



Major Energy Users Inc.

Australian Energy Markets Commission

Draft Rule Determination

National Electricity Amendment (Inter-regional transmission charging) Rule 2010

Comments on the Draft Rule Determination

Submission by

The Major Energy Users Inc

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The views expressed in this document do not necessarily reflect the views of the Consumer Advocacy Panel or the Australian Energy Market Commission. The content and conclusions reached in this submission are entirely the work of the MEU and its consultants.

A condition by the Consumer Advocacy Panel for making funding available to the MEU to provide this submission is a requirement imposed on it by the Ministerial Council on Energy.

This requirement is that this submission must be considered to be a draft until the MCE has the opportunity to review it for accuracies of fact. The MCE review will take two weeks and when MCE approval is granted, the MEU will advise the AEMC of any changes to this submission that are required by the MCE.

The MCE SCO advises that it does not require any changes to the submission and the submission is now “final” and can be made public and listed on the AEMC website

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Executive Summary

The Major Energy Users Inc (MEU) welcomes the opportunity to present its views to the AEMC on its draft determination for the Inter-regional transmission charging rule change proposal.

The MEU considers that the AEMC should not proceed with the proposed rule change in its current form without properly addressing a number of concerns the MEU and other stakeholders, (such as AEMO and Grid Australia) have raised.

The MEU supports, in principle, the concepts of the proposed rule change (in particular to have better cost reflectivity), but finds that the proposal will create more problems and distortions than it addresses.

Whilst the key argument in favour of the draft rule is to provide equitable allocation of costs, it does not provide strong pricing signals to any party that would benefit from the rule. The signals are buried in transmission costs.

The draft rule also mutes other signals and does not address the total costs consumers see in relation to the supply of power and its transport to the load centres.

The MEU further considers that contrary to the AEMC comments:

- A load export charge will directly impact spot pricing and, therefore, the total cost impacts must be addressed
- The draft rule does not promote dynamic efficiency
- The draft rule does not:
 - Improve price signalling to engender behavioural change and so make the NEM more efficient. In fact, the draft rule mutes these signals.
 - Recognise that some of the interconnection assets provide non-price benefits (such as increased reliability) but these non-price benefits are not recognised in the cost assessment
 - Recognise that assets that will be charged for might be essential for the reliable supply in the exporting region
 - Allocate a signal to the party best able to manage the cost incurred but requires the party least able to manage the cause to bear the cost.
 - The draft rule requires AEMO to change its pricing methodology in Victoria to be less representative of peak usage and is contrary to the pricing principles in the Rules (see Rule 6.A.23.4(e))

The MEU has examined the proposed increased costs Tasmanian consumers face in relation to I-R charging and uses this example to highlight examples of

the potential detriments associated with the draft rule. For example, the passing through of the Victorian Transmission Land Tax to Tasmanian (and adjacent States') customers is highly distortive.

The MEU also details specific comments on the AEMC's responses to stakeholders' concerns, of which many of the latter are shared by the MEU.

The MEU believes that a more equitable system might involve the calculation of the LEC to be based only on those assets specifically used in exporting power and for the marginal costs to be allocated in terms of demand on those assets when the region is operating at its peak demand. This recognises that many of the costs an exporting region incurs are totally unrelated to any export of power and, therefore, should not be allocated to an importing region.

Further, there must be recognition that interconnection provides considerable reliability benefits to regions that are not recognised at any point. As the MEU notes, Victoria receives a considerable reliability benefit from Tasmania which is used occasionally, but when it is used, it avoids the potential for involuntary load shedding.

When the changes recommended by the MEU are made to the LEC calculation, it becomes quite apparent that the LEC would become a quite small amount, and therefore raises the concern the MEU enunciated in its earlier submissions on this topic, that introducing inter-regional charging to improve cost reflectivity, becomes a less important issue than other distortions in the electricity market

1. Introduction

1.1 The MEU concerns with the proposal

As noted in its initial submission to this proposal, the MEU supports, in principle, the concepts of the proposal and would otherwise support the rule change provided that it did not create more problems than it appears to solve and more distortions than it resolves.

The AEMC has carried out some cost impacts of the MCE rule change as subsequently modified by the AEMC and, as the MEU forecast, overall it would appear that the beneficiary regions would be SA and Queensland, but with NSW and Tasmania regions to pay more as a result of the change; Victoria will gain a little. On a “per customer” basis, Tasmania is the major loser by the proposed rule change as the Allowed Average Revenue Requirement (AARR) for transmission will increase by over 8% with NSW costs increasing by nearly 6%¹, with proportionate increases in the current transmission charges².

However, it is important to note that nearly all interconnectors were built without undergoing a regulatory test of any kind, so there is no certainty that there was ever a net benefit calculated for the interconnectors prior to their development.

Connections between Victoria and NSW and Victoria and SA were built prior to the advent of the NEM and Directlink and Murraylink were initially constructed as market interconnectors but were later converted to regulated interconnectors. In the case of NSW, the connection between NSW and Queensland (QNI) was committed prior to the commencement of the NEM although its operation did not commence until late 2000. The Queensland government considered that the construction of QNI was a prerequisite for Queensland to enter the NEM. Similarly, the construction of Basslink was essentially a prerequisite for Tasmania entering the NEM.

In the case of QNI, its costs have been shared to a large degree between Powerlink and TransGrid with each paying for the augmentation in their regions. NSW has been a major beneficiary of QNI as it has been a significant importer of power from Queensland.

In contrast, Tasmania (through its wholly owned generator, Hydro Tasmania) has been responsible entirely for Basslink costs. Whilst Tasmania has imported considerable amounts of power from Victoria and is thus a beneficiary of the interconnector, Victoria has been a major beneficiary as well, due to Tasmania supplying peak power to Victoria and thereby increasing reliability in Victoria.

¹ AEMC Table 7.2

² For example, in Tasmania the five largest consumers in the state use some 60% of the power transported, implying that these five will pay more than half of the increase.

This means that all interconnections (except some small upgrades of the connections between Victoria and NSW) have been constructed without the benefit of a regulatory test to formally assess the benefits of the interconnectors or to prove there was even a net benefit and what this benefit was.

It is important that these facts be recognised in light of some comments made by the AEMC in support of its decision to introduce inter-regional charging by use of a simplistic model.

1.2 What is the impact of this proposed rule change?

Overall, whilst the principle behind the rule change has a degree of acceptability (as it should lead to greater cost reflectivity) the MEU is still very concerned that the benefits that might flow from attempting to provide more cost reflective pricing, will be swamped by the detriments and inconsistencies the model proposed generates.

Based on the cost calculations and allocations developed by the AEMC, it is clear that NSW and Tasmania consumers will be paying more for transmission services and those in Queensland and SA will be paying less. The MEU is unable to comment more about the cost allocations because the details of the cost developments are not provided in the AEMC draft determination.

In its draft determination, the AEMC has provided comments to address specific concerns and comments raised by stakeholders and the MEU has addressed some of these later in this response to the AEMC.

It is apparent that the AEMC has retained its simplistic approach to allocating costs, but whilst simplicity is supported in principle, the MEU sees that this simplicity results in some significant detriments and adversely impacts on equity.

1.3 Overall assessment

The MEU considers that the draft rule introduces many anomalies that have not been given sufficient examination. However, the MEU considers that the draft rule processes for the making to and receiving from each region of payments of the LEC are appropriate.

The following sections attempt to provide a greater understanding of the MEU concerns about how the LEC would be calculated.

2. The proposed rule change and the NEO

“The objective of the [National Electricity] Law 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.”

The objective is written in terms of consumers and (amongst other things) the price of electricity as consumers see it. Thus, when the AEMC assesses any rule change proposal, it must examine the impact of the change in terms of consumers.

2.1 The draft rule and the National Electricity Law

Embedded within the Law (section 7A) are six principles which are to provide guidance to setting the Rules in regard to networks. The AEMC needs also to address the draft rule in relation to these principles. These principles require the Rules to provide:

1. A reasonable return to the network owner
2. Incentives to the network owner which promote economic efficiency in the service provision and efficient use of the services
3. The RAB to reflect past decisions
4. A return commensurate with the regulatory and commercial risks faced by the network owner
5. Guidance to address under or over investment in network assets
6. Guidance to address under or over utilisation of the assets

Principles 5 and 6 have particular relevance in relation to this draft rule. Under and over investment and under and over utilisation are managed (in part) by the development and implementation of strong pricing signals.

Whilst the headline argument in favour of the draft rule is to provide equitable allocation of costs (and the MEU has consistently supported this requirement), the MEU has identified that the draft rule does not send strong pricing signals to any party that would benefit from the draft rule. Despite consumers in one region paying more for the use of transmission services, they are not able to do anything which will impact the price signal that is provided, as the signal is buried in transmission costs.

Further, the draft rule mutes other signals and does not address the total costs consumers see in relation to the supply of power and its transport to the load centres. These aspects are developed further below.

This means that the draft rule has not addressed some of the principles that are required to be addressed by the Law.

2.2 Effect on the market

As the cost of power delivered to load centres is the sum of the price of electricity and the cost to the consumer of its transport to the load centre (ie the transmission cost), for the AEMC to examine the cost of transmission in isolation is insufficient. Analysis should be on the basis of the total cost of delivered power.

The AEMC comments that the draft rule does not affect the market. On page 9 it observes:

“Although the load export charge could affect interconnector flows, it would not directly impact spot pricing outcomes as it relates to transmission pricing.”

To state that a load export charge will not directly impact spot pricing is not correct. If interconnector flows are affected (as the AEMC and the MEU both consider is likely), this must have an effect on generator revenues as it means there will be less or more generation dispatched in a region³. If generator revenues are affected, this will impact spot pricing as a generator getting less revenue will have to increase its prices to cover its costs.

Therefore, it is quite logical that when assessing the impact of the rule change the AEMC must address both the cost impact of the changed transmission charging in conjunction with the potential impact on generator pricing.

That this must be done is clear. The purpose of the I-R charging rule is to send price signals as well as to allocate appropriate costs to the beneficiaries of the provision of the asset. If the price signals do not include the effect of the new rule on electricity pricing, then they are inefficient.

2.3 The outcome must increase efficiency

There is no doubt that **allocative efficiency** is improved by charging the beneficiaries of an investment, the cost for providing the assets they benefit from. The MEU supports this concept, providing the costs are shared appropriately and recognise that even in the absence of their ability to transport power between regions, many of the assets are needed by consumers within the region.

³ For example a reduced flow on an interconnector must mean that a generator in the exporting region is dispatched less and a generator in the importing region is dispatched more

However, the MEU takes issue with the basis of the AEMC assessment that the proposed rule change promotes **dynamic efficiency**. In providing a mechanism to reduce potential barriers to coordinated planning of investment in transmission network infrastructure, the AEMC has not addressed the aspect that the draft rule could impact decisions on generation location and by doing so may influence the optimal location for new generation.

As noted above, it is important to note that transmission cannot be assessed in isolation. Transmission is the basic tool to connect generators to large load centres⁴. From a consumer perspective the cost of supply to the load centre is the sum of the price for power plus the cost of transmission.

Therefore, any decision made to vary the way transmission is charged for (and thus impact on transmission planning decisions) has the potential to influence generation locational decisions. The AEMC has not really addressed this aspect of **dynamic efficiency**, as it has only looked at the fact that generator locations will affect inter-regional flows.

That is, the AEMC has only addressed dynamic efficiency from one direction, whereas the issue has two facets – the first identified by the AEMC (that barriers are reduced for planning decisions) and the second (that those planning decisions will impact on generation location decisions).

2.4 The cost to consumers is the sum of generation plus transmission

In its response to the Consultation Paper, the MEU pointed out that there is a basic anomaly in the draft rule. As the MEU highlighted, consumers see electricity supply in terms of the total cost (ie generation plus transmission plus distribution plus retail costs), not in terms of transmission costs as a separate cost. The AEMC in its draft rule discussion totally avoids this, yet it is an implicit requirement of the Objective to see electricity costs in terms of the consumer.

In the case of inter-regional transfers consumers will pay for their power as the sum of the generation plus transmission. In Tasmania for example, Tasmanian consumers will pay ~\$17.50/MWh⁵ average cost for transmission under the AER decision in 2009. The AEMC calculation for I-R charging adds another ~\$1.40/MWh⁶. Thus, by assuming free flow of electricity based on bid prices from generators as the NEM design posits, the Tasmanian consumers pay the power price from highest priced dispatched generator in either Victoria or Tasmania. What the allocation does not reflect, is that the next highest priced generator in Tasmania might be less than the \$1.4/MWh premium Tasmanian consumers are to pay to Transend as a result of this draft rule.

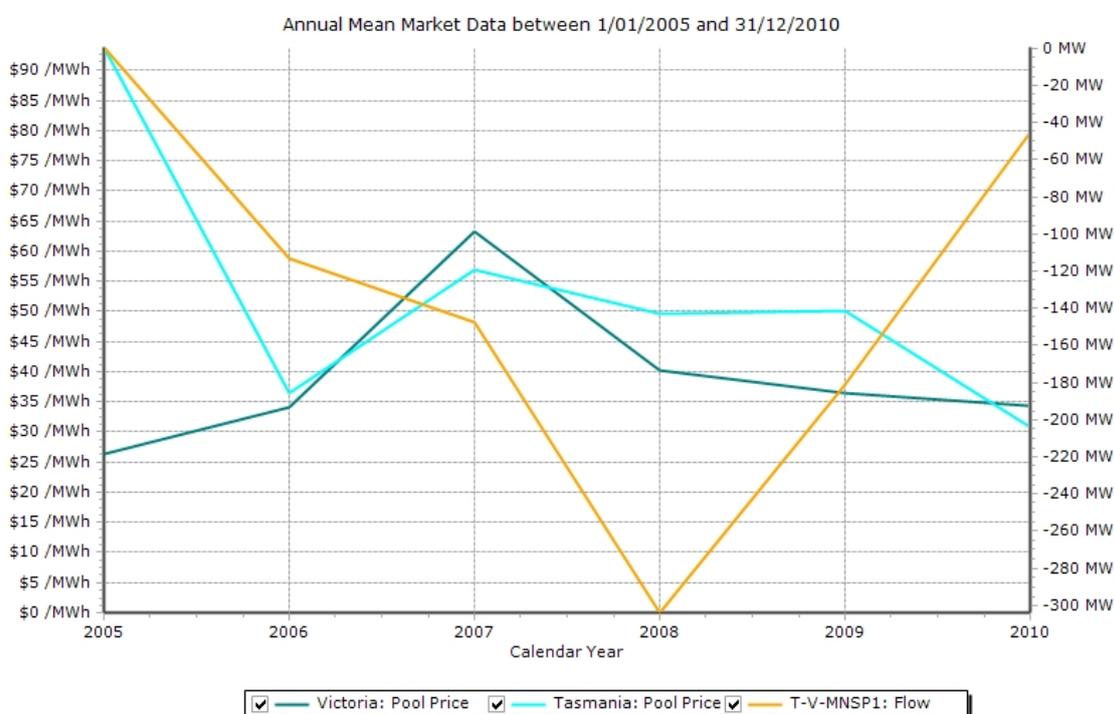
⁴ Distribution being to provide the ability to disseminate power within a large load centre

⁵ AER Final Decision on Transend 2009 related to volume of electricity transported

⁶ AEMC calculation for LEC related to volume of electricity transported

This being the case, for Tasmanian consumers, they might pay overall less for their power by **not** importing from Victoria but paying a small premium (<\$1.40/MWh) to a Tasmanian generator for the power that would otherwise be imported at a lower generation price but which causes an increase in transmission costs.

That this will occur, is clear from the following chart which plots annual time weighted spot prices for Victoria and Tasmania, along with the flows on Basslink.



Source: NEMReview using AEMO data

The chart shows that Tasmania has been consistently a net importer of power from Victoria⁷ and therefore Tasmania would be a consistent payer for use of Victorian transmission assets. Since 2006, there are as many years where the Tasmanian spot price is lower than the Victorian spot price as there are when Victoria has higher prices. It is therefore probable that in at least half of the years a Tasmanian generator could be dispatched in preference to a Victorian generator for less than a premium of \$1.40/MWh⁸.

⁷ Further analysis shows that this import is predominantly at night when Victorian generators need extra demand in order to maintain stability in their generators

⁸ While it is accepted that averaging can cloud the detail involved, the fact that the AEMC has used averaging to develop its costs impacts provides confidence that the MEU approach has validity.

The draft rule requires the Tasmanian consumers to pay for use of the Victorian assets, regardless that there may be a generator in Tasmania that could be dispatched in preference to importing from Victoria and thereby avoiding the LEC that will be levied.

This analysis also highlights that the draft rule will prevent appropriate signalling designed to send price signals. This issue of muting price signals is more developed in the next section.

This analysis highlights that the draft rule, whilst simple in concept, has outcomes that detract from other important elements of the Rules.

2.5 Muting of price signals

The purpose of price signals is to engender a desire to change so that when the change occurs, there will be greater efficiency. The AEMC has overlooked two aspects of this in its assessment of the draft rule:

- Firstly, consumers see the price of power as the sum of the cost of the power plus the cost of the transport to deliver the power. This is addressed in the above sections.
- Secondly, the purpose of a price signal is to encourage behavioural change. Increasing the cost of transmission to reflect importation of power, provides a signal to the consumer, but the consumer has little ability to influence the outcome other than by moving its demand to a lower transmission cost region. However, it is the locational decision of the generator that causes the need for importation.

For example, Queensland has low cost coal and has built more generation than it needs, so it exports to NSW because power in NSW is higher priced. Consumers do not see the lower price from Queensland because the marginal price is set by the higher priced NSW generators, yet NSW consumers will pay a load export charge to Queensland because of the imports into NSW. Consumers only see the increased transmission cost, but generators do not see this signal. Whilst the proceeds of the settlement residue auction are used to ameliorate the pricing differential (and so impact on the overall charge seen by consumers), because the auction proceeds are less than the actual residue, the overall price signal to consumers is muted and is non-existent to generators.

What is required is that generation should be located in NSW (the higher regional price signals this causing flows from Queensland), but the LEC charge (as is the residue from the Settlements Auctions) are buried in the transmission charges which generators do not see.

So the introduction of the LEC does nothing to signal change to those stakeholders who have the ability to cause the desired change.

2.6 The impact on reliability

In its earlier submission on I-R charging, the MEU pointed out that interconnection provided other benefits than the net amount of power flows was not a good indicator of the benefit of interconnection, and that interconnection improved reliability of supply. The MEU noted:

“However, the approach does not appear to reflect the importance of any power flows at any given time.

Such small flows could be for overcoming reliability issues or to offset a large spot price change, where the small flows are in one direction for short periods but which have a massive impact on consumers in the importing region to avoid blackouts or large transfers of wealth between consumers and generators in the importing region. Flows in the other direction might be much greater in aggregated volume, but have a minor impact on consumers in the other region.”

The AEMC has stated that such reliability benefits are included in the RIT-T, but as noted in section 1.1, none of the interconnectors in the NEM were developed under the Regulatory Test regime and therefore do not make allowance for any increase in reliability.

Reliability does have a value. For example, in Victoria, the price of reliability is set as the Value for Customer Reliability and its current value is \$60,180/MWh. It is therefore possible to calculate a value for the reliability provided by Basslink, for example. Using this rate for the cost of reliability, it would require only the transfer of about 240 MWh of power from Tasmania at peak times in a year to eliminate the \$14.2m benefit that Victoria apparently provided to Tasmania in 2009.

It is important that the value of reliability is explicitly recognised in the calculation of an LEC, as to exclude this benefit, grossly distorts any cost reflectivity that the LEC provides.

2.7 Impact on AEMO as a TNSP

In addition, the AEMC points out that it can only make the rule if it requires AEMO to change its approach to setting the transmission charges in Victoria, which is based on allocating transmission costs on the basis of usage on the 10 peak demand days.

The pricing principles in the Rules (see rule 6A.23.4(e) requires the cost allocation to be set on demand at times of greatest utilisation of the network. This is what AEMO does. The other transmission businesses use an averaging technique to set prices. Whilst the AER guidelines allow this averaging to be used, effectively the new rule will prevent AEMO from following its current practice and thereby reducing the effectiveness of the cost allocation and price derivation.

2.8 Impact of assets deeper in the regional transmission network

One of the controlling elements of flow on an interconnector is not related to the capacity of the interconnector, but to the capacity of the assets deeper in the various networks and the locations of generation which impact on the flows near the interconnector.

For example, Murraylink between SA and Victoria was built as a market interconnector and therefore did not go through a regulatory test examination. It has been converted to a regulated interconnector and part of the ACCC decision to allow this to occur was that both ElectraNet in SA and VENCORP/PowerNet in Victoria were to augment their assets to allow Murraylink to operate at its full capacity. In practice, Murraylink seldom operates at its full capacity when the price signals would normally cause this, due to the constraints in the ElectraNet and AEMO/SPAusnet assets deeper in each region.

This means that the TNSPs themselves and the locational decisions of generators have a much greater impact on the level of the LEC, than decisions by consumers. It seems incongruous that although TNSPs and generators cause the resultant need for an LEC, consumers are those that are required to pay for it.

A core principle of the NEM is that the party most able to manage an issue should be provided with the signals to address the issue. In this case, neither TNSPs nor generators are provided with the signals to alleviate the additional cost a consumer in an importing region will incur as a result of the imposition of the LEC.

2.9 Summary

The draft rule does provide a method for allocating transmission costs to reflect the fact that an importing region needs to recompense an exporting region for the use of its transmission assets. Against this benefit, it is likely to impinge on generator pricing.

What it does not do, is:

- Increase dynamic efficiency

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- Improve price signalling to engender behavioural change and so make the NEM more efficient. In fact, the draft rule mutes these signals.
- Recognise that some of the interconnection assets provide non-price benefits (such as increased reliability) but these non-price benefits are not recognised in the cost assessment
- Recognise that assets that will be charged for might be essential for the reliable supply in the exporting region
- Requires AEMO to change its pricing methodology in Victoria to be less representative of peak usage
- Allocate a signal to the party best able to manage the cost incurred to the party least able to manage the cause of the cost.

3. The LEC calculation

The approach used by the AEMC for calculating the Load Export Charge reflects the average usage over a period of time and makes no attempt to recognise that the assets involved might provide a greater benefit to participants other than in the importing region. In this case, the approach to the calculation provides a cost to the importing region that should be allocated to the exporting region.

3.1 Usage at low demand times

A major concern with the allocation of costs based on averaging (such as the AEMC is proposing) is that the costs for transmission are biased against those consumers who use assets at times of low demand, bearing in mind that the assets are built to manage the peak demand loads.

This means that where assets are built to provide for peak demands that occur between (say) midday and six pm on work days but are little used on non-work days or between (say) midnight and 6 am, there is no differentiation in costs between the users at peak times and those that use the assets at non-peak times.

The intention to calculate an LEC based on the volumes of the flows bears little relationship to the size of the assets involved which are driven by peak demand requirements, yet the costs to be allocated to the importing region are set by the size of the assets used.

It would appear to be more equitable if the allocations were based on the share of the demands incurred at times of peak demand for cost allocation rather than on the “anytime” peak demands.

For example, consider that the assets servicing an interconnector are sized to provide for a peaking generator located near the interconnector (eg Origin’s Mortlake generation of 550 MW near the Heywood interconnector to SA) which is needed for an exporting region’s usual demand to match the regional daily peak demand (usually between midday to 6 pm)⁹. If the region then exports power between midnight and 6 am (a low regional demand period) it is likely that the peaking generator would not be operating and there would be a reverse flow on the transmission lines used.

Under the LEC charge calculation, the exporting region would be able to charge the importing region for assets that the exporting region needs for its own use. This would be inequitable because the assets are essential for the exporting region but perhaps not so for the importing region.

⁹ See <http://www.originenergy.com.au/1376/Mortlake-Power-Station-Project>

3.2 Postage stamping biases the costs

The AEMC posits that the LEC will be assessed on the basis that the importing region is a load at the regional boundary of the exporting region.

Under the current approach, TNSPs develop their transmission charges with the locational TUoS being based on the level of maximum demand at an exit point. Even though they are “postage stamped”, non-locational TUoS and Common Service costs are charged at the lesser of a charge calculated on the basis of consumption and on demand. What this means is that a region which often exports but imports occasionally (ie has a low load factor – a high occasional demand but low consumption) will be subsidised by a region which imports consistently (ie has a high load factor – a low demand and a high consumption). As is widely recognised, assets are provided by TNSPs on the basis of demand, and not consumption.

Following this practice, the LEC will benefit those importing regions which occasionally use an interconnector (ie have a low load factor) to those which have a high load factor, even though those with the low load factor might have a significant non-price benefit such as increased reliability and the mitigation of unscheduled load shedding¹⁰.

3.3 Easements and the Victorian Smelter levy

Within the common service costs all transmission businesses allocate the costs of easement acquisition. Even when there is no export, the cost of these easements would have to be paid for by the consumers in the exporting region. An easement does not provide capacity for export; it only provides the right to build on it and its acquisition provides no marginal benefit to any additional user.

It is therefore iniquitous that an importing region should have to contribute to the costs for easements that are required by the exporting region regardless of whether there are imports or not. A similar view can be taken of many of the other costs that are included under the heading of common services – that such costs would be incurred by the exporting region even if there were no exports.

This issue is made even more poignant for importing regions when it is realised that in Victoria, the land tax cost for transmission easements is a specific purpose vehicle which provides funds to pay the Government liability for it providing low cost electricity to the aluminium smelters. Under the AEMC simplistic approach to calculating the LEC, this easement land tax charge (a surrogate for the erstwhile smelter levy) has now been in part transferred to importing regions and therefore the smelter levy is being paid in part by non-beneficiaries of the Victorian government deal with the smelters.

¹⁰ The issue of increased reliability is addressed later in section 4

This is not cost reflective or equitable.

3.4 The “with and without” assessment

In any region, the costs that the consumers incur within the region reflect the needs of the regional consumers. Therefore the only costs that should be passed onto an importing region are the marginal costs that are associated with the export. This is a cost reflective approach.

Consumers in an importing region have their imports limited by the capacity of the system in the exporting region, so effectively the importing region only has access to the marginal capacity available at any one time. When this marginal capacity is reached, and the importing region requires more generation, the importing region has to provide this additional generation capacity. This becomes a cost to the importing region consumers. So due to the inability of the exporting region to match the importing region’s needs all the time, the net benefit to the importing region is limited to the capacity that the exporting region can provide at the peak usage time.

Despite that fact that at other times, an importing region might be able to import more power when the exporting region has spare capacity, the value of exporting regional network to an importing region is limited to the amount of generation capacity the importing region can avoid having to provide. An importing region should only have to pay for the value the network in the exporting region that it can use when it requires the power.

Whilst a load at the boundary (the concept behind the AEMC rule) is provided for with its full needs regardless of peak demands, the supply to an importing region is limited to what the exporting region can provide before there is congestion.

3.5 Summary

In its endeavour to provide a simplistic approach, the AEMC has introduced anomalies into the calculations that distort the outcomes and therefore do not deliver equity which is the basis for good allocation of costs.

A more equitable system might be for the LEC to be calculated based only on those assets specifically used in exporting the power, and for the marginal costs to be allocated in terms of demand on those assets when the region is operating at its peak demand. This recognises that many of the costs an exporting region incurs are totally unrelated to any export of power and therefore should not be allocated to an importing region.

4. The Tasmanian issue

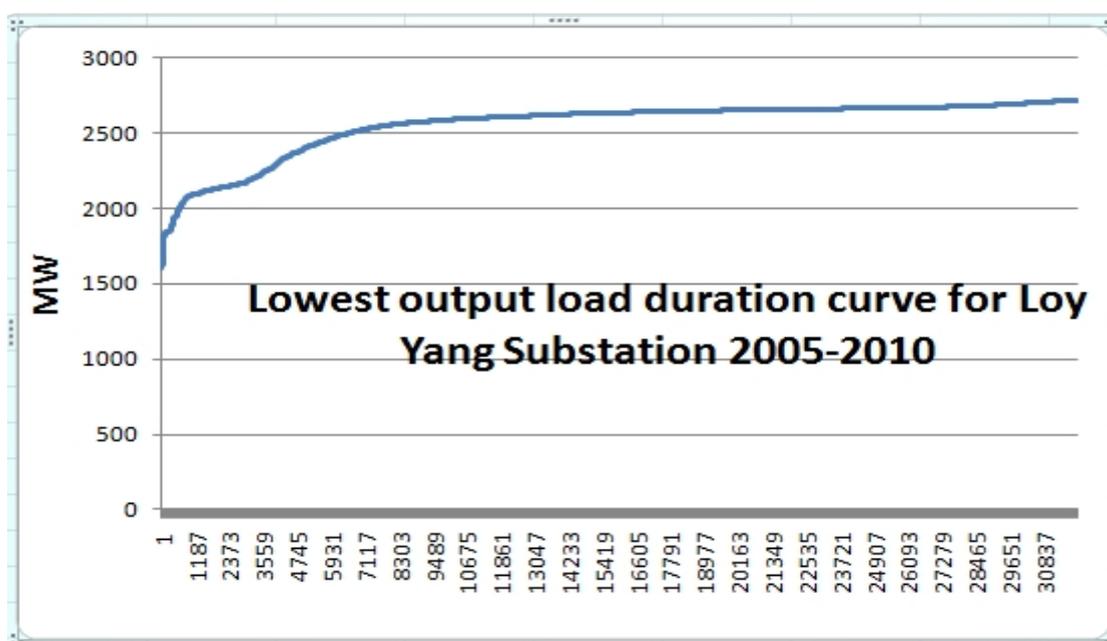
As alluded to in section 2, the MEU considers that the AEMC has not made a proper evaluation of the circumstances surrounding the development of the Vic-Tas regional interconnector when it established the draft rule.

4.1 The history of Basslink

The original of the need for a connection between Tasmania and Victoria was that Tasmania identified that it needed more power than the hydro system could provide and the requirement of “no new dams”. Early in the ‘00s Tasmania examined a coal fired power station and looked at gas firing and determined the most cost effective solution was to use low cost Victorian power as a base load and to use its fast response hydro power in the most effective manner.

The outcome of this decision was that Tasmania benefited from gaining supplies of low cost generation from Victoria and that Victoria would benefit from receiving peaking power from Tasmania. Tasmania (through its government owned generator, Hydro Tasmania) undertook to commission the building of Basslink and to accept the liabilities that this entailed. At the time the assessments were made, there was no indication that Tasmania would have to pay Victoria any costs associated with the use of the Victorian transmission network.

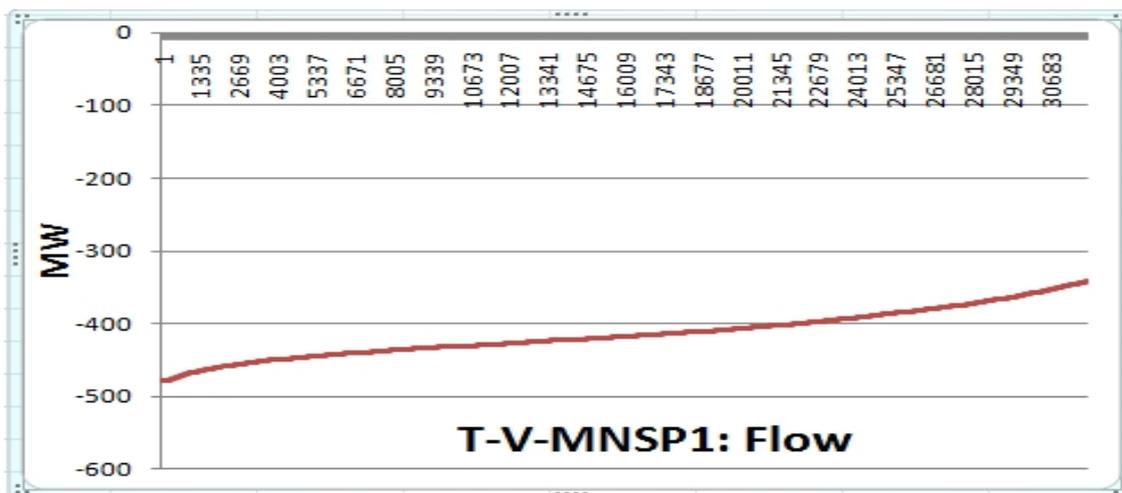
Basslink is connected at the Victorian end, to the Loy Yang substation, which is only a point of generation. In the six years since 2005, the Loy Yang substation has always been a point of generation as the following load duration curve shows.



Source: NEM Review, using AEMO data

The output of Loy Yang substation has never been less than 1609 MW (5:00 AM 30/9/2009) and reached 3316 MW (7:00 AM 13/10/2010).

The carrying capacity of Basslink from Victoria to Tasmania has never exceeded 478 MW flow to Tasmania up to end 2010 (maximum flow into Victoria has reached 600 MW), this means that at all times there has been a flow of power from Loy Yang substation into Victoria.



Source: NEMReview using AEMO data

This means that the delivery of power from Basslink has never used any Victorian assets other than the connection between Basslink and Loy Yang substation. With these facts, it is difficult to see what Victorian transmission assets Tasmanian consumers have used in relation to their imports. This means that the calculation for the LEC is wrong.

It is not difficult to identify where the anomaly lies. Analysis of the proportional structures of the LEC into the three basic elements is shown in the following table, based on table 7.1 in the AEMC draft rule

Load export charge			\$ million (to be paid by the "Adjoining Region" to the "Region")				
Exporting region	Importing region	Flow region	Locational TUoS	Non-locational TUoS	Common service	Total LEC	Total AARR
SA	VIC	SA to VIC	79%	16%	5%	34.2	279.6
VIC	SA	VIC to SA	69%	13%	17%	20.9	423.2
VIC	TAS	VIC to TAS	3%	43%	54%	20.8	
VIC	NSW	VIC to NSW	53%	21%	26%	35.9	
NSW	VIC	NSW to VIC	69%	21%	10%	36.2	850.4
NSW	QLD	NSW to QLD	91%	6%	3%	10.5	
QLD	NSW	QLD to NSW	25%	45%	30%	60.0	644.2
TAS	VIC	TAS to VIC	86%	9%	6%	6.6	175.2
Total						225.2	2,372

This table shows that 97% of the Victorian LEC attributable to Tasmania is 97% comprised of non-locational charges. These non-locational charges include the costs of easements referred to in section 3.3. That such a high proportion of non-locational costs is transferred to the importing region must raise concern about cost reflectivity overall.

It is bizarre that the approach to charging for services used in Victoria should require Tasmanian consumers to pay for such a large proportion of the non-locational transmission system costs levied in Victoria in relation to the small amount of assets actually used.

In counterpoint, the charges between other regions indicate that the bulk of the costs relate to locational TUoS which would, prima facie, appear to be more reflective of the costs actually involved with the provision of the service¹¹.

The non-locational charges are intended to allocate the costs incurred which are unrelated to the location of a consumption point. In fact, with the LEC set at this level Tasmanian consumers are paying for some 7% of the total non-locational and common services costs of the Victorian transmission service. Such a cost cannot by any stretch of imagination be seen as cost reflective when considering the extent of the assets actually used.

Yet the total approach to I-R charging is intended to increase cost reflectivity. In the case of Tasmania, the approach results in a totally different outcome.

This analysis shows that the approach used by the AEMC in trying to develop a simplistic system for calculating the LEC has created a totally iniquitous outcome for Tasmanian consumers.

If the approach to calculation cannot be seen as equitable for Tasmanian consumers, then it is probable that the same view could be applied to the LECs calculated for other regions.

4.2 Other benefits

It was quite clear that Basslink would be primarily a source of base load power for Tasmania. But it has provided a significant benefit to Victoria through the supply of peak power at times when Victoria needs this. As a result, Victoria has received a significant benefit in terms of reliability of supply. This was most clearly felt in Victoria and SA when in late January 2009, due to the failure of Basslink and other transmission elements there were rolling black outs in both

¹¹ A wider review of the costs indicates that the non-locational and common service costs attributable to NSW from Queensland exhibits a similar trend to the Vic-to-Tas LEC but not quite as extreme

regions. This clearly shows that Basslink provides a key element in the reliability of supplies in the Victorian and SA regions.

The MEU makes this point in its response to the AEMC Consultation Paper, that it is insufficient to just allocate costs of transport between regions based purely on the net volume of flows between the regions because the value of the electricity flows to each region are different.

In response to the MEU concern, the AEMC draft determination makes the observation that (page 44):

“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.”

This statement is disingenuous on two counts.

Firstly, the RIT-T is designed to assess the net benefit of an investment. It does not allocate the costs associated with the investment to those who benefit – it only looks at the net benefit overall. Therefore if there is a benefit to Victoria through greater reliability resulting from Basslink, there is no cost allocated to Victoria as a result of this investment because there is no mechanism to do so. The only mechanism to allocate these costs that has been considered to date, is the current draft rule and the outworkings of this show that Tasmania will pay Victoria for the use of its transmission assets because it imports more power than its exports.

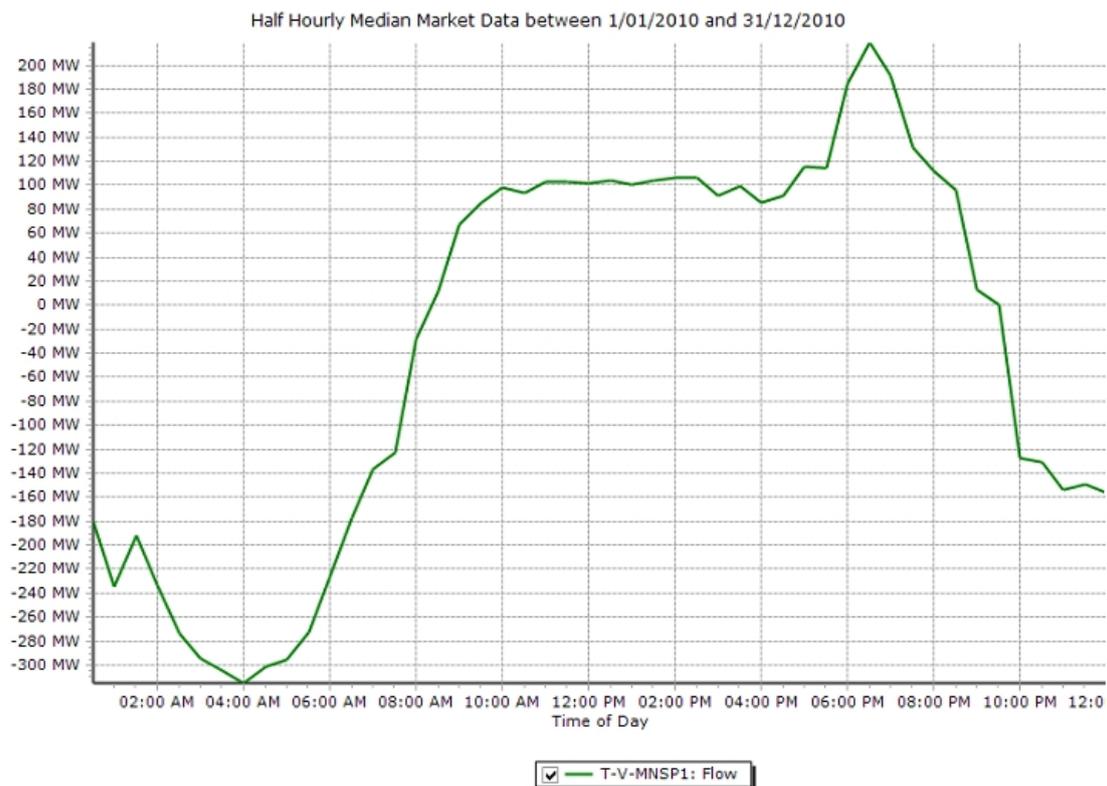
In its response to the consultation paper, the MEU attempted to quantify the benefits of this increased reliability by use of the spot prices that occur to drive imports and exports. In this regard, the MEU considered that high prices result from scarcity of supply and therefore these high prices reflect the value of the increased reliability the imports provide. The AEMC totally avoided any discussion in relation to improved reliability, other than to comment the benefits were accrued elsewhere, but not investigating this issue further or if indeed the AEMC observation really did address the concern.

Analysis shows that there is no cost to Victoria for the value Basslink provides to its increased reliability. Therefore this benefit needs to be recognised.

Secondly, Tasmania has paid all of the costs associated with the construction of Basslink. As Basslink is a market interconnector, there was no RIT-T assessment made and nor was there a National Planning function (NTP) assessment made. To therefore imply that the benefits to Victoria of increased reliability have been separately recognised and included in the RIT-T and NTP assessments cannot be true.

Whilst increased reliability to Victoria might have been a consideration in the development of Basslink, it is most unlikely that Tasmania, in its development of the benefits to Tasmania of Basslink, would have included in its financial assessment of the benefits, that Basslink would increase reliability of supply to Victoria and added this as a financial benefit to Tasmania. Even if this was done, the cost has not been added to Victoria's network costs.

There is no doubt that Basslink provides Victoria with increased reliability. The following chart shows quite clearly that the flows to Victoria on Basslink for 2010 are made at times of Victorian high demand periods, and flows to Tasmania are in Victorian off peak times when the Victorian assets are under-utilised.



Source: NEMReview using AEMO data

A further benefit to Victoria from the Basslink arrangement is that the brown coal generators are able to operate more efficiently (and therefore provide lower prices) because the power transferred to Tasmania is off peak when the generators would otherwise have to turn down output – brown coal generators have flame stability problems at even modest turn downs. However, such an assessment is not one that Tasmania would have included in its development of Basslink, as the benefit accrues to Victoria in terms of lower power generation costs.

4.3 Summary

The entire cost of Basslink is borne by Tasmanians as Basslink is a market interconnector and underwritten by Hydro Tasmania.

The only costs Victorian consumers see in relation to transfers of power on Basslink are those associated with use of the Victorian transmission assets used upstream of the northern terminal of Basslink and many of these assets are used by Victorian consumers as well as by Basslink.

Basslink provides Victorian consumers with improved reliability as is evidenced by the blackouts in Victoria in 2009 when Basslink failed.

As calculated by AEMC (and others) there will be no cost to Victorian consumers for the use of Basslink or the Transend assets used to provide this reliability. This is a direct result of the AEMC assuming that all transfers of power have equal value as the value is based on the volume of transfers rather than the value of the transfers at the time the transfers are made.

It appears that the AEMC approach to allocating costs for I-R transfers fails to recognise that Basslink revenue is guaranteed by Tasmania and all costs for it are a liability to Tasmania. If Victoria undertook its share of the liability for Basslink costs (to recognise the increased reliability it provides Victoria) then perhaps the draft rule would be less discriminatory against Tasmanian consumers, but this is not the case.

Additionally, Tasmania is being adversely affected for using off peak power supplies from Victoria when that usage provides an indirect benefit to Victoria in terms of generation costs.

Overall, the AEMC draft rule discriminates against Tasmanian consumers and imposes on them a cost that is inequitable when the actualities of the interconnector costs are identified.

4.4 Drawing parallels from the Tasmanian assessment

However, if the I-R draft rule makes so many fundamental errors in relation to the Victorian Tasmania transfers, then it is probable that there are similar errors made in relation to the transfers between other regions that will result in significant imposts that are unlikely to be truly cost reflective.

5. MEU Commentary on some stakeholders concerns and AEMC responses

Stakeholder observation	Issue	AEMC Response	MEU observation on AEMC response
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.	The issue for the MEU is that in attempting to reduce the complexity the AEMC has created anomalies that do not deliver an equitable outcome
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.	That because transmission costs are smaller than the costs of supplying power, this is not a reason to discount the concerns. In fact, transmission is not small compared to supply of power. For example in SA transmission costs are approaching \$20/MWh and the average spot price in SA in 2010 was \$40/MWh. So the AEMC observation is not necessarily valid
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	It is insufficient to state that as the TNSP revenue are regulated this obviate the MEU concern. In fact, the MEU sees that the impact on the prices consumers see is the sum of the generation price plus the cost of transmission. Therefore, there is a

		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.	need to assess whether there will be a net increase in the generation plus transmission to assess whether the costs to consumers increases. The AEMC has assessed only the impact on the costs of transmission and neglected to assess the impact of the change on generation prices
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.	The MEU agrees that cost reflective pricing is the goal. The AEMC has introduced a simple model for calculating LEC but it has neglected to assess whether the outcome reflects the actuality. The MEU concern is based on observations that the simple approach suggested by the AEMC does not result in equity
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.	In its discussion, the AEMC has discounted the GA view and is maintaining that the costs of the postage stamped elements should be included. The MEU agrees with the Grid Australia view that signalling will be muted by this approach
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 $\pm 30\%$. Would ask the Commission consider how the process for determining the inter-regional transmission charges could cater for	Discussion is outlined above and in section 7.4.2.	The MEU is very concerned that the LEC will discriminate against Tasmanian consumers and benefit Vic consumer that get increased reliability at no cost. This issue is separately developed in the MEU

	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.		response in section 2
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.	The AEMC response totally disregards the GA observation. Signalling to cause an outcome is a major element of incentive regulation, but the draft rule does not provide any clear signalling at all
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.	The AEMC response totally misses the point. Under the T-Price model used by TNSPs for allocating transmission charges, the model looks at where generation is located and when it is dispatched, and calculates an element of the transmission costs for each load point in reference to this. This means that if generation in a region is located far from the interconnector, then the costs to be allocated to the transfer point will be higher than if the generation was located closer to the transfer point.
Energy Australia	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	Again the AEMC has ignored the fact that consumers will not see a pricing signal and the AEMC states that this is an issue for another place. However, the outcome for consumers will not be changed

		Transmission Frameworks Review.	
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.	The AEMC has decided that the GA issue can be addressed by the AER but AEMC refuses to clarify what is intended so that stakeholders know what is intended
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.	The AEMC has not addressed the MEU concern. None of the major interconnectors currently in use were built under a RIT-T, therefore reliability has not been addressed. This increased reliability provided by an adjacent region has a value and this needs to be included. See comments in section 4 on Basslink
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.	Does the AEMC response mean that there will be a separate LEC for each interconnector. This is not clear as all the discussion is about inter-regional flows, not individual connector flows
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	The Commission notes that prices generally are based on a forecast value or historical amount. However,	This means that consumers that caused the need for inter-regional flows in the past are not charged the

	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.	once actual flows are known, adjustments would be made such that the prices paid by customers reflect the actual usage over time.	costs associated with this service, and that consumers today will be paying for the actions of other consumers in the past. While there might be an eventual "true-ing up" the consumers that caused the problem are not being charged for the costs they incurred
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.	This means that the AEMC doesn't have the problem that it is causing, but has handballed the problem to the AER. The AEMC needs to make it clear what they expect of the rule so there is clarity for the AER and TNSPs
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.	The AEMC discussion just says that each TNSP will derive its own approach. This means that the LEC will be different depending on the approach used by each TNSP. The AEMC has not addressed the AEMO concern
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	The composition of the load export charge is discussed in section 5.4.3.	But the discussion does not address the basic AEMO concern

	need to be decided and implemented nationally at least in respect of the portion assigned to customers in importing regions. p. 4.		
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.	But the discussion does not address the basic AEMO concern
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.	But the discussion does not address the basic AEMO concern