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Dr John Tamblyn
Chairman
Australian Energy Market Commission
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Dear John

VENCORP'S RESPONSE TO THE AEMC FIRST INTERIM PAPER FOR THE REVIEW OF ENERGY MARKET FRAMEWORKS IN LIGHT OF CLIMATE CHANGE POLICIES

VENCorp welcomes the opportunity to make a submission to the Australian Energy Market Commission's (AEMC) First Interim Paper for the *Review of Energy Market Frameworks in Light of Climate Change Policies*.

In this submission, VENCorp has identified the following issues that we believe should be given priority:

- **Convergence between gas and electricity**
  In recognition of the growing convergence between the electricity and gas sectors, VENCorp strongly encourages the comprehensive examination by the AEMC of both gas and electricity market frameworks as part of this Review, as directed by the Ministerial Council on Energy.

  While your report suggests that convergence between electricity and gas is not a priority, we disagree and suggest that the increase in gas usage with the introduction of the CPRS will severely stress the relationship between gas and electricity markets (or lack of them, in some cases). There are cases in which market frameworks should be coordinated between the two sectors, such as market price settings and energy security mechanisms.

  While the MCE, gas industry and VENCorp have been making good progress in the area of open and transparent gas markets, the framework for development of these markets is being gradually handed over to the AEMC to manage. It is VENCorp's view that reform in this area is far from complete and VENCorp would strongly support all states participating in open and transparent markets such as the Victorian wholesale gas market, the BB and STTM.

- **Gas network planning**
  VENCorp is concerned that the AEMC report does not identify this as a significant issue. VENCorp would be in favour of new measures to deal with expected challenges for the gas network, due to the changing nature of demand for gas. These measures include the

introduction of a National Gas Network Planner and the ability of this Planner to employ a Last Resort Planning Power with a procurement role, where appropriate.

- **Integrating renewable energy into the electricity transmission network**
  VENCorp supports the AEMC's conclusion that there should be improved arrangements in the National Electricity Rules for the coordinated connection of renewable generation, a congestion management regime and inter-regional Transmission use of System arrangements.

VENCorp has continued interest in this important Review, and looks forward to engaging further with the AEMC prior to the release of the Draft Report. Should you wish to discuss the contents of this submission, please do not hesitate to contact Louis Tirpcou on 03 8664 6615 or Antara Mascarenhas on 03 8664 6685.

Yours sincerely

G J cook

Graeme Cook
Interim Chief Executive Officer

VENCORP SUBMISSION ON THE SCOPING PAPER OF THE AEMC REVIEW OF ENERGY MARKET FRAMEWORKS IN LIGHT OF CLIMATE CHANGE POLICIES

1. EXECUTIVE SUMMARY

On 23 December 2008, the Australian Energy Market Commission (AEMC) published its First Interim Paper in its *Review of Energy Market Frameworks in Light of Climate Change Policies* (the Review). The Review, as directed by the Ministerial Council on Energy (MCE), is considering whether aspects of the current energy market framework will require adjustment following the introduction of the expanded Renewable Energy Target (ERET) and Carbon Pollution Reduction Scheme (CPRS).

This submission largely considers the impact of the CPRS and expanded ERET on the energy market from a network planning perspective, at times drawing on some of VENCorp's other work in the area of climate change. This work includes forward-looking analysis on the ability of the electricity transmission network to integrate wind generation (December 2007). VENCorp is currently undertaking an investigation into the practical implementation of the Regulatory Test in an ERET/CPRS environment. VENCorp will provide the results of this investigation to the AEMC as soon as practicable, for input into this Review.

In this submission, VENCorp has highlighted key areas for further consideration and proposed appropriate solutions to improve the efficiency of the energy market. In doing so, VENCorp has focused on the following areas:

Convergence between gas and electricity

In recognition of the growing convergence between the gas and electricity sectors, VENCorp strongly encourages the comprehensive examination of both gas and electricity market frameworks as part of this Review. The Ministerial Council on Energy explicitly directed the AEMC to examine energy market frameworks.

The AEMC First Interim Report suggests that convergence between gas and electricity is not a priority issue. VENCorp disagrees and suggests that the increase in gas usage with the introduction of the CPRS will challenge the relationship between the gas and electricity markets, or highlight the lack of a relationship in some cases. VENCorp urges coordination of market frameworks across the two sectors in some cases, such as market price settings and energy security measures.

While the MCE, gas industry and VENCorp have been making good progress in the area of open and transparent gas markets, the framework for development of these markets is being gradually handed over to the AEMC to manage. It is VENCorp's view that reform in this area is far from complete. As such, VENCorp strongly supports all states participating in open and transparent markets such as the Victorian wholesale gas market, the BB and STTM.

Gas network planning

From a network planning perspective, VENCorp expects greater pressure on networks to support growth in gas demand. In addition to considering this development in VENCorp's approach to gas network planning, VENCorp is in favour of a National Gas Network Planner and a Last Resort Planning Power with a procurement function to ensure secure and reliable supply.

Integration of renewable energy into the electricity transmission network

The effective integration of renewable energy into the transmission network is essential for the large-scale entry of renewable energy into the NEM. This will require incremental reforms to some transmission arrangements in the National Electricity Rules (NER). In particular, VENCorp sees a need for the following:

- Arrangements in the NER to encourage the coordinated connection of multiple generators located in the same area, especially where this generation is located remotely. VENCorp has commented on an appropriate model in Section 4 of this submission.

- A comprehensive congestion management regime that provides dynamic and transparent information about network capability that is accessible to market participants.

- A comprehensive, national approach to Transmission Use of System pricing, to ensure equitable cost allocation of shared network costs among customers. This is especially an issue where development of the shared network is required to meet national targets for renewable generation.

2. CONVERGENCE OF ELECTRICITY AND GAS

- VENCorp urges the AEMC's consideration of the gas sector as a priority area during this Review, particularly in the areas of gas markets and gas network planning;
- VENCorp supports strengthening of gas markets with all states participating in open and transparent markets, such as the Victorian wholesale gas market, the BB and STTM;
- To reflect growing convergence, VENCorp supports coordinated consideration of the electricity and gas sectors in the areas of market price settings and energy security.

The AEMC has noted during the course of this Review that the electricity and gas sectors have been converging in recent years, but that current frameworks in the gas sector are sufficient to deal with upcoming challenges to the energy market. VENCorp disagrees, and is of the view that the gas market and gas networks are priority areas in the context of this Review.

VENCorp expects the already apparent trend of investment in gas-fired generation in the NEM to increase with the introduction of the CPRS. This expected increase in gas-fired generation is likely to create new challenges for existing gas markets and the gas network planning framework. Given these challenges, and the fact that the MCE explicitly directed the AEMC to consider both electricity and gas in the Terms of Reference for the Review, VENCorp urges the AEMC to consider gas markets and gas network planning as a priority issue during the course of the Review.

While the MCE, gas industry and VENCorp have been making good progress in the area of open and transparent gas markets, the framework for the development of these markets is being gradually handed over to the AEMC to manage. It is VENCorp's view that reform in this area requires further work, and VENCorp would strongly support all states participating in open and transparent markets such as the Victorian wholesale gas market, the BB and STTM.

Extending transparent gas markets to all states

VENCorp notes recent progress in improving transparency and short-term balancing arrangements through the BB and STTM. The Gas Market Leaders' Group (GMLG), in December 2008, noted the planned extension of the BB nationally. Given the benefits of the BB, VENCorp sees this as a positive development. As the GMLG noted in its National Gas Market Development Plan, the BB is intended to facilitate improved decision-making and trade in gas through an up-to-date system that is readily accessible.

VENCorp also expects the introduction of the STTM to bring considerable value to the energy market, by improving price signals and facilitating improved trading. The GMLG noted that the STTM will be particularly beneficial when there are supply constraints to enable dynamic trading. With expectations of further benefits arising from this increased information and transparency to the gas industry, VENCorp would support all states participating in markets such as the Victorian wholesale gas market, the BB and STTM.

Benefits of the Victorian spot market

The spot market for gas has brought significant benefits to the gas sector in Victoria. The Victorian spot market now operates with five intra-day pricing intervals, and continues to provide many benefits, particularly in accommodating short-term adjustments to supply and

demand. From May 2009, the Australian Securities Exchange will list Victorian gas futures, which will improve investment signals for potential new entrants.
Other states rely on bilaterally-negotiated contractual trading, with limited transparency about commercial transactions. This lack of transparency may be reasonable when gas demand is of a long-term nature, but the lack of a spot market limits scope for short-term adjustments to incremental load growth, and short-term opportunities to manage risk. The lack of a spot market also limits new entry and can limit the scope of gas trading opportunities.

VENCorp completed a Victorian Gas Market Pricing and Balancing Review (2004), which was directed by the Victorian Government to "make recommendations to improve the efficiency and effectiveness of the gas spot market". VENCorp recommended enhancements to the spot market pricing and balancing arrangements that would have substantial benefits by more equitably allocating costs to cause and improving market response to changing supply/demand circumstances on a day-to-day basis. These recommendations included intra-day pricing, which was introduced in 2007. These new measures bring greater opportunities for market participants to respond to supply-demand dynamics.

While some aspects of the gas and electricity sectors should be considered independently, areas in which the AEMC should consider these two sectors together include market price settings and energy security.

Market price settings
One of the central components of the NEM's energy-only model is the framework of market price settings, particularly the spot market price cap. If set at the 'volume of lost load', this price cap should provide appropriate signals for efficient investment in new generation. The current rationale for establishing the NEM price cap appears to be more focused on risk management than allowing the proper clearance of a market at times of stress. If the cap is too low then investment will be insufficient to provide reliable supply, and increases in intermittent generation will only make this issue worse.

For this reason, price caps in the NEM and the various gas markets should be set appropriately, and thought should be taken to ensure consistency between the price settings in the two markets to reflect the growing convergence between gas and electricity. This should also apply to the administered price caps in the NEM and gas markets.

VENCorp would, therefore, support a common framework for determining and reviewing market price settings across the gas and electricity markets. The AEMC should consider an appropriate process to periodically review and coordinate these market price settings, such as a joint review by the Reliability Panel.

Energy Security
The convergence between electricity and gas is likely to be reflected in energy security issues, some of which will be caused by the interaction between the two sectors. For example, the effect of the 2007 drought on gas-fired generation, during which over 30 PJ's of gas was used in the year compared to the historical average of around 10 PJs, highlighted a link between the sectors in terms of emergency management.

Back-up generation for intermittent renewable generation will create another important link between the two markets. It is likely that open-cycle gas generation (OCGT), which ramps up

swiftly, will be called upon to back up intermittent renewable generation plant that will increase in quantity in the market as a result of the ERET. This back-up generation may be required to deal with sudden reductions in output of intermittent generation. If this OCGT does not locate close to this intermittent generation, there may be energy security risks that will need to be managed by the market operator.

The need for greater coordination between gas and electricity in the area of energy security has been reflected in the establishment of the Energy Security Working Group (ESWG) by the Ministerial Council on Energy's Standing Committee of Officials. This Working Group is reviewing the national energy sector emergency management arrangements and will provide advice on an appropriate structure for electricity and gas emergency management.

Where possible, the market should be designed to resolve emerging threats to system security through appropriate long-term signals for investment and short-term pricing signals for dispatch. Market operator intervention should be seen as a last resort. There is, however, a need for arrangements and protocols for appropriate intervention.

Legislation confers powers on both the electricity and gas market operators when dealing with emergency situations. This is limited to electricity because there is no single market operator in gas, and cannot happen in gas without the consent of Ministers. This led to the establishment of the National Gas Emergency Response Advisory Committee (NGERAC), to advise Ministers on the use of their emergency powers and responses to gas supply shortages affecting multiple jurisdictions. However, NGERAC has no formal power.

3. GAS NETWORK PLANNING

VENCorp would support:

- The establishment of a National Gas Network Planner, similar to the electricity National Transmission Planner, to provide a nationally-coordinated approach to gas network planning.
- A Last Resort Planning Power, with procurement powers, for the National Gas Network Planner to ensure timely and efficient investment in gas infrastructure.
- Strengthening of gas markets with all states participating in open and transparent markets, such as the Victorian wholesale gas market, the BB and STTM.

VENCorp's gas planning role

As the planner for gas and electricity networks in Victoria, VENCorp advises market participants about appropriate investment on the Principal Transmission System (PTS). In the area of gas planning, VENCorp's principal role is to provide information to the market and to facilitate economically-efficient investment in the gas transmission system.

To carry out this role, VENCorp now includes a 10-year outlook of the Victorian system in the Victorian Annual Planning Report, based on analysis of a range of scenarios. In addition, VENCorp carries out rigorous investment evaluations, based on cost-benefit analyses, to facilitate actual investments in key projects within a 5-year time horizon, published in Major System Augmentation Reports.

During the consultation process on the AEMC's Scoping Paper, a few stakeholders criticised the Victorian model on the basis that the regulatory framework and open access regime provide limited incentives for private investment in gas pipelines in Victoria as an impediment to investment. VENCorp disagrees, and is of the view that the Victorian model drives investment adequately in three key ways:

- First, VENCorp balances the trade-off between operating an open access network and providing opportunities for new entry through a spot market.
- Second, the cost-benefit test is designed to facilitate commercial economic investment in the network. VENCorp supports this framework, on the basis that network investment that is not economic should not be borne by consumers.
- Third, Victoria's open access network is coupled with a dynamic spot market of five intra-day pricing intervals. This enables market players to respond to changing supply-demand patterns, thereby encouraging transparency, competition and efficiency in the delivery of reliable supply.

Impact of the CPRS on gas planning

VENCorp anticipates that the CPRS will drive more growth in the use of both base-load and gas peaking power generation. This trend is changing the nature of demand for natural gas, making gas network planning increasingly complex. Historical point-to-point investment is likely to give way to increasingly integrated and meshed networks with gas moving across multiple boundaries.

Lumpy investments in combined-cycle gas generation will lead to a large step-change in gas demand, making such demand unpredictable. Demand is also likely to be scattered across Victoria, rather than being concentrated in Melbourne, making the network more meshed. VENCorp expects that this may pose challenges for the current planning framework.

To supply this changing demand, VENCorp expects an increase in import and export activity across states in the gas sector. This is likely to require additional pipeline investment that affects more than one state and provides benefits to more than one state.

Assessing the benefits of cross-border investment is a potential problem for VENCorp, because the cost-benefit analysis that determines network feasibility does not consider the value of import and export capability. This limitation means that investment that may provide benefits to the gas sector beyond Victoria may not eventuate.

To address this issue, VENCorp will consider incorporating increased export capability within the Annual Planning Review, based on existing planning criteria. Based on these criteria, VENCorp is looking to take greater account of possible demand for gas coming from potential future gas-fired generation within and outside Victoria. Suitable arrangements to share the costs between consumers in all affected states would need to be considered.

Last Resort Planning Power

Due to the above complexities associated with changing demand patterns, VENCorp has expanded its planning capabilities in the last three years to ensure that timely investment occurs. Despite this extension, VENCorp's ability to only advise APA GasNet to invest in the PTS may act as a barrier to securing reliable supply. There is a particular risk of this occurring if, as expected, large amounts of gas-fired generation connect to the PTS. Therefore, VENCorp requests that the AEMC consider the introduction of a Last Resort Planning Power to procure gas network investment, on the basis of securing reliable supply.

A national approach to planning

Based on the above discussion, VENCorp is of the view that there would be significant benefits associated with a broader, more strategic and coordinated national approach to gas planning, especially in the context of climate change policies. While VENCorp expects the Gas Statement of Opportunities to provide benefits for long-term planning, it will largely be an information-only document that will not propose appropriate augmentations.

As such, VENCorp would be in favour of strengthening the national gas planning framework further, by introducing a National Gas Network Planner, consistent with the establishment of a National Transmission Planner for electricity networks. Such a Planner would provide benefits to the energy market in the following ways:

- Providing independent advice on efficient investment;
- Developing a periodic, strategic long-term national plan; and,
- Developing a nationally-coordinated and streamlined approach to gas planning.

VENCorp thinks that it would be appropriate for the Network Planner to adopt a Last Resort Planning Power function. This is to ensure that network investment occurs when there is a risk to the delivery of reliable supply.

4. INTEGRATING RENEWABLE ENERGY INTO THE TRANSMISSION NETWORK

To facilitate the integration of potentially large amounts of renewable generation, VENCorp would support provisions in the NER to facilitate:

- the coordinated connection of multiple generators;
- an improved congestion management regime; and,
- a comprehensive national framework for Transmission Use Of System Charges.

Impact of the ERET on the transmission network

The entry of potentially large amounts of renewable generation into the NEM, driven by the ERET, could place pressure on the existing capacity of the electricity transmission network. A significant challenge to the energy market lies in ensuring that the planning framework encourages efficient, forward-looking and timely investment within the existing market-based framework, without consumers baring the cost of inefficient investment and stranded assets in the shared network.

The connection of scattered, small windfarms to the network, which is expected to increase in frequency following the introduction of the expanded ERET, creates new challenges for a network that developed around large coal generators. This trend will also raise questions about whether the essentially reactive planning framework will be flexible enough to accommodate new types of generation quickly enough to meet emissions-reduction targets.

VENCorp examined wind integration issues in a report titled "Capacity of the Victorian Electricity Transmission Network to Integrate Wind Power", December 2007. To examine whether the Victorian electricity network can accommodate a large amount of wind power generation, VENCorp studied the possible technical impact of new wind generation connecting to the Victorian shared transmission network and the NEM. VENCorp is expecting this wind to connect largely in Western and South Western Victoria.

VENCorp found that the network can accommodate around 3,000 MW installed capacity, with associated network augmentation. Depending on the location of generation, VENCorp found that up to 4,000 MW may be able to connect.

The Regulatory Investment Test for Transmission

VENCorp's findings assume that the appropriate technical solutions would meet the requirements of the Regulatory Investment Test for Transmission (RIT-T). This means that the RIT-T design should encourage efficient investment, accompanied by accessible information about network capacity.

VENCorp is currently carrying out analysis of the implementation of the RIT-T factoring in the CPRS and ERET. Preliminary thought suggests the RIT-T framework will accommodate augmentation driven by the entry of new renewable generation that enters the market because of the expanded ERET. This is the view of Allens Consulting Group, which expects the RIT-T, in its supplementary report to the AEMC Interim Paper ("Climate Change Policies and the application of the Regualtory Investment Test for Transmission"), to take these new policy measures into account.

Coordinated connection of multiple generators

To support the integration of potentially large amounts of renewable generation, VENCorp is in favour of provisions in the NER, independent of but consistent with the RIT-T, to facilitate the coordinated connection of multiple generators. VENCorp views this as an efficient method of accommodating multiple generators on the network, which would share the costs of network development, especially where this generation is remote and costs of connection and network investment are high. The ERET is expected to encourage the introduction of new remotely-located renewable generation. A framework for coordinated connection would enable such generators to share the costs of connection to the network.

As such, VENCorp welcomes the AEMC's consideration in its First Interim Report of a set of options to facilitate the coordinated connection of multiple generators. As the AEMC notes, and as VENCorp put forward in its submission to the AEMC's Scoping Paper, the current connection framework does not encourage an efficient solution for multiple connecting parties in the same location. A framework to encourage such connection is likely to become more necessary following the introduction of the ERET and CPRS.

While VENCorp supports development of a model of coordination connection, such a model should not remove the economic incentive for generators to locate as close as possible to the transmission network, where network capacity allows for such connection, while also maintaining the technology-neutral approach of the National Electricity Rules.

Combining Options 2 and 3

Of the four options presented in the AEMC's Interim Paper for coordinated connection, VENCorp favours a combination of "Option 2" and "Option 3". While "Option 1" would facilitate coordination by inviting applications for connection and providing a timeframe for network development, Options 2 and 3 provide greater depth for physical network development and greater clarity about funding arrangements.

As described by the AEMC, Option 2 would create new arrangements in the NER for a "hub" for each cluster of generation development and maintain existing shallow arrangements for connection assets from the hub to the generator. Candidate extensions would be subject to an economic test defined in the NER, presumably administered by the TNSP. Option 3 is the same as Option 2, except that the National Transmission Planner (NTP) would administer the economic test.

VENCorp expects that this model would operate as follows:

- Generators would apply to TNSPs to connect to the network;
- If there are multiple applications in a certain area, the TNSP would be obliged in the NER to publicly invite further applications within a specified timeframe;
- Multiple applications in the one area would form the basis for establishing a shared network extension to create a "hub". A site would then be selected according to technical feasibility, the cost of acquiring land and available capacity on the network.
- If the investment is expected to have a material inter-network impact, as referred to in 5.6.6(c)(5) of the NER, VENCorp suggests that the NTP would be the most appropriate

organisation to carry out the economic test. This would be consistent with the new national planning framework, and ensures an integrated approach nationally. However, if the NTP were to run the economic test, further clarification is required of how this relationship between the NTP and TNSP would work. If the hub has an impact on only one region, then the relevant TNSP would be the most appropriate body to assess the economic viability of the project.

The TNSP would need to provide the generator with information about, and reasoning behind, the choice of site and cost allocation between generators. VENCorp emphasises the need for equitable cost-sharing. For example, a generator that faces higher connection costs than other generators in the hub due to the TNSP's choice of location for the terminal station would need to be compensated financially.

The advantage of coordinated connection lies in the economies of scale derived from using one terminal station in a hub rather than several. This approach is most beneficial where cost and capacity of transmission plant are high, such as with 500 kV lines and terminal stations. This approach also provides the opportunity to minimise the impact on the security of existing lines by minimising the number of switching points over their length. With a lower-voltage line it may be more optimal not to undertake coordinated connection, and feasibility should be determined on a case-by-case basis. While this model may lead to delays in the initial connection of the first and second generators, overall VENCorp expects efficiency gains in terms of the timing of connection.

Cost-allocation

While VENCorp broadly supports such an approach, the AEMC needs to further examine and refine the cost-allocation arrangements. VENCorp is unsure whether the suggested AEMC approach that once a certain proportion of the costs are met, such as 50%, is appropriate, especially given that the consumer will bare the risk. The TNSP should receive an adequate level of commitment or payment, to ensure that generators make prudent commercial decisions and commit to them – in other words, to ensure generators do not pull out at a late stage in the process.

Costs should be determined by the relevant TNSP/NTP, depending on whether there is a material inter-network impact, according to generation capacity and anticipated capacity factors. The total charges to generators should be sufficient to cover the full cost of the extension. Costs will vary on a case-by-case basis, depending on the size of generators, the size of augmentation and the benefit of the augmentation to the network as a whole.

Confidentiality requirements

Further refinement is also required to overcome the barrier of confidentiality requirements. In a multiple connection situation, VENCorp deals with confidentiality issues by seeking permission from one applicant to inform another applicant about a connection in a similar area. VENCorp then provides both applicants with the option to communicate with each other about sharing the cost of connection.

VENCorp is not in favour of Option 4, which would effectively remove any locational signals for generators because the cost of the hub would be recovered from consumers. VENCorp disagrees that customers should pay for connection assets, or that these should be funded by *Infrastructure Australia*. This would remove the locational signal for generators and depart from

the technology-neutral nature of the NER. Further, consumers would bare the risk of over-building and risk of stranded assets.

Congestion Management

As noted in VENCorp's submission to the AEMC's Scoping Paper, VENCorp would support provision to the market of more dynamic and transparent information about network capability. VENCorp agrees with the AEMC (*Final Report of the Congestion Management Review*) that the introduction of new generation driven by Australian Government climate change policies may result in the emergence of material congestion.

VENCorp favours the introduction of large amounts of new generation following the introduction of the ERET and CPRS in the NEM, which could lead to network congestion within regions and on transmission inter-connectors. As noted in VENCorp's previous submission, this is already evident in the South Eastern, Eyre Peninsula and mid-northern areas of South Australia. This congestion caused negative market effects in late 2008.

VENCorp reiterates its preference for a model of Congestion Management that provides accessible, dynamic and transparent information about network capability, to inform generator and TNSP investment decisions. This information would be real-time, and would be published dynamically on the AEMO website. It would feed into a longer-term set of information in the National Transmission Network Development Plan. Information about binding intra-regional constraints could also be made more accessible. This real-time information would complement the historical information of the Congestion Information Resource to be published by NEMMCO.

The benefits of such an approach include improved information to drive efficient generator locational decisions, and improved competition. Currently new entrant generators have limited exposure to the cost of increased congestion on the common carriage network.

National framework for Transmission Use of System Charges (TUoS)

VENCorp agrees with the AEMC (Interim Report) that the arrangements for a national TUoS should be improved in light of climate change policies. As outlined in our submission to the Scoping Paper, VENCorp strongly supports the introduction of a national framework for inter-regional transmission pricing arrangements.

VENCorp considers that a NEM-wide scheme is required to ensure that any costs associated with augmenting the shared network to improve inter-regional transfer flows are allocated efficiently and recovered from customers on an equitable basis for all jurisdictions of the NEM.

Four possible options for implementing an national TUoS pricing mechanism were outlined in the AEMC's Final Report for its Review National Transmission Planning Arrangements. The four possible options are as follows:

- Option 1: Interconnector cost sharing;
- Option 2: NEM-wide interconnection cost sharing;
- Option 3: Load export charging; and,

- Option 4: NEM-wide methodology.

Based on the above options, VENCorp favours option 4 (NEM-wide methodology) as the preferred model for the implementation of a national TUoS pricing mechanism, especially in the post-CPRS/ERET environment. This model involves pooling the regulated revenue allowances of all TNSPs and recovering them through a single NEM-wide charging methodology.

VENCorp favours option 4 for the following reasons:

- Firstly, option 4 represents a common methodology for the calculation of national TUoS charges and is likely to enhance transparency with respect to the calculation and recovery of inter-regional transmission charges in all jurisdictions of the NEM;

- Secondly, option 4 is consistent with the National Electricity Market Objective, promoting the efficient investment in, and efficient operation of inter-regional assets on a NEM-wide basis; and,

- Finally, as noted in the AEMC's draft Rule determination on Pricing of Prescribed Transmission Services, the main advantage of option 4 is that:

  > *The locational TUoS charge paid by a consumer would reflect its notional usage of all transmission network assets in the NEM based on the CRNP (or substitute) allocation methodology.*

VENCorp also notes that Grid Australia has expressed an initial view that option 3 (load export charge) is the best option for implementing a national TUoS pricing mechanism. VENCorp agrees that, in the short term, option 3 is a viable option that could be implemented by TNSPs to recover the costs associated of inter-regional load transfers. However, in the long-run, VENCorp considers that option 4 is the best option and the one that is more likely to complement future efficiency reforms for the NEM.