2 February 2012

Australian Energy Market Commission
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By E-mail: www.aemc.gov.au

Re: AEMC Transmission Frameworks Review, Project Number: EPR0019

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Infigen Energy welcomes the opportunity to make a submission to the AEMC "First Interim Report, Transmission Frameworks Review", Project Number EPR0019.

Infigen Energy is Australia's leading specialist renewable energy business. Infigen Energy is also the largest wind farm owner and operator in Australia with six wind farms totalling over 556 MW in generating capacity. These wind farms include the:

- 279 MW, Lake Bonney Stage 1, 2 & 3 Wind Farms near Millicent, SA;
- 89MW, Alinta Wind Farm near Geraldton, WA; and
- 190MW, Capital and Woodlawn Wind Farms east of Canberra near Bungendore, NSW.

Infigen Energy also owns and operates wind energy facilities in the United States, taking its aggregate wind energy business interests to over 1600 MW. Infigen Energy is listed on the ASX exchange, and more information about the company is available on our website www.infigenenergy.com.

OVERVIEW

Infigen Energy agrees with previous reports written by the AEMC concluding that the Transmission Framework of the NEM has proven itself to be generally robust and efficient in its operation. However, we consider that substantial improvements are needed with regards to the connection of new generation plant. Therefore, this submission will focus on the issues raised in Chapter 13 of the Interim Report which we believe offers the greatest opportunity for material and practical improvements to the efficiency and operation of the NEM.

ACCESS POLICY PACKAGES

Which package do you consider would best contribute to the achievement of the NEO and, more specifically, the objective of this review to minimise the expected total system costs faced by electricity consumers?

Infigen Energy considers that Policy Package #1, Open Access, is probably the most appropriate policy package and is best aligned with the NEO. However, we would suggest the AEMC continues to work on the details of Policy Package #2, Open Access with Congestion Pricing. More details of Policy Package #2 and further study might result in this Policy Package being deemed to be a superior package. However, more information is needed before this can be determined with any certainty.

Infigen agrees with the AEMC that the section of clause 5.4A potentially opening the door for generators to negotiate firm access should be deleted to clarify that the NEM is an Open Access regime.

What evidence or anticipated outcomes are there to support this view? Stakeholders should consider both:

- *Why this package is more likely to contribute to the achievement of the NEO than the other packages presented*

Packages #3, #4 and #5 represent very significant changes to the operation of the NEM and/or transmission frameworks. Package #3 involves additional payments to NSPs of an unknown amount to arguably perform their role already required under National Electricity Rules Clause S5.1.2.1. Such additional payments would eventually have to be charged to consumers, and as stated in Table 8.1, the complexity in applying these standards and uncertainty that they will change are significant. Package #4 involves additional payments for "firm" access of an unknown amount (or payments from new generators without firm access to those with firm access of an unknown amount). These costs would have to be passed onto customers, and have the potential to reduce competition. While Package #5 could theoretically work better than today's transmission network framework, it represents such a massive change to the current framework and is so complex, as noted in Table 10.1, that it is not possible to confidently predict what would happen should it be implemented.

Packages 3, 4 and 5 would also result in significant uncertainty with regards to the future operation of the NEM resulting in a delay in investment as company boards and financial institutions contemplated the impact of such changes on impending generation investment decisions. In addition, while each of these packages has intended consequences, the complexity of these packages would also likely result in material and expensive unintended consequences.

Additional unknown costs, unintended consequences, and delays in generation investment are all not well aligned with efficient operation of the NEM and the NEO.

- *What evidence exists to suggest that the materiality of the problems identified would support adopting that package.*

Infigen Energy agrees with the statement on page ii, that:

> "…to date limited evidence has been provided which demonstrates the materiality of any current or anticipated inefficiencies associated with the existing arrangements. Any significant framework change will carry implementation costs and risks which need to be proportionate to and tested against any risks of retaining current frameworks."

Infigen Energy considers that the materiality of the problems identified with regards to access does not warrant further consideration of, or work expended on, Packages 3, 4 or 5.

In terms of your preferred package, are there any modifications that you would make, while maintaining the consistency of the package?

Further modifications and suggestions are incorporated later in this submission with regards to planning, connections and network extensions.

Do any of the other packages presented merit further analysis and assessment?

As stated, Infigen does recommend that further work and analysis be undertaken for Policy Package #2 (as well as Policy Package #1). The derivation and operation of the formulas involved in Policy Package #2 are very important to determining how well such a policy would operate in the real world.

Are there any other packages for reform that we should consider and, if so, how would they better promote the NEO?

Infigen Energy considers that the NEO itself should be considered for reform. The NEO currently focuses almost exclusively on efficiency and reliability of supply. There is no scope in the NEO to consider environmental issues and/or legislative mandates. For example, the Large-scale Renewable Energy Target (LRET) scheme is supported by the Government, the Opposition and the Greens party and continues operation through to 2030. However, any rule change to achieve the LRET target at reduced cost would be seen to conflict with the NEO as consideration of legislation, such as the LRET scheme, is not part of the NEO.

PLANNING REFORMS (CHAPTER 11)

Is there a case for changing the existing planning arrangements?

Infigen Energy considers that there is a case for making incremental changes and enhancements to the existing dis-aggregated jurisdictional planning arrangements within the NEM.

Infigen Energy supports implementation of all of the potential enhancements to existing planning arrangements identified in Section 11.2, which are:

- implementing a national framework for transmission network reliability standards for load;
- improving the consistency of the APRs;
- improving the transparency of the RIT-T;
- aligning the revenue resets of TNSPs; and
- Introducing reliability standards for interconnectors.

Infigen considers that the rationale for these low-risk, incremental changes have been made very well in Section 11.2.

In addition, Infigen believes consideration should be given to further extending these reforms to include alignment of TNSP and DNSP annual planning reports as well as unified distribution network reliability standards.

If so, is there a case for enhancements to existing arrangements or more significant reform?

Infigen is of the view that Options 3 and 4, a single NEM-wide transmission planner or joint venture planning body, are not warranted at this time. While Infigen Energy does not have a lot of direct experience with the Victorian model, other companies with more experience connecting new generation plant in Victoria do not appear to favour the model of AEMO as the network planner in Victoria, let alone expanding this role across the NEM.

Of the options presented, which do you consider merit further assessment?

Infigen Energy considers that Options #1 and #2, enhanced coordination of the NTNDP and APRs and harmonised transmission planning arrangements are worthwhile and merit further assessment.

Infigen believes that any standards imposed on the network planner should be measureable, and thus supports the view of the AEMC of using economically derived - deterministically expressed reliability standards. Infigen also considers that the load forecasts used for network planning purposes should be derived independently from the TNSPs, although the TNSPs should have input into this process.

CONNECTIONS (CHAPTER 12)

Does the description in this chapter [12] of the current connections provisions and TNSPs' practices correspond with stakeholders' experiences in practice?

The TNSP practices described in Chapter 12 of the TFR 1st Interim Report broadly correspond with Infigen Energy's experience in this area.

Are the current categories of services in the Rules - e.g. shared transmission services and connection services - the appropriate categories for classifying services related to connections, or should one or more new categories be created for services related to connections?

Infigen considers that the categories of service, distinction between assets and services, and the definition of contestability are unclear and require clarification, to enable market participants utilising the same definitions for these important terms. However, these issues are secondary compared to the issues raised in Chapter 13. For example, should the term “negotiated transmission service” be utilised when, in practice, there can often be very little “negotiation” and the NSP effectively dictates the technical solution and/or price to the intending generator?

Should the construction of the underlying assets be part of the relevant services that a TNSP is required to provide under the Rules?

In our experience, NSPs have not been hesitant to offer such construction services, so this has not been an issue. In fact, it is not unusual for some NSPs to essentially demand they build some assets, like substations.

Is contestability an appropriate test for determining whether a service related to connections should be economically regulated under the Rules? If so:

- *What is an appropriate definition of contestability?*

Infigen notes the comments made by the AEMC regarding the contestable supply of transmission facilities and agrees that suppliers may be reluctant to tender because of pre-existing relationships with incumbent TNSPs. However, if competitive tenders can be obtained from multiple independent suppliers for facilities, they should be regarded as "contestable".

Infigen considers that common design standards should be used for all transmission assets and these should be available to all parties. Infigen also considers that the barriers and licensing requirements to becoming a TNSP should be reviewed, and potentially eased. There would be merit in opening up all aspects of transmission system construction to competitive provision by multiple "TNSPs" as a means to reduce costs for the generator (and thereby electricity customers).

- *Should contestability be considered separately in relation to the construction aspects of the service and the ongoing operation and maintenance aspects of the service?*

Infigen supports this approach.

- *Which services required to connect a generator, NSP or other transmission user to the national grid are contestable?*

Infigen believes that all services associated with connection to the national grid should be contestable to the maximum extent practical, as increased competition is obviously well aligned with the NEO. However, as noted in the First Interim Report, NSPs have the ability to reduce contestability in practice.

ECOMONIC REGULATION OF CONNECTIONS (CHAPTER 13)

General Comments

In Box 13.1, it is stated that,

> "The assessment of the proposal will be primarily based on consideration of the degree of imbalance in bargaining power that generators and other transmission users face when negotiating with a TNSP."

Section 13.2 describes the criteria used by the Expert Panel on Energy Access Pricing for accessing market power. Four of these criteria are listed below with Infigen's comments as to the current situation in the NEM.

- The Barriers to Entry for another NSP are **Nearly Insurmountable**
- The Countervailing Market Power, of even the largest generators, is **Near Zero**
- The Substitution Possibilities are normally **Non-Existent** as the NSP's network is normally the only one present
- The Information Asymmetry is typically **around 20:1** due to the lack of commercial (and technical) transparency

The comment that the countervailing market power of generators is negligible is not made lightly. Consider the "cards" that the NSPs hold in regards to connection negotiations:

1. They can specify whatever costs they like
2. They can slow the connection process down to a crawl
3. They can even allow a competitor's connection offer to leapfrog over one's project---killing the initial generator's project all together

Essentially, the NSP suffers minimal financial loss or inconvenience if the generator fails to connect, while the generator typically loses millions of dollars in development costs. *The generator needs access to the NSP's network to build their project; the NSP does not need the generator at all.*

Therefore, Infigen Energy, and other generators, consider that there is a prima facia case that intending generators have "insufficient countervailing market power in negotiating commercially efficient outcomes with a TNSP." It is worth stating that this conclusion is irrespective of the size of the intending generator. Large companies such as TRUenergy, Origin, and AGL have made submissions to the AEMC during the TFR process stating there is a huge imbalance in negotiating outcomes. The 'cards' the NSP holds are the same whether they are facing a large or small generation company.

Which options, if any, do you consider would best contribute to the achievement of the NEO and, more specifically, the objective of this review to minimise the expected total system costs faced by electricity consumers?

Infigen considers that there is merit in all three proposals, and that each would improve on the current situation. Infigen Energy currently favours Proposal 3; however, if the Commission did not adopt this Proposal, we consider that a combination of Proposal 1 & 2 would also provide improvements and reduce total system costs. Further work on Proposal #3 should be undertaken to confirm its cost benefits to generators, and thereby customers, without undue negotiation delays and/or loss of control over the construction schedule of the connection assets.

A discussion of the three options appears below.

Proposal 1- Enhancements to dispute resolution

While insufficient on its own, and as written, Infigen considers that a modified version of Proposal 1, in conjunction with Proposal 2, would result in a significant improvement in new connection negotiations and agreements.

There are two important enhancements that would be required to effectively improve the current dispute resolution system.

First, there would need to be a significant deterrent for one party forcing matters in dispute to arbitration on a repetitive basis---and then losing. Otherwise, one party could abuse the process by utilising the dispute resolution system as a means to stall progress and frustrate the other party. As one suggestion, a "three strikes" policy where a third loss at arbitration resulted in a significant fine or other penalty would discourage abuse of the arbitration system. Under this scenario, loss of one, or certainly two, arbitrations in a connection negotiation would help to equalise the imbalance in the connection negotiations as the losing party would presumably fear, to some degree, losing another case at arbitration as the penalty would be significant.

Second, some sort of protection is needed for the"plaintiff" against punitive action taken by the "defendant" directly, or indirectly, for taking disputes to arbitration would be needed in the Rules. In Section 13.4.1, there is a discussion as to potential reasons why the current dispute resolution process has not been utilised. From our experience, and discussion with others, we

can assure the Commission it is most certainly ***not*** that the materiality of concerns has been insufficient to warrant seeking such recourse.

It is Infigen's view that the primary reason the current process has not been utilised is mostly out of concern for how the NSP would react and we are aware that this view is also shared at the officer level within the AER. As a suggestion, the Commission could consider adapting regulations from successful 'whistle blower' legislation to insure that (successful) arbitration cases do not "backfire" on the plaintiff.

Infigen considers that such arbitration should reside within the AER; however, this would require sufficient dedicated and qualified staff to make the enhanced arbitration quick and effective. In addition, we consider splitting the costs of arbitration 50/50 as the simplest and most appropriate way to allocate the costs of arbitration.

Proposal #1, as modified above, in conjunction with Proposal #2, would almost certainly result in reduced generator connection costs to some degree which aligns well to the NEO due to increased competition and a reduction in these connection costs passed along to consumers.

Proposal #2 – Enhancements to the negotiating framework

Section 13.5.1 includes a statement that:

> "…this proposal is predicated on generators and transmission users having some degree of countervailing market power…"

As previously stated, Infigen Energy considers that intending generators do not have any meaningful degree of countervailing market power. Therefore, this proposal, even when combined with our suggested modifications to Proposal #1, is likely to be insufficient in completely resolving the current imbalance in negotiating leverage. However, Infigen would like to take this opportunity to make some observations with regards to Proposal #2.

Proposal #2 basically expands on the current obligation in the Rules for NSPs to provide cost breakdowns for connections works and services. It is very difficult to come up with reasonable rationale for why this would not be an improvement from the current situation and a benefit to the transparency and efficiency of the electricity market. Providing breakdowns of WACC, depreciation costs and time periods, operating and maintenance costs, etc. can only result in an improvement in the current information asymmetries. Infigen would also advocate the publication of transparent design standards for connection works to make 'gold plating' and 'overdesign' of connections more obvious.

Publication of historical actual cost data and indicative, or average, costs for connection would be a step forward as well. Infigen would also suggest that as opposed to providing the extent to which costs vary with voltage, that the NSP be required to itemise indicative costs for transformers, circuit breakers, lines, etc. for different voltages.

However, making cost breakdowns available does not obligate a NSP to respond to concerns that their connection is over designed or unnecessarily expensive. While cost breakdowns enable more effective and logical arguments, NSPs are currently still in a position where they hold all the "cards" and can still dictate the terms of the connection. If the enhanced arbitration provisions are adopted along with Proposal #2, then there would be some increased probability of "negotiating commercially efficient outcomes with a TNSP", but we would consider this to be far from a foregone conclusion.

If the Commission decides to continue to examine this Proposal, Infigen Energy would be pleased to work with the Commission to define a comprehensive list of connection costs (and technical standards) that should be itemised and made transparent.

Proposal #3 – Prescribing transmission services

The primary advantage of this proposal is that it would substantially address the imbalance in negotiating leverage, as discussed in Section 13.6.2, as all connection charges would have to be defended in front of the regulator. For the first time, intending generators would have a process where connection designs and costs would be reviewed by an independent "umpire", the AER, as part of the standard connection process.

We consider that two of the implementation issues raised in Section 13.6 are not that serious. The issue identified in Section 13.6.1 is not significant as the identification of all assets providing a connection related service are typically indentified in connection agreements as a matter of course. Second, the disadvantage that charges may change between regulatory periods, as discussed in Section 13.6.2, is not materially different than generators taking on CPI risk as they do in many other contracts.

There are two implementation issues that should be investigated further for Option 3. First, are there means to minimise time delays involved in negotiating connections as prescribed transmission services? The generator connection process is already quite long and laborious. One consideration would be how to minimise and/or fast track appeal processes to avoid unnecessarily delays in connection negotiations. It is important that the AEMC consider whether Proposal #3 could be implemented in such a way that it does not unduly increase the time period to negotiate and build new generator connections.

The second issue is that it is important that the ability of a generator successfully negotiating with the NSP to build connection assets should be maintained. This is important as generators in this position have significant control over the timing of the asset construction, since they, or their subcontractors, are the ones building it. Therefore, option 3 should not preclude generators building their own connections to operate themselves, or to "gift" to an NSP.

What evidence is there to support this view?

Infigen understands that the AEMC has information that supports the need for substantial and significant regulation of the new generation connection process, such that Proposal #3 is warranted, if it is deemed to be the best option.

Are there any other options for improving connection arrangements that we should consider and, if so, how would they better promote the NEO?

Infigen Energy is satisfied that Proposal 3, or a combination of Proposal 1 and 2, will address the inefficiency and unnecessarily high costs of connecting new generation plant today to some degree. Improving the efficiency and reducing the costs of new generator connections promotes the NEO in two ways. First, reducing unnecessary connection costs will improve the efficiency of the NEM and reduce costs that generators must inevitably pass on to customers. Second, making generator connections more cost effective will encourage more new generation plant to be built, increasing competition in the wholesale electricity market, thereby improving the efficiency of the NEM.

PROVIDING EXTENSIONS TO SHARED NETWORK (CHAPTER 14)

Before addressing the specific issues in Chapter 14, Infigen would like to take this opportunity to make a few comments about network extensions and augmentations to enable new generation to connect and/or resolve existing constraints.

On page 17 of the First Interim Report, Infigen Energy agrees that,

- "TNSPs have incentives to:
  - operate efficiently, so as to maximise network availability in the short run; and
  - Invest efficiently, such that load requirements can be met at least cost while maintaining quality, safety, reliability and security of supply…"

The absence of any incentive to facilitate generation or remove generation constraints is significant---as well as being correct.

Infigen Energy also agrees with the statement on the following page, that:

> "Transmission investment should also support a competitive generation sector through the timely and efficient construction of additional network capacity."

However, while we agree this "should" happen, it is our experience that it does not. This is not surprising as there are no incentives for it to happen. NSPs are only rewarded for meeting (or penalised for not meeting) reliability standards with *regards to loads*. There are no incentives for NSPs to resolve generation constraints even though reducing constraints, particularly for lower

marginal cost generation like wind farms, is clearly in the interest of electricity consumers (and the NEO). We concur with the statement on page 31, that:

> "Congestion is therefore only likely to be built out if a proposed augmentation passes the RIT-T or if it is required to meet load reliability standards."

As the RIT-T is relatively new, it is not clear at all how successful it will be in resolving constraints or "supporting a competitive generation sector".

Infigen Energy believes that the cost of constraints in the market can be calculated and estimated. For example, Section 5.3.3 of the TFR First Interim Report provides one methodology. The benefit associated with removing a particular constraint can be calculated (by comparing the settlement cost associated with unconstrained dispatch with constrained dispatch), and along with an estimated frequency of occurrence, the economic merits of removing the constraint can be determined.

Last, Section 14.4.1 discusses the issue of transmission users seeking access to independently owned networks. It should be noted that private transmission systems exist in the NEM which have third parties connected to them, notably the BHPB Olympic Dam 275 kV system in South Australia which connects the District Council of Roxby Downs and Oz Minerals Prominent Hill mine to the NEM.

Is there any evidence to suggest that competition in the provision of extensions is (or is not) workable?

Infigen agrees with the AEMC that there are a number of significant barriers to third parties undertaking extensions (or network augmentations) including:

- any requirement to be a registered TNSP in order to own, operate and control the extension;
- any state-based licensing requirements to operate part of a transmission network;
- the desirability of possessing land acquisition powers to obtain the necessary easements for the land over which the extension will be constructed;
- TNSPs, as providers of network services, may have a significant competitive advantage in terms of economies of scale, experience and capability in providing network infrastructure services; and
- Third party providers may be hesitant to bid against TNSPs if they are concerned about maintaining their relationship with those TNSPs for future contracts.

While the AER can grant exemption from the requirement to register as a TNSP, such exemptions have typically required the asset owner to provide access to the services provided by its assets on a fair and reasonable basis, effectively making the extension an un-regulated prescribed service. It is unreasonable to expect a generator to fund an augmentation, or extension, and then allow other generators to connect and potentially constrain them off the network and/or cause them to be assigned a less favourable MLF as a result. This is another very important barrier to third parties undertaking extensions or augmentations to the network.

Are there any compelling reasons why competition in the provision of extensions should be limited to registered or incumbent TNSPs?

Infigen Energy sees no reason why the provision of extensions should be limited to registered or incumbent TNSPs. Rather, Infigen believes competition in the provision of **ALL** transmission assets should be encouraged to the maximum extent possible.

Should third parties have the right to access extensions that are paid for by incumbent network users?

Infigen believes that this is already the case, in some instances, under the TNSP license exemptions granted by the AER.

In the interests of promoting cost effective, optimised, and efficient development of the transmission system, Infigen considers that network extensions and augmentations should be funded by the NSP and be constructed as a prescribed transmission service with third party access provided as far as practical. However, as previously noted, there is very little incentive for NSPs to undertake such works, so network extensions or augmentations to relieve generator constraints funded by NSPs are not very likely.

Infigen considers that for instances where a third party (i.e. another party besides the incumbent NSP) pays for an extension or augmentation to the network, that party must be provided additional rights over access to the extension or augmentation. In Section 14.4.2, it is stated that a Generator, having paid for an extension to the network (Generator A), ***may*** receive some level of compensation in circumstances from a second Generator (Generator B) connecting to the extension where Generator A is paying ongoing charges. It is also stated in Section 14.4.2, that the Rules are even ***less clear*** on whether any portion of Generator A's capital contributions would be reimbursed in such a scenario.

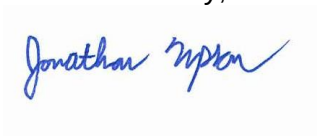
The result of this tremendous uncertainty is that generators are incredibly unlikely to fund an augmentation or extension of the network without firm access rights and/or certainty that their capital and ongoing expenses will be reimbursed should other generators connect to the extension or augmentation for which they paid.

Hence, we are left with the situation today where the party that should fund extensions and augmentations (NSPs) have no incentive to do so, and the party that has the incentive (Generators) have no rights over the extension or augmentation they've paid for making such an investment untenable.

Infigen Energy would like to refer the Commission to Page 7 of our Directions Paper submission where it is suggested that new categories of services be defined---"funded extensions" and "funded augmentations" which define, and set the rules, for such transmission user funded extensions and augmentations. Without such changes, extensions or augmentations to the network to relieve congestion or enable cost effective grid connections to remote areas are very unlikely to be built.

Infigen Energy looks forward to continuing our dialogue with the Commission with regards to this very important review. If you have any questions with regards to this submission, please feel free to contact myself using the details below.

Yours sincerely,



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