

17 May 2010

Australian Energy Market Commission  
PO Box A2449  
Sydney South  
NSW 1235

Dear Madam/Sir

**Re: Submission to the National Electricity Amendment (Scale Efficient Network Extensions) Rule 2010**

Pacific Hydro welcomes the opportunity to submit to the Australian Energy Market Commission (AEMC) on the proposed rule change to accommodate Scale Efficient Network Extensions (SENE) in the National Electricity Market (NEM).

Pacific Hydro has long supported the AEMC's recognition of the need for new transmission infrastructure and new investment models, identified through the 2009 Review of Energy Market Frameworks in light of Climate Change Policies (the Review). We also support further work on this important area to ensure that solutions are developed which unlock strategic renewable energy resources in a timeframe consistent with government renewable energy objectives, while providing an equitable investment environment for renewable energy developers.

The 20% Renewable Energy Target (RET) will drive very strong renewable energy uptake in the coming years. Under the RET, which is now the key climate change policy of the Australian Government, we expect 8-10 gigawatts of new renewable energy capacity to be installed in the next decade. This new generation capacity will predominantly be remote to the existing network, as identified in the scoping paper and both reports produced by the AEMC under the Review. This volume of new capacity will require an infrastructure solution that delivers timely investment as well as reducing prohibitive cost to developers.

Pacific Hydro believes that investment in large-scale transmission infrastructure to support renewable energy development is investment made in the public good and should therefore be considered in line with investments made by previous governments to support incumbent thermal generators.

However this will not happen as long as the National Electricity Law (NEL) and National Electricity Objectives (NEO) make no specific reference to greenhouse emissions and sustainability. Until these aspects are specifically included in both the NEL and the NEO, the AEMC, Australian Energy Market Operator (AEMO) and Australian Energy Regulator (AER) will be unable to propose effective transmission solutions, as all rule changes required to be justified according to their ability to meet the current objectives of security, reliability and affordability.

Pacific Hydro therefore renews previous calls for the Australian Government, through the Ministerial Council on Energy (MCE), to amend the NEO to include low emissions objectives, therefore allowing the AEMC, AEMO and AER to build and operate a functioning electricity market consistent with the government's climate change policies and priorities.

Pacific Hydro also has broad concerns about the SENE proposal which we have raised in previous submissions to the AEMC throughout the Review. These concerns are:

[ENCLOSURE](#)

- The process does not address the prohibitive network cost barrier for developers making investments in the public good which are remote to the existing shared network; and
- The process does not include mechanisms to trigger investment in deep augmentation of the existing network which will be vital to the success of individual SENEs, in many instances including the need for increased interconnection of NEM jurisdictions.

Given these fundamental concerns with the design of the SENE process, Pacific Hydro has not responded to the specific and detailed questions raised in the rule change consultation paper. We do however have the following technical issues to raise about details of the SENE legislation.

### *1. Risk of constraints in the shared network due to lack of deep augmentation*

There is an obligation (5.5A.14) on individual network service providers (NSP) to ensure the transmission capacity design will accommodate the contracted level of generation. This obligation is consistent with the 100% funding arrangements imposed on the SENE generators. However, the SENE generators must rely on adequate network access to customer loads, which exposes the generators to the shared network constraints.

This will lead to SENE generators, operating in the NEM as semi-scheduled generators, to reduce generation at times of network constraints across the shared network. SENE generators will require reasonable certainty of the adequacy of deep augmentation in the shared network including the augmentation of interconnectors.

Deep augmentation in the shared network will require the application of a Regulatory Investment Test for Transmission (RIT-T), and SENE generators will need to understand the outcome of this before they can commit to connection arrangements. The SENE must therefore include the development and approvals of deep augmentation.

Furthermore, the 100% funding by generator option on the SENE is unreasonable and short-sighted. SENEs will deliver transmission infrastructure to remote areas of Australia and with growing population, the expectation should be that these areas will become populated and customer load will be required. This scenario has been seen often with railway and road infrastructure driving urban development. The SENE design does not contemplate customer connections or consider cost rebates to SENE generators in the event of new load centres connecting to SENEs. Generators may be reluctant to accept customer loads "free riding" on the SENE arrangements and may further consider the undesirable impact on voltage stability and reactive support. We believe that the legislation should consider, and provide adequate treatment for, these consequences now.

### *2. The cost allocation methodology of SENEs*

Pacific Hydro has consistently argued during the Review that new generators face major challenges competing with incumbent generations in relation to the adequacy of transmission. In the past, government policies and budgets drove large capacity transmission systems to locations where fuel supplies for conventional power generation reside. The renewable energy industry is dependent on utilising the existing network and, where required, building the transmission infrastructure to the fuel source through private investment.

Pacific Hydro considers that SENEs deserve recognition as important nation building infrastructure that will benefit all of Australia, and have previously proposed alternative funding arrangements, including from Infrastructure Australia. The ability of the SENE to deliver the renewable generation under the proposed funding arrangements is questionable.

The proposed legislation considers it appropriate to recover costs for a SENE over the economic life of the generators (5.5A.13) rather than the economic life of the SENE assets as used by the NSP for design planning purposes (5.5A.5(c)(2)(iv)). This will lead to SENE generators being charged a disproportionate cost in relation to an asset that has a much longer economic life. Pacific Hydro considers generators will continue to operate in some form beyond the economic life of their original assets and this must be considered in the SENE cost allocation.

### *3. Review mechanism by the AEMO /AER*

Regardless of the proposed SENE funding approach, the SENE Connection Offer prepared by the NSP will be subject to actual construction and operational costs. Conservative NSP estimates will encourage SENE generators to enter connection agreements only to find out that the construction and operating costs were understated and are now subject to charges that make their projects unviable.

Pacific Hydro has negotiated various transmission connection enquiries and feels that the control of the construction and operating costs must be through a competitive mechanism that will drive efficiencies.

We understand a SENE Planning Guideline will be prepared to address some of these concerns, however as the legislation does not provide any direction on these guidelines we would expect transparency and benchmarking of pricing to be a minimum requirement. The mechanism to review the connection offer is only possible through an objection to the AER. The AER is to consider these objections when making its final approval of the SENE. This mechanism will delay the debate and not allow for constructive alternatives proposed by industry to be considered.

Pacific Hydro proposes that the AEMO review of SENEs, currently limited to NSP conclusions on the generation forecasts, include a broader role to review the design option and cost. This will ensure NSPs are compelled to only put forward the most competitive and efficient SENE options.

### *Conclusion*

Pacific Hydro strongly supports change to the NEM to encourage investment in new transmission infrastructure. We believe that the SENE mechanism begins to address some of the fundamental barriers to large-scale investment, however believe it does not go far enough in creating funding arrangements on par with previous investment made in the public benefit and in ensuring delivery in a timeframe appropriate for the scale of investment Australia is about to realise in new renewable energy generation.

We believe that the most important consideration is the timely introduction of a process to encourage investment and therefore offer qualified support of the SENE legislation based on the following criteria:

1. Commensurate amendment of the NEL and NEO to include specific reference to greenhouse gas emissions;
2. Inclusion of mechanisms and guidelines for public investment in deep augmentation to support SENEs;
3. Inclusion of a mechanism to allow alternative funding of SENEs in line with previous models for transmission investment in the public good.

Pacific Hydro would welcome the opportunity to discuss these issues with you in more detail as we work towards a solution for large-scale infrastructure investment to support renewable energy development in Australia.

Yours sincerely

A handwritten signature in purple ink that reads "Lane B. Crockett". The signature is written in a cursive style with a horizontal line underlining the name.

Lane Crockett  
General Manager, Australia / Pacific