Infigen Energy Limited · ABN 39 105 051 616
Level 22 · 56 Pitt Street · Sydney NSW 2000 · Australia
T +61 2 8031 9900 · F +61 2 9247 6086 · www.infigenenergy.com

3 August 2009

Australian Energy Market Commission
AEMC Submissions
PO Box A2449
Sydney South, NSW 1235

Via email to: aemc@aemc.gov.au

Dear Committee Secretariat:

RE: Submission in response to the AEMC's Review of Energy Market Frameworks in light of Climate Change Policies, 2nd Interim Report June 2009

Thank you for the opportunity to provide a submission in response to the AEMC's Review of Energy Market Frameworks in light of Climate Change Policies.

Infigen is Australia's largest owner of wind energy generators with over 508MW either in operation or late stage construction. Infigen is also one of the worlds leading wind farm owners with a total of 41 wind farms located in Australia, Germany, France and the USA ranking us in the top 10 globally. This uniquely positions Infigen to provide comments in regard to AEMC's Report. In South Australia in particular, Infigen has constructed, manages and operates the Lake Bonney 1 and 2 wind farms near Millicent in South Australia, which presently form the largest wind energy generating facility in Australia.

If you have any questions concerning our submission, please do not hesitate to contact me.

Yours Sincerely,

Geoffrey Dutaillis

Chief Operating Officer

cc. Miles George, Managing Director
Jonathan Upson

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Submission in response to the AEMC Review of Energy Market Frameworks in light of Climate Change Policies – 2nd Interim Report

General

Infigen welcome's the AEMC's 2nd Interim Report (the "Report") which we believe provides a sound understanding of the key influences the proposed expanded Renewable Energy Target (RET) and the Carbon Pollution Reduction Scheme (CPRS) will have on energy markets.

As noted, energy markets will be particularly impacted as we move to lower the carbon intensive nature of our energy and unless key changes are made to facilitate this transition, there will continue to be resistance to change the existing generation and transmission system to one that supports a more sustainable future.

Chapter 2 (and Appendix F): Connecting remote generation

The draft recommendation seeks to ensure that extensions to the network are sized efficiently for future generation such that customers can benefit from potentially significant total cost savings. Customers would, however, have some limited exposure to costs if the forecast generation does not materialise. The recommendation reflects our finding that the existing bilateral negotiations framework for connections is unlikely to support co-ordinated, efficiently-sized investment.

Infigen agrees with this view.

2a Will the recommended model adequately address the deficiencies in the existing framework?

Infigen Energy considers that the recommended model put forward by the AEMC will go a long way towards addressing deficiencies in the existing remote generation connection framework. Infigen agrees that the existing framework is inadequate in that it places an undue burden on the "first mover" which in many cases makes the remote renewable energy project uneconomic. However, Infigen considers that the planning of any NERG and connection assets, as strategically important pieces of infrastructure, should be with an independent third party such as AEMO or the NTP rather than with the TNSPs.

As a result, Infigen Energy supports Option 3 (Section 2.5) rather than the preferred Option 2, on the basis that an independent party (to the network service providers) should determine the need for, and capacity of a NERG. We feel that any NERG is a central component of any national transmission plan and should be incorporated in this ongoing planning (and subsequent approval process). Notwithstanding the view that AEMO has insufficient qualified resources to undertake such work, we

see this task being inextricably linked to AEMO's role (suggested in Section 2.3.5) of providing verification of generator forecasts put forth by the NSPs.

Infigen Energy is concerned that existing arrangements for negotiation with, what are effectively, monopoly service providers are not effective, and that there is little incentive for the TNSPs to design and construct efficient and cost effective connections – the higher the cost the more revenue is obtained.

Infigen understands that the first mover's contribution to a NERG will be in proportion to the total capacity of the NERG assets and not on the basis of the marginal cost of increasing the capacity of the NERG (above and beyond that needed for the initial connection). We note that the marginal cost of providing increased transmission capacity is considerably lower than the cost of providing the initial assets. Therefore, it is important that the AEMC clarify and consider mechanisms to enforce that the first mover (and subsequent generators) only contributes to the cost of the NERG in proportion to the capacity they utilise.

Infigen Energy agrees that bilateral negotiations with monopoly NSPs do not often work efficiently and strongly supports the use of a "standard contract" approach to provide transparency to all potential connecting parties. Infigen considers that there is considerable merit in expanding such arrangements to encompass other areas of network connection and augmentation work, with the exception of bona-fide contestable work.

Infigen Energy would also like to suggest that the AEMC be mindful for the potential for loads to connect to NERG assets and the fact that NERG assets may also provide improved network performance and reliability. Subsequently, there is the potential for NERG assets to provide more than just shared "connection" service but also provide shared network services. In such cases provision needs to be made to permit the NERG asset to be transferred into the regulated asset base with a consequential alteration to the charging arrangements. An example of this possibility is the Eyre Peninsula in South Australia, which is presently supplied via a capacity limited radial 132 kV system. The Eyre Peninsula contains significant wind generation resource as well as significant mining potential that could make use of the NERG assets if constructed in the region.

Infigen would like to make a comment with regards to the Generator connection enquiry paragraph of Appendix F. While we agree that speculative or vexatious connection enquiries are clearly undesirable and need to be discouraged. We consider that allowing NSPs to levy a fee above and beyond their necessary costs to process and evaluate such enquiries as this paragraph may infer, could easily become an unregulated and substantial source of income as well as a barrier to generators participating in a NERG forecasting process. Infigen would urge the AEMC to modify this section to state that only reasonable and justifiable expenses directly related to the generator's initial connection enquiry be allowed.

2b Does the recommended assessment process appropriately balance customer risk with potential customer benefits?

Infigen Energy considers that the proposed NERG charging arrangements appropriately balance customer risk with potential customer benefit. It should also be noted that the network pricing arrangements permit costs to be allocated over a large number of customers on a postage stamp basis meaning that the impact on individual customers is relatively and manageably small. The converse would apply if the "strategic" development costs associated with a NERG were charged to a relatively small number of proponents.

2c Is there merit in allowing rival service providers to deliver network extensions for remote generation?

Infigen Energy strongly supports the concept of introducing real competition into the provision of not only NERG assets, but to all transmission assets and services.

The introduction of AEMO and the National Transmission Planner role provides access to an independent planning party with access to all the necessary information needed to promote competition in the area of network service provision. Infigen Energy is concerned that the present arrangements for network augmentation and negotiated works do not promote efficient or cost effective designs. In fact the converse often applies, in that the more an asset costs, the more revenue a TNSP can obtain. This aspect encourages "gold plating", conservative design, and inefficient procedures which add to costs without justification and without timely recourse to an independent "umpire".

Infigen Energy is concerned that the TNSPs are designing, rating, and constructing assets to internally developed standards and practices which are not subject to independent review or verification regarding their soundness or appropriateness. Infigen Energy believes such standards and practices which can significantly affect, or alter, network capability and costs should be reviewed and approved by an independent technical regulator.

Chapter 3: Efficient utilisation and provision of the network

AEMC's *draft recommendation proposes the introduction of a form of generator transmission use of system (G-TUOS) charge for all generators*. The AEMC *also seek views on whether there is a need for a complementary short term congestion pricing mechanism, focusing in particular on a mechanism for localised and time-limited intervention for selective application to address acute, short term areas of congestion*.

3a Do you agree that we have accurately identified which elements of the existing framework are considered inadequate and therefore require change?

Infigen Energy feels that the AEMC has only partially identified all of the elements of the existing network provision framework where particular behavioural changes attributed to the CPRS and expanded RET place strain on the prevailing energy market frameworks.

Infigen Energy considers that part of the reason associated with networks being constrained under normal operating conditions is as a result of Network Service

Providers failing to meet their obligations under Clause S5.1.2.1 of the NER which states in part *"Network Service Providers must plan, design, maintain and operate their transmission networks and distribution networks to allow the transfer of power from generating units to Customers with all facilities or equipment associated with the power system in service…".* If this obligation was fully met, then it is likely that the number of constraints applying to generators in the NEM would reduce significantly.

Infigen Energy believes that suitable locational, bidding, and retirement signals are provided in the present NEM by means of static loss factors, connection charges, and the bidding process as it is applied under constrained network situations. Therefore, we do not agree with the general statement in Section 3.2.3 of the Report that:

> "The existing signals faced by generators do not reflect the total costs imposed on the network by a new location or a retirement decision."

This view that needs to be determined on a case-by-case basis.

Likewise, we do not understand how Static Loss Factors, sometimes as severe as 0.82, amount to a failure to "price congestion within regions" (p28 of the Report). While all generators do receive the same RRP within a region, the revenue each generator receives in a region is not the same as they are impacted by MLFs and DLFs amongst other factors. Therefore, the statement that "Currently, all generators within a region receive the same price (the RRP)" (p29) could be misleading.

3b Would the G-TUOS charging option design improve pricing signals to promote efficient location and retirement decisions in the most efficient way? Are there any design variations that may improve the signals?

Infigen Energy is concerned that the proposed G-TUOS arrangements will distort and unnecessarily add confusion to the market by artificially allocating positive and negative costs to generators, i.e. there must be an equal quantum of winners and losers to make the charge neutral, which may not always be the case. Additionally, Infigen considers that payment to generators that defer/avoid network augmentation is already available in the NEM under the Regulatory Investment Test and Network Support Services provisions.

Infigen believes that the interaction between the bidding and dispatch processes under constrained operating conditions already provides a strong market signal in respect of generation installation and retirement signals. It is unclear what additional benefit will be obtained from the proposed G-TUOS arrangements.

Infigen Energy does not believe that, "*At the margin, renewable plant may be flexible in its location decisions, given the right pricing signals*" (p28 of the Report). As stated in page 36 of the Report, the most probable form of renewable generation (i.e. wind farms) have location decisions dominated by wind resources, environmental and planning requirements.

Last, if a G-TUOS charge is implemented, Infigen Energy considers that the payment of any G-TUOS charge should be associated with the provision of some form of service which is not the case under the present AEMC recommendation.

3c Given that G-TUOS is a preferred option, what additional value would a congestion pricing mechanism add? If such a mechanism is required, what design variations should be considered to improve signals to manage short-term intra-regional congestion in the most efficient way?

Infigen Energy is of the view that adequate short-term pricing signals are provided under the dispatch mechanism that applies under constrained operating conditions. In this case, generators behind the constraint are dispatched on a least cost basis, meaning that given the binding nature of the constraint, the most economic dispatch of generation is obtained. Additionally, high cost, inefficient plant which is typically higher in cost to operate would only be dispatched to the extent that the constraint permitted.

Infigen Energy supports the views of the AEMC that reforms to the present connection charging arrangements are not appropriate at this point in time.

If a G-TUOS charge is introduced for the purposes of providing behavioural signals regarding network congestion, Infigen Energy believes that such a charge should be levied on all generators that contribute to that congestion, existing and new.

Infigen Energy is remains hopeful that "*The National Transmission Planner (NTP), Last Resort Planning Power (LRPP), AER revenue determinations and the Regulatory Investment Test for Transmission (RIT-T) work together to deliver timely and efficient network investment*" (p39 of the Report). It is apparent from the AEMC 2nd Interim Report that this has not necessarily been the case in the past.

Chapter 4: Inter-regional transmission charging

The AEMC *draft recommendation proposes the introduction of an obligation on transmission businesses to levy a "load export charge" on the transmission business in each adjacent region. This charge would reflect the costs of providing transmission capacity to transport flows to the adjacent region*.

4a Is the proposed design for the load export charge appropriate as an effective mechanism to address the identified problems?

and

4b Is our suggested commencement date of 1 July 2011 achievable?

Infigen Energy supports the recommendation of the Report in respect of Inter-regional transmission charges and believes the recommended approach represents a practical and consistent approach to recovering costs associated with inter-regional interconnectors. Infigen Energy considers that the proposed approach can readily be incorporated in the existing transmission pricing arrangements and can be implemented as of 1 July 2011.

However, we would ask that the AEMC clarify that any reductions in a load export charge that occur as a result of a new generator entrant (or increase in generation by an existing generator).

Chapter 5: Regulated retail prices

Infigen Energy has no detailed comments to make in this area.

Based on the extent and conclusions of many modelling studies undertaken in recent months, Infigen would agree in the affirmative with questions 5a and c.

Chapter 6: Generation capacity in the short term

Infigen Energy has no comments to make in this area.

Chapter 7: Investment in capacity to meet reliability standards

The AEMC *have found that the existing framework provides effective signals to promote efficient levels of investment in both transmission capacity, generation capacity and demand response. It can, therefore, be expected to continue to operate in the long term interests of consumers, if those signals are appropriately maintained.*

7a Do you agree with our description and assessment of how the current framework operates, and our finding that the framework for the medium to long term is resilient to the stresses created by the CPRS and expanded RET?

and

7b Do you agree with our characterisation of the risks under existing frameworks, and how could they be managed or mitigated?

Infigen Energy would suggest that if the existing arrangements regarding investment in transmission capacity were effective, many of the arguments and recommendations provided in previous chapters would not be required.

Infigen Energy is concerned that existing network capacity augmentation arrangements do not promote efficient and cost effective development of the energy system. Rather, the revenue setting processes encourage over-design and over-investment which in turn leads to increased revenue allocations to the TNSPs.

The process appears to have with few checks and balances regarding the appropriateness and cost effectiveness of the implemented designs, and an inability to call on independent umpires to settle disputes in a timely manner. Infigen Energy would like to see an independent party such as the NTP take over responsibility for power system augmentation and to act as an arbitrator in the event of connection design disputes. Infigen Energy would like to see increased competition in the area of providing network services.

Chapter 8: Convergence of gas and electricity markets

Infigen Energy has no comments to make in this area.

Chapter 8: Convergence of gas and electricity markets

Infigen Energy has no comments to make in this area.

Chapter 9: System operation with intermittent generation

The AEMC *have found that the existing energy market frameworks are sufficiently robust to enable the system operator to maintain a secure system following the anticipated large increases in renewable generation as a result of the CPRS and expanded RET*.

9a Is it necessary to create formalised centrally coordinated contracting arrangements for the provision of power system inertia? If so, what is the nature of the process by which those arrangements should be developed?

and

9b Is there adequate transparency in the process by which FCAS recruitment and interconnector capability is affected by the increasing penetration of intermittent generation?

Infigen Energy is of the view that the variable nature of wind based generation connected as a result of the CPRS and expanded RET will in all likelihood eventually require additional ancillary services to be obtained.

However, Infigen Energy agrees with the AEMC that the existing energy market frameworks specifically in the ancillary service area are sufficiently robust to enable the system operator to maintain a secure system.

Chapter 10: Distribution networks

Infigen Energy has no specific comments to make in this area. However, comments provided previously in respect of transmission networks also apply to this Chapter.

Chapter 11: System operation with intermittent generation in Western Australia

Infigen Energy has no specific comments to make in this area. However, many comments made earlier in this submission would apply equally to the WA situation.

Chapter 12: Connecting remote generation and efficient utilisation and provision of the network in Western Australia

Infigen Energy has no specific comments to make in this area. However, many comments made earlier in this submission would apply equally to the WA situation.

Chapter 13: Convergence of gas and electricity markets in Western Australia

Infigen Energy has no comments to make in this area.

Chapter 14: Reliability in the short term and longer term in Western Australia

Infigen Energy has no specific comments to make in this area. However, many comments made earlier in this submission would apply equally to the WA situation.

Chapter 15: Northern Territory

Infigen Energy has no specific comments to make in this area. However, many comments made earlier in this submission would apply equally to the NT situation.