CONTRACT PRINCIPLES: GENERATION CONNECTIONS TO THE VICTORIAN DECLARED SHARED NETWORK

PREPARED BY: Connection Initiatives

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Contents

1 Purpose

This document demonstrates how AEMO aims to meet certain obligations in relation to negotiations and contracts for connections to the transmission system in Victoria by Generators.

It is a statement of AEMO's policy intent, but it does not bind AEMO or connection applicants.

It is intended that this document will support development of new AEMO template contracts as it sets out the high level principles that AEMO will apply in developing these contracts.

As far as practicable, AEMO seeks to develop during 2012 standard template contracts comprising fair and reasonable provisions that could, if parties wish, apply automatically without the need for further negotiation.

This document focuses on key issues for generator connections identified through consultation, research and successive reviews[1] that identified a need for:

- greater transparency;
- improved structure and timeliness in the connection process;
- certainty around AEMO's decision making processes;
- competitive connection terms and conditions;
- clarity in the respective roles undertaken by SP AusNet and AEMO; and
- proponent involvement in negotiations that affect them.

2 Application

AEMO will apply this policy document in developing template contracts for generation connections to the Victorian declared shared network *(***DSN***)* that require augmentation to the Victorian DSN, where these are:

- *negotiated transmission services* that are fully funded by a connection applicant; and
- subject to a competitive tender process conducted by AEMO to identify a *declared transmission system operator* (**DTSO**) to build, own and operate the relevant assets.

Some provisions are also relevant to major loads connecting to the Victorian DSN*.* Where this is the case, it is noted within the text.

In this context, AEMO's role is that of the sole procurer of augmentations, and the sole provider of *shared transmission services* under its Use of System Agreements with generators or transmission-connected customers.

AEMO procures the augmentation and interface construction, and the operation and maintenance through separate agreements with existing or prospective DTSOs, or with the incumbent DTSO, which is generally SP AusNet. Indicatively, the augmentation assets may comprise terminal stations, components of a terminal station, or transmission lines.

Importantly, the Rules permit connection applicants to negotiate any commercial connection arrangement they wish. The only limitation on achievement of a desired outcome is the availability of construction and DTSOs willing to agree to the terms requested. AEMO notes that negotiations

[1] Notably, the Australian Energy Market Commission's (AEMC) Transmission Frameworks Review (current), and the Victorian Government's Inquiry into the Approvals Process for Renewable Energy Projects, conducted by the Victorian Environment and Natural Resources Committee in late February 2010.

also take time, can lead to delays, and will attract additional costs that are borne by the connection applicant.

AEMO acknowledges that detailed legal drafting, practical or commercial positions adopted by DTSOs may lead to changes or compromises to a preferred position outlined in this paper.

3 Legal and regulatory framework

One of AEMO's declared network functions under section 50C of the National Electricity Law (**NEL**) is to procure augmentations to the Victorian DSN. Augmentations to accommodate new or altered generation connections are instigated by an application to connect from a connection applicant in accordance with Chapter 5 of the National Electricity Rules (**NER**).

Where the services being sought will constitute *negotiated transmission services,* contract negotiations are to be conducted in good faith in accordance with an AER-approved negotiating framework.

AEMO considers that a public statement of its initial contract position will enhance the transparency and understanding by industry of why AEMO believes its position on various issues is fair and reasonable.

As the AEMC acknowledged in its First Interim Report of the Transmission Frameworks Review[2], the legal and regulatory framework for connections under the NER contains many ambiguities and inconsistencies that create uncertainty and lead to inconsistent interpretation and application by National Electricity Market (**NEM**) participants. AEMO will continue to liaise with the AEMC to share insights gained through AEMO's Connection Initiatives Project.

4 Related Policies and Procedures

The principles set out in this document are related to other policies, procedures and guidelines produced by AEMO. They should be read in conjunction with the following documents:

- Contract Principles: Generation Connections to the Victorian Declared Shared Network;
- Guidelines for Establishing Terminal Stations in Victoria;
- Guidelines for Shared Transmission Connections in Victoria;
- Cost Allocation Policy in Victoria; and
- Connecting Victoria: Transmission Project Development Protocol.

5 Principles

5.1 High level principles

In the context of the NEL and statutory role of AEMO in the Victorian regime, AEMO has developed high level principles that it will use to guide its development of fair and reasonable negotiated arrangements for connections to the shared transmission system[3]. The high level principles are:

[2] AEMC, 17 November 2011, at Chapter 12.3.

[3] These principles were tested and refined through AEMO workshops with generators and other stakeholders on 14 October and 8 November 2011, and targeted stakeholder consultation in November and December 2011.

1. Contracts must meet the regulatory requirements, including consistency with the National Electricity Objective (NEO).
2. Ensure contracts are user-friendly.
3. Promote efficient risk allocation.
4. Promote clear governance and accountabilities.
5. AEMO aims to achieve at least an outcome that the connection proponent would achieve if it were negotiating directly.
6. AEMO will pass through actual costs.
7. AEMO will be open and transparent with all relevant parties.
8. AEMO, in its system security role, treats all regions in the same way.
9. AEMO as the planner and procurer for transmission services on the shared network will balance proponent and long term network requirements for all users.

Table 1 provides examples of how AEMO will interpret these high level contract principles.

Table 1: AEMO interpretation of high level principles

	Contract principle	What does this mean?
1	Must meet regulatory requirements	Consistency with the NEO. The minimum agreements required under the NER (e.g. Connection Agreement, use of system agreement) must be prepared. Includes the steps required under the NER (e.g. enquiry, information exchange, application, offer to connect, connection and commissioning). Parties' obligations must be consistent with their roles and/or statutory limitations (e.g. AEMO is a not for profit organisation). Promotes open access to transmission infrastructure (build assets that will easily take up additional connections, e.g. multi-connection terminal stations). Consistency with principles in Schedule 8.11 of the NER for contestable augmentation agreements, including stipulated risk allocation. Consistency with AEMO's statutory immunity.
2	Ensure contracts are user-friendly	Contracts that meet the needs of connection applicants, DTSOs and AEMO. Minimal number of agreements. Consistent definitions, aligned with NER. Plain English drafting, avoid duplication. Logical ordering, sequencing and grouping of matters.
3	Promote efficient risk allocation	AEMO should only take on risks that it can manage effectively, and seek cost recovery for (see below), or insure. AEMO should not assume risk for matters outside its control. AEMO should explore opportunities to better control risks, such as pre-agreed terms with a contractor panel. Proponents underwrite the costs of the infrastructure they require for connection. Consistency with risk allocation for contestable augmentation

	Contract principle	What does this mean?
		agreements set out in Schedule 8.11 of the NER, that is, risk allocation for site construction, statutory approvals, native title, output specification, design construction and commissioning, operating, network and interface, and industrial relations. Where the risk is manageable, it should be allocated to party that can best manage it within its role. Where a risk is not manageable, it should be allocated to the party that can best absorb it
4	Promote clear governance and accountabilities	Contracts should support statutory roles and accountabilities Spell out core roles and ensure that detailed provisions do not undermine them.
5	AEMO to achieve at least an outcome that the connection applicant would achieve if it were negotiating directly	AEMO should not assume greater risks than those of other NSPs. Connection applicants are not entitled to a risk profile that is better than if it were negotiating directly with an incumbent DTSO.
6	AEMO will pass through actual costs	The cost of any risks borne by AEMO must be recouped.
7	AEMO will be open and transparent with all relevant parties	AEMO will facilitate the flow of information between parties, the form and regularity of which should be specified. AEMO provides formal updates on a regular basis (to be determined).
8	AEMO, in its system security role, treats all regions in the same way	System security is paramount with any transmission shared network assets. AEMO requires technical compatibility.
9	AEMO as the planner and procurer for transmission services on the shared network will balance connection applicant and long term network requirements for all users	AEMO will balance connection applicant needs and long term needs of all users of the shared network. AEMO will consider the NEO, including promoting efficient, timely generation investment outcomes. As the market system planner and sole procurer for transmission services on the shared network, AEMO will: • Complete its role efficiently. • Balance the proponent requirements for flexibility with the need for efficient and certain outcomes.

5.2 Additional guidance for contract drafting

The high level principles will be supported by additional guidance for contract negotiations, and to assist lawyers drafting template provisions. The outcomes sought are as follows.

1. Respect accountability boundaries.
    - Contracts should support statutory roles and accountabilities.
    - Do not blur accountabilities:
        - Note risk allocation in Schedule 8.11 of the NER.

- Technical decisions should be made by the entity accountable for them. Accountable entities may be required to consult or consider others' views, but should not be required to act on those views.
- AEMO is to define outputs or end-points where possible.

2. Promote consistency across NEM regions.
   - Where practical, rely on AEMO's statutory powers, rather than replicating in contracts.
   - Clearly distinguish actions / decisions by AEMO as NEM system operator from those of AEMO as NSP for the Victorian DSN.
   - AEMO in its capacity as system operator should treat Victorian connection applicants / connections the same as those in other regions.
   - Promote consistency with industry practice.
3. Develop user-friendly contracts.
   - Ensure clear rights and obligations.
   - Use standardised, consistent definitions:
     - Use NEL and NER definitions where possible.
   - Use logical prioritisation and ordering.
     - Identify and group together provisions relating to different contract elements.
     - Identify and group provisions chronologically.
     - If a provision has limited temporal application (e.g. construction phase only), consider separating from provisions or agreements that continue for the life of the asset.
   - Minimise the number of contracts (as far as practicable).
4. Balance certainty and flexibility.
   - Identify those provisions or matters that could be common to all agreements.
   - Identify those matters (technical, commercial) that are more likely to be subject to variation.
5. Promote efficient remedies.
   - Align incentives, information and accountabilities with powers to monitor and enforce.
   - Promote adequate, workable enforcement mechanisms.
6. Promote free flow of information between the DTSO and connection applicant, via AEMO (subject to known exceptions).

6 Policy

AEMO will instruct its lawyers to develop new standard connection agreements that reflect the high level principles and drafting guidance set out above. In addition, AEMO will provide its lawyers with specific guidance on 12 policy areas that have been highlighted through:

- Victorian and national transmission connection reviews and consultations4;

[4] Australian Energy Market Commission's Transmission Frameworks Review and the Victorian Government's Inquiry into the Approvals Process for Renewable Energy Projects.

- AEMO research and analysis of the problems identified formally and informally by Victorian connection applicants;
- analysis of the regulatory, technical and commercial context for Victorian transmission connections (as outlined in Appendix A); and
- targeted consultation with generators5.

For each of the 12 general topics, Sections 8 to 19 of this document provide a general description of the area as it affects generation or where relevant, transmission-connected customers; an overview of the guiding principles that will be used to guide contract drafting; and outlines likely provisions where possible.

Lastly, AEMO identifies whether provisions are likely to be standard (part of the template contracts) or variable and negotiable by the proponents. The intention is that some contract provisions, once drafted and settled, are likely to be offered as standard or boiler plate provisions to all potential proponents, incorporated in all tenders issued to DTSOs, and included in network agreements with DTSOs (these are referred to as template provisions).

Variable or negotiable provisions will reflect AEMO's understanding of those aspects within a particular topic that are likely to vary to accommodate different technical or commercial scenarios.

As noted above, as far as practicable, the aim is to develop standard contracts comprising fair and reasonable provisions that could apply automatically. However, these categorisations do not prevent connection applicants requesting and negotiating alternative provisions, provided that:

- connection applicants accept the consequential delays and additional costs involved in negotiations; and
- AEMO is able to obtain agreement from the relevant DTSO.

7 Stakeholder feedback

There has been general support for AEMO's process and objectives in developing contract principles and template provisions, particularly from generators. There is also support emerging from the transmission sector for template provisions to minimise connection contract negotiation[6] costs and delays.

Most stakeholders support AEMO's high level contract principles and drafting guidelines, and the positions reflected in this policy paper. Understandably, stakeholders reserve final positions until actual drafting progresses in 2012.

AEMO notes, that many stakeholders remain critical of the complexity associated with the Victorian procurement model. The arrangements provide transparency and choice to connection applicants. Some choices made by connection applicants have exacerbated complexity. AEMO considers that the measures proposed through this policy and other aspects of its Connection Initiatives Project will address many of the underlying stakeholder concerns.

Stakeholders will have the opportunity to comment on all draft template provisions as they are developed through 2012, through targeted consultation.

[5] Proposed principles and provisions were tested and refined through AEMO workshops with generators and other stakeholders on 14 October and 8 November 2011, and targeted consultation in November and December 2011.

[6] Presentation by Merryn York, Powerlink , to AEMC public forum on its First Interim Report, Transmission Frameworks Review, Melbourne Airport, 12 December 2011.

8 Connection applicant control / involvement in decisions

AEMO recognises the trade-offs between transparency and contract complexity, and proponents' interest in matters that affect the cost, timing or quality of a project and transmission services. AEMO will seek an efficient balance that best meets its high level principles[7].

Examples of matters that may affect a connection applicant, whether a generator or a transmission-connected load, are:

- progress against milestones;
- scope variations affecting project timing, costs or service quality (variations may be instigated by DTSO, AEMO or a connection applicant);
- breaches by NSPs of underpinning network obligations;
- choice of remedies and enforcement actions; and
- force majeure events.

8.1 Principles for connection applicant involvement in variations

Generator connection applicants have expressed concerns about uncertainty created by variations that are outside their control, particularly those variations that affect timing and cost.

The principles to be applied by AEMO in developing variations to contestable augmentation contracts are:

- If a matter does not affect cost, timing or quality, there need be no connection applicant involvement:
  - such matters would be clearly listed in standard documentation; and
  - where there is any doubt, AEMO would consult with the connection applicant.
- If a matter does affect cost, timing or quality, then depending on the type of matter, a connection applicant should:
  a. be consulted, and have its views considered;
  b. be kept informed, but have no say in decisions; or
  c. control and make decisions.

For multi-connection terminal stations, AEMO is likely to be the key decision-maker, consulting with connection applicants, but ultimately balancing the interests of current and future users of the shared network.

8.2 Proposed provisions

At this stage, it is envisaged that AEMO would consult with the connection applicant on an individual project basis to agree the approach for each issue. However, if in developing template provisions some consensus emerges, the agreed positions will be reflected in the template contracts.

In developing the contract templates, indicative application of the principles would see the following contract provisions in relation to contract variations:

[7] These principles are set out in Section 5.

Table 2: Proponent input to decisions

Connection applicant	Matter
Connection applicant to be consulted	• Variation instigated by AEMO (1). May be dispute resolution on costs. • Variation instigated by DTSO (2). • Breaches by NSPs and DTSO, if they adversely impact on the cost, timing or quality of service. • Choice of remedies and enforcement actions – for multi-connection terminal station.
Connection applicant to be kept informed	• Progress against milestones. • Breaches by NSPs, if they do not adversely impact on the cost, timing or quality of service. • Force majeure.
Connection applicant to control, make final decision	• Variation instigated by connection applicant – but note, DTSO can reject. May be dispute resolution on costs. • Choice of remedies and enforcement actions – for single connection.

Notes:

(1) Examples of variations by AEMO would include variations to reflect changes in system security obligations or requirements, or an unforeseeable change to the functional specification. These may entail:

- additional control system to manage non-credible event;
- relocation of equipment to permit future development due to unforseen site issues; or
- additional functional requirements to meet a change in system security obligations.

(2) An example of a variation by a DTSO is a change in:

- proposed protection design;
- the type of equipment proposed for use – rating / brand, etc;
- physical layout due to site issues;
- a proposed change in construction approach to facilitate construction works;
- a proposed change to milestones / milestone dates; or
- a proposed change in auxiliary supply arrangements.

9 Land use planning and permits

This topic deals with work during the initial project feasibility assessment phase and formal contractual obligations in relation to land use planning. It can apply to generators and transmission-connected customers.

Note that Section 10 deals with land acquisition and types of proprietary rights.

For transmission-connected customers, as for generators, arrangements generally will be bespoke. The principal guidance document dealing with issues of land acquisition and development

approvals processes is AEMO's protocol titled "Connecting Victoria: Transmission Project Development Protocol". That document assists stakeholders to determine which entity is best-placed to assume a leading role in land acquisitions and associated matters.

However, the following general observations can be made about planning and permit issues that may arise for connection applicants and contracts:

- A planning permit will be informed by the single line diagram for the initial connection, the concept design for the initial connection and the proposed building envelope. The permit will affect the detailed augmentation design.
- Planning permits are usually granted by the appropriate authority subject to a number of conditions, such as the approval of:
    - vegetation offset plans;
    - landscape plans;
    - environmental management plans; or
    - traffic management plans.
- Construction activities need to be carried out to relevant standards and to the satisfaction of the appropriate authority.

9.1 What does AEMO's contract with the connection applicant need to cover?

Consistent with the lead role agreed under the project development protocol, the contract is likely to address rights and obligations in relation to:

- planning for generating plant, connection assets owned by the connection applicant, terminal stations, and SP AusNet interface;
- developing plans, and with whose input;
- obtaining permits, complying with conditions; and
- varying a plan.

9.2 Principles to be applied

The key principles relevant in this area seek:

- clear governance and accountabilities;
- efficient risk allocation;
- a balance between connection applicant and long term network requirements for all users;
- user-friendly contracts – minimising complexity and duplication; and
- no impediments to future third party access.

9.3 Proposed provisions

Contractual provisions will give effect to the roles and responsibilities agreed in accordance with the Connecting Victoria: Transmission Project Development Protocol.

Role of the project development protocol

The principal guidance document dealing with issues of land acquisition and development approvals processes is AEMO's protocol titled, "Connecting Victoria: Industry Protocol for Project Development". That document assists stakeholders to determine which entity is best-placed to assume a leading role in land acquisitions and associated matters.

Applying the protocol will clarify other key responsibilities during the augmentation delivery process. Specific sections of the protocol address:

- prescribed augmentations to alleviate a transmission constraint;
- prescribed augmentations to alleviate a distribution constraint;
- a negotiated augmentation to accommodate a single connection applicant; and
- a negotiated augmentation to accommodate multiple connection applicants.

However, some project-specific matters will still need to be addressed or supported in use of system, project and network agreements.

Planning permits

A planning permit will be informed by the single line diagram for the initial connection, the concept design for the initial connection and the proposed building envelope. The permit will affect the detailed augmentation design.

Planning permits are usually granted subject to a number of conditions, such as the approval of:

- vegetation offset plans;
- landscape plans;
- environmental management plans; and
- traffic management plans,

by the appropriate authority, and construction activities need to be carried out to relevant standards and to the satisfaction of the appropriate authority.

In all instances, AEMO will:

- during the pre-feasibility phase of the connection:
  - follow the project development protocol;
  - consult with the connection applicant about the forms of connection; and
  - issue invitation to tender in line with planning approvals and permits.
- require confirmation of planning compliance before commissioning.

For a multi-connection terminal station, AEMO will:

- develop the functional specifications for the augmentation; and
- specify the building envelope for the augmentation, based on a concept design of the augmentation (used for planning approvals, and AEMO invitation to tender).

For a multi-connection terminal station, the connection applicant will:

- secure the land; and
- obtain development approvals, with AEMO's input on:
  - the terminal station;

- expected development now and into the future; and
- any investigations into community impacts.

For both single connection and multi-connection terminal stations, the DTSO will be responsible for the design and construction of transmission assets that comply with the planning permit conditions.

9.4 Template and variable provisions

AEMO expects that most provisions will be offered as template provisions.

However, a connection applicant may choose to develop some of the detailed planning approvals that are required as conditions of the planning permit. Any detailed approvals that are prepared by the connection applicant would be attached to AEMO's tender documentation. Where detailed plans are not provided by the connection applicant, it is assumed that the DTSO would develop them and factor such costs into its bid.

10 Land acquisition and access

A connection applicant generally will acquire land, or an interest in land on which assets will be located. The DTSO will need rights to occupy and use land on which shared network assets are located. These concepts could also apply for transmission-connected customers.

For a multi-connection terminal station, a connection applicant would be required to secure the land rights for an ultimate development. However, AEMO's Cost Allocation Policy ensures that the initial connection applicant is not disadvantaged when a subsequent connection applicant connects. AEMO will apply the principles from its cost allocation policy to ensure that subsequent connection applicants are required to share the historical costs (including costs of transmission outages) and forward looking network charges borne by the initial connection applicant that are associated with the initial augmentation.

The types of land access requirements are as follows:

- **Access to the site** – If the site on which an augmentation is to be situated is not accessible by public road, third parties will need to access the site by private roads. The type of land right that is likely to give them these powers is a licence or an easement.
- **Land for the initial augmentation** – The site on which augmentation assets are to be situated will need to be protected from third party trespassers. Once energised, the site will be highly dangerous and will need to be fenced off and clearly inaccessible without permission. The types of land rights that can give the augmentation owner these types of assurances will be either full ownership, or a lease, as both of these will give them exclusive possession of the land on which the augmentation is to be situated.
- **Land for connection assets** – Similar issues arise with respect to the location of connection assets, if they are to be owned by someone other than the connection applicant. Either full ownership or a lease would be appropriate.
- **Land for any subsequent augmentation** – Third party access means that any party wishing to construct a subsequent augmentation will require land on which to locate the subsequent augmentation. The same issues confront the owner/constructor of a subsequent augmentation as do the owner/constructor of the initial augmentation. The types of land rights a subsequent augmentation owner will need are either full ownership or a lease.
- **Access to store equipment** – Constructing parties need access to land on which they can store equipment. A licence to use part of the land for laydown purposes will provide sufficient rights, unless exclusive possession is required, in which case a lease might be required as this need is likely to be temporal.

- **Erecting powerlines** – This need will arise where powerlines either don't exist, or where existing powerlines need to be augmented to accommodate the needs of the augmentation to be constructed. Easement rights are usually obtained for this purpose.
- **Access to powerlines** – This requirement arises from the need to access powerlines for the purposes of ongoing maintenance. Easement rights are usually obtained for this purpose.
- **Access to augmentation** – Where a subsequent augmentation is constructed, third parties will need to access the initial augmentation for the purposes of connecting new augmentations, or for the purpose of locating subsequent augmentations. Licence rights would be appropriate in this instance as exclusive possession is not appropriate.

Table 3 indicates how the land rights considered above might need to be allocated as between the different parties involved with the use of an augmentation.

Table 3: Who needs which land rights?

	Access to the site	Land for the Initial Augmentation	Land for Connection Assets	Land for any Subsequent Augmentation	Access to store equipment	Erecting powerlines	Access to powerlines	Access to Augmentation
Connection applicant	✓	✓	✓		✓			
DTSO	✓	✓			✓			✓
SP AusNet	✓				✓	✓	✓	
New connection applicant	✓		✓	✓	✓			
New DTSO	✓			✓	✓			✓

10.1 What does AEMO's contract with the connection applicant need to cover?

Agreements will need to deal with the various forms of land rights where the connection applicant or another entity owns the land.

10.2 Principles to be applied

The key principles relevant in this area seek:

- clear governance and accountability;
- efficient risk allocation;
- efficient project delivery - effective coordination and cooperation; and
- no unreasonable impediments to future third party access.

10.3 Proposed provisions

Indicatively, the connection applicant would be required to:

- grant licences to allow access to roads during and post-construction on fair and reasonable terms;
- allow access by all entities involved in construction, ongoing operation and maintenance, potential future DTSOs, new connection applicants and other users of the shared network assets; and
- grant easements to relevant DTSOs for transmission powerlines.

The connection applicant may also be asked to transfer to the DTSO land on which shared network assets are located.

AEMO notes that the connection applicant and DTSO have the strongest interests in this negotiation. AEMO's key interest is in facilitating future third party access by ensuring agreements do not create unreasonable barriers to future access. This requirement is considered reasonable in light of practical issues faced under the legislative framework and AEMO's desire to ensure that the policy objective of third party access is met.

Matters considered in this section could apply equally to transmission-connected customers.

10.4 Template provisions

Once the contract provisions are settled, AEMO expects the provisions to be offered as template provisions capable of automatic acceptance and application (that is, without the need for lengthy negotiations).

11 Design of shared transmission assets

This topic refers to the detailed design of the augmentation that is undertaken by the DTSO in relation to contestable augmentations and the incumbent DTSO in relation to interface works. The detailed design is to be based on AEMO's functional specification and subject to any planning permit conditions.

A connection applicant wants to know that AEMO's functional specification and the DTSO's designs will not prohibit the connection applicant from meeting its performance standards and delivering its load to market. Connection applicants want to maximise certainty in the functional specification by ensuring that the framework creates appropriate incentives and procedures to avoid or minimise subsequent variations to the functional specification.

AEMO has reviewed existing contracts and identified opportunities to improve accountabilities and to minimise any unnecessary duplication that can affect timing. Separately, AEMO has further refined and developed internal templates for primary and secondary functional requirements.

Matters considered in this section could apply equally to transmission-connected customers.

11.1 What does AEMO's contract with the connection applicant need to cover?

Contracts will provide for a wide range of commercial and technical matters. From a technical perspective, contracts collectively will deal with:

- location of the connection;
- service definition;
- design and commissioning;

- local and remote functional specification (that is, protection and control requirements and primary functional requirements); and
- primary equipment (e.g. transformers), and secondary equipment (e.g. communications equipment, control schemes, monitoring, etc).

Only those matters of direct impact or interest for the connection applicant need to be included in connection applicant-AEMO agreements.

Given connection applicants' stated need for confidence in the DTSO's design (including AEMO's functional specification), ideally the contracts would provide for consultation with the generators in their development. However, there are some practical hurdles to this approach, notably intellectual property and confidentiality associated with designs.

11.2 Principles to be applied

The key principles relevant in this area seek to achieve:

- clear governance and accountability;
- technical decisions should be made by the entity accountable for technical compliance;
- accountable entities may be required to consult or consider others' views, but should not be required to act on those views;
- contract simplicity – do not complicate connection applicant-AEMO contracts with network matters;
- procedural efficiency – minimise duplication;
- transparency – allowing a connection applicant access to review and comment on:
  - the functional specification (as produced by AEMO during the connection application process); and
  - the detailed design prepared by the DTSO after contract execution[8]; and
- efficient risk allocation.

11.3 Proposed provisions

The connection applicant will be responsible for designing and constructing its own plant to meet agreed performance standards and other functional requirements during commissioning and operation.

The connection applicant will be offered the opportunity to review and comment on both AEMO's functional specification an, subject to the DTSO's agreement, to the DTSO's designs for transmission assets. This allows the connection applicant to manage any delay risks caused by the DTSO designing assets that do not comply with the functional specification. If the connection applicant chooses to be involved in review of the design it can highlight these issues prior to construction commencing, minimising the impact of any required corrections.

The DTSO will be accountable to AEMO for:

- designing (and constructing) transmission assets that meet planning requirements, and AEMO's functional specifications;
- developing the commissioning program, conducting commissioning tests;

[8] As noted above, this is subject to DTSO agreement, and adequate confidentiality and intellectual property protections being implemented.

- observing Australian standards, good electricity industry practice; and
- satisfying AEMO that network assets meet all necessary standards, including those stipulated by AEMO.

AEMO will:

- conduct tenders for contestable augmentations, based on information provided by the connection applicant;
- develop the functional specification;
- specify (to network service providers) measurable outcomes, that is, network performance standards, any matter/ design that must be satisfied for practical completion; and
- check that all outcomes have been achieved for practical completion before commissioning.

11.4 Template provisions

Once the contract provisions are settled, AEMO expects the provisions would be offered as template provisions capable of automatic acceptance and application (that is, without the need for lengthy negotiations).

12 Project planning, milestones and delivery programs

Project plans and delivery programs are required for all construction works associated with a terminal station and interface works.

These plans are driven by:

- AEMO's functional specification; and
- the design of the terminal station or interface works that is prepared by the relevant DTSO or incumbent DTSO.

Relevant provisions are set out in agreements between AEMO and the relevant DTSO. Practical completion under those agreements triggers financial obligations for AEMO; in turn, those payment obligations are passed on to the connection applicant. Failure to meet the delivery program, or changes in the program, can result in significant additional costs, or delays, or both, for the connection applicant.

Reviews have identified the following areas of concern with current arrangements[9]:

- lack of adequate, timely focus on details by NSPs that can lead to a project plan and milestones that are not fair and reasonable, or achievable;
- lack of clarity, advice, or co-ordination and further information about proposed changes to plans;
- poor incentives on NSPs to provide rigorous, timely and considered input to initial plans;
- inequity in the requirements to pay delay costs;
- late changes by NSPs to the design that affect plans, and therefore connection applicant costs, timing and potentially the service quality;
- monitoring of progress against plans, and the potential for unnecessary duplication, or skewed accountabilities;

[9] See for example submissions made to the AEMC's Transmission Frameworks Review.

- variations and how decisions are made by AEMO to accept or challenge a proposed variation;
- inadequate time allowed for consultation, actions and inputs required by others; and
- planning for outages, power system security (electricity supply) during construction and commissioning.

A related matter is the AEMO/ DTSO roles and responsibilities in relation to factory acceptance tests.

AEMO is reviewing technical provisions against the high level principles, to simplify provisions and procedures and remove any unnecessary duplication. AEMO is also exploring avenues to arrive at an outage plan earlier in the planning process.

Applying the high level principles, responsibility for program monitoring would be allocated to the entities with the strongest incentives in ensuring realistic estimates and timely delivery. That entity may be the connection applicant. AEMO, however, must also balance connection applicants' stated desire for simplicity in contracts with the connection applicants' desire to be involved in the underpinning network decisions that affect them.

Connection applicants have indicated a strong preference for direct communication with the DTSO in relation to project coordination, including monitoring progress against project plans and milestones. This position applies equally to new multi-connection terminal stations, as generally, only one initial connection applicant will be involved during terminal station construction.

Matters considered in this section could apply equally to transmission-connected customers.

12.1 Key changes proposed

In theory, connection applicants could assume greater direct control over project progress.

This would be achieved by direct obligations between the connection applicant and entities involved in construction of terminal stations and interface assets in relation to coordination and cooperation during and post-construction. AEMO remains accountable, however, for power system security and minimising disruption through outages. DTSO and incumbent DTSO delivery plans would remain a requirement under network agreements, triggering breaches and AEMO remedies under those agreements.

Detailed drafting and consultation will test the feasibility of such arrangements without undermining the high level principles, in particular, without impeding future third party access.

Section 13 deals with site-specific cooperation and coordination during the construction phase.

12.2 What does AEMO's contract with the connection applicant need to cover?

An AEMO – connection applicant contract should deal with the connection applicant's payment obligations and how those obligations can be varied. This may include reference to changes in the underpinning network agreements.

To the extent that the connection applicant is to have input to network decisions affecting the project plan, the connection applicant's right to such input, and AEMO's obligation to inform or consult with them, would be recorded in the AEMO – connection applicant agreement.

In theory, DTSO and connection applicant project obligations could be owed to each other under a project coordination agreement, or to AEMO under a multi-party project coordination deed as is

current practice[10]. Monitoring and enforcement arrangements would need careful consideration (see Section 17).

12.3 Principles applied

The key principles relevant in this area seek:

- to align incentives, information and accountabilities with powers to monitor and enforce;
- efficient risk allocation;
- clear governance and accountabilities;
- to meet regulatory requirements;
- to maintain system reliability and security by:
- effectively managing the impact of the connecting party on the shared network;
- facilitating future shared network expansion;
- transparency;
- no unreasonable impediments to future third party access;
- AEMO pass through of actual costs; and
- user-friendly agreements – separating construction phase provisions from ongoing operational provisions.

12.4 Indicative provisions

Connection applicants, DTSOs and the incumbent DTSO will be required to act in a manner that minimises disruption to others. Indicatively, connection applicants will be required to:

- enter into a project coordination agreement with the DTSO and incumbent DTSO:
  - subject to the comments in Section 12.1, a template could be provided by AEMO, based on relevant parts of the current Project Coordination Deed;
- monitor progress against milestones; and
- liaise directly with the DTSO/ incumbent DTSO and affected stakeholders in relation to its proposed changes to plans.

Under its Use of System Agreement with AEMO, the connection applicant will be required to:

- consult with AEMO in relation to any changes to plans that affect the timing of AEMO actions to ensure that revised plans are achievable;
- advise AEMO of any matters affecting practical completion;
- underwrite all augmentation costs including costs resulting from agreed variations; and
- post project completion, cooperate with AEMO, the DTSO, the incumbent DTSO, and any future connection applicant requiring access to the site.

[10] In comments made in a public forum on the AEMC's Transmission Frameworks Review Interim Report, Melbourne, 12 December 2011, generators indicated that in other NEM jurisdictions a single agreement between the generator proponent and TNSP deals will connection, construction, coordination and ongoing network services.

The DTSO will be required to:

- enter into a project coordination agreement with the connection applicant and incumbent DTSO; and
- liaise directly with the connection applicant, incumbent DTSO and any affected stakeholders in relation to its proposed changes to plans.

Under its project / network agreement with AEMO, the DTSO will be required to:

- meet the agreed project delivery plan;
- consult with AEMO in relation to any changes to plans that affect the timing of AEMO actions, to ensure that revised plans are achievable;
- advise AEMO of any matters affecting practical completion;
- post project completion, cooperate with AEMO, the connection applicant and any future connection applicant requiring access to the site; and
- provide access to future connection applicants on essentially the same terms and conditions as the initial connection applicant (AEMO is developing a cost allocation policy and principles to ensure that the initial connection applicant is not disadvantaged).

Indicatively, incumbent DTSOs would be required to:

- consult in a timely manner to ensure that agreed plans for interface works are efficient and achievable (existing regulatory obligation);
- enter into a project coordination agreement with the connection applicant and DTSO; and
- liaise directly with the connection applicant, DTSO and any affected stakeholders in relation to its proposed changes to plans.

Under its project / network agreement with AEMO, the incumbent DTSO would be required to:

- meet the agreed project delivery plan;
- consult with AEMO in relation to any changes to plans that affect the timing of AEMO actions to ensure that revised plans are achievable; and
- advise AEMO of any matters affecting practical completion.

Under its Use of System Agreement with the connection applicant, and its network services agreements with each of the DTSO and incumbent DTSO, AEMO will:

- incorporate agreed plans in its agreements with the DTSO / incumbent DTSO;
- respond in a timely manner when consulted on changes to plans initiated by others;
- enforce remedies for breaches of plans under network agreements;
- decide whether to allow “Minor Outstanding Items”;
- determine practical completion;
- pay the DTSO/ incumbent DTSO upon practical completion; and
- pass on all augmentation costs to the connection applicant, including costs resulting from agreed variations.

AEMO will also require that any future connection applicant that connects to the terminal station enters into an agreement with the initial connection applicant and DTSO in relation to site access and coordination, and contributes to historical and forward-looking network charges in accordance with AEMO’s proposed Cost Allocation Policy.

12.5 Template and variable provisions

Obligations owed to AEMO in the Use of System and network agreements would be offered as template provisions capable of automatic acceptance and application (that is, without the need for lengthy negotiations).

However, on-site entities could agree project coordination and cooperation provisions. This matter is dealt with in Section 13.

13 Coordination and cooperation during construction phase – site specific

Connection applicants have indicated a strong preference for direct communication with the DTSO in relation to project coordination, including monitoring progress against project plans and milestones. This position applies equally to new multi-connection terminal stations, as generally, only one initial connection applicant will be involved during terminal station construction.

DTSOs are not yet clear about the feasibility of such arrangements within the Victorian framework, but some have expressed willingness to explore options.

Matters considered in this section could apply equally to transmission-connected customers.

13.1 What does AEMO's contract with the connection applicant need to cover?

AEMO wants to be confident that the connection applicant has appropriate incentives and obligations to co-operate and co-ordinate activities with DTSOs and other stakeholders during construction.

All entities involved in construction are interested in:

- milestones and practical completion;
- project coordination and oversight;
- access to the site, including traffic management, responsibility for occupational health and safety, etc;
- environmental management; and
- outage coordination.

However, some obligations would lie better in an agreement other than the AEMO-connection applicant Use of System Agreement as:

- AEMO is not onsite during construction and, therefore, is unable to monitor cooperation efficiently; and
- the connection applicant has the strongest commercial incentives for ensuring that the project runs smoothly, without delays and additional costs.

Instead, obligations may reside in a Project Coordination Deed between AEMO, the DTSO, the incumbent DTSO and connection applicant that covers coordination and other matters for the whole site until the decommissioning of the terminal station.

13.2 Principles to be applied

The key principles relevant in this area seek:

- to promote clear governance and accountabilities;

- efficient risk allocation;
- to minimise disruption to others; and
- efficient monitoring and enforcement.

13.3 Proposed provisions

The appropriate agreement will be discussed with connection applicants and SP AusNet (for interface works). Indicatively, a connection applicant will be required to:

- consult with affected stakeholders;
- coordinate and cooperate with construction parties;
- pay costs associated with delays caused by the connection applicant;
- coordinate construction activities so as to minimise disruption to others; and
- grant construction parties access to the site – for storage, laydown areas.

13.4 Template or variable provisions

Subject to the comments in Section 12.1, AEMO could develop a template that is based on the relevant sections of its current Project Coordination Deed. Provided provisions do not undermine obligations owed to AEMO under Use of System, network services or project agreements, the parties (on-site entities) would be able to agree to project coordination and cooperation arrangements that differ from the template provisions.

14 Security for payment

14.1 Current position

Connection applicants underwrite the full costs of any augmentation and interface works that is necessary for them to connect their facilities to the shared transmission network. Connection applicants are required to provide security for payment in the form of either a bank guarantee or a parent company guarantee. This security requirement will be retained.

The processes required, and risks borne, by the relevant DTSO and AEMO vary depending on the form of guarantee provided. Importantly, AEMO's rights under a parent company guarantee are assigned to the relevant DTSO.

To date, AEMO has not stipulated the form of security at the outset, but has called for tenders to be priced based on each form of guarantee. Generally, tendered prices have not varied for the two options, though debates around the form of security and specific provisions have slowed negotiations.

Informally, the incumbent DTSO has indicated that in the current financial climate it would not accept a parent company guarantee.

Matters considered in this section could apply equally to transmission connected customers.

14.2 Possible change

AEMO's initial thinking is that the choice of the form of security should be a matter for the connection applicant to choose, with some guidance from AEMO and DTSOs as to the factors or characteristics that would be expected for a DTSO to consider accepting a parent company guarantee. Tenders would then proceed in line with the connection applicant's stated preference.

Ultimately, the DTSO would be the entity deciding whether to accept a parent company guarantee. AEMO would remain, as now, neutral.

Standard detailed provisions for each of the two types of security will be developed for all agreements. AEMO would work with the DTSOs to develop guidance for connection applicants regarding the circumstances in which a parent company guarantee may be acceptable, and the characteristics of an acceptable parent company guarantee. However, as noted above, at this stage the incumbent DTSO has expressed a strong reluctance to accept a parent company guarantee.

As with other provisions, connection applicants could negotiate non-standard arrangements. However, anecdotal evidence suggests that such negotiations are generally protracted and difficult, with each law firm having strong preferences for its own wording. A fair and reasonable standard form of wording could save considerable time, cost and effort.

14.3 What does AEMO's contract with the connection applicant need to cover?

The agreement needs to cover:

- the connection applicant's obligation to provide and maintain a bank or parent company guarantee;
- the required attributes of that guarantee;
- the circumstances in which the guarantee may be called on, and by whom; and
- breach and enforcement provisions.

14.4 Principles applied

The key principles that apply to security provisions are:

- efficient risk allocation;
- encouraging connection applicant control, that is, in relation to informed choice as to the form of security;
- AEMO cost pass through and connection applicant underwriting obligations; and
- efficient processes, that is, a fair and reasonable standard to avoid the need for lengthy negotiations.

14.5 Proposed provisions

Indicatively, the connection applicant would be required to:

- nominate its preferred form of security, that is, whether bank guarantee or parent company guarantee; and
- provide and maintain the guarantee with the required attributes.

AEMO will be required to:

- call on the guarantee only in accordance with circumstances outlined in the agreement, which should be fair and reasonable; and
- assign its rights in relation to a parent company guarantee to the relevant DTSO.

In circumstances where the DTSO has agreed to a PCG, the DTSO will be required to:

- accept an assignment from AEMO of a parent company guarantee; and

- call on the parent company guarantee only in accordance with circumstances outlined in the DTSO-AEMO network services agreement.

14.6 Template provisions

Once the contract drafting is finalised, AEMO expects the outcome to be offered as template provisions capable of automatic acceptance and application (that is, without the need for lengthy negotiations).

15 Insurance requirements

Insurance is required to underpin DTSO service delivery obligations. Key insurances required are public liability in relation to construction, loss and theft, and professional indemnity in relation to design.

15.1 What does AEMO's contract with the connection applicant need to cover?

The agreement needs to cover:

- information only - the connection applicant contract could identify the insurances that AEMO will require in its network agreements with transmission service providers; and
- the contract will also set out any insurance excess amounts or amounts that are below the threshold that can be claimed through insurance, that will be passed on to the connection applicant.

These arrangements could also apply for transmission-connected customers.

15.2 Principles to be applied

The key principles relevant in this area seek:

- clear governance and accountabilities - supporting clear accountability for construction site risks;
- delay-risk mitigation - the underlying rationale for insurance obligations is to encourage timely response and rectification if problems occur, to minimise delays. This is particularly important where there are few incentives for a DTSO to deliver on time; and
- due diligence on service providers - as part of reasonable due diligence on potential service providers, AEMO includes insurance requirements in its tenders. It requires assurances or proof of continuing insurance under network service agreements.

15.3 Proposed provisions

AEMO will review requirements and the principles above. In its network services agreements, AEMO will require DTSOs to maintain public liability and other site insurances until project practical completion and completion of all minor outstanding items. AEMO will also require DTSOs to maintain professional indemnity insurance for 7 years post completion.

AEMO has considered changing (and simplifying) its underpinning network services agreements to provide for where a DTSO fails to maintain the required insurances, and AEMO suffers losses or incurs costs as a result of that failure (e.g. due to an claim that would otherwise have been covered by DTSO insurance). In that instance, at practical completion AEMO could pay the DTSO the agreed network charges less AEMO costs, including the costs of capital. However, one generator

has flagged its preference for AEMO to step in and procure insurance at the DTSO's cost if the DTSO allows insurance to lapse. AEMO will analyse this option further during drafting.

15.4 Template provisions

Once the contract provisions are settled, AEMO expects the provisions would be offered as template provisions capable of automatic acceptance and application (that is, without the need for lengthy negotiations).

16 Network outages and availability incentives

16.1 What does AEMO's contract with the connection applicant need to cover?

The agreement needs to cover service rebate arrangements – during both construction and operation phases.

16.2 Principles applied

Key principles relevant in this area seek:

- to minimise disruptions and outages;
    - create incentives to minimise frequency and duration, and to time outages to minimise impact on others;
- to promote an efficient, reliable network; and
- to apply for negotiated services the same protections and incentives that apply for prescribed services.

Matters considered in this section could apply equally to transmission-connected loads.

16.3 Proposed provisions

Indicative provisions would include:

- incentive arrangements in network service agreements and project agreements with DTSOs; and
- service rebate arrangements in Use of System Agreements between AEMO and connection applicants.

For negotiated services, AEMO aims to replicate the protections and incentives as for prescribed services. AEMO would also standardise and publish a methodology.

16.4 Template and variable provisions

The common methodology will apply in all instances, but incentives may vary by agreement from 0% to 100% of network charges. Variations may be based on the nature of generation – base load, intermediate and peaking – and how much the connection applicant is prepared to pay for availability (assuming that a more onerous incentive scheme may result in higher premiums at the outset).

AEMO will begin development of a methodology for negotiated services in 2012, to be incorporated in its Connections Information Kit.

17 Breaches, monitoring, enforcement and remedies

AEMO's review of current breach, monitoring, enforcement and remedy provisions against the high level principles and simplification objectives highlighted a number of areas for potential improvement.

It has not reached concluded positions, but raised a number of matters that it explored with stakeholders during targeted consultation. Proposed principles were well accepted, but AEMO anticipates that detailed drafting will require additional stakeholder consultation.

17.1 Principles applied

The key principles to be applied here are as follows.

- Promoting efficient risk allocation by encouraging:
    - parties to manage risks within their control efficiently and effectively; and
    - DTSOs to set prices at a level which allows for risks faced.
- Promoting efficient remedies, through:
    - aligning incentives, information and accountabilities with powers to monitor and enforce;
    - adequate, workable enforcement mechanisms; and
    - effective and proportionate remedies.
- Clear governance and accountability.
    - technical decisions should be made by the entity accountable for them – accountable entities may be required to consult or consider affected stakeholders' views, but should not be required to act on those views;
    - AEMO should define outputs and end-points where possible; and
    - AEMO, in its system security role, should treat all regions in the same way.

These principles apply equally to transmission-connected customers. However, the technical issues faced with transmission-connected customers are more aligned with those encountered in DNSP load connections.

17.2 General concepts

Breaches can be categorised as financial, non-financial or NER breaches. Non-financial and NER breaches are further grouped according to the time frame required for resolution; and their material impacts on others, or power system security.

Connection applicants have a strong interest in breaches that affect project cost, timing, or the quality of the service received and their ability to get their load to market, or that affect the integrity of their generation plant.

A DTSO will be particularly concerned with failure to pay, delays caused by others that affect DTSO resourcing for this or other projects, or breaches that cause harm to DTSO assets.

Table 4 below provides examples of each type of breach, indicates which entities have strong incentives to monitor and seek rectification of a breach, and proposes some possible remedies.

Generally, the party in breach should be given a reasonable opportunity to remedy the breach, before listed remedies are pursued. All parties will be required to mitigate losses.

Table 4: Examples of breaches and remedies

Type of breach, examples	Who can monitor	Possible remedies, comments
Financial		
Failure to pay By connection applicant By DTSO (e.g. rebates)	Entity entitled to receive moneys AEMO	For connection applicant non-payment, draw on security provided by connection applicant. AEMO draws on bank guarantee. DTSO draws on parent company guarantee. For DTSO non-payment (e.g. rebates, delay costs), AEMO to pursue normal contractual remedies, possibly offset payments.
Expiry of bank guarantee	AEMO	Consider whether arises during construction or operational phase. During construction: • Require replacement bank guarantee. • Delay/suspend construction if the bank guarantee is not replaced. Operational phase: • Require replacement bank guarantee. • Suspension or termination of permission to use the system.
Insolvency events: Affecting a connection applicant Affecting a DTSO	Difficult to monitor AEMO and contract parties will be notified under general insolvency laws	For a connection applicant – an administrator has a strong incentive to continue agreements. NER remedies will apply, though note these remedies are discretionary. Orderly termination of Network Service Agreements create challenges. For a DTSO – appropriate remedies depend on the timing of the event, that is, whether during construction, or when asset is in service. AEMO considers step in rights to be highly problematic. The options need to be worked through with generators. One option is for AEMO to compel a DTSO to sell assets to an entity that is nominated by the connection applicant and AEMO, at an independent valuation. AEMO acknowledges that negotiating the price will be challenging.
Insolvency event affecting a DTSO when an asset is operational	Difficult to monitor AEMO and contract parties will be	As a practical matter, receiver and manager will have incentives to continue to operate, and arrange an orderly sale.

Type of breach, examples	Who can monitor	Possible remedies, comments
	notified under general insolvency laws	No AEMO remedy required.
Reduced credit rating (of connection applicant, or DTSO)	Difficult to monitor AEMO to be notified under contract	For a connection applicant with a bank guarantee, no remedy required. For a connection applicant with a parent company guarantee, the connection applicant will be required to replace the parent company guarantee with a bank guarantee. For a DTSO, no specific remedies are required, If for example, the DTSO was no longer able to procure insurance, then the arrangements flagged under Section 15 Insurance would apply.
Non-financial breach		
Impeding delivery	Parties on the ground during construction	Court action - Injunction, with party impeding delivery to bear costs.
Obstructing third party access to the shared network infrastructure Connection applicants unreasonably impeding future third party access to the shared network infrastructure over their land. It is expected that the DTSO will have control over the land on which shared network augmentation is built (or planned to be built); however this land may be surrounded by land owned by the initial connection applicant. Initial connection applicant may be in the position to impede the access to the shared network for future connection applicants.	AEMO	Court action - Injunction or specific performance, with party at fault to bear costs. AEMO will allocate costs for the augmentation between multiple connecting parties in line with a published Cost Allocation Policy.
Failure of connection applicant or DTSO to meet technical	AEMO	Remedies should be exercised commensurate with the harm that is faced. Implement an effective rectification or cure

Type of breach, examples	Who can monitor	Possible remedies, comments
requirements Affecting other parties Affecting power system security, or Causing AEMO to breach NER		plan. AEMO requires a rectification plan from the connection applicant or DTSO. The level of AEMO input to and oversight of plan will depend on nature of problem. Generally, AEMO will provide comments but the connection applicant or DTSO remains accountable. Disconnection may be required until cure plan received or implemented. NOTE - may require additional financial incentive/ penalty/ rebate to compel a DTSO to rectify problems as quickly and effectively as possible.
Failure of AEMO to meet technical requirements (eg quality of supply)	Connection applicant / AEMO	Remedies should be exercised commensurate with the harm that is faced. Implement an effective rectification or cure plan. AEMO will prepare a rectification plan for discussion with the connection applicant or DTSO. Generally, AEMO will accept comments from the connection applicant or DTSO but AEMO will remain accountable. NOTE - may require additional financial incentive/ penalty/ rebate to compel a DTSO to rectify problems as quickly and effectively as possible.
Failure to provide timely, accurate information	AEMO Information recipient	Unless the NER cover the matter, a party that fails to provide information (e.g. Vic specific schedule information), should bear the costs (including delay costs) that result from its failure. (An example is where a party fails to inform AEMO of the rating of a particular piece of plant, causing AEMO to breach the NER).
Insurance coverage ceases	DTSO, SP AusNet AEMO checking annually	AEMO to confirm remedies.
Breach of the Rules		
Technical breaches	AEMO	NER remedies to be applied. Contractual remedies will also be used to

Type of breach, examples	Who can monitor	Possible remedies, comments
Affecting other parties Affecting power system security, or Causing AEMO to breach NER		support protection of network and connection applicant assets.

17.3 What does AEMO's contract with the connection applicant need to cover?

This agreement is likely to include:

- breach, monitoring, remedy and enforcement provisions applicable under the Use of System Agreement; and
- relevant information on AEMO's enforcement of DTSO obligations that potentially affect the connection applicant.

17.4 Proposed provisions

A far as practicable, enforcement provisions will be standardised and included in general AEMO standard terms and conditions. Outline provisions will be developed following consultation with stakeholders.

17.5 Template provisions

Once the contract provisions are settled, AEMO expects the provisions would be offered as template provisions, capable of automatic acceptance and application (that is, without the need for lengthy negotiations).

18 Delay costs

During the construction phase, delays may be caused by the connection applicant, DTSO, or by AEMO. To date, several delays have been attributed to late changes in technical requirements that are within the control of the DTSO, but costs have been borne by connection applicants.

Other examples of matters that have resulted in delays in augmentation projects are:

- industrial relations issues with DTSOs;
- site access delays, due to delays in connection applicants completing civil works;
- traffic management plans rejected by the local council;
- removal of native vegetation;
- obtaining easements for interface works;
- variations instigated by AEMO;
- equipment delivery delays;
- coordination with affected stakeholders and asset owners;
- changes in:

  - connection asset location and/or arrangement within a terminal station due to site issues;
  - protection design of the generation system and connection assets;
  - interface arrangements;
  - SCADA design; and
  - requirements for planning permits;
- delayed milestone dates for construction of connection assets or the generating system; and
- requests for additional provision of services from DTSO.

Matters considered in this section could apply equally to transmission-connected customers.

18.1 What does AEMO's contract with the connection applicant need to cover?

Ideally, contracts will include:

- commercial incentives to minimise delays, and allocate accountability for associated costs in a fair and reasonable manner;
- obligations to ensure a timely exchange of information on delays; and
- the circumstances in which delay costs are passed (via AEMO) from connection applicant to DTSO, and vice versa.

18.2 Principles to be applied

The key principles AEMO seeks to achieve in this area are:

- clear governance and accountabilities;
- efficient risk allocation;
- minimising disruption to others;
- encouraging each entity to meet the costs associated with delays that are within its control; and
- AEMO to pass through costs (given its not for profit status).

A practical overlay is necessary here. AEMO's ability to implement a fair and reasonable position is dependent on agreement from willing DTSOs.

Several comments made by generators at an AEMC Transmission Frameworks Review Interim Report forum on 12 December 2012 provide some insights here. Some generators indicated that they had successfully negotiated with DTSOs for fixed project delivery dates and significant penalties for delays, with generators willingly paying a premium for certainty.

These arrangements could also apply to transmission-connected customers.

18.3 Proposed provisions

AEMO will continue to review all provisions, testing item by item who is best placed to manage each matter. It will document fair and reasonable positions, and seek support for these from the incumbent DTSO. AEMO will review and standardise definitions of proponent-caused delays, DTSO-caused delays, and force majeure events.

When finalised, template provisions should require each party to meet the financial consequences of delays that are within its control. However, in practice:

- AEMO has not been able to negotiate this position with the incumbent DTSO; and
- Commercial incentives and trade-offs may be required.

Generally, it is in the DTSO's interest to deliver the augmentation sooner as network charges (that is, OPEX, CAPEX recovery and a return on their investment) will only be paid once practical completion is granted. Moreover, practical completion will only be granted if the DTSO can demonstrate that the AEMO functional specification is met. Around 25% of the proposed network charges are usually withheld until all minor outstanding items are completed.

Indicatively, a connection applicant would:

- bear costs (of DTSO, incumbent DTSO or AEMO) associated with delays that are within the connection applicant's control; and
- be consulted on decisions in relation to delays (e.g. whether AEMO should challenge or accept a DTSO-initiated delay) in accordance with Table 2.

Indicatively, AEMO will:

- implement systems and procedures to minimise the occurrence of delay events caused by AEMO;
- be responsible for delays it causes where it has been negligent, provided that these can be funded from AEMO's insurance noting that the connection applicant will pay the costs up to the excess amount;
- pass compensation to / from connection applicant and DTSO; and
- make decisions in relation to accepting or challenging delays in accordance with Section 8 above.

18.4 Template and variable provisions

AEMO envisages that the common framework will be offered as a template in all instances, but there will be room to negotiate the conditions under which delay costs are paid and how they are calculated.

19 Liability caps

Reciprocal liability caps can work to the benefit of connection applicants, AEMO and DTSOs. If effective, they can discourage unnecessary litigation, and promote effective insurances and other risk mitigation measures.

AEMO has raised this topic with stakeholders, but views differed on the appropriateness and adequacy of any existing caps, and the timing or frequency of any reviews.

Nevertheless, AEMO's preferred policy position is as stated below.

19.1 What could AEMO's contract with a connection applicant cover?

If liability caps are provided, the contracts will need to address:

- the level of caps, and circumstances in which they will apply as between the connection applicant and AEMO; and
- possibly information on caps that may apply as between AEMO and the DTSO.

19.2 Principles to be applied

Ideally, any liability caps would achieve:

- flexibility to deal with multi-connection terminal station scenarios on a fair and reasonable basis;
- consistency with industry practice and limits;
- recognition of AEMO's non-for-profit status; and
- consistency with statutory limitation of liability provisions.

19.3 Proposed provisions

AEMO will undertake further consultation with stakeholders, and if appropriate, will develop template provisions for future contracts.

19.4 Template provisions

When drafting of the provisions is finalised, the provisions are expected to be template provisions capable of automatic acceptance and application (that is, without the need for lengthy negotiations).

Appendix A: Indicative matters that Victorian DNSP load connection arrangements need to cover

Note – This table is not comprehensive, but is provided for illustrative purposes only.

Relevant phase	Source of obligations / requirements		
	NER	**Commercial**	**Technical**
Pre agreement	**NER suggest contract(s) needs to provide for...** • See schedule 5.6 of the NER re connection agreements and schedule 8.11 re principles for contestable augmentation agreements **Matters covered in NER already:** • Invoicing for study costs as NSP • RIT-T to categorise services	**Commercially, need to provide for....** • Conditions precedent • Project certainty, before committing AEMO resources • Payment for studies, etc	**From technical perspective, need to deal with....** • Pre-studies • Agree generator standards • Project certainty, before committing AEMO resources – Manage priorities, resources • Flag accommodating future expansions
Pre construction	**NER suggest contract(s) needs to provide for...** See schedule 5.6 of the NER and schedule 8.11 re principles for contestable augmentation agreements Includes: • Procedural steps to reach agreement • Access standards • Mandatory agreement content • Obligations to negotiate in good faith, arrive at fair & reasonable	**Commercially, contracts need to provide for....** • Conditions precedent • Payment certainty - augmentation – Security – Timing of payment obligations • Commitment – Project certainty, before committing AEMO resources	**From technical perspective, contracts need to deal with....** • Location of connection (also a NER requirement) • System management, e.g. hubs • Land acquisition, access – Development, environment approvals • Service definition • Design – Local and remote **functional specification** (that is, AEMO primary scope of works) – Primary e.g. transformers, *cf* secondary communications controls,

Relevant phase	Source of obligations / requirements		
	NER	**Commercial**	**Technical**
	terms		monitoring, etc) • Practical access and cooperation (also a NER requirement)
Construction	**NER suggest contract(s) needs to provide for...** • Risk allocation • NER only covers connection and operation, not construction **Indicative matters covered in NER already:** • Not really covered in NER	**Commercially, contracts need to provide for....** • Underwriting of construction costs • Risk allocation • Variations, delays	**From technical perspective, contracts need to deal with....** • Functional specs • Milestones (see practical completion below) • Project coordination and oversight – Access to site – Traffic management • Responsibility for OH&S, etc • Environmental management • Outage coordination

Relevant phase	Source of obligations / requirements		
	NER	**Commercial**	**Technical**
Commissioning *Note – applies to generators and transmission assets*	**NER suggest contract(s) needs to provide for...** • Note that clause 5.8 contains detailed process. • No specific additional requirements identified However, AEMO is yet to identify to what extent the contract should go beyond the NER. • There is a possible gap with commissioning of a terminal station • Room for greater clarity around procedures for commissioning in the contract **Matters covered in NER already:** • Chapter 5 Network Connection, especially 5.8 Commissioning, Schedule 5.2 Conditions for Connection of Generators • AEMO power to stop commissioning - in specified circumstances, generally to do with compliance and upon NSP's request: clause 5.8.5(e) **NER** application to terminal station commissioning is unclear	**Commercially, contracts need to provide for....** • Rights and obligations in relation to commissioning process • Practical completion – Decisions re minor / major outstanding items • Obligation to pay moneys – When, how much, how varied? • Retained moneys, and when called on • Breach, enforcement, termination, remedies – Liquidated damages • Risk of failure – Who bears risk? What consequences flow?	**From technical perspective, contracts need to deal with....** • Oversight, monitoring – Includes performance data requirements • Outage coordination • Power system coordination • Practical completion – Decisions re minor / major outstanding items • Consequences, remedies where failure • Energisation • Commissioning procedures
Operational	**NER suggest contract(s) needs to provide for...**	**Commercially, contracts need to provide for....**	**From technical perspective, contracts need to deal with....**

Relevant phase	Source of obligations / requirements		
	NER	**Commercial**	**Technical**
	• Provision and payment for services • UoS to include performance standards • DTSO standards / Generator standards • Facilitate 3rd party access **Matters covered in Rules already:** • Power system security covered in Ch 4 • Emergency management • Compliance with performance standards covered in clause 4.15 but also 5.7.3 enables AEMO to constrain output if power system security threatened by Generator failure to adhere to performance standard. • Some incident reporting covered in clause 4.8.15.	• Obligations to provide and pay for services • Insurance requirements – Generator – DTSO • Availability incentives • Breach, enforcement, termination, remedies (disconnection) • Consequences of change in law, etc • Pass through events, thresholds • Legal rights and obligations in relation to future 3rd party access, including price	• Outage coordination • Incident reporting *(in excess of **NER**)* • Emergency management *(in AEMO's NSP role)* • Disconnection • Monitoring and reporting? • Security of land tenure, terms and conditions of future 3rd party access • Information provision (including reliability information) • Breach of performance (terminal station) and QoS for generator • Compliance, maintenance, refurbishment • Rectification of problem • Decommissioning of other parties

Relevant phase	Source of obligations / requirements		
	NER	**Commercial**	**Technical**
Future access	**Rules suggest contract(s) needs to provide for...** • Facilitating future 3rd party access , by generators, landowners (TNSPs already captured) **Indicative matters covered in Rules already:** • 3rd party access by TNSPs • Fair and reasonable, good faith obligations of TNSPs	**Commercially, contracts need to provide for....** • Facilitate future access by generators, landowners • Commercial terms for access • Price implications for future access – Cost allocation – Fair and reasonable charges – Recalculating charges to incumbent – Land rights and $ • Native title risk	**From technical perspective, contracts need to deal with....** • Optimal design to facilitate future access – Covered by functional spec design • Limitations on land use, changes (e.g. through easements) • Practical access and cooperation
Termination	**Rules suggest contract needs to provide for...** • NER appear silent on this point **Indicative matters covered in Rules already:** • Note - NER not concerned with termination of contracts, however, they require the existence of connection agreements at all times. • Need to clarify how this sits with a termination remedy. AEMO could constrain a participant's ability to continue to participate in the NEM if it terminated their contract.	**Commercially, contracts need to provide for....** • Rights and obligations • Ability to accept / reject / postpone termination request	**From technical perspective, contracts need to deal with....** • Presumably, if contract to be terminated, would it need to provide for disconnection (at the very least) • Assets remaining on site • Clean up / rectification of land • Technical impact on agreements that haven't been terminated • Timeframes (notifications) • Extensions of time / replacement / renewal • Land transfers

Relevant phase	Source of obligations / requirements		
	NER	**Commercial**	**Technical**
Decommissioning	**NER suggest contract needs to provide for...** • NER appear silent on this point **Indicative matters covered in Rules already:** • Largely covered - See clauses 5.9.1 & 5.9.2	**Commercially, contracts need to provide for....** • Timing for decommissioning • Who pays for returning the network to its original state	**From technical perspective, contracts need to deal with....** • Restoration of network • Site cleanup / contamination • Decommissioning impacts / coordination with other parties (hub)