Australian Energy Market Commission

RULE CHANGE

DRAFT RULE DETERMINATION

National Electricity Amendment (Inter-regional Transmission Charging) Rule 2010

Rule Proponent
Ministerial Council on Energy

Commissioners
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Henderson
Spalding

2 December 2010

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About the AEMC

The Council of Australian Governments, through its Ministerial Council on Energy (MCE), established the Australian Energy Market Commission (AEMC) in July 2005 to be the rule maker for national energy markets. The AEMC is currently responsible for rules and providing advice to the MCE on matters relevant to the national energy markets. We are an independent, national body. Our key responsibilities are to consider rule change proposals, conduct energy market reviews and provide policy advice to the MCE, as requested, or on AEMC initiative.

Summary

In response to a Rule change request from the Ministerial Council on Energy, the Australian Energy Market Commission (AEMC or Commission) has made this draft Rule determination to introduce an inter-regional transmission charging mechanism in the form of a load export charge. Consumers in a region do not currently contribute to the costs of transmission assets in other regions that support electricity flows to their region. The load export charge would improve the cost-reflectivity of transmission charging such that consumers that benefit from inter-regional flows contribute to the costs of the transmission assets to provide those flows.

Introducing the load export charge would result in a redistribution of transmission charges where transmission charges for customers in a 'net' importing region would increase, while transmission charges for customers in a net exporting region would decrease.

Based on considering the outcomes of modelling provided by transmission network service providers (TNSPs), NSW and Tasmania would be net payers of the load export charge. Indicative results estimate that small customers in NSW would experience on average a $1.80 per quarter increase in their final bill and small customers in Tasmania would experience on average a $3.40 per quarter increase. Small customers in other jurisdictions would on average experience a decrease ($1.20 in South Australia, $2.20 in Queensland per quarter. There would be minimal change on average for customers in Victoria).

Improving the cost-reflectivity of transmission charging would, over time, promote more efficient use of the electricity system. TNSPs and the Australian Energy Regulatory (AER) would likely incur administration costs in implementing the load export charge arrangements, however, the potential benefits of improving cost-reflectivity are likely to outweigh these costs. Load export charge arrangements would not directly impact spot pricing outcomes as it relates to transmission pricing and, as a result, it would not impact the ability for participants to make use of financial contracts to manage risk. Specifically, the load export charge arrangements should not change the effectiveness of the settlement residue provisions as an inter-regional risk management tool.

The Commission proposes that the load export charge arrangements be introduced on 1 July 2012. Prior to that date, transitional provisions would require the AER to amend its pricing methodology guidelines and TNSPs would be required to amend their pricing methodologies.

Submissions on the draft Rule determination and draft Rule are to be provided by 21 January 2011.

Contents

1 MCE's Rule change request

1.1 The Rule change request

On 15 February 2010, the Ministerial Council on Energy (MCE) (Rule Proponent) submitted a Rule change request to the Australian Energy Market Commission (AEMC or Commission) seeking to implement an inter-regional transmission charging mechanism (Rule Change Request).

The Rule Change Request proposes that new inter-regional transmission charging arrangements be introduced such that transmission businesses in each region would levy a new charge - a load export charge - on transmission businesses in adjoining regions. This new charge would reflect the flow of electricity from one region to the adjoining regions.

1.2 Rationale for Rule change Request

Currently under Chapter 6A of the National Electricity Rules (Rules), a transmission network service provider (TNSP) recovers its costs in building and operating its transmission system from customers within its region.[1] The pricing provisions under the Rules, which set out how these costs are to be recovered, are based on a set of principles and require TNSPs to develop separate prices for each category of prescribed transmission service.[2] Each TNSP must also publish a pricing methodology which, in part, sets out how the revenue to be recovered has been allocated to each category of prescribed transmission service.[3]

The National Electricity Market (NEM) consists of five interconnected regions where electricity may be exported and imported between regions. When electricity flows between regions, the provision of electricity to customers in the importing region will utilise the network in the exporting region. Under the Rules, however, the transmission system charges in the importing region are based on the costs of the TNSP in the importing region only. They do not reflect the costs of utilising the assets of the exporting region's network. By not paying charges that reflect the cost of the transmission network in the exporting region, customers in the importing region, in effect, could be paying a network price that is lower than it otherwise should be.

Without a robust inter-regional transmission charging mechanism, transmission network charges would not be effectively seen across region boundaries. As customers

1 Clause 3.6.5(a)(5) of the Rules provides for jurisdictions to establish inter-regional charges through inter-governmental agreement. However, in practice, inter-regional transmission service payments have been negotiated only between South Australia and Victoria.

2 The categories of prescribed transmission services are set out in clause 6A.23.4 of the Rules and are prescribed entry services, prescribed exit services, prescribed common transmission services and prescribed transmission use of system services. The pricing principles generally are set out under clause 6A.23 of the Rules.

3 The pricing methodology is set out in clause 6A.24 of the Rules.

do not contribute to the costs of transmission assets in other regions that support electricity flows to their region, even if they benefit from those flows, the charges for the imported energy may not reflect the long-run marginal cost of serving loads in the importing region.

1.3 Solution proposed in the Rule Change Request

The Rule Change Request provides the following to address the problem identified:[4]

- transmission businesses in each region would be required to levy a new charge - a load export charge - on transmission businesses in adjoining regions;
- the charge would reflect the flow of electricity from one region to adjoining regions;
- the level of the load export charge would reflect the costs incurred in the use of the transmission network in the region to conduct electricity to the adjoining region and therefore the charge should be calculated as if the relevant interconnection with the adjoining region was a load on the boundary of the region;
- a Co-ordinating Network Service Provider (CNSP) would be appointed for each region and the CNSP would be responsible for calculating both the charges to be levied on CNSPs in adjoining regions and the amounts to be recovered from customers within the CNSP's own region;[5]
- CNSPs would calculate the prices to be applied in the upcoming financial year in accordance with a pricing methodology that has been approved by the Australian Energy Regulator (AER); and
- the total permitted revenue to be recovered by TNSPs overall would not change - the Rule proposed by the MCE would change the way revenues are collected.[6]

1.4 Relevant Background

The development of provisions for inter-regional transmission charging have been ongoing and were first considered by the Commission as a part of the Review of Electricity Transmission Revenue and Pricing Rules, which was initiated in 2005. Potential solutions were considered further in the National Transmission Planner (NTP) Review and one of the recommendations to the MCE from the Review was that the current lack of a systematic inter-regional transmission charging mechanism could

4 MCE 2010, *Rule change request - Inter-regional Transmission Charging*, February 2010, pp. 2-3.

5 There are existing provisions under the Rules in clause 6A.29.1 for the appointment of CNSPs.

6 The Commission notes that the Rule proposed by the MCE would also change the way in which costs are allocated by TNSPs.

impede the development of a more efficient national transmission network.[7] In response, the MCE requested that the Commission consider the need to improve the existing inter-regional transmission pricing arrangements as a part of the Review of Energy Market Frameworks in light of Climate Change Policies (Climate Change Review).[8]

In the Final Report on the Climate Change Review, the Commission recommended the introduction of an obligation on transmission businesses to levy a "load export charge" on the transmission business in each adjoining region.[9] This charge would reflect the costs of providing transmission capacity to transport electricity to the adjoining regions. In its policy response to the Climate Change Review, the MCE supported, in principle, the introduction of the load export charge and subsequently submitted this Rule change request.[10]

1.5 Commencement of Rule making process

On 13 May 2010, the Commission published a notice under section 95 of the National Electricity Law (NEL) advising of its intention to commence the Rule change process and the first round of consultation in respect of the Rule Change Request. A consultation paper prepared by AEMC staff identifying specific issues and questions for consultation was also published with the Rule Change Request. Submissions closed on 24 June 2010.

The Commission received eight submissions on the Rule Change Request as part of the first round of consultation. They are available on the AEMC website.[11] A summary of the issues raised in submissions and the Commission's response to each issue is contained in Appendix A.

1.6 Extension of time

The publication of the draft Rule determination had been extended under section 107 of the NEL on two occasions. Firstly a notice under section 107 of the NEL was published on 13 May 2010 extending the time by four weeks to 30 September 2010, and secondly on 30 September 2010 extending the time by nine weeks to 2 December 2010.

7 AEMC 2008, *National Transmission Planning Arrangements*, Final Report to MCE, 30 June 2008, pp. 68-72.

8 The Hon Martin Ferguson AM MP, Chair MCE, Letter to Dr Tamblyn, Chairman AEMC, 5 November 2008. See www.mce.gov.au.

9 AEMC 2009, *Review of Energy Market Frameworks in light of Climate Change Policies: Final Report*, September 2009, pp. 42-53.

10 MCE 2009, *Response to the AEMC's Final Report on the Review of Energy Market Frameworks in light of Climate Change Policies*, December 2009, pp. 7-8. See www.mce.gov.au.

11 www.aemc.gov.au

1.7 Consultation on draft Rule determination

In accordance with the notice published under section 99 of the NEL, the Commission invites submissions on this draft Rule determination, including a draft Rule, by 21 January 2011.

In accordance with section 101(1a) of the NEL, any person or body may request that the Commission hold a hearing in relation to the draft Rule determination. Any request for a hearing must be made in writing and must be received by the Commission no later than 9 December 2010.

Submissions and requests for a hearing should quote project number "ERC0106" and may be lodged online at www.aemc.gov.au or by mail to:

Australian Energy Market Commission
PO Box A2449
SYDNEY SOUTH NSW 1235

2 Draft Rule Determination

2.1 Commission's draft determination

In accordance with section 99 of the NEL the Commission has made this draft Rule determination in relation to the Rule proposed by the MCE.

The Commission has determined it should not make the Rule proposed by the Rule Proponent and to make a proposed more preferable Rule.[12]

The Commission's reasons for making this draft Rule determination are set out in section 3.1.

A draft of the proposed Rule that the Commission proposes to be made (Draft Rule) is attached to and published with this draft Rule determination. The key features of the Draft Rule are described in section 3.2.

2.2 Commission's considerations

In assessing the Rule change request the Commission considered:

- the Commission's powers under the NEL to make the Rule;
- the Rule Change Request;
- the fact that there is no relevant MCE Statement of Policy Principles;[13]
- the MCE's policy response to the Climate Change Review;[14]
- the Transmission Network Prices Publication Date Rule change decision;
- the Climate Change Review outcomes;
- the NTP Review outcomes;
- the revenue and pricing principles under section 7A of the NEL;
- outcomes from the TNSPs' modelling on a load export charge;

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12 As discussed in section 2.5, under section 91A of the NEL the AEMC may make a Rule that is different (including materially different) from a market initiated proposed Rule (a more preferable Rule) if the AEMC is satisfied that having regard to the issue or issues that were raised by the market initiated proposed Rule (to which the more preferable Rule relates), the more preferable Rule will or is likely to better contribute to the achievement of the NEO.

13 Under section 33 of the NEL the AEMC must have regard to any relevant MCE statement of policy principles in making a Rule.

14 MCE, Review of Energy Market Frameworks in light of Climate Change Policies - Response to Australian Energy Market Commission's Final Report, December 2009.

- submissions received during first round consultation; and
- the Commission's analysis as to the ways in which the proposed Rule will or is likely to, contribute to the National Electricity Objective (NEO).

2.3 Commission's power to make the Rule

The Commission is satisfied that the Draft Rule falls within the subject matter about which the Commission may make Rules. The Draft Rule falls within the matters set out in section 34 of the NEL as it relates to section 34(1)(a)(iii) which sets out that the Commission may make Rules with respect to the activities of persons (including Registered participants) participating in the national electricity market or involved in the operation of the national electricity system. Further, the Draft Rule falls within the matters set out in schedule 1 to the NEL as it relates to:

- Item 16(1) - The regulation of prices charged or that may be charged by owners, controllers or operators of transmission systems for the provision by them of services that are the subject of a transmission determination;
- Item 20 - The economic framework, mechanisms or methodologies to be applied or determined by the AER for the purpose of items 15 to 16 including (without limitation) the economic framework, mechanisms or methodologies to be applied or determined by the AER for the derivation of the revenue (whether maximum allowable revenue or otherwise) or prices to be applied by the AER in making a transmission determination.

The Commission considers that the Draft Rule falls within these subject matters as the Draft Rule relates to the setting and regulation of transmission pricing.

2.4 Rule making test

Under section 88(1) of the NEL the Commission may only make a Rule if it is satisfied that the Rule will, or is likely to, contribute to the achievement of the NEO.

The NEO is set out in section 7 of the NEL as follows:

> "The objective of this Law is to promote efficient investment in, and efficient operation and use of, electricity services for the long term interests of consumers of electricity with respect to:
>
> (a) price, quality, safety, reliability and security of supply of electricity; and
>
> (b) the reliability, safety and security of the national electricity system."

For this Rule Change Request, the Commission considers that the relevant aspect of the NEO is promoting the efficient investment in, and use of, electricity services.[15]

The Commission is satisfied that the Draft Rule will, or is likely to, contribute to the achievement of the NEO because the Draft Rule promotes allocative efficiency and dynamic efficiency and hence would be in the long term interest of consumers with respect to the price of supply of electricity. The Draft Rule promotes efficiency in the following ways:

- allocative efficiency - the load export charge improves the cost-reflectivity of transmission charges by requiring customers that benefit from imported energy to contribute to the transmission costs of the exporting region. In the long term this would lead to more efficient use of the transmission system by existing and future customers, improving allocative efficiency; and

- dynamic efficiency - the load export charge would promote dynamic efficiency by minimising any potential barrier to coordinated planning of investment in transmission network infrastructure by ensuring that all customers that may benefit from an investment would be able to contribute to its cost.

Under section 91(8) of the NEL the Commission may only make a Rule that has effect with respect to an adoptive jurisdiction if satisfied that the proposed Rule is compatible with the proper performance of Australian Energy Market Operator (AEMO)'s declared network functions. The Draft Rule sets out a new process for TNSPs to allocate costs to a load export charge component. AEMO, in its capacity of a TNSP in Victoria, would be required to amend its pricing methodology in order to implement the Draft Rule. The Draft Rule does not impact on AEMO's obligations associated with planning or providing shared transmission services. For these reasons, the Commission considers the Draft Rule is compatible with AEMO's declared network functions.

2.5 More preferable Rule

Under section 91A of the NEL, the AEMC may make a Rule that is different (including materially different) from a market initiated proposed Rule (a more preferable Rule) if the AEMC is satisfied that, having regard to the issues or issues that were raised by the market initiated proposed Rule (to which the more preferable Rule relates), the more preferable Rule will or is likely to better contribute to the achievement of the NEO.

Having regard to the issues raised by the Rule proposed in the Rule Change Request, the Commission is satisfied that the Draft Rule will, or is likely to, better contribute to the NEO as the AER would be required to amend its pricing methodology guidelines and TNSPs would be required to amend their pricing methodologies. This would ensure that the pricing methodologies to be applied by TNSPs would be consistent

15 Under section 88(2), for the purposes of section 88(1) the AEMC may give such weight to any aspect of the NEO as it considers appropriate in all the circumstances, having regard to any relevant MCE statement of policy principles. As noted in section 2.2, there is no relevant Statement of Policy Principles.

with the requirements under the Rules. The Draft Rule also clarified the provisions to minimise any ambiguity in the requirements.[16]

2.6 Other requirements under the NEL

Under section 88B of the NEL, the AEMC must take into account the revenue and pricing principles in making a Rule for, or with respect to, any matter or thing specified in items 15 to 24 and 25 to 26J in Schedule 1 of the NEL. The Commission has taken into account the revenue and pricing principles in making this Rule determination as the Draft Rule relates to items 16(1) and 20 of Schedule 1 of the NEL. Some relevant aspects of the revenue and pricing principles relate to:

- providing a reasonable opportunity to service providers to recover efficient costs and ensuring that prices should allow for a return commensurate with the regulatory and commercial risks in providing the service; and
- having regard to the economic costs and risks of the potential for under and over utilisation of a transmission system with which a regulated network service provider provides direct control network services.

The Commission considers that the Draft Rule is consistent with the revenue and pricing principles as it improves the cost reflectivity of the prices charged by TNSPs, encouraging more efficient use of the transmission network, without impacting the TNSPs' ability to recover efficient costs.

The Draft Rule does not change the total amount of revenue recovered by TNSPs. However, it would result in a one-off redistribution of transmission charges.

16 Differences between the Draft Rule and the proposal in the Rule change request are discussed in section 3.2.

3 Commission's reasons

The Commission has analysed the Rule Change Request and assessed the issues/propositions arising out of this Rule Change Request. For the reasons set out below, the Commission has determined that a Rule be made. Its analysis of the Rule proposed by the MCE is also set out below.

3.1 Assessment

Current transmission charging arrangements, where customers do not contribute to the costs of transmission assets in other regions that support electricity flows to their region, do not fully reflect the interconnected nature of the NEM. Under the current arrangements, inter-regional flows result in implicit cross-subsidies where a region that experiences net-imports has not faced a price that fully reflects the costs of transporting that energy. The materiality of this issue is likely to increase in the future given that greater inter-regional flows are anticipated as a result of changes in the location of generation and for other reasons such as in response to climate change policies. By introducing an inter-regional transmission charging mechanism, the Draft Rule aims to improve the cost-reflectivity of transmission price signals.[17]

A load export charge would increase the cost reflectivity of transmission pricing and, over time, this would impact on the use of electricity and the location of load. Although the load export charge could affect interconnector flows, it would not directly impact spot pricing outcomes as it relates to transmission pricing. For this reason, it would not impact the ability for participants to make use of financial contracts to manage risk. Specifically, the load export charge arrangements should not change the effectiveness of the settlement residue provisions as an inter-regional risk management tool.

3.2 Draft Rule

The Draft Rule provides:

- for a load export charge to apply from 1 July 2012;
- that the TNSP would calculate the load export charge to apply to TNSPs in adjoining regions. In regions where there is more than one TNSP, the CNSP would calculate the load export charge;
- that the load export charge would comprise three components: the locational prescribed transmission use of system (TUOS) service charge; the non-locational prescribed TUOS service charge; and the common service charge;
- that the load export charge would be recovered from customers in the same way as which it was charged (i.e. the locational TUOS component would be recovered

17 The potential impact of the load export charge is discussed in chapter 7.

through the locational prescribed TUOS charge; the non-locational TUOS component would be recovered as part of the non-locational prescribed TUOS charge; and the common service charge would be recovered as part of the common service charge);

- that TNSPs, consistent with existing provisions, would be required to submit pricing methodologies as part of the transmission determination process and pricing proposals annually to the AER; and
- for transitional provisions to require the AER to amend its pricing methodology guidelines and TNSPs to amend their pricing methodologies.

The Draft Rule generally maintains the intent of the proposal in the Rule change request in terms of the composition of the load export charge and how it should be applied. It differs from the proposal in the Rule change request in the following ways:

- the drafting of the load export charge provisions have been amended for clarification;
- settlement residue auction proceeds would be redistributed through the locational prescribed TUOS charge component under the Draft Rules (as opposed to through the non-locational prescribed TUOS charge);[18]
- the transitional provisions under the Rule change request have been replaced with new transitional provisions. Under the Draft Rule the transitional provisions require the AER to amend its pricing methodology guidelines and TNSPs to amend their pricing methodologies.

3.3 Stakeholder views

The Commission's assessment has taken into consideration issues raised in stakeholder submissions to the Rule change process. The issues raised in submissions are discussed in the following chapters and a detailed summary of the issues, and responses and comments from the Commission, are outlined in Appendix A.

3.4 Civil penalties

The Draft Rule does not amend any Rules that are currently classified as civil penalty provisions under the National Electricity (South Australia) Regulations. The Commission does not propose to recommend to the MCE that any of the proposed amendments in the Draft Rule be classified as civil penalty provisions as the Draft Rule relates to the TNSPs' pricing provisions under Chapter 6A of the Rules. The nature of the provisions under Chapter 6A provide incentives to ensure that TNSPs adhere to the requirements so that their costs may be efficiently recovered.

18 This issue is discussed in section 5.4.5.

4 Commission's assessment approach

This chapter describes the assessment framework that the Commission has applied to assess the Rule Change Request in accordance with the requirements set out in the NEL (and explained in chapter 2).

The Rule proposed by the MCE was assessed against the relevant counterfactual arrangements which, in this case, were the current provisions under the Rules. That is, the assessment examined the proposed load export charge mechanism against the current arrangements. The scope of the Rule change did not include consideration of the relative merits of any alternative models of inter-regional transmission charging. Detailed analysis of alternative models was considered by the Commission under the NTP and Climate Change Reviews, and the load export charge was recommended as the most proportionate response.[19]

The Commission's assessment of the Rule change request took into consideration the following issues:

1. Achieving more cost-reflective price signals - whether the current arrangements provide cost-reflective price signals and whether the proposed Rule would likely provide a better outcome;

2. Procedural and implementation issues - how the proposed Rule, if made, should be implemented. This included considering:

    (a) Administrative efficiency - whether the proposed Rule works efficiently with existing pricing and revenue provisions;

    (b) Transparency - whether the proposed Rule provides an appropriate level of prescription and clarity; and

    (c) Stability and regulatory certainty - whether the proposed Rule provides adequate regulatory certainty with respect to the long-term predictability and certainty of charges. In addition, transitional provisions to minimise any impacts on TNSPs and adequately manage any potential price adjustments for customers will be relevant;

3. Potential impact of the proposed Rule - what would be the effect of the load export charge on how transmission charges are distributed between regions. Modelling on the potential impact has been completed by TNSPs, including AEMO in its capacity as a TNSP in Victoria, to assist in this analysis.

19 As set out in the Rule Change Request, the MCE endorsed the recommendations and rationale that a load export charge would be the appropriate option.

5 Achieving more cost reflective price signals

In assessing whether the proposed load export charge would reflect the costs incurred in the use of the transmission network to transport electricity to an interconnected region, a number of factors were considered. These factors include how the load export charge should be defined, how it should be calculated and how the charges should be recovered.

5.1 Rule change proponent's view

The Rule Change Request sets out that the load export charge should reflect the costs incurred in the use of the transmission network in the region to conduct electricity to the adjoining network. The charge should therefore be calculated as if the relevant interconnection with the adjoining network was a load on the boundary of the region.[20] The load export charge should reflect the costs of all (new and existing) assets that the CNSP determines contribute to the transfer capability to export flows to adjoining regions and will comprise both the locational and non-locational components of transmission use of system charges as well as charges for common transmission services.[21] Common services charges imposed on other regions would then be recovered from the common service charge component of charges to customers in that region where the locational and non-locational TUOS charges would be recovered from the locational and non-locational components of charges to customers in that region respectively.[22]

The Rule proposed by the MCE also changes the treatment of settlement residue auction (SRA) proceeds from being returned to customers on a locational basis to a non-locational basis.

5.2 Stakeholder views

Stakeholders were generally supportive of the introduction of an inter-regional transmission charging mechanism in the form of a load export charge. However, stakeholders raised a number of issues with the design and implementation of the load export charge as discussed below (and in subsequent sections of this draft Rule determination).

Although some stakeholders supported that the load export charge have both a locational and non-locational TUOS service charge component and a common service charge (including Integral Energy and the National Generators Forum), other stakeholders considered that the load export charge should only comprise the locational TUOS service charge component (including Grid Australia, AEMO, EnergyAustralia and the Major Energy Users (MEU)) as the "postage stamped"

20 op cit MCE, p. 2.

21 ibid, p. 3.

22 ibid

components do not provide a price signalling function. For example, Grid Australia considered that:[23]

> "... the current proposal, which includes the postage stamped components of prescribed transmission prices, is likely to result in importing regions making a contribution significantly beyond the long run marginal costs of existing and new transmission assets which support inter-regional flows."

Stakeholder views on the level of prescription of how the load export charge should be calculated were also mixed. Although stakeholders generally agreed with the proposed arrangements setting out how the load export charge should be calculated, Grid Australia noted that the Rules should not be overly prescriptive whereas AEMO considered greater prescription in some aspects would be required. Some stakeholders (including EnergyAustralia) noted that the Rules should specify the types of assets to be included in cost allocation.

Stakeholders also held different views on the treatment of SRA proceeds. Some stakeholders (including Integral Energy and EnergyAustralia) considered that more analysis would be required on this issue while other stakeholders (including Grid Australia and AEMO) considered that the provisions should not be changed in that the proceeds should continue to be redistributed back to customers on a locational basis.

A detailed summary of stakeholder submissions, and the Commission's responses to the issues raised, is provided in Appendix A.

5.3 Other relevant considerations

Other relevant considerations included AEMO's shared network obligations and the revenue and pricing principles. These considerations are discussed generally in sections 2.4 and 2.6 respectively and considered in more detail below.

5.4 Commission's analysis

The Commission's analysis is set out as follows.

5.4.1 Requirement for a load export charge

A load export charge would more accurately reflect the interconnected nature of the NEM. Under the current arrangements, customers in a region that imports energy from another do not contribute to the cost of transmitting that energy in the export region. A load export charge would increase the cost-reflectivity and allow customers that benefit from a service to contribute to the cost of providing that service. The revenue and pricing principles include consideration of any potential for the under and over utilisation of a network. Improving cost-reflectivity in transmission charging would promote efficient use of the transmission network over time.

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23 Grid Australia, submission to the first round of consultation, 24 June 2010, p. 6.

Currently under the Rules, for regions where there is more than one TNSP, a co-ordinating network service provider (CNSP) would be appointed. The CNSP would be responsible for the allocation of the relevant aggregate annual revenue requirement (AARR) for that region.[24] Consistent with this provision, CNSPs in each region should also be required to determine the appropriate load export charge to be incorporated in each TNSPs' pricing for a region.

5.4.2 Definition and composition of the load export charge

Definition of the load export charge

To clarify the new charge, a definition should be introduced for the load export charge. The load export charge is the transmission costs that are incurred in providing energy by a region to an adjoining region. As discussed in the following sections, the load export charge would be made up of three separate components. A definition of the load export charge which makes references to the composition of the charge would provide clarity.

Composition of the load export charge

The Commission considers that the composition of the load export charge should be structured to reflect the costs of the assets that contribute to the export flows to the adjoining regions as if an adjoining region was a load on the region boundary. That is, the load export charge should be structured in a similar way to other loads to ensure that the charge would reflect the cost of any new assets as well as existing assets. To consider the composition of the load export charge, it is first appropriate to consider the transmission charges that are currently applied to loads within a region, which are charges for:

- prescribed exit services;
- prescribed transmission use of system (TUOS) services (locational and non-locational); and
- prescribed common services.

Under the current provisions, the locational component of the prescribed TUOS service charge is allocated to customers on the basis of estimated proportionate use of the transmission network.[25] As the load export charge should reflect the costs of the assets that contribute to the export flows, including the locational component of the prescribed TUOS service charge would provide that customers in the importing region would also be charged on a basis of the estimated proportionate use. This would contribute to improving the cost-reflectivity of the pricing arrangements and would form a necessary element in the inter-regional transmission charging mechanism. For

24 Clause 6A.29.1 of the Rules.

25 Clause 6A.23.3(c)(1) of the Rules.

this reason the Commission considers that the load export charge should comprise of the locational component the prescribed TUOS service charge.

As noted by stakeholders, the non-locational component of the charges for prescribed transmission use of system services and charges for prescribed common services are charged on a postage stamp basis. It is noted that these charges do not provide an economic price-signalling function. However, the Commission considers that these postage stamped components of transmission pricing are necessary to ensure that service providers are able to recover fixed costs. As considered in the Commission's review on transmission pricing, a key feature of services provided by infrastructure such as transmission networks is that if prices are set equal to marginal or incremental cost, a TNSP may be unable to recover its fixed capital investments.[26] As the load export charge should be charged on a similar basis as charges for customers within the region, the Commission considers that the load export charge should also include the non-locational prescribed TUOS service charge and the common service charge, as these charges relate to the costs of the assets providing interconnector services.

On the other hand, the Commission considers that it would not be appropriate to include the prescribed exit service component in the load export charge as exit services relate to the services that are provided by TNSPs to the customers in its region at each connection points. Including the prescribed exit service charge would not be consistent with the principle of the load export charge, which is to reflect the use of the transmission network in the exporting region by customers in an importing region.

In Grid Australia's submission it referred to the decision made by the Australian Competition and Consumer Commission (ACCC) in 2001 that the 'postage stamped' components should not be imposed on inter-regional flows as they do not provide a price signalling function.[27] However, the Commission notes that the ACCC decision was also that further review and consideration should be completed on inter-regional transmission charging. Through the work completed by the Commission under the NTP and Climate Change Reviews, it was concluded that a load export charge would be the most proportionate response. As set out above, the Commission acknowledges that the postage stamped components do not provide a price signalling function, however, they allow for recovery of fixed capital investments and are charges that apply to loads.

5.4.3 Calculation of the load export charge

The Commission has adopted a "principles based" approach to transmission revenue and pricing. Under this approach, the key design features of the regulatory regime, such as methodologies and process, were codified in the Rules and the implementation elements were not codified in detail. It was considered that the codification of key design features would provide regulatory certainty and the implementation elements

26 AEMC 2006, *National Electricity Amendment (Pricing of Prescribed Transmission Services) Rule 2006 No. 22*, Rule Determination, 21 December 2006, Sydney, p. 24.

27 Grid Australia, first round submission, p. 6.

of the regime would be subject to the guided discretion of the AER and TNSPs.[28] The Commission considered that the advantages of this approach would include the ability to encourage innovation and to harness TNSPs' superior information about their physical networks and minimising implementation costs, as well as allowing the AER to carry out its role in a flexible and responsive manner.

The Commission considers that the principles based approach should be maintained for this Rule change. However, each interconnected region would likely be both an exporter and importer of energy at different times throughout a given period. Therefore, there should be a level of consistency in how the charges are calculated in applying the load export charge. To this end, the Commission considers that it would be appropriate to clarify the directional capacity of the interconnectors that should be used in determining pricing. In Grid Australia's submission, it was proposed that either the capacity used by AEMO in the settlement residue auction process or the maximum directional flow in the notional interconnector in the previous financial year could be used.[29] Giving consideration to the potential options, it is proposed that the maximum capacity of the notional interconnector in the previous financial year be used for this purpose. The maximum capacity would provide a clear and consistent basis on which the prices would be determined.

In addition, given that implementing a load export charge would require adding to the underlying principles of the transmission pricing requirements, the Commission considers that the AER should be required to amend its pricing methodology guidelines to provide clarification on the implementation of the load export charge. Consistent with the requirements under the existing pricing methodology guidelines, this could include clarifying how types of transmission assets are allocated to categories of prescribed transmission services. As the AER would be required to have regard to the desirability of consistency across the NEM in developing/amending the pricing methodology guidelines, by requiring the AER to amend its guidelines, specific implementation issues could be considered and consulted upon. This would include consideration of clarifying the cost allocation for interconnector assets and how power and energy for interconnectors are measured. TNSPs should also be required to subsequently amend their pricing methodologies to ensure that their pricing methodologies are consistent with the revised pricing methodology guidelines. This is discussed further in sections 5.4.4 and 6.4.3.

The Commission considers that the approach of setting out the principles to be applied in the Rules and requiring the AER to amend its pricing methodology guidelines would go towards addressing the issues raised by stakeholders in relation to the level of prescription that should be provided. This approach would allow the principles based approach to be maintained while providing clarification on how the charges should be calculated. Additional implementation requirements could also be considered under the processes for amending the AER's pricing methodology guidelines and TNSPs' pricing methodologies.

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28 AEMC 2006, op cit, pp. 26-28.

29 Grid Australia, first round submission, p. 5.

The MEU raised concerns regarding the location of the regional reference nodes and their potential impact on the calculation of load export charges such that there would be a disparity between the load export charges depending on the location of the regional reference nodes.[30] However, the Commission notes that the load export charge arrangements would improve the cost-reflectivity of transmission charging and would be calculated as if the interconnected region was a load on the region boundary.

AEMO raised the issue of the allocation of prescribed TUOS service charges to the locational and non-locational components. Currently the Rules set out that a 50:50 split should be used, or an alternative allocation that is based on a reasonable estimate of future network utilisation.[31] AEMO considers that there should be consistency in how the charges are allocated.[32] However, the Commission notes that currently each TNSP is able to determine the most appropriate way to charge its customers depending on the requirements of its network, which should not be changed through introducing a load export charge.

5.4.4 Recovery of the load export charge

Once a load export charge has been calculated by a CNSP and charged to the importing region, the CNSP in the importing region would need to determine how the charges would be recovered from the customers in its region.

As the locational component of the prescribed TUOS service charge would be calculated on the basis of the proportionate use of the transmission network, these charges should be recovered by the CNSP on the same basis. That is, the locational component of the load export charge should be recovered by adjusting the locational component of the charges to be applied. This would ensure the locational component would also be recovered on a cost reflective basis. Similarly, the non-locational prescribed TUOS service charge and the common service charge should be recovered by adjusting the non-locational prescribed TUOS service charge and the common service charge respectively. This method would provide for a level of consistency in how charges are calculated and applied to customers in adjoining regions.

In order to incorporate the recovery of the load export charge into their processes, TNSPs (including CNSPs) may be required to amend their pricing models and systems. Compared to the current requirements where inputs in TNSPs' pricing processes are mostly contained to each TNSP's network, the load export charge arrangements would introduce a new element to be incorporated into the recovery process. The load export charge would introduce new steps to the TNSPs' pricing process. Firstly, the CNSP would need to calculate the load export charge to apply to the adjoining regions. Secondly, the CNSP would need to incorporate the load export charge charged to it into the cost recovery calculations. The Commission considers that TNSPs should be

30 MEU, first round submission, pp. 13-14.

31 Clause 6A.23.3(d) of the Rules.

32 AEMO, first round submission, p. 4.

required to amend their pricing methodologies to ensure that the requirements for these processes are appropriately considered by TNSPs and sufficiently robust.

5.4.5 Settlement residue auction proceeds

Inter-regional settlement residues accrue when power flow and price separation occurs between regions. The difference between the money paid by customers in one region and that received by generators in the other region forms the settlement residue. The rights to future residues are auctioned by AEMO, and these rights can be used as a risk management instrument for parties contracting across regions.

Under the current arrangements, SRA proceeds are redistributed by the TNSP to customers in the importing region on a locational basis.[33] This redistribution benefits customers located on or near the interconnector as they would be faced with the charges associated with the cost of those assets despite the fact that a significant portion of those assets would be used to support interconnector flows. That is, locational charges for a connection point bear a direct relationship to the proximity of the connection point to the interconnector.

Under the proposed load export charge arrangements, the charges to be paid by customers in an importing region would then also include a component of transmission costs incurred in the exporting region - that is, the load export charge (which would include a locational component). As customers on or near the interconnector would then also be faced with the additional load export charge, the Commission considers that the SRA proceeds should continue to be redistributed on a locational basis in accordance with the current provisions. If the SRA proceeds were redistributed via the non-locational component, it would likely dampen the cost-reflectivity of the load export charge for customers further downstream.

As noted above, this Rule change would not impact the effectiveness of the settlement residue arrangements.

5.5 Commission's conclusion

The Commission concludes:

- an inter-regional transmission charging mechanism in the form of a load export charge should be established;
- the load export charge should be made up of the locational TUOS service charge, the non-locational TUOS service charge, and the common service charge. The load export should be recovered on the same basis as they are charged - that is, the locational TUOS service charge imposed on a region should be recovered from the locational TUOS service charge and similarly for the other components;

33 Clause 6A.23.3(c)(1) of the Rules.

- the Rules should set out the principles for the load export charge and additional implementation details should be set out in the AER's pricing methodology guidelines and TNSP's pricing methodologies; and
- there should be no change to the way SRA proceeds are returned to customers.

6 Implementation and transition

The load export charge would be a new type of charge and how it would be implemented needs to be considered. This includes considering whether any transitional provisions would be required and an appropriate implementation date.

6.1 Rule change proponent's view

As the Rule proposed by the MCE would require CNSPs to provide information to other CNSPs so that the load export charges may be incorporated appropriately into the costs to be recovered, it is proposed that CNSPs would provide estimates to other CNSPs before 15 May each year of the inter-regional "pre-adjusted" charges to be levied in the following financial year. This would allow the charges to be incorporated into the recovery process so that charges to be levied to with-in region customers may be published on 15 May. The Rule proposed by the MCE also sets out specific billing provisions and the obligations for payment.

The Rule proposed by the MCE also provides for AEMO, in its role as the CNSP in Victoria, to amend its pricing methodology during the current regulatory control period in order to adopt a cost allocation process consistent with the derivation of cost-reflective inter-regional locational TUOS charges. In addition, Powerlink would be required to amend its pricing and charging methodology.

Transitional provisions were included in the Rule change request to enable CNSPs to recover the "pre-adjusted" locational TUOS charges through non-locational TUOS charges as a transitional measure (while the locational charges would be recovered through the locational component on an enduring basis). This transitional measure was to allow the load export charge to be introduced in the current regulatory period without requiring all CNSPs and TNSPs to amend their pricing methodologies.

The Rule change request also proposes that the load export charge arrangements should begin on 1 July 2011.

6.2 Stakeholder views

With respect to the implementation and administration of the payments between CNSPs, Grid Australia submitted that a level of prescription such as setting out gross payments to be made on a monthly basis with provisions for other arrangements to be agreed between parties would be appropriate. Grid Australia also noted that in the absence of a connection agreement or other enforceable instrument between adjoining CNSPs, it may be appropriate for the Rules to specify default conditions or require terms to be agreed between parties.[34]

Some stakeholders (including Grid Australia and the National Generators Forum (NGF)) considered that the pricing methodologies for all TNSPs should be

34 Grid Australia, submission to the first round of consultation, [date], p. 10.

amended/reviewed to ensure that they comply with the implementation of a load export charge. The NGF also considered that the AER should be required to amend its pricing methodology guidelines.[35] EnergyAustralia on the other hand considered that the AER's pricing methodology guidelines did not appear to require modification to enable the recovery of inter-regional TUOS charges.[36]

Some stakeholders (including EnergyAustralia and Grid Australia) did not consider that an implementation date of 1 July 2011 would be feasible. Grid Australia submitted that a 1 July 2012 implementation date would be more feasible to allow pricing methodologies to be amended and for the charges to be calculated under the new arrangements.[37] EnergyAustralia submitted that modelling should be undertaken to identify the pricing impacts of the proposal before the policy details and the date of its introduction are established.[38]

EnergyAustralia proposed that TNSPs should be required to publish their pricing proposals at least one month prior to 15 May to allow a more orderly process for distribution network service providers (DNSPs) to establish their transmission recover tariffs.[39]

A detailed summary of stakeholder submissions, and the Commission's responses to the issues raised, is provided in Appendix A.

6.3 Other relevant considerations

In relation to the issue raised by EnergyAustralia on the publication date of transmission prices, the Commission has taken into consideration its decision on the "Transmission Network Prices Publication Date" Rule change.[40]

6.4 Commission's analysis

The Commission's analysis is set out as follows.

6.4.1 Billing of the load export charge

Introducing a load export charge would require CNSPs to issue bills to CNSPs in adjoining regions. The Commission agrees with stakeholder views that the requirements for the billing processes need not be overly prescriptive as CNSPs should be able to co-ordinate the requirements among themselves. However, to provide some certainty, the Rules should set out the minimum requirements that the bills should

35 NGF, submission to the first round of consultation, p. 3.

36 EnergyAustralia, submission to the first round of consultation, p. 10.

37 op cit, Grid Australia, p. 12.

38 op cit, EnergyAustralia, p. 10.

39 EnergyAustralia, first round submission, p. 9.

40 Information on this Rule change may be found on the AEMC website www.aemc.gov.au.

include and clarify the obligation on CNSPs to pay the charges billed. Such clarifications would be consistent with existing provisions under the Rules for other types of charges billed by service providers. The Commission agrees that the Rules should provide CNSPs to agree appropriate terms and conditions.

In addition, the Commission considers that the provisions should clarify that the "gross" charges should be applied, which would provide transparency on the recovery of charges.

6.4.2 Preparation of pricing information

In order for a CNSP to determine the amount that is to be recovered from its customers, it must also include the load export charge that the adjoining CNSPs would be charging so that the recovery of the load export charge/s may be incorporated. However, as all CNSPs are required to publish their pricing proposals on 15 May each year, there would be a requirement for CNSPs to provide relevant information to each other prior to 15 May to allow their pricing proposals to be finalised. The Commission considers that CNSPs should be able to mutually agree to suitable timeframes and dates on which information may be exchanged, however, it is acknowledged that practically this information would be estimated information. Given that this estimate would then be used by CNSPs to structure their prices, the pricing provisions should allow any deviations of the actual amounts from the estimated amounts to be adjusted in subsequent years.

In regards to the publication date of transmission prices, giving consideration to the factors taken into account for the Transmission Network Prices Publication Date Rule change, the Commission notes that the current publication timetable provides certainty and accuracy to the calculation of transmission prices. However, the Commission notes that, in introducing a new type of charge, it would be of benefit for the DNSPs and TNSPs to share any relevant information that would improve the efficiency of the overall pricing process. For this reason, provisions should be made to allow TNSPs to share any relevant estimates with DNSPs where this has been requested.

6.4.3 Pricing methodologies and AER guidelines

Under Chapter 6A of the Rules, the AER publishes pricing methodology guidelines to set out how the pricing principles under the Rules are to be applied by TNSPs in developing their pricing and pricing methodologies. Each TNSP is required to publish a pricing methodology, which sets out how the TNSP meets the requirements under the Rules and the AER's pricing methodology guidelines.

Given the proposed load export charge introduces a new principle under the pricing arrangements, the Commission considers that it would be appropriate to require the AER to amend its pricing methodology guidelines. Through the process of amending the guidelines, the AER and TNSPs would have the opportunity to consider the detailed implementation requirements to ensure that there is appropriate consistency in how TNSPs apply the load export charge provisions. This could include ensuring

that consistent measures of energy and power at each end of the interconnector would be used and clarifying how costs for interconnector assets would be allocated to categories of prescribed services. Following from the AER's amendment of the pricing methodology guidelines, each TNSP should then be required to amend its pricing methodology to ensure consistency with the load export charge requirements. Updating TNSPs' pricing methodologies is especially relevant in the case of AEMO where it currently allocates costs based on system conditions on the ten weekdays of highest system demand to derive locational TUOS charges, which is inconsistent with the method used in other regions.[41]

The Commission notes that the MEU considered that, by using a pricing methodology based on the ten weekdays of highest system demand, AEMO's methodology "most closely reflects the current rules".[42] Therefore the MEU was concerned as to why AEMO should be amending its methodology. However, the Commission does not agree that AEMO's methodology most closely reflects the requirements under the Rules compared to that used by other TNSPs. The Commission notes that the pricing principles under the Rules may be achieved through different ways, and hence the Rules allow TNSPs to propose different methodologies, which are then assessed by the AER. Each methodology has advantages and disadvantages. A potential disadvantage of the ten peak day method is that it may not correctly account for any connection points that have low usage on those ten days (but higher usage at other times). Under the load export charge arrangements, as transmission costs would be levied across region boundaries, consideration of any inconsistencies that would affect the load export charge principles would need to be addressed.

Under the Rules, the AER can amend the pricing methodology guidelines at any time but it must follow the transmission consultation procedures in undertaking any amendments.[43] However, TNSPs' pricing methodologies may not be amended during a regulatory control period. Transitional provisions would be required to specifically require the AER to amend its pricing methodology guidelines and to allow TNSPs to amend their pricing methodologies during the current regulatory control period.

6.4.4 Implementation date

Given that the AER would be required to amend the pricing methodology guidelines and TNSPs would be required to amend their pricing methodologies, the Commission considers that an appropriate implementation date for the load export charge would be 1 July 2012. This date would provide sufficient time for:

- the AER to follow the transmission consultation procedures in amending the pricing methodology guidelines. This process would then provide for the AER to

41 This issue was identified and discussed in the Final Report on the Climate Change Review, pp. 47-48.

42 MEU, first round submission, p. 24.

43 The transmission consultation procedures are set out under Rule 6A.20.

consult with TNSPs and other interested parties in developing the amended guideline; and

- consultation to be carried out in reviewing the TNSPs' amended guidelines. This would be consistent with the normal process where TNSPs would submit pricing methodologies to the AER under the transmission revenue determination process.

6.5 Commission's conclusions

The Commission concludes:

- the load export charge should be billed on a gross basis to provide transparency to the charges applied. The Rules should set out the obligations for the charges to be paid, however the billing provisions should not be overly prescriptive;
- TNSPs and DNSPs should be required to share information where possible to assist each other with developing their pricing requirements;
- the AER should be required to amend its pricing methodology guidelines to take into account the new load export charge provisions. TNSPs should then also be required to amend their pricing methodologies; and
- the load export charge should apply from 1 July 2012.

7 Impacts on price

This chapter sets out other relevant issues raised in the Rule Change Request or in stakeholder submissions.

7.1 Rule change proponent's view

The Rule Change Request noted that a load export charge was considered a proportionate and efficient response to address the lack of an inter-regional transmission charging mechanism and that the AEMC would assess the costs associated with the change during the Rule change process.[44] In its policy response to the Climate Change Review, the MCE also noted that empirical analysis of the costs would be undertaken during the Rule change process.[45]

7.2 Stakeholders' views

Although stakeholders provided in principle support for the Rule change request, the MEU considered there were higher priority market issues that should be addressed and that, in any case, costs and benefits of the Rule Change Request should be clearly set out.[46]

Some stakeholders (including Grid Australia and AEMO) noted the potential for the load export charge to impact the volatility of prices.[47] For example, Grid Australia considered that the volatility of annual energy flows across interconnectors would lead to considerable volatility in the load export charge on a year to year basis.[48]

A detailed summary of stakeholder submissions, and the Commission's responses to the issues raised, is provided in Appendix A.

7.3 Other relevant considerations

7.3.1 Modelling by TNSPs

In order to assess the potential costs of the Rule change to consumers, the Commission requested TNSPs, including AEMO in its capacity as a TNSP in Victoria, to undertake modelling of a load export charge. Requesting TNSPs to undertake the modelling ensured that the Rule change assessment would take into account likely charges. The modelling was based on the current methodologies and data for determining 2010-2011 pricing, which would have used historical energy flows in 2008/2009, with

44 MCE, Rule change request, p. 5.

45 MCE, op cit.

46 MEU, first round submission, p. 3, p. 20.

47 Price volatility is discussed in section 7.4.2.

48 Grid Australia, first round submission, p. 11.

amendments to incorporate the load export charge.[49]The Commission thanks the TNSPs for their work and assistance.

The modelling was based on the proposed arrangements set out in the Rule change request. Any relevant assumptions were agreed between Commission staff, Grid Australia and AEMO prior to initiating the modelling process. The "gross" modelling results are outlined in the following table. These gross values represent the total amount that would apply for each component of the load export charge to an interconnected region. That is, the table shows the load export charge that would be paid by the "Adjoining Region" to the "Region". It is noted that these results provide an overall estimate only to allow an understanding of the overall magnitude of the load export charge. Each of the TNSPs' customers may be affected differently. These results are indicative as the modelling had to be based on actual data for a specific period, changes in the interconnector flows could change the load export charge.

Table 7.1 Modelling results – indicative gross load export charge [50]

Load export charge			$ million (to be paid by the "Adjoining Region" to the "Region")				
Region	**Adjoining Region**		**Locational TUOS**	**Non-locational TUOS**	**Common Service**	**Total load export charge**	**Total AARR**
SA	VIC	SA to VIC	27.0	5.4	1.8	34.2	279.6
VIC	SA	VIC to SA	14.5	2.8	3.5	20.9	423.2
VIC	TAS	VIC to TAS	0.68	9.0	11.2	20.8	
VIC	NSW	VIC to NSW	19.1	7.5	9.4	35.9	
NSW	VIC	NSW to VIC	24.8	7.7	3.7	36.2	850.4
NSW	QLD	NSW to QLD	9.6	0.6	0.3	10.5	
QLD	NSW	QLD to NSW	15.0	27.2	17.7	60.0	644.2
TAS	VIC	TAS to VIC	5.7	0.6	0.4	6.6	175.2
					Total	225.2	2372

The AARR for each region, which represents the total annual revenue to be earned by TNSPs in a region for prescribed transmission services, is also included in the table above.[51]

49 The Electricity Statement of Opportunities (ESOO) published each year by AEMO includes information on historical interconnector flows. For example, historical interconnector flows is outlined on pp. 92-93 in the 2010 ESOO.

50 Modelled as the load export charge that would have applied in 2010-2011, which would have been based on historical flows in 2008-2009.

51 Clause 6A.22.1 of the Rules.

As all regions export and import energy, they will also both levy and pay load export charges. In order to consider the 'net' effect of the load export charge on each region, the modelling results including the reconciliation of the gross values set out in Table 7.1 to take into account payments that interconnected regions will make to each other. These net values are set out in Table 7.2 below.

Table 7.2 Modelling results – indicative net load export charge [52]

Region	Net load export charge ($ million) (net amounts to be paid by the "Region")	Net charge as % of AARR
SA	- 13.3	- 4.8%
VIC	- 0.66	- 0.2%
NSW	+ 49.3	+ 5.8%
QLD	- 49.5	- 7.7%
TAS	+ 14.2	+ 8.1%

The 'net' values in the table below shows the total amount that a region will need to pay to its adjoining regions (where a negative value means that it will be paying less than it receives). The net values are also expressed as a percentage of the AARR for each region.

7.4 Commission's analysis

The Commission's analysis is set out as follows.

7.4.1 Modelling analysis and costs/benefits

Based on the net values set out in Table 7.2, NSW and Tasmania are the net 'payers' of the load export charge under the modelling results. Transmission charges faced by customers in NSW and Tasmania would on average increase by 5.8 percent and 8.1 percent respectively.[53] On average, customers in other regions would see a decrease in the total transmission service charges. (In order to gain an understanding of the potential magnitude of the load export charge, this analysis has been based on the estimated average impact. The actual outcome for individual customers may vary).

However, transmission charges form only one component of a customer's bill. In the case of small customers in NSW, for example, the transmission component would be approximately 8% of the customer's bill. In this case, a 5.8 percent increase in the transmission component, would translate to a 0.5 percent increase in the total bill. On

52 Modelled as the load export charge that would have applied in 2010-2011, which would have been based on historical flows in 2008-2009.

53 In providing the modelling outcomes, the Transend also noted that the load export charges for Tasmania may be subject to significant volatility. Price volatility is discussed in section 7.4.2.

average, this would equate to approximately a $1.80 increase in a small customer's bill each quarter. Table 7.3 below sets out the impact on small customers' bills due to the load export charge (based on estimated average values).

Table 7.3 Impacts on final small customer bill – indicative results [54]

Region	Transmission component of small customer's bill[55]	% change in small customer bill due to load export charge	$ change in average small customer bill due to load export charge per quarter
SA	8.1%	- 0.4%	- $1.20
VIC	5.8%	- 0.01%	< - $0.05
NSW	7.9%	+ 0.5%	+ $1.80
QLD	8.1%	- 0.6%	- $2.20
TAS	10.6%	+ 0.9%	+ $3.40

The Commission considers that the benefits of providing more cost-reflective price signals through a load export charge outweigh the costs, which in this case would be a less than 1 percent increase in the cost of electricity services for some small customers (and a decrease in costs for other customers). The price for a service should as far as possible reflect the actual costs involved in providing that service. Improving the cost-reflectivity of transmission services would in turn promote allocative efficiency. This would, in the long term promote the interests of consumers of electricity with respect to the price of supplying electricity. The load export charge also provides the benefit of potentially minimising potential obstacles to coordinated investment in transmission infrastructure. This would ensure greater efficiency would be achieved in transmission investments.

7.4.2 Volatility of prices

The Commission acknowledges that changes in the interconnector flows would change the value of the associated load export charge. However, it is difficult to predict how interconnector flows will change in the future and it would be expected that, in most circumstances, any change in an interconnector's flow profile would occur over time. In the case of Basslink, stakeholders have indicated that the flow from one year to the next can be relatively volatile. The Commission notes that as the transmission charges form a portion of total costs faced by a customer, the impact on volatility of prices due to the load export charge would be less than the volatility of the interconnector flow itself. In addition, to the extent that the load export charge improves cost-reflectivity, any volatility in costs would be reflected in the load export charge.

54 The percentage values of the transmission component of small customer's bill are based on information published by the AER in its distribution determinations for each jurisdiction.

55 Compiled by the AEMC based on figures published by the AER.

Consistent with existing provisions, the Commission notes that the locational component of the prescribed TUOS service charge would not be able to change by more than 2 per cent per annum compared with the load weighted average price for the component in the relevant region. This provision would assist in reducing any price volatility.

7.4.3 Market network service providers

As market network service providers (MNSPs) earn their revenue from participation in the spot market and its revenues are not regulated, MNSPs should be excluded from the load export charge provisions. However, to the extent that any assets of a TNSP are used to support flow across a non-regulated interconnector, the TNSP should be able to account for this in its load export charge calculations.

7.5 Commission's conclusion

The Commission concludes:

- the load export charge will improve the cost reflectivity of transmission charging. This will mean that, compared to the current pricing arrangements, transmission charges for some customers will increase and for other customers decrease;
- to the extent that the load export charge improves cost-reflectivity, any volatility in costs would be reflected in the load export charge. However, it is expected that the impact on volatility of final prices would be less than the volatility of the interconnector flow; and
- MNSPs should be excluded from the load export charge arrangements.

Abbreviations

AARR	aggregate annual revenue requirement
ACCC	Australian Competition and Consumer Commission
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
CNSP	Co-ordinating Network Service Provider
Commission	See AEMC
DNSP	distribution network service provider
MCE	Ministerial Council on Energy
MEU	Major Energy Users
MNSP	market network service provider
NEL	National Electricity Law
NEM	National Electricity Market
NEO	National Electricity Objective
NGF	National Generators Forum
NTP	National Transmission Planner
Rules	National Electricity Rules
SRA	settlement residue auction
TNSP	transmission network service provider
TUOS	transmission use of system

A Summary of issues raised in submissions

Stakeholder	Issue[56]	AEMC Response
General views and issues on the Rule Change Request		
Gallaugher & Associates	In broad terms supports the concept of inter-regional network charges proposed but considers there are many serious flaws with the current regulatory and economic framework for the provision of transmission services in the NEM. p. 1.	The Commission notes that the specific points raised in Gallaugher & Associates submission, as well as other submissions, on the design of the load export charge are discussed in this determination.
Hydro Tasmania	Broadly supports the proposal to introduce inter-regional transmission charging. Has reservation with the Commission's inter-regional transmission charging proposal on the prediction of future network flows as a basis for assigning costs shares. p. 1.	As discussed in chapter 5 of this determination, the Commission considers that the current approach to allocating costs can accommodate load export charges. Specific discussion relating to issues in Tasmania are discussed in section 7.4.2.
Integral Energy	Supports the principle that customers who import power from another region should contribute towards the transmission costs thereby incurred in the exporting region and considers that the load export charge approach set out in the Consultation Paper provides a suitable mechanism for doing so. p. 1.	The Commission notes the comments made.
Grid Australia	Supports the implementation of a load export charge based on the locational component of prescribed transmission prices to commence from 1 July 2012 at the earliest. p. 3.	As discussed in sections 5.4.3 and 6.4.3, the Commission considers that a 1 July 2012 commencement date for the load export charge would be more appropriate.

56 Page numbers refer to the page numbers in the stakeholder's submission.

Stakeholder	Issue[56]	AEMC Response
The Major Energy Users Inc (MEU)	While the rule change request conceptually seeks to impose a higher degree of cost reflectivity, it has the potential to create more problems than it solves e.g. some beneficiaries will receive a greater benefit at the expense of other consumers. Also considers that the Rule change proposal lacks quantification and undermines key principles underpinning the NEM [in ways as discussed in other sections of the MEU's submission as outlined below]. p. 3.	As discussed in section 2.6, the load export charge may result in a one-off redistribution of charges among customers in different regions. However, this redistribution would result from the improvement in cost-reflectivity, which would benefit all consumers in the long term. The modelling outcomes has shown the potential cross-subsidies that currently exist. The Commission does not consider the Rule change undermines the underlying principles of the NEM (as discussed in response to the MEU's issues below).
MEU	Although the MEU supports, in principle, allocating the costs of interconnectors to the beneficiaries of the interconnectors, it raises a number of issues and concerns on the proposed arrangements. pp. 4-5. In addressing these inconsistencies in the proposed arrangements, the MEU is concerned that the complexity that then arise will make the implementation too complex to deliver a sensible and commercial outcome for consumers. p. 7.	In making this determination, the Commission has clarified the principles of the load export charge, where any export load would be treated in a similar manner to existing customer load. In doing so, the Commission considers that the load export charge provides a proportionate solution to the requirement of inter-regional transmission charging arrangements and that its implementation would not be complex.
MEU	The Rule change proposal posits that consumers will accrue significant commercial benefit by the implementation of the change and therefore it should cover the costs that generators and TNSPs will incur as a result of the Rule change. But considers there is no attempt to quantify either the costs or benefits of the proposal, let alone the materiality of the issue. p. 7.	The Commission considers that the Rule change proposal recognises the potential benefits of introducing inter-regional transmission charging arrangements. The materiality of the potential impact of an load export charge is discussed further in section 7.4.

Stakeholder	Issue[56]	AEMC Response
MEU	Considers that the Rule change request had its origins from a request of the MCE for the AEMC to conduct the Climate Change Review and considers that "[e]ffectively the AEMC sees that its recommendations [from the Climate Change Review] will assist the implementation of the eRET and CPRS policies, irrespective of the quantum of costs involved so long as the market outcomes (which will reflect the interventions) are seen to be 'efficient' and 'reliable'". pp. 8-9.	The Commission notes that the objective of the Climate Change Review was to consider how the current energy market frameworks would respond to the expanded eRET and the CPRS and how any potential impacts of these policies on the market may be managed. The Commission did not consider how any of these policies should be implemented. In addition, the Commission notes that inter-regional transmission charging has been an issue that the market has considered and assessed for some time, including consideration by the National Electricity Code Administrator in its transmission and distribution revenue review completed in 1999. The Commission is now assessing the proposed load export charge through this Rule change process to consider whether the proposed arrangements would be in the long term interest of consumers.
MEU	In regards to cost-reflectivity considerations, raises the issue of the cost of power compared with the cost of transmission. Notes that the reasons for a region to be a normally importing region are many but the main reason is that the prices of generation in an importing region are higher than those in a normally exporting region. Just because there is a price differential does not mean that this differential is more than the additional costs of providing transmission. p. 12.	The Commission notes the issue raised however the cost of transmission is typically a small proportion of the total costs for electricity that consumers face. Additional discussion is outlined in section 7.4.

Stakeholder	Issue[56]	AEMC Response
MEU	Notes that if an importing region is expected to pay for transmission costs within an exporting region, from a consumer viewpoint, this makes generation from an exporting region a higher cost - effectively the cost to consumers in the importing region for the imported generation becomes the dispatch price for the generation plus the load export charge. The proposal for allocating transmission services from an exporting region however implies that a generator outside a region will still be dispatched on the current basis. This raises the question - is the proposal really economically efficient and does it maintain competitive neutrality? p. 13.	The Commission notes that the load export charge is intended to improve the cost-reflectivity of transmission assets. In terms of whether the transmission investments themselves are efficient, the existing framework which provides for the role of the National Transmission Planner and the Regulatory Investment Test for Transmission go towards ensuring efficient transmission investments are made.
MEU	Considers that the Rule change proposal does not assess whether consumers will pay more for their delivered power under the proposed change than necessary and whether the proposal might reduce competitive neutrality between generators and regions. p. 14.	The load export charge would relate to the regulated revenues of TNSPs and interconnectors. As the purpose of the revenue regulation process is to ensure that only efficient costs would be recovered, the Commission considers that the mechanisms in place ensures that consumers would not pay more than necessary. In addition, as the load export charge would apply to all TNSPs, and revenues are regulated, there would not be any impact on competitive neutrality.
MEU	The complexity of implementing the proposal might reach a level where the value of the proposal has only a marginal benefit compared to the costs of implementation and the degree of moving from the simplicity of the current arrangements. p. 18.	The Commission notes that as the pattern of interconnector flows responds to changes in the underlying market requirements, introducing an inter-regional transmission charging mechanism is an important step in ensuring that prices are cost-reflective.

Stakeholder	Issue[56]	AEMC Response
National Generators Forum (NGF)	On balance, supports the proposed improvements to the transmission charging arrangements. However, have a concern on the potential difficulty to develop and set the load export charge with a degree of certainty. Energy movement from one region's transmission network to an adjoining region's network is likely to be volatile. We expect the energy forecasts used to work out a load export charge to be similarly variable. This could create problems around certainty. Do note, however, that forecasting energy flows for customer loads at existing connection points on the transmission system are relatively stable. p. 1.	The provisions in place provide that charges to be applied to customers cannot vary by more than 2 per cent per annum compared with the load weighted average price for the locational component of transmission charges. The Commission considers that this provides a degree of certainty. In addition, to the extent that the load export charge improves cost-reflectivity, any volatility in costs would be reflected in prices. In addition, as noted above, the transmission charges component of a customer's bill is relatively small.
NGF	Considers the proposed methodology of implementing a load export charge is consistent with the current methodology in the AER's electricity transmission network service providers pricing methodology guidelines. p. 2.	The comments are noted.
AEMO	Supports in principle the introduction of inter-regional transmission charges. Considers the proposal is consistent with the establishment of the role of the national transmission planner within AEMO and recognition of the need to coordinate the development of the grid on a national basis. Considers it would be incongruous to plan and develop the grid on a national basis without recognising this in transmission pricing. p. 1.	The comments are noted.

Stakeholder	Issue[56]	AEMC Response
AEMO	In undertaking this Rule change notes that there is the need to recognise that transmission pricing is complex and that detailed procedures are not specified in the Rules and the implementation in respect to a number of details are likely to vary from one region to the other and that the overall outcomes of the methodology can be very sensitive to a range of decisions. The final process to be determined should seek to deliver both a workable and consistent process and meet the MCE's objectives in introducing inter-regional transmission charging. p. 1.	The comments are noted. The Commission also acknowledges the work that TNSPs and AEMO have completed in providing modelling for this Rule change request, which has assisted with the analysis and understanding of the proposed arrangements.
EnergyAustralia	Considers that quantitative analysis of the potential impact of the proposed change on stakeholders, including customers, should be completed and subject to further consultation. pp. 1-2.	The Commission notes the issue and the results from the modelling undertaken by TNSPs, including AEMO in its capacity as a TNSP in Victoria, are discussed in section 7.4.
Composition and definition of the load export charge		
Integral Energy	Supports the extension of the current transmission pricing principles to determining the load export charge, including both locational and non-locational components for the relevant TUOS charges. p. 1.	The comments are noted.
Integral Energy	As a general principle, would like to see greater stability and transparency in transmission pricing. In the current context, supports the proposed Rule setting out notification processes and requiring a level of information disclosure from the CNSP that ensures the impact on distribution and retail tariff notification processes can be managed as effectively as possible. p. 2.	The comments are noted. TNSPs would be required to provide estimates to each other and, where possible, to DNSPs. The AER would also be required to amend its pricing methodology guidelines and TNSPs would be required to amend their pricing methodologies.

Stakeholder	Issue[56]	AEMC Response
Grid Australia	The inclusion of the postage stamped components of prescribed transmission prices is likely to result in importing regions making a contribution significantly beyond the long run marginal costs of existing and new transmission assets which support inter-regional flows. Considers the inclusion of these components departs from the principles of the current pricing regime and would not be consistent with the NEO. p. 3 (and pp. 6-7).	Discussion is outlined in chapter 5.
Grid Australia	To include postage stamped components would be to impose costs on customers of an adjoining region that bear no relation to their proportionate use of the adjoining region's transmission system assets. Such a view is also consistent with the ACCC position where it was expressed that rather than to be used as a tool for signalling, the non-locational component is to serve as a recovery mechanism that will cause the least distortion possible. p. 6.	Discussion is outlined in chapter 5.
Grid Australia	The volatility of annual energy flows across interconnectors would lead to considerable volatility in the load export charge on a year to year basis. The effect of this volatility on customers (in both the importing and exporting regions) would depend on the relative materiality of the charge. Is concerned that the introduction of the postage stamp components to the load export charge will materially increase the impact of the load export charge on customers and may lead to even greater volatility from year to year. p. 11.	The Commission acknowledges that it may be difficult to predict how interconnector flows will vary in the future. However, it is noted that any changes in the overall interconnector flow profiles would happen over time. As the load export charge is intended to increase the cost-reflectivity of prices, if there is volatility in the underlying costs then this would be reflected in the charges - although any variations in costs would also be impacted by the redistribution of settlement residue auction proceeds. As noted above, the load export charge and transmission charges in generation are not expected to be a significant portion of a customer's bill.

Stakeholder	Issue[56]	AEMC Response
NGF	A load export charge that includes both a locational and non-locational component of prescribed TUOS implemented in a way that minimises price volatility is suitable. We expect that the AEMC will engage with TNSPs to facilitate this outcome. p. 2.	Discussion is outlined above and in chapter 5.
Hydro Tasmania	In the case of Victoria/Tasmania inter-regional transfer, forecasting of network flows is particularly difficult, depending as they do on hydrological inflows in Tasmania, which can vary ±30%. Would ask the Commission consider how the process for determining the inter-regional transmission charges could cater for potentially large swings from year to year, in inter-regional transfer payments between Victoria and Tasmania, without resulting in unmanageable variations in Customer costs. p. 2.	Discussion is outlined above and in section 7.4.2.
Grid Australia	To define the export load the appropriate quantity to use would be a prescribed capacity of the notional interconnector, which defines the capacity in place of a "contracted demand". p. 4.	The Commission notes the suggestion proposed. As discussed in section 5.4.3, the Commission considers that the prescribed capacity would be required.
Grid Australia	The definition of notional interconnector capacity will significantly impact the magnitude of the TUOS non-locational and common service component charges. Considers that two options are readily available: (1) the capacity used by AEMO in the settlement residue auction process; and (2) the maximum directional flow in the notional interconnector in the previous year. p. 5.	As discussed in section 5.4.3, the Commission considers that the maximum directional flow on the notional interconnector would be an appropriate measure.

Stakeholder	Issue[56]	AEMC Response
Grid Australia	Notes that the pricing methodology mandates that the contract agreed maximum demand should only be used for charging if the customer's connection agreement or other enforceable instrument governing the terms of connection stipulates a fixed maximum demand and penalties for exceeding that demand. Consideration should be given to the ability to satisfy this requirement under the proposed arrangements. p. 8.	The Commission agrees that an appropriate definition would need to be introduced and considers that maximum flow on the notional interconnector in the last year may be used for this purpose.
Grid Australia	Although, in simplistic terms, customers in importing regions use the shared network services in a similar way to customers with the exporting region, it is not clear that customers in the importing region would be readily able to associate their behaviour with the load export charge allocated to them and respond appropriately. This would depend, in part, on the relative materiality of the inter-regional charge. p. 6.	The Commission notes that the load export charge mechanism would provide an important step in the pricing arrangements to accommodate likely future changes in interconnector flows. The modelling results are discussed in section 7.4.
MEU	If the regional node in the importing region is located closer to the border than the regional node in the exporting region, then the costs of transmission to the border in the exporting region are much higher than the costs of transmission to the border of the importing region. Therefore there will be a disparity between the rate of the "load export charge" in one region compared to another. Despite this as power flows in both directions, it is assumed that the amount of power transferred is a net amount. This means that the export from the net importing region has a lower value in terms of dispatch price plus load export charge than export from the net exporting region in terms of dispatch price plus load export charge. pp. 13-14.	As discussed in chapter 5, the locational component of the load export charge is calculated in a similar method to other loads. That is, the Rules require the cost-reflective network pricing (CRNP) or the modified CRNP methodology to be used to determine the proportionate use of the system. This methodology is not related to the location of the regional price node, which relates to the determination of the spot price.

Stakeholder	Issue[56]	AEMC Response
MEU	The proposal to introduce a load export charge, which would have a locational component, would mean that the locational element of TUOS in the importing region will become distorted by the addition of locational TUOS from the load export charge. As locational TUOS is calculated from the regional node, this approach will provide a penalty on consumers located close to the point of importation. Considers that neither the consultation paper or the Rule Change Request provided any reason for making this change, yet it will necessarily increase the costs incurred by consumers located close to an importation point. p. 16.	As discussed above, the calculation of locational transmission charges is based on a customer's proportionate use of the network assets. This is related to the location of the customer on the network itself and not related to the location of the regional reference node. Additional discussion is outlined in section 5.4.3.
NGF	Supports a load export charge that reflects the costs of all assets which contribute to export flows to the adjoining region as if an adjoining region was a load on the region boundary. p. 1.	The comments are noted.
EnergyAustralia	The major proportion of the non-locational costs is associated with assets servicing customers within a region, rather than the small number of assets near the jurisdiction interface, whose locational cost would be allocated to customers in another jurisdiction. Passing on these charges between regions, particularly in respect of sunk assets, would not contribute to "efficient investment in, and efficient operation and use of, electricity services". Therefore, is not convinced that passing on the non-locational component of TUOS to another region contributes to pricing efficiency or to the market objective. p. 3.	Discussion is outlined in chapter 5.

Stakeholder	Issue[56]	AEMC Response
EnergyAustralia	If the goal of the pricing arrangements is to promote efficient pricing signals, the AEMC could consider demonstrating to customers that it has considered whether there should be a proportional allocation of cost to generators upstream of inter-regional interconnectors to provide efficient pricing. p. 3.	The Commission notes the comments raised and notes that broader issues relating to the pricing and other regulatory provisions for the transmission network will be considered by the AEMC under the Transmission Frameworks Review.
Calculating and recovering the load export charge		
Integral Energy	Supports the adoption of consistent pricing methodologies across the NEM regions for the determination of load export charges, wherever feasible. p. 1.	The Commission has maintained the principles of the existing framework for Chapter 6A of the Rules where the Rules set out the principles and additional implementation details would be set out in the AER guidelines. The Commission notes that the principles are aimed at promoting the adoption of consistency across regions and the AER is required to take this factor into consideration.
Grid Australia	By treating the point(s) of connection of a notional interconnector as a connection point the prices and charges can be calculated in a manner broadly consistent with the principles. p.7.	The comments are noted and additional discussion is outlined in section 5.4.3.
Grid Australia	A broader range of transitional provisions are required to allow CNSPs to modify their approved pricing methodologies to the extent required to implement the changes arising from this Rule change. This would eliminate the double jeopardy inherent in the requirement to be compliant with both the Rules and the approved pricing methodology. p. 7.	As discussed in section 6.4.3, the Commission has provided transitional provisions to allow TNSPs to amend their pricing methodologies.
Grid Australia	The most material difference between pricing methodologies is the implementation of the CRNP in the Victoria region, which has been identified in the Rule change request. p. 7.	The comments are noted.

Stakeholder	Issue[56]	AEMC Response
Grid Australia	ElectraNet and Transend use approved implementation of the modified CRNP methodology and considers this has no material impact on the proposed load export charge. p. 7.	The comments are noted and additional discussion on the calculation of the load export charge is set out in chapter 5.
Grid Australia	The Rules should not be overly prescriptive in the calculation of the load export charge. Given the extremely complex nature of prescribed transmission pricing to introduce additional complexity in the Rules runs the real risk of unintended consequences arising. Grid Australia considers it would be more appropriate for the more detailed implementation issues to be dealt with in changes to TNSP pricing methodologies, which would be subject to approval by the AER. p. 8.	As discussed in chapter 5, the Commission has maintained the existing principles of Chapter 6A where the Rules set out the principles for revenue and pricing and additional implementation details are dealt with under the AER's guidelines and TNSPs' pricing methodologies. Some clarifications to address the requirements for the load export charge have been added.
Grid Australia	Notes that in order for the CRNP process to operate the energy flows in both directions on the interconnector(s) must be modelled rather than setting the flows to zero when it is importing. This is consistent with the way interconnectors are currently modelled for prescribed pricing. Conversely, when calculating postage stamped prices and charges only the half hourly load (export) component of the energy flow should be considered as otherwise it is possible to have negative charges in some months. This does not appear consistent with the intent of the Rule change request. p. 9.	The Commission notes that the Rules would provide the principles of the load export charge. The AER's pricing methodology guidelines would provide additional guidance on any specific implementation issues and TNSPs' pricing methodologies would provide additional clarification. This process would provide the opportunity to utilise the expertise of the AER and TNSPs.

Stakeholder	Issue[56]	AEMC Response
Grid Australia	There is no available methodology which would allow the export charge from the adjacent region to be passed through to customers using the CRNP methodology which would not in turn influence the export charge to the adjoining region. Accordingly an alternative methodology is required. The most administratively efficient mechanism would be to prorate the charge to customers on the basis of their expected annual charge for that component of their prescribed transmission charges. p. 9.	The Commission understands that TNSPs, through the modelling process, have been considering the requirements for performing the actual calculations for a load export charge and that it may be possible for an "iterative" approach to be taken to allow the required charges to be calculated.
MEU	Noting the requirement under the clause 6A.23.4(e) of the Rules relating to the recovery of prices for prescribed TUOS services are to be recovered based on demand at times of greatest utilisation of the transmission network, questioned why AEMO, as the Victorian TNSP, must be required to change its pricing policy from one which explicitly meets the pricing requirement set by the Rules, to one that does not meet the Rules in order to meet the inter-regional transmission charging arrangements. pp. 9-10.	The Commission notes that the amendment that is required of AEMO's pricing methodology relates to the calculation of the locational component of the prescribed TUOS service charge. This locational component must be calculated using either the CRNP or the modified CRNP methodology. Under the modelling processes of these methodologies (which are defined under Schedule S6A.3 of the Rules) there are different ways of achieving the pricing principles under the Rules of modelling the system to determine the times of greatest utilisation of the transmission network. The amendment to AEMO's methodology would be more consistent with the introduction of the load export charge and would prevent any distortion being created in the price outcomes. Additional discussion is outlined in section 6.4.3.

Stakeholder	Issue[56]	AEMC Response
MEU	Concerned that the current proposal to allocate inter-regional costs in an exporting region to power importing regions does not take into account benefits of interconnection in terms of reliability. The mere presence of the ability to transfer power from one region to another when power shortages occur, has major value, even if the transfer occurs only occasionally. The MEU has a concern that the cost allocation approach used will overlook this benefit to a normally exporting region, and transfer these costs to a region which usually imports power. p. 10.	The NTP and RIT-T ensures that efficient transmission investments are made giving consideration to a number of factors including the potential market benefits provided by each investment. Through these processes under the regulatory framework, appropriate consideration is given to potential benefits of each investment.
MEU	The change proposed by the rule implies that the load export charge will be based on the volume of energy transferred, as if the load was located at the border of the two regions. What is totally absent from the proposal is how this apparently simple philosophy will be addressed in the complexity that is the NEM and its structure which allows free flow of electricity between regions. p. 14.	As outlined above and discussed in chapter 5, the Rules sets out the principles to be applied. The AER's pricing methodology guidelines and the TNSPs' pricing methodologies would set out additional implementation considerations.
MEU	There is a need to clarify if the approach is to require each interconnector to be assessed separately, or whether the flows on the two interconnectors are to be aggregated. Further there is a need to reflect the value of these counterflows to each region. p. 15.	As discussed in chapter 6, the load export charge would be based on gross flows.

Stakeholder	Issue[56]	AEMC Response
MEU	Has considerable doubt as to the methodology which will be used to develop the load export charge for transferring power from one region to another. Considers there are a number of issues that would need to be addressed including whether the load export charge is an average of the net flows or is to be calculated for both regions; determining the appropriate cost allocation. The implication of the Rule change request is that cost allocation, when developing the load export charge, should reflect the times of maximum demand in the region, yet the Rule change proposal implies that the cost allocations will be made on the averaging used by most TNSPs. pp. 16-17.	The Commission notes that prices generally are based on a forecast value or historical amount. However, once actual flows are known, adjustments would be made such that the prices paid by customers reflect the actual usage over time.
MEU	Due to the various bases on which the load export charge could be developed, there is a need for a high degree of prescription so that all consumers are treated on a consistent basis, bearing in mind that under the current approach to pricing methodology, almost every TNSP has a different approach. It would be bizarre if the pricing approach used by one TNSP resulted in a lower cost for the same service. p. 27.	The Commission considers that it is desirable that a consistent approach across the NEM is adopted where appropriate while allowing a certain degree of discretion to the AER and TNSPs to adopt methodologies that reflect any unique circumstances in a region. Given the nature of the load export charge, the Commission considers the greater co-ordination between TNSPs would be encouraged in order to facilitate the required calculation processes.
NGF	Supports a load export charge with a locational and non-locational component of prescribed TUOS, and the charge from prescribed common services to be charged to TNSPs in the relevant interconnected areas. p. 2.	The comments are noted.

Stakeholder	Issue[56]	AEMC Response
AEMO	A consistent national approach needs to be determined, justified and implemented as part of introducing inter-regional TUOS. p. 4.	As discussed above and in chapter 5, provisions under the Rules have been clarified to accommodate the introduction of the load export charge. In addition, the AER and TNSPs would be required to amend the pricing methodology guidelines and pricing methodologies respectively.
AEMO	The current Rules provide for an arbitrary 50:50 split into the locational and non-locational components of prescribed TUOS charges, which most regions adopt. The Rules also permit other approaches which seek to better reflect the intent of giving efficient price signals. One would expect that a consistent approach needs to be adopted nationally in this respect. p. 4.	Discussion is outlined in section 5.4.3.
AEMO	The Rules allow the adoption of either CRNP or a modified CRNP process. The Rules also provide little detail in the implementation of either approach. We consider that the whole approach needs to be checked to ensure that it works appropriately and deals with new forms of non-synchronous generation. Also considers that further work is required on consistency of approach. p. 4.	The Commission understand that TNSPs, including AEMO in its capacity as a TNSP in Victoria, are further analysing the application of the CRNP and modified CRNP methodologies to consider the impact of non-synchronous generation on these methodologies and that a Rule change request may be made to address any potential amendments required.
AEMO	The allocation of a proportion of the non-locational component to the load export charge needs to be questioned. If it remains, a consistent approach would need to be decided and implemented nationally at least in respect of the portion assigned to customers in importing regions. p. 4.	The composition of the load export charge is discussed in section 5.4.3.

Stakeholder	Issue[56]	AEMC Response
AEMO	The locational component of prescribed TUOS service is based on CRNP or modified CRNP methodology which itself is based on the value that network assets provide to network users. Times of greatest value generally correspond to times of regional system peak and higher prices. An interconnector is no different in this regard - it will have greatest value to the network users in an importing region at times of peak demand. It is therefore more efficient for the inter-regional TUOS rules to limit the charges attributed to an importing region to the locational component of the exporting regions' prescribed TUOS charge and guiding when the appropriate survey period to measure and model system loading. p. 5.	The composition of the load export charge is discussed in section 5.4.3.
AEMO	By its nature, the non-locational component of prescribed TUOS service charges is inefficient because no account is taken of its utilisation in the network by the importing region and it is not based on the CRNP or modified CRNP calculations. As such, non-locational charges do not appear to have these same efficiency outcomes. If the adjusted non-locational component is to be part of inter-regional TUOS charging regime, then consideration should be given to the option of a single national non-locational price where the NEM aggregate is allocated to all NEM transmission users independent of their region and particular interconnector flows. p. 6.	The composition of the load export charge is discussed in chapter 5.

Stakeholder	Issue[56]	AEMC Response
AEMO	A change in the methodology of allocating transmission costs nationally raises the possibility of a quantum change in a region's TUOS charges. This is also an issue for long term charges where movements in generation investment and dispatch have a material impact in TUOS pricing. This is both a practical implementation issue and also a concern in terms of efficient price signalling. The value of these measures in terms of their ability to drive more efficient outcomes needs to be questioned if they exhibit a high level of volatility from year to year. p. 6.	Price volatility is discussed in section 7.4.
EnergyAustralia	Should the Rule change proceed, the overriding principles concerning cost allocation to intra-region load connections using the CRNP allocation approach are also appropriate for interconnected loads. However, again, NEM participants would benefit from quantitative analysis being undertaken to determine the impacts. p. 6.	TNSPs through Grid Australia and AEMO, in its capacity as a TNSP in Victoria, have prepared modelling on the potential impact of the load export charge on the redistribution of transmission charges. Modelling results are discussed in section 7.4.
EnergyAustralia	An obligation needs to be placed on the TNSP in the importing region to pass on [the locational component of the inter-regional TUOS] in a cost reflective manner to DNSPs in the region. In addition, considers that economic price signals would be preserved only if inter-region postage stamp price components were recovered on the same basis in the importing region. p. 7.	The recovery of the load export charge is discussed in section 5.4.4.

Stakeholder	Issue[56]	AEMC Response
Treatment of settlement residue proceeds; Market Network Service Providers		
Integral Energy	Questions whether the proposed change in the way that inter-regional settlement residue auction proceeds are returned to customers in the importing region is likely to mean a net improvement in the locational signalling. Ideally, Integral Energy would like to see the Commission provide analysis that demonstrated that reducing the auction proceeds available to customers who import across the interconnector doesn't over-value the congestion costs and therefore potentially distort the investment signal. It may also be appropriate to review the effectiveness of the change after a period of several years. p.2	As discussed in section 5.4.5, the Commission considers that settlement residue auction proceeds should continue to be returned to customers on a locational basis.
Grid Australia	The change to prevent the locational return of settlement residue auction proceeds to customers in the exporting region is a material departure from the principles. Considers that an alternative would be to include it as an adjustment to the prescribed TUOS services - pre-adjusted locational component - customer connection points. This would then result in it being allocated in a manner closer to the proportional use of the assets. p. 7 and p. 9.	As above.
AEMO	The return of settlement residue auction proceeds would be more efficient through the locational component since the receipts arise from the use of the interconnector. Ideally the SRA auction proceeds would be netted off the amount transferred as the load export charge from the adjacent region and allocated locationally. p. 4.	As above.

Stakeholder	Issue[56]	AEMC Response
NGF	Supports settlement residue auction revenues, which are currently offset against a common service charge. Under this proposal, all customers receive a more even spread of revenue from SRA auctions. p. 2.	As above.
EnergyAustralia	Supports in principle the proposed change to return the settlement residue auction proceeds to customers via the non-locational component of TUOS. Considers that the proposed change would be an improvement since the year on year variation of settlements surpluses leads to instability in the cost reflective components of TUOS charges. However, notes that participants would benefit from quantitative analysis being undertaken to determine impacts for customers. p. 8.	As above.
MEU	An MNSP should pay for the load export charge just as an exporting region TNSP would do so for providing the same service directly across a regulated interconnector. This approach is consistent with the concept that the beneficiary pays for the provisions of assets needed to deliver the service to it, and reflects equity between consumers in an exporting region with the MNSP that uses those assets for generating profits for itself. Further it reflects the analogy of an MNSP being effectively a generator at the regional boundary. p. 26.	The proposed provisions allow for any assets that are used by an MNSP, and where the costs for the assets are regulated, to be included in the load export charge. Otherwise, MNSPs are excluded from the load export charge provisions as the revenue and prices of MNSPs are not regulated where MNSPs earn their revenue from participating in the spot market.

Stakeholder	Issue[56]	AEMC Response
NGF	Supports the exclusion of MNSPs from the proposed load export charge. As MNSPs are unregulated in the NEM, they are excluded from the pricing provisions of Chapter 6A of the Rules. Furthermore, MNSPs recover their revenues from the market and are not relevant to developing a load export charge. However, this need not limit charging of inter-regional TUOS charges between regulated Network Service Providers on either side of a MNSP. p.3.	MNSPs will be excluded from the load export charge.
AEMO	It is appropriate to exclude MNSPs from the inter-regional transmission charging process. However noting that inter-regional flows do occur over MNSPs and will need to be taken into account in the load flow modelling analysis and decisions taken as to how to treat any sums allocated to their connection points in this process. p. 6.	As above.
EnergyAustralia	It would be inappropriate for the presence of Basslink (or any other MNSP) to inhibit the transfer of a TUOS charge between NEM regions. Considers that the arrangements will require ether: (1) the MNSPs, as interconnected parties, to receive TUOS charges from the exporting region and then to recover these charges from the importing region; or (2) inter-region TUOS charges are settled directly between the TNSPs connected to a MNSP. Considers the second alternative would be more efficient from the perspective of transaction costs and administrative complexity. p. 8.	As above.
Transition and implementation		
Integral Energy	Supports the transitional arrangements proposed in the Consultation Paper. p. 1	Implementation and transitional requirements are discussed in chapter 6.

Stakeholder	Issue[56]	AEMC Response
Grid Australia	With regards to administrative efficiency and the level of prescription for administrative processes, considers that specifying gross payments on a monthly basis with provisions for other arrangements to be agreed between parties would be reasonable. In the absence of a connection agreement or other enforceable instrument between adjoining CNSPs also considers it would be appropriate to specify default conditions or require terms to be agreed between parties. Does not believe that any additional prescription would be warranted. p. 10.	The Commission generally agrees that the level of prescription in the Rule proposed by the MCE in relation to the CNSP billing requirements appear to be reasonable and have been reflected in the Draft Rules.
Grid Australia	There does not appear to be a material increase in the prudential risk to be managed as a result of the proposed requirements. p. 10.	The comments are noted.
Grid Australia	It is appropriate for the AER to amend the pricing methodology guidelines to take into account the impacts of this Rule change process for proposed pricing methodologies submitted as part of future revenue applications. p. 11.	The Commission agrees that the AER should amend its pricing methodology guidelines to reflect the new requirements for the load export charge. This is discussed in sections 5.4.3 and 6.4.3.
Grid Australia	Considers it is appropriate to have a general transitional provision allowing CNSPs to modify their approved pricing methodologies to the extent required to implement the changes arising from the Rule change. As with the AEMO specific transitional provision it would be appropriate to have the AER approve these proposed changes. It would not be necessary for the guideline to be amended in order for the AER to assess the changes required to the pricing methodologies within the revenue control period. p. 11.	The Commission agrees that TNSPs should be able to amend their pricing methodologies to take into account the new requirements. This is discussed in sections 5.4.3 and 6.4.3.

Stakeholder	Issue[56]	AEMC Response
Grid Australia	Consistent with Grid Australia's previous submissions, strongly supports the adoption of 1 July 2012 as the earliest prudent commencement date. This is due to: • the requirement to amend pricing methodologies; • that Power link will be subject to chapter 6A of the Rules at that time; and • that the CNSPs will be required to commence the calculation of the charge for adjoining CNSPs as early as January 2011 to meet the AEMC's proposed commencement date. p. 12.	As discussed in section 6.4.4, the Commission considers that a 1 July 2012 implementation date would allow for sufficient public consultation on the pricing methodology guidelines and pricing methodologies, which would require amendment by the AER and TNSPs respectively.
EnergyAustralia	Does not believe that the proposed arrangements could reasonably be implemented by 1 July 2011. Elsewhere in its submission, it has stressed the need for modelling to be undertaken to identify the pricing impacts of the proposal before the policy details and the date of its introduction are established. p. 10.	As above.
NGF	Proposes that the AER reviews the pricing methodology of all TNSPs to ensure they comply with their pricing methodologies following the implementation of a load export charge. p. 2.	As above.

Stakeholder	Issue[56]	AEMC Response
NGF	Proposes that the AER formulates any required changes to its pricing methodology guidelines to accommodate a load export charge. p. 2. Submits that the AER should refrain from adopting a new set of guidelines, independent of the pricing methodology guidelines, to develop a load export charge. p. 3.	The Commission agrees that a separate set of guidelines would not be required and that the AER should be required to amend its existing pricing methodology guidelines.
NGF	Proposes that TNSPs apply a load export charge which could be implemented on a gross or net basis, but should be levied on the same basis throughout the NEM. They would set the charge based on the use of each individual TNSP's assets on either side of a region and ensure it was developed in accordance with their own pricing methodology. p. 2. Submits that the AER should develop consistent and transparent guidelines in gross or net payment procedures with TNSPs for the billing of inter-regional TUOS. p. 3.	The Commission agrees that each TNSP/CNSP would set charges based on each individual TNSP's assets within its region and developed in accordance with its pricing methodology. The AER will also be required to amend its pricing methodology guidelines to take into consideration the load export charge requirements.
NGF	CNSPs should provide estimates of the load export charge to be levied to other CNSPs before 15 May each year. p. 3.	The Commission agrees that this would be required to allow each TNSP to finalise its pricing proposal within the required timeframes. Discussion is outlined in chapter 6.
NGF	Credit issues between CNSPs regarding the billing of inter-regional TUOS can be resolved between TNSPs without guidance from the AEMC. p. 3.	The Commission agrees that additional guidance should not be necessary.

Stakeholder	Issue[56]	AEMC Response
NGF	The charge could potentially impact customers in each region differently as charges in one region increase and charges in another region decrease. Therefore, to deal with any unfortunate impacts associated with this charge, we support transitional provisions for the TNSPs to initially recover the load export charge through the non-locational component of TUOS and permit AEMO to revise its pricing methodology. p. 4.	The Commission considers that the transitional arrangements under the Rule change request to allow the load export charge to be initially recovered on a non-locational component only was to allow some form of load export charge to be introduced without requiring all TNSPs to amend their pricing methodologies. However, given that the TNSPs will now be required to amend their pricing methodologies under the Draft Rule, the Commission considers that the transitional provision to allow the load export charge to be recovered on a non-locational basis only would not be required.
AEMO	The derivation and publication of transmission prices must always work to a tight timetable to allow them to be incorporated in distributor's tariffs an retailers' price offers. The national process therefore needs to fit to these requirements. Notes that , in order for locational TUOS charges to be recovered on the basis of customers' proportionate use of network assets in the adjoining region, TNSPs would need to calculate their load export charge and then redo their TUOS calculations again after they receive export load charges from adjoining regions. This will result in an iterative process that ends only when all TNSPs resolve their TUOS prices in light of all other TNSPs' cascading load export charges. A practical solution will need to be identified in the testing and assessment process. pp. 4-5.	The Commission considers that by requiring the AER to amend the pricing methodology guidelines and to require TNSPs to amend their pricing methodologies, implementation issues would be able to be clarified. With respect to the timetable for the derivation and publication of distributor tariffs, the Commission considers that where possible, TNSPs should share up-to-date estimates with DNSPs.
EnergyAustralia	The proposal will introduce a greater level of price uncertainty, both initially and on an ongoing basis. To address this issue, considers that the publication date for inter-regional transmission charges should be 15 April of each regulatory year which would allow DNSPs to provide sufficient notice to customers of likely changes to prices in the forthcoming year. p. 2.	As above.

Stakeholder	Issue[56]	AEMC Response
EnergyAustralia	In the likely event that the price impacts arising from changes to the TUOS allocation approach are material, a degree of prescription on the cost allocation approaches used by individual TNSPs will be necessary. The Rules should also specify the types of assets to be included in the cost allocation. p. 7.	The Commission considers that the AER's pricing methodology guidelines should clarify the types of assets that should be included, which would be consistent with the current provisions under the Rules.
EnergyAustralia	The AER's existing transmission pricing methodology guidelines do not appear to require modification to enable the recovery of inter-regional TUOS charges. p. 10.	As discussed in sections 5.4.3 and 6.4.3 and noted above, the AER will be required to amend its pricing methodology guidelines.
EnergyAustralia	Noted that transitional provisions for the introduction of inter-regional transmission charging could be implemented at the transmission level, at the distribution level, or some combination of the two. Their interaction with existing pricing constraints for both transmission and distribution charges will also need careful consideration, to ensure that: (1) the impacts on the transmission and distribution connected customers are balanced; and (2) each TNSP or DNSP is not prevented from recovering the regulated revenue for its prescribed services.	The Commission notes that as the load export charge would be recovered from customers through the existing components of the prescribed transmission service charges, a new category of charges would not be created in terms of the amounts to be recovered by DNSPs. For this reason, DNSPs and retailers should be able to pass through these costs to the same extent as existing network charges are passed through. With respect to ensuring that the impacts on transmission and distribution connected customers are balanced, the Commission notes that the locational component of the load export charge is based on proportionate use of the transmission network, as discussed in section 5.4.3.

Stakeholder	Issue[56]	AEMC Response
Other issues		
Gallaugher & Associates	Suggests that the proposal as presented is overly prescriptive. Considers an alternative would be to simply obligate the NTP to prepare and publish a methodology for quantifying the charges in accordance with some limited but quite well defined objectives, and to prepare, publish and administer operating procedures for its implementation. In this way the interregional charges would all be determined on a consistent basis across all interconnectors. p. 2.	The Commission has taken into consideration the requirement to achieve an appropriate balance between the level of prescription under the Rules and the ability for the AER to establish guidelines to assist with the implementation of the load export charge. This is discussed in section 5.4.3.
Gallaugher & Associates	The proposal will at best only marginally enhance achievement of the NEO. Considers that given the gross inadequacies of existing transmission regulatory and pricing arrangements in the NEM from an economic efficiency standpoint, it is not sensible to base one's entire argument for any inter-regional network charging proposal including this one around the question of economic efficiency and the NEO. p. 2.	The factors that must be taken into consideration in any Rule change process is set out under the NEL. These requirements and the Commission's consideration of them are set out in Chapter 2.
Gallaugher & Associates	The Consultation Paper should have included information on the potential impact of the proposal on existing transmission cost allocations and TUOS charges in each of the NEM regions. Considers that when quantitative data is considered it will show that inter-regional transmission charging is quite immaterial and not worthy of the amount of time and attention it has already attracted and will continue to attract until it is resolved. pp. 2-3.	As discussed above, the Commission notes that TNSPs, including AEMO in its capacity as a TNSP in Victoria, have undertaken modelling of the potential impacts of the load export charge on the redistribution of transmission charges. Consideration of the modelling outcomes are discussed in section 7.4.

Stakeholder	Issue[56]	AEMC Response
Hydro Tasmania	Supportive of the request for the public disclosure of an assessment of the magnitude of net inter-regional payments based on historical network flows. However considers it would be unwise to assume that the historical flows will be a reliable guide to future performance, given the projected large growth in renewables in South Australia and the untapped wind energy potential in Tasmania. p. 2.	As discussed above, modelling outcomes are outlined in section 7.4.
Gallaugher & Associates	The Consultation Paper should have disclosed in quantitative terms what in fact has occurred since NEM commencement on each interconnector in terms of energy flows, inter-jurisdictional payments; interconnector residue payments and settlement proceeds. p. 3.	The Commission notes the comments made and consideration of these issues are set out in section 7.4.
Hydro Tasmania	It would probably be more pertinent for an assessment to be provided on the basis of a forward-looking view but recognising that a degree of uncertainty will always surround projected system demand, generation location and consequent power flows. The materiality of net inter-regional payments may be low today but is unlikely to remain so. p. 2.	The Commission notes the comment made and notes that if changes in inter-regional flows occur in the future then it would be expected that the load export charges would be reflective of the changing utilisation of inter-regional transmission assets.
MEU	There are higher priority issues that need reviewing with respect to the transmission revenue and pricing regulatory framework. Concerns over the potential in the incidence of blackouts and brownouts in South Australia indicated in the CRA modelling for the AEMC Climate Change Review have not been addressed as the AEMC's final report was silent on this issue. p. 3.	The comments are noted.

Stakeholder	Issue[56]	AEMC Response
MEU	Despite the amendments to Chapter 6A of the Rules there has been almost no investment in increasing inter-regional electricity flow capability. Considers that the causes of this lack of investment in inter-regional transmission is a much higher order issue for the NEM than this Rule change request which merely allocates costs between consumers. p. 5.	The comments are noted. Transmission Frameworks Review will be examining a broad range of issues. It is noted that the Commission had published an Issues Paper for this review and is currently in the processes of reviewing the submissions received.
MEU	The MEU has long been a supporter of the view that justification of interconnector augmentation should include the benefit consumers get from the greater competition between generators that results from this investment. The MEU considers that its view has been denied by the AEMC on the basis that to incorporate such in the regulatory test does not provide a net benefit to the market but it is a "transfer of wealth" between generators and consumers. The MEU considers that this is inconsistent with the fact that as consumers pay for transmission services, they should not have to share the benefit of the investment with generators. p. 19.	The Commission notes that generators do contribute to transmission charges through prescribed entry charges. In addition, as noted above, the Transmission Frameworks Review will also include consideration of the broader framework.
MEU	The AEMC has made no attempt to quantify the benefit the consumer in the importing region gets from using the assets in the exporting region, but assumes that they will exceed the also unquantified cost to use the assets in the exporting region. It is axiomatic in the Rules that a consumer should not be required to pay more for a service than the benefit it receives; therefore if the cost of the service exceeds the benefit a consumer gets, then it should not pay more than the value of the benefit it receives. p. 20.	Modelling results are discussed in section 7.4.

Stakeholder	Issue[56]	AEMC Response
AEMO	Unsure what meaning the proposed definition of prescribed TUOS services is attempting to convey but assume that it is trying to include benefits accruing to regions that are connected to the original region by an intervening region(s). If this is indeed the intention, it should probably be made more explicit in order to remove potential ambiguity. p. 7.	The Commission notes that the underlying concept for the load export charge is that adjoining regions should be treated in the same way as customers within the region. For this reason, the definition of prescribed TUOS services has been expanded, consistent with the existing definition, so that TNSPs from the adjoining region are treated in the same way as connection points within the region.
EnergyAustralia	Regional interconnections comprise lengthy, high capacity, high cost transmission assets connecting remote generators to jurisdictional interfaces. However, under the inter-regional TUOS proposal, generators do not pay charges for their use of the capacity of shared network assets. Generators in the exporting jurisdiction can make free use of these assets and the entire cost of the assets be borne by the downstream customers in the importing region. pp. 3-4.	The Commission notes that these related issues will be further considered under the Transmission Frameworks Review.