Australian Energy Markets Commission

Second Draft Decision

National Electricity Amendment (Inter-regional transmission charging) Rule 2013

Comments on the Proposed Draft Decision

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.

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Summary of MEU views

The Major Energy Users Inc (MEU) has been a strong supporter of the principle that those that benefit from investment in the NEM should bear the cost of that investment on a cost reflective and equitable basis. This means that, in principle, the MEU would support allocating the costs of inter-connectors to the beneficiaries of the interconnectors.

The concern of the MEU regards the methodology being proposed to address this concept. The "in principle" support for the concept needs to be seen in this context; the MEU sees a number of issues with the proposed methodology which will negatively impact on the achievement of the concept and these are developed in more detail elsewhere in this submission.

The MEU has been a significant contributor to all the debates regarding the implementation of an inter-regional charge for using transmission assets in an electricity exporting regions. An export charge has the potential to increase cost reflectivity but in its application (as provided by the proposals of the MCE and AEMC) an export charge can also lead to many detriments and complexities that can detract from any benefit that the improved cost reflectivity might deliver.

The MEU has consistently pointed out that the difficulties in developing an equitable inter-regional charging program could well result in other inequities resulting. Its examination of the supposed benefits of the preferred inter-regional charging (IRTC) method – the modified load export charge (mLEC) – does not lead the MEU to agree with the AEMC that it has identified a better approach to this intractable issue. In its response to the Discussion Paper, the MEU proposed an alternative approach to setting an IRTC but the AEMC does not even comment on its suggestion or the fundamental issues it addresses. This reflects poorly on the AEMC's objectivity.

When the AEMC released the report on modelling undertaken by its consultant, ROLIB, the MEU provided considerable analysis of the modelling outcomes. The MEU is quite concerned that many of the issues raised in its response have not been addressed in the second draft determination. In the second draft determination, the AEMC, however, invited the MEU to provide more support for the issues it raised and this has been done in this response. What is concerning is that the AEMC had previously requested the MEU to provide explanations to support its concerns yet in reaching its second draft determination, it elected not to address the elaboration of its issues provided. The MEU also notes that the AEMC had expected greater input from TNSPs to the modelling work undertaken and have been critical of the TNSPs for not doing so. This seems to indicate that the AEMC is not using stakeholder input to ensure the optimum outcome is achieved.

The MEU has a number of concerns with the AEMC approach to deciding on a preferred rule.

- The current approach to setting transmission prices is well recognised as being based on a number of assumptions and arbitrary decisions. Whilst there is agreement that peak demand sets the sizing (and therefore cost) of transmission assets, in practice, demand at peak usage times is not widely used to set transmission prices. Further, over half of the TNSP revenue is derived from the user having the choice to pay on demand based pricing or consumption based pricing. Therefore, current prices are not strongly reflective of the costs each user imposes on the transmission networks. Despite these obvious detriments, the AEMC approach uses what are demonstrably non-cost reflective inputs to its modelling from which it draws its conclusions.

- To make the preferred approach possible, the AEMC requires all TNSPs to use a pricing method which not all TNSPs consider will give a cost reflective outcome. The AEMC requires all TNSPs to use the CRNP 365 day pricing approach even though some TNSPs consider a modified CRNP approach is better and others use demand based on 10 peak days or monthly demand. The result of this imposition will be that intra-regional pricing will be less cost reflective. The AEMC then asserts that its preferred approach will be more cost reflective but fails to demonstrate that this is so!

- The AEMC comments that its preferred approach meets the requirements of the National Electricity Objective (NEO) but closer examination of the assertions are less than convincing. One of the most concerning aspects of the AEMC qualitative assessment is that it only examines the impact of the IRTC on transmission pricing – the cost of transport. To demonstrate that it’s preferred approach is more efficient the AEMC must look at the NEO in terms of the impact on consumers – not merely on the efficiency of transport pricing. Consumers see the cost of energy in terms of the cost of the commodity (for which the spot price is used as a surrogate) plus the cost of transport. To demonstrate that efficiency has been improved, the AEMC must assess the total price impact on consumers. Modelling by the MEU shows that by shifting some costs from consumers in region A (to avoid a supposed cross subsidy which is inherent in the lack of an IRTC) to consumers in region B, imposes higher costs on region B consumers than they could achieve by increasing generation in their own region. Looking at transmission to the exclusion of other input costs that affect the total consumer cost does not meet the requirements of the NEO.

- The AEMC uses modelling to assess which of the IRTC options it has developed will be more cost reflective and stable in price impact yet this modelling is quite specific to the IRTC and does not assess the wider impacts of the proposed models. Further, the modelling is based on the transmission pricing used by TNSPs which has been identified as not being all that cost reflective. It is therefore difficult to assume that the outcome using flawed data will result in a less flawed outcome.

- The AEMC's preferred approach results in inappropriate costs being "exported" to other regions. For example,

    - Other (importing) regions will contribute to the easement land tax imposed in Victoria to recover the government subsidy to aluminium producers (this might raise constitutional questions about the legality of one state to tax consumers in another state!)
    - As there is no requirement for transmission revenue to be optimised, other (importing) regions will contribute to the cost of assets in an exporting region which are oversized and have significant spare (unutilised) capacity.

- Using the results of the modelling, the MEU highlights that the AEMC approach delivers some quite bizarre outcomes, such as:

    - There is one region which is a net importer of power but is paid by the exporting region to take this power.
    - Even if there is no net inter-regional flow of power between two regions, one of the regions will have to make a payment to the other region.

With these points in mind, unless the AEMC can develop a better new Rule proposal that addresses all the concerns raised in this submission, the MEU cannot support the introduction of an inter-regional charge and recommends that the AEMC should not proceed further with this proposed new rule.

Whilst satisfying cost reflectivity appears reasonable on the surface, the MEU questions the benefits (either in the short or long-term) given the issues and complexities inherent in the new approach adopted by the AEMC. In fact, rather perversely, the AEMC will be introducing significant distortions (less cost reflectivity) to intra-regional transmission pricing. Overall, the MEU does not consider that the AEMC has developed a better rule than the current arrangements. The AEMC's rule change is not consistent with the NEO.

In its response to the Discussion Paper, the MEU proposed an alternative model for the IRTC which did address a number of the anomalies and perverse outcomes seen when using the mLEC. The MEU suggests the AEMC should re-examine the MEU alternative proposal to identify if the approach provides a more efficient and equitable outcome for consumers.

1. Introduction

The Major Energy Users Inc (MEU) has been an active participant in the long running debate surrounding the introduction of an inter-regional transmission (IRTC) charging mechanism since the concept was first debated during the review by the AEMC during its preparation of the report to the MCE regarding the impact of climate change policies on the electricity and gas markets.

During the early discussions, the MEU was (and still is) a supporter of the introduction of cost reflectivity in electricity transmission charges relating to the transfer of electricity across regional boundaries.

The MEU has also been a strong supporter of cost reflectivity in the allocation of transmission (and distribution) charges between consumers, so that the impacts of each consumer's decisions on the use of electricity will be seen by each consumer. The MEU notes that the AEMC is also a strong supporter of cost reflectivity in charges relating to the use of electricity assets. The AEMC has consistently highlighted that unless consumers can see the cost impacts of their energy usage decisions they are unlikely to change their usage habits. The MEU agrees with the AEMC on this concept. After all, it is the fundamental premise/maxim underpinning the AEMC's review "Power of choice" on demand side participation.

During the 2007 debates (ie over 5 years ago!) led by the AEMC regarding changing the transmission pricing rules, there was considerable discussion as to how the pricing rules should be changed to increase the cost reflectivity of transmission prices. During these discussions there was widespread agreement that it was peak demand for the service that drove the extent of the assets needed to provide the service and that from this there was agreement concerning a number of basic aspects:

- Because it is demand that drives the size (and cost) of assets, demand should be the main driver of pricing
- As assets are provided to meet peak demand, prices should reflect the use of the assets at times of peak demand.
- Even if the service is used only occasionally, but contributes to the peak demand, then the user should pay for its share of the assets it caused to be provided to meet the peak demand.

However, despite agreement on these basic aspects, in practice, implementation of them (ie in transmission pricing) has been less than fulsome. For example:

- There is an arbitrary split of 50/50 when allocating the costs between locational and non-locational charges for the provision of the assets used to provide the transmission service. Whilst there is agreement that some of the costs other than commons service costs are not locationally related, the 50/50 split is purely arbitrary and there has been no effort made to refine this allocation.

- TNSPs have the flexibility to use either cost reflective network pricing (CRNP) or a modified CRNP approach. Those TNSPs using the modified CRNP approach consider that this is needed to provide more appropriate cost reflective intra-regional pricing and to make best use of transmission assets.
- Transmission pricing by most TNSPs averages the use of assets over a full year rather than focussing on usage at peak times. In contrast, Victorian transmission pricing is based on demand on the 10 peak system demand days, and NSW transmission pricing is based on peak demand incurred in each month.
- Whilst locational pricing is solely based on demand, non-locational and common service pricing is based on the lower of charges based on demand or consumption. This means that users who use the transmission system only at peak times (and thereby causing additional assets to be provided) but not at other times do not pay their full share of the cost of these assets because they have the choice to use the consumption charge if it results in a lower cost to the user.

There can be no doubt that because there are arbitrary delineations – flexibility by TNSPs to price their services in the way that serves their needs best (rather than cost reflective) – the current approaches to transmission pricing cannot be assumed to be cost reflective and are, at most, a poor approximation with clear areas of likely error.

It must also be accepted that, fundamentally, TNSPs must be considered to be disinterested in ensuring the maximum degree of cost reflectivity because they are able to recover their allowed revenue regardless of the inaccuracies in their pricing. This means that basically TNSPs are incentivised to seek the easiest path to setting prices for their services but when developing their pricing have no need to bias the prices they calculate.

It is in this context that the AEMC seeks to impose a common methodology to all transmission pricing just in order to allocate transmission costs when electricity is traded across regional boundaries, all in the interests of increased cost reflectivity of trade across regions.

In its initial draft decision, the AEMC comments that the issue of inter-regional charging for electricity services has been a long standing issue, being first addressed by the National Electricity Code Administrator (NECA) in 1999. The fact that the issue has not yet been resolved is an indication as to how intractable the problem is to resolve in an equitable way but also because TNSPs have no incentive to support changes to their preferred methods.

2. The basic concept and AEMC approach

The MCE (on the advice of the AEMC) submitted a rule change proposal to impose a cost to importing regions for the transport of electricity from an exporting region. Whilst the proposal in principle would improve cost reflectivity, it is in the implementation of the concept that the problems arise. Initially, the MCE posited a simple concept that the transmission service cost should be allocated as if the importing region was a user located at the region boundary. In its examination of this the AEMC concluded that this would not result in a cost reflective outcome – the MEU concurred with this as there were a considerable number of obvious shortcomings with the proposal which were exposed by the MEU in earlier submissions.

The AEMC then considered three further alternatives which it then sought input from stakeholders. It concluded that the most cost reflective outcome would result from a NEM-wide CRNP approach but that there were a number of obstacles in delivering this as an acceptable approach.

The AEMC finally concluded that a modified load export charge (mLEC) provided **a balance between improving cost reflectivity for importation of electricity with administrative simplicity, recognising the quantum of the inter-regional charges was relatively modest and administrative costs have to be low to ensure there is a net benefit**. The MEU agrees with these qualifications.

However, to implement the preferred AEMC approach requires consistency between all TNSPs in the calculation of all intra-regional prices. In particular, the implementation of the mLEC requires all TNSPs to use the CRNP approach (those using the modified CRNP approach would have to change) and to require Victoria to cease using the 10 peak day approach it has used for a number of years. Imposition of both of these will, in the view of the TNSPs and the MEU, reduce the cost reflectivity of intra-regional transmission pricing. But, significantly the AEMC appears to have ignored these considerations (ie the negative impacts on intra-regional pricing where there are considerably larger electricity flows than there are inter-regional flows therefore resulting on a bigger impact on consumers) or whether the positive effects of the mLEC will offset the detriments it will indirectly impose (ie are consumers better off in terms of the NEO?)

The MEU therefore requires that, as a basic step, the AEMC should demonstrate that the benefits offset the detriments otherwise it cannot confidently assert that there is an overall net benefit – there must be a net benefit otherwise the change does not meet the requirements of the NEO.

What the MEU can state, unequivocally, is that in its desire to implement inter-regional pricing the AEMC has obviated some of the basic aspects that all key stakeholders considered were implicit in cost reflectivity – that prices should reflect usage at peak demand times and modifications to the CRNP approach are used to deliver the best outcome for consumers.

Essentially, the AEMC has required changes that could make intra-regional pricing less cost reflective (at least in some regions) in its desire to implement inter-regional pricing. As the AEMC has also commented that as the inter-regional charge is relatively small (and therefore implementation costs have to be small), it appears that the search for an answer could be resulting in lower cost reflectivity more widely.

The MEU notes that Grid Australia (GA – representing the TNSPs) has raised a number of concerns about the approaches posited by the AEMC. Further, the AEMC has criticised the TNSPs for not working more closely with it and its consultant in the modelling work undertaken, implying that the outcomes of the modelling might not be as supportive of change as indicated by the AEMC consultant. The MEU is very concerned that the AEMC is seeking to introduce changes that the TNSPs **and** consumers have severe concerns and reservations about, and it appears to be steam rolling its proposal irrespective of identified anomalies, the distortions that will be caused on intra-regional pricing and whether the methodology proposed really is consistent with the NEO. This is very disappointing and does not reflect well on the AEMC or its processes.

3. The MEU view of the concept and AEMC proposal

It is necessary to put this issue of inter-regional pricing into context with the National Electricity Objective (NEO). To an extent, the AEMC has done this, but only on a very narrow focus. The AEMC has only addressed the NEO in terms of the efficiency of transmission pricing.

The AEMC is in error in its application of the NEO – the NEO does not just address the efficiency of transmission pricing, it addresses the efficiency of all electricity services as a whole. The NEO states:

> "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 customers 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 AEMC has not addressed the rule change proposal in the terms the NEO requires because it focuses purely on addressing the change in efficiency of a single element in isolation, whereas the NEO reflects the need to address both investment and operation of the entire electricity service and other sundry specified issues. This means that the total impact on customers of any change must be the focus of the rule change analysis.

The introduction of inter-regional charging for transmission services is predicated on the assumption that it will contribute to the achievement of the NEO by improving efficiency of the market in two aspects.

The first is that IRTC will improve allocative efficiency because it is more cost reflective and lead to more efficient use of the networks. The second is that it will improve dynamic efficiency by minimising barriers to coordinated planning of the NEM wide network by ensuring that those benefiting from investments contribute to their cost.

The MEU does not disagree that improvement in either of these efficiencies would assist in the achievement of the NEO. What does concern the MEU is whether the tool proposed for implementing the charges (ie the mLEC) does in fact improve either of the efficiencies noted.

There is no doubt that the current arrangements for trade across regions are not cost reflective as there are substantial inter-regional transfers and, in providing these, generators in exporting regions do use the region's transmission assets to deliver their product to other regions. However, the MEU has not seen any evidence that the proposed arrangements (the mLEC) will be any more cost reflective than the current arrangements as the implementation of the AEMC's mLEC does reduce intra-regional cost reflectivity where there are much larger power flows.

In this regard, the MEU points out that small deviations from cost reflectivity where there are large power flows have a greater impact on consumers than smaller power flows with a larger deviation from cost reflectivity. In this regard, the MEU points out that the proportion of exported power from each region is a small percentage of the total power flows within a region, reinforcing the impact of this aspect.

GWh pa[1]	Tas	SA	Vic	NSW	Qld
total average outflow	-404	-773	4172	-8820	5825
total average usage	9977	13300	50643	76487	79810
% exported	-4.0%	-5.8%	8.2%	-11.5%	7.3%

The impact of this assessment is that there has to be a positive impact of between 9-25 times of the cost reflectivity of the IRTC to offset any negative of a change in the cost reflectivity the IRTC imposes on intra-regional pricing

Further, the results from the implementation of the mLEC contain some disturbing anomalies that the AEMC has failed to address – these were pointed out by the MEU in its earlier submission on the modelling work undertaken and are again discussed in section 4 below. It is the responsibility of the AEMC to demonstrate that there is a net improvement in efficiency and this it has failed to so in its second draft determination.

The AEMC considers that the proposed rule (AEMC Second DD page 8) is preferable to the initial rule change proposed because

- "it sends better price signals than the rule change proposal (section 6)
- it is calculated in a more consistent way across the NEM
- the regional beneficiary pays reflecting the benefit they derive (section 7)
- there is improved operational transparency (section 8)"

The MEU addresses each of these points below.

[1] Data provided is thew average of flows and consumption in each region for the three financial years 2009-2012

3.1 Better price signals

Price signals are intended to change the behaviour of the party most able to manage the risk, yet the inter-regional charge is a cost to consumers who have little ability to manage or mitigate the risk and costs because their investments are sunk, inter-regional flows are driven by generator pricing decisions and they cannot influence generator location decision making.

In regard to providing better price signals, the MEU questions who will be able to use the better price signals? As the MEU noted in its responses to the earlier AEMC papers on this issue, price signals only provide a benefit where those paying the charge will change their practices. In the case of the inter-regional charging,

- TNSPs are indifferent to how they recover their costs and the price signals from inter-regional charging will not change their practices and so improve the efficiency of the operation of the market
- Generator location has the greatest impact on creating inter-regional flows, yet generators are not exposed to the cost. In contrast, consumers do pay the cost of the inter-regional charge, yet their locational decisions have little impact on the costs they incur.
- Consumers in the importing region who pay the charge, have no ability to influence the cost they incur because the energy flows across an interconnector are determined by generator pricing in the spot market and not by decisions of the beneficiary.
- Consumers in the exporting region (who get lower charges) have no ability to influence the costs transferred to consumers in the importing region.

The MEU does agree that prices should be cost reflective, yet other than to assert the new rule will result in more cost reflective pricing, there is no evidence that it will be more cost reflective than the current arrangements, especially when the identified anomalies (see section 4 below) and the changes imposed on intra-regional pricing are considered.

The AEMC has consistently stated that its reviews must be “evidence based” and therefore it must demonstrate that its analysis on this rule change is in keeping with this requirement!

3.2 Consistency of calculation

The MEU points out that the imposition of consistency across the market may or may not provide a benefit. In this regard the MEU note that there is considerable divergence in views of the different TNSPs as to be the best method to provide cost reflective pricing in their different regions and normalisation of cost allocations in all regions therefore might not be in the interests of consumers. This is because a different approach used in one region might better benefit consumers in that region than the approach used in another region. For example, in Victoria the TNSP considers that cost reflective pricing is based on assessing demand on the 10 highest demand days, in NSW the TNSP considers that demand charges should be set on the highest demand in that month and TNSPs in other regions also have other variations as to how to provide the most cost reflective outcome.

As noted above, consistency in calculating prices does not equate to ensuring the most cost reflectivity in every region. As a number of TNSPs will have to change their pricing methods to comply with the new consistent approach, intra-regional cost reflectivity might be reduced.

3.3 Beneficiary pays

The concept of the "beneficiary pays for the service" is not at issue. That the beneficiary of the investment should pay for the investment that provides the benefit is a fundamental aspect of cost reflectivity. However, the AEMC has made a number of assumptions about benefits that are not symmetrical.

In its assessment, the AEMC disregards the benefit of improved reliability on the basis that this is symmetrical – that users in the importing and exporting regions benefit equally from increased reliability. The AEMC also posits that lower production costs are a result of the IRTC. Neither of these assertions are supported by facts.

For example, Tasmania is the recipient of base load power from Victoria and in return provides peaking power to Victoria. Provision of baseload power to Tasmania by Victoria is not essential to Tasmania unless its dams are at a very low level but it assists Victorian generators considerably because brown coal generators need to operate at high load factors because of their design and the features of their fuel. The net flow of electricity between the States is that Tasmania is a net importer of power. In theory, therefore Tasmania would pay an IRTC[2].

In the case of Victoria as an exporter, its consumers benefit from having its base load generators operate in their more efficient range[3] and this results

[2] The fact that AEMC modelling shows Tasmania is paid to receive a net inflow of power is discussed in section 4.

[3] Brown coal generators have difficulty in operating at even moderate turn down ratios, and when operating at their maximum output are very efficient and provide lower unit costs. Therefore it is in the interests of Victorian consumers that the brown coal generators operate at their maximum output as much as possible as this lowers the generation costs Victorian consumers will be exposed to

in lower market prices for all Victorians that would not occur if the generators were not able to export surplus power to allow operating at their most efficient point of operation. Not being able to export power interstate will also reduce the reliability of supplies from Victorian generators.

In the case of Victoria as an importer, it avoids the need to provide peaking generation that would operate for very short periods of time yet if implemented, would impose considerable cost on Victorian consumers which they can avoid by having Tasmania provide this from its resources. In contrast, by Tasmania providing peaking power to Victoria, this avoids Victoria having to install significant amounts of generation that would be used very infrequently.

The MEU does not agree that lower production costs will result from the imposition of the IRTC. In fact, lower production costs arise because there is the ability to transfer power across regional boundaries, not because there is a charge!

The AEMC also avers that lower congestion and competition benefits are symmetrical, but there is no examination that this is the case.

There are some essential inconsistencies inherent in the mLEC calculation that impacts the supposed "beneficiary pays" principle:

- The charge is based on the net transfer of power at each inter-regional transfer point, yet the costs of delivering the power to the transfer points vary remarkably between regions due to the location of the generators in each region. This is entirely due to the generator locations relative to the transfer points and is further discussed in section 4 below.
- Tasmanians have the entire liability for Basslink costs, yet Victorians make no contribution for its services so Victorians receive a considerable benefit for which they do not pay.
- Victorian locational charges include the land tax on easements which is used to pay the aluminium smelter commitment incurred by the Victorian government. Therefore, importing regions will be paying a Victorian government tax by being required to contribute to the recovery by the Victorian government of the aluminium smelter levy imposed on Victorian consumers In this regard, there might be constitutional questions that arise concerning the extra territorial reach of the Victorian tax.

3.4 Transparency

The AEMC asserts that operational transparency is enhanced. The current arrangements are quite transparent (there is no charge!) and the introduction of inter-regional charging actually reduces transparency as it imposes changes and more complex arrangements that must be integrated. The proposed rule merely identifies the most transparent of options for imposing the charge, but the current approach is the most transparent of all the options.

3.5 General assessment

When seen in this light (comparing the current arrangements to the proposed arrangements) there is no certainty that the implementation of the concept of inter-regional charging will result in a better or more cost reflective outcome for consumers.

Whilst the AEMC has identified that the concept of inter-regional charging will improve efficiency of the market and assist consumers, it has not demonstrated that the implementation via the mLEC delivers an outcome which is more efficient than the current arrangements. This is the single biggest failing of the draft determination and is not evidence based!

4. The problems with inter-regional transmission charging proposed

The NEO requires all rule change assessments to be made "in the long term interests of consumers". Thus, any change must look at the impacts on consumers in a holistic way. In assessing this rule change, the AEMC has merely examined the impacts of the IRTC in terms of transmission pricing and how the efficiency of transmission pricing might be enhanced.

Subsequent to the issue of its Discussion Paper, the AEMC commissioned some detailed modelling work to be undertaken. The AEMC places a lot of its conclusions on this modelling but as MEU pointed out in its response to the modelling work undertaken, this only addresses partially a few of the MEU concerns. What the modelling does is to identify the merits and detriments of the three options considered. It does not address the fundamental issues inherent in the tools proposed for achieving the concept.

In its second draft determination the AEMC provides the following modelling outcomes for its preferred IRTC model (mLEC). The table shows the average of the annual outcomes for the three year 2009-12 period in $m.

Table 11.2 Estimated IRTC for MLEC method

		Region paying IR TUOS					
		Tas	SA	Vic	NSW	QLD	Gross Received
Region Receiving IR TUOS	Tas		0	5	0	0	5
	SA	0		20	0	0	20
	Vic	1	33		32	0	65
	NSW	0	0	25		8	33
	QLD	0	0	0	17		17
Gross Paid		1	33	50	49	8	140
Net Paid		-5	13	-16	17	-9	
Per cent net Paid		-7.9%	12.0%	-6.5%	5.3%	-4.0%	
Per cent net standard deviation		1.8%	1.2%	1.1%	0.3%	0.2%	

To put this into context, the highlighted section shows the net payments made by each regional TNSP. A negative number indicates that the TNSP receives a payment. As the AEMC does point out, the net payment across the NEM shows that, overall, consumers do not pay more for transmission services. The outcome of the modelling shows there are some winners and some losers, with SA consumers (in proportion being the biggest losers by a significant margin.

Using NEM Review (which converts AEMO data into a more usable form), the actual annual average net outflows from each region are as follows

Total outflow	Tas	SA	Vic	NSW	Qld
GWh pa	-404	-773	4172	-8820	5825

This average data can be converted to total payments made by each region.

Amount paid by	Tas	SA	Vic	NSW	Qld
$/MWh	-12.38	16.81	3.83	-1.93	1.55

The MEU uses these outcomes as the basis of its comments in the following sections.

4.1 The mLEC premium and power prices

The AEMC states that increasing efficiency of transmission pricing is the (only) aspect that must be examined in regard to this rule change. At most, it has acknowledged that the rule change might have an impact on the spot market, but if this is the case, then the impact will be low.

However, as the MEU reiterates again, what the AEMC has not addressed is that consumers see their electricity prices as the sum of a number of inputs – the cost of electricity plus the cost of transport plus the cost of risk management plus other costs. In relation to this rule change, the MEU sees that it is the cost of electricity plus the cost of transmission that need to be assessed in conjunction.

The most efficient outcome for consumers is where the sum of power plus transmission costs is the least cost (the efficiency level). This is what the NEO requires.

The average total demand for power in SA for these three years was 13.3 TWh and the annual amount of imported electricity was 773 MWh. This means that the amount of imported power as a proportion of the total usage was only 5.8%.

Using the above simple assessments, the IRTC charge for SA averaged $16.81 for every MWh of imported power. As the spot price for SA for the same three year period averaged $39.39/MWh, it would be more efficient for SA consumers, rather than importing power, to pay local generators an amount of $56.20 (or less) to replace this imported power with locally generated power.

It is possible that for this imported power to be replaced by local SA generation it would be at a higher cost than the average spot price.

However, it is unlikely that the price from this local generator would be provided at a 43% premium!

This demonstrates that examining the ITRC in isolation (which is what the AEMC has done) can readily result in a less efficient outcome for consumers when the total costs to consumers in each region are considered.

The modelling indicates that the NEO is unlikely to be satisfied by the application of the mLEC for SA consumers. To require SA consumers to pay the mLEC rather than allow them to have local generation at a lower price has the same effect as requiring them to pay a cross subsidy to Victorian consumers.

4.2 Perverse outcome of the modelling

The outcome of the modelling for Tasmania shows that Tasmania receives an annual mLEC payment of $5m as its IRTC.

However, Tasmania was a net importer of power from Victoria of some 404 GWh per year in the three years under the study.

It is possible that the net payment is intended to compensate Tasmanians for carrying the liability for Basslink. This is not the case. The AEMC makes it clear that there should be no recompense for Tasmanians for this liability as Basslink (being a market interconnector) is expected to derive its revenue from arbitraging the difference in spot pricing between the two regions it connects.

Ignoring that the payment to Tasmania might be related to reimbursement for Basslink, means that Tasmania is being paid to be a net importer of power. This is bizarre and certainly does not meet the requirements of the NEO.

4.3 The impact of the locus of generation

In its responses to the various stages of this rule change examination, the MEU has consistently made the point that a significant impact on the IRTC is the location of generation related to the point on the regional boundary where the interconnector is located. Consumers have no ability to influence the location of generation, yet they are expected to pay the locational cost impacts of the generator decision making.

In this regard, it is important to understand that TPrice – the program used by all TNSPs and by the AEMC consultant – when used on a 365 day basis calculates the distance from the locus of generation in a region to the various usage points[4]. Locational transmission prices generally reflect the cost of transporting electricity from the locus of generation in a region (not the regional node as the AEMC alleges the MEU assumed) to the various usage points in that region.

In relation to the impact of this feature of the current transmission pricing approach on IRTC, it results in the outcome that the value of generation exported from one region does not have the same value as that imported from the same region.

This perverse outcome can be exemplified by looking at the locational transmission prices in specific regions. In NSW, the locus of generation is to the north of Sydney; the locus of generation in Victoria is to the west of Melbourne[5]. In its 2012/13 pricing schedule, TransGrid states its GST inclusive locational TUoS for Albury is $3.0554/kW/month, and AEMO states its locational TUoS for Wodonga is $11,138/MW/year. Converting these to a common pricing basis, results in a TransGrid charge to deliver to Albury of $100.45/MW/day and an AEMO charge to deliver to Wodonga of $30.15/MW/day. Thus there is a difference of over $70/MW/day between the two delivery charges to basically the same location. This is a direct result of the locus of the regional generation related to the point of interconnection.

Similarly, the difference between Loy Yang (Victoria) locational TUoS and George Town (Tasmania) locational TUoS – the two ends of Basslink – is some $30/MW/day in favour of Tasmania. This is the cause of the anomaly identified in section 4.2

In an uncongested condition, power flows across a regional boundary when spot prices in both regions are much the same. However for a consumer on the boundary between the regions, the delivered price of power is different. The mLEC is based on the assumption that an exporting region sees the importing region as a load on the regional boundary. This notional consumer on the boundary sees two different power prices depending on the flow direction because the cost of the power is the sum of the commodity price (the spot price) and the transmission charge. If there is a difference in the transport charges in the two regions to the same point on the boundary between them, it means that, when the cost of the transport is included,

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[4] One MEU member reports that when it challenged a TNSP about the cost of the locational charge, the TNSP provided a print out of the TPrice calculations for its usage point. This showed that a component of its locational charge included a contribution for the transmission system on the other side of the network where there was a small generation plant located.

[5] TNSP pricing data does not publish prices to main substations but to substations providing service directly to customers, so the data might not be quite accurate but is a good approximation

consumers in one region are providing power to the other region at a lower price than they receive it in return. This is inequitable.

The mLEC is calculated on gross flows as this is the outcome of using TPrice to allocate costs. So all of the power delivered to an importing region incurs a cost based on the exporting region TUoS. Thus, even if there was a net flow of zero between regions, (ie exports equalled imports) the region with the higher costs to deliver power to the boundary will receive a mLEC payment. This is inequitable and illogical.

This analysis highlights that using the AEMC preferred approach to setting the IRTC (ie the mLEC) consumers in an importing region are paying for generator location decisions made in another region. Whilst there might be some argument that consumers in the same region should accept the generator locational decision making in the same region, it is a much more tenuous argument that consumers in another region could even impact on this generation decision making. After all, a consumer deciding to locate in Victoria would hardly be aware that it will be responsible for the locational decision making of generators in NSW or Tasmania.

4.4 Price signalling

One of the supposed benefits of an IRTC is that it sends price signals. That is, it provides signals to the market in order to impose pressure to change usage and locational habits.

As noted above, generator location is the major determinant of the locational TUoS, as this is derived as the cost to transport power from the generator to the user. Imposing an IRTC does nothing to encourage generators to locate closer to major demand centres, yet the IRTC is intended to provide signals to achieve more efficient outcomes.

Existing consumers (and generators) have already made their locational decisions based on price signals provided at the time of the locational decision. Generators do not see the IRTC so they are indifferent to its imposition, but existing consumers are now being impacted by it. Whilst it is easy to state that the IRTC merely reallocates costs to be more cost reflective, what it really does is penalise a large number of consumers in retrospect. This is not equitable as those consumers made their locational decisions based on information which the AEMC now sees should be changed.

The only impact that the IRTC signals will provide will be to encourage better locational decision making by consumers. However, the IRTC is generally a small element of the total TNSP revenue (except for SA) as the following table shows:

$m pa	Tas	SA	Vic	NSW	Qld
average MAR[6]	178	267	487	736	736
mLEC as % MAR	2.8%	4.9%	3.3%	2.3%	1.2%

The IRTC will be incorporated into the TNSP pricing so that effectively the IRTC will not be seen by consumers but will just be buried in the total MAR and then apportioned into the different categories of charges levied. As such, consumers will not see any price signal.

For the AEMC to allege that the IRTC provides a price signal to the market is just not sustainable.

4.5 The impact of under-utilised assets

The build up of TNSP locational TUoS prices is based on CRNP which uses the replacement cost of assets used as the basis of the allocation of costs.

The MEU has a concern that by imposing a CRNP approach and a 365 day averaging of usage to all TNSPs there will be a less efficient outcome in intra-regional pricing. The MEU is also concerned that the current TNSP approaches are not sufficiently cost reflective to reasonably base an IRTC. With this in mind the MEU poses the following examples to highlight further concerns.

Under the current Rules, assets are not required to be optimised, so that an asset built has its costs recovered on an "as built" basis, regardless as to the actual utilisation of the asset[7].

Example
The link between the locus of generation in region A is distant from the border and is sized for 500 MW capacity. The annual cost for this link (based on an asset value of $50m) is $5m pa.

The locus of the generation in region B is close to the border and is also sized for export of 500 MW. The annual cost of this link (based of an asset value of $25m) is $2.5m, reflecting its shorter length. Other users

[6] The MAR used is the average of the maximum allowed revenue for each TNSP over the three financial years 2009-2012

[7] Some TNSP use the modified CRNP basis which places a higher asset value on assets that are heavily used in order to achieve better utilisation of all assets.

in region B use 300 MW of the link's capacity, so region A can only import 200 MW from region B.

Over the year, region A imports the same amount of power from region B that it exports to region B, so that over the year there is no net flow between the regions.

Assuming the interconnector is not constrained, the spot price in both regions will be notionally the same (assuming losses are the same).

Issue 1:
Under the mLEC approach, region A would be liable for 40% of the cost of link in region B and uses 40% of its capacity. Both regions have the same import capacity and both receive 200 MW from the other region. Region A would pay to region B for its imports $1.0m pa yet region B would pay for its 200 MW $2m pa. The price of power is the same in both regions, so consumers in region B are paying more for their imported power than consumers in region A pay for their imports. This is inequitable.

Further, the cost of the next element of power dispatch in region B could be at a lower price than the sum of the spot price (applying to both regions) plus the cost of the IRTC. This would be inefficient for consumers in region B.

This exemplifies the MEU concerns raised in 4.1 and 4.3 above.

Now, suppose the link in region A is actually sized for 1000 MW[8]. The annual cost for this link (based on an asset value of $100m) is $10m pa reflecting its greater capacity. Usage by region B is limited by its network to only be able to import 200 MW. Other users of the link in region A still use 300 MW.

Issue 2:
Under the mLEC region B would pay 40% of the cost of the link in region A yet it only uses 20% of its capacity. Users in region B would now pay region A $4m pa for the imported power. The TNSP in region B had no say in the sizing of the link in region A so consumers in region B are paying for the unutilised capacity in region A. Whilst this is cost reflective, it is not equitable nor efficient for consumers in region B. To be more cost reflective the

[8] The reason for the increase in size might be historical or that the AER has accepted that there might be a new user in region A that will use the additional capacity

annual cost would have to be based on an optimised value for the asset.

4.6 Summary

The MEU has identified a number of inconsistencies and perverse outcomes from the application of its preferred solution to generate an IRTC. These are of such a concern that the MEU cannot support the proposed approach to implementing a charge for use by an importing region for the costs of the assets used to deliver this power by the exporting region.

5. Response to the specific questions raised

The MEU provides responses to these questions as requested but advises that in responding to these, the MEU does not consider the AEMC has provided a better solution than continuing with the current arrangements.

#	AEMC Question	MEU response
1	The AEMC seeks stakeholder views on any other material in relation to the IRTC that either the CNSP or TNSPs should publicly disclose?	The MEU considers that both the CNSP and any TNSP involved must publicly divulge the amount of the mLEC that it is proposing to include in the transmission pricing and where this amount is being recovered from. As there is a true up required on completion of each year, the CNSP and the impacted TNSPs must declare what the actual mLEC was and where the adjustment has been made in the transmission pricing. The AER should be required to publish a report each year highlighting the mLEC revenue each region levied and then paid (received) so that the total mLEC recovered and the adjusted mLEC after the true up can be seen to be a zero amount.
2	The AEMC seeks stakeholder views on any other material that a TNSP or CNSP require to enable them to fulfil their obligations?	All information in relation to the mLEC must be provided so that consumers can see what they are paying for and whether this is an equitable amount when seen in comparison to other methods of providing for imported electricity
3	The AEMC seeks stakeholder views on whether the locational component of the intra-regional transmission charge is the most appropriate mechanism for the recovery of the inter-regional transmission charge.	Users in a region are required to provide sufficient revenue to a TNSP to cover their non-locational costs. In particular, the cost of common services will be the same to users in a region regardless of whether there is export or not. The logic behind the non-locational TUoS is that this part of the cost of providing assets is not locationally based and therefore the cost is unrelated to the export of power. This logic therefore leads to the conclusion that only the locational TUoS should be recovered under an IRTC. However, the MEU highlights that using the locational TUoS (as has been used under the mLEC methodology) does result in some perverse outcomes indicating

		that further refinement of the approach is required.
4	The AEMC seeks stakeholder views on whether this sequence reflect the most efficient way of incorporating the inter-regional transmission charges into the locational component of the intra-regional charge?	The forecast mLEC and the true up of the mLEC must be prepared in sufficient time for the information to be made public before the incorporation of the costs (benefits) into the TNSP charges and for the AER to confirm that the charges and true up are correct
5	The AEMC seeks stakeholder views on whether there is a more appropriate date to commence the operation of inter-regional transmission charging.	Providing the TNSPs can produce and get approved the revised methodologies and prepare and get approval for the actual mLEC inputs in sufficient time to get the 2014/15 pricing structures prepared and issued, then a commencement at July 2014 is feasible. Failing this the commencement date should be July 2015
6	The AEMC seeks stakeholder views on whether there is any specific need for savings and transitional provisions to enable the MLEC to be introduced into the NER?	The MEU notes that the modelling indicates that SA consumers will incur a 5% increase in transmission costs. If this is recovered entirely as part of locational TUoS, there would be a step increase of over 10% in this value. This would constitute price shock which must be avoided. This means that there needs to be a phased introduction of the charge over time to minimise the price shock .