13 May 2010

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Dr John Tamblyn
Australian Energy Market Commission
PO Box A2449
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By online submission

Dear Dr Tamblyn,

Scale Efficient Network Extensions

We refer to the AEMC's Consultation Paper on Scale Efficient Network Extensions (SENEs) and lodge our submission response.

AEMO believes that the introduction of SENEs is a significant addition to the National Electricity Market and welcomes the opportunity to comment on the Consultation Paper. We also would welcome any prospect to assist the AEMC in developing considering the issues surrounding SENEs and development of the rules.

If you have any questions, please call Franc Cavoli on (03) 9609 8416.

Yours sincerely

David Swift

Executive General Manager Corporate Development

cc:

Attachment: Submission – Scale Efficient Network Extensions

AEMO'S SUBMISSION TO THE AEMC'S CONSULTATION PAPER ON SCALE EFFICIENT NETWORK EXTENSIONS

1. EXECUTIVE SUMMARY

The National Electricity Market (NEM) faces a strong challenge over the ensuing decades as it attempts to meet the challenges posed by national climate change policies and changing generation technology and sources. The Australian Energy Market Commission (AEMC) has recognised the magnitude of the challenge that the NEM faces. In its reports entitled "Review of Energy Market Frameworks in light of Climate Change Policies" (Climate Change Review)[1], the Commissioners stated "[climate change policies] will result in a structural transformation of many aspects of the market over a period of years and that transformation will not be without substantial risk and cost for energy markets."[2] One of the significant issues to be addressed in these changes is the need to efficiently expand the national network to meet the needs of a changed generation portfolio. To help meet this challenge it has introduced the concept of a Scale Efficient Network Extension (SENE).

By developing the concept of a SENE, the AEMC has recognised that there is a large generation potential in locations that are remote from the existing shared network which has, the potential to competitively meet the criteria of the climate change policies. Yet connecting these potential sources can be very costly. Even a rudimentary calculation of the potential costs indicates the magnitude of the costs that we could be facing in connecting such generators is in the billions of dollars across the NEM. One need only look at AEMO's Innamincka Case Study to understand the large costs of connecting remote generation.[3]

If the network is expanded efficiently, the cost of all SENEs should not be incurred at once and the annualised costs should be manageable. However, it reinforces the need to be cognisant of both the potential value and the risks in developing the detailed Rules through the Commission's current process. The optimisation processes used in AEMO's planning should be able to identify premium SENE investment areas in terms of resource extraction capability, advancement of technology that can exploit certain remote resources and relative positioning of the SENE not only to the existing network but to load centres. Careful planning will allow the overall costs of SENEs to be optimised against their benefits.

Were the risk of these investments to be entirely faced by private generators, then the arguments presented in this submission would be moot. A private investor is free to risk its capital and be rewarded for successful investments or financially punished for poor ones. However, a SENE is more like a joint venture between generators and

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[1] Review of Energy Market Frameworks in light of climate Change Policies, 30 September 2009. This report can be found at http://www.aemc.gov.au/Market-Reviews/Completed/Review-of-Energy-Market-Frameworks-in-light-of-Climate-Change-Policies.html.

[2] Climate Change Review, page iii.

[3] The Innamincka Case Study provided estimations of different configurations of varying lengths, voltages, distances and stages. The cost estimates ranged from $0.3 million to $6.1 million depending on configuration and stage. This case study along with other documents on extending the network to connect remote generation can be found at (http://www.aemo.com.au/planning/nera.html).

consumers. Each bears the risk of the success of that SENE where, in the case of consumers, success is measured by both whether it becomes fully subscribed and whether the location and timing represents an efficient extension of the grid. It is not clear whether the criteria in the proposed Rule support such a view.

This being the case, each SENE investment must be properly and thoroughly scrutinised in order to minimise the risks to consumers. The AEMC has considered this risk and designed roles for both AEMO and the AER in its Review which are included in the proposed Rule changes currently under consideration. We agree in principle with the need for appropriate checks and balances to provide a mechanism to manage the risk to consumers. AEMO is currently exploring the potential to use the existing regulatory framework and the RIT-T to justify the development of a generation hub in Western Victoria. This process does inherently include an economic efficiency test and we would be pleased to share any learnings from this process with the Commission. AEMO has already provided a preview of how it intends to identify SENE zones in its 2010 National Transmission Network Development Plan Consultation[4] and in this submission, AEMO has attempted to further clarify how it perceives its roles in the SENE framework and sought changes to the framework where it thought that it lacked sufficient rigour to safeguard the risks to consumers.

AEMO's approach to the NTNDP is based on the development and assessment of a number of scenarios for the future development of the power system with different economic, technology and public policy assumptions.. In our SENE zone identification role, we intend to apply our NTNDP co-optimised planning methodologies[5] to identify the best sites to develop in each scenario. The optimisation techniques would then seek to identify the likely size, location and sequence of SENE zones that would be efficient for the particular scenario. This could include, for instance, comparisons of zones that are geographically located closer to load centres to those which are further away. This type of analysis may reveal that a distant zone with a superior generation resource is ultimately less efficient than a zone with an inferior generation resource when cost of shared network constraints is taken into account.

AEMO also has a Victorian planning function that arises from the National Electricity Law (NEL). We believe that the Victorian arrangements and the manner in which AEMO intends to implement SENEs are consistent and they should achieve an efficient result. AEMO believes that SENEs will fall within the contestability framework in the National Electricity Rules (NER) and the competitive tender arrangements within that framework should drive an optimal result.

Finally, AEMO makes some observations regarding the firm access arrangements proposed by the AEMC. AEMO supports a financial form of firm access as it is more efficient than physical allocation but it does have some reservations regarding how a SENE's transfer capability would be determined and how rights would be treated should firm access become a feature of the entire network or a SENE is converted to a shared network asset after looping or integration with the rest of the network.

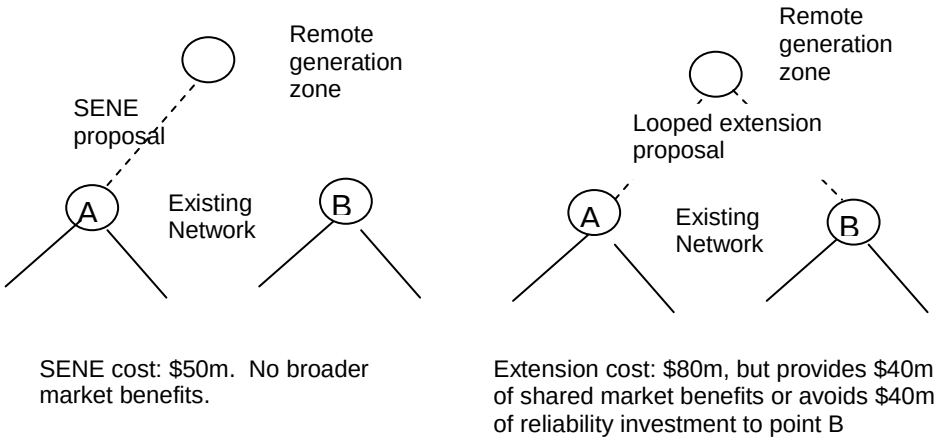
[4] NTNDP Consultation papers can be found at (http://www.aemo.com.au/planning/ntndp.html).
[5] See National Transmission Network Development Plan: Consultation Paper, p. 16 (http://www.aemo.com.au/planning/ntndp.html)

2. INTERACTION WITH RIT-T FRAMEWORK

The AEMC has raised legitimate concerns about whether the identification and development of SENEs, as envisaged, could compromise economic efficiency in the transmission and distribution networks. AEMO was involved in the initial working groups that considered and developed the SENEs concept and it also considered them in the Climate Change Review. During the process of considering SENE (then referred to as Network Extensions for Remote Generations (NERG)), the potential inefficiencies of SENEs were highlighted and recognised as such.

The two major issues highlighted were:

- the test for determining the size of the transmission/distribution line is a forecast of the reasonable amount of generation that will sign up to that SENE location rather than an assessment of that SENE's efficiency compared against other potential network and non-network investments that would deliver similar benefits (in the manner that a RIT-T[6] would do). If done correctly, a SENE assessment as proposed would allow local efficiency but not global or network-wide efficiency. This can be shown by the following diagram:



SENE cost: $50m. No broader market benefits.

Extension cost: $80m, but provides $40m of shared market benefits or avoids $40m of reliability investment to point B

  In the first example a SENE is constructed and sized to the NSP's reasonable generation forecast. The benefits accrue entirely to the connecting generators. In the second example, the line is directed towards generation sources before reconnecting back into the network. In this situation, a RIT-T is better able to determine the full benefits of a loop whereas a SENE assessment would only be capable of justifying the investment in the first example.

  In addition, a RIT-T analysis would enable a comparison of the proposed SENE against other network and non-network alternatives and indeed against other SENE proposals. Lastly, the RIT-T is also able to efficiently scale a network investment. With the introduction of option valuation as an explicit valuation methodology in the RIT-T, there is no doubt that efficient "over-sizing" can be valued as a market benefit and built into the project;

- a SENE does not directly remove constraints in the shared network downstream of the generation thereby reducing the attractiveness of the SENE to potential generation investment.

[6] In this submission a reference to RIT-T includes a reference to the RIT-D and to the Regulatory Test unless otherwise specified.

These inefficiencies could be mitigated by the NTNDP Planning process identifying candidate SENE zones that were identified as efficient investments on various scenarios and given timeframes. The modelling undertaken should incorporate market dispatch and network modelling which also effectively took into account the impacts of downstream constraints. It was also acknowledged that the existing "funded augmentation" framework also leads to inefficiencies for the following reasons:

- if a generator funds the cost of network extensions to transport its output to the existing network, the size of the line will usually be optimised for its own output and not that of other nearby generation sources. This leads to the potential for duplication as other nearby generators fund their own extensions and connection assets;
- it does not capture the option value of presently expanding the capacity of the line to enable future generation to connect at lesser cost than they would if they were to have to upgrade the facility at a later date.[7]

AEMO considers that a RIT-T assessment may be able to be applied and a case developed for the scale efficient connection of a group of generators. AEMO is currently exploring the potential to use the existing regulatory framework and the RIT-T to justify the development of a generation hub in Western Victoria. as a test case of the approach. However, while the RIT-T approach is already available, it was judged by a number of stakeholders to not address the needs of environmental policy driven generation that tend to make generation remote more viable. The concern was that it did not deliver the necessary investments. In addition, justifying to the AER, the incorporation of part of a connection asset into an NSP's revenue cap application as an "option value " has no precedent. Consequently, even if justified by a RIT-T, there is a risk that SENE type assets could not be recovered except by incorporating it into the NSP's Regulated Asset Base (RAB) at its subsequent revenue application which of itself also carries a risk of rejection.

AEMO supports specific provisions for SENEs which try to balance risk to consumers with the desire to capture the benefits of scale. Furthermore, the SENE concept does not replace the role of the RIT-T as the NSP's assessment tool to augment or extend its network, rather it is an additional tool that is used for a particular type of investment. Consideration of the criteria for identifying and implementing SENEs may effectively bring the two provisions closer into alignment.

3. SENE ZONE IDENTIFICATION

AEMO agrees generally with the guidelines set out in the proposed rules relating in its role of identifying the SENE zones. The NTNDP is a logical avenue for the dissemination of a wide range of information relating to network development and information regarding the location and the potential of prospective SENE zones is no exception. AEMO has already conducted a consultation into matters associated with the identification of zones in the NTNDP[8] and has received a number of submissions [9]

[7] For example, the cost of purchasing a wider easement than required at connection of the foundation generator is minimal compared with the expanding the easement when the future generators wish to connect. A number of factors could operate to escalate the cost of an easement in the meantime or it could simply become unavailable due to incompatible development.

[8] http://www.aemo.com.au/planning/0418-0003.pdf

[9] http://www.aemo.com.au/planning/ntndp.html

from potential SENE connectors and a TNSP. AEMO refers the AEMC to this. Several of the issues raised by submitters are appropriate to consider within the rule change process.

In this vein, AEMO intends to make that document as informative and useful to the market as possible but stresses that like the rest of the document, it is not a statement of planning intent, rather it is a recommendation of a SENE zone in light of the likelihood of a particular scenario or a number of scenarios coming to fruition. This suggests that in some cases, if the conditions that are assumed in any particular scenario have not come to fruition, that SENE zone would not be ready to be approved for construction. This approach is consistent with the proposed NTNDP planning approach as outlined in the NTNDP consultation document and the filtering process should provide some comfort that it will not cause NSPs to devote a high proportion of their planning resources to plan SENEs for their subsequent APRs when there is a low likelihood that the SENE is viable in that year.

The NTNDP intends to provide not just a list of the nominated AEMO SENE zones, but also information about other, prospective zones that have a good chance of being nominated in future NTNDPs when the scenarios considered come closer to fulfilment. This will thereby allow a sequencing of zones reflecting their relative efficiency over time. In this way, risks faced by consumers of bearing the costs of uncommitted capacity on multiple simultaneously constructed SENEs is reduced. This information would include the changes in conditions that would likely see those prospective zones promoted to nominations. It is then up to the NSP to determine by its forecasts whether there will be a need for a SENE in the recommended SENE zone.

AEMO does have concerns that the criteria in clause 5.6A.2(b)(2)(v)(2a) do not give it sufficient scope to consider the commercial viability of a zone's generation resource. The rule include criteria that refer to the viability of future electricity generation projects but there is no criteria that the resource be commercially viable or that the zone's generation resource is better than a resource located elsewhere. We believe that such a criterion would greatly assist AEMO in its SENE zone identification role and align with AEMO NTPDP planning methodologies. Further, in order to provide greater guidance to the market about how SENE zones are identified AEMO intends to (and prefers that the rules allow AEMO to) develop, in consultation with the market, guidelines that would guide it in this task.

There are some other issues that AEMO would like to highlight:

- consumers bear a great deal of the risk that generators do not connect at the location and at the time that the TNSP's generator forecasts that they will. One way of minimising this risk is to require that AEMO consider this risk as a positive objective as part of its SENE zone identification role;
- the NTNDP is an annual document and therefore AEMO's assumption is that each year the assessment of each SENE zone will have to recommence. AEMO understands the need for investor stability and would attempt to avoid undue volatility in the list of zones;
- AEMO considers it important to consult with all stakeholders on the development of the NTNDP and, as part of those processes, to receive input on a range of matters relevant to the development of the Plan and the identification of candidate SENE zones. As such, we consider that specific reference to

"consultation with the *participating jurisdictions*," should be removed from proposed rule 5.6A.2(b)(2)(v)(2a)(viii).

4. GENERATOR FORECASTS

4.1. AEMO's assessment

Under the proposed rule 7.5A.7 AEMO is required to undertake an assessment of the generation forecast to connect to a proposed SENE, this assessment is then used by the AER in its assessment of the proposed SENE connection offer. In its rule change request MCE indicated that this assessment was intended to reduce the risk of inefficient investment by providing an informed assessment of the NSPs generation forecast.

AEMO is concerned that the rule as currently drafted restricts AEMO's ability to make this assessment effectively. The proposed rule 7.5A.7(b) provides that AEMO must:

> *assess whether, in the view of AEMO, the methodology, assumptions and conclusions of the Network Service Provider in determining the forecast generation profile were reasonable.*

These criteria do not permit AEMO to make an independent assessment of whether the estimate is the best possible in the circumstances. This may result in AEMO giving advice that an NSP's forecast is reasonable despite being unconvinced that it represents the most likely outcome. The AEMC should consider these provisions and the extent to which they may expose consumers to the risk of inefficient investment.

In addition, AEMO proposes that in carrying out this role, it would engage in discussions with NSPs regarding the proposed SENE leading up to the application being lodged with the AER. AEMO believes that it will be more productive for both AEMO and the NSP to engage cooperatively to identify the most desirable SENE investment rather than merely exercise its judgement in a formulaic decision-making process. As the AER ultimately makes the decision to accept a SENE proposal, AEMO should be able to apply a more consultative and less formal approach. We therefore would prefer that the rules reflect this cooperative process approach. We make this point again in section **Error! Reference source not found.** in relation to developing alternative configurations of SENEs.

4.2. Staged Development

AEMO supports the capability for TNSPs to stage the construction of SENEs to counter the risk of the inherent uncertainty in the generation forecast. This could be done by TNSPs proposing SENEs that can be delivered over a number of years with stages being dependent on generation forecasting or cost estimation data that may become more certain at a later date. The forecasts may be expressed as targets that, if satisfied would trigger the construction of the staged developments. This would obviate the need for the TNSP to return to the AER to get further approval for each stage once each stage's conditions were satisfied and would therefore provide a much more certain investment pathway while allowing consumers to take the benefit of deferrals of expenditure on assets that may not be utilised for a long time or possibly become stranded. This is not intended to remove any benefits of scaling that can be properly identified as "option benefits". If the scope of the SENE project includes scale efficiencies that fall into this category, these should be included in the initial stage.

The proposed rules do not provide an explicit pathway to the staging of a SENE but they probably do not need to. Provided that there is nothing in the proposed rules that would prohibit or cast doubt on the AER's capability to approve a stage development, the AER could develop guidelines regarding how it would implement staging and under what circumstances.

In advising the AER on its view of the generation forecast, it would consider any opportunity to stage a SENE as a benefit since it defers portions of the investment until better and clearer information can be obtained about the economic benefits of proceeding with the next stage. AEMO would see it identifying staging opportunities with NSPs in a cooperative manner in anticipation of carrying out its advice role.

4.3. Alternative Configuration of SENEs

The AEMC has identified that SENEs are not necessarily radial lines to a hub and spoke arrangement. They are likely to take the form of any number of configurations including those that the AEMC has illustrated on page 18 of its Paper. AEMO believes that the concerns raised by the AEMC regarding cost allocation to generators are legitimate. There is no doubt that each SENE zone will require innovative solutions to exploit and many of them will not have been predicted.

AEMO would hope that a properly designed SENE would be cost reflective wherever a generator decided to connect. Therefore, if a "wind" SENE zone that had a relatively uniform wind regime, it should be designed so that capacity and therefore input costs should diminish over its length to accommodate connection along its length rather than all at the end. This would enable generators that are connected closer to the existing network to pay less than those connecting further out. This not only reflects an upward cost curve as a generator moves further from the existing network but it provides a good locational signal as well.

Further, SENEs should not be thought of as having to continue directly to each generator's "door" but rather to be developed to provide for the lowest overall cost to connect; i.e. to take advantages of scale efficiencies where they exist but not to unnecessarily expand the value of assets designated as SENE assets. This method allows the market to determine the most innovative configuration while minimising exposure to consumers.

The staged approach to developing a SENE would also reduce the risks associated with potential inefficient configuration. Leaving later stages to a time when generation forecasts can be determined with greater certainty can ensure better route, distance and capacity decisions. One concern that should be considered are the cost implications of a staged development. While AEMO believes that a staged development reduces the risks to consumers it creates some issues with costing. If staging occurs then thought needs to be given to how charging is apportioned to generators connected to prior stages of the SENE where they should gain the benefit of a reduction in the costs due to the subsequent staging. This could be a role for the AER to consider that may need to be captured in the rules.

4.4. Co-ordinating SENE Network Service Provider

Where a region has several TNSPs then according to 5.5A.15 states that all NSPs must appoint a *Co-ordinating SENE Network Service Provider*. AEMO does not have any issue with the concept of a co-ordinating SENE NSP but does believe that the method of appointing one when there are several to choose from will lead to disputes.

The pathway to resolving such disputes should be very clear but it also needs to be recognised that there will usually be a clear logical NSP and the dispute process will only delay the appointment of that NSP. A circuit breaker to this would be to have either the AER or AEMO determine the appropriate NSP for that SENE.

In addition we believe that this does not apply to the Victorian arrangements and would request that this be clarified in the eventual Rule. There is no doubt that AEMO would be the co-ordinating NSP for the Victorian jurisdiction despite the existence of three TNSPs and five DNSPs.

5. TIMING CONSTRAINTS

The time that it takes to plan a SENE after its initial proposal format in the APR will be considerable and questions whether the timeframes allowed in the proposed framework will cause the NSP to have to unreasonably rush its planning and costings of a SENE. AEMO believes that it is reasonable to assume that [after the initial planning of a SENE is completed by a NSP, that the timings of stage 5.5A.5 (b) (30 business days) and (c) (20 business days) are unreasonably short to ensure that the SENE can be planned in an organised manner considering all the technical issues that are likely to emerge from the SENE invitation period. It is impossible to define exactly what the maximum timeframe should be set at given the great range of complexities that a SENE may entail. It is AEMO's view that these timeframes should not be fixed. Instead, it should be left to the NSP to determine what period it requires to adequately develop the SENE and its connection offer.

NSPs would have a natural incentive to not overly prolong their development of the proposal, because this would risk the connectors "losing interest" and therefore jeopardise the chance of gaining AER approval.

6. COST RECOVERY

Thought needs to be given to the recovery of planning costs of the SENE. There are many options available to a NSP from charging the planning costs to connection applicants (in proportion to its contracted capacity) at the time that the connection application is made to the wrapping up of those costs in the total costs of the project and charging it through the generator charge. Either way is a legitimate method of recovering those costs and the SENE framework should allow either.

We note that the proposed rules envisage that those costs are wrapped up in the connection contract, however, AEMO believes that the former method is the better way to account for those costs because it is consistent with the existing connection application process. In addition, it ensures that the connection applicant is serious about its willingness to sign up to the SENE because it will have to pay an up-front connection application charge reflective of the effort that a NSP has to invest in planning the SENE asset.

7. VICTORIAN ARRANGEMENTS – CONTESTABILITY

7.1. Background

As the AEMC is aware AEMO is responsible for planning and directing augmentations to the Victorian Declared Shared transmission network (DSTN). Connection assets are provided by the asset owner to whom the connection is being formed. The clarifications made in respect of the nature of the assets and the service in the

Consultation Paper have made it clear that in Victoria, AEMO will be responsible for planning of, connecting to and charging of SENEs that connect to the DSTN as well as identifying the SENE zones in the NTNDP.

There are a number of consequential changes that are required to the proposed SENE Rules arising from these clarifications that are highlighted below.

7.2. AEMO's dual Role and AER approval

Under the Victorian arrangements AEMO is not subject to AER revenue regulation. The independent governance of AEMO, its financial status and its legislative obligations ensure that it acts in 'the long term interest of consumers' and therefore eliminates the need for this oversight.

Given the potential for AEMO to perform a dual role in Victoria, if it determines that a SENE is best developed on the Victorian DSTN, there would be limited benefits in AEMO seeking AER approval to proceed with a SENE.

As an alternative arrangement AEMO proposes that it be subject to additional public consultation to ensure that any investment decisions are made in an open and transparent manner. This would be similar to a RIT-T process which incorporates a public consultation process prior to a SENE going to tender in order to allow the market to validate and check AEMO's assumptions and methodologies.

AEMO could also publicly consult on the ultimate functional specification of the SENE before proceeding to a Request for Proposal to build, own and operate the SENE.

We believe that these two measures acting in tandem should provide sufficient comfort to the market that the absence of an independent check of AEMO's generator forecast should not mean that there is an unreasonable risk of it being inflated or otherwise incorrect.

7.3. Pricing Issues

The competitive tendering provisions that apply in Victoria require AEMO to seek public tenders if the cost of the asset is expected to exceed $10 million and can be provided by an alternative service provider as a 'separable' service.

These thresholds are likely to be satisfied for any SENE's developed in Victoria. This will mean that while functional specifications may be determined by AEMO as part of its SENE planning obligations but the detailed project specifications and costing of the proposed SENE will be that detailed in the final tender specifications of the successful conforming tender.

Given the tensions that come from these arrangements the cost to consumers and generators will be competitive. AEMO therefore does not consider that the pricing regime proposed or AER oversight that is required for 'for-profit' asset owners need apply to AEMO determined cases.

7.4. NER Clarification of the Roles

In accordance with the National Electricity Law's arrangements, the National Electricity Rules (NER) details how some responsibilities are split between AEMO and asset owners (see for instance 5.1.2). The final version of the Rules will need to include provisions setting out which functions will be performed by each party. AEMO does not wish to comment on the exact allocation of roles at this stage as we anticipate changes to the draft rules but broadly AEMO understands that it will be responsible for planning

SENEs in the declared shared network. We look forward to engaging with the AEMC about the exact allocation of functions as the Rules develop.

8. FINANCIAL FIRM ACCESS

8.1. General

A central tenet of the SENE proposal is that generators are able to obtain firm financial access along the SENE to the connection point with the shared network. It would work by allowing each generator that wishes to connect to the SENE to nominate a capacity that it would contract for. The contracted amount would then assure the generator a defined capacity over the SENE asset. The type of firm access envisaged by the proposed SENE rules would have a generator constrained from achieving its contracted capacity receive compensation from the generator or generators that caused the first generator to be constrained. The amount of compensation would be equal to the regional pool price multiplied by the amount of the constraint less the marginal cost of generation reflecting the idleness of the generator during the constraint. This is the equivalent of the clause 5.4A methodology that may currently be applied to the shared network.

Private investment in generation in part depends on some level of guaranteed access to the regional price. While access does not always have to come in the form of a firm access right (some generators are content to take the regional price on an opportunistic basis while others prefer to locate on robust parts of the network that permit them to manage access to the regional price given their generator's generation profile) in most cases, some form of explicit financial firm access right would greatly assist in reducing generator investor risk.

AEMO supports the firm access scheme proposed by the AEMC because a framework based on financial settlements allows for a more efficient use of the system rather than a physical firm access arrangement. AEMO also believes that the mechanism currently proposed in the rules appears consistent with the design of the dispatch engine and would permit the co-ordinating NSP to retain a balanced settlement. AEMO will need to distinguish constraints applying to the SENE from shared network constraints. Thought may need to be given to the process of averaging 5 minute constraint values with 30 minute trading interval settlement.

There are a number of issues that surround firm access, some of which have been identified by the AEMC, including the following:

- the contracted capacity on the SENE would only allow for the generator guaranteed access to the connection with the existing shared network;
- if the generation forecast is underestimated or the and the SENE is over-subscribed.

AEMO would add the following matters for the AEMC to consider:

- the proposed rules do not provide any guidance as to how an NSP would determine the transfer capability of a SENE for the purposes of the scheme. A line's transfer capability changes depending on a number of factors, for instance, ambient air temperature, season (summer and winter) and its short term capability can be much higher than its long term. Some guidance in the rules to provide some consistency among SENEs would be welcome and AEMO is be willing to explore options with the AEMC;

- AEMO would like to see some form of firm access considered, designed and eventually applied to the entire network rather than piecemeal to parts of it. Applying it to a certain portion of the network while excluding it from the shared network is likely to cause unforeseen problems and gaming. We note that the AEMC is likely to consider the concept of firm financial access or a variation of it in its Transmission Frameworks Review. If so, then the AEMC will need to consider a transition path that will enable the rights that it has created under this scheme to convert to or integrate with the type of rights that may be adopted in the future; and

8.2. Load Connection

We note the AEMC's comments in relation to what happens if load connects to the SENE. AEMO view is that where load connects to a SENE, there should be a pathway to allowing conversion of those assets, or some proportion of those assets, to part of the shared network and the provision of prescribed services. The point at which that conversion should take place should be dictated by the outcome of a RIT-T analysis because if the market benefits identified in that analysis exceed the costs of the asset (i.e. the investment shows net benefits to society), then it would justify that consumers pay for the asset through TUOS. This would also require that any firm access rights granted to generators on the SENE would be extinguished and they would be subject to any shared network constraints.

8.3. Reconfiguration and Conversion

As discussed in the paper, the rules need to contemplate the possibility of a SENE being substantially reconfigured to become an integral part of the shared network. Such a reconfiguration would take place following a RIT-T analysis of the market benefits of the redesign. In the current network regime, the generator funding and financial firm access regime that would apply to a dedicated SENE are inconsistent with the shared network. It would seem that upon a reconfiguration based on a RIT-T development, the SENE assets would need to be converted to shared prescribed assets and connecting generators would be relieved of their ongoing obligation to fund the SENE. Their financial firm access would also lapse.