

26<sup>th</sup> October 2006

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Dear John,

**Submission to: Draft Rule Determination –  
Management of Negative Settlement Residues by Re-orientation**

The primary purpose of this submission is to clarify two key issues which Snowy Hydro believes may not have been well articulated on our part during the consultation process on the Southern Generator's (SGen) and Snowy Hydro's re-orientation rule change proposals. We would like to highlight these key issues and put our views of these issues on the public record.

Snowy Hydro notes that the Southern Generator's proposal has been approved. We do not expect any action by the Commission in relation to the Snowy Hydro re-orientation proposal ensuing from this submission. We have come to this position as we believe the Commission has acknowledged and all market Participants recognise that a long term solution to the problems in the Snowy Region is more important than tinkering with these short-term solutions. We believe this submission would help Participants' understanding towards a Region Boundary solution for the Snowy Region.

Snowy Hydro notes that 7 out of the 8 criteria on which the Commission used to assess the proposals, the re-orientation proposal was equal to or marginally superior to the SGen proposal. The one criterion where the SGen was deemed superior by the Commission was the good regulatory practice criterion and consistency with the Tumut CSP/CSC trial.

**Good Regulatory Practice**

The Commission's basis for favouring the SGen was that it leads to less NEMMCO discretion. We believe that the Commission has misunderstood our submission

related to the activation of the re-orientated constraint equations. In our submission<sup>1</sup> to the Commission we stated,

- NEMMCO can leave re-orientated constraints in place for a reasonable period following introduction of the re-orientated constraints under a high northerly flow/high NSW price scenario given that these constraints will have no material impact if Murray to Tumut transmission becomes unconstrained. Hence the impact of NEMMCO's exercise of judgement is also immaterial. This mitigates the risk of negative residues when it is uncertain when the Murray to Tumut constraint may bind.
- In any case there are a limited number of hours where the Murray to Tumut constraint binds and hence the limited need to use re-orientated constraints.

In other words, the re-orientated constraints can be active all the time and will have no effect unless the relevant intra-regional constraint binds. The only time NEMMCO may need to change constraints back to Murray node is if Murray generation generates above 1300MW thereby pushing counter-priced flows to Victoria. However, as highlighted in diagrams later in this submission the probability of this occurring is zero since it would be financially unviable for Snowy Hydro to generate in this way. Hence, Snowy Hydro believes that NEMMCO does not need to intervene or make any discretionary decisions at all under the re-orientation proposal. It is unfortunate that this message was not well articulated to the Commission during the consultation process.

### **Consistency with CSP/CSC trial**

The second reason the AEMC gave for favouring the SGen's proposal was consistency with existing regulatory interventions, in order to promote greater certainty and predictability about the regulatory framework. The AEMC therefore favours the SGen's proposal because they considered it was more consistent with the rationale for the Snowy CSP/CSC trial.

The objective of regulatory consistency is entirely correct. The starting point should therefore be the current regulatory framework for locational pricing in the NEM. That framework is dominantly a regional approach to setting wholesale prices. A regional approach substantially reduces volatility and risk in the wholesale market, and so facilitates trade. It does however sacrifice some accuracy in price signals. When the price signals become increasingly inaccurate – originally measured through a proxy of hours of intra-regional constraint per year – the regional structure is amended.

The approach since market start has therefore been a regional approach to wholesale prices, which reflects a trade-off between accurate price signals and effective management of risk. That policy has been reinforced through the MCE's restatement of a regional approach, and through its rejection of nodal pricing.

The problem over regulatory consistency has not been due to the policy, but rather to its application. There has been a consistent failure to change regional boundaries in the way originally envisaged, and set out in the then Code. This failure to implement

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<sup>1</sup> Snowy Hydro Section 99 submission to AEMC dated 19/7/06, Consultation: Southern Generators Rule Draft Determination, page 4.

regulatory policy has caused particular problems in the Snowy region. Snowy therefore initiated the introduction of the CSP/CSC arrangements.

These arrangements are not consistent with regulatory interventions in the rest of the NEM for wholesale pricing and required a derogation. This was clearly recognised by NECA when it approved the proposed derogation. The approval stated:

*“NECA notes that:*

- it is generally accepted that the current regional structure in the Snowy region creates significant problems;*
- a change to the regional boundary would be a durable and effective solution to these problems..*

*[NECA] recommends to the MCE that it should consider whether the trial should be combined with steps to progress an expedited regional boundary change.”*

The arrangements were designed as a response to continuing failure to implement agreed regulatory arrangements for the wholesale market. They were explicitly intended to be a trial, and not a substitute for regional boundary change. The trial expires on 31 July 2007, but can be cancelled earlier.

Consistency with regulatory intervention should therefore be addressed by considering which proposal is most closely aligned with the arrangements for wholesale pricing in the NEM. Those arrangements are, and will continue to be, an approach relying on pricing regions, with periodic change to regional boundaries. It would be mistaken to focus on consistency with one ad hoc arrangement, introduced as a trial with a limited life, and introduced simply because of the failure to consistently apply the regulatory policy reflected in the Code.

The reorientation proposal is effectively a dynamic regional boundary change. As such, it is closely aligned to the regulatory intervention in pricing. The Southern Generators proposal is effectively nodal pricing. As such, it is inconsistent with pricing regulation for the rest of the NEM and with stated MCE policy.

***Conclusion: the AEMC is correct to focus on regulatory consistency. However, Snowy Hydro believes the re-orientation proposal meets this criterion better than the SGen’s proposal.***

A related issue is whether the AEMC is correct to consider that the SGen’s proposal is consistent with the CSP/CSC trial. We consider this is only partially correct:

- The SGen’s proposal would expose Murray to a nodal price. While inconsistent with MCE policy and with pricing arrangements for the rest of the NEM, this is consistent with the pricing arrangements under the CSP/CSC trial.

- The SGen’s proposal would give Murray no certainty against the imposition of this nodal price. This is inconsistent with the CSP/CSC trial. The trial included a contractual arrangement – the CSC component – which protected Tumut against the impact of CSP pricing.

The SGen’s proposal is effectively introducing a CSP for Murray without a CSC. By endorsing the SGen’s proposal, the AEMC is therefore endorsing nodal pricing without any contractual certainty. Again, that is inconsistent with the regulatory arrangements in the NEM as a whole.

In addition to those distributional impacts, this approach has negative efficiency impacts. These impacts arise in two ways:

- The introduction of nodal pricing for Murray, without the introduction of a CSC (as under the SGen’s arrangements) creates very substantial risk. This will lead to bidding and dispatch behaviour designed to minimise those risks. The result is a loss in dispatch efficiency, in comparison with the reorientation proposal. This inefficiency is illustrated in attachment 1, and
- The introduction of nodal pricing without a CSC, rather than adoption of the re-orientation proposal, substantially increases risk in the contract market. Experience elsewhere suggests that this will result in a substantial increase in transaction costs and/or a reduction in trade.

## **Conclusion**

The purpose of this submission was to clarify two key issues which we may not have effectively communicated on our part.

The first is that the re-orientation proposal would not increase NEMMCO’s discretion in dispatching the market. Hence, the re-orientation proposal meets the good regulatory practice criterion. Further, unlike the SGen proposal, the re-orientation proposal does not involve any post dispatch settlement adjustment of settlement residues. On the arguments outlined we believe that the re-orientation proposal is equal to or better than the SGen proposal using the good regulatory practice criterion.

Secondly, we believe the SGen proposal creates a nodal price at Murray, without a CSC. This is inconsistent with existing regulatory arrangements for regional pricing throughout the NEM, and with MCE policy. It is also inconsistent with the existing derogation for the ad hoc, and time-bound, trial of CSP/CSC arrangements.

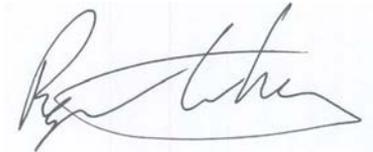
This approach will create substantial risk for Snowy Hydro, resulting in inefficient dispatch and a loss of efficiency in the contract market.

In summary, the re-orientation proposal is more consistent with the NEM-wide arrangements for pricing; more consistent with the CSP/CSC trial and equal to or better than the SGen proposal based on the good regulatory practice criterion. Hence,

we still believe that the re-orientation proposal is a superior proposal than in comparison to the SGen proposal.

Snowy Hydro appreciates the opportunity to comment on the Draft Determination. Please do not hesitate to contact me on (02) 9278 1885 should the Commission wish to further discuss issues raised in Snowy Hydro's submission.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Roger Whitby', is centered on the page. The signature is fluid and cursive, with a large initial 'R' and a long, sweeping underline.

Roger Whitby  
Executive Officer, Trading

**Attachment 1:** Efficiency Losses from nodal pricing at Murray, in the absence of a CSC

The Commission’s determination solely looks at the CSP for Murray without consideration of its implications. A naked CSP (that is in the absence of a CSC allocation to the load hub) is basically a nodal price for Murray generation. We have stated in previous submissions that this is inconsistent with the MCE policy direction of a regional market.

We believe the original CSP/CSC trial intent was to improve market efficiency by creating efficient incentives on generators to make their generation available. Allocating just a CSP to Murray without a CSC allocation does not create efficient market incentives to make generation fully available.

Snowy Hydro believes it is not the AEMC’s intent to impose naked CSPs in the NEM.

The re-orientation proposal gives implicit CSCs to Murray generation. As such, we believe the re-orientation proposal is more consistent and aligned with the principles/intent of the CSP/CSC trial as it creates efficient incentives on Murray generation. The incentives arising under these two options are explored in the following diagrams.

Diagram 1 shows a stylistic representation of the flows through the Snowy Region.

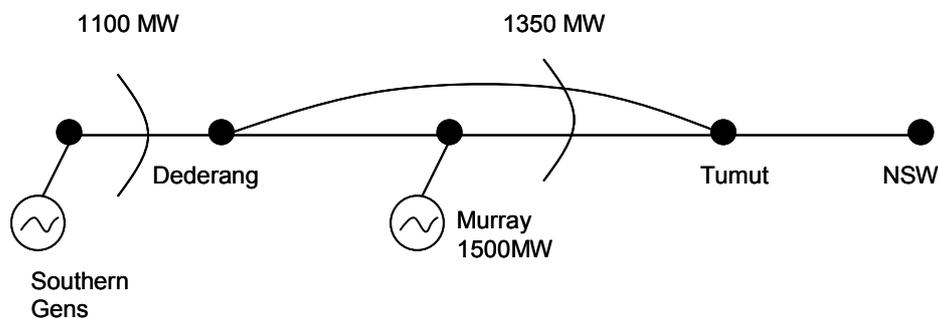


Diagram 1

From Diagram 1, it can be seen that Murray is the only generator that can supply 250MW through the Murray to Tumut cut-set (ie. 1350MW – 1100MW). If only a CSP is implemented for Murray generation (as per the SGen’s proposal) Murray faces the profit curve as shown in diagram 2 (with the assumption that the flow from Vic to Snowy is at the maximum 1100MW).

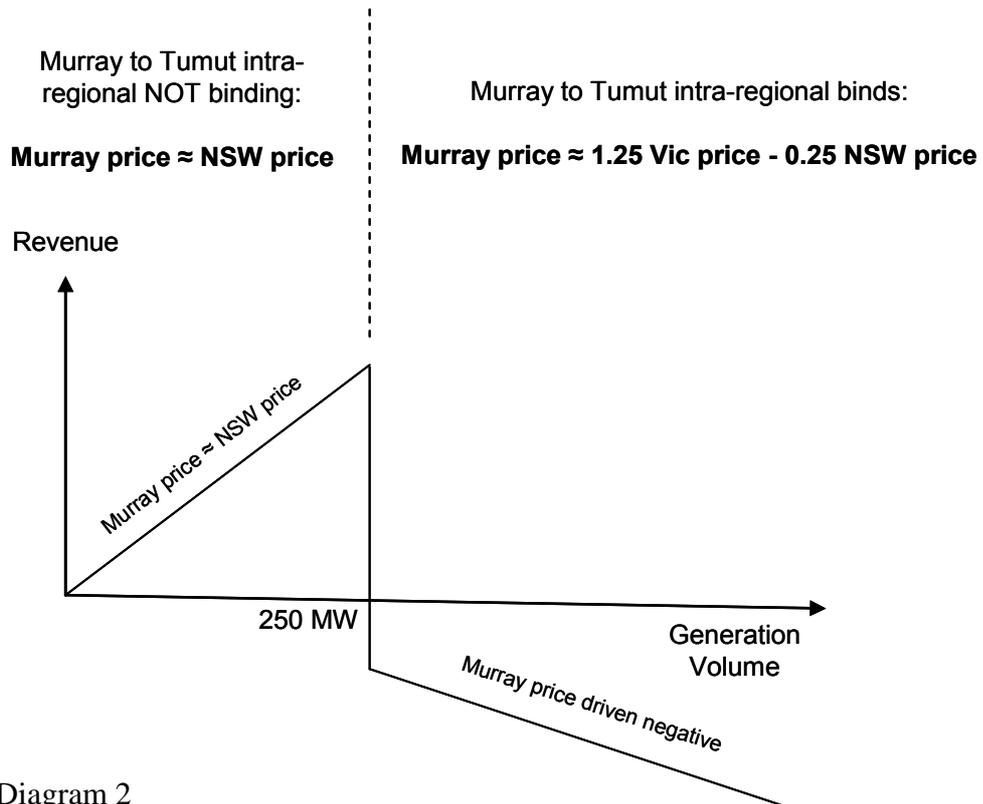


Diagram 2

The profit curve shown in diagram 2 places strong commercial incentives on Murray generation not to generate above 250MW and constrain the intra-regional constraint between Murray and Tumut. In effect, 1250 MW of available Murray generation is effectively withdrawn from competition in the Victorian market. This is clearly inefficient as it removes available generation and reduces competition.

A complete CSP/CSC scheme would allocate Murray 250MW CSC to access the NSW region (NSW load) as this amount represents Murray generation's uncontested transmission access to the NSW Region. This CSC allocation would provide Murray with profit curve as shown on diagram 3.

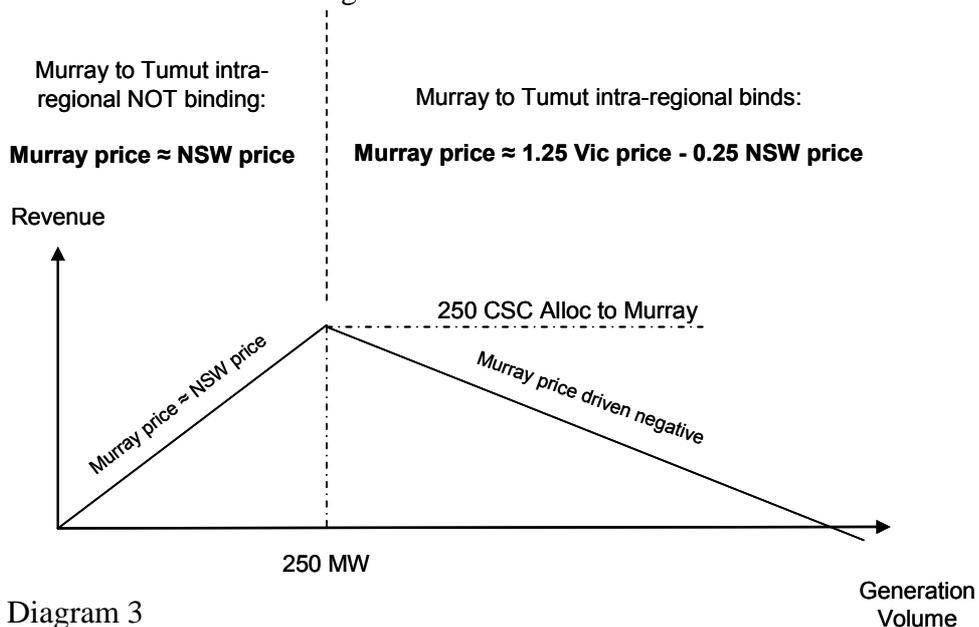


Diagram 3

Clearly, the profit curve in diagram 3 offers much better incentives for Murray generation to be available and provide competition in Victoria. Hence this is a more efficient arrangement while still recognising Victorian generators have better constraint coefficients.

Snowy Hydro believes the re-orientation proposal and the CSP/CSC (with CSC allocation to Murray) in fact offer very similar incentives on Murray generation. The re-orientation profit curve for Murray is shown on diagram 4 (assuming the Vic to Snowy interconnector flow is 1100MW).

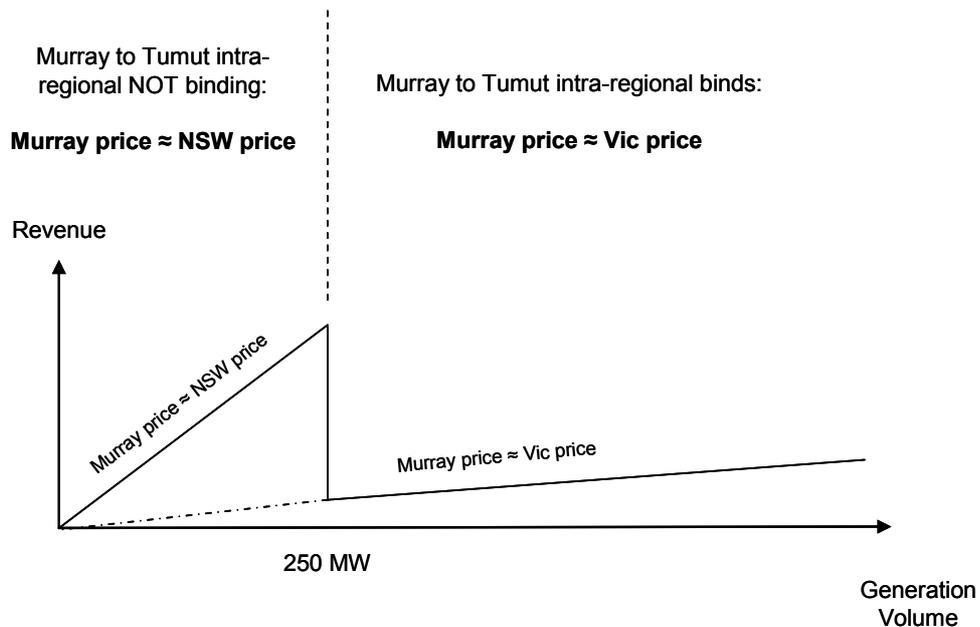


Diagram 4

When comparing the CSP/CSC and the re-orientation arrangements, it can be shown that the generation level at which the profit curves of the two arrangements intersect is 1250MW (see Appendix 2 for details of this calculation). The intersection of the CSP/CSC and re-orientation proposals is shown diagram 5.

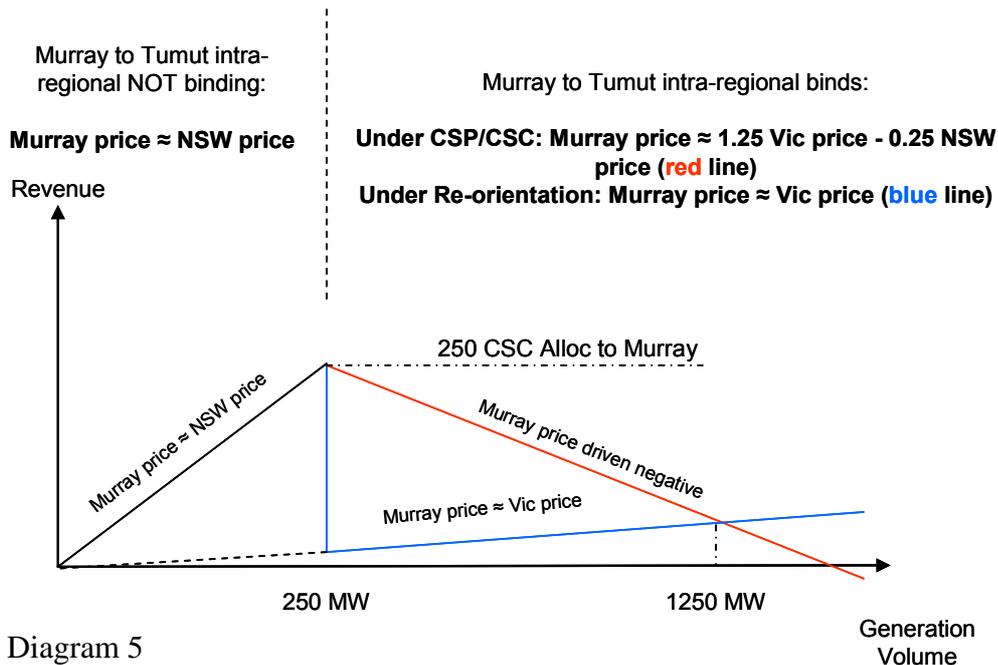


Diagram 5

In comparing the CSP/CSC arrangement with the re-orientation arrangement, from diagram 5 both proposals are the same if Murray generates at 1250MW. Under re-orientation Murray is slightly worse off if Murray generates between 250 and 1250MW and under re-orientation Murray is better off if generates above 1250MW.

Overall the effect of the re-orientation proposal can be summarised in the following:

- In our submissions we proposed that NEMMCO up front uses re-orientation constraints. If the intra-regional constraint between Murray and Tumut does not bind then it doesn't matter whether the constraints were orientated to either Murray or Dederang. Because of the network configuration in the Snowy region, if re-orientated constraints are set as initial constraints, NEMMCO would need to intervene only in the case when Murray generates above 1300MW. This is a level at which Murray generation would push flows to Victoria. If this were to occur there would be counter-price flows from Dederang to the Vic node. Hence under this situation, NEMMCO may remove the re-orientated constraints and invoke constraints referenced to the Murray node.
- However, due to the commercial implications of constraints being re-orientated back to Murray (ie. receives low prices, see diagram 2) the likelihood that Snowy Hydro would generate in this way is very low, we believe practically zero probability. That is, Snowy Hydro would be incentivised to not let this occur because it is fully in control of Murray generation and cost to Murray generation would be enormous (as depicted in diagram 2).

Our conclusion is that the re-orientation proposal based on the discussion presented above represents a form of effective CSP/CSC implementation. Re-

orientation offers much more efficient market incentives on Murray generation to make its generation available and hence we believe that it is more aligned and consistent with Tumut CSP/CSC trial than a naked CSP implementation as per the SGen's proposal.

In contrast, there are inefficient incentives on Murray generation under the SGen's proposal as highlighted in the following:

- Effectively only a CSP has been implemented for Murray generation. This incentivises Murray to withhold generation which significantly reduces competition and reduces welfare to Victorian customers. In effect the proposal removes 1250MW of Murray generation out of the market; and
- No efficiency benefits in NSW is achieved as Tumut generation incentives to hold the headroom on the Tumut to NSW lines have not changed.

## Appendix 2: Intersection of the profit curves

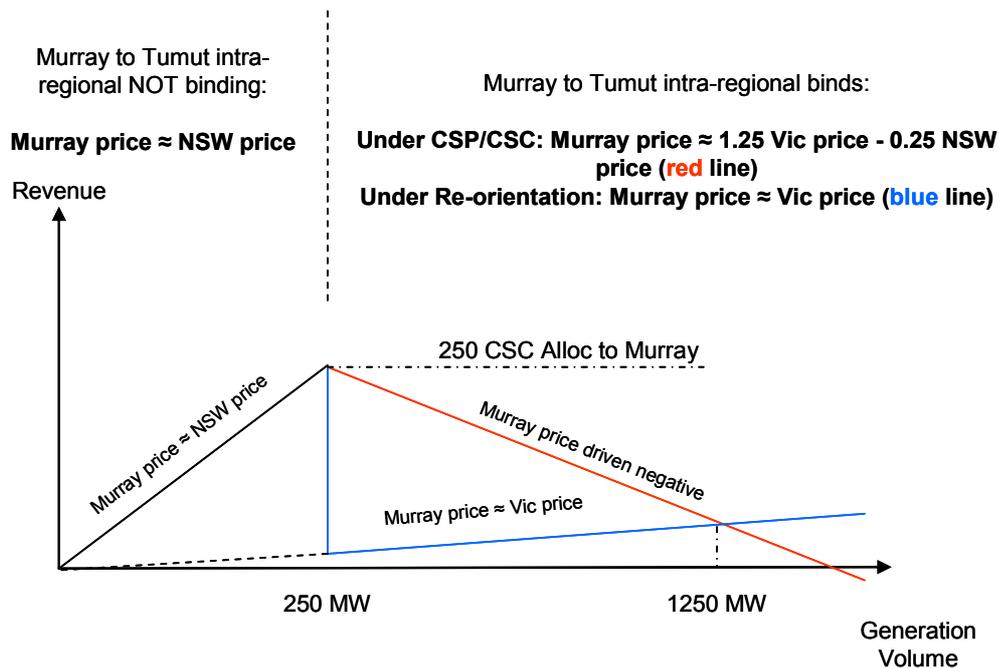


Diagram 5

The figure of 1250MW was calculated in the following manner:

Murray should be allocated a 250MW CSC to the NSW Load Hub.

What is the Generation Volume where the CSP/CSC and the re-orientation arrangements offer the same profit outcome? Let this Generation Volume be known as X.

The equation to solve for X becomes:

$$\begin{aligned} \text{CSP/CSC profit} &= \text{Re-orientation profit} \\ \text{CSC} * \text{NSW} - \text{Murray} * (\text{X} - \text{CSC}) &= \text{X} * \text{Vic} \end{aligned}$$

Assuming Murray price is \$0/MWh (ie. Murray bids \$0/MWh) and the Murray CSC is 250MW.

$$250 * \text{NSW} - 0 = \text{X} * \text{Vic} \quad \text{Equation 1.}$$

Further, with the configuration of the network in the Snowy Region, prices in Vic, Snowy, and NSW are given by the following relationship:

$$\text{Vic} = 0.8 * \text{Snowy} + 0.2 * \text{NSW}$$

If the Snowy (Murray) price = \$0/MWh then,

$$\text{Vic} = 0.2 * \text{NSW}$$

Therefore,  $NSW = 5 * Vic$  substituting this into the above equation 1 gives,

$$250 * 5 * Vic = X * Vic$$

Therefore  $X = 1250MW$