COST ALLOCATION POLICY FOR VICTORIAN TERMINAL STATIONS – PRESCRIBED TRANSMISSION SERVICES

PREPARED BY: Network Development

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CONTENTS

1 Purpose

AEMO has developed this Cost Allocation Policy for Victorian Terminal Stations – Prescribed Transmission Services (Policy) to outline how the costs associated with new or expanded terminal stations on the Victorian declared shared network (DSN) may be allocated between negotiated and prescribed transmission services. AEMO's Cost Allocation Policy for Victorian Terminal Stations – Negotiated Transmission Services outlines how AEMO determines the sharing of negotiated transmission service costs between connecting parties.

The connection of multiple generators at a single terminal station will result in a more efficient process for the connection of generators. This will deliver savings to generators and consumers. In line with these benefits, the costs incurred in augmenting the DSN to establish or expand these terminal stations may be allocated among both generators (in relation to negotiated transmission services) and consumers (in relation to prescribed transmission services).

AEMO has developed this policy in response to receiving a significant number of connection applications within close physical proximity to one another in recent years. Multi connection terminal stations offer a number of advantages over single (or stand alone) connection terminal stations, including the following:

- Fewer "cut-ins" to the connecting transmission lines, with an associated improvement in security;
- Lower overall connection costs and better utilisation of terminal station assets, this is expected to ultimately reduce costs to connection applicants and consumers;
- Shorter lead times for applicants connecting to an existing terminal station as compared to building a new separate terminal station;
- Increased likelihood of multi connection terminal stations being connected to additional transmission lines in the future, reducing constraints on individual connections.

This Policy explains how the cost of incremental works to facilitate future connections (but which would not be required to meet an individual connection applicant's requirements), may be allocated to prescribed transmission services where they will provide net benefits to users. The Policy also explains the criteria for determining expansion enabling works and the nature of the works required.

2 Application

At this stage, the Policy applies only to the connection of generators.

This Policy covers two different situations where a component of the costs of establishing or augmenting a terminal station may be allocated to prescribed services. These situations are:

- A connection requiring the construction of a new terminal station (Initial Connection);
- A connection requiring the expansion of an existing terminal station (Expansion Connection).

This Policy applies irrespective of whether the relevant transmission network augmentation is contestable under rule 8.11 of the NER.

This Policy will not normally apply to Incremental Connections which require only minimal expansion to an existing terminal station (e.g. establishment of a single connecting bay). Incremental Connection to an existing terminal station in reasonable proximity to the generation is expected to be the least cost option and so should be the most attractive to the applicant. Where Incremental Connection to an existing terminal station is not the least cost option it is anticipated that the new generation would be outside the optimal area for connection and that no significant market benefits beyond those of a dedicated connection would be achieved.

3 Legal and Regulatory Framework

AEMO has developed this Policy in accordance with its declared network functions under the National Electricity Law, specifically:

- To plan and direct augmentation of the DSN;
- To provide shared transmission services by means of, or in connection with, the DSN; and
- To provide information about the planning processes for augmentation of the DSN and to facilitate decisions for investment and the use of resources in the Victorian electricity industry.

In accordance with the above functions, AEMO is the provider of shared transmission services in Victoria and the party that applicants are required to approach when seeking connection to the DSN. Connection to the DSN is governed by Chapter 5 of the NER, while Chapter 6A governs the pricing of shared transmission services.

In determining this Policy, AEMO has also been guided by the national electricity objective, which seeks to promote the efficient operation and investment in the market for the long-term benefit of consumers, taking account of price, quality, reliability, security and safety.

4 Related Policies and Procedures

This Policy should be read with the following:

Guidelines for Establishing Terminal Stations.

Guidelines for Shared Transmission Connections.

Policy on the Active Management of Victorian Connection Applications.

Cost Allocation Policy For Victorian Terminal Stations – Negotiated Transmission Services

Connecting Victoria: Transmission Project Development Protocol

Application of RIT-T to Multi-Connection Terminal Stations.

5 General Concepts

The costs associated with the establishment of a terminal station, and its subsequent use, are calculated by reference to the capital cost of establishing the relevant infrastructure plus the ongoing cost of operating and maintaining it. The costs associated with the expansion of a terminal station will be similarly calculated. When a new connection creates a requirement to establish or expand a terminal station, the costs relating to that augmentation of the transmission network are recovered from the connection applicant through negotiated transmission service charges. However, under clause 6A.9.1(2) of the NER, the price for negotiated transmission services should not exceed the cost of providing them on a stand alone basis.

Optimal development of the DSN requires that, where appropriate, new terminal stations should be located and constructed so as to facilitate future expansion and that existing terminal stations are effectively utilised before additional terminal stations are built in the vicinity. For an individual new connection, provision for expansion capacity or relocation from the position preferred by the applicant may result in additional costs which do not need to be incurred for that individual connection and therefore exceed the stand alone cost. The additional costs do not relate to the provision of a negotiated transmission service but, where economically justified, they may be allocated to the provision of prescribed transmission services.

AEMO is not proposing to justify the construction of connection assets within a terminal station. Any terminal station works to enable future expansion will relate to the shared network and facilities common to all parties connected to a terminal station.

Any additional costs associated with the connection between a generator and terminal station (for example a longer connecting line) would be justified only as part of an integrated solution involving relocating construction of a new terminal station from an applicant's preferred stand alone location (with minimum connection asset cost) to a location providing maximum overall market benefit. This is consistent with clause 5.6.5C(e) of the NER.

6 Principles

The development of new terminal stations should not lead to applicants incurring costs in excess of those that would be incurred for a stand alone connection. However, additional costs may be incurred under the following circumstances:

- At terminal station establishment in order to allow for future expansion;
- Connection to a new terminal station at an alternative location; or
- Connection to an existing terminal station at an alternative location, where major expansion is required to enable the connection.

Where AEMO determines that those additional costs relate to the provision of prescribed transmission services under the NER, AEMO proposes to recover them through prescribed transmission service charges, subject to satisfaction of a regulatory investment test for transmission (RIT-T) where required. If the incremental capital costs are not expected to exceed $5 million, a RIT-T is not required under the NER, but AEMO will instead conduct a cost-benefit test. Where costs in excess of a stand alone connection cannot be justified through the application of a RIT-T, the new terminal station will be developed as a stand alone connection (without provision for future expansion) and all costs will be recovered from the applicant as negotiated transmission service charges.

AEMO has developed this Policy to promote the following within the DSN:

- Economic efficiency in transmission network connections;
- Transparency and certainty in charging arrangements for connection applicants;
- Efficient development of terminal stations, with emphasis on providing expandability of new terminal stations and increased utilisation of existing terminal stations, where economically justified.

Application of these principles results in the following outcomes:

- Applicants will pay no more than the cost of a stand alone connection, while new connecting terminal stations may be constructed with expansion capacity (and in some cases relocated at the planning stage) or existing terminal stations expanded where appropriate to maximise overall market benefits;
- Where the incremental costs of allowing for future expansion above the cost of a stand alone connection, including any additional land or augmentation works, will contribute to the provision of prescribed transmission services, those incremental costs will be allocated to prescribed transmission service charges if they are justified under the RIT-T;
- The investment to which the RIT-T is applied will include any additional costs associated with the relocation of the planned connection (if agreed between AEMO and the applicant) to an alternative location nominated by AEMO;
- The remaining costs will be allocated to the provision of negotiated transmission services and will be allocated between connection applicants, as described in the Cost Allocation Policy For Victorian Terminal Stations – Negotiated Transmission Services.

7 Policy

7.1 Initial Connection

New terminal stations will be designed in accordance with AEMO's Guidelines for Establishing Terminal Stations, with the initial connection being in accordance with AEMO's Guidelines for Shared Transmission Connections. AEMO may specify a design involving additional station works (including acquisition or reservation of land) to accommodate future network developments and anticipated future connections. The criteria for determining these works and the types of works likely to be required are listed in Appendix A. Where additional station works are specified, the applicant will not be required to pay more than it would have paid for a stand alone connection. This means that those additional works will only proceed if they will relate to the provision of prescribed transmission services and their estimated cost satisfies a RIT-T assessment.[1]

The location of a new terminal station will normally be determined by the applicant prior to AEMO conducting a RIT-T assessment. The applicant will be able to select the location of a new terminal station for its connection, subject to AEMO's agreement on fair and reasonable terms. AEMO may nominate an alternative location for the new terminal station, based on proximity to transmission infrastructure or anticipated future connections. In this case, AEMO will provide information to the applicant that will enable it to compare the connection costs, opportunity for cost sharing and ongoing costs of a connection at AEMO's nominated location against a connection at the applicant's nominated location (refer Connecting Victoria: Transmission Project Development Protocol). The location of the terminal station remains the decision of the applicant.

The applicant may proceed with acquiring easements and approvals for connecting at its chosen location without waiting for the RIT-T outcome. The RIT-T in these circumstances will only apply to incremental costs associated with works required to facilitate future expansion of the terminal station.

If AEMO specifies a design for the terminal station to enable future expansion which is different to that nominated by the applicant, AEMO will conduct a RIT-T assessment to determine the net benefit of developing a terminal station to AEMO's nominated design enabling future expansion against a connection to the applicant's nominated design (normally a stand alone design), which may lead to a requirement for additional stand alone terminal stations to accommodate forecast future generation connections in the vicinity.

If AEMO has proposed an alternative location with agreement from the applicant, AEMO's RIT-T assessment will also include determination of the net benefit of developing the terminal station at AEMO's nominated location against a connection at the applicant's nominated location. The RIT-T in these circumstances will apply to incremental costs to enable future expansion plus any incremental costs associated with connection of the generator to the terminal station at AEMO's nominated location (e.g. longer connecting lines).

If, following the RIT-T or cost-benefit assessment, it is determined that a terminal station at AEMO's nominated design (and location if applicable) offers net benefits to users generally and will contribute to the provision of shared transmission services, the incremental costs associated with the design and location will be allocated to the provision of prescribed transmission services.

If the combined incremental costs associated with the station design and location (if applicable) satisfy the RIT-T and do not exceed the cost of the interface and terminal station works then:

- The combined incremental costs will be subtracted from the total cost of the interface and terminal station works;
- The remaining costs will be used in the calculation of charges to provide the applicant with negotiated transmission services.

[1] Where the $5 million threshold for conducting a RIT-T is not satisfied, AEMO will conduct and publish a cost-benefit analysis in accordance with its Planning Criteria for the DSN published under clause 8.11.4 of the NER. The outcome of the cost benefit analysis must be net positive for the additional costs to be treated as prescribed services.

The incremental costs do not relate to the negotiated transmission service provided to the applicant and will be allocated to the provision of prescribed transmission services.

If the combined incremental costs exceed the cost of the interface and terminal station works then:

- The incremental costs will be allocated to cover the total cost of the interface and terminal station works;
- The excess incremental costs (over and above the total cost of the terminal station and interface works) will be allocated to the transmission line connecting the generating plant to the terminal station if the transmission line is providing a shared transmission service;
- If the transmission line does not provide a shared transmission service, those excess incremental costs will be allocated to the provision of the expansion capability, as they were incurred in providing that capability;
- The remaining costs of the transmission line will be funded by the applicant as a negotiated transmission service.

If the incremental cost of developing the terminal station to AEMO's nominated design and/or location does not satisfy the RIT-T, AEMO will develop the station to the applicant's nominated design and/or location, subject to meeting AEMO's technical requirements. The applicant may nominate its initial proposed connection location or an alternative location agreed between AEMO and the applicant, The connection will be developed generally as a stand alone connection. The cost of the connection will be borne entirely by the applicant as a negotiated transmission service. Where the RIT-T is not satisfied, any additional costs associated with development at the alternative location, including the cost of obtaining new easements and associated approvals will be borne by the applicant.

7.2 Expansion Connections

An Expansion Connection occurs where subsequent generation connections can only be accommodated if there is a major expansion of the terminal station involving a substantial investment. Examples of a major expansion include:

- Conversion from a tee connection to double-switching or breaker-and-a-half switching of connecting transmission lines;
- Connection of the terminal station to the network via an additional transmission line.

It may be appropriate for a share of the costs of an Expansion Connection to be allocated to the provision of prescribed transmission services where the expansion of an existing terminal station is triggered by the redirection of a connection to a location preferred by AEMO. This will be the case where:

- The total cost of a new connection (including the cost of the expansion) exceeds the total cost of a new stand alone connection at an alternative location (nominated by the applicant) at which there is no existing terminal station;
- AEMO is satisfied that the incremental costs will be incurred in relation to a service that can be classified as a prescribed transmission service;
- It is net beneficial, from a market-wide perspective, for the existing terminal station to be expanded and for the applicant to connect its generating plant at the existing terminal station rather than establish a new connection at a greenfields site.

Any redirection from an applicant's nominated location will occur only with agreement from the applicant.

Where AEMO proposes an Expansion Connection, AEMO will use the RIT-T or cost-benefit test as appropriate to assess the net benefit of expanding an existing terminal station against constructing a new terminal station for connection at an alternative location nominated by the applicant.

If an expansion of the existing terminal station is demonstrated to offer net benefits, AEMO will allocate any incremental costs associated with the Expansion Connection (in excess of the cost of developing a greenfields terminal station at the applicant's nominated location) to the provision of prescribed transmission services.

If these incremental costs do not exceed the cost of the interface and terminal station works associated with the expansion then:

- The incremental costs will be subtracted from the cost of the interface and terminal station works associated with the expansion;
- The remaining costs will be used in the calculation of charges to provide the applicant with negotiated transmission services.

If the incremental costs exceed the cost of the interface and terminal station works associated with the expansion then:

- The incremental costs will be allocated to cover the total cost of the interface and terminal station works associated with the expansion;
- The excess incremental costs (over and above the total cost of the terminal station and interface works) will be allocated to the transmission line connecting the generating plant to the terminal station if the transmission line is providing a shared transmission service;
- If the transmission line does not provide a shared transmission service, those excess incremental costs will be allocated to the provision of the terminal station expansion, as they were incurred in providing that expansion;
- The remaining costs of the transmission line will be funded by the applicant as a negotiated transmission service.

If the incremental cost of the Expansion Connection at the location nominated by AEMO does not satisfy the RIT-T, AEMO will develop a new terminal station to the applicant's nominated design and location, subject to meeting AEMO's technical requirements. Where the connection is of the applicant's nominated design and location (generally a stand alone connection), the cost will be borne entirely by the applicant as a negotiated transmission service.

8 Further Development

This Policy is subject to further development in the following areas.

8.1 Load Connections

This Policy presently does not cover cost allocation for load connections. AEMO is currently considering how costs will be allocated between applicants connecting generation and load at the same terminal station. In doing so, AEMO will consider how a RIT-T would be applied to justify any prescribed services where appropriate and take into account other applicable NER requirements. Any approach for load connections will be developed in consultation with Victorian Distribution Network Service Providers.

8.2 Transmission Frameworks Review

Elements of this Policy may overlap with outcomes of the AEMC's Transmission Frameworks Review (TFR). AEMO will monitor the outcomes of the TFR and modify any policies or procedures if required for consistency with any Rule changes arising from the TFR.

APPENDIX A: Prescribed Works Required for Future Expansion of a Terminal Station

Prescribed works required at the time of terminal station establishment for future expansion would fall under one or more of the following criteria:

- Required to ensure that the station can be expanded in an economic manner.
- Could not be carried out at a later stage without excessive disruption to in-service plant.
- May be carried out at a significantly lower cost at the initial development stage, as compared with later stages. This may include works to minimise required rework as the station is expanded.

The extent and nature of these works will vary considerably between projects according to site conditions. They may include the following:

- Land Acquisition
  - Additional land (or option to acquire additional land) to accommodate the planned ultimate switching arrangement
- Fencing
  - Perimeter fencing for land acquired to accommodate the planned ultimate station development.
  - Additional security fencing for any additional developed land (i.e. extra land accommodating larger buildings or additional switchyard bench area developed at the initial stage)
- Earthworks, roads, surfacing, drainage & cable trenches and other site preparation works
  - May include additional rock drilling or blasting and any other works adjacent to plant to be in service at the initial stage of development.
- Earth grid
  - May include earth grid adjacent to bays to be in service at the initial stage of development.
- Light, power and security system
  - Additional works as necessary to provide security of the additional area.
- Landscaping
  - Any additional landscaping required to meet planning permit conditions at the initial stage of development, taking into account any additional land acquired for the ultimate arrangement. May include arrangements to minimise any future destruction or rework of landscaped areas.
- Buildings
  - May include construction of larger or readily expandable buildings. Construction of separate additional buildings to meet future requirements is not envisaged.
- AC and DC supply system
  - May include installation of higher capacity (above initial requirements) or readily expandable systems. Installation of separate additional ac or dc supply systems to meet future requirements is not envisaged.