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Clean Energy Council

Thursday, 25 October 2012

John Pierce, Chairman
Australian Energy Market Commission
PO Box A2449
Sydney South NSW 1235
By Email

Dear John,

RE: Clean Energy Council Submission to EMO0019 Transmission Frameworks Review: Second Interim Report

The Clean Energy Council (CEC) welcomes the opportunity to participate in this stage of the Australian Energy Market Commission's Transmission Frameworks Review.

The CEC is the peak body representing Australia's clean energy and energy efficiency industries. The CEC works with over 550 member organisations and governments to identify and address the barriers to efficient industry development in the stationary energy sector. Its priorities are to:

- create the optimal conditions in Australia to stimulate investment in the development and deployment of world's best clean energy technologies
- develop effective legislation and regulation to ensure a sound investment environment for the clean energy industry
- work to reduce costs and remove all other barriers to accessing clean energy

The attached submission is our initial response to the Second Interim Report which represents the view of the majority of our members. Note that another submission specific to the Optional Firm Access model will follow shortly.

In the coming years the clean energy industry is expected to be the single largest investor in new transmission infrastructure. Clearly the CEC appreciates the dire need for an efficient investment environment in the National Electricity Market and acknowledges the importance of the transmission frameworks to facilitate this.

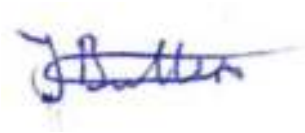
The CEC expects that some of the key issues under consideration by the Commission in the Review would be more efficiently considered with a holistic approach where the market

externalities such as emissions reduction and the renewable energy target are considered in conjunction to the proposed changes.

The CEC believes that ultimately the best way to achieve efficiencies is to ensure that competitive delivery can be achieved wherever possible. The framework should allow for transmission businesses to compete with each other across regions for delivery those aspects of connections in the shared network. Private construction and ownership of assets which are not related to the shared network must be allowed to proceed with minimum regulation. All facets of the operations of the market's regulated monopolies must be regulated. The roles, responsibilities and reaches of these monopolies must be very clearly delineated within the framework. Price regulation should never be light-handed.

Please do not hesitate to contact the undersigned for any queries regarding this submission. The CEC would be pleased to meet with the Commission to discuss the finer points in more detail.

Yours sincerely,



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Executive Summary

The Clean Energy Council (CEC) welcomes the opportunity to contribute to another important stage in the Australian Energy Market Commission's Transmission Frameworks Review. This submission is our response to the majority of the review. However, with regards to the proposed Optional Firm Access model we only offer a high level summary of our position here. We are preparing a supplementary submission which will consider this proposal in more detail. This will be provided to the Commission within the coming days.

The CEC commends the Commission on the efforts to date on this intensive review and equally intensive level of stakeholder engagement. Clearly the future frameworks for the NEM's transmission systems are of the upmost importance for efficient economic outcomes moving forward.

Collectively, members of the CEC are expected to be the largest investor in new transmission infrastructure in the NEM in the coming 10-15 years. In order to ensure a solid and attractive investment environment this industry expects transmission frameworks to

1. Operate with clearly delineated roles for parties within the NEM including a consistent approach to the roles of regulated entities within clearly defined boundaries.
2. Allow efficient regulatory arrangements which oversee the activities of regulated monopolies under complete and consistent information transparency, including controlled revenue through all facets of their businesses such that they remain accountable for their decisions.
3. Enable private investment to occur without hindrance and within a competitive environment in all aspects of the NEM where a monopolistic structure is unnecessary.
4. Be governed by a consistent and coherent set of rules which clearly define the boundaries, roles and obligations set out above.
5. Be flexible enough to the extent of ensuring that market participants have complete visibility of the risks associated with their investments.

The following outlines our position on each of the areas considered by the Commission in the Review.

Non-firm access model

While the CEC accepts that some aspects of the current arrangements (Clause 5.4A) appear to impose unworkable obligations on TNSPs the CEC also expects that that Commission is aware that those obligations are strictly limited to those parts of Clause 5.4A which detail

compensation arrangements. No other reference to a 'guarantee' of access is made in the rules.

Chapter 5 necessarily prescribes the activities of a Transmission Network Service Provider in order to achieve efficient outcomes in the interface between that monopoly provider and a connecting party. Without a prescriptive process it is highly likely that the monopoly provider will exert monopoly power, as was recognised in the initial stages of the development of the current market.

To this extent all other parts of clause 5.4A are essential and their removal would be regressive. The CEC proposes that part of this Clause is expanded in order to ensure that its intent of enabling a connection applicant to assess the commercial implications of a connection are fully realised by imposing a requirement on Transmission Network Service Providers to properly assess the capability of their networks, without providing a 'guarantee' of power transfer.

Optional firm access model

The CEC does not support Optional Firm Access (OFA) in its current form. The CEC also queries the material benefits to consumers consistently with the NEO under a revised OFA model. The CEC notes that the Commission has not demonstrated the extent or cost of the issues which are to be resolved by implementing OFA, despite an expectation of high costs to do so. Nor has the Commission clearly articulated any advancement of the NEO resulting from OFA.

The CEC is preparing a detailed supplementary submission which will provide more detail on the concerns captured here.

The AEMC is proposing that OFA promotes market-led investment in the shared transmission network. Fundamental NEM design dictates that a profit-driven monopolies control the NEM's networks and regulation is applied accordingly. The OFA proposal looks to blur the currently defined boundaries which, in the CEC's view fundamentally impedes efficient regulation and contradicts the intent of the NEO relating to efficient investment for the long term interests of consumers.

The CEC believes that implementation of the OFA model must not be recommended without undertaking a significantly body of work on aspects of the model itself and consideration for the inter-related impacts on consumers. The impacts of the extensive implementation period will have on future investment in the NEM and on all registrable generation categories must be considered in much more detail. In particular the impact of OFA in light of market externalities must be considered in detail by the relevant government bodies. The CEC suspects that the model will have a severe negative impact on aspects such as emissions reduction and the renewable energy target.

The NEM is undergoing a fundamental change which will require investment in the tens of billions over the years ahead and the vast majority of this investment will come from the renewable energy sector. OFA proposes a radical change that would be *disruptive* for all

market participants and deter future investment in the market for some time, yet the Commission has not fully quantified the problem/s being solved by implementing OFA.

Planning

The CEC supports the enhanced role of AEMO as the National Transmission Planner. Such an arrangement will be crucial for nation building investments to be made into the future. However, the CEC is disappointed that the Commission's firm view is that *only* profit-motivated planning can produce efficient outcomes. Profit motivated planning which exists in Qld, NSW, SA and Tasmania has resulted in extremely high run away network revenues. This is in stark contrast to the relatively stable network revenues occurring in Victoria.

The CEC believes that the Commission has overlooked the benefits that have been developing under the Victorian arrangements, where even the spectre of competition is now promoting the behaviour expected within a competitive environment. The CEC does not accept that the benefits of passing LRPP responsibilities onto AEMO outweigh the loss of those achieved through the Victorian arrangements. Indeed the Commission has not demonstrated that the Victorian model is inefficient or costly in comparison to the alternative.

Connections: rules clarifications

The CEC agrees with and supports the Commissions objectives in attempting to clarify the rules and to apply the appropriate form of regulation to NSPs when delivering connections. However, in this instance the CEC entirely disagrees with the Commission's interpretation of the rules applied in developing the proposed policy outcomes.

The CEC believes that the Commission has not demonstrated how the existing framework is sufficiently flawed to justify the proposed sweeping changes to the status of assets that the rules intended to be treated very differently to "*network*". The proposed changes appear to be caused by perceived ambiguity which has evolved due to the behaviour of some TNSPs who fail to recognise the existing right of *Network Users* to build and own their own *connection assets*.

The CEC believes that, rather than building on the current framework the Commission is proposing policy outcomes which are already intended by the rules, but in doing so will not resolve the ambiguity problem at its source.

This submission outlines an alternative interpretation of the rules which is based on the fundamental principles under which the rules where developed. In doing so the CEC identifies and clearly articulates the causes of ambiguity and provides solutions to each of the problems identified by the Commission in this Review through a succinct set of rule changes. This solution only expands on the intent of the rules and does not require the fundamental changes which have been proposed by the Commission. In conjunction the solution can be implemented immediately with negligible implementation costs.

The solutions offered by the CEC ensure that

- A connection applicant will have access to competitive delivery wherever possible.
- The boundaries of reach of the regulated monopoly are minimised and well defined, including the services offered by that monopoly.
- The legislative advantage held by the market's regulated monopolies can be accessed by connection applicants where required.
- That the rules are consistently and coherently aligned with their original intent and fundamental principles.
- An efficient resolution to the third party access problem is provided.

The CEC uses independent legal advice and the practices of the Australian Energy Regulator and jurisdictional regulators to ensure that the solution is consistent with the intent of the rules and the interpretation of the rules as applied by these regulatory bodies under their rules obligations.

Connections: third party access

The resolution to third party access proposed by the Commission appears to be found on a belief that *connection assets* are already part of a *network* and therefore can be easily transferred to the control of a Network Service Provider. In practice there are significant complexities involved with this transfer and the Commission will need to develop this framework in more detail to move it forward.

The CEC believes that the Commission's proposal is in fact a whole new way to expand the network for the greater good of consumers. Under this arrangement the market would expect that all connection related works would be prescribed and the assets in question should be treated as network from the onset – the appropriate form of regulation should be applied.

The CEC expects that the AER's current application of the exemptions framework has been misinterpreted. The AER does not currently grant exemptions for connection assets and they do not perform the function of a network and are not a system.

A more measured resolution to third party access is proposed here whereby all future connection agreements contain a requirement for the owner of the agreement to apply the local Network Service Provider's negotiating framework (i.e. mimicking the role of that provider) if a request is made to gain access to their connection assets. This approach avoids any fundamental changes to the rules and can be implemented immediately.

Connections: negotiated transmission services

The CEC supports the Commission's position on proposing an 'open book' approach to the provision of *negotiated transmission services*. In particular the CEC agrees that the proposed approach should achieve the desired policy outcomes of holding TNSPs accountable for their decisions, providing for more efficient *connections* and information sharing between TNSPs and *Connection Applicants*. In lieu of prescribed connection costs or full contestability this is the most effective outcome possible. The CEC advises to ensure that this proposal remains as the minimum benchmark for the Commission's recommendations.

The CEC recommends that the Commission looks very closely at the principles on which the market was founded. Recommendations made in 1993 by the National Grid Management Council clearly articulated deep concerns about monopoly Transmission Network Service Providers exerting monopoly power in the connection process and the conflict of interest that arise from state owned corporations behaving in this way. These recommendations included that connection costs should be prescribed and that 'self-regulation' needs to be avoided. Today's market reflects exactly those conditions that which the Council was trying to avoid: *connections* are essentially 'self-regulated' by Transmission Network Service Providers and the conflict of interest arising from state owned corporate TNSPs 'self-regulating' profits from new *connections* has materialised. The self-regulation experiment has failed.

The CEC accepts that market may have come too far to revert to prescribed connection costs. However, there is a clear need to reinforce the Commission's 'open book' proposal with tighter regulation. The CEC recommends the following inclusions:

- The concept of reward being commensurate to risk is visibly missing from the connection process. Despite the intent to balance this, prudential measures in the rules allow Transmission Network Service Providers to require a full bank guarantee for work funded by a connection applicant, who subsequently carries all of the risk. These same providers also demand commercial rates of return from the connection applicant while avoiding the risk because of the bank guarantee. This is a clear inefficiency which must be resolved by regulating the return earned to a rate which is commensurate to a negligible risk investment[1].

- The AER should undertake a role of auditing all charges for negotiated transmission services. This can be undertaken retrospectively and would not seek to analyse individual projects but would serve to identify systematic inefficiencies. The CEC expects that this would be a powerful 'de-facto' arbitration mechanism which would also support any arbitration process.

- A tighter constraint must be placed on the reporting of the processing of a connection application by a Transmission Network Service Provider. Such a framework is visibly missing from the rules and must be included in order to ensure that these providers can be held accountable for the process and their actions during it.

[1] Consistently with the MCE's Terms of Reference to the Commission: p. 4.

- All connection process publications applied by Transmission Network Service Providers should be reviewed for consistency against the rules and approved by the AER.
- The AER should undertake regular reporting to the Commission on the performance of the arbitration framework. This would not require significant detail and could be limited to a brief annual statement only.

The CEC contends that these enhancements are well within the present capabilities of the AER and seek to retain the intent for the structure of the market as laid out at inception.

Connections: evidence of contestability in the current framework

The CEC believes that the Commission has not fully appreciated the effectiveness of some aspects of the Victorian model and should in fact encourage contestability for connections between TNSP's (cross-border competition). This was clearly the intent for this market at inception and the CEC does not consider that there are material issues with promoting that the existing Transmission Network Service Providers compete with each other in a similar "Declared Transmission Service Operator" arrangement to that in Victoria. These providers have the necessary experience and full capability to do so.

In proposing such an arrangement the CEC notes that the taxation issues identified by the Commission can be completely avoided.

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1 Access models

1.1 Non-firm access model

The CEC accepts the Commission's proposal that the rules should be amended to remove unworkable obligations on TNSPs in relation to the requirements of Clause 5.4A. However, the Commission should be aware that the scope of Clause 5.4A which relates to an access 'guarantee' is strictly limited to those subclauses which reference compensation arrangements: (h), (i) and (j).

Clause 5.4A focusses on the provision of *transmission network user access*, which is defined as

transmission network user access

> The *power transfer capability* of the *transmission network* in respect of:
>
> (a) *generating units* or group of *generating units*;
>
> (b) *network elements*; or
>
> (c) plant,
>
> at a *connection point* which has been negotiated in accordance with rule 5.4A.

While *power transfer capability* is defined as

power transfer capability

> The maximum permitted *power transfer* through a *transmission* or *distribution network* or part thereof.

Neither of these definitions contemplates any guarantee of power transfer through a network. Hence it is only those parts of Clause 5.4A which reference a form of compensation to be provided by the TNSP if said capability is not provided which are relevant to the Commission's concerns. Removal of any other part of 5.4A would be regressive.

The obligations of Chapter 5 on NSPs constitute prescribed services. Prior to the market starting the National Grid Management Council set out their recommendations for regulation to be applied to all TNSPs. Included in these recommendations was the requirement that

> "*the technical aspects (i.e. procedures for connections, the physical assets required and their performance characteristics) relating to entry, exit and use of the*

network are prescribed in the Protocol, providing no latitude for grid owners/operators to place barriers in front of or discriminate against users."[2]

Chapter 5 is necessarily prescribes the process in detailed in order to facilitate the Council's intent. It was clearly developed on the basis that the rules intended for *connections* to occur between a monopoly service provider and a competitively motivated *Connection Applicant*. As a result Chapter 5 necessarily prescribes the activities of the service provider in order to achieve efficient outcomes in the interface between these parties.

Clause 5.4A(e) expects that the TNSP provides sufficient information for a *Connection Applicant* to fully assess the commercial significance of the *transmission network user access* arrangements sought. Since these arrangements refer to a *power transfer capability* through the *network* this clause expects that the TNSP would provide information to the *Connection Applicant* on the conditions under which the *power transfer capability* would be available, reduced or unavailable. This requires that the TNSP provides clear and transparent connection studies that define the conditions within the *network* under which the *power transfer capability* will occur.

Power transfer capability is not related to *connection assets*. As will be demonstrated in following sections *connection assets* are not a part of a TNSP's *network*. *Power transfer capability* relates specifically to a TNSP's *network* and is subject to special limiting factors, control schemes, operational conditions, special temperature conditions (or wind conditions affecting dynamic ratings for example).

Again, there would not be a guarantee (all participants know they are in a competitive market) but the rules intend that the *Connection Applicant* would be provided with this information in order to assess the commercial implications of the *connection* and subsequently make informed and efficient investment decisions. The *Connection Applicant* has no visibility of the factors that affect *power transfer capability*. TNSPs are the only party with the requisite knowledge to determine what power their *network* is capable of accepting. Presently, TNSPs take no accountability for this.

Without requiring a TNSP to undertake these engineering studies it is likely that a highly inefficient market could arise as a result of TNSPs being capable of making profits from new *connections* while *Connection Applicants* are not provided with sufficient information to effectively manage the risk. TNSPs are the only party with the prerequisite information and it is crucial that an obligation is included in the rules to so that *Generators* can make efficiently investment decisions and this clear risk to efficient market operation can be overcome.

The CEC considers that this obligation would be an appropriate level of light-handed regulation and is well within the intent of Clause 5.4A. A new subclause (c)(3) could be inserted which states that the TNSP must provide the *Connection Applicant* with the information relevant to any limitations of the *transmission network user access* arrangements sought by the

[2] National Grid Management Council, 1993, *The Structure of an Interstate Transmission Network for Eastern and Southern Australia*, p. A1. (a copy of this document is provided in confidence).

Connection Applicant under subclause (c)(2). Note that there would still be no penalty framework so no material risk on the TNSP. Suggested wording for this could be:

New subclause 5.4A(c)(3)

> the information provided under (2) must include all relevant information including, without limitation, the *power transfer capability* limits in MVA as a result of constrained areas of the *Transmission Network Service Provider's network* relevant to the *connection*, the frequency and duration of such constraints occurring and documented assumptions on the conditions under which they occur.

As noted by numerous submissions to this review *Generators* have made a strong case for reform of the connections framework. However, the process prescribed by Chapter 5 is not their concern. Rather, concern has arisen from the performance of TNSPs against the obligations set out in Chapter 5 and the inadequacy of the *negotiating frameworks*.

1.2 Optional firm access model

The CEC does not support Optional Firm Access (OFA) in its current form. The CEC also queries the material benefits to consumers and the NEO under a revised OFA model. The CEC notes that the Commission has not demonstrated the extent or cost of the issues which are to be resolved by implementing OFA, despite an expectation of extreme costs to do so. Nor has the Commission clearly articulated any advancement of the NEO resulting from OFA.

The CEC believes that implementation of the OFA model must not be recommended without undertaking significantly more work on aspects of the model itself. Further, the impacts of the extensive implementation period on future investment in the NEM and on all registrable generation categories must be considered in much more detail. In particular the impact of OFA in light of market externalities must be considered in detail by the relevant government bodies. The CEC suspects that the model will have a severe negative impact on aspects such as emissions reduction and the renewable energy target.

Consumers have not been properly considered. The AEMC is proposing that OFA promotes market-led investment in the shared transmission network. Fundamental NEM design dictates that a profit-driven monopoly controls the NEM's networks and regulation is applied accordingly. OFA would blur the currently defined boundaries which, in the CEC's view fundamentally impedes efficient regulation and contradicts the intent of the NEO for efficient investment for the long term interests of consumers. The Commission must demonstrate that this would not be the case.

The CEC is preparing a submission dedicated to the OFA model. Some of the CEC's concerns considered in more detail in that submission include:

- The benefits suggested by the Commission have not been clearly articulated in the reports, nor have they been demonstrated to outweigh the costs or risks associated with implementing OFA.
- The model presents a significant risk to the financial viability of future generation projects due to significantly increased uncertainty about the scale of the impact that system constraints will have.
- The CEC has strong concerns that OFA will provide a mechanism for semi-scheduled generation to be discriminated against as they are less capable of valuing 'firmness'. The CEC believes that this would provide a sanctioned favouritism within the rules and subsequently it would be anti-competitive.
- An expectation that the 'optional' firm access could easily become 'forced' firm access which could impose very high costs on existing generators under some market conditions. In particular in cases where a contract for difference PPA has been agreed to.
- All current PPAs would be subject to a 'market disruption' force majeure event and will require re-negotiating.
- The proposed transitional approach whereby incumbent generators are gifted access (which is sculpted back over time) while new entrants pay for access creates an immediate new entry barrier which is anti-competitive. Value creation for incumbent generators by allowing gifted perpetual firm access is also a significant concern.

2 Planning framework

The CEC supports the enhanced role of AEMO as the National Transmission Planner. Such an arrangement will be crucial for nation building transmission investments to be made into the future.

Despite this the CEC has serious reservations on the Commission's intent to disband the Victorian arrangements on the basis that the LRPP would be best placed with AEMO. The move would seek to remove the competition which has developed under the Victorian arrangements.

The CEC notes that the Commission cites an expectation that a vertically integrated profit driven TNSP in Victoria is likely to result in more efficient outcomes. No demonstrated benefit is provided, nor is any indication of the Victorian model being material less efficient than in any other jurisdiction.

The CEC entirely disagrees with the Commission's position on the effectiveness of competition in Victoria. The competitive tendering process in Victoria has been developing and is now driving behaviour within the incumbent TNSP that represents that expected in a competitive environment.

The Commission has noted the transaction costs and contractual complexities associated with the planner/procurer arrangements in Victoria.

Firstly, within current arrangements in other jurisdictions connecting parties can expect that their connection costs are inflated at around 150% from those expected under competitive delivery[3]. This is somewhat significant when compared to the 5% increase that the Commission cites from the SP AusNet submission as being associated with AEMO's management of the tendering process[4].

Secondly, the complex contractual arrangements have not led to untenable solutions to date. Given the significant economic benefit from competition these arrangements can be managed.

[3] Based on the experiences of CEC members.
[4] AEMC, *Transmission Frameworks Review: Second Interim Report*, p. 80.

3 Connections: rules clarification

The CEC understands that the Commission is seeking to develop policy solutions to the following three problems:

1. Resolving ambiguity
2. The clarification of roles and the appropriate form of regulation to be applied
3. Third party access

The CEC agrees with the Commission that the rules are ambiguous. However, the CEC vigorously disagrees with the approach taken to achieve the above outcomes and expects that the Commission has proposed solutions which are not based on the fundamental intent of the rules. As a result the solutions propose fundamental changes to the treatment of specific assets in the rules while achieving policy outcomes which already exist in the rules to a large degree. This approach therefore obfuscates the fundamental concepts within the rules and fails to tackle the sources of ambiguity.

The CEC would like to raise concern that the following critical matters have not been addressed by the Commission when developing the proposed solution outlined in the Second Interim Report:

- The current framework within the rules has not been described by the Commission.
- Consideration has not been given to the interpretation of the rules by the AER in their role of approver of exemptions from TNSP licences.
- The Commission's proposed significant redrafting of Chapters 5, 6A and 10 would include a fundamental change to the NEM framework. This has not been recognised by the Commission nor has there been any demonstration that the proposed fundamental change enhances the performance of the market or advances the NEO in light of material issues presented to the market.

The following sections outline the CEC's concerns in more detail while presenting an alternative view of the rules and proposing alternative arrangements to achieve the policy outcomes sought by the Commission.

3.1 Summary

It is not clear that there is any material benefit to approach the problem by resolving the three outcomes listed above together. The CEC believes that these three problems are not mutually

inclusive and that they can be resolved more efficiently by reaffirming the current rules framework.

The CEC proposes an approach to achieve this here by considering ambiguity, regulation and roles independently to third party access. This approach focusses on identifying the sources of ambiguity and providing solutions to this problem. Subsequently a solution to the Commission's third party access concerns is also provided with a more appropriately measured approach.

The Commission will note that that the solutions offered here only require subtle changes to the rules to relieve the ambiguity. In conjunction these outcomes can be achieved through negligible implementation effort. The following sections achieve this by:

1. Identifying the key causes of ambiguity and how ambiguity has been perpetuated (Section 3.2).

2. Recognition of the existing rules framework in respect of the guiding principles applied consistently throughout the rules, and which are applied to the rules by the AER when making determinations on exemptions under Clause 2.5.1 (Section 3.2.3).

3. Consideration of the key terms reflected within the existing framework along with their practical meaning and application while identifying areas of ambiguity within these terms and proposing minor changes in order to reaffirm their intended meaning where necessary – but not to the extent that significant change to their meaning results (Section 3.2.4).

4. Consider the provision of services by TNSPs within the current rules framework. Identify areas of ambiguity as presented by the Commission in the First Interim Report and demonstrate how the CEC's proposed changes resolve the issues identified (Section 3.3).

5. Present key concerns associated with the Commission's proposed resolution to third party access and provide an alternative and more appropriate solution to the problem, considering the magnitude of the issue (Section 4).

6. Compare the outcomes presented in this submission against those sought by the Commission and demonstrate how the changes proposed here will achieve equivalent outcomes without making fundamental changes to the rules and with negligible implementation cost and effort (Section 5).

7. Propose a set of succinct 'reinforcing' rule changes which are intended to remove ambiguity without adjusting the rules framework. These changes achieve the desired policy outcomes and can be adopted by the Commission immediately with negligible further implementation cost or effort (Section 11).

3.2 An alternative framework for analysing and relieving ambiguity in the rules

3.2.1 Key causes of ambiguity

In order to resolve ambiguity there is a need to understand its root causes. The CEC notes that the Review has placed a very strong focus on ambiguity relating to the provision of services by TNSPs as they relate to new *connections*. This suggests that a key cause of ambiguity is likely to be the interpretation of the rules by TNSPs rather than the AER or *Connection Applicants*.

This distinction is important because the rules should seek to define asset boundaries through asset function. The services which assets are provided under and the subsequent ownership of those assets are secondary concerns to be considered as appropriate.

The CEC has observed the following key causes of ambiguity.

TNSP behaviour during the connection process

Following the extensive stakeholder consultation to this Review the Commission should be well aware that during negotiations for the provision of services TNSPs rarely display the characteristics of a regulated monopoly service provider, as intended by the rules. Rather, the characteristics of a profit-driven corporate monopoly are exhibited.

These negotiations will often result in the TNSP forcefully enlarging their scope of supply for the *connection* into the provision of the '*extension*' assets. This behaviour has led to the terminology applied by some TNSPs and Grid Australia to redefine *connection assets* as '*extensions*'[5]. The rules do not provide this justification and so appear highly ambiguous. Figure 1 illustrates this key cause of confusion and how it has been perpetuated.

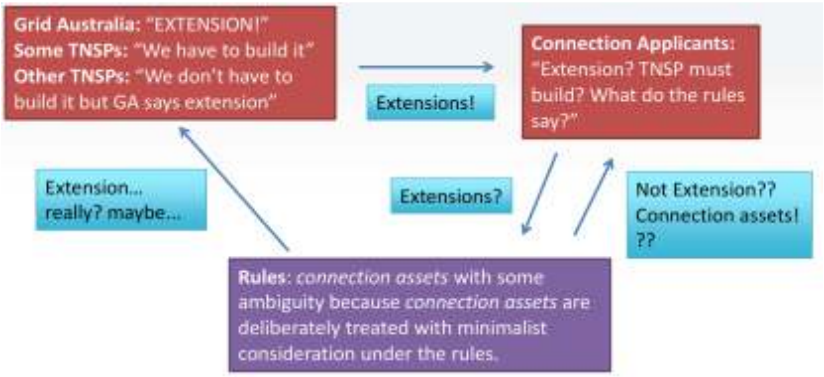

Figure 1: Illustraton of a key source of ambiguity and the perpetuation of the ambiguity under consideration by the Commission. Note that the rules' intent is discussed in the following sections.

[5] As the Commission will recall under the rules *extensions* are to be affected by a TNSP (clause 5.3.6(k)).

Section 9.1 demonstrates that the rules intent for the defined term '*extension*' is very different to that which is presented by Grid Australia and some TNSPs and which has been applied in this Review. The rules make no reference to a *Network User* connecting to an *extension*. An *extension* is an extension of the network. '*Networks'* are owned by NSPs for the primary role of delivering electricity to *Customers*, or between *Network Users*, and are subject to regulation under Chapter 6A as a result[6].

The asset in question has absolutely no relationship to *Customers* so therefore cannot be an '*extension*' of the *network*. More concisely, the obligations of clause 5.3.6(k) are completely unrelated to the asset in question: a *connection assst*.

The CEC also notes the Commission's representation of a *connection asset* as being the small piece of asset between the *busbar* and the *substation* fence. As explained later in Section 6.1 this asset is inconsequential. It only exists because TNSPs have a preference to prevent another party from entering their *substations* so they force the *connection point* to the *substation* boundary and have contrived this 'missing-link' in doing so. The rules do not contemplate the existence of this asset which, the CEC expects has driven a large amount of the ambiguity now under consideration in the Review.

Legal advice received by the CEC

The CEC has engaged legal firm Finlaysons to confirm the correct terminology. Their assessment (Attachment 1) confirms that the following statements correctly interpret the rules:

- The rules do not contemplate a *connection asset* connecting to an *extension*, or that a TNSP provides any particular service to a *connection asset*, other than a *connection service* which is a *negotiated transmission service* to *connect* to the *network*.
- As the rules are in place to observe the regulated activities of the TNSP, which excludes *connection assets*, *extensions* must only be related to the *network* as the rules state that they are affected by the TNSP (cl. 5.3.6(k)).
- As the *system* is only comprised of two parts a *connection asset* must be something else that is used to *connect* to the *network* and sits outside of the *network*. On this basis any party can own a *connection asset*.
- An *extension* is an extension of the *network* owned by a TNSP, it has no relationship to a *connection asset*.

Section 9.1 contains an assessment of the rules' definition and usage of the defined term *extension* in order to provide evidence dismissing its usage here. Continued consideration of this term will only compound ambiguity and distort the objective of clarifying the rules.

[6] National Grid Management Council, 1993, *The Structure of an Interstate Transmission Network for Eastern and Southern Australia*, p. A10.

TNSP ownership of connection assets

The CEC notes that there may be a reasonably high incidence of TNSP ownership of *connection assets*. This may now be leading to an expectation that these assets should be treated differently under the rules. However, ownership of the asset does not change its function and treatment to that effect under the rules. One can expect that a TNSP would be well aware of this function and the treatment of these assets by the rules. Ownership does not change this treatment and is therefore not a sound basis for policy reform.

Scale Efficient Network Extensions

The SENE rule change created an anomaly. The CEC notes that upon commencement the Commission was requested to consider the construction of an asset which forms a component of a *network* and would be funded by consumers initially. Such an asset would have a close relationship to *Customers*[7] and subsequently form part of the *network* owned by the TNSP and considered *network* for the purposes of Chapter 6A.

Despite this the decision that was made created an asset which would be funded and owned by private enterprise – the complexity of the solution increased at this time. In the case of ownership by a third party the SENE would become *network* and that party would be performing the role of a *Network Service Provider*[8]. However, where owned by the *Generators* using the asset it would remain a *connection asset*. As there is no third party ownership and no relationship to *Customers* this latter case the asset would not meet the criteria for *network* and its owner/s role would not meet the criteria of a *Network Service Provider*.

The CEC contends that the defined term *extension* requires reinforcing in order to remove ambiguity. As shown in Section 9.1 the CEC proposes that the defined term *extension* be reinforced by inserting '*network*' proceeding it in every incidence in the rules: i.e. *network extension*. This should resolve the vast majority of the ambiguity recognised by the Commission. Further clarification of other terms proposed here will also reinforce the rules' intent for *extensions*.

Ambiguity Source 1:	**Misrepresentation of the defined term '*extension*' by Grid Australia and some TNSPs to the Review and for economic gain during the negotiation process for new *connections*.**
Ambiguity Source 2:	**Convolution of the definition of '*extension*' from the SENE rule change and TNSP ownership of *connection assets* driving confusion.**

[7] Ministerial Council on Energy, 2010, *Rule Change Request – Scale Efficient Network Extensions*, available: ww.aemc.gov.au.

[8] It follows that in this case an exemption may be sought under clause 2.5.1 by this party.

Proposed Clarification 1:	**Refine the definition of *extension* by clearly stating that it is an extension of a *Network Service Provider's network* by inserting '*network*' preceding every incidence of *extension* in the rules.**

3.2.2 Summary of CEC concerns

The Commission's proposed changes to clarify the rules have not recognised that there are distinct differences between the terms in question here. The Commission has not provided a solution which resolves the ambiguity problem at its origins and is subsequently proposing a change to the treatment of *connection assets* which obscures the borders of regulation in the NEM.

The proposed changes appear to support a misinterpretation of the rules as presented to the negotiation process by some TNSPs. Hence encouraging monopolistic behaviour during this process and reducing competition for the provision of *connection assets*.

The CEC believes that while the Commission's approach may produce the policy solutions desired it will also produce new mechanisms for the rules to be manipulated. An entirely new set of rules will be required and the problem will not be resolved.

The fact that TNSPs above others are noting that there is significant ambiguity should indicate that it is their interpretation of the rules, and that which is presented to *Connection Applicants* by TNSPs which is the source of ambiguity (Figure 1 illustrated this). The focus of efforts to resolve ambiguity should be the proper integration of Chapter 6A into the rest of the rules.

The CEC is extremely concerned that the Commission has presented changes to the rules without fully considering the current rules framework which, as shown in the following sections, does not support the interpretation considered by the Commission.

The following sections demonstrate how the Commission's proposed policy solutions already exist in the rules to a large degree. As a result they can be achieved through negligible implementation effort by acknowledging and reinforcing the fundamental concepts and intent of the rules.

3.2.3 Recognition of the existing rules framework

The CEC considers that the following three guiding principles are consistent with the intent of the market and the rules from their inception. They must be considered in order to understand and fully appreciate the existing rules framework:

- Regulation should be strictly limited to those areas where it is expected that the monopoly prevails. A distinct boundary is required to mark the extent of this regulation.

- The rules define an area or region of regulation within the defined boundaries. The intent is to limit this area to that which is strictly necessary, and to allow competition and private commercial arrangements to manage all other investment decisions on the basis that the decision makers are carrying the associated risk.

- Within the rules the primary objective of NSPs is to own, operate and control their *networks* as third parties with the objective of conveying electricity through those *networks* to *Customers*, or between *Network Users*[9]. This *network* then represents the area of regulation where the rules intend that decisions are made by regulated bodies within the constraints of the NEO. Chapter 6A facilitates the regulation of this *network*.

As demonstrated in the following section the rules already provide the mechanisms for achieving the guiding principles listed above. Figure 2 illustrates the existing framework within the rules based on these mechanisms. The following sections clearly outline the supporting evidence on which Figure 2 was developed while proposing some succinct rule changes which retain and clarify this fundamental framework.

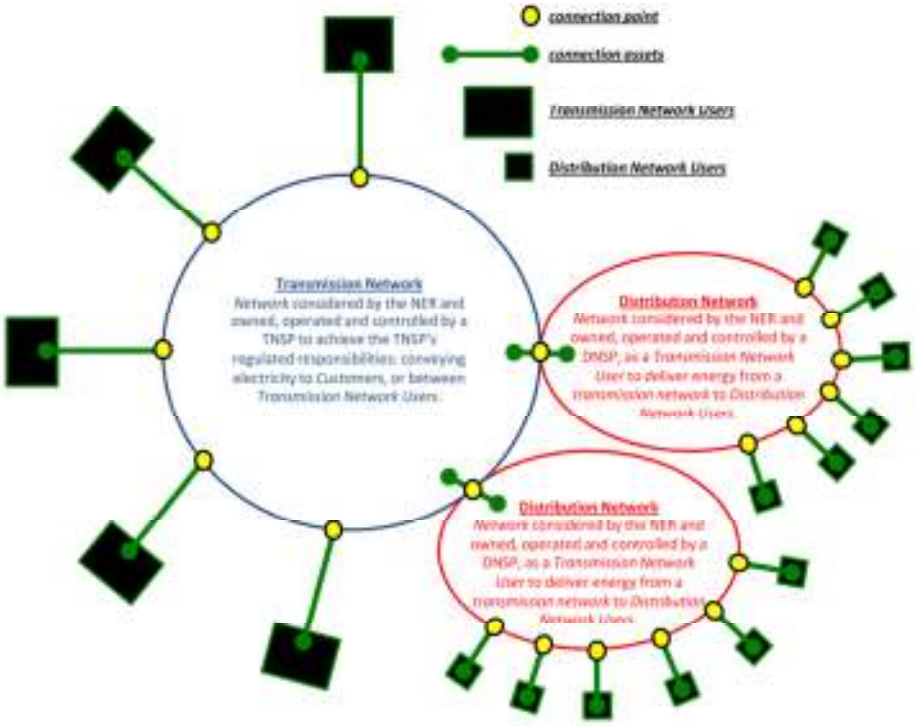

Figure 2: Illustraton of the fundamental building blocks which define a system and the boundaries of regulation (Chapters 6 and 6A) within the rules.

[9] National Grid Management Council, 1993, *The Structure of an Interstate Transmission Network for Eastern and Southern Australia*, p. A16.

3.2.4 Resolving ambiguity within the existing framework

Each relevant defined term presented in Figure 2 is discussed below along with its use in the rules and intended practical application. Each term is considered within the guiding principles outlined above in Figure 2 and enhancements are proposed where the principles are not clear from the definition of the relevant terms.

System

The definitions of the terms below alone clarify that a system, being a *transmission system* or a *distribution system* is strictly the combination of two components: *network* and *connection assets*.

distribution system

> A *distribution network*, together with the *connection assets* associated with the *distribution network*, which is connected to another *transmission or distribution system*.
>
> *Connection assets* on their own do not constitute a *distribution system*.

transmission system

> A *transmission network*, together with the *connection assets* associated with the *transmission network*, which is connected to another *transmission or distribution system*.

In order to clarify the intent for the term 'system' the CEC recommends that the definition of *transmission system* be expanded such that any future ambiguity is avoided. Any proposed change is required to retain the intent of the rules and remain in keeping within the guiding principles above.

Proposed Clarification 2:	**Insert "*Connection assets* on their own do not constitute a *transmission system*." into the definition of *transmission system* in order to better align the definition with the clear intent of the rules and to avoid any future ambiguity.**

The CEC notes that AER supports this interpretation when making determinations for exemptions applied for NSP ownership of systems under Clause 2.5.1(a). As a *system* clearly

does not consist of *connection assets* alone exemptions have not been required to date for a party owning *connection assets* and their own *facilities* only. In accordance with the guiding principles the AER and the rules expect that a *Network Service Provider* is a third party owner of the conveying *network*. This is also demonstrated in the AER's Registration Exemption Guideline[10], which supports their derogation that exemptions are not required for the ownership of *connection assets*.

The AER's interpretation is also supported by the assessment from Finlaysons (Attachment 1) who state

> "in our view a *connection asset* owned by a *generator* would not constitute a *transmission system* for the purposes of this Clause [2.5.1(a)], as the *generator* does not own, control or operate any of the associated *network* which comprises the *transmission system* (i.e. by definition, a *transmission system* needs to be comprised of more than a *connection asset* alone)."[11]

The CEC notes that the Commission has not considered the AER's interpretation in the Review, despite the AER's fundamental role in interpreting the rules to this effect.

Network

The definition of *network* alone makes clear that its purpose is for the delivery of electricity to *Customers*, that it is owned by an NSP and that it is something other than *connection assets*. The definitions of *transmission network* and *distribution network* only seek to provide some defining context to their application in the NEM.

Network

> The apparatus, equipment, plant and buildings used to convey, and control the conveyance of, electricity to customers (whether wholesale or retail) excluding any *connection assets*. In relation to a *Network Service Provider*, a *network* owned, operated or controlled by that *Network Service Provider*.

Transmission network

> A *network* within any *participating jurisdiction* operating at nominal *voltages* of 220 kV and above plus:
>
> (a) any part of a *network* operating at nominal *voltages* between 66 kV and 220 kV that operates in parallel to and provides support to the higher voltage *transmission network*;

[10] AER, 2011, *Electricity Network Service Provider Registration Exemption Guideline*, p. 12.
[11] Section 6.2 of the Finlaysons legal advice received and included as Attachment 1 to this submission.

(b) any part of a *network* operating at nominal *voltages* between 66 kV and 220 kV that is not referred to in paragraph (a) but is deemed by the *AER* to be part of the *transmission network*.

distribution network

A *network* which is not a *transmission network*.

While there is little ambiguity in the definition and function of a *network* the CEC suggests that a subtle change is made in order reaffirm the intent of the rules. This change would clarify that an NSP's role within the NEM is to own and operate *networks* specifically used for the delivery of electricity to *Customers* as below.

Proposed Clarification 3:	**Insert "~~.~~ for the purpose of conveying electricity to *Customers.*" Into the definition of *network* in order to better align the definition with its clear intent and to remove ambiguity around the role of NSPs within the rules' framework.**

Connection point

Relevant terms include:

- *connection point*
- *distribution network connection point*
- *transmission network connection point*

Section 9.2 shows 15 examples of how the use of of the term *connection point* within the rules quite clearly indicates that it is the interface point between an NSP's *network* (which is used to convey electricity to *Customers*) and other *Network Users*. Being this interface it is also the point where regulation of an NSP within the scope of its obligations for the delivery of electricity to *Customers* does not extend beyond. Therefore, the rules imply that it would be the boundary of assets used to meet different purposes or provide different functions.

A *Connection Applicant* should be able to expect an NSP to meet its reasonable requirements as to the location of the *connection point* (clause 5.3.6(d)). This is in keeping with the guiding principles set previously in that, as a *Connection Applicant* would be funding the works associated with its *connection,* the location of the *connection point* is their commercial risk. The interpretation of this clause also supports the concept of the *connection point* being an interface or boundary point where the TNSP is expected to deliver *network* assets to a location determined by the *Connection Applicant* and agreed to by the TNSP.

As demonstrated in Section 9.2 the CEC contends that the usage and intent of the term *connection point* is so ingrained within the rules' fundamental principles that creating a new

term to clarify it, such as "Transmission System Connection Point", will only result in unnecessary obfuscation.

Ambiguity Source 3:	**Asset purpose or function boundaries are not clearly defined within the rules' definition of *connection point*, despite this intent being clear from its use throughout the rules.**
Proposed Clarification 2:	**Insert "and located on the boundary of a *Network Service Provider's network* in order to establish an interface point between assets on that *network*, and a *Network User's connection assets*" into the definition of connection point in order to reaffirm its current usage throughout the rules.**

Section 9.2 shows that the definitions and usage of *distribution network connection point* and *transmission network connection point* clearly show that the rules do not contend that they have any physical context aside from a *connection point* located on a *network*. These terms are strictly applied within the rules to make a distinction between distribution and transmission where failing to do so could create ambiguity.

A clear anomaly exists in relation to Chapter 6A where the use of '*transmission network connection point'* appears to create some distinction between it and a *connection point*. This is clearly out of context with the intent of the term throughout the rest of the rules.

The CEC recommends that *transmission network connection point* should be completely removed from Chapter 6A and replaced with *connection point*. As Chapter 6A only relates to *transmission networks* a distinction is not required because the use of *connection point* here would simply imply a *connection point* on a *transmission network*. The CEC notes that as no distinction is made in Chapter 6 in relation to *distribution networks* for this reason.

Arguments for retaining a distinction in Chapter 6A are nullified as the use of the term here is clearly out of context with the rest of the rules. There is no justification for this anomaly and it should be rectified to avoid future ambiguity.

Ambiguity Source 4:	**Disconnect between Chapter 6A and all other parts of the rules. Use of the term *transmission network connection point* within Chapter 6A where the use of *connection point* will suffice due to the implicit nature of Chapter 6A in specific relation to *transmission networks*.**
Proposed Clarification 3:	**Replace all references to '*transmission network connection point*' within Chapter 6A with *connection point* as the use of the former here is unjustified within the intent of its definition and broad use throughout all other parts of the rules.**

Connection assets

The CEC agrees with the Commission that there is some ambiguity around the definition of *connection assets*. However, as shown in Figure 2 and demonstrated here *connection assets* are a key fundamental building block for the rules.

connection assets

> Those components of a *transmission* or *distribution system* which are used to provide *connection services*.

Use within the rules is focused on Chapter 5:

- Clause 5.1.2(e) states that the rules cannot prevent any person from constructing *connection assets* or *network*.
- Clause 5.4A(e) refers to a TNSP using reasonable endeavours to provide *transmission network user access arrangements* sought by the *connection applicant* considering the *connection assets* provided by the TNSP, or otherwise.
- Clause 5.4A(f) refers to a TNSP and a *Connection Applicant* negotiating in good faith for the *connection service* charge to be paid in relation to *connection assets* provided by the TNSP.
- Clause 5.5(e) refers to a DNSP using reasonable endeavours to provide *distribution network user access arrangements* sought by the *Connection Applicant* considering the *connection assets* provided by the DNSP, or otherwise.
- Clause 5.5(f) refers to a DNSP and a *Connection Applicant* negotiating in good faith for the *connection service* charge to be paid in relation to *connection assets* provided by the DNSP.
- Clause 5.6.5C(e)(8) states that investment in *connection assets* by TNSPs are not subject to a RIT-T.
- Schedules S5.3.5, S5.3.6, S5.3a.9 all imply that customer equipment to ensure proper interaction with the *network* is part of the customer's *connection assets*.

The use of the term *connection assets* unambiguously shows that they are an asset built exclusively for the purpose of a *Network User*. The rules also clearly state that any person can construct a *connection asset*.

The CEC notes that the title of Chapter 5 "*Network Connection*" is also defined:

network connection

> The formation of a physical link between the *facilities* of two *Registered Participants* or a *Registered Participant* and a *customer* being a *connection* to a *transmission* or *distribution network* via *connection assets*.

The intent for *connection assets* is unambiguously clear: they are the assets which are used to *connect* to a *network*. In light of the above discussion it is clear that *connection assets connect* to a *connection point* on a *network*.

As a *connection asset* would be constructed entirely to meet the needs of the party *connecting* their plant this party is best placed to optimise the design and construction of the asset as they are making the investment and carrying the associated risk. On this basis there is nothing in the rules preventing a party which constructs its own *connection assets* from owning and controlling them. This is supported by legal advice received from Findlaysons (Attachment 1) who conclude on page 2 that "*A connection asset can be constructed, owned, controlled or operated by a person other than a TNSP under the NER*".

The CEC also notes that where an NSP provides *connection assets* to a *Connection Applicant* Clause 5.4A(f) (and 5.5(f) in relation to distribution) require that they must negotiate in good faith, implying that they would be provided under a *negotiated transmission service* if provided by an NSP[12]. This interpretation is further supported by the definition of *connection assets* in that that they provide *connection services*, which are a *negotiated transmission service* as stated in the definition of this term. The CEC also notes that in some cases TNSPs have previously provided *connection assets* through *negotiated transmission services*.

Policy Solution 1.1:	**Form of regulation** **Connection assets are intended to be provided under a *connection service* which is a *negotiated transmission service* under the rules. See Section 3.3.3 for more on this.**

The role of an NSP under the rules is to manage the *network* for the conveyance of electricity to *Customers*. Hence, *Network Service Providers* and their *networks* are subject to regulation under Chapter 6A for this purpose. Because *connection assets* are constructed to serve the needs of a single *Network User* (or group of *Network Users*) they have not relationship to an NSP's *Customers* and therefore are not subject to the same regulatory principles as *network* under the rules. That is they exist outside of the boundary of regulation applied to a NSP's *network*. The CEC notes that is not to say that *connection assets* are not subject to the rules: they are simply only subject to limited consideration under the rules and therefore the rules appear to treat *connection assets* ambiguously.

Importantly, because one of the guiding principles of the rules is to define the boundaries of regulation there has not been a need to expand the definition of *connection assets* to ensure that the limited consideration for them does not lead to ambiguity. This appears to now be one of the causes of ambiguity and should be resolved by clarifying the definition of the term.

[12] Discussed in more detail in Section 3.3.3.

Ambiguity Source 5:	**Intentionally minimalist description within the definition of *connection assets* leading to ambiguity.**
Proposed Clarification 4:	**Refine the definition of *connection assets* in order to ensure that obligations are clear and that the intent of the term is clear for all parties:** **"Those components of a *transmission* or *distribution system* which are used to make a *network connection* between two *Registered Participants* or a *Registered Participant* and a *Customer*.** **Nothing in the rules prevents any person from constructing, owning or controlling *connection assets*. Where provided by a *Network Service Provider connection assets* provide *connection services*."**

Network Users

The general allocation of the term *Network User* within the rules provides little room for ambiguity:

Network User

> A *Generator*, a *Transmission Customer*, a *Distribution Customer* or a *Market Network Service Provider*.

Transmission Network User

> In relation to a *transmission network*, a *Transmission Customer*, a *Generator* whose *generating unit* is directly *connected* to the *transmission network* or a *Network Service Provider* whose *network* is *connected* to the *transmission network*.

Distribution Network User

> A *Distribution Customer* or an *Embedded Generator*.

The rules' use and definition of the terms above do not identify any distinguishing features between the parties referred to by them. In all cases the intent of the term is that the *Network Users* are the parties that are either delivering or receiving the electricity conveyed through the *network* (which is owned, controlled and operated by an NSP).

The only exception to the general intent of the terms above is the specific reference to a "*Generator* whose *generating unit* which is directly *connected* to the *transmission network*".

As the term '*Network User*' is used throughout the rules generally to describe a party using the *network* this level of specific detail is obsolete. No *Generator, or any other Network User, connects* directly to a *network* – they *connect* to *connection assets* which *connect* to *connection points* on *networks*. This definition should not separately characterise the way in which *Generator's connect*.

While the CEC does not contend that this source of ambiguity has had significant weight on the concerns expressed by the Commission or stakeholders it should be rectified to clarify the term's use within the rules and in order to avoid future ambiguity. Section 11 shows this proposed change.

3.2.5 Asset summary

In order to provide clarity on the application of the defined terms discussed above Figure 3 compares them to the example figure used by the Commission. The CEC's proposed rule changes in Section 11 provide the necessary changes to reinforce the rules' intended fundamental principles.

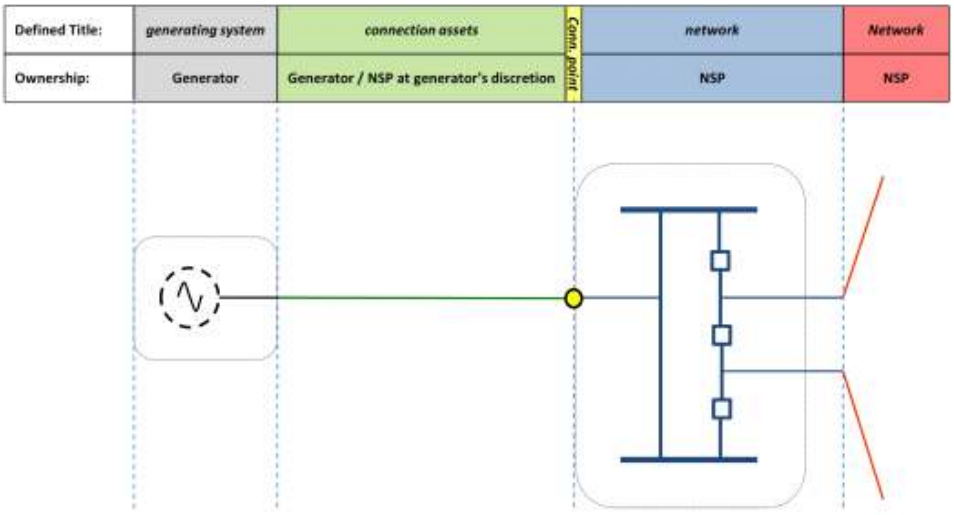

Figure 3: Example connection arangement showing assset function boundaries and potential ownership arrangements as intended by the rules and reaffirmed by the CEC's proposed changes.

Figure 3 confirms the following:

transmission system

> A *transmission network*, together with the *connection assets* associated with the *transmission network*, which is connected to another *transmission or distribution system*.

Connection assets on their own do not constitute a *transmission system*.

network

The apparatus, equipment, plant and buildings used to convey, and control the conveyance of, electricity to ~~c~~*Customers* (whether wholesale or retail) excluding any *connection assets*. In relation to a *Network Service Provider*, a *network* owned, operated or controlled by that *Network Service Provider*~~.~~ *for the purpose of conveying electricity to Customers.*

Connection point

The agreed point of *supply* established between *Network Service Provider*(s) and another *Registered Participant*, *Non-Registered Customer* or *franchise customer*~~.~~ and located on the boundary of a *Network Service Provider's network* in order to establish an interface point between assets on that *network*, and a *Network User's connection assets*.

connection assets

Those components of a *transmission* or *distribution system* which are used to make a *network connection* between two *Registered Participants* or a *Registered Participant* and a *Customer*.

Nothing in the rules prevents any party from constructing, owning or controlling *connection assets*. Where provided by a *Network Service Provider connection assets* provide *connection services*.

network connection

The formation of a physical link between the *facilities* of two *Registered Participants* or a *Registered Participant* and a *customer* being a *connection* to a *transmission* or *distribution network* via *connection assets*.

network extension

An *augmentation* that requires the *connection* of a power line or *facility* outside the present boundaries of the *transmission* or *distribution network* owned, controlled or operated by a *Network Service Provider*.

Transmission Network User

In relation to a *transmission network*, a *Transmission Customer*, a *Generator* ~~whose *generating unit* is directly *connected* to the *transmission network*~~ or a *Network Service Provider* whose *network* is *connected* to the *transmission network*.

3.3 *Network Service Providers* and the provision of services

3.3.1 Network Service Providers

In accordance with the guiding principles the role of an NSP is that of the third party owner and operator of the *network* for the purpose of conveying electricity to *Customers*, or between *Network Users*. In doing so there is necessarily some overlap between that *network* for this purpose and *connection assets* also owned by an NSP, but which could be otherwise owned by any other party (as discussed above ownership does not change the function of the asset).

However, ambiguity arises in that definitions below could be interpreted as implying that an NSP owns the system in its entirety. This is only correct to the extent that this system includes the *connection assets* relevant to the NSP's role of conveying electricity to *Customers*. There is an opportunity for ambiguity to arise because the rules do not intend to imply exclusive ownership of all parts of a system by TNSPs.

Distribution Network Service Provider

> A person who engages in the activity of owning, controlling, or operating a *distribution system*.

Transmission Network Service Provider

> A person who engages in the activity of owning, controlling or operating a *transmission system*.

In keeping with other proposed changes the CEC does not propose any material change to the intent of these definitions. Rather there is a need to ensure that the system owned by an NSP is not all encompassing and all parties owning a system have to conform to the registration requirements under Chapter 2. This can be achieved by inserting a note ensuring that ambiguity is avoided in the future.

In both definitions 'person' should be replaced with '*Network Service Provider*'. The following note should also be inserted under both definitions:

> **Note**
>
> In order to avoid ambiguity the *Rules* do not intend that any person other than a *Network Service Provider* is excluded from owning any part of a *transmission* or *distribution system* provided that all relevant parts of these *Rules* are complied with.

3.3.2 Services provided by *Network Service Providers*

In the First Interim Report the Commission identified that there were concerns amongst NSPs about a lack of clarity on which services, and the scope and regulation of services they were to provide for a new *connection* to their *networks*. The key concerns cited by the Commission included:

- That the services required seem to go beyond what is defined as a *connection service*[13].
- A degree of disconnect between Chapters 5 and 6A and the definitions in Chapter 10[14].
- Varying approaches by TNSPs in developing service policies, classifications of services and the extent that the underlying assets form part of the service[15].
- Ambiguity resulting from the different approaches from TNSPs when categorising services as *connection services*, *shared transmission services* or '*extensions*'[16,17].
- Lack of clarity on the obligations which apply to TNSPs when providing services[18].

The CEC contemplates that if the source of the ambiguity presented to this Review is TNSPs it is highly likely that the rules' Chapter 6A is where the issues lie. Within the context of the considerations made by the Commission in the First Interim Report, the CEC's recommended reaffirming adjustments to the rules can be demonstrated to resolve any ambiguity.

3.3.3 What services are required to connect to the *national grid* and what categories of services are related to connections under the rules?

Seven areas where TNSP perspectives diverged and caused ambiguity were identified by the Commission in the First Interim Report[19]. Each of these is considered below within the context of the guiding principles and the CEC's proposed clarifications. The following discussion demonstrates how each of the divergences discussed by the Commission is resolved by the CEC's proposed changes.

[13] AEMC, 2011, *Transmission Frameworks Review: First Interim Report*, p. 156.
[14] Ibid, p. 157.
[15] Ibid, p. 158.
[16] Note the previous discussion in Section 3.2.1 which dismissed the use of the defined term '*extension*' in relation to the asset in question here: a *connection asset*.
[17] AEMC, 2011, *Transmission Frameworks Review: First Interim Report*, p. 158.
[18] Ibid, p-p. 166-167.
[19] AEMC, 2011, *Transmission Frameworks Review: First Interim Report*, p-p. 155-167.

Connection services (p-p. 159-160)

The definition of *connection service* suggests that it is either an *entry service* or *exit service* for a *Network User* as required by that user. Considering the use of the term in Chapters 5, 6 and 6A it appears that the *connection service* clearly encompasses everything required to *connect* a user. Further, S5.6 indicates that *connection agreements* should contain the conditions for the payment of *connection service* charges. Other service charges are not considered which supports the case that all services to *connect* to a TNSP's *network* are *connection services*.

The CEC notes that clause 5.4A(f)(1) (along with clause 5.5(f)(1) in relation to distribution) refer to *Connection Applicants* negotiating in good faith for the *connection service* charge to be paid in relation to *connection assets* provided by the TNSP[20]. Considering this clause in the context of the proceeding clause (e) it is clear that the provision of *transmission network user access* would be expected to require an *augmentation* or *extension* of the *network* along with *connection assets* (which could be provided by any party).

Based on the discussion above it is clear that clause 5.4A(f)(1) is incomplete. It actually relates to the *connection service* charge associated with the provision of the *transmission network user access* sought under clause 5.4A(e) which would then include the *connection assets*, where provided by the TNSP, and any *augmentation* or *extension* to the *network*, as follows[21].

Clause 5.4A(f)

> The *Transmission Network Service Provider* and the *Connection Applicant* must negotiate in good faith to reach agreement as appropriate on:
>
> (1) the *connection service* charge to be paid by the *Connection Applicant* in relation to the ~~*connection assets*~~ *transmission network user access* arrangements to be provided by the *Transmission Network Service Provider* under (e); …

With this interpretation in mind clause 6A.9.2 requires that a TNSP must comply with "rules 5.3 and 5.4A, when negotiating for the provision of *connection services* and the associated *connection service* charges", indicating that all *connection services* are *negotiated transmission services*. Again, this is supported by the definition of *negotiated transmission services* which includes "*connection services* that are provided to serve a *Transmission Network User*, or group of *Transmission Network Users*, at a single *transmission network connection point*"[22].

[20] This clause also appears to indicate that all assets used to *connect* are *connection assets*. However, as previously discussed this cannot be the case because a *connection* usually requires some *augmentation* on the *network* and *connection assets* are clearly not *network*.
[21] This change should also be extended to clause 5.5(f) for consistency.
[22] Note the previous discussion on the contextual basis for the term *transmission network connection point*.

Despite different interpretations by TNSPs the rules clearly intend that all services provided to *connect* a *Generator* are *connection services* which may include *extensions* or *augmentations* to the *network*, and may include *connection assets* provided by a TNSP, but which will always be a *negotiated transmission service*.

This is also consistent with the need for *Connection Applicants* to access the legislative advantage held by TNSPs for acquisition of land (discussed later in Section 6). In the current framework this need can only be met by the *Connection Applicant* engaging the TNSP to provide the *connection assets* under *negotiated transmission services*.

For completeness, where *connection assets* are provided by the *connecting Network User* they provide no service because the TNSP has no involvement in their provision.

The CEC suggests that the following changes be made to confirm the intent of the definition of *connection services*.

Policy Solution 1.2:	**Confirmation of the form of regulation** **All services provided by a TNSP to make a new *connection* are *connection services* and *connection services* should only be provided by NSPs as *negotiated transmission services* under the rules.**
Policy Solution 2:	**Provision of assets associated with a service** **Since the *connecting* party would be funding services provided by TNSPs the rules imply that this service would also include the provision of the physical underlying assets.**

Ambiguity Source 6:	**Minimalist description within the definition of *connection service* leading to ambiguity.**
Proposed Clarification 5:	**Refine the definition of *connection service* in order to ensure that obligations are clear and that the intent of the term is clear for all parties:** **"*Connection services* encompass all services provided by a *Network Service Provider* in relation to the establishment of a new *connection* and includes the provision of physical assets to the extent that this is requested by a *Connection Applicant*."**

The CEC suggests that, along with the clarifications offered previously, these simple clarifications will address the concerns raised by TNSPs and the Commission in the First Interim Report. In particular

- alignment of TNSP policies[23];
- reaffirmation of the intended location and purpose of the *connection point*[24];
- removal of the misguided concept of a *transmission network connection point* being physically different to a *connection point*[25], and;
- assisting to overcome the misguided use of the term '*extension*'[26].

Shared transmission services[27]

The usage of this term within the rules demonstrates that a *shared transmission service* is limited to those assets which form part of the *transmission network*, including any *augmentations* to that *network*. While the definition of *negotiated transmission service* includes a *shared transmission service* and a *connection service* this does not suggest that the two are mutually exclusive.

While TNSPs consider that there is some difference between a *connection service* and a *shared transmission service* nothing in the rules supports this assertion. In particular, as discussed above, the rules only contend that charges for *connection services* are negotiated in good faith. Since *shared transmission services* are not explicitly noted one has to conclude that these too form a component of a *connection service*. If this was not the intent of the rules some other mechanism for *shared transmission services* to be funded would be specified.

From this interpretation it is clear that the rules intend that a *shared transmission service* is part of a *connection service*. The CEC does not propose any change to the definition or application of *shared transmission service* as other changes will solidify the meaning of this term.

Extensions[28]

As already presented here there is no justification for the defined term 'extension' to be applied by TNSPs in the way it has been presented to this Review. Its continued misrepresentation by TNSPs would only result in an increase of the monopoly footprint through the *connection* process resulting in and economic gain for TNSPs at the expense of reduced competitive market tension (see previous Section 3.2.1 and Section 9.1 below).

The CEC notes that the Commission outlines several different interpretations of 'extensions' by TNSPs in the First Interim Report[29]. Significant divergence of views was presented. The CEC

[23] Ibid, p. 158.
[24] Ibid, p-p. 159-160.
[25] Ibid.
[26] Ibid, p. 161-162.
[27] Ibid, p. 161.
[28] AEMC, First Interim Report, p-p. 161-162.

contends that this is a direct result of confusion caused by the term being misrepresented by Grid Australia and some TNSPs. As the rules do not justify its use in this context there appears to be significant ambiguity.

The CEC's proposed clarifications will make significant progress towards resolving this divergence in views between TNSPs. In conjunction the CEC recommends that the Commission undertakes a complete and independent revision of Chapter 6A in order to ensure that this chapter is consistent with the intended rules framework.

Distinction between assets and services[30]

The Commission considers that the rules do not clearly outline that services relate to the construction of assets. However, the CEC contends that although not explicitly stated this is implied within the rules. The proposed amendment to the definition of *connection services* should ensure that ambiguity does not persist, as explained in Policy Solution 2 above.

Categories of services for economic regulation purposes[31]

The Commission provided a summary of the three categories of service provided by TNSPs as defined in the rules: prescribed, negotiated and non-regulated. The Commission notes the understanding that "each of these categories is relevant to the services that are required to connect a party to the *national grid*"[32]. As already demonstrated in Section 3.2.4 the rules intended that all *connection services* provided by a TNSP for the *connection* of a *Generator* are *negotiated transmission services*. As noted by the Commission Grid Australia considers that the provision of *connection assets* would be a *non-regulated transmission service*[33]. Yet clause 6A.9.2 explicitly states that the TNSP must "also comply with Chapters 4, 5, and Chapter 6A of the Rules, including the requirements of: … rules 5.3 and 5.4A, when negotiating for the provision of *connection services* and the associated *connection service* charges…". As discussed above this is supported by rule 5.4A in relation to *connection services*.

As explained previously in Section 3.2.4 the light consideration of *connection assets* within the rules does not imply that *connection assets* exist outside of the rules. Rather the rules only intended that they necessarily exist outside of the area of regulation applied to NSPs.

The CEC contends that the clarifying changes proposed here should make some progress to overcome this misinterpretation, whilst also meeting the policy outcome proposed by the Commission for some form of regulation to apply to TNSPs when they provide *connection assets* as presented in Policy Solutions 1.1 and 1.2 above.

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[29] Ibid.
[30] Ibid, p-p. 161-163.
[31] Ibid, p-p. 163-164.
[32] Ibid, p. 164.
[33] Ibid, p. 165.

What are a TNSPs' obligations in relation to connections?[34]

The CEC believes that the clarifying changes proposed here will overcome any ambiguity around the obligations of TNSPs in relation to *connections*. Firstly, TNSPs are only obliged to provide *connection services* under the rules. In relation to a *Generator connection* this is a *negotiated transmission service* which would include the provision of the underlying assets to the extent that this is requested by the *Generator*.

Given that TNSPs have a legislative advantage in some cases (discussed below in Section 6) the *Connection Applicant* would be able to decide on the extent that the TNSP is involved in the construction of any *connection assets* which is in keeping with the guiding principle that they are best to carry the risk associated with their investment.

Clause 5.3.6 states that "an offer to *connect* in respect of a *transmission network* must conform with the access arrangements set out in rule 5.4A". Clause 5.4A refers to reaching agreement on the *connection services* provided by the TNSP, these services include the provision of the underlying assets as required by the *Connection Applicant* (as clarified by the changes to the definition of *connection services*). The execution of a *connection agreement* implies the execution of a contract from which a TNSP will be expected to provide *connection services*.

The role of contestability[35]

Under the rules the provision of a service is *contestable* if it is "permitted by the laws of the relevant *participating jurisdiction* to be provided by more than one *Transmission Network Service Provider* as a contestable service or on a competitive basis"[36].

The rules do not provide a linkage between a service category and contestability. While this in itself is not a problem it implies that contestability is not a relevant factor to determining whether a service is subject to economic regulation under the rules.

The CEC notes Grid Australia's interpretation of the rules that *connection assets* "*to connect a Transmission Customer or Generator would generally be offered as non-regulated transmission services, as these works are usually fully contestable*"[37]. As noted by the Commission this is unjustified under the rules because there is no linkage between contestability and a service category[38]. The argument that this is a '*non-regulated transmission service*' cannot stand.

Once again, the interpretation offered by Grid Australia is the source of more ambiguity. In many cases TNSPs will also state that anyone can deliver the *connection assets* implying that

[34] Ibid, p-p. 166-167.
[35] Ibid, p-p. 163-164
[36] NER, definition of *contestable*.
[37] Ibid, p. 165.
[38] The CEC again reminds the Commission of the behaviour of some TNSPs during the connection negotiation process.

'contestable' as considered by Grid Australia is clearly different to the rules definition of *contestable*.

As the rules clearly intend that a *connection asset* provided by a TNSP would be provided as a *negotiated transmission service* the position of Grid Australia on this matter is unfounded. The rules do not contemplate that *connection assets* are 'non-regulated'.

As demonstrated previously a *Generator* has the discretion to engage an NSP to provide *connection assets* as part of the *connection service*. Where a *connection service* is provided by a TNSP it must be provided as a *negotiated transmission service*. The changes proposed here reaffirm this.

Note that where *connection assets* are provided by the *connecting Network User* they provide no service because the TNSP has not involvement.

Further, clause 5.1.2(e) states that "Nothing in the Rules is to be read or construed as preventing any person from constructing any *network* or *connection assets*". Therefore the construction of *connection assets* is clearly contestable but is not limited by the rules' definition of the term. This interpretation is confirmed by legal advice from Findlaysons in Attachment 1 who state that "In our view: … A *connection asset* can be constructed, owned, controlled or operated by a person other than a TNSP under the NER"[39].

In practice *connection assets* have no relationship to *Customers*, are outside of the *network* and they do not facilitate the function of a *Network Service Provider's* network.

Ambiguity Source 6:	**Misleading use of the defined term '*non-regulated transmission services*' by Grid Australia leading to ambiguity.**
Proposed Clarification 5:	**Remove the concept of *non-regulated transmission services* from the rules entirely. All of an NSP's activities are to be regulated to some to some extent.**

3.3.4 Services summary

Figure 4 is based on the example figures used by the Commission in the Second Interim Report and demonstrates how the rules intended to treat asset ownership and service delivery by TNSPs. The intent of the rules in relation to assets was demonstrated previously in Section 3.2.5. The provision of services from TNSPs has been demonstrated here.

[39] Attachment 1: Findlaysons legal advice on connection assets, p. 2.

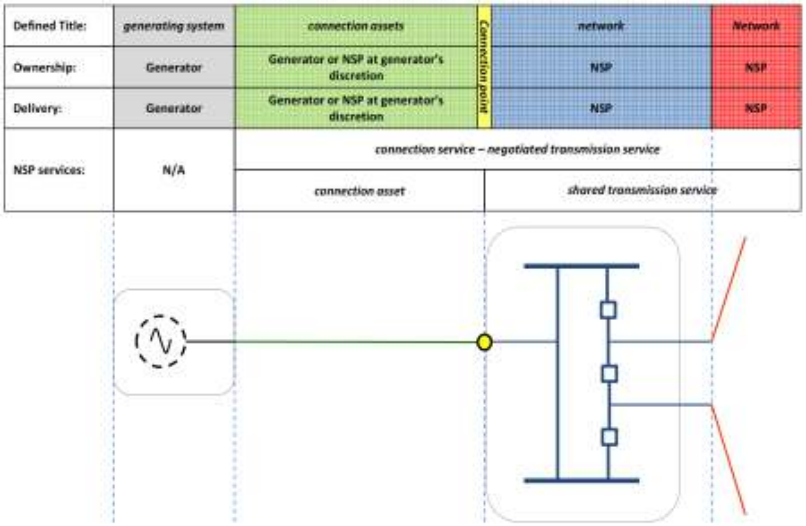

Figure 4: Example connection arangement showing assset boundaries, ownership arrangements and related services as intended by the rules.

Connection service

An *entry service* (being a service provided to serve a *Generator* or a group of *Generators*, or a *Network Service Provider* or a group of *Network Service Providers*, at a single *connection point*) or an *exit service* (being a service provided to serve a *Transmission Customer* or *Distribution Customer* or a group of *Transmission Customers* or *Distribution Customers*, or a *Network Service Provider* or a group of *Network Service Providers*, at a single *connection point*).

Connection services encompass all services provided by a *Network Service Provider* in relation to the establishment of a new *connection* and include the provision of physical assets to the extent that this is requested by a *Connection Applicant*.

Clause 5.4A(f)

"The *Transmission Network Service Provider* and the *Connection Applicant* must negotiate in good faith to reach agreement as appropriate on:

(1) the *connection service* charge to be paid by the *Connection Applicant* in relation to the ~~*connection assets*~~ *transmission network user access* arrangements to be provided by the *Transmission Network Service Provider* under (e);"

The reference to clause 5.4A(e) inherently links the charges to *connection assets* if required by the *Connection Applicant*, and any necessary *network extension* or *augmentation* to the *network* under 5.4A(e).

Transmission Network Service Provider

A ~~person~~ *Network Service Provider* who engages in the activity of owning, controlling or operating a *transmission system*.

Note

In order to avoid ambiguity the *Rules* do not intend that any person other than a *Network Service Provider* is excluded from owning any part of a *transmission* or *distribution system* provided that these *Rules* are complied with.

4 Connections: third party access

As noted previously the CEC expects that the Commission's intent to provide for third party access to *connection assets* can be addressed outside of the resolution for ambiguity in the rules. This resolution is presented here.

This chapter outlines the CEC's concerns with the Commission's proposals and then provides an alternative and more appropriate solution to provide for third party access, given the magnitude of the perceived problem.

4.1 CEC concerns with the Commission's proposals

The CEC notes that the Commission's concerns appear to be founded on the basis that "*it becomes an increasing possibility that third parties may wish to gain access to ~~extensions~~* [connection assets] *going forward*"[40]. On this basis alone there are a range of complex solutions presented by the Commission. These are discussed below, along with some of the CEC's concerns relating to their practical implementation.

4.1.1 An obligation for owners of *connection assets* longer than 2km to be a registered TNSP or be exempt from registration[41]

The CEC questions the merits of this proposal as it ultimately obscures the boundaries of the regulated *network* which have necessarily been created and defined in the rules in order to contain regulated monopolies.

The CEC notes that Grid Australia has presented a set of privately owned *connection assets* to the Commission in a supplementary submission to the Review[42]. As demonstrated here (Section 3.2.1) the submission incorrectly presumes that these assets are 'extensions'.

Further, the Commission has not acknowledged that under the AER exemption framework the AER does not consider that *connection assets* form a system, or that a *connection asset* meets the criteria of the function of a TNSP's *network*[43], and therefore does not consider that an exemption is required for these assets (as explained previously in Section 3.2.4).

[40] AEMC, Second Interim Report, p. 100.
[41] Ibid, p. 101.
[42] Grid Australia,16/07/2012, "*Transmission Frameworks Review First Interim Report – PwC Report on the Case for the Application of Economic Regulation to Transmission Services*", p. 18.
[43] i.e. third party owner of *network* for the conveyance of electricity between *Network Users*.

Although explained in the Second Interim Report to some extent the selection of an arbitrary 2km length of circuit because this has a low impact on existing *connection assets* does not appear justified. There are jurisdictional arrangements in place for the ownership of existing *connection assets* and these arrangements already contemplate third party access[44]. The Commission has not demonstrated that these arrangements are incapable of delivering the desired policy outcomes.

4.1.2 Forced transfer to the shared network[45]

The Commission proposes that a private *connection asset* would be sold off to the local TNSP for 'fair value', or for a value determined by the AER otherwise where these assets are to be used by that TNSP as *network* assets.

The CEC has serious reservations about this approach. There has been no consideration of what a fair value would be comprised of. There is significantly more to consider than the depreciated construction costs of the *connection assets*. The Commission will be required to develop a complete and consistent approach to determining 'fair value' for this proposal to be carried forward.

In practice there are significant consequences associated with forced ownership transfer of private assets for 'fair value'. Such a transaction would be exposed to a constitutional challenge over what a fair value would be if the owner of these assets was not content with the offer made by the TNSP or the AER's determination.

The most important consequence of this proposal is that it creates a convolution of the intended function of the assets. Where *connection assets* are constructed by a TNSP the *Network User* pays that TNSP which receives a commercial rate of return from that user (12-15%)[46]. As the Commission is proposing that *connection assets* would form a part of the *network* then forced ownership transfer would require that consumers return the investment made by the *Network User* by considering this commercial rate.

Put simply the Commission is effectively proposing a new mechanism for investment in expanding the *network* whereby *Network Users* can expect that sometime in the future their *connection assets* would readily form part of the *network* for the purposes of Chapter 6A.

If the Commission is content with the concept of *connection assets* being considered *network* so that the incumbent TNSP can procure them when needed, the Commission should also be content with prescribing *connection costs* or allowing *connection assets* to be delivered under the conditions that a TNSP's regulated rate of return is applied to the investment made by the

[44] Most *Generator* licences issued by jurisdictional regulators include the licence to own the relevant *connection assets* as part of the *Generator's* facility. The regulators are aware that third party access may be sought and notify the owner of these *connection assets* that this will be managed at the time it is sought.
[45] AEMC, Second Interim Report, p-p. 101-104.
[46] This is discussed later in Section 7.

Network User (Section 7 discusses how the concept of reward commensurate to risk is visibly missing in the *connection* process).

4.1.3 Consequences of fundamental changes to the rules

The CEC refers the Commission to the Review's Terms of Reference provided by the Ministerial Council on Energy (MCE). These terms include the direction from the MCE which clearly state that the commission should "…focus on identifying any inefficiencies or weaknesses in their inter-relationship between transmission and generation investment and operational decisions under current market frameworks…"and that "If the AEMC concludes that fundamental changes are essential, it shall consider whether there are any implications for the existing arrangements…" and "…the AEMC shall have regard to the National Electricity Objective…"[47].

Despite this the Commission is proposing a fundamental change to the treatment of *connection assets* without demonstrating that there is any inefficiency or weakness under current market frameworks. Further the benefits of the proposed fundamental change have not been demonstrated in light of the NEO. The CEC contends that, ultimately this has occurred because the misrepresentation of the defined term *'extension'* by some stakeholders (as discussed in Section 3.2.1) has led to a misunderstanding of the crucial function of *connection assets* within the current NEM framework.

The proposed solution appears to be radical and unjustified considering that its entire premise is the basis that "*it becomes an increasing possibility that third parties may wish to gain access to ~~extensions~~* [connection assets] *going forward*"[48].

4.2 A proposed resolution to third party access

As previously stated the CEC considers that *connection assets* are not explicitly included within a TNSP's boundary of regulation within Chapter 6A because they are not specifically related to the primary objective of NSPs (i.e. to manage their *networks* for the conveyance of electricity to *Customers*). As described by the guiding principles applied by the CEC (Section 3.2.3) this is also because the rules deliberately provide a minimalist approach to the defined area of regulation. Despite this the CEC accepts that the NEM is an 'open access' market which should harbour competition wherever possible. Therefore there is no reason why some provision for third party access to *connection assets* should not be made within the rules as this does not currently exist.

In reference to the Commission's rejection of a proposal for *prescribed transmission services* being applied to *connections* because this may be "*a disproportionate response*"[49] the CEC

[47] MCE, Terms of Reference – AEMC Transmission Frameworks Review, p. 3.
[48] AEMC, Second Interim Report, p. 100.

contends that the solutions presented by the Commission for third party access to *connection assets* by making fundamental changes to the treatment of *connection assets* are an equally disproportionate response.

Given that the proposed solutions are not based on any evidenced market flaws, weaknesses or inefficiencies a more appropriate resolve may be a simple addition to the minimum requirements for *connection agreements* or other conditions in the rules. The CEC contends that the following proposed amendments will achieve the policy outcomes sought by the Commission to manage the very rare cases that third party access or transfer to shared *network* is requested.

4.2.1 Inclusion of a third party access condition into the requirements for *connection agreements* for privately owned *connection assets*

Schedule 5.6 sets out the minimum requirements of *connection agreements*. The CEC expects that under the guiding principles set out previously *connection assets* should remain subject to the limited requirements as intended by the rules. To achieve this outcome the CEC proposes that the Commission's proposed changes to the AER's individual exemptions[50] could easily be incorporated within the rules as additional minimum conditions for *connection agreements*:

- Requiring third party access to *connection assets* to be explicitly contemplated, including that this should occur through the application of the *Local Network Service Provider's negotiating framework* with the owner of the *connection asset* performing the role of that NSP in this case. This proposal would inherently include access to the existing dispute resolution mechanism.

- Clarifying that if a *connection asset* (or any part of it) becomes part of the shared *network* by request for *connection* by a *Local Network Service Provider*, and negotiated under the relevant *negotiating framework* then that *connection asset* (or the part of it) would form part of that NSP's *network*. Note that this is the only condition under which a *connection asset* will form part of a *network*. The negotiate / arbitrate model would support the transaction.

- Where a new *Generator connects* to an existing *connection asset* this asset does not change functions under the rules. It would remain a *connection asset* but it would be shared by the parties *connected*. There is still no relationship to a NSP's *Customers* in this case. This sharing arrangement would be negotiated and agreed to through the existing *negotiating framework* and arbitration model if necessary.

The CEC does not consider that *connection assets* which are already subject to *Connection Agreements* present a material issue to the market. The Commission should examine the

[49] Ibid, p. 92.
[50] Ibid, p. 101.

existing framework in more detail in order to appreciate the arrangements for third party access and demonstrate that these frameworks cannot deliver the intended policy outcomes.

4.2.2 Inclusion of a third party access condition into the requirements for TNSP owned *connection assets*

Where an NSP has provided and owns *connection assets* a similar arrangement will need to be adopted. The rules already provide for this in clause 5.2.3(d)(2):

Clause 5.2.3 – Obligations on Network Service Providers

Clause 5.2.3(d)(2)

> "A *Network Service Provider* must: … ensure that, to the extent that a *connection point* relates to its part of the *national grid*, every arrangement for *connection* with a *Registered Participant* or any other arrangement involving a *connection agreement* with that *Network Service Provider* complies with all relevant provisions of the *Rules*"

Since the *national grid* encompasses all parts of the system and clause 5.2.3 refers to those parts owned by an NSP, the provision already exists for third party access to *connection assets* owned by NSPs. They should therefore be treated in the same way as any other n*etwork connection* by the NSP. Noting that in the case of a second *Generator connecting* to a *connection asset* the asset function would not change – it would still remain a *connection asset* owned by a TNSP.

The CEC suggests that clause 5.2.3(d)(2) is amended to reaffirm that an NSP's part of the *national grid* includes any *connection asset* owned by that NSP (See Section 11).

Policy Solution 4:	**New arrangements for third party access to privately owned *connection assets* requiring third party access to *connection assets* to be explicitly inserted into Schedule 5.6 in relation to privately owned *connection assets* (wording to be resolved by Commission):** • **Requiring third party access to *connection assets* to be explicitly contemplated, including that this should occur through the application of the *Local Network Service Provider's negotiating framework* with the owner of the *connection asset* performing the role of that NSP in this case. This proposal would inherently include access to the existing dispute**

	resolution mechanism. • **Clarifying that if a *connection asset* (or any part of it) becomes part of the shared *network* by request for *connection* by a *Local Network Service Provider*, and negotiated under the relevant *negotiating framework* then that *connection asset* (or the part of it) would form part of that NSP's *network*. Note that this is the only condition under which a *connection asset* will form part of a *network* and the negotiate / arbitrate model would support the transaction.** • **Where a new *Generator connects* to an existing *connection asset* this asset does not change functions under the rules. It would remain a *connection asset* but it would be shared by the parties *connected*. There is still no relationship to a NSP's *Customers* in this case. The terms of sharing will be negotiated and agreed through the existing *negotiating framework* and AER arbitration model if necessary.** • **Reference to third party access requirements within the definition of *connection assets* to avoid ambiguity.**

Proposed Clarification 6:	**Ensure clarity on the treatment of *connection assets* owned by a TNSP by ensuring that Chapter 5 remains relevant to *connections* to any assets.** **Amend clause 5.2.3(d)(2) to reaffirm that an NSP's part of the *national grid* includes any *connection asset* owned by that NSP.**

5 Comparison of CEC's proposed clarifications and the Commission's proposal

This section seeks to demonstrate the effectiveness of the CEC's proposed changes in achieving the Commissions desired policy outcomes[51]. The CEC's guiding principles stated previously in Section 3.2.3 are also applied here in light of the CEC's proposed rule changes and a detailed comparison is offered against the Commission's proposed changes as outlined in the Second Interim Report.

The CEC notes that the Commission's proposed changes seem to be premised on the terms *extension* and *connection asset* being interchangeable. As demonstrated here they are very different things under the rules. Similarly, the Commission's reasoning for treating *Generators* differently to any other *Network User* is not clear and is contrary to the intent of the rules.

***Guiding principles*[52]**

The Commission intends that:

- "fundamentally, all services provided by a TNSP can be termed transmission services; distinctions are only required to accommodate different charging arrangements;
- the *transmission network connection point* should be clearly defined as the point at which a generator physically connects its equipment/assets to the relevant *transmission system* (and should be named the *transmission system connection point*); and
- reflecting the policy proposals in section 6.3 above, all *transmission system* assets should be subject to the NER."

As demonstrated here the rules do not contend that there is a physical difference between a *connection point* and a *transmission network connection point*.

The *connection point*, *connection assets* and *network* are the fundamental building blocks which underpin the rules (Section 3.2.3). Defining a new type of *connection point* is contrary to the fundamental intent of the rules and will lead to obfuscation. Similarly, *connection assets* have no relationship to *Customers*. The rules only make light consideration of them because they are fundamentally excluded from the defined area of regulation (i.e. the *network*) within the rules (Section 3.2.4).

The expansion of the area of regulation to include *connection assets* is a fundamental change to the rules' framework. The Commission should examine alternative options for reform

[51] Ibid, p-p. 111-115.
[52] Ibid. p. 111.

within the existing framework rather than proposing a fundamental change to resolve ambiguity or concerns over potential future requests for third party access to *connection assets*. The Commission has not demonstrated any material benefit to consumers from making these fundamental changes.

Boundary issues[53]

The Commission intends that:

1. "A *Generator's connection point* should be clearly defined as the point at which the relevant *generating plant* is physically connected to the relevant *transmission system* (a *transmission system* is a *transmission network*, together with the *connection assets* associated with that *transmission network*).

2. The definition of *transmission network connection point* should be replaced with a definition of transmission system connection point (TSCP). A *Generator* connects its *generating plant* to *connection assets*, which are owned by the TNSP and part of the TNSP's *transmission system*. *Generating plant* does not connect directly to the *transmission network*."

The CEC notes that point '1.' above contradicts the Commission's intent to apply Clause 2.5.1 to *connection assets*. Clause 2.5.1 does not apply because *connection assets* do not form a system and their owner is not undertaking the role of a *Network Service Provider*.

The clarification of the definition of *connection point* proposed by the CEC makes clear that it is the boundary between *connection assets* and *network* – the two provide very different functions to the NEM. There is no clear need to define a new type of *connection point* or to expect that a *Generator*, or any other *Network User, connects* to a system.

One of the fundamental concepts applied in the rules is the separation of *connection assets* and *network*. Because there is no relationship between *connection assets* and *Customers* they are not considered to the same extent as other parts of the system controlled by a regulated monopoly – the party investing in *connection assets* carries the associated risk as they are best placed to do so.

The CEC's proposed changes clarify that a *Generating system* would *connect* to *connection assets* which *connect* to a *connection point* on a TNSP's *network*. *Generators* do not *connect* to systems or a "transmission system connection point" – they *connect* to *connection points* on *networks* via *connection assets*.

3. "The distinctions between *connection assets* and *transmission network* assets should be limited to:

    i. who the TNSP should charge for the construction, operation and maintenance of those assets; and

[53] Ibid. p. 111.

ii. the services that a *Generator* can expect from specific assets. While a *Generator* should be entitled to some level of service from *connection assets*, it does not have any entitlement to a specific level of service from *transmission network* assets.

4. *Connection assets* should be defined as *transmission system* assets used solely to facilitate a user's access to the *transmission network*. For *Generators*, *connection assets* should also specifically include *transmission system* assets (such as *substations*) used by multiple participants, but "caused" by the *generating plant's* connection to the *transmission system*."

The rules make very clear that any party can construct and own *connection assets*. There is also a very clear distinction between *connection assets* and *network*. The CEC's proposed changes intend to reaffirm that *connection assets* are used to facilitate a *connection* only and can be constructed, owned and operated by any party. *Connection assets* are not related to a *connection* to a 'system' – the proposed changes reaffirm that *connection assets connect* to *connection points* on *networks*, consistently with the fundamental intent of the rules.

5. *"Transmission network* assets should be defined as all *transmission system* assets other than *connection assets*.

6. We do not see any compelling reason to separately identify *extensions* in the rules. An *extension* should be treated consistently with any other *connection asset* or *transmission network* asset (as the case may be). The distinction in the requirements on TNSPs when providing the assets can be set out in the *negotiating framework*.

7. All *transmission system* assets should be subject to the NER (including in the case of *connection assets*, the relevant TNSP's negotiating framework). Consideration should be given to whether the concept of *non-regulated transmission services* is required in the NER."

The interpretation by some stakeholders that *extensions* are used for *connections* has been demonstrated here to be unjustified. Use to this effect should be rejected by the Commission.

The specific reasoning for the rules making light consideration of *connection assets* has not been examined by the Commission. As demonstrated here the rules already intend that *connection assets* owned by a TNSP are subject to that TNSP's *negotiating framework*. The CEC's proposed changes reaffirm that intent. They also facilitate third party access to *connection assets* owned by any other party by inserting a condition into future *connection agreements*.

As demonstrated here all services provided by an NSP to *connect* are *connection services*. The rules intend that these services are *negotiated transmission services*. *Non-regulated transmission services* are unrelated and should be removed from the rules to avoid confusion.

Service descriptions[54]

The Commission considers that:

1. "The existing multiple categories of "services" provided to users should be rationalised and structured more clearly.

2. The linkages between the charges paid by a user and the services provided to that user should be maintained. As *Generators* do not pay any charges for use of the *transmission network*, the rules should not recognise any services provided to *Generators* in respect of the transmission network (other than development of *augmentations* to the *transmission network*, which would be provided as part of a *connection service*).

3. *Generator connection services* should therefore be defined as:

   (a) the development/construction of *connection assets* and any *augmentations* to the *transmission network* required by the *Generator* and the ongoing operating and maintenance of those *connection assets*; and

   (b) the provision of *power transfer capability* through the *connection assets* to allow the *Generator* to inject electricity generated by its *generating plant* into the *transmission network*.

4. All *Generator connection services* provided by a TNSP should be subject to the *negotiating framework* approved by the AER for that TNSP."

As demonstrated here only one service is related to a *connection*: a *connection service*. The rules do not make a distinction between a *connection service* and any other service. A *connection service* would usually include a *shared transmission service* but could also include the provision of *connection assets* if requested by the *Connection Applicant*. The changes proposed here reaffirm that *connection services* are *negotiated transmission services*.

There is no clear reasoning for a new category of service to be created.

Charging[55]

The Commission contends that:

1. "Generator transmission connection charges should apply for Generator transmission connection services. Generator transmission connection charges are "negotiated" charges."

[54] Ibid, p. 112-113.
[55] Ibid, p. 114

See above on *connection services*. As these encompass all *connection* related activates provided by an NSP and are already a *negotiated transmission service* the reaffirming changes proposed here achieve this outcome without creating a new service category to base a new type of charge on.

2. "Generator transmission connection charges should recover all of the TNSP's costs of:

   (a) developing / constructing any *connection assets* (defined above as all *transmission system* assets "caused" by the *generating plant's* connection to the *transmission system*) and the ongoing operating and maintenance of those *connection assets*; and

   (b) any other *transmission system* assets provided as part of the *connection service* by the relevant *generating plant* (e.g. *augmentations* to the *transmission network* requested by the *Generator*)."

The rules clearly intend that *connection assets* can be provided by any party and the CEC's proposed changes solidify this intent. The case for making a fundamental change to consider that only TNSPs can own and provide *connection assets* has not been made by the Commission, as the current framework has not been analysed nor shown to be deficient. *Connection service* charges, including for any *connection assets* provided by a TNSP are already recovered in this way.

2. "If other users subsequently connect to and use *connection assets*, those users should bear a reasonable share of the costs of developing / constructing those *connection assets* and the ongoing operating and maintenance of those *connection assets* (including reimbursement of the *Generator* to the extent that those costs have been funded "up front").

3. A TNSP's *negotiating framework* should specifically set out the basis on which a *Generator* will be reimbursed for other users connecting to its *connection assets*."

The changes proposed here refer any request for third party access to the *Local Network Service Provider's negotiating framework*. The inclusion of a basis for reimbursement may be useful for this purpose.

4. "We do not see any compelling reason to separately identify *funded augmentations* in the NER. The concept of *funded augmentations* should be rolled together with *augmentations* funded under Rule 5.4A(f), as set out in point 2 (b) above."

The Commission should be aware of the potential impacts on competition that has developed under the Victorian arrangements prior to recommending this change. The CEC does not believe that it is relevant to the Commission's concerns.

Other changes[56]

Further amendments proposed include:

> "accommodating amended definitions of *connection assets* and *transmission network* assets to clarify the boundary between the classes of assets (for both *Generators* and *loads*);"

The amended definition of *connection assets* proposed by the CEC clearly defines the difference between *network* and *connection assets* with the amended definition of *connection point* solidifies that it is the boundary or interface between the two. These meanings are relevant irrespective of *Network User*.

> "ensuring the NER reflect consistently that users connect to the *transmission system*, not *transmission networks*, and that TNSPs own and operate *transmission systems* rather than just *transmission networks;*"

This is clearly contrary to the intent of the rules: *Network Users connect* to a *connection point* on a *network* via *connection assets*. TNSPs only own systems to the extent that they own the *network* and any *connection assets* relevant to the conveyance of electricity to *Customers*. The statement above obfuscates the role of an NSP under the rules. That is the third party owner of the *network* to convey electrons to *Customers* or between *Network Users*.

Where a TNSP has entered into a commercial arrangement to own a *connection asset* third party access is already managed through clause 5.3.2(d)(2). The function of this asset does not change until that asset is used for the purposes of Chapter 6A. The changes proposed here reaffirm this intent.

> "rationalise the use and structure of service descriptions / definitions to reflect the definitions of *connection assets* and *transmission network* assets;
>
> rationalise the use and structure of charges descriptions / definitions to reflect the rationalised service descriptions;"

All services offered by a TNSP for a *connection* are *connection services*, which are *negotiated transmission services*. The CEC's proposed changes reaffirm this.

> "remove unnecessary concepts such as, potentially, *extensions* and *funded augmentations*;"

The rules validate the current definition of *extension*. An extension is unrelated to *connection assets* and its use to this effect by some stakeholders has been an attempt to manipulate the connection process. This is one of the key causes of ambiguity. The changes proposed seek to reaffirm the rules' intent for the defined term *extensions* while also reaffirming the definition of *connection assets* and *connection point* to ensure that the use of 'extension' in the place of *connection assets* can no longer be practiced. Further, then can be implemented immediately with negligible effort or cost.

[56] Ibid, p-p. 114-115.

6 Contestability in the provision of *connection assets*

This section examines the Commission's analysis of the provision of *connection assets* as presented in Section 6.3.2 of the Second Interim Report. Section 3.2.4 above demonstrated that the rules clearly state that any party can construct and own *connection assets*, as confirmed by the AER's treatment of exemptions for them and legal advice received by the CEC (Attachment 1).

The changes proposed in this submission reaffirm that *connection assets* provided by a TNSP as part of a *connection service* are to be provided as a *negotiated transmission service*.

As *connection assets* are purpose-built for the needs of a single party they can be provided under a different set of design criteria than that of the shared *network*. This includes a need to meet the relevant Australian Standards, jurisdictional requirements and be optimised for the specific needs of the *Network User* they are constructed for. As a result of these factors the barriers to workable competition for the provision of *connection assets* are limited to jurisdictional regulations.

The CEC considers that in the vast majority of cases there is a strong preference for a *Connection Applicant* to control the delivery of *connection assets* externally to the TNSP. As demonstrated to this review TNSPs have not shown the capacity to deliver efficiently in a competitive market, they often display monopolistic characteristics when managing *connections* and will only undertake projects with the expectation of a commercial rate of return while the *Connection Applicant* carries all of the risk (explained later in Section 7).

The CEC notes that the Commission has undertaken detailed analysis of the provision of a number of the elements associated with the provision of *connection assets* and identified that in some cases the TNSPs have 'economies of scale'. The economic benefits of any economies of scale have never been demonstrated to *Connection Applicants*. Since *connection assets* are subject to limited consideration within the rules[57] and the rules state that anyone can deliver them the CEC queries why the Commission has not examined how to break down such economies of scale. The CEC believes that TNSPs have a 'legislative advantage' rather than any economy of scale.

The analysis by the Commission provides a good starting point to identify some key areas where the Commission should carry out further investigation for enhancing competition in the delivery of *connection assets*. These are discussed below.

[57] As was demonstrated in Section 3.2.4 *connection assets* are constructed to serve the needs of a single party specifically they have not relationship to an NSP's *Customers* and therefore are not encompassed within the defined area of regulation under Chapter 6A.

6.1 Intended *connection asset* provision under the rules

As demonstrated in Section 3.2.4 the rules intended that the *connection point*[58] is located at the boundary between *connection assets*, which serve the needs of a specific *Network User* (or a group of *Network Users*), and the *network* which serves the TNSP's obligation to convey electricity to *Customers*, or between *Network Users*.

Despite this intent an anomaly has been created by a preference expressed by TNSPs. Referring to Figures 6.3 and 6.4 in the Second Interim Report this is the asset between the *busbar* and the *substation* fence. In that report this is referred to as the "generator connection asset" and this "missing-link" needs to be accounted for here.

The rules intended that the *connection point* is the boundary between the *connection assets* and the *network*. Since the TNSP's *network's* role of delivering electricity to *Customers* cannot extend into the *connection asset* this link probably is not *network*.

In order to understand what is going on here it's important to understand that it only exists because TNSPs are opposed to allowing another party to operate within their *substation*. In practice TNSPs prefer to push the *connection point* to the *substation* boundary. This asset is in fact inconsequential to the NEM. Despite this the Commission should be investigating the reasoning behind TNSP's decisions to locate the *connection point* on the fence line.

There is likely to be significant efficiencies gained by allowing *connecting* parties to install their own equipment inside the *substation* fence to locate the *connection point* closer to the busbar, as intended by the rules. That is locating *Generator's switchyard* within the *substation* boundary. Figure 5 demonstrates this improved arrangement.

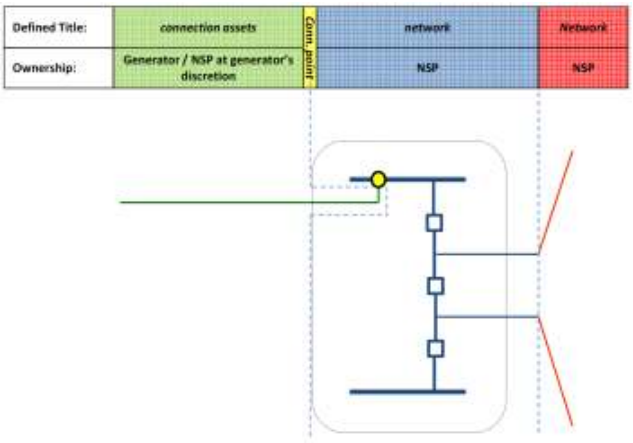

Figure 5: The location of the *conneciton point* as intended by the rules in its function as the boundary between the *network* and *connection assets*.

[58] See Section 3.2.4 for a demonstration of the difference between a *connection point* and a *transmission network connection point* under the rules.

There is no clear argument against implementing such a model in practice. There is no material supply security issues up to the *connection point* noted in Figure 5 and, provided qualified contractors are used, no material implications for consumers. TNSP's expressing a 'preference' is an inadequate argument to form policy on.

The Commission should be examining the justification for this preference in more detail and demonstrating an economic or risk based justification why the current framework is unable to deliver the rules' intended outcomes.

6.2 Legislative advantage of TNSPs

From Figure 6.1 of the Second Interim Report the key barrier for competition is the capacity to obtain easements, or to utilise and expand existing easements. There are various jurisdictional arrangements in place. However, the CEC contends that in some cases these arrangements provide corporatized TNSPs with a legislative advantage within area which the rules intended to be competitive.

For example ElectraNet is a private corporation which is owned by Powerlink. Yet there is an immediate right for ElectraNet to apply for ministerial approval to obtain easements. Clearly there is a significant market flaw if the rules state that any party can construct *connection assets* yet ElectraNet is the only private corporation with that access to the relevant minister. The Commission should investigate whether there are opportunities for enhanced access to ministerial approval for this right or if there are existing barriers to achieving this that need to be considered more closely by state regulations.

Clearly, no developer is going to take a project down the path of land acquisition if this is unnecessary. Given that approval would be sought and then approved by the minister's office it would not be wise for a developer to make unsubstantiated or unnecessary claims. Behaviour in this way would likely lead to any sensible minister making light consideration of their application.

Compulsory sharing of existing easements should also be considered by the Commission. A new *Generator* should be able to access existing easements to install its *connection assets*. If the Commission is content with imposing a forced transfer of *connection assets* to *network* the Commission should also be content that this asset could be constructed within an existing easement.

The Commission should examine the reasoning for disallowing the use of existing easements in more detail while also examining possible enhancements to access to ministerial approval for the right to obtain easements.

7 Provision of *negotiated transmission services*

Much has changed in the NEM since market start and it's essential to appreciate its origins in order to determine an appropriate direction to move forward. In the early development of the NEM a range of 'structural options' were considered for the market's networks subsequent to the disaggregation of the original vertically integrated monopolies.

In 1993 the final recommendations on the structure of the *Interstate Transmission Network for Eastern and Southern Australia*[59] (the NEM as we now know it) were made by the National Grid Management Council which clearly directed participant state governments to start preparing for a 'Multiple Network Corporations' structure for ongoing reform[60]. The NEM's current design was formed on the basis of these recommendations.

The framework set out a number of criteria which underpin its recommendations, including the appropriate forms of regulation to be applied to these network corporations. Crucially, there was a need to ensure that no network could hinder a new connection. The framework called this "*Open and Non-discriminatory Access to the Grid*" which was supported by the Grid Protocol[61] (the original rules):

> *"A central feature of the Protocol is the encouragement of trade in electricity through non-discriminatory access to the National Grid. The Protocol defines the responsibilities, procedures, terms and conditions that must be met by both existing and new Participants (grid owners/operators and grid users).*
>
> *Non-discriminatory access is seen to be capable of being provided through each of the structural options provided grid owners and operators are required to comply with the provisions of the Protocol. Whilst the Protocol does not have the force of law, it will be necessary, irrespective of the structural option, to ensure that the conditions of open and non-discriminatory access are continuously available to users. These conditions can best be ensured by establishing separate legal agreements between grid owners/operators and users.*
>
> *In addition to any legal arrangements between grid owners/operators and users, open and non-discriminatory access will be supported by :*
>
> - *grid charges being set by parties independent of the grid owners/operators (i.e. the regulator); and*
> - *the physical characteristics of the network (i.e. the laws of physics which determine physical power flows) that would inhibit grid owners /operators from undertaking actions to prejudice the operations of particular customers or generators.*

[59] National Grid Management Council, 1993, *The Structure of an Interstate Transmission Network for Eastern and Southern Australia*, p-p. 29-30.
[60] Ibid, p. 29.
[61] Ibid, p. A1.

> *Charges for access to and use of the grid are to be established by the National Grid Management Council independent from the grid owners/operators. As such, the charges for entry, exit and use of the network are to be prescribed by the National Grid Management Council. Furthermore, the technical aspects (i.e. procedures for connections, the physical assets required and their performance characteristics) relating to entry, exit and use of the network are prescribed in the Protocol, providing no latitude for grid owners/operators to place barriers in front of or discriminate against users. Grid charging and grid entry and exit arrangements are easily auditable*" [own emphasis].

Clearly the original intent of the market intended that *connection service* charges were not only regulated but were to be prescribed by the regulator in order to overcome concerns of TNSPs monopolising over the process. The rules were intended to underpin the *connection* process by prescribing it to a significant degree to ensure that no barriers could prevent efficient access. This process is now detailed in Chapter 5.

The risks of TNSPs abusing their monopoly position were also discussed in the recommendations. In relation to pricing where it was decided that "*these concerns should be reduced by the application of uniform pricing principles*"[62]. The recommendations advised the following in relation to the appropriate regulation to be applied to manage these concerns

> "*Non-discriminatory access is likely to be perceived to be the greatest, with the Multiple Network Corporations and National Network Corporation* [a different structural option considered and rejected] *structures, which conduct transmission independently from the other activities of the Electricity Supply Industry. Self-regulation would not be appropriate because of the enormous monopolistic powers implicit in such a corporation.*" [63]

> "*Self-regulation is not considered appropriate for the Multiple Network Corporations option with private participation, because of potential conflict between Government and private sector interests in this arrangement*" … "*It is considered that external regulation would be more appropriate than self-regulation for these options*"[64]

The National Grid Management Council's recommendations clearly show concern for the monopoly power that TNSPs can wield and the potential conflicts of interest that arise from government owned corporations integrated with private investment. In response the Council very audibly recommended that 'self-regulation' should be avoided.

While it is difficult to second guess how the market moved from these recommendations to today's framework it is very clear that a significant divergence has occurred. It is also very clear that the present *connections* framework is characterised by

[62] Ibid. p. A6.
[63] Ibid. p. A21.
[64] Ibid. p. 19.

exactly that which the Council was trying to avoid: *connections* are essentially 'self-regulated' by TNSPs and the conflict of interest arising from state owned corporate TNSPs receiving 'self-regulated' profits from new *connections* has become material. The self-regulation experiment has failed.

As demonstrated herein the rules intended that all services provided by a TNSP for a *connection* (being *connection services*) are to be provided as *negotiated transmission services*[65]. It's fair to say that the numerous submissions to this review have demonstrated that the current *connection* negotiation process has been failing to produce efficient or equitable outcomes.

The CEC supports the Commission's position on proposing an 'open book' approach to the provision of *negotiated transmission services*. In particular the CEC agrees that the proposed approach should achieve the desired policy outcomes of holding TNSPs accountable for their decisions, providing for more efficient *connections* and information sharing between TNSPs and *Connection Applicants*. In lieu of prescribed costs and contestability, and the initial intent for prescribed *connections* this is the most effective approach possible. The CEC advises to ensure that this proposal remains as the minimum benchmark for the Commission's recommendations.

Despite this it is clear that the connections framework has diverged significantly from that originally intended for the market. The CEC believes that a more tightly regulated framework is now required in order to supplement the Commission's position and ensure that the National Grid Management Council's concerns can no longer be material. These proposals place some additional tasks on the AER which are expected to be well inside the present capabilities of that regulator, including

(1) Regulating the rate of return earned by TNSPs when providing *negotiated transmission services*;

(2) Auditing *connection service* charges imposed by TNSPs;

(3) Reviewing published documentation on the *connection* process as applied to the process by TNSPs, and;

(4) Reporting annually on the outcomes of the arbitration framework.

The CEC has not sought to include any proposed rule changes to affect these proposals but recommends that the Commission consider them within the package of changes proposed to facilitate the open-book proposal.

[65] See previous sections 3.2.4 and 3.3.3.

7.1 Regulated rate of return

The market may have diverged too far for the implementation of prescribed *connection service* charges within the current framework. However, the concerns expressed at the inception of the market are not to be taken lightly. 'Self-regulation' has demonstrated inefficient outcomes, and evidenced that price regulation should never be light-handed.

As demonstrated here the rules do not anticipate that *connection assets* form part of the *network*. However, in some jurisdictions TNSPs have moved into building and owning *connection assets* necessary to *connect Generators*. As a result these assets are now a combination of *Generator* owned and TNSP owned (previous sections have outlined how ownership of *connection assets* does not change the asset's function within the rules). If the Commission is content on treating *connection assets* as *network* moving forward then it is more efficient if strong regulation is applied. These *Generators* should not be paying any more than the prescribed rate to a TNSP.

The current *connections* framework provides an opportunity for TNSPs to make commercial rates of return from new *connections*, while carrying negligible material risk. Clause 6A.1.9 sets out the principles relating to access to *negotiated transmission services* which states in clause 6A.1.9(10) that

> "the *terms and conditions of access* for a *negotiated transmission service* (including, in particular, any exclusions and limitations of liability and indemnities) must not be unreasonably onerous taking into account the allocation of risk between the *Transmission Network Service Provider* and the other party, the price for the *negotiated transmission service* and the costs to the *Transmission Network Service Provider* of providing the *negotiated transmission service*"

Despite the intent of this clause the prudential requirements of clause 6A.28.2 expect that a *Connection Applicant* makes a capital contribution or prepayment for the provision of a *connection service*. This is usually facilitated by TNSPs requiring a bank guarantee to the full value of the delivery of the service, thus mitigating the TNSP of all risk.

Such arrangements are clearly contradictory to the intent of the *negotiating framework* to prevent terms and conditions being unreasonably onerous and the appropriate allocation of rewards against risks. As recognised in 1993 this form of 'self-regulation' should be avoided. Some form of regulation is necessary and a light handed approach is insufficient.

The CEC recommends that the rules are adjusted to align any rate of return received by a TNSP for a *negotiated transmission service* to that applied to that TNSP's regulated asset base. Given the risk profile however this return should be less than that of the *weighted average cost of capital*.

The CEC proposes that the Nominal Risk Free Rate as published by the AER when making the determination on the TNSP's revenue is applied to this effect. The Nominal Risk Free Rate is described in Clause 6A.6.2 of the rules.

A reference could be inserted into clauses 6.7.1 and 6A.9.1 to ensure that this limitation is applied to NSPs. The AER could be made responsible for reviewing and approving the applied rate of return received by NSPs for *negotiated transmission service*s as a part of the determination process, or through an annual reporting mechanism. Such a task is well within the capabilities of the AER.

7.2 Auditing of *connection service* charges

The Commission's proposed 'open-book' arrangement provides an excellent basis for the AER to perform a high level assessment of applied *connection service* charges. An annual reporting process would easily underpin an assessment by the AER on the efficiency of the charges applied by TNSPs and would easily be within the AER's capability.

In effect this would provide a de-facto arbitration framework which enables the AER to consider the applied charges and take necessary action if these charges are consistently disproportionate to the activities. In conjunction, as the AER gains sufficient background knowledge the opportunity will arise over time for future *Connection Applicants* to seek rulings from the AER on a TNSP's proposed *connection service* charges. Although this is not proposed here the proposed auditing process allows for increased efficiencies in connections moving forward.

7.3 Accountability for expenses

Clause 5.3.3(c)(5) requires that a *Connection Applicant* pays the TNSP a fee to process the a *connection application*. The *negotiating frameworks* are more than a little relaxed about the extent which a TNSP remains accountable for the expenditure of this fee whilst processing a *connection application*. In general the *negotiation framework* will state that the TNSP will advise the applicant of expenditure and achievements on a 'from time to time' basis.

Experience is that TNSPs rarely advise of this and avoid accountability altogether. The rules must be adjusted to ensure that regular reporting of expenditure, hours spent and milestones achieved are part of the prescribed service that TNSPs follow in the connection process.

In conjunction to the above the *connection applicant* must approve the use of sub-contractors engaged by the TNSP on behalf of that applicant.

The CEC suggests the following subclause be inserted into the existing clause 6A.9.5 of the rules.

New subclause 6A.9.5(c)(10)

the obligations of the *Transmission Network Service Provider* for monthly reporting to the *Service Applicant* of activities relating to the processing of the *application to connect*, including but not limited to:

(i) all expenditure and balances of any fee paid to the *Transmission Network Service Provider* subsequent to subclause 5.3.3(c)(5);
(ii) all hours spent to date;
(iii) the status of milestones to be delivered; and
(iv) the expected delivery date/s for each milestone.

New subclause 6A.9.5(c)(11)

the procedures under which the *Transmission Network Service Provider* will seek approval for the use of subcontractors on behalf of the *Service Applicant*.

7.4 Review and approval of published connection processes

The National Grid Management Council intended that the Chapter 5 underpinned the connection process by prescribing sufficient detail to ensure that no barriers could prevent efficient open access[66]. Earlier Sections 3.2.1 and 3.3.3 provided a clear demonstration of the capacity of the *connection* process rules to be manipulated in order to expand the scope of supply from TNSPs, which is exactly the practice that the Council was trying to avoid.

The CEC believes that such practices will continue to occur regardless of the content of the rules and a mechanism must be put in place to ensure that any documented connection process is aligned with the rules to prevent future occurrence of such practices.

This outcome would not be difficult to achieve and would be considered an appropriate form of light-handed regulation. The relevant TNSP would have to seek approval from the AER who would essentially benchmark the proposed process against that prescribed by the rules. Once approved the publication could be released for use by the TNSP. Alternatively the AER could run a public consultation process on this documentation.

7.5 Reporting on the arbitration framework

While the Commission's proposed changes will go some way to providing greater support to the AER's arbitration capabilities the CEC also recommends that the current arbitration

[66] National Grid Management Council, 1993, *The Structure of an Interstate Transmission Network for Eastern and Southern Australia*, p. A1.

framework be made the subject of an annual reporting process. As the effectiveness of this framework has not been demonstrated to date it is important to understand whether it has the capacity to achieve its intended outcomes. A simple 'set-up and forget' approach may be inadequate.

Note that this should not require a detailed report. Rather a simple summary of cases occurring over the previous year could be presented by the AER to the Commission to monitor.

8 Evidence of contestability within the current framework

The CEC accepts that the Commission has made detailed consideration of the applicability of contestability for the delivery of services in the shared *network*. However, the apparent willingness to reject the model applied in Victoria is somewhat concerning.

In the Second Interim Report the Commission appears to make light consideration of the Victorian connections model. No reference was made to whether the Victorian model is presenting the characteristics of a competitive market.

The CEC's members have indicated a preference for competitive delivery of *transmission network* assets and expect that a move to revoke the Victorian arrangements will be counter-productive and regressive.

In establishing the NEM the National Grid Management Council made very clear that the boundaries of the network corporations would not have to be limited to the state and territory borders[67]. Further, the Council clearly stated that "*A basic premise for the continuing reform of the electricity industry is that the move to a competitive market will provide the framework for the most efficient usage of Australia's resources*"[68]. Then stated that "*In order to increase transparency and improve benchmarking, the involvement the private sector in network service provision would be desirable*"[69]. Clearly the intent at market start was to harbour a competitive environment for the delivery of *connection services*.

The Victorian model enables Declared Transmission System Operators (DTSO) to compete for the construction, ownership and operation of the *connecting substation*. Although there are limited numbers of registered DTSOs this model has produced changes to the behaviour of the incumbent TNSP which is now starting to reflect that expected in a competitive environment.

There are currently 6 registered TNSPs in the NEM that can deliver transmission assets through the 'economies of scale' identified by the Commission. The CEC queries why the Commission has not considered a framework where the incumbent TNSPs can compete against each other across jurisdictions.

Such a framework would require each TNSP to register as a DTSO (or similar) in jurisdictions in which it is not the incumbent to enable it to undertake the role of ownership and operation of transmission assets. The incumbent TNSP would remain responsible for its jurisdictional obligations (planning, etc) and a DTSO in its region could simply be required to provide the relevant information to support the TNSP's obligations.

[67] National Grid Management Council, 1993, *The Structure of an Interstate Transmission Network for Eastern and Southern Australia*, p. 24.
[68] Ibid, p. 13.
[69] Ibid, p. 17.

There are clearly enough contenders for a competitive market. This approach would also completely avoid the tax implications associated with asset ownership transfer and avoid any complications arising from *Network Users* owning the shared network.

Some assimilation of standards may be required, or publication of the standards applied by each incumbent TNSP in each region. Alternatively publication could be avoided by allowing 'sharing' of standards between TNSPs and DTSOs to ensure consistency.

The CEC contends that claims of the publication of standards breaching intellectual property rights should be overridden by the rules on the basis that efficient regulation requires complete transparency. This is also consistent with the National Grid Management Council's intent at market inception[70]. The AER's determinations should be supported by complete information transparency by TNSPs moving forward as this would be in the interest of the NEO and efficient transmission investment.

[70] Ibid, p. 27.

9 Appendix 1 – Rule definitions and use

9.1 *Extensions* within the rules framework

In conjunction to the legal advice which the CEC has received in relation to the relationship between *connection assets* and *extensions* (Attachment 1) the following analysis of the usage of the defined term within the rules supports the CEC's position.

Extension

> An *augmentation* that requires the *connection* of a power line or *facility* outside the present boundaries of the *transmission* or *distribution network* owned, controlled or operated by a *Network Service Provider*.

Once completed the *extension* assets involved would be owned, operated and controlled by an NSP. An *extension* is a specific type of *augmentation* that serves the purpose of extending or expanding a *network*.

Chapter 5 of the rules considers *extensions* and supports the case that NSPs provide them (clause 5.3.6(k), cl. 5.3.7(d)). Clause 5.3.8(b) implies that an NSP can liaise with AEMO in order to determine the extent of any required *extension*, which supports the interpretation of an *extension* being part of the broader *network*, rather than related to a specific *connection*. Rules 5.4A and 5.5 both refer to *extensions* being located on a *network* and designed to provide a specific (maximum) *power transfer capability*. Schedule S5.5.2 considers that an NSP would need preliminary data from a *Connection Applicant* to assess the need for *network extension* options.

Schedule 5.6 provides that a *connection agreement* may include technical, legal and commercial conditions for works required for a *connection* or *extension* to the *network* which the parties have negotiated and agreed to. Again indicating that an *extension* is to the network which is separate to a specific *connection*, and that it could be provided under a *negotiated transmission service* in relation to a new *connection*.

As '*networks'* have the primary role of delivering electricity to *Customers* (discussed in Section 3.2.4) it stands to reason that specific design principles should be applied to them. For example an NSP would not design an *extension* of the *network* with the intent of serving a single *Generator* or large *Customer*. Rather the *extension* would be designed to accommodate future load growth because it forms part of the NSP's *network*. *Connection assets* built to serve a single *Transmission Network User* are not designed in this way (as was discussed in Section 3.2.4).

These factors make a clear distinction between *extensions* and *connection assets*. Nothing in the rules implies that a *Network User connects* to an *extension*.

Importantly, because the *extension* would be owned by an NSP it would be incorporated into the rules' boundary of regulation of TNSPs – the TNSP's *network* under Chapter 6A. As a result the CEC is proposing that the intent of the term '*extension*' be reinforced by refining it as a '*network extension*'.

9.2 *Connection points* within the rules framework

The definition of *connection point* alone is insufficient to fully appreciate its meaning. Analysis of its application and usage within the rules provides an understanding of its intended purpose and provides guidance on how to overcome any associated ambiguity. The definition implies that some agreement is made between an NSP and another party as to its location.

Connection point

> The agreed point of *supply* established between *Network Service Provider*(s) and another *Registered Participant*, *Non-Registered Customer* or *franchise customer*.

Usage:

- Chapter 2 uses the *connection point* for the purpose of identifying a physical location where *Market Participants* interact by transferring electricity between each other in order to define different registration criteria.
- Chapter 3 outlines the rules that relate to market operation by using the term *connection point* in a generic sense where necessary, but also referring to a *transmission network connection point* and a *distribution network connection point* where relevant to *transmission* or *distribution*. Further, in relation to dispatch and other market characteristics, such as loss factors only the *connection point* is referred to.
- Chapter 4 discusses the obligations that different market participants have at their respective *connection points*.
- Chapter 5 makes multiple references to the *connection point* and provides detailed information on the process for *connecting* a *Market Participant* to a *connection point* and the detailed interaction between that *Market Participant* and the relevant NSP's *network*:

- Rule 5.2.3 obligates an NSP to advise a *Registered Participant* or party with which it has a *connection agreement* of the supply characteristics and quality at a *connection point* on its *network*, and to keep its *network* operating in a satisfactory state.

- Clause 5.3.6(d) obligates an NSP to use reasonable endeavours to provide a *Connection Applicant* with an offer to *connect* in accordance with the reasonable requirements of the *Connection Applicant*, including without limitation, the location of the proposed *connection point* and the level and standard of *power transfer capability* that the *network* will provide.

- Rule 5.6.1 makes very clear that *connection points* connect *Registered Participants* to *networks*.

- Rule 5.7 and 5.9 reinforces that *Registered Participants* interact with the *network* at their *connection points*.

- Schedule S5.1 infers that the performance of the registered participant's equipment or facility is measured at its *connection point*. Even to the extent that an NSP must determine the electrical characteristic planning levels for *connection points* on their *network*.

- Schedule S5.2 outlines in explicit detail the technical requirements for performance at a *connection point*.

- Chapter 6 infers that a DNSP's *Customers connect* to *connection points* on their *networks*.

- Chapter 6A – see discussion on *Connection Point* in Section 3.2.4.

- Chapter 7 outlines the requirements for metering installations located at *connection points* (cl. 7.1.2 & 7.3.1).

- Chapter 10 makes multiple references to *connection points* being located on *networks* including in the definitions of c*onnect, disconnect, distribution system, Distribution Customer, network, network connection, switchyard, Transmission Customer, Transmission Network User, Distribution Network User*.

- Further chapters only refer to *connection points* being located on *networks*.

Analysis of the usage of the term *connection point* within the rules quite clearly shows that it is the interface point between an NSP's *network* (which is used to deliver electricity to *Customers*) and other *Network Users*. The rules also intend that a *Connection Applicant* has some control over the location of the *connection point* which is in keeping with the principle that they are carrying the risk associated with their investment.

Other related defined terms include

distribution network connection point

A *connection point* on a *distribution network*.

and

transmission network connection point

A *connection point* on a *transmission network*.

The usage of these terms in the rules is unambiguous:

- Chapter 3 necessarily uses them both in a contextual sense to clearly distinguish between a *connection point* on a *distribution network* or a *transmission network*.
- Chapter 5 refers to the relevant *transmission network connection point* to calculate avoided *transmission* use of system charges (TUOS) for *distribution* connected *Connection Applicants* in order to avoid confusion in clause 5.5(i).
- Chapter 6A – see discussion on *Connection Point* in Section 3.2.4.
- Chapter 7 identifies a special circumstance where clear distinction must be made between a *connection point* on a *transmission network* and a *connection point* on a *distribution network* in clause 7.2.4A.
- Chapter 10 describes a *negotiated transmission service* as being related to a *transmission network connection point* for contextual purposes only.

The definitions and usage described above make clear that the rules do not contend that a *transmission network connection point* or a *distribution network connection point* have any physical context other than a *connection point* located on a particular type of *network*. They are only applied within the rules in order to make a distinction where failing to do so could create ambiguity.

Section 3.2.4 demonstrated how the use of *transmission network connection point* in Chapter 6A has led to significant confusion. It should be entirely removed from that chapter and refined to *connection point*.

The CEC contends that the intent of the term *connection point* is so ingrained within the fundamental rules principles that creating a new term to clarify it, such as “transmission system connection point” will only obfuscate the current rules framework.

10 Appendix 2 – Suggested further amendments to overcome ambiguity

The following minor rule amendments are also suggested to reaffirm the intent of the rules in order to avoid future ambiguity.

Switchyard

The rules' definition of *switchyard* is below. It is clearly distinguished from a *substation* in that a switchyard is specifically designed to house a *connection point*, thus providing a location for a *Generator's network connection* to be made to the relevant *network*.

switchyard

> The *connection point* of a *generating unit* into the *network*, generally involving the ability to *connect* the *generating unit* to one or more outgoing *network* circuits.

Although mainly considered in other definitions in Chapter 10 some ambiguity arises because there no other part of the rules makes reference to a *generating unit* connecting directly to any other thing. This is because a *generating unit* is part of a *generating system* which *connects* to a *connection point* via *connection assets*, rather than a *generating unit connecting* to a *connection point*. In order to remove ambiguity the CEC suggests the following minor changes to the definition:

> The *connection point* of a *generating system* ~~*unit*~~ into the *network*, generally involving the ability to *connect* the *generating system* ~~*unit*~~ to one or more outgoing *network* circuits via *connection assets*.

Generator

As previously indicated the rules do not intend that a *Generator connects* to a system. The reference to this within the definition of '*Generator*' is obsolete with regards to the intent of the rules. It is also a level of detail that is obsolete with regards to the general use of the term.

Generator

> A person who engages in the activity of owning, controlling or operating a *generating system* that ~~is *connected* to, or who otherwise~~ *supplies* electricity to, a *transmission* or *distribution system* and who is registered by *AEMO* as a *Generator* under Chapter 2

and, for the purposes of Chapter 5, the term includes a person who is required to, or intends to register in that capacity.

11 Appendix 3 – CEC's proposed rule changes

The following table outlines the CEC's proposed rule changes intended to relive the ambiguity identified by the Commission.

Chapter 5 proposed rule changes
Proposed insertion into Schedule 5.6 to covering third party access to privately owned *connection assets* (wording to be resolved by the Commission): o Requiring third party access to *connection assets* to be explicitly contemplated, including that this should occur through the application of the *Local Network Service Provider's negotiating framework* with the owner of the *connection asset* performing the role of that NSP in this case. This proposal would inherently include access to the existing dispute resolution mechanism. o Clarifying that if a *connection asset* (or any part of it) becomes part of the shared *network* by request for *connection* by a *Local Network Service Provider*, and negotiated under the relevant *negotiating framework* then that *connection asset* (or the part of it) would form part of that NSP's *network*. Note that this is the only condition under which a *connection asset* will form part of a *network*. The negotiate / arbitrate model would support the transaction. o Where a new *Generator connects* to an existing *connection asset* this asset does not change functions under the rules. It would remain a *connection asset* but it would be shared by the parties *connected*. There is still no relationship to a NSP's *Customers* in this case. This sharing arrangement would be negotiated and agreed to through the existing *negotiating framework* and arbitration model if necessary.
Proposed insertion into Clause 5.2.3(d)(2) ensure that, to the extent that a *connection point* relates to its part of the *national grid*, including any *connection asset* owned by that *Network Service Provider*, every arrangement for *connection* with a *Registered Participant* or any other arrangement involving a *connection agreement* with that *Network Service Provider* complies with all relevant provisions of the *Rules*;
New subclause 5.4A(c)(3) the information provided under (2) must include all relevant information including, without limitation, the *power transfer capability* limits in MVA as a result of constrained areas of the *Transmission Network Service Provider's*

network relevant to the *connection*, the frequency and duration of such constraints occurring and documented assumptions on the conditions under which they occur.
Proposed clarification of Clause 5.5(f)(1) the *connection service* charge to be paid by the *Connection Applicant* in relation to the ~~*connection assets*~~ *distribution network user access* arrangements to be provided by the *Distribution Network Service Provider* under (e);
Chapter 6A proposed rule changes
Complete independent review of Chapter 6A to ensure consistency with all other parts of the rules.
All instances: ~~*transmission network*~~ *connection point*
Deletion of unrelated Clause 6A.1.1(j) Deleted Clause.~~Other *transmission services* provided by *Transmission Network Service Providers* (*non-regulated transmission services*) are not subject to regulation under this Chapter 6A.~~
New subclause 6A.9.5(c)(10) the obligations of the *Transmission Network Service Provider* for monthly reporting to the *Service Applicant* of activities relating to the processing of the *application to connect*, including but not limited to: (i) all expenditure and balances of any fee paid to the *Transmission Network Service Provider* subsequent to subClause 5.3.3(c)(5); (ii) all hours spent to date; (iii) the status of milestones to be delivered; and (iv) The expected delivery date/s for each milestone.

New subclause 6A.9.5(c)(11)

the procedures under which the *Transmission Network Service Provider* will seek approval for the use of subcontractors on behalf of the *Service Applicant*.

Chapter 10 proposed rule changes

transmission system

A *transmission network*, together with the *connection assets* associated with the *transmission network*, which is connected to another *transmission or distribution system*.

Connection assets on their own do not constitute a *transmission system*.

network

The apparatus, equipment, plant and buildings used to convey, and control the conveyance of, electricity to ~~c~~*Customers* (whether wholesale or retail) excluding any *connection assets*. In relation to a *Network Service Provider*, a *network* owned, operated or controlled by that *Network Service Provider*~~.~~ *for the purpose of conveying electricity to Customers.*

Generator

A person who engages in the activity of owning, controlling or operating a *generating system* that ~~is *connected* to, or who otherwise~~ *supplies* electricity to, a *transmission* or *distribution system* and who is registered by *AEMO* as a *Generator* under Chapter 2 and, for the purposes of Chapter 5, the term includes a person who is required to, or intends to register in that capacity.

network connection

The formation of a physical link between the *facilities* of two *Registered Participants* or a *Registered Participant* and a ~~c~~*Customer* being a *connection* to a *transmission* or *distribution network* via *connection assets*.

~~***non-regulated transmission services***~~

~~A *transmission service* that is neither a *prescribed transmission service* nor a~~

~~*negotiated transmission service*~~.

network extension

An *augmentation* that requires the *connection* of a power line or *facility* outside the present boundaries of the *transmission* or *distribution network* owned, controlled or operated by a *Network Service Provider*.

Insert '*network'* preceding all instances of the defined term '*extension*'.

connection point

The agreed point of *supply* established between *Network Service Provider*(s) and another *Registered Participant*, *Non-Registered Customer* or *franchise customer*~~.~~ and located on the boundary of a *Network Service Provider's network* in order to establish an interface point between assets on that *network*, and a *Network User's connection assets*.

connection assets

Those components of a *transmission* or *distribution system* which are used to make a *network connection* between two *Registered Participants* or a *Registered Participant* and a *Customer*.

Nothing in the rules prevents any person from constructing, owning or controlling *connection assets*. Where provided by a *Network Service Provider connection assets* provide *connection services*.

Transmission Network User

In relation to a *transmission network*, a *Transmission Customer*, a *Generator* ~~whose *generating unit* is directly *connected* to the *transmission network*~~ or a *Network Service Provider* whose *network* is *connected* to the *transmission network*.

Distribution Network Service Provider

A ~~person~~ *Network Service Provider* who engages in the activity of owning, controlling, or operating a *distribution system*.

Note

In order to avoid ambiguity the *Rules* do not intend that any person other than a *Network Service Provider* is excluded from owning any part of a *transmission* or *distribution system* provided that all relevant parts of these *Rules* are complied with.
Transmission Network Service Provider A ~~person~~ *Network Service Provider* who engages in the activity of owning, controlling or operating a *transmission system*. **Note** In order to avoid ambiguity the *Rules* do not intend that any person other than a *Network Service Provider* is excluded from owning any part of a *transmission* or *distribution system* provided that all relevant parts of these *Rules* are complied with.
connection service An *entry service* (being a service provided to serve a *Generator* or a group of *Generators*, or a *Network Service Provider* or a group of *Network Service Providers*, at a single *connection point*) or an *exit service* (being a service provided to serve a *Transmission Customer* or *Distribution Customer* or a group of *Transmission Customers* or *Distribution Customers*, or a *Network Service Provider* or a group of *Network Service Providers*, at a single *connection point*). *Connection services* encompass all services provided by a *Network Service Provider* in relation to the establishment of a new *connection* and include the provision of physical assets to the extent that this is requested by a *Connection Applicant*.
switchyard The *connection point* of a *generating system* ~~*unit*~~ into the *network*, generally involving the ability to *connect* the *generating system* ~~*unit*~~ to one or more outgoing *network* circuits via *connection assets*.

12 Attachment 1 – Legal advice receive by the CEC