

Scarcity pricing and related measures - proposed amendments to the Code

Submission to the Electricity Authority



This is a submission by Contact Energy Limited (“Contact”) in response to the *Consultation Paper – Scarcity pricing and related measures – proposed amendments to the Code* (the “consultation paper”) issued by the Electricity Authority (the “Authority”) on 13 July 2011.

Below we provide general comments on the consultation paper, and responses to the specific questions raised by the Authority.

For any questions relating to our submission, please contact:

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Summary

Contact agrees with the Authority's problem definition for the scarcity pricing proposal. Contact also agrees with the Authority that unfounded criticisms of the market by parties that choose to be exposed to high spot prices are unhelpful and hinder productive investment in the energy industry and wider economy.

By setting a clear framework for parties to commercially manage risk during supply emergencies, the Authority should be in a position to discount such criticisms. There are a number of initiatives and mechanisms already in place or under development which help do this. The Authority should assertively communicate these initiatives and opportunities as a first response, as opposed to implementing regulation that imposes even more obligations on parties that appropriately manage risk. Unfortunately, a major component of the Authority's scarcity pricing proposal – the stress test – is likely to do the latter.

If, despite the numerous initiatives and mechanisms in place and under development, there are still justifiable concerns around energy security, Contact continues to believe that price caps¹ and cumulative price thresholds² are appropriate, as they clearly identify the boundaries of risk – and the subsequent tradeoffs between hedging and taking spot exposure – that parties could be exposed to under such conditions. If implemented, parties who chose to remain exposed would have no grounds to claim they were unaware of the potential costs of having exposure to spot prices, as has been the case in recent high price events. The stress test proposal does not provide this clarity.

In terms of the specific elements of the Authority's scarcity pricing proposal:

- Contact is generally supportive of the Authority's amended proposal for instantaneous reserve ("IR") shortfalls.
- For the emergency load shedding proposal:
 - There should be different prices for the floor and cap i.e. the floor of \$10,000/MWh should be accompanied by a cap of \$20,000/MWh.
 - The stop-loss mechanism proposed is appropriate, but should be a permanent feature.
 - The scaled pricing approach is preferable to the flat pricing approach.

¹ Similar to the VOLL price used in the NEM.

² Or stop-loss mechanisms, to use the Authority's language.

- The impacts of the constraint conditions that are a pre-condition to scarcity prices flowing through to final prices have not been adequately considered.
 - Additional refinement of the proposal is required to ensure that real time signals better align with final pricing outcomes.
 - Until these issues have been resolved, it is questionable whether the proposal could be operationalised by the System Operator.
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- Contact agrees with the Authority that the case for introducing price floors during public conservation campaigns (“PCC”) and rolling outages is not strong.
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- Contact submits that the stress test will not have any discernable impact on energy security, and that:
 - The proposal will increase the already asymmetric obligations on retailers in relation to energy security.
 - The proposal will be costly, burdensome (particularly on smaller participants) and of little value given the varying risk appetites of market participants.
 - The Authority does not appear to have considered listed companies existing disclosure requirements under the NZX.
 - Contact would consider certifying that we had received information on various pricing outcomes from the Authority and had considered it (as we saw fit) as part of our own risk testing, but do not believe that any further obligations are appropriate.

Contact agrees price suppression during scarcity events is an issue

Contact agrees with the Authority's problem definition for the scarcity pricing proposal that under existing arrangements, during supply emergencies:

- There is potential for spot price suppression where non-price rationing mechanisms are used, such as forced load shedding; and
- Spot price suppression reduces the incentive for providing voluntary demand response as well as the incentives to manage risk appropriately.

For Contact, price suppression can influence the incentives to invest in and efficiently operate generation; particularly low capacity factor plant necessary to support security of supply during supply emergencies.

...and that criticism of the market during scarcity events is unproductive

Contact also agrees with the Authority that unfounded criticism by parties exposed to spot prices about the effectiveness of the market (e.g. that hedges were not available on reasonable terms and/or that spot prices are not competitively determined) are unhelpful and hinder productive investment. Contact believes that there are commercial opportunities available to manage such risk.

Mechanisms are already in place to address these issues, with others under development

Contact believes that by setting a clear framework for parties to commercially manage risk during supply emergencies, the Authority should be in a position to discount such criticism about the effectiveness of the market.

Contact believes that there are a number of initiatives and mechanisms already in place or under development which help do this, including:

- The formalisation of pre-defined triggers for the commencement and cessation of PCC. These were introduced as part of the implementation of the consumer compensation scheme (“CCS”). This, as the Authority note, should narrow the scope of lobbying in an energy shortage, or the lead-up to a shortage.
- The Wholesale Advisory Group (“WAG”) review of settlement and prudential arrangements. This will help ensure that the prudential arrangements in place are sufficient such that people can be assured of the sustainability of the market, particularly under adverse hydrological conditions.
- The increasing range of risk management products/mechanisms available (and soon to be available) to a broad range of participants, such as:
 - The pending dispatchable demand product
 - Pending demand-side bidding and forecasting arrangements
 - Pending financial transmission rights products
 - The emergence of standardised cap products, and increased availability of hedges through the ASX

Contact believes that such initiatives increase the ability of participants to understand the likely bounds of risk during supply emergencies and other scarcity events, and the trade-offs associated with hedging, or remaining exposed to, those risks.

As a result, the narrowed scarcity pricing proposal is largely supported, apart from the stress test

The extent of the initiatives already in place and under development impacts Contact’s views as to the appropriateness of various components of the Authority’s scarcity pricing proposal. The Authority must assertively communicate these initiatives and opportunities as a first response to unfounded criticism the effectiveness of the market, as opposed to implementing regulation that imposes even more obligations on parties that appropriately manage risk. Unfortunately, a major component of the Authority’s scarcity pricing proposal – the stress test – is likely to do the latter. Comments on the various components of the proposal follow.

Instantaneous reserve shortfalls

Contact is generally supportive of the Authority’s amended proposal for IR shortfalls. It should be recognised though, that while the proposal should remove the likelihood that infeasible IR prices in dispatch will flow through to final prices it will not prevent high IR prices *per se*. Because the proposal is based on the highest IR or energy offer, it is still possible that an increment of IR could

be offered in at a relatively high price; higher than the highest energy offer³. Contact continues to believe that it is confusing for the price of energy to cover off a contingency to be higher than the underlying price of the energy itself.

In the last consultation on scarcity pricing, Contact submitted that a minimum threshold for IR could be of value, such that if available IR dropped below a certain level then the IR market would close and the energy price could be set by the floor for emergency load shedding. This would help ensure that very small amounts of IR wouldn't be setting a very high price, with little real benefit in terms of ability to offset a contingency. Beyond a certain shortfall threshold reserve won't be of value, and could be better utilised (in many cases) in the energy market. Contact continues to believe that this should be considered as part of Authority's proposal for scarcity pricing.

Capacity shortfalls – emergency load shedding

Floor and cap values

The Authority proposes to introduce a \$10,000/MWh price floor during emergency load shedding. The Authority is also proposing that a cap of either \$10,000/MWh or \$20,000/MWh be introduced.

Contact submits that there should be *different* prices for the floor and cap i.e. that the floor of \$10,000/MWh should be accompanied by a cap of \$20,000/MWh. Contact agrees with the Authority that having a different level for the floor and cap will reduce risks of unintentional dampening of resource provider incentives, and will allow the market to still determine (between those bounds) what the appropriate price of energy is.

Stop-loss mechanism (cumulative price threshold)

Contact is comfortable with the Authority's proposed stop-loss mechanism where the price floor and cap are set at different levels (i.e. cumulative GWAP for the previous 336 trading periods). However, we submit that it should be a permanent feature of the scarcity pricing mechanisms, not a transitory one. Participants need certainty around the key features of the mechanism so they can adjust their risk positions accordingly.

³ Customer Advice Notice (Ref 284093670) also appears to reduce the impact of the proposal above the status quo.

Scaling versus flat adjustments

While the flat pricing option for adjusting prices during emergency load shedding would provide more certainty than the scaled option, Contact supports the scaled option as it provides/maintains locational signals for demand response and generation and should better preserve the relativity between IR and energy prices. It is also likely to be less distortionary in terms of the impact on locational risk management strategies (noting our concerns below on the impact of both approaches on rentals).

Constraint testing and differences between real-time and final prices

While the Authority has attempted to provide some certainty for parties who could potentially respond to supply emergencies in real time, the constraint conditions that are a pre-condition to scarcity prices flowing through to final prices are an issue that has not been adequately dealt with in the proposal.

There are numerous AC constraints that bind (or are close to binding) on any particular day, and hence the pre-condition that no AC constraints be found to be binding (in conjunction with conditions on constraints on the HVDC) could set an incredibly high threshold for scarcity pricing to actually flow through to final prices. Also, in terms of the HVDC constraint conditions SPD will always dispatch an HVDC flow even with a dual island shortage (if the market is still in operation) and hence scarcity pricing may never flow through to final prices⁴.

This uncertainty about the possible returns from responding to supply emergency conditions could prolong such emergencies, and increase their cost. Participants need to respond in real-time, based on the information at hand, and as with differences that occur between real-time pricing and final prices at present, parties are often unsure as to whether their actions will be rewarded at prices they observed when they took those actions. The AC and HVDC constraint conditions as proposed only add to this uncertainty.

Contact believes that Authority should provide more detailed thinking around these pre-conditions and other measures to align real-time signals and final pricing outcomes. This should include work on:

- The potential value of a minimum threshold on AC (and potentially HVDC) constraints, rather than the blanket no constraints rule proposed;

⁴ It is also unclear as to why the conditions for a dual island shortage c.f. a national shortage are different.

- How AC constraints, as a pre-condition to scarcity pricing, will be measured;
- How constraints triggered by actual load shedding would impact on the likelihood of scarcity prices appearing in final prices; and
- The interplay between energy and reserve when load that is shed may have been providing IR.

Without resolution of these issues, we question whether the proposal could actually be operationalised by the System Operator.

Contact also submits that the Authority has not provided sufficient analysis of the potential impacts of the proposal on loss and constraint rentals. While some information on outcomes from either scaled or flat pricing is provided, given the potential impact of scarcity pricing on rentals, and the flow-on impacts to the value of FTRs and hedge contracts, Contact believes more is required in order that participants understand the potential impacts.

Energy shortfalls – public conservation campaigns

Contact agrees with the Authority that the case for introducing price floors during PCC is not strong. The proposal was based around an assumption that the market won't price scarce resources appropriately during PCC. The presence of the CCS should help reduce this likelihood without requiring the introduction of a price floor.

Energy shortfalls – rolling outages

As with PCC, Contact agrees with the Authority that the case for introducing price floors for shortage events that lead to rolling outages is not strong. The level of risk associated with rolling outages is so high that spot prices should be well in excess of the previously proposed spot price floor.

Proposed stress test to address energy security concerns

While the Authority has changed its proposal to introduce price floors during PCC, it has included a modified stress test proposal to address its concerns around energy security. Contact does not believe the stress test is necessary, or will have any discernable impact on energy security.

Measures already in place to address any concerns – ‘no change’ not possible

In the Authority’s words, “the establishment of a market failure is clearest for short-term capacity shortfalls”⁵. The Authority seems to determine that there is little need for further intervention during energy shortfalls given the more advanced warning of such conditions, yet a burdensome intervention is still proposed.

In the consultation paper the Authority outlines the extensive list of measures already introduced to address energy security concerns⁶:

- The adoption of clear pre-defined triggers for starting and stopping public conservation campaigns;
- The introduction of the CCS;
- The virtual and physical asset swaps between SOE generators; and
- The proposal to adopt scarcity pricing for emergency load shedding events which should have a ‘signalling effect’ that flows into the energy security time domain.

The Authority notes that, in terms of energy security, a ‘no change’ stance is unacceptable⁷. The above list of interventions suggests that a ‘no change’ stance is already not possible - even without the stress test.

Increasing the asymmetric burden on retailers

The proposal will only increase the asymmetric obligations on retailers, given the imposition of the CCS earlier in 2011. While Contact agrees that actions by some spot market exposed parties who amplify energy security concerns are unhelpful and potentially costly, this would suggest a measure targeted at **those** parties might be appropriate, rather than a wide ranging intervention such as that proposed.

The Authority should be confident in communicating initiatives to Government that are already in place (as listed above) to address any energy security concerns, rather than imposing further obligations on a broad group of participants.

Contact already carries out extensive risk testing which forms part of our broader risk management policy; Contact’s Board are ultimately responsible for how that risk is managed. Contact believes

⁵ Consultation paper, p.17.

⁶ Consultation paper, p.19.

⁷ Consultation paper, p.19.

that the Authority has no role in trying to influence how companies assess risk. Practically, Contact is not clear as to how the Authority would adjust responses to their stress test to account for various risk appetites present across the market. Contact would be comfortable with certifying (at an appropriate level) that we had received information on various pricing outcomes from the Authority and had considered it (as we determined to be appropriate) as part of our own risk testing.

Contact is also already subject to disclosure requirements as a listed company on the NZX. The proposal does not consider how listed companies' obligations to the NZX could potentially conflict with the stress test. We are not aware that the Authority even tested its proposal with participants and those that would be responsible for the stress test directly (aside from those on the technical group) *prior* to this consultation, to test whether the burden of what is proposed is reasonable.

The stress test will be ineffective

Contact believes that the stress test will not alter participants' behaviour. As already noted, parties have varying risk appetites, and even if participants have completed and submitted stress test results it is unlikely to change their overall lobbying behaviour.

Alternatives to the stress test

Contact believes that if evidence is provided that further measures are still required (in addition to those listed by the Authority) to address energy security concerns, then a price cap similar to the VOLL price used in the NEM could be introduced for energy shortfall events (PCC and rolling outages) to better help identify the boundaries of risk that participants should be aware of and seek to manage. Spot price exposed parties who would otherwise seek to amplify energy security concerns could then not complain about being unaware of the potential outcomes under such events.

If the Authority has concerns around certain participants' ability to remain operative under energy shortfalls, these can be addressed through the review of prudential arrangements.

The Authority could also consider how risks associated with spot market exposure are communicated to smaller commercial consumers by intermediaries.

Specific answers to consultation questions

	Question	Contact response
1	Do you agree with the problem definition?	Yes.
2	Do you agree that the proposed narrowing of scarcity pricing (to be applied for short-term emergencies and not for extended shortages) would be more consistent with the Authority's statutory objective?	Contact is generally supportive of the proposed changes, with the major exception being the stress test proposal, which Contact does not believe is consistent with the Authority's statutory objective.
3	Do you agree that scarcity pricing should be applied as a price floor and cap, rather than simply a price floor during emergency load shedding?	Yes. Contact submits that the use of a different price floor and cap during emergency load shedding is more efficient.
4	Do you agree that scarcity pricing should include a stop-loss mechanism, at least on a transitional basis?	Yes. Contact believes that the mechanism should be permanent though, not transitional.
5	Do you agree that scarcity pricing should not apply for AUFLS per se?	Contact is comfortable with the proposal not addressing AUFLS.
6	Do you agree with the proposed geographic threshold for initial application of scarcity pricing, and if not why?	Contact still believes that nodal scarcity pricing application would be more efficient, however an island based application is more appropriate than a blanket national application.
7	Do you agree that an amendment should be made to final pricing processes when an infeasible solution arises following an IR shortfall?	Contact supports the proposal for IR, yet notes its effects on IR prices will be limited.
8	Do you agree with the proposed implementation timetable?	Yes, subject to the changes Contact believes are required to the proposal.
9	What is your view of the proposed review provisions for key scarcity pricing parameters?	Contact would prefer longer periods between reviews, but understands the logic behind the proposal.
10	What is your view of the trigger mechanism for declaring a national or island shortage?	<p>Contact is comfortable with the disconnection instruction component of the proposal, but notes issues below around the constraint conditions that form part of that trigger.</p> <p>There are numerous AC constraints that bind (or are close to binding) on any particular day, and hence the pre-condition that no AC constraints be found to be binding (in conjunction with conditions on any constraints on the HVDC) could set a very high threshold for scarcity pricing to actually flow-through to final prices. This uncertainty about the possible returns from responding to supply emergency conditions could prolong such emergencies, and increase the cost of combating them.</p> <p>Contact believes that Authority should provide more detailed thinking around these pre-conditions.</p>
11	What is your view of the trigger mechanism for revoking shortage declarations?	Contact is comfortable with the proposal on this issue.
12	What is your view of the proposed pre-dispatch and real time indicators for scarcity pricing?	Contact believes the indicators should apply to all real-time and forward looking schedules.

13	<p>Which approach do you believe will best meet the Authority’s statutory objective (and why):</p> <ul style="list-style-type: none"> - a common value for the GWAP floor and cap of \$10,000/MWh; or - a GWAP floor of \$10,000/MWh and a cap of \$20,000/MWh? 	<p>Contact submits that there should be different prices for the floor and cap i.e. that the floor of \$10,000/MWh should be accompanied by a cap of \$20,000/MWh. Contact agrees with the Authority that having a different level for the floor and cap will reduce risks of unintentional dampening of resource provider incentives, and allows the market to still determine (between those bounds) what the appropriate price of energy is dynamically.</p>
14	<p>Which approach do you believe will best meet the Authority’s statutory objective (and why):</p> <ul style="list-style-type: none"> - scaled pricing approach; or - flat pricing approach? 	<p>Contact supports the scaled pricing approach as it provides/maintains locational signals for demand response and generation and should better preserve the relativities between IR and energy prices.</p>
15	<p>What is your view of the proposed approach to applying scarcity pricing across trading periods?</p>	<p>Contact supports the proposal on this issue.</p>
16	<p>What is your view of the proposed approach to treating differences between forecast and actual conditions?</p>	<p>While the Authority has attempted to provide some certainty for parties who could potentially respond to supply emergencies in real time, the AC and HVDC constraint trigger conditions that are a pre-condition to scarcity prices flowing through to final prices are an issue that has not been adequately dealt with in the proposal. There are numerous AC constraints that bind (or are close to binding) on any particular day, and hence the pre-condition that no AC constraints be found to be binding (in conjunction with conditions on any constraints on the HVDC) could set an incredibly high threshold for scarcity pricing to actually flow-through to final prices (to the point that scarcity prices may almost never flow through to final prices). This uncertainty about the possible returns from responding to supply emergency conditions could prolong such emergencies, and increase the cost of combating them. Participants need to respond in real-time, based on the information at hand, and as with differences that occur between real-time pricing and final prices at present, parties are often unsure as to whether their actions will be rewarded at prices they observed when they took those actions. The constraint conditions as proposed only add to this uncertainty.</p> <p>Contact believes that Authority should provide more detailed thinking around these pre-conditions and other measures to align real-time signals and final pricing outcomes. This should include work on:</p> <ul style="list-style-type: none"> • The potential value of a minimum threshold on AC (and possibly HVDC) constraints, rather than the blanket no constraints rule proposed; • How AC constraints, as a pre-condition to scarcity pricing, will be measured; • How constraints triggered by actual load shedding would impact on the likelihood of scarcity prices appearing in final prices; and • The interplay between energy and reserve when load that is shed may have been providing IR. <p>Without resolution of these issues, we question whether the proposal could actually be operationalised by the System Operator.</p>

17	What is your view of the proposed approach to HVDC rentals, and what alternative (if any) would you support and why?	Contact submits that the Authority has not provided sufficient analysis of the potential impacts of the proposal on loss and constraint rentals. While some information on outcomes from either scaled or flat pricing is provided, given the potential impact of scarcity pricing on rentals, and the flow-on impacts to the value of FTRs and hedge contracts, Contact believes more is required in order that participants understand the potential impacts.
18	What is your view of the proposed approach to implementing a scarcity pricing stop-loss mechanism?	Contact is comfortable with the Authority's proposed stop-loss mechanism where the price floor and cap are set at different levels (i.e. cumulative GWAP for the previous 336 trading periods).
19	What is your view of the proposed modification to final pricing when an IR shortfall occurs and an infeasible solution arises in final pricing?	Contact is comfortable with the proposal on this issue.
20	What is your view of the proposed information to be disclosed?	<p>Contact does not believe the stress test is necessary, or will have any discernable impact on energy security.</p> <p>Contact already carries out extensive risk testing which forms part of our broader risk management policy; Contact's Board are ultimately responsible for how that risk is managed. Contact believes that the Authority has no role in determining how companies assess risk. Practically, Contact is not clear as to how the Authority would adjust responses to their stress test to account for various risk appetites present across the market.</p> <p>Some of the information sought under the proposal is available via companies annual reports, hence could be accessed by the Authority without increasing the compliance burden on participants.</p> <p>Contact would be comfortable with certifying (at an appropriate level) that we had received information on various pricing outcomes from the Authority and had considered it (as we determined to be appropriate) as part of our own risk testing.</p>
21	What is your view of the indicative stress test parameters?	Contact submits that the parameters will be difficult and costly for many smaller participants to consider and analyse, and that other parties (such as Contact) already consider similar risks internally, hence the proposal would effectively be a costly an unnecessary intervention, with no impact on energy security.
22	What is your view of the proposed level of guidance to be provided to participants?	<p>Contact submits that the guidance will be difficult and costly for many smaller participants to consider and analyse, and that other parties (such as Contact) already consider similar risks internally, hence the proposal would effectively be a costly an unnecessary intervention, with no impact on energy security.</p> <p>Contact would be comfortable with certifying (at an appropriate level) that we had received information on various pricing outcomes from the Authority and had considered it (as we determined to be appropriate) as part of our own risk testing.</p>
23	What is your view of the proposed frequency of reporting?	If a stress test were introduced, Contact submits that the frequency is too high, and represents an inefficient and unnecessary burden on parties already reporting on risk to their Boards.
24	What is your view of the proposed coverage of a disclosure obligation?	While Contact agrees that actions by some spot market exposed parties who amplify energy security concerns are unhelpful and potentially costly, this suggests a measure targeted at those parties might be appropriate (even on an ad hoc basis), rather than a wide ranging intervention such as that proposed. The Authority should be confident in communicating initiatives to Government that are

		<p>already in place (as listed above) to address any energy security concerns, rather than imposing further obligations on participants. The proposal will only increase the asymmetric obligations on retailers, given the imposition of the CCS earlier in 2011.</p> <p>Contact also submits that if the Authority wishes to inform the market more broadly (e.g. smaller commercial and industrial customers who are not direct connects or don't buy from the clearing manager) about its views on pricing outcomes, that it is best placed to do this, rather than increasing compliance costs by requiring retailers to pass on the same information.</p>
25	What is your view of how information disclosed could be used?	Practically, Contact is not clear as to how the Authority would adjust responses to their stress test to account for various risk appetites present across the market. The information is likely to be of little value to participants.
26	What is your view of the proposed compliance and auditing arrangements?	Contact submits that the proposed arrangements represent an inefficient, costly and unnecessary burden for parties already reporting on, and managing, risk appropriately. It is not for the Authority to determine how participants manage their risk, subject to those parties meeting prudential and Code requirements.
27	What is your view of the proposals when assessed against the Authority's statutory objective?	Contact does not believe the proposal aligns at all with the Authority's statutory objective. Contact does not believe the stress test is necessary, or will have any discernable impact on energy security.
28	What is your view of the alternative means of achieving the objectives of the proposed scarcity pricing and stress-testing regime?	<p>Contact believes that if evidence is provided that further measures are still required (in addition to those listed by the Authority) to address energy security concerns, then a price cap similar to the VOLL price used in the NEM could be introduced for energy shortfall events (PCC and rolling outages) to better help identify the boundaries of risk that participants should be aware of and seek to manage. Spot price exposed parties who would otherwise seek to amplify energy security concerns could then not complain about being unaware of the potential outcomes under such events.</p> <p>Contact would be comfortable with certifying (at an appropriate level) that we had received information on various pricing outcomes from the Authority and had considered it (as we determined to be appropriate) as part of our own risk testing.</p> <p>If the Authority has concerns around certain participants' ability to remain operative under energy shortfalls, these can be addressed through the review of prudential arrangements.</p>
29	What is your view of the costs and benefits of the proposed scarcity pricing changes?	Contact believes that having a framework for prices during scarcity events will improve investment and operational incentives and decisions, however the stated benefits seems high.
30	What is your view of the costs and benefits of the proposed stress testing regime?	Contact submits that the claimed benefits of the stress test regime in terms of overall growth are highly optimistic. Contact does not believe the stress test will have any discernable impact on energy security.
31	Do you propose any changes to the proposed Code amendments set out in Appendix C?	<p>Contact believes that the policy settings should be finalised prior to Code being drafted, such that unnecessary costs are not incurred by having to re-draft Code repeatedly.</p> <p>Contact has proposed amendments to the proposal, hence in our view there are changes required to the Code.</p>