/MWh price floor**	Supports, though suggests administrative price is more appropriate than a price floor or cap.	$3,000/MWh is reasonable.	Island/NZ wide, triggered by 50% Hydro Risk Curve	Authority to consider increased real time information disclosure to assist response for entities exposed to spot market.	Should consider developing stop-loss mechanism (i.e. cumulative price threshold).
Reduced IR cover	**Amendments to prevent artificially high prices**	Supports	N/a		N/a	Can be introduced without transition
Emergency load shedding if capacity shortage (grid emergency)	**$10,000/MWh price floor**	Supports	$10,000/MWh is reasonable,	Trigger should be based on extent of shortage (island/NZ wide) rather than where load shedding instructed.	Authority to consider increased real time information disclosure to assist response for entities exposed to spot market.	Should consider developing stop-loss mechanism (ie. cumulative price threshold).

6. Meridian would also like to emphasise the importance of distinguishing the design of scarcity pricing arrangements from the UTS issue which is also currently under consideration by the Authority. That is, scarcity pricing is a response to the risk of artificially low prices during supply emergencies. In contrast, the pricing on 26 March 2011 was not the result of any shortage of capacity or energy. Rather, a generator took advantage of transient market power due to a short term transmission outage and the extraordinary spot prices witnessed during that period did not serve any useful signalling function. It is important to bear these differences in mind as the reasons for and against price caps during a scarcity situation (when "high prices are good") may be quite different to price caps during a short term transmission maintenance outage.

7. Meridian's responses to the following specific questions asked in the Consultation Paper are set out in Section B of these submissions:

Specific Questions (Appendix A of Consultation Paper)	
1.	To what extent is price suppression an issue with the current pricing arrangements?
2.	To what extent do you agree that price suppression will adversely affect security of supply?
3.	What is your assessment of historic security of supply performance, and the likely future performance under current arrangements?
4.	What is your view of the proposed price floor to be applied for emergency load shedding?
5.	What is your view of the proposed treatment of load curtailment in AUFLS events?
6.	What is your view of the proposed approach to pricing during IR shortfalls?
7.	What is your view of the proposed price floor to be applied in rolling outage load shedding curtailment?
8.	What is your view of the proposed disclosure mechanism?
9.	What is your view of these possible financial mechanisms?
10.	What is your view of the comparative merits of disclosure versus a spot price floor to address concerns about over-reliance on public conservation campaigns? Is there merit in pursuing both mechanisms?
11.	What is your view of the proposed approach to imposing a minimum geographic threshold before any scarcity price floor is applied?
12.	What is your view on the preferred approach to transition arrangements?
13.	What is your view of the proposed review arrangements?
14.	What is your view of the proposed changes when assessed against the Electricity Authority's statutory objective?
15.	What, if any, other reasonably practicable options should be considered?
16.	What is your view of a capacity mechanism, when assessed against the Electricity Authority's statutory objective?
17.	What is your view of the costs and benefits of the proposed changes?
18.	What is your view of the likely impact on prices of the proposed scarcity pricing changes, both in the near term (static effects) and over time (when parties can adjust their plans and behaviour?)

Specific Questions (Appendix A of Consultation Paper)	
19.	What further pro-competitive initiatives should the Authority be considering at this time?
20.	Do you agree that the undesirable trading situation provisions could be invoked to address an exceptional event, and ensure that scarcity pricing is not applied in an inappropriate situation? If not, what changes should be considered in relation to the undesirable trading situation provisions?
21.	What is your view of price capping mechanisms, when assessed against the Electricity Authority's statutory objectives?

B. MERIDIAN'S RESPONSES TO SPECIFIC QUESTIONS

Questions 1, 2 and 3: What is the underlying problem?

8. Supply emergencies can take the form of an energy constraint or capacity constraint. Meridian understands the Authority's concern that:

   (a) the various mechanisms used to manage supply emergencies have a tendency to suppress spot prices;

   (b) this may lead to an inadequate provision of last resort generation and/or voluntary demand side response (both in an operational context and from a long-term investment perspective); and

   (c) this will lead to an over-reliance on forced load shedding and public conservation campaigns, both of which impose costs on consumers.

9. The Authority sets out four supply emergency situations in section 4.1 of the Consultation Paper:

   (a) emergency load shedding as result of capacity shortage (where there is insufficient generation to meet demand in the immediate period);

   (b) reduced IR cover (or capacity scarcity);

   (c) rolling outages as a result of energy/fuel shortage; and

   (d) public conservation campaigns during projected fuel scarcity (in particular, the issue of lobbying by net buyers in the spot market).

10. Meridian agrees that, in principle, public conservation campaigns and other measures to manage supply emergencies have meant that prices have tended to be lower than they would otherwise be and that this will have reduced incentives to provide last resort generation and/or voluntary demand side responses.

11. In terms of how important this dynamic is in practice, Meridian makes the following observations:

12. First, it is very difficult to quantify either the degree of price suppression that has occurred or the effect that this has had on incentives, particularly long term incentives which will have been driven by expected prices not actual prices.

13. Secondly, despite the run of poor hydrological events over the last decade,[2] the market structure has performed well in managing the system under times of fuel scarcity. In particular, there has been no forced load shedding.

14. Thirdly, as noted in the Consultation Paper (at paragraph 62), the changes introduced in the Code now address the concerns about price shortfall during IR shortfalls. Indeed, the remaining concern here is that prices may be *too high*, rather than too low.

15. Fourthly, although public conservation campaigns may have caused prices to be lower than they would otherwise have been, the recently introduced Customer Compensation Scheme has signalled to retailers that there will be direct costs associated with conservation campaigns. Accordingly, gentailers may now have an incentive to lobby *against* conservation campaigns even if they are net retailers. Although large industrial consumers that are exposed to the spot market may still have an incentive to lobby for a public conservation campaign, the pressure around the timing of when to initiate a conservation campaigns should be less of an issue than in the past.

16. Finally, scarcity pricing may have far ranging consequences. In particular:

    (a) there is likely to be an increase in risk for retailers that will be reflected in higher prices for consumers; and

    (b) as with any step change intervention, price floors triggered by particular events are likely to create incentives and behaviours which are hard to predict in advance (for example, net generators may now lobby for conservation campaigns etc so that they become the beneficiaries of price floors).

17. Accordingly, in Meridian's view:

    (a) a cautious approach should be taken to ensure that there is confidence in the proposed scarcity pricing arrangements and that the changes are, ultimately, durable.

    (b) mechanisms are required to allow for greater visibility and awareness of circumstances causing high prices in order to provide for greater certainty, which will be useful and important for long term investment signalling and hedging.[3]

    (c) market monitoring and enforcement initiatives with clear rules as to what behaviour is permissible and what is not should be developed. This will help to address periods of weak competition when, for example, transmission outages occur to facilitate maintenance or expansion of the transmission grid.

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[2] Since 2000 Meridian's hydro inflows have been between 5-10% below the long-run average. This includes several very low inflow periods, which have been especially pronounced over summer. In the 2007-08 summer and earlier winter period New Zealand received only 78% of expected inflows.

[3] For example, in relation to constrained on events, Meridian has suggested to the System Operator that information should be available that indicates:

- That discretion is being used to constrain on generation (information should be available widely);
- The amount of MW being constrained on;
- The start and end times for when discretion is to be used;
- The node/unit to which the discretion applies; and
- The reasons why discretion is being used.

Further, as much advanced warning as possible should be provided so participants can trade outside of the two hour window if there is no grid emergency. Following the event the relevant section of the SO's daily report including anticipated market impact should be provided to participants.

Questions 4, 5, 6, and 7: General comments on proposed arrangements

Introduction

18. The core elements of the scarcity pricing arrangements proposed under section 5 of the Consultation Paper are:

    (a) a price floor in relation to emergency load shedding, rolling outages and public conservation campaigns;

    (b) a modified process would apply to reduce the scope for suppression or unduly high prices in relation to IR shortfalls when the final pricing run is close to infeasibility;

    (c) mechanisms for transitioning to the new arrangements; and

    (d) an ability to review the key elements of the regime every three years.

Not a market-based solution

19. Meridian's preference is for market mechanisms rather than regulatory interventions. Philosophically, Meridian is concerned with the proposed introduction of a price floor when a public conservation campaign is initiated at the 10% hydro risk curve (HRC). This is a step away from allowing a market to set prices efficiently.

20. However, Meridian does see merit in setting a price floor as a disincentive for parties to call for a public conservation campaign before the 10% hydro risk curve is reached.

Hydro risk curves should be subject to greater scrutiny

21. The hydro risk curves were originally derived as a simple indicator of security. With market outcomes (public conservation campaigns, rolling outages and possible floor prices) being linked to the 10% and 50% HRC, in particular, it is vital that the industry has confidence that these curves reflect the capabilities of supply and demand. While many of these assumptions are transparent to all parties, there are at least two sets of assumptions that may have a material influence on the HRCs and deserve more attention given the direct link to outcomes for market participants:

    (a) strategic operation/availability of plant; and

    (b) the expected timing and level of voluntary price-based demand reductions.

22. It is important that the System Operator carefully consider and publish the assumptions used (as is done now), the basis for them, and the process intended to be used for updating them (routinely, and during an emergency situation).

Transition measures important to ensure credible and durable arrangements

23. Meridian agrees with the Authority's statement that there may be merit in providing for transition measures to moderate the initial impact, and for parties to gain experience with the arrangements, and make necessary changes to their plans. Appropriate transition measures will greatly increase the overall credibility and ultimately the durability of the scarcity pricing arrangements.

24. Meridian also considers that it would be appropriate for the EA to conduct further modelling (including game theoretic models) to assess how particular scenarios may develop.

Question 4: Price floor in capacity shortage (emergency load shedding)

25. The Consultation Paper proposes that where load shedding is required under the "grid emergency" provisions of the Code,[4] this will trigger a scarcity price floor ($10,000/MWh). This floor would apply in the region of the grid affected by the capacity shortage, but would only be invoked if a capacity shortage was widespread and affecting one or both islands (that is, there would be a geographical threshold).

26. In Meridian's view:

(a) a cumulative price threshold (or similar other stop-loss mechanism) should be introduced, at least as a transitional measure. This balances a number of factors, in particular, addressing the missing money problem while avoiding excessive risk for spot purchasers (see paragraphs 67-74 for discussion of price caps)[5]. Meridian believes that a cumulative price threshold will provide an opportunity for these arrangements to gain credibility, and ultimately be durable.

(b) the $10,000/MWh is a reasonable amount to represent the value of load lost in a grid emergency (i.e. without warning).

(c) nodal prices should apply whenever possible. However, if a grid emergency is declared, Meridian agrees that the 'price floor' should apply across the extent of the shortage rather than simply where load shedding is instructed.

(d) with the implementation of scarcity pricing it will be essential that there is increased visibility of high prices or high cost periods[6] so that an exposed party can make decisions to change its behaviour, such as using standby generation or switching to battery backups. Meridian notes comments by the Authority in the January 2011 Constrained On Event report, that indicate there may have been some potential for increased demand side response (or use of back up generation) if more real time information was available.

(e) it will be important to ensure that there is clarity around the market monitoring role of the Authority, and that there are clear rules (for participants) as to what behaviour is permissible and what is not. This will help to address weak competition concerns, and mitigate the potential for participants to price at, or above, shortage during transmission outages.

Question 5: Forced demand curtailment in AUFLS event

27. Where curtailment occurs without instruction from the System Operator due to the sudden loss of a supply side asset and consequent immediate triggering of automatic under frequency load shedding relays ("**AUFLS**"), electricity users will not have any notice prior to curtailment. Furthermore, investment in peak generation is not a solution to an AUFLS event.

[4] Part 8, section 6(1)(d) of the Code.

[5] Meridian agrees with statements made at the Scarcity Pricing Workshop in relation to VOLL and super-VOLL pricing. If the $10,000/MWh is supposed to represent the value placed on loss of load for consumers, then pricing above this number is inappropriate. Further consideration is perhaps required as to whether a price cap rather than a price floor is likely to be more consistent with the 'long term benefit of consumers'.

[6] Given constrained on costs are not known until monthly invoices are received from the Clearing Manager.

28. Accordingly, scarcity pricing is inappropriate for AUFLS events. Meridian therefore agrees with the Authority's view that load curtailment in AUFLS events should not be considered a trigger event for scarcity pricing.

Question 6: Capacity shortage - shortfall in IR

29. Although the changes to the Rules in July 2010 have largely addressed the potential for artificial price suppression during IR shortfalls, the Authority does not consider such changes to have addressed the risk of very high spot prices if the final pricing solution is close to the point of infeasibility in the market clearing engine.

30. To address this concern, the Authority has proposed the introduction of a procedure to apply when IR shortfalls occur in dispatch which would introduce a virtual IR provider with an offer price that is the greater of:

(a) the highest dispatched IR/energy offer; or

(b) an IR scarcity price from a pre-defined IR shortage function (no more than $10,000/MWh).

31. The Consultation Paper (at paragraph 107) sets out more specifically the six steps proposed by the Authority to apply in IR shortfalls.

32. Meridian notes that the Authority has not finalised the precise profile of the IR shortage function. However, at this stage, Meridian supports the proposed approach to pricing during IR shortfalls on the basis that:

(a) any adjustment to final pricing would apply to limited situations, meaning that a market-based process would continue to apply for most IR shortfalls;

(b) it reduces the potential for very high prices; and

(c) all available energy and IR resources would continue to be procured in real time.

Question 7: Energy/fuel shortage - rolling outage load shedding

33. Under the rolling outage provisions, the System Operator may direct participants to reduce electricity demand in accordance with pre-specified plans in a situation where emergency load shedding is otherwise expected in the future.[7]

34. In the Consultation Paper, the Authority considers that in order to effectively reduce the incentive of a generator that is short of supply to run down its hydro storage or thermal stockpiles to suppress near term spot prices a distinct price floor of $3,000/MWh should apply to rolling outage load shedding. This is on the basis that participants need to perceive the prospect of sustained *emergency* load shedding as credible.

35. Meridian's position is that:

(a) Meridian agrees that deciding whether the underlying cause of a rolling outage is within the market boundary is a difficult balancing exercise, and that where the underlying cause of rolling outages is outside the scope of a reasonable market boundary (such as an earthquake damaging electricity infrastructure), scarcity pricing would be inappropriate. Given that it is vital to maintain market signals for as long as possible, Meridian suggests such situations could trigger administered pricing under the UTS regime rather than scarcity pricing.

[7] Part 9 of the Code.

(b) nodal prices should apply whenever possible. However, if rolling outages[8] are occuring, then it would be appropriate to have island wide pricing. This is consistent with the philosophy of pricing to reflect the extent of the shortage rather than where load shedding (or rolling outages) are being instructed.

(c) the proposed $3,000/MWh figure is reasonable to reflect the value of lost load during rolling cuts. While lower than the $10,000/MWh value for emergency load shedding there is likely to have been greater notice which would allow participants to manage their position.

(d) when the 50% hydro risk curve is breached it is probably more appropriate that the $3,000/MWh figure is an administered price rather than a price floor, or cap. This position reflects one of pragmatism rather than market economics. In the event that this level of energy storage is reached it is likely that further intervention will be required, and assessing the nature of that intervention from afar is unrealistic.

(e) nevertheless, it may be prudent during the transition period for there to be a cumulative price threshold to shore up the credibility and durability of the proposed arrangements. Sustained period of $3,000/MWh prices will impose considerable financial stress, if not insolvency, on some participants. Accordingly, there should be some sort of cumulative price threshold mechanism in place (see paragraphs 67-74 for discussion of price caps/cumulative price thresholds).

Questions 8, 9 and 10: Public conservation campaigns

Energy/fuel shortage - public conservation campaigns

36. The Consultation Paper identifies the concern with current arrangements as:

(a) the potential incentive on some generators to run down discretionary hydro storage/thermal fuel stockpiles;

(b) artificial suppression of spot prices; and

(c) the potential for parties to lobby for (and the actual usage of) conservation campaigns to undermine future investment confidence (thereby increasing the risk of ad hoc intervention).

37. The Authority has proposed a disclosure mechanism and/or financial mechanism to address the above concerns.

38. The aim of the proposed disclosure mechanism is to make transparent the financial motives of parties calling for a campaign. The Authority has proposed a broad disclosure regime due to the practical difficulties in applying the regime only to those calling for a campaign.

39. Meridian's position is as follows:

(a) firstly, the Authority should provide further information as to what information it expects to be disclosed, whether it is real time or historic and how it anticipates it will influence the situation.

[8] Rolling outages will apply when the 50% hydro risk curve has been breached, when assessed either on a South Island or a New Zealand wide basis.

(b) the Authority should also consider whether a regime of voluntary disclosure is sufficient. That is, if the reason for disclosure is that otherwise lobbying for a public conservation campaign is driven by self-interest not the national interest, then the Authority can make it known that it will view requests for a conservation campaign sceptically unless full disclosure is made to the Authority (confidentially) by the party proposing it of its exposure to spot prices.

(c) in considering the above, the Authority may wish to take into account voluntary disclosures that currently exist. For example, Meridian publishes quarterly operation information, which includes quantities and average prices of total generation, and quantities of fixed priced contract sales and spot electricity sales.[9] Meridian understands that other generators also publish similar information.

(d) both demand and supply side participants should be subject to voluntary contract disclosure. Meridian acknowledges there may be some concern with regard potential transaction costs associated with disclosure by demand side participants. However, this must be balanced against providing a disincentive to exposed participants from lobbying for a public conservation campaign.

(e) if compulsory disclosure is required, the requirement should be as straightforward as possible. In particular, disclosure should only be required on an expost aggregate (New Zealand wide) basis.

(f) real time information about a party's hedge position should not be made publicly available as it may well make it harder for an unhedged party to secure future hedges at reasonable prices.

40. The Authority has proposed two options as potential financial mechanism to address the issue of under-hedging as a result of over-reliance on conservation campaigns, namely:

(a) graduated penalties to be applied to spot market purchasers based on actual/simulated net exposure to spot prices over a preceding period; or

(b) a price floor when public conservation campaigns are operating (of approximately $500/MWh).

41. However, in Meridian's view, requiring disclosure of a party's hedge position is a better first step towards encouraging hedging for the following reasons:

(a) a financial penalty on spot market purchasers who are over-exposed would essentially be a requirement to enter into hedge contracts. This would mean that a party's risk appetite is being overridden by the Authority's views as to how they should be hedged (effectively, a regulatory yardstick). That is, electricity sellers and purchasers should be able to take their own views as to an appropriate level of exposure to the market: this should not be regulated by the Authority.

(b) one of the aims of a price floor is to target major industrial players that may benefit from a lower spot price. Given that the Authority and System Operator have some discretion as to when a price floor would apply, in Meridian's view, a price floor may not address the risk of lobbying for an early conservation campaign[10].

[9] See http://www.meridianenergy.co.nz/about-us/our-company/company-reports-and-presentations/half-yearly-and-quarterly-reports/.

[10] Further thought may be required to ensure that this discretion has appropriate and sufficient boundaries. See comments on hydro risk curves, paragraphs 21 to 22.

(c) a hedge contract disclosure regime would be an ongoing requirement that may be useful during wet or dry years as it would allow industry monitoring and scrutiny.

Question 11: Geographic scope

42. The events on the 26 March 2011 illustrate the importance of having a secure transmission grid. Given that shortage events that affect only a single node or a localised area are primarily driven by transmission-related actions, Meridian submits that the Authority must develop new Code provisions as to what behaviour is permissible and what is not. Such amendments would assist to mitigate situations where there is only weak competition, or where for a specific period there is not workable competition.

43. Meridian agrees that in setting the geographical threshold the key issue is the extent of the shortage rather than where load shedding (either emergency or on a rolling basis) is instructed. Meridian suggests that:

(a) the proposal to use the hydro risk curves to define the trigger for either the public conservation campaign (10%) or the rolling outages (50%) on a South Island or New Zealand basis is appropriate. However, note comments in paragraphs 21 to 22 on hydro risk curves.

(b) the Grid Emergency Rules should be the basis of defining the geographical threshold for emergency load shedding.

(c) as instantaneous reserve cover is procured on an island basis the trigger for reduced IR cover should be on an island basis.

Questions 12 and 13: Transition and review arrangements

44. The Authority is considering the following three options for transitioning to the scarcity pricing arrangements:

(a) a staged introduction of individual measures to introduce the capacity-related measures and disclosure requirements around hedge contracts (and moving to the energy-related matters at a later stage);

(b) adopting the whole package of changes, but increasing the scarcity price floors over time; and/or

(c) adopting the whole package (including disclosure) with full scarcity price values, but moderate the impact of price floors with a 'stop-loss' type mechanism that is progressively relaxed over time.

Meridian would prefer (c). Meridian considers that cumulative price thresholds (a ‘stop-loss’ mechanism) should be introduced. This will assist in mitigating price risks from, among other things, weak competition, and will increase the overall credibility and durability of the scarcity pricing arrangements.

45. New Code provisions should also be developed:

(a) to ensure there is increased real time information disclosure so that participants and users can act in response to high prices; and

(b) to clarify both the Authority’s market monitoring role and enforcement initiatives with respect to what behaviour is permissible and what behaviour is not during periods of weak competition, or where there is not workable competition (i.e. during transmission outages).

46. Further, it is vital that there is increased scrutiny of the process for calculating and changing hydro risk curves. See paragraphs 21 to 22 for more detail.

47. The Consultation Paper also proposes that a formal review be conducted at least every three years, covering scarcity price values and other key design issues. This review process would involve:

    (a) evaluating possible changes to scarcity price values against a clear set of published criteria (to be anchored in statutory framework and Code);

    (b) initiating and/or considering possible changes to ensure affected stakeholders can provide input before final decisions are made; and

    (c) at least 12 months notice will be provided before any changes to scarcity price values take effect (unless change is necessary to address a genuinely urgent issue).

48. While Meridian believes it is important that any interventions in the market are as reversible as possible (in case they turn to have undesirable consequences), longevity is required for any proposed scarcity pricing regime in order for it to have the desired effect. That is, potential builders of new peak generation will not rely on price floors if they think they may be only temporary measures. This would suggest that the Authority should take a "minimal intervention" approach to any scarcity pricing arrangement and increase the extent of intervention if required in the future.

49. Meridian agrees that changes to parameters such as the value of the floors should not occur without full consultation and reasonable lead in times (say 12 months). Further, any proposal to change the triggers for a public conservation campaign (10% hydro risk curve), rolling outages (50% hydro risk curve) or the grid emergency load shedding should also be subject to similar review provisions.

Questions 14 and 15: Consistency with statutory objective, and other reasonably practicable options

50. The Authority's statutory objective is as follows:[11]

> The objective of the Authority is to promote competition in, reliable supply by, and the efficient operation of, the electricity industry for the long-term benefit of consumers.

Meridian's position is that, relative to the counterfactual (status quo), the set of proposed scarcity pricing (refer capacity-related, energy-related, disclosure, price floors) arrangements are likely to be consistent with the Authority's statutory objective.

51. However, Meridian believes that the following changes would make the proposal better meet the competition and efficient operation limbs:

    (a) cumulative price thresholds applied to grid emergency load shedding, rolling outages and public conservation campaigns;

    (b) voluntary disclosure of contract position by supply and demand side participants, both ex post and on an aggregate New Zealand wide basis;

    (c) increased real time information disclosure to aid greater real time supply and demand side response;

[11] Section 15 of the Electricity Industry Act 2010.

(d) new Code provisions to clarify both the Authority's market monitoring role and enforcement initiatives with respect to what participant behaviour is permissible and what behaviour is not during periods of weak competition;

52. Meridian considers that:

(a) the application of a cumulative price threshold will also assist to mitigate any extreme instances of weak competition, and therefore facilitate achieving the 'competition' limb of the Authority's statutory objective; and

(b) the cumulative price thresholds would also mean that parties are able to gain experience of the new arrangements, which will increase the overall credibility and durability of the arrangements. This is consistent with the 'competition' and 'efficient operation' limbs of the Authority's statutory objective.

(c) new Code provisions that clarify what behaviour is permissible and what is not during periods of weak competition, will ensure that the new arrangements do not present an opportunity for participants to use the existence of 'scarcity' values to price at these levels, or above, during periods of regional scarcity (i.e. during localised transmission outages). This will facilitate achieving the 'competition' limb of the Authority's statutory objective;

(d) increased real time information disclosure is also consistent with the 'competition' and 'efficient operation' limb of the Authority's statutory objective.

Question 16: Capacity mechanism

53. Meridian acknowledges that a number of overseas jurisdictions have workable capacity mechanisms.

54. Meridian agrees that the scarcity proposals contained in Table 2 of the Authority's Consultation paper, and the reasonable practicable alternative proposed in paragraphs 51 above are preferable to introducing a capacity mechanism at this time.

55. Commenting on the Authority's assessment against the statutory objective and the Code Amendment Principles, Meridian notes:

(a) the arrangements would need to be prescriptive to address the need to consider dry year energy capacity as well as peak demand;

(b) the arrangements would need to be prescriptive to address capacity provided by hydro as well as the more usual (overseas) capacity provided by thermal stations;

(c) the arrangements would not be consistent with 'small scale, trial and error' options as they would require a substantial change to the Code;

56. Meridian agrees with the Authority that other arrangements do complement the proposed scarcity pricing arrangements – especially in relation to hedge market arrangements. Developments in this area such as the Meridian-Genesis five year hedge[12] have much the same effect as capacity payments.

Question 17: Costs and benefits

57. Meridian notes that the cost benefit analysis is of the capacity mechanism only.

[12] Meridian has effectively underwritten one unit at Huntly for 5 years.

58. Meridian has not conducted a comprehensive cost/benefit analysis of the proposed changes. However, based on an initial analysis, the main benefit of a price floor would appear to be the economic use of a public conservation campaign being called. Whether this would have already been achieved by the Customer Compensation Scheme amendment is unknown. Another benefit may be the development of retail products and generation capacity by generators/retailer in order to reduce the likelihood of a public conservation campaign being required.

59. Meridian notes that the results from this analysis are dependent on the assumption that future offer strategies/levels are reflective of historic (pre March 2011) offers.

Question 18: Likely impact on prices

60. Meridian considers that it is likely that the proposed scarcity pricing arrangements (including the recently gazetted Customer Compensation Scheme) will result in some upward pressure on wholesale, contract and residential electricity prices.

61. This will reflect a number of factors, including:

(a) risk of paying compensation to customers in the event of a public conservation scheme;

(b) risk of participants deciding to adjust offers to price more highly during periods of weak competition;

(c) risk that prices will rise more rapidly during periods leading up to periods of shortage.

This increase in either real or perceived risk is likely to be reflected in prices, whether wholesale, contract or to end use customers.

Question 19: Other pro-competitive init*iatives*

62. Meridian supports the Authority's current initiatives towards qualitative safeguard mechanisms, including:

(a) the introduction of products for dispatchable demand;

(b) facilitating hedging of locational price risks between North and South Island;

(c) changes to demand-side bidding; and

(d) encouraging the development of a more liquid hedge market.

63. Meridian considers that further thought is required on how additional real time information disclosure can be provided to participants to facilitate response to high prices periods. This issue was highlighted by the Authority in its report on the January 2011 Constrained On event, and by various parties making UTS Claims in relation to 26 March 2011.

Question 20: UTS provisions

64. The Authority is aware that Meridian has filed a UTS claim in relation to the 26 March 2011 event. The Authority has announced that it does not intend to announce its decision on this matter until 6 May. Any comments made in response to Question 20 are made without prejudice to Meridian's UTS claim or its response to the Authority's decision.

65. Meridian agrees with the Authority that the UTS provisions would appear to provide sufficient powers to address an exceptional event, such as a devasting earthquake or similar natural disaster, and ensure that scarcity pricing is not applied in an inappropriate situation.

66. Meridian notes that the recent devasting earthquake and tsunami in Japan have necessitated rolling outages to be undertaken in the affected regions. At an appropriate point it may be appropriate for the Authority, and/or the System Operator to have discussions with Japanese counterparts to learn from their experiences in this matter.

Question 21: Price caps and cumulative price thresholds

67. The Consultation Paper also raises the concern of 'over shooting' prices at times, particularly as a result of weak competitive pressure or on a sustained basis as a result of an exceptional adverse event. The Authority is of the view that price capping should not be introduced on a permanent basis, although sees merit in considering a stop-loss type mechanism (such as a cumulative price threshold) as a possible transitional measure.

68. Meridian is concerned that "excessive" pricing (whether in the form of price floors applying for a sustained period or the transient exercise of market power due to transmission outages or weak competitive pressures) could have adverse consequences for the market. In particular, the prospect of such pricing outcomes may:

(a) increase risk/costs from retailing in areas where you do not generate, which would decrease retail competition (as gentailers will retrench their retail operations to areas in which they generate, while standalone retailers could exit the market);

(b) increase hedge prices (as hedges will need to be taken, but the price will tend to approximate the expected high spot prices);

(c) bias large industrials towards hedges and fixed price contracts;

(d) if retailers and industrials become very highly hedged this will have its own consequences as such parties will have no incentive to change their demand in response to rising spot prices;

(e) increase the risk of some participants becoming insolvent;

(f) have significant impacts on the quantum of prudential settlements, particularly given New Zealand's gross settlement requirements;

(g) distort incentives to invest in generation; and

(h) in relation to situations where a party is able to "name its price", the problem will tend to become worse over time as higher and higher price levels becomes normalised.

69. In the extreme, if there are numerous periods of high prices, then the Authority or Government may be forced to take dramatic action.

70. In Meridian's view:

(a) in relation to scarcity pricing, there is a risk that a sustained period of high prices will lead to an inverse "missing money" problem where the generation

revenues and purchaser costs are far greater than anticipated which will result in risk and potential insolvencies without any corresponding benefit;[13] and

(b) regardless of scarcity pricing, as the events of 26 March show, the same issues can arise as a result of transient market power.

71. Accordingly, in Meridian's view, new Code provisions and cumulative price thresholds should be an integral part of both the scarcity pricing rules and the market generally. In outline, Merdian's position is that:

Situation	Price floor	New Code provision	Cumulative price thresholds
Normal market operation	N/a	Either a code of conduct principle (eg good faith) or a standard (eg reasonable relationship to marginal cost)	
Public conservation campaigns	$500/MWh (floor)	As above	Threshold to be developed.
Rolling outages if energy shortage	$3,000/MWh (administrative, i.e. fixed price)	As above	Threshold to be developed.
Emergency load shedding if capacity shortage (grid emergency)	$10,000/MWh (floor)	As above	Threshold to be developed.

72. Meridian believes that such caps are necessary to make scarcity pricing (and the market mechanism generally) credible and durable, and that they would promote the statutory objective of the Authority of improving security of supply, and encourage the efficient operation of the electricity market for the long-term benefit of consumers.

73. Meridian accepts that introducing a cumulative price threshold is a 'blunt' instrument. However, Meridian considers that at least in the short term such a mechanism will be important to ensure credibility and durability of the proposed arrangements.

74. The Authority has highlighted that it is conscious of the potential for electricity consumers to be exposed to high spot prices when there is weak competitive pressure on suppliers, and that price capping mechanisms would help to address this risk. Meridian agrees. See also Meridian's comments in paragraph 51 in relation to new Code to mitigate weak competition risks.

[13] Assuming monthly spot volumes of the order of 3000GWh spot settlements from month-long $500/MWh prices would be roughly $1.5bn; $9bn from $3,000/MWh prices; and $30bn from $10,000/MWh prices.