NATIONAL ELECTRICITY AMENDMENT

(REFORM of the REGULATORY TEST PRINCIPLES) Rule 2006

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REFORM OF THE REGULATORY TEST PRINCIPLES

The Energy Users Association of Australia (EUAA) is pleased to have an opportunity to respond to the AEMC's Draft Determination in respect of reform of the Regulatory Test principles.

The application of the Regulatory Test is a complex technical process that has caused considerable dispute and controversy. However, we are concerned that key issues raised in our previous submission and, in particular, by our technical economic consultant Marsden Jacob Associates (MJA), have either been misunderstood or received insufficient attention.

In this response we re-state what we believe are relevant and important issues that need to be addressed and/or resolved but have not been adequately addressed by the AEMC in the draft Determination. This includes comment, where relevant, on the Charles River Associates International (CRAI) report accompanying the draft Determination and comment on issues raised in the determination.

We also question whether this is the appropriate time for this determination to be made given that the issue of the Regulatory Test is currently being considered by the Energy Reform Implementation Group (ERIG). As stated in our previous submission, some of the fundamental issues, such as whether there is a better way to stimulate achievement of the policy objectives attributed by the MCE to the Regulatory Test, are beyond the powers of the AEMC to resolve in this Rule change process. These limitations are acknowledged by the AEMC in the draft determination and we suggest that, given that the draft ERIG report is to be released on 7 November 2006, it would be more appropriate for the AEMC to seek comment on the draft Determination following the release of that report.

Re-statement of Issues

In our previous submission we discussed four key issues:

1. There is a case for the AEMC and MCE to thoroughly examine whether there is a better way to stimulate achievement of the policy objectives attributed by the MCE to the regulatory test;

2. The issue of welfare transfers must be considered by the AEMC

3. It is essential to ensure that execution of the Regulatory Test, if it is to be retained, is done with appropriate technical rigour; and

4. Consideration needs to be given by the AEMC to treatment of outcomes arising from cost benefits analysis techniques when applied to the NEM as a partial equilibrium analysis.

We discuss each of these points in the following. However, before commencing on this exposition we reiterate a point we have often made, but which appears to have received little attention. One of the major concerns of energy users is that the Regulatory Test has so far failed to facilitate efficient investment across the NEM, particularly to remove inter-regional transmission constraints, and has therefore contributed to congestion and constraints that have inefficiently increased electricity prices. It is our firm view that this could have been avoided by addressing the issues raised in the MJA report that accompanied our initial submission.

MJA has estimated that the cost to end users of these constraints is around $0.9 billion per year since the start of the NEM.

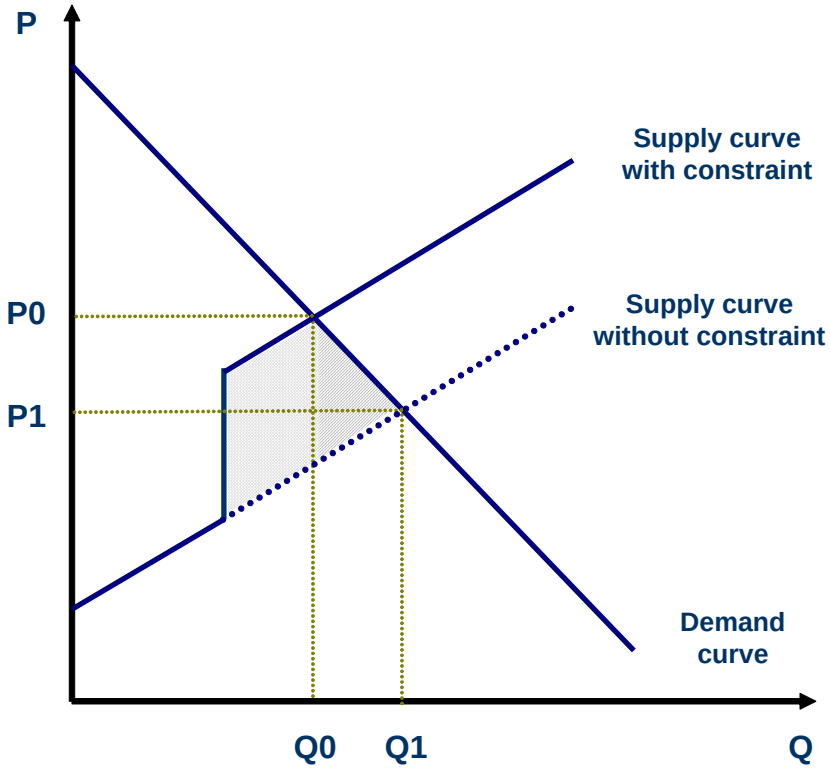
System constraints add a substantial burden to the wholesale electricity market by:

- increasing output from less efficient generators;
- increasing the cost of wholesale energy to electricity consumers by distorting 'efficient' pool price outcomes; and
- distorting signals for 'efficient' investment in demand side response and new generation capacity.

Specifically, the benefits of investment in inter-regional interconnection capacity can provide benefits in terms of increased competition and reduced constraints. In essence, investment in inter-regional capacity increases the ability of competitors to reach locations in the electricity grid at all relevant times. By not facilitating this investment, benefits are foregone. These include:

1. the spread of more efficient lower cost generation into a previously supply constrained areas;
2. increase in the intensity of competition in a less than fully competitive market; and
3. dynamic efficiency gains, i.e. deferred or avoided investment in relatively high cost generation and demand-side investment.

Conceptually, the static benefits of relaxing a capacity constraint (point 1 above) can be illustrated as shown in the figure below.



In the figure, there is a kink in the supply curve illustrating the capacity constraint in the market. With the constraint the quantity Q0 is produced at price P0. The market price is set by the higher cost of supply due to the constraint. The combination of P1 and Q1 illustrates a market where there is no constraint. Without the constraint low cost suppliers can supply the market leading to supply curve without a kink. In other words, the supply curve has shifted right. This reduces the price and increases the quantity supplied. Note that this analysis assumes the market is fully competitive, and market prices are set by production costs at the margin.

The shaded triangle represents the deadweight loss created by the restriction of output due to the constraint. When the constraint is removed, this area becomes a direct welfare gain (in allocative efficiency). The shaded rectangle is the cost savings due to improved productive efficiency. The volume that was previously produced with the constraint is now produced at a lower cost.

As noted above, this analysis assumes competitive behaviour. It is likely that there are some market effects arising directly from changing the physical constraints (expanding transmission capacity) and from changes in behaviour. However, the case is clear: a litmus test of the appropriateness of the regulatory test would be its ability to promote and facilitate efficient investment across the NEM and, in particular, inter-regional interconnection capacity.

Examination of alternatives

The EUAA realises that the issue of whether there is an alternative way of stimulating the policy objectives of the Regulatory Test is the primary objective of this rule change. However, such a review must form a key part of the review process. It is insufficient

simply to argue that the Regulatory Test has been subject to significant reform and perceived weaknesses and problems have been addressed. A review must also focus on possible alternatives that could further promote the single market objective specified for the NEM in the National Electricity Law. In this respect, it is disappointing that neither the AEMC nor its consultant considered the possibility of alternatives (incentives and mechanisms) that could be used to achieve improved outcomes (relative to the Regulatory Test) in the NEM.

The EUAA considers that the current framework has clearly resulted in delays in investment, in particular in investment in inter-regional capacity. It is also clear that the costs of delay can be very significant and are to the detriment of end users.

As noted in our previous submission, even a robust application of cost-benefit analysis techniques may no more than assist in making a rational investment decision. It is unlikely to produce a 'right' decision alone and must be complemented by other decision criteria.

Ideally, those other criteria should be linked to incentives for TNSPs to take actions and make investments that would be reasonably likely to lead to improved outcomes in the NEM. It is therefore essential that the AEMC considers the interrelationships between the current review and the concurrent review of electricity transmission revenue and electricity transmission pricing. It is not enough simply to refer to links between the reviews as the AEMC currently does. Without consideration of the total regulatory framework, there is a real risk that outcomes will not be reflective of the objective for the NEM and not in the interest of end users.

To ignore these fundamental issues and the work that is being undertaken in the other major reviews will result in either wasted effort by the AEMC or the introduction of changes that will not improve the operation of the NEM. We recommend the AEMC must consider these fundamental issues together with the Energy Reform Implementation Group (ERIG) and the MCE.

Wealth transfers

The AEMC refer to the issue of wealth transfers in section 5.4.1 of the draft Determination. The AEMC interpret our submission as requiring greater weight be given to consumer benefit than producer benefit. This shows a misunderstanding of the comments we provided.

As explained in the MJA report that accompanied our previous submission, there are a number of ways the regulatory test could be specified. The current approach implies that no special weight is assigned to any particular group. However, this is only one of a myriad of tests that could be conducted.

Formally, the current test uses the *total surplus standard,* which may be characterised as being at one end of the scale of potential welfare tests. At the other end of the scale is the *consumer welfare test*.

The AEMC refer to comments by the ACCC on this matter and, in particular, the following quote:

> *The Commission believes that it is clear that clauses 6.2.2 and 6.2.3 of the code emphasise that the regime it administers must provide for the efficient operation, provision and expansion of the transmission facilities. As a consequence of enhanced efficiencies, reductions in prices can and do arise. But lower prices are not an objective in itself. It is the Commission's view that if the writers of the Code had intended that reducing prices for consumers were to be an objective it would have been expressly stated. It was likely that they considered that promoting efficiency would provide the benefits of the market as a whole. That is the benefits would accrue to both producers and consumers of electricity, not just consumers. (emphasis added)* [1]

This statement it is based on an assumption that was made by the ACCC. As MJA noted in it's report, the ACCC has resorted to an argument in the form "if this is what was intended….. then …it follows that" to make its case, i.e. if the writers of the Code (now the Rules) had intended that reducing prices for consumers were to be an objective, then that would have been expressly stated. Simply because a particular phrase has not been used does not provide compelling evidence that something (in this case lower prices) was not the writers' of the Rules intention.

In the AEMC's opinion (which also is supported by the work done by MJA), the concept of efficiency does not necessarily entail that the choice of welfare standard should fall upon the total surplus standard as currently assumed in the regulatory test.

The issue of transfers among groups is one of distributional policy not one of economics. There is no conventional approach to the treatment of welfare transfers by economists. The relevance and treatment of transfers is most often, and most appropriately, made by policy makers and/or courts when exercising their judgement. Although, the economic theory that supports cost-benefit analysis offers no principle objection to the approach assumed by the ACCC, it also allows greater weight to be given to the interests of consumers, or to treat transfers from producers to consumers as a benefit, in the cost-benefit analysis.

In applying the principles of cost-benefit analysis to the Regulatory Test, it is necessary to take, as a starting point, some well defined target group to which costs and benefits accrue. In this particular case, it is the EUAA's view that an analysis from the perspective of consumers (as a group) is relevant, implying that cost and benefit to be considered are those which are of relevance to consumers, as distinct from society as a whole. The investment options to be considered relate to the shared electricity network for which the electricity consumers bear 100% of the cost in both transmission and distribution sectors. A clear focus on consumer benefit is therefore appropriate as to achievement of the NEM objective. This is not an argument that wealth be transferred from producers (i.e. generators) to consumers. It is an argument of how best to achieve, through efficient investment in transmission, the Single Market Objective for the NEM, namely that it functions in the long term interests of end users.

The AEMC's consultants CRAI also briefly discuss the relationship between the NEM objective and that of the regulatory test. The consultants recognise that there is a tension between the objective of the NEM and how the Regulatory Test is defined.

[1] p. 49, ACCC, *Review of the Regulatory test for Network Augmentation*, Draft Decision.

However, CRAI state that:

> *The long terms interests of consumers of electricity are best served by an industry in which all sectors operate on a sustainable basis and a reduction of profitability in one part of the industry (generation) is viewed a benefit to consumers.*
>
> and
>
> *Regulators are sometimes tempted to curtail profits at the cost of long term service provision – the consequences of insufficient financing may take many years to come to light, and investors may not be in a position to remove the assets and put them to good use elsewhere. However, even monopolistic firms (such as NSPs) must compete for financing in a global market, and all investors must reasonably expect a return that is sufficient to recover their opportunity cost of capital. A regulatory regime that does not reasonably compensate investors is not sustainable, in the sense that financing will become increasingly costly or private sector investors will exit the industry altogether.*[2]

We agree that sustainable operation of NSPs is in the interest of electricity end users and, in that respect, it is desirable that the sector is adequately funded. However, we believe the adequacy of funding is irrelevant in the current context. The key issue is to choose a project that will maximise the net benefit, not just in the short term, but in long term interests of end users as specified for the NEM objective.

We also note that CRAI appear to acknowledge that there is a need to consider welfare transfers:

> *…Each project causes gains and losses and an evaluation involves measuring these in some way such that they can be added up. With large projects, this cannot be done using conventionally measured consumer surplus. Additionally, since there are "winners" and "losers", there is a judgement involved in determining whether the gains to the former should be allowed to outweigh the loss to the latter. <u>These are complex issues in cost-benefit analysis that are all too often merely ignored</u>. (emphasis added)*[3]

To the extent that erosion of producer surplus has an impact on dynamic efficiency this should be considered within the Regulatory Test.

The application of cost-benefit analysis to these issues seeks to determine whether a particular project should be undertaken or decision should be made that would lead to improved performance of the NEM. The EUAA is quite clear that any reasonable interpretation of the Single Market Objective for the NEM would suggest that consumer benefit be given greater weighting than other stakeholders. This would be entirely consistent with outcomes from a perfectly competitive market and also reflects the fact that it is end users who pay 100% of the cost of shared transmission services.

[2] p. 12, CRAI, Principles for the Regulatory Test.
[3] p. 24 CRAI, Principles for the Regulatory Test.

Appropriate technical rigour

The AEMC and its consultant CRAI spend considerable effort on the discussion of and formulation of principles to guide the application of the Regulatory Test. While we agree that formulation of clear and consistent principles is paramount, the AEMC does not consider, in any detail, the issues practitioners are required to consider as suggested in our previous submission. These include:

1. actively identify relevant alternative projects and scrutinise them closely;

2. avoid an unduly restrictive approach to the screening of alternative projects to ensure that all reasonably comparable alternatives are considered;

3. examine ways of making potentially beneficial projects commercially feasible instead of taking a premature judgement that they are not commercially feasible to the regulatory test proponent and eliminating them, again to ensure that all reasonably comparable alternatives are considered;

4. be sensitive to the incremental costs and benefits associated with components or variants of particular projects;

5. seek out, identify and highlight the possibility that particular components of a project could provide all, or most of (or even more than) all the benefits associated with the project as a whole;

6. actively explore the most economic configuring of submitted projects;

7. explore in more detail claims of risks associated with the potentially most beneficial projects, including the sources of such risk, their probability or likelihood, and the expected costs associated with them;

8. explore possible and economic ways of mitigating any justified risks, including by alternative network design and by means of contractual or charging arrangements, in the context of the statutory objectives on the parties in question;

9. insist from the outset on a more explicit and accessible form of modelling, with wider and more informed discussion of results; and

10. demonstrate understanding (and explain the impact of) relevant organisational incentives, as documented in the economic literature and as recognisable in practical experience, and their potential implications for the proposals, issues and decisions likely to arise in the context of the regulatory test.

We note that CRAI touch upon a number of issues that that are important when carrying out the cost benefit analysis:[4]

- definition of alternatives;
- the problems of using existing market prices when projects are large;
- the choice of welfare criteria (this is related the issue of transfer discussed above);
- the difficulty of placing a specific value on a specific parameter;

[4] Our summary of p. 24-26, CRAI, Principles for the Regulatory Test.

- choice of discount rate; and
- adjusting for distortions.

None of these issues appear to be dealt with by the AEMC.

However, the AEMC does recommend the introduction of a requirement for the AER to produce guidelines to provide further guidance for those undertaking the Test. We fully endorse this recommendation and suggest that the list of requirements by practitioners provided above be used as a starting point for the discussion of these guidelines.

A partial equilibrium analysis

The AEMC makes little reference to the partial equilibrium nature of the Regulatory Test and has no discussion of its consequences. The only reference made by the AEMC to the issue of partial equilibrium is related to determining whether it is appropriate to specify in the Rules the use of cost benefit analysis to determine the most efficient investment option. The AEMC state:

> *the Commission has been mindful of a number of factors, including:*
>
> > *The development of the form of the cost-benefit analysis in the Regulatory Test over several years by the ACCC. The partial equilibrium based approach to cost-benefit analysis used in the Regulatory Test has been the subject of significant debate and development since it was originally proposed by Ernst and Young to the ACCC when considering the original Regulatory Test. As such, major elements of the framework are well understood and have been the subject of significant market consultation. This does not mean that the form of cost-benefit analysis used in the Test is beyond improvement. The Commission considers that experience in the use of the Test may lead to further improvements in the specification of the form of cost-benefit analysis to be used for the Test. However, in the view of the Commission it would be inappropriate to discard the cost-benefit analysis framework that has already been well developed.*

We agree that experience in the use of the Regulatory Test may lead to further improvements in the specification of the form of cost-benefit analysis to be used. This is precisely why we engaged MJA to review key aspects of the regulatory test. It is therefore disappointing that this work has received little or no attention by either CRAI or in the AEMC's draft Determination.

By adopting a 'partial equilibrium analysis' certain economic effects may go undetected in the Regulatory Test. Accordingly, a risk is introduced that a project which appears to yield superior net economic benefits may be ranked differently and below a higher benefit project once a more complete equilibrium analysis is conducted. The preferred project (identified from a partial equilibrium analysis) may even result in net losses when investigated in a general equilibrium context. Investments in transmission can have significant impacts on, among other things, energy costs, security of supply, market power mitigation, risk management, effectiveness and confidence in the market as well as economic development more generally. The current draft Determination contains no discussion of issues arising from the assumption that partial equilibrium analysis is appropriate. Nor is there any discussion of how any limitations of this approach could be taken into account.

We recognise that the introduction of a general equilibrium framework is likely to be onerous and, almost certainly, too complex to implement in a more general sense. However, we suggest that the AEMC consider the extent of any effects that would not be expected to be included in a partial equilibrium framework. If the AEMC itself does not believe this is within their scope, we suggest it be recommended that the AER consider these issues in the guidelines to be produced for those undertaking the Regulatory Test. One approach could be to require the AER to consult widely and seek government policy input on the full measure of benefits likely to be created by a particular investment.

Issues from the Draft Rule Determination and Draft Rule

We have highlighted the tension between the NEM objective and how the Regulatory Test is defined in both this and our previous submission. The proposed new sub clause 5.6.5A (b):

> *maximise the net economic benefit to all those who produce, consume and transport electricity in the market*

clearly illustrates this fundamental problem. It is quite conceivable that negative impacts for end-users are outweighed by benefits that accrue to producers or transporters *in the long term.* There does not appear to be any mechanism in what is proposed by the AEMC to ensure that the SMO is not violated.

The "two limb" approach

The AEMC has sought comment on the "two limb" approach and whether on of those limbs should be a market benefits or efficiency limb. Practical experience with the Test suggests that the relative simplicity of the reliability limb of the test compared to the market benefits limb results in the majority of augmentations assessed under the test having been reliability investments. It would therefore appear that the test creates a bias against market benefit investments (for instance inter-connector investments).

As the EUAA believes that this is the case it may be appropriate to add flexibility to the Test by having an overall efficiency and reliability principle. We note that this will increase the discretion of the AER, because having an efficiency and reliability principle gives the AER the flexibility of requiring practitioners to conduct a regulatory test with both market and reliability limbs. The EUAA considers that providing the AER with this flexibility will result in proposals being evaluated against the NEM objective.. We note the AEMC focus in the review on the need to create "certainty" in the market, but we question whether this emphasis is appropriate given the regulatory test is concerned with whether a specific project is to proceed or not.

We note that this will increase the discretion of the AER, as by having an efficiency and reliability principle, it is the AER that is given the option (or flexibility) of conducting a regulatory test with both market and reliability limbs. The EUAA considers that providing the AER with this flexibility will result in proposals being evaluated against the SMO.

If the AEMC decides to include an efficiency principle, the EUAA considers that the suggested wording is appropriate. Again we stress, however, that the logical way is to determine the fundamental issues, identified above, rather than fine tuning what we believe is a flawed model.

Alternatives

In defining alternatives, the EUAA shares the AEMC concerns that there is scope for uncertainty and therefore gaming. As such, the EUAA endorses the AEMC view that more guidance should be provided in the Rules for the determination of alternative options. This is of particular importance for the market limb of the test. However, we see no reason why a similar rigour and guidance could not also apply to the reliability limb.

As a general rule, it is the EUAA's view that the rigour applied in the Regulatory Test should be commensurate to the level of (net) benefits achieved by the investment. This should be reflected in the assessment of alternatives. We would also like to stress that transmission investments can produce benefits in both the short and long-term that are different to those that a seemingly similar set of capabilities from demand-side investments would achieve. It is therefore important to ensure that all alternatives are considered. When only subsets of alternatives are considered, there is the potential for a biased or inefficient outcome

Concluding remarks

The EUAA considers there are major deficiencies in the AEMC draft Determination by way of failure to consider many of the issues raised in our previous submission. In this submission we have attempted to clarify key points. The AEMC draft Determination only contains one reference to our previous submission related to wealth transfers; and this has been misinterpreted. In our view there are reasonable and measured arguments for the adoption of a *consumer surplus standard* in the application of cost benefit analysis and, as a minimum, consider differential weightings. The arguments for this approach are not self-interested but rational, legitimate and in line with the Single Market Objective for the NEM promoting efficient outcomes from the electricity market to the long term benefit of end users.

Finally we again question the logic of proceeding with this determination before ERIG addresses the fundamental issues associated with the Regulatory Test. From discussions that the EUAA has had with ERIG, we understand that the Regulatory Test is a prime issue in their considerations and given the eminent release of the ERIG Draft Report, it would appear to us to be a more productive approach to incorporate the ERIG findings in the considerations of this determination.

We look forward to the AEMC's consideration of the issues highlighted in this submission. Bob Davenport (bob.davenport consideration @euaa.com.au) has primary carriage of this issue in the EUAA and should be contacted if you have any queries.