# AEMC Congestion Management Review

## Responses from the Latin Group of Generators to the Questions posed in the AEMC Issues Paper

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| Question in AEMC Issues Paper | Our Response |
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| 1. Do existing constraints have a material effect on the efficiency of the NEM? What is the nature and materiality of these constraints? Why is it that these constraints have not been addressed to date? Are there specific points of congestion that should be addressed in advance of the establishment of a new congestion management regime? | Yes, existing constraints *do* materially affect efficiency. The nature of the inefficiency is primarily that rationing to manage intra-regional congestion is volume based rather than price based. For an estimate of materiality see the IES paper for the ACCC (Regional Boundaries and Nodal Pricing. An Analysis of the Potential Impact of Nodal Pricing and Market Efficiency, December 2004). Constraints have not been addressed to date because Region Change – as well as being a disruptive mechanism of managing congestion – has not been allowed to take place. A comprehensive CM regime should be introduced as soon as possible, rather than a "band aid" approach of considering constraints individually. |
| 2. Given the development of the NEM and the recommendations of reviews undertaken to date, what are the significant priority issues for this Review? | The priority is to establish a comprehensive and sustainable regime for efficiently managing all forms and locations of congestion in the NEM, to remove the continuing regulatory uncertainty and market inefficiencies. |
| 3. What are the key questions the Commission should seek to examine quantitatively as part of the Review? What key factors should the Commission take into account in this modelling analysis? | The key question is the cost of implementing the "full CSP/CSC" approach that we have described. We think implementation costs have always been overstated. On the other side of the cost-benefit equation, previous modelling of benefits (eg the IES paper) has always shown these to be substantial. |
| 4. Are there any material problems with the 'option 4' approach to constraint formulation to managing system security and reliability? How might such problems be addressed while continuing to maintain system security and reliability? | "Option 4" really means constraints that represent the actual physics of the power system. This is the only sensible, efficient and sustainable approach. However, there may be more effective ways of representing physical constraints: eg a full network model. This is a matter for NEMMCO. The only "problems" (eg negative residue) with the option 4 approach are caused by flaws in NEM pricing arrangements, not in the constraint formulation itself. |
| 5. Are there any other problems, other than constraint formulation, with the management of system security in the context of the current congestion management regime? How might any such problems be addressed? | The problem is not in constraint formulation but the fact that intra-regional constraints are not priced. So we continuously have a "tragedy of the commons" where generators (existing and new) aim to over-utilise the available capacity, creating the system security risks. |

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| 6. How material are reductions in the dispatch and pricing efficiencies due to binding intraregional constraints under the current arrangements? How can they be quantified? | We refer you again to the IES report |
| 7. How material are the reductions in dispatch and pricing efficiencies due to the management of negative settlements residues under the current arrangements? How can they be quantified? | These problems tend to be manifested on days of extreme inter-regional pricing differentials. We suggest that you analyse some of these historical days to estimate the cost of the inefficiencies. |
| 8. Have the existing arrangements resulted in materially inefficient investments? Could the existing arrangements result in materially inefficient investments in the future? What kind of inefficiencies may result? | The inefficiencies result from the fact that a generator makes no contribution (except in relation to losses) for delivery of its power from its connection point to the RRN. We refer you the Group's submission to the AEMC Chapter 6 Review (Transmission Pricing) for more details. |
| 9. How well do existing arrangements provide signals for efficient investment over time and locationally using the least-cost technology—generation, network demand side management or non-electricity alternatives? | They do this very badly, for the reasons given in the answer to question 8. |
| 10. Does the potential to be constrained-off or constrained-on relative to the regional reference price result in material risks for market participants? How are those risks managed? | Yes (in relation to constrained-off). These risks are managed by (a) undertaking detailed analysis to understand when and how a power station may be constrained off (b) managing forward sales accordingly (c) structuring bids so as to minimise the volume of MW constrained. |
| 11. Do market participants face problems in managing risk due to the nature of the instruments available, or the liquidity of market for those instruments? If so, how are those problems related to the current approach to congestion management? | Where there is a risk of being constrained-off, the volume of hedges offered into the forward market must be reduced accordingly. This may cause difficulties for retailers seeking hedging cover. Where hybrid constraints cause inter-regional settlement residue to be reduced or even negative, this reduces the effective level of firm MW provided by the SRA instruments and, again, reduces the amount of hedges (from inter-regional generation) available to retailers. |

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| 12. Are there problems in accessing information to support effective risk management in the context of congestion in the NEM? Is the lack of exchange based trading a problem in this context? | Yes. It is very complex to model and analyse the likely level of constrained-off MW, particularly as it can depend upon other participants' bidding. The problem is not related to exchange based trading but the fact that intra-regional rationing is volume-based rather than price-based. |
| 13. Does the current design of IRSR units impact the ability of participants to efficiently manage inter-regional price risk? | No. The problem is not with the design of the SRA units, but with the characteristics of the IRSR itself, as it is adversely affected by hybrid intra-regional constraints. |
| 14. Has the uncertainty regarding regulatory process and decisions created material risks for participants? | Yes. Without doubt, this is *the* major concern with the existing arrangements. |
| 15. Do market participants face problems in managing risk due to a lack of transparency associated with the current approach to congestion management? If so, what are the nature and materiality of these problems? | Yes. In two ways. Firstly, due to the absence of any markets (spot or forward) for managing intra-regional congestion. Secondly, because of the high level of regulatory risk and the impossibility of quantifying or managing such risk. |
| 16. Are there any additional issues with the current congestion management regime that should be considered as part of the Review? How can the materiality of these concerns be quantified? | No. We think that all of the issues have been identified. |
| 17. Is this an appropriate characterisation of the current arrangements in the NEM for the purposes of assessing potential improvements to the congestion management regime? | Yes |
| 18. Is the proposed 'staged approach' to congestion management an appropriate framework? Is it the most effective response to those problems? Is it technically and commercially feasible? | No. We believe a staged approach is flawed. We have seen how the staged approach to region change has resulted in regulatory paralysis and consider that the new approach is even more unworkable. We believe that a "full CSP/CSC" approach is preferable for the reasons set out in P6-8 of our main submission. |

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| 19. Has the NEM had material congestion problems which have not been enduring? Is it likely to do so in future? | Congestion in the NEM tends to be chronic rather than enduring. The Tarong-Brisbane constraint is a good example of this. Although the capacity of this constraint is constantly being expanded, demand for the capacity (which is, of course "free" at the point of use) is also constantly increasing. This is likely to be an enduring characteristic of the NEM (under the current arrangements): what might be called "the tragedy of the regions". Wherever a scarce resource is offered at zero price it is always going to be over-utilised. |
| 20. Are the costs of an interim congestion regime (discussed in greater detail below) clearly lower than the costs associated with region boundary change? | Yes, region change is highly disruptive to the market (see P5 of our main submission). CSP/CSC is a better alternative. |
| 21. What triggers should be considered for the introduction of various congestion management tools under a staged approach? Which institutions should be responsible for recommending and approving the introduction of congestion management tools at each stage? | Under our proposed full CSP/CSC approach these questions do not arise.(see P7 of our main submission). If the staged approach were adopted, the answers would be similar to those for the region change process: ie the triggers will inevitably be unclear, inefficient or arbitrary. |
| 22. What role should region boundary changes play in managing congestion, particularly in a staged response? How much emphasis should be placed on that role? | If a CSP/CSC approach were adopted (whether staged or full) the case for region change, in relation to congestion management, would be limited. However, region change could nevertheless continue to play a role in improving dynamic efficiency on the demand side. |
| 23. Is the economic boundary change criterion proposed in the MCE region boundary Rule change proposal consistent with the staged approach to congestion management? What further efficiency gains would be realised from region boundary change, after the introduction of an interim congestion management tool? | Again, we would point out that under a full CSP/CSC approach, these issues do not arise. The current MCE proposal would fall under the category "unclear". What is "material"? What is "enduring"? How are alternative approaches assessed? As noted above, once congestion is managed by an effective CSP/CSC regime, the additional efficiencies available from region change are likely to be extremely limited. |

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| 24. To what extent will firming-up IRSRs facilitate inter-regional trade? What is the best approach to firming up IRSRs and how would this work? | Of course, firmer IRSR would help inter-regional trade. The best way to do this (in addition to addressing the problems created by hybrid intra-regional constraints) is to incentivise the TNSPs to maximise the physical firmness of the interconnector capacity. "Financial engineering" of the IRSR, on the other hand, will just create more complexity without really making the underlying service any more firm. |
| 25. Is there a need to review the case for the 'option 4' constraint formulation approach in the context of this Review? If so, what would be advantages and disadvantages of moving away from an 'option 4' approach to constraint formulation? | No |
| 26. What would be the effect of ceasing NEMMCO intervention to manage counter price flows? To what degree does this depend on other factors such as the region boundary criteria and process? | Without other changes to the current arrangements, ceasing NEMMCO intervention would potentially lead to a massive settlement deficit, which would have to be covered by somebody. If it were the SRA holders, this would substantially undermine the role of the SRA instruments as hedging tools. A full CSP/CSC approach – together with appropriate allocation of CSCs to the interconnectors – would remove the risk of negative IRSR and therefore remove the need for NEMMCO intervention. |
| 27. How should negative settlements residues be funded? Should the current process of offsetting negative residues with positive residues within the current billing week be continued or changed? | We are comfortable with recent Rule changes on this topic, but believe the recovery of negative residues from SRA proceeds should be extended to cover all time periods (ie NEMMCO should discontinue its practice of netting off negative and positive residues within each settlement week). |
| 28. Are constrained-on payments an appropriate solution to generators being paid regional reference prices less than what they offer? If so, what principles should apply for determining the size of payments, who should apply them and how should they be funded? | All intra-regional congestion – whether "constraining-on" or "constraining-off" generators – should be covered by a single, comprehensive CSP/CSC arrangement. Should this give rise to a situation where a "constrained-on" generated is considered to be "misusing" its market power to make "excessive" returns, this would a matter for the competition regulator (ie the ACCC). |
| 29. Would the funding of constrained on payments be likely to introduce a material financial risk for participants making the payments? How could this risk be managed? | Under CSP/CSC this issue does not arise. |

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| 30. Would there be merit in extending the existing NSAs as a congestion management tool in the NEM? If so, how should such arrangements be implemented? | Under a full CSP/CSC approach there would be no role for NSAs. However, we envision in the future that TNSPs should take some responsibility for the costs of intra-regional congestion and this may lead to TNSP entering into NSAs with constrained-on generators. [but may still need additional funds through NSA] |
| 31. Should NCAS support contracts be used to enhance transmission network capability? If so, who should offer these contracts? | Logically, these should be offered by the TNSP. These would be considered to be an alternative to network augmentation in the Regulatory Test. |
| 32. Is there merit in having TNSPs responsible for procurement of NCAS, rather than NEMMCO, so that NCAS forms a part of the Network Services? If so, how should this be arranged? | Yes, there is merit. However, the problem is the current lack of TNSP accountability for "external" operating costs (eg NSA costs are simply passed through to the user). Therefore, a prerequisite may be a comprehensive incentive framework on the TNSP to manage these costs. |
| 33. What would be the best way of funding NCAS payments and how should this be implemented? | We have no current view on this. |
| 34. Is the allocation of CSCs a necessary element of a CSP/CSC regime, or would it be practical to introduce CSPs without simultaneously allocating CSCs? | Yes, it is a critical element. See P9 of our main submission. It would be a costly mistake to introduce CSPs without allocating CSCs. The NZ market (which introduced nodal pricing without providing hedges) provides a useful lesson in this regard. |
| 35. If CSCs are a necessary component, what is the optimal way to allocate CSCs? What effect will this have on the ability to introduce CSPs rapidly and flexibly? | This is covered in some detail on P12-15 of our main submission. Under the full CSP/CSC approach the issues of "rapidity" and "flexibility" do not arise, as all CSCs would be allocated on "day one". |
| 36. Is it important to the design of a congestion management regime whether or not CSCs are firm? If so, what issues should the AEMC consider in reaching a view on the appropriate nature of CSCs? | See our answer to Q24. CSCs cannot be firm as long as the transmission network underlying them is not firm. We address this issue in some detail on P12-16 of our main submission. Again, the answer for the longer term is to incentivise TNSPs to increase the physical firmness of the transmission network. |

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| 37. How should the process of region boundary change be coordinated with the allocation of CSCs under a staged approach to congestion management? | We see no real need for boundary changes in relation to congestion management once full CSP/CSC is introduced. However, as noted in Q22, region change could still play a role in relation to long-term locational signals for demand. |
| 38. How can the Commission best draw on the partial Snowy CSP/CSC trial to evaluate the costs and benefits of the use of CSP/CSCs? How can the Commission best draw on the Snowy CSP/CSC trial to consider modifications to the proposed design of CSPs and CSCs? | The experience of NEMMCO and Snowy Hydro in implementing and operating the Snowy Trial should be used to benchmark the cost of full CSP/CSC. We believe the costs are much lower than previously envisaged. In addition, the Snowy Trial shows the dangers of a piecemeal "stage" approach to CSP/CSC, as an important mistake in the Trial design was not to allocate CSCs to the Snowy-Vic interconnector to address the negative-IRSRs caused by the "trans-regional" Murray-Tumut constraint (see earlier discussion of this topic in the CRA papers to the MCE). Our full CSP/CSC model – which adopts a comprehensive approach to CSP definition and CSC allocation – would avoid similar oversights in the future. |
| 39. Are there any additional congestion management tools that should be considered as part of this Review? How would these tools be implemented? How would they interact with other aspects of the congestion management regime? What would be the effect of such tools on participant behaviour and market outcomes? | No. We think the CSP/CSC model is sufficient to manage congestion. It just needs to be implemented consistently and comprehensively across the NEM. |
| 40. Which, if any, of the congestion management issues identified in this paper could be considered on a stand-alone basis? Which issues need to be considered together to ensure a comprehensive and consistent congestion management regime? | This depends upon the time required to implement a full CSP/CSC regime. We believe that this could be done quite quickly: for example by the end of the Snowy Trial in July 2007. However, if implementation were delayed, it may be necessary to implement interim "band-aid" solutions: for example extending the derogation to allow NEMMCO to intervene to prevent negative IRSR. |