Review of the ACCC Regulatory Test

Submission to the *Australian Competition & Consumer Commission*

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Report to the *National Electricity Consumers Advocacy Panel*

from

Energy Users' Association of Australia
&
Energy Action Group

The National Electricity Consumers' Advocacy Panel commissioned the EUAA & EAG to prepare this report. Assistance in preparing the document was provided by Pareto Associates Pty Ltd. However, the views expressed herein are those of the EUAA and EAG.

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EXECUTIVE SUMMARY AND RECOMMENDATIONS

The ***regulatory test*** is a key element in the regulation of network services in the National Electricity Market (NEM). Clause 5.6 of the National Electricity Code (Code) requires that the test be applied, subject to certain specified conditions, to all major augmentation investments in regulated transmission and distribution networks. This makes the ***regulatory test*** important to end-users for the following reasons:

- End-users have paid over $22 billion dollars for 'shared' network services since the NEM commenced operation on 13 December 1998. They will continue to pay a further $5 billion each year unless the NEM Ministers' Forum (and/or Ministerial Council for Energy) decides to fundamentally change the basis on which network services are provided, and NECA (or its successor) develops a workable 'beneficiary pays' mechanism that shifts costs to generators who currently obtain the benefit of transporting their 'product' to market but pay nothing towards the costs of the 'shared' transmission and distribution networks.
- The cumulative cost to end-users of Regional spot price differentials has been (approximately) $6.6 billion since commencement on the NEM. These costs accrue primarily because of constraints in inter-regional transmission systems.
- Jurisdictional regulators have clarified and reinforced the principles on which the ***regulatory test*** (and Clause 5.6 of the Code) is based and applied these specifically to DNSPs (or attempted to do so). These principles also oblige NSPs to consider non-network options, including demand side response, which some end-users are in a position to provide.

The ACCC has proposed three Options for development of the ***regulatory test***. None of the Options address fundamental deficiencies in the economic principles underpinning the test.

Material presented in Prof Gavan McDonell's minority decision on the SNI Appeal, makes it clear that application of cost-benefit analysis to 'welfare economics' is valid where society, as a whole, bears the costs and gains the benefits from an activity, or, in the case of the ***regulatory test***, all participants in the NEM bear the costs and gain the benefits of network investment. McDonell also refers to a further assumption that is required to apply cost-benefit analysis to a sub-set of the economy (in this case, the NEM). This second assumption being that there are no external or 'cross-over' effects from, or to, the sub-set of the economy to which cost-benefit analysis is being applied.

McDonell makes no comment on the validity of these assumptions as they relate to the ***regulatory test.*** However, it is obvious that the first assumption is invalid because the cost of network investment is not shared by all participants in the NEM, and strongly arguable that the second is also invalid because outcomes in the NEM clearly impact on the whole economy. More specifically:

- The ***regulatory test*** is intended to cover investment in 'shared' (or common) network assets. Clause 3 of Schedule 6.8 of the Code explicitly provides for allocation of all 'shared' network costs to end-users through transmission use of system charges, or distribution use of system charges. End-users currently pay, and always have paid, 100% of the costs of the 'shared' network. This means that the first assumption in applying cost-benefit analysis to 'welfare economics' is not valid in the case of the ***regulatory test*.**

- Nor is it safe to assume that there are no cross-over effects from the NEM to other sectors of the economy. Large end-users could convincingly argue that cross-over effects do exist, are real and have a substantial impact on their business activities.

The explanation provided by McDonell shows that, where only one party (or one group of stakeholders) pays all the costs, cost-benefit analysis can and should be applied in the form of a straightforward business investment analysis undertaken from the perspective of those who make the investment (and pay the cost of the investment). It is unnecessary to consider, within the analysis, the impact on any stakeholder who does not contribute to the costs of the activity.

A logical conclusion from McDonell's explanation of the basis for using cost-benefit analysis in the ***regulatory test*** is that end-users (or regulated network service providers on their behalf) should only be concerned that the investment for which end-users pay, delivers overall net benefits to end-users. This might be termed a 'payer benefits' principle.

In the context of the ***regulatory test***, if investment in a transmission interconnector is expected to increased competition between generators and lead to changes in energy market prices that benefit end-users, these benefits should be included in the analysis. This would be the case even if the 'service' provided by the interconnecter was to create real physical competition between inter-regional generators that equalised the price in one or more adjoining Regions; and even if, in other respects, the transmission investment was sub-optimal. The fact that such benefits may be difficult to estimate is not sufficient reason to exclude them from the analysis, especially when they could impact significantly on end-users (i.e. the 'payers').

Accordingly, this submission concludes that the proposals in the ACCC discussion paper are unsatisfactory and not significant from the point of view of end-users. The ACCC has not acknowledged fundamental problems with assumptions that underpin the ***regulatory test*** and none of its proposals will 'solve problems created by significant differences between the test, the Code and jurisdictional regulations. As a minimum, the ACCC should:

- acknowledge the basic deficiencies in the assumptions underpinning the ***regulatory test***;
- restructure the ***regulatory test*** so that it can be applied by NSPs in the form of an application of cost-benefit analysis of investment options from the point of view of the end-users who pay for network services;
- require removal from the Code of avenues and rights for dispute and appeal by 'non-payers' of any decisions related to any augmentation of the 'shared' network that is paid for by end-users;
- require the NEMMF/MCE (in lieu of NECA or its successor) to undertake a review of the application of the ***regulatory test*** (revised as above) and the related Code obligations as they relate to DNSPs to ensure nationally consistent application of explicitly specified minimum:
  - service and supply quality standards;
  - information disclosure obligations; and
  - obligations to consider DSR for all network augmentations.

In addition, the submission notes with concern the fundamental differences between the ACCC's statement on 'optimisation of assets' where investment in those assets has been subject to the ***regulatory test*** and 'guarantees' given to Victorian gas distributors by the

Victorian Essential Services Commission not to seek or identify and remove stranded or partially stranded assets for a period of 30 years***.***

This stark and fundamental difference on a crucial area of 'regulatory policy' clearly demonstrates deficiencies in the 'practice' of incentive regulation in Australia. The ACCC should note that the EUAA and EGA totally disagree with the position taken by the ESC on this issue. If regulation is seeking to emulate competitive market outcomes then stranded assets should have no value.

However, there are issues that the ACCC must consider in regard to revaluation of assets and the ***regulatory test***. For example, if the ACCC adopts the recommendations in this submission and changes the ***regulatory test*** to a straightforward application of cost-benefit analysis to a business investment on the part of end-users (who pay):

- a TNSP could undertake an interconnector investment that would physically increases cross-Regional competition between generators which would, inevitably, lead to generators bidding differently in the face of *actual* competition compared to bids in the face of *actual* inter-regional transmission constraints;
- this could change energy flows across interconnectors and mean that investment in additional transmission interconnector capacity was under-utilised.

Under those circumstances, end-users would gain the broader benefits that the increased competition brings to the energy market, which would justify the costs of building the interconnector capacity that delivered that outcome. However, the ACCC's asset optimisation policy could result in the augmented asset value being 'optimised' down (or out of the TNSP's asset base) and the TNSP would have less incentive to pursue the investment in the first place.

1. INTRODUCTION

This report comments on proposals to change the ***regulatory test*** contained in the ACCC's February 2003 discussion paper - *Review of the regulatory test.*[1]

The ***regulatory test*** is a key element in the regulation of network services in the National Electricity Market (NEM). Clause 5.6 of the National Electricity Code (Code) requires that the test be applied, subject to certain specified conditions, to all major augmentation[2] investments in regulated transmission and distribution networks. The discussion paper also says that the ACCC is consulting on whether replacement assets and refurbishments should be subject to the regulatory test.[3]

The report has been prepared by the Energy Users' Association of Australia (EUAA) and Energy Action Group (EAG) based on work commissioned by the National Electricity Market Advocacy Panel (NEMAP) and also forms the basis of a submission to the ACCC review of the ***regulatory test***.

The report comments on issues raised in the ACCC discussion paper in so far as the issues are likely to impact on end-users. However, the EUAA and EAG are also concerned that several related activities have the potential to impact on the way the ***regulatory test*** is interpreted and applied. These activities are being undertaken either independently or in parallel with the ACCC review without any clear evidence that all these activities are being coordinated. These activities are:

- A review by the Inter-Regional Planning Committee of criteria for *reliability augmentations*[4] of transmission networks.
- Deliberations/actions by the Ministerial Council on Energy (MCE) on the Council of Australian Governments (CoAG) Energy Market Review (Parer) report that may lead to fundamental changes in the way TNSPs operate in the NEM.
- Deliberations by the NEM Minister's Forum (NEMMF) on the policy framework and future directions for the transmission network.[5]
- Completion of a review by NECA of a mechanism to change the allocation of costs for 'shared' transmission services under the *beneficiary pays* principles that came out of

[1] *Discussion paper - Review of the regulatory test*, Australian Competition and Consumer Commission, 5 February 2003.

2 The Code defines augmentation to mean: Works to enlarge a network or to increase the capability of a network to transmit or distribute active energy.

[3] If the ***regulatory test*** were extended to cover replacement/refurbishment of network assets it would apply to all network investments (subject to any conditions specified in the Code and the test).

[4] *Reliability augmentation* is a term used in conjunction with the ***regulatory test*** that refers to an investment in network assets required to meet any one (or any combination) of the range of service standard or supply quality parameters listed in schedule 5.1 of the Code.

[5] NECA's quarterly report for the period October to December 2002 includes the following: "*The National Electricity Market Ministers' Forum announced last July a study of the policy implications of alternative transmission models. Following that study, Ministers have said that they intend to publish a statement on the policy framework and future directions for the transmission network by June. The ACCC, NECA and NEMMCO have agreed that it would not make sense, whilst that study is being conducted, to propose further changes to the market rules surrounding the transmission network. We shall assess what further work will be sensible in the light of the fresh direction set out in the Ministerial statement. In the meantime, we have provided an interim report on methodologies for implementing the 'beneficiary pays' principle for new regulated network investments to the Forum as part of our contribution towards its study.*"

the ACCC approval, in September 2001, of the 'transmission and distribution pricing review' Code change package.[6]

- A proposed review by NECA of Code and ***regulatory test*** obligations for distribution network service providers (DNSPs) that came out of the ACCC approval, in January 2002, of the 'network and distributed resources' (NDR) Code change package.[7]

Reference to these other activities highlights one of the fundamental challenges for consumer advocacy in the NEM. This example of related, but multiple, uncoordinated and parallel activities undertaken by different institutions, at both national and jurisdictional level, is by no means isolated, even though it creates major difficulties for consistent and co-ordinated decision-making, as well as for resourcing end-user participation.

1.1. The Regulatory Test – What it is intended to do and what it does not do.

The ***regulatory test*** was developed in response to concerns raised by NEMMCo[8] in June 1998, following an application of the *Customer benefits test* originally incorporated into the Code to a proposal to construct a new transmission interconnector between NSW and South Australia (the SANI project).[9]

Resolution of the issue was triggered by a request made by the National Electricity Code Administrator (NECA) on 23 July 1999 for authorisation of changes to the Code to replace the original *Customer benefits test* with a ***regulatory test*** to be determined by the ACCC. The ACCC then authorised the ***regulatory test*** code change on 20 October 1999. These changes were gazetted on 18 November 1999.

In its final decision published on 15 December 1999, the ACCC determined that the **regulatory test** *would be:*

A new interconnector or an augmentation option *satisfies this test if it maximises the* net present value *of the* market benefit *having regard to a number of alternative projects, timings and market development scenarios; and*

An augmentation *satisfies this test if -*

(a) *in the event the* augmentation *is proposed in order to meet an objectively measurable service standard linked to the technical requirements of schedule 5.1 of the Code*[10] *–* *the* augmentation *minimises the net present value of the* cost *of meeting those standards; or*

[6] NECA's review was mandated by the ACCC to be completed by September 2002, but was suspended by NECA (with the agreement of the ACCC and NEMMCo) following the July 2002 NEMMF decision to review the policy framework and future directions for the transmission network.

[7] While the NDR Code changes were developed with transmission network planning in mind, NECA modified the Code to ensure that the existing provisions and obligations on DNSPs were maintained but not extended. That is, DNSPs must continue to carry out economic cost effectiveness analyses of options that satisfy the regulatory test where it has identified necessary augmentations in its annual planning review. NECA is intending to undertake further work with the industry and jurisdictional regulators on how the general principles applied to TNSPs might apply to DNSPs.

[8] Reflecting this concern, the NSW Government lodged this issue on NEMMCo's Issues Register requiring it to be resolved prior to the commencement of the NEM (which occurred on 14 December 1998). Consequently, the ACCC was asked, as an independent party, to review the test and recommend changes to the test to overcome the perceived inadequacies.

[9] The fact that there has still been no final decision to proceed with (or abandon) the NSW-SA interconnector demonstrates very clearly the key failings of the NEM arrangements for transmission.

[10] The Code allows jurisdictional regulators to specify standards of service for distributors. But there is currently no consistency in the jurisdictional obligations. For example, Victorian distributors are obliged to comply with minimum service standards explicitly specified in the Distribution Code, whereas there are no explicit service standards specified in NSW Codes. NSW

> *(b)* *in all other cases – the augmentation maximises the net present value of the* market benefit
>
> *having regard to a number of alternative projects, timings and market development scenarios.*

That is, the ***regulatory test*** deals with two distinct classes of network investment, a new interconnector (defined in the Code as *transmission lines that connect the transmission networks in adjacent regions of the National Electricity Market*), and an augmentation (defined as *works to enlarge a network or to increase the capability of a network to transmit or distribute active energy*).

In addition, different types of augmentations are required to be treated differently. A *reliability augmentation*, which is an augmentation "*proposed to meet objectively measured service standards linked to the technical requirements of Schedule 5.1"* of the Code, will 'pass' the ***regulatory test*** if it minimises the net present value of the *cost* of meeting those standards**.** A market-driven augmentation will 'pass' the ***regulatory test*** if it maximises the net present value of the *market benefit.*[11]

> *The ACCC discussion paper focuses on applications of the* **regulatory test** *to transmission investment, including the contentious aspects impacting on investment in inter-regional interconnectors.*
>
> *However, it is important that the test can be interpreted to apply to all network investments related to capacity or supply quality - subject to the qualifications specified in the Code and clarifications and definitions specified by the ACCC.*

The ***regulatory test*** is clearly intended to apply to all regulated network service providers (NSPs), including distribution network service providers (DNSPs), but its application to DNSPs requires interpretation of related provisions in clause 5.6 and schedule 5.1 of the Code. Schedule 5.1 deals almost exclusively with service standards and supply quality parameters that relate to transmission network service providers (TNSPs) and operation of the National Electricity Market (NEM). While some of the relevant obligations fall on DNSPs, schedule 5.1 contains no explicit service standards relating to of distribution networks.[12]

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distributors have a specific obligation to produce annual reports on service performance, which allow the distributors to specify voluntary service standards that they believe will satisfy the reasonable expectations of their customers. Specification of the service standard in a form that can be interpreted to be objectively measurable may be embedded on other documents published by the NSW distributors.

[11] "*Cost*" and "*market benefit*" are as defined by the ACCC in "notes" accompanying the definition of the ***regulatory test***.

[12] Code Clause S5.1.2.1 refers to supply reliability contingency events for lines above 66kV and, arguably, does not apply to most distribution network assets.

Clause S5.1.2.2 refers to network redundancy; and sub-clause (b)(1) allows operation of a network element without any redundancy during the most critical single element outage. This implies an N-1 contingency operating mode, but this is not what happens in practice within distribution networks. In fact, the timing of an augmentation investment would appear to be largely a matter of the distribution network service provider's discretion. Given the incentives in the regulatory regimes to delay CAPEX as long as possible, this suggests a prudent distributor would delay investment until just before the capacity of a major substation was likely (or certain) to be exceeded.

Clause S5.1.2.3 relates to network services between NEM Regions and does not (generally) apply to distributors.

Other clauses in Schedule 5.1 relate to quality of supply parameters such as frequency, voltage variation, harmonics, fault clearance times, load shedding capabilities and monitoring, with the primary emphasis on operation of transmission networks elements.

The ***regulatory test*** (and the Code more generally) places emphasis on the need to consider 'market-based' solutions in the planning process for network augmentations. The importance of identifying and specifying an appropriate service standard that is both meaningful and can be objectively measured is crucial when applying the 'simpler' *reliability augmentation* version of the test. Specification of such a service standard (in effect) establishes a 'baseline' reference for a cost-benefit analysis of an investment proposal. This allows the ***regulatory test*** to be applied by considering the net present value of the *costs* of meeting the specified standard and avoids difficulties associated with quantifying the value of *market benefits*.

However, even in the case of a *reliability augmentation*, achieving a least-cost outcome is not the only requirement that NSPs must meet to 'pass' the ***regulatory test***. For the purposes of interpreting how the test should be applied, the ACCC specified the following definitions and supplemental conditions:

(a) *market benefit* means the total net benefits of the *proposed augmentation* to all those who produce, distribute and consume electricity in the National Electricity Market. That is, the increase in consumers' and producers' surplus or another measure that can be demonstrated to produce equivalent ranking of options in most (although not all) credible scenarios;

(b) *cost* means the total cost of the *augmentation* to all those who produce, distribute or consume electricity in the National Electricity Market.

(c) the net present value calculations should use a discount rate appropriate for the analysis of a private enterprise investment in the electricity sector;

(d) the calculation of the *market benefit* or *cost* should encompass sensitivity analysis with respect to the key input variables, including capital and operating costs, the discount rate and the commissioning date, in order to demonstrate the robustness of the analysis;

(e) a proposed augmentation maximises the *market benefit* if it achieves a greater market benefit in most (although not all) credible scenarios; and

(f) an augmentation minimises the *cost* if it achieves a lower cost in most (although not all) credible scenarios.

These definitions are based on a primary assumption that underpins the **regulatory test** *in its current form (and the form that would flow from the proposals in the ACCC's Discussion Paper). This assumption is that the test can be based on application of cost-benefit analysis to 'welfare economics'.*

A relatively simple explanation of the basis for applying cost-benefit analysis to 'welfare economics' is included in Appendix 1 of Prof Gavan McDonell's minority decision on the SNI Appeal.[13] *The material presented by McDonell makes it clear that application of cost-benefit analysis to 'welfare economics' is valid where society as a whole bears the costs and gains the benefits from an activity (or, in the case of the* **regulatory test**, *all participants in the NEM bear the costs and gain the benefits of network investment).*

[13] *APPENDIX 1, The Regulatory Test, Cost Benefit Analysis and this Application,* Professor Gavan McDonell FTSE, undated (but issued in May 2003).

McDonell also refers to a further assumption that is required to apply cost-benefit analysis to a sub-set of the economy (in the case of the **regulatory test,** *the NEM). This second assumption being that there are no external or 'cross-over' effects from or to the sub-set of the economy to which cost-benefit analysis is being applied.*

McDonell makes no comment on the validity of these assumptions as they relate to the **regulatory test***. However, it is obvious that the first assumption is invalid because the cost of network investment is not shared by all participants in the NEM, and strongly arguable that the second is also invalid because outcomes in the NEM clearly impact on the whole economy.*

The **regulatory test** *is intended to cover investment in 'shared' (or common) network assets. Clause 3 of Schedule 6.8 of the Code explicitly provides for allocation of all 'shared' network costs to end-users through transmission use of system charges or distribution use of system charges. End-users currently pay, and always have paid, 100% of the costs of the 'shared' network. The NEMMF/MCE review of transmission may lead to changes in this situation (through completion by NECA, or its successor, of the review of the* beneficiary pays *mechanism). But the very strong opposition from generators to implementing the* beneficiary pays *principle in the first place provides no comfort for end-users that such a change will occur anytime soon. This means that the first assumption in applying cost-benefit analysis to 'welfare economics' is not valid in the case of the* **regulatory test.**

Nor is it safe to assume that there are no cross-over effects from the NEM to other sectors of the economy. Large end-users could convincingly argue that cross-over effects do exist, are real and have a substantial impact on their business activities.

The explanation provided by McDonell shows that where only one party (or one group of stakeholders) pays all the costs, cost-benefit analysis can and should be applied in the form of a straightforward business investment analysis undertaken from the perspective of those who make the investment (and pay the cost of the investment). It is unnecessary to consider, within the analysis, the impact on any stakeholder who does not contribute to the costs of the activity.

A logical conclusion from McDonell's explanation of these basic principles is that end-users (or regulated network service providers on their behalf) should only be concerned that the investment for which end-users pay delivers overall net benefits to end-users. This might be termed a 'payer benefits' principle.

In the context of the **regulatory test***, if investment in a transmission interconnector is expected to increase competition between generators and lead to changes in energy market prices that benefit end-users, these benefits should be included in the analysis. This would be the case even if the 'service' provided by the interconnecter was to create real physical competition between inter-regional generators that equalised the price in one Region or its adjoining Regions; and even if, in other respects, the transmission investment was sub-optimal.*

The fact that such benefits may be difficult to estimate is not a sufficient reason to exclude them from the analysis, especially when they could impact significantly on end-users (i.e. the 'payers').

The EUAA and EAG make no comment on McDonell's dissenting views in the NET Appeal. However, his explanation of the basis for applying cost-benefit analysis to the ***regulatory test*** provides a valid "sanity check" on the ACCC's proposals by going back to the basic economic principles that underlie the test. It is axiomatic that a complex process like the ***regulatory test*** should not depart from the basic principles on which it is supposedly founded.

See also: *National Electricity Tribunal Application No. 1 of 2001, Application for Review of a NEMMCO Determination on the SNI Interconnector, dated 6 December 2001, Reasons For Decision*, Professor Gavan McDonell FTSE, undated (but issued in May 2003).

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The ACCC also explicitly noted nine aspects of methodology that were to be included in application of the ***regulatory test***. Most of these (notes 1 through 5, and note 7) deal specifically with aspects of the methodology related to estimation of *market benefit*. While it might appear that these need not be considered for *reliability augmentations*, the ACCC also noted in the above definition of *cost* that:

> *"any requirements in notes 1 to 9, inclusive, on the methodology to be used to calculate the market benefit of a proposed augmentation should also be read as a requirement on the methodology to be used to calculate the cost of an augmentation."*

Very briefly, the notes require network service providers to consider:

(1) The cost of the *proposed augmentation*; reasonable forecasts of electricity demand; the value of energy to electricity consumers; efficient operating costs and capital costs (to meet forecast demand) from existing, *committed, anticipated and modelled projects,* including demand side and generation projects; whether the capital costs are completely or partially avoided or deferred (by demand side or generation projects); cost of providing ancillary services; capital and operating costs of other regulated network and market network service provider projects that are augmentations consistent with the forecast demand and generation scenarios; and the proponent's nominated *construction timetable.*

(2) Whether the *proposed augmentation* will enable a Network Service Provider to provide both prescribed services and other services.

(3) The cost of complying with existing and anticipated laws, regulations and administrative determinations such as those dealing with health and safety, land management and environment pollution, and the abatement of pollution.

In addition, the ACCC noted that:

(4) Any benefit or cost, which cannot be measured as a benefit or cost to producers, distributors and consumers of electricity in terms of financial transactions in the market, should be disregarded.

(5) Analysis should include modelling a range of reasonable alternative market development scenarios, incorporating varying levels of demand growth at relevant load centres (reflecting demand side options), alternative project *commissioning* dates and various potential generator investments and realistic operating regimes.

(6) Modelled projects should be developed using 'least-cost market development' and 'market-driven market development'.

(7) The proposed *augmentation* should not pre-empt nor distort potential unregulated developments, including network, generation and demand side developments.

(8) The consultation process must be an open process, with interested parties having an opportunity to provide input and understand how the benefits have been measured and how the decision has been made.

(9) Any information which may have a material impact on the determination of *market benefit,* and which comes to light at any time before the final decision, must be considered and made available to interested parties.

Note (4) 'translates' the assumption that cost-benefit analysis can be applied to 'welfare economics' into terms that NEM participants (are supposed to) understand.

This is the most controversial and widely criticised condition imposed by the ACCC. In effect, it prevents inclusion of the (competition) benefits that increased inter-regional (and even intra-regional) transport capacity could have on wholesale market energy price – when this is a major benefit that consumers might expect to see from inter-regional transmission investment.

As noted in the previous Box, there is compelling logic supporting the inclusion of benefits to end-users from inter-regional price differences in the cost-benefit analysis since it is end-users who bear all of the costs of 'shared' network investments.

The ACCC's Discussion Paper deals with issues related to this aspect and Option 3 proposed by the ACCC seeks to address these criticisms. However, the proposals contain no recognition or acknowledgement of flaws in the basic assumptions supporting application of cost-benefit analysis to the **regulatory test***.*

2. Impact of the Regulatory Test on End-Users

As outlined above, the ACCC's notes on the application of the ***regulatory test*** require network service providers to conduct a cost-benefit analysis of options, including non-network options, and to undertake a consultation process for all *augmentations* that relate to the test. Many, if not most, non-network options are likely to be forms of 'demand side response' (DSR) implemented at the distribution level.

End-users should expect that application of the ***regulatory test*** would deliver sensible business investment decisions, including decisions by DNSPs to 'procure' DSR where that would deliver efficient outcomes. This section examines some of the 'institutional' factors that tend to hinder realisation of this expectation.

2.1. Impact of the regulatory test on Demand Side Response

The ***regulatory test*** itself does not provide all the detail required to interpret how it is to be applied. Interpretation of the ***regulatory test*** also requires reference to clause 5.6 of the Code. For example, clause 5.6.2(g) says:

> *Each Distribution Network Service Provider must carry out an economic cost effectiveness analysis of possible options to identify options that satisfy the* **regulatory test***, while meeting the technical requirements of schedule 5.1 of the Code and where the Network Service Provider is required by clause 5.6.2(f) to consult on the option this analysis and allocation must form part of the consultation on that option.*

And clause 5.6.2(h) says:

> *Following conclusion of the process outlined in clauses 5.6.2(f) and (g), the Distribution* Network Service Provider *must prepare a report that is to be made available to affected* Code Participants *and* interested parties *which:*
>
> *(1) includes assessment of all identified options;*
> *(2) includes details of the Distribution* Network Service Provider's *preferred proposal and details of:*
> *(A) its economic cost effectiveness analysis in accordance with clause 5.6.2(g)(1); and*
> *(B) both its determination in accordance with clause 5.6.2(g)(2) and its consultations conducted for the purposes of that determination.*
> *(3) summarises the submissions from the consultations; and*
> *(4) recommends the action to be taken.*

Thus, at the conclusion of its consultation and cost-benefit analysis processes for any *reliability augmentation*, a DNSP is required to produce and release publicly a report that provides details of the consultation and analysis undertaken and of the option(s) it intends to pursue.

These provisions might seem to imply that DNSPs are required to consider non-network options for augmentation. If that were the case, there would be clear opportunities for investment in DSR. However, the Code and the ***regulatory test*** are not as clear as they might be on this point. This is because clause 5.6.2(f) says:

> *… a Network Service Provider does not need to consult on a network option which would be a new small network asset,*

where *a new small network asset* is defined (in effect) as an asset of a transmission network service provider requiring an estimated capital investment of between $1 million and $10 million.

The explicit absence of references to DNSPs and the (relatively) high investment 'hurdle' value remove any compulsion for DNSPs to be bound by these provisions. The (relatively) high investment hurdle values may capture a significant proportion of transmission augmentations, but would only capture larger distribution augmentations – which, in turn, may account for only a small portion of distribution system augmentation costs.

> *Issues related to matters that could, or do, influence incentives for DNSPs to pursue 'efficient' demand side response are not included in the ACCC's review. These would, presumably (but by no means certainly), be included in the proposed review by NECA of Code and* **regulatory test** *obligations for DNSPs that came out of the ACCC approval of the NDR Code change package. But, as yet, NECA has made no firm commitment to conduct that review.*
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> *Given published work programs, it would be far better for the ACCC and NEMMF/MCE examine the relevant issues than to leave this to a more narrow NECA review.*

2.2. The impact of the regulatory test on jurisdictional regulation

There is a degree of subjectivity involved in interpreting how the ***regulatory test*** applies to distribution network augmentations. This is partly due to the lack of any explicit services standards that clearly apply to DNSPs in schedule 5.1 of the Code, and the 'exemptions' from applying the test embedded in clause 5.6.

End-users might reasonably expect that the ***regulatory test*** would (or should) be interpreted broadly, rather than legalistically, when applied to network augmentation proposals. They might also reasonably expect that actions required to comply with the ***regulatory test*** would be both practical and in the interests of end-users. But it is far from clear that this is so, partly because the degree of subjectivity varies between jurisdictions simply because different jurisdictions specify the obligations of DNSPs differently.

For example, NSW distributors are required to follow procedures specified in the NSW Code of Practice for Demand Management (DM Code).[14] The DM Code reinforces, clarifies and significantly modifies less specific obligations (for distributors) in clause 5.6 of the Code and the ***regulatory test***. The DM Code requires NSW distributors to:

- prepare and publish reports identifying and quantifying the magnitude and (preliminary estimated) cost of network constraints for each major transformer on an annual basis;[15]
- actively seek offers for non-network alternatives for augmentation whenever the estimated annual cost of an augmentation exceeds $200,000/year;[16]

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[14] The NSW government and IPART are currently reviewing the DM Code.

The Essential Services Commission of South Australia has issued for consultation a draft Code with similar obligations to the NSW DM Code, but with a different investment threshold value.

[15] NSW distributors published the first of the Annual Electricity Development Review Reports required by the DM Code in May 2002 and placed copies on their websites

- consider non-network alternatives for all augmentations above the threshold value;
- adopt the non-network alternative if it is more 'efficient' (lower cost than the network augmentation option); and
- publicly explain the basis of a decision to pursue augmentation above the threshold value.

In effect, the NSW DM Code imposes a process on distributors that is generally consistent with the *reliability augmentation* provisions of the ***regulatory test*** and clause 5.6 of the Code, but with substantially higher and more explicit disclosure obligations and a substantially lower investment threshold value than applies to the ***regulatory test***. This 'opens up' more augmentations for formal consideration of DSR options than might application of the ***regulatory test***.

Victorian distributors on the other hand are required by their licences to comply with procedures specified in the Victorian Distribution Code that have the effect of imposing the *reliability augmentation* provisions of the *regulatory test* and clause 5.6 of the Code. Clause 3.5 of the Distribution Code requires each distributor to publish an annual Distribution System Planning Report detailing plans to meet predicted demand for electricity supplied through subtransmission lines, zone substations and high voltage lines over the following five calendar years. The report must include the following information:

- the historical and forecast demand from, and capacity of, each zone substation;
- an assessment of the magnitude, probability and impact of loss of load for each subtransmission line and zone substation;
- the distributor's planning standards;
- a description of feasible options for meeting forecast demand, including opportunities for embedded generation and demand management;
- where a preferred option for meeting forecast demand has been identified, a reasonably detailed description of that option, including estimated costs; and
- the availability of contributions from the distributor to embedded generators or customers to reduce forecast demand and defer or avoid augmentation of the distributor's system.

The Victorian distributors first published these reports in December 2002 (and posted copies on their websites). While the obligations for Victorian distributors are similar to those in NSW, they do not include any explicit obligation to actively seek proposals from DSR proponents, the level of detail that is disclosed is different and there is no explicit obligation that changes the investment hurdle values specified in the Code.[17] This has the effect of placing more emphasis on a voluntary response by both distributors and DSR proponents than is the case in NSW. Arguably, this tilts the playing field even more against DSR.

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[16] This leads to an approximately investment hurdle value around $2 million (assuming the weighted average cost of capital is in the order of 10%) compared to the $10 million threshold of the regulatory test. The draft DM Code in SA proposes an investment hurdle value of $300,000/year.

[17] The content of each Victorian distributor's report is similar, but the level of detail differs. For example:

- United Energy and TXU refer to the interim decision relating to the Somerton Power Station taken by the (then) Office of the Regulator-General in March 2001 as the basis for valuing likely benefits available to a DSR proponent (and make the point that such amounts may differ between projects, and are subject to approval by the regulator);
- United is the only distributor to provide a summary and explanation of the cost impact of its probabilistic planning approach, but provides no explicit indication of the likely benefits available to a DSR proponent; and
- AGL provides an approximate value for the benefits likely to be available to a DSR proponent but provides no explanation of how this value is derived.

Whilst these jurisdictional differences are not trivial, they have not resulted in substantially different outcomes so far as 'take-up' of DSR by is concerned. There seems little doubt that the NSW Code imposes clearer obligations to actively seek DSR options than is the case in Victoria. But there is little evidence, to date, that the NSW arrangements have lead to higher rates of DSR 'take-up' by distributors, although it is relevant to note that arrangements in both jurisdictions could only be described as being in the early stages of implementation.

Indeed, the Essential Service Commission (ESC) in Victoria refers to the Bairnsdale and Somerton Power Stations as examples of non-network augmentations that have occurred in Victoria but not (yet) been replicated in other jurisdictions. While these examples provide a useful precedent, they are hardly compelling. Both involved agreements between related supply-side entities,[18] not between end-users and NSPs, and both involved 'loss of revenue opportunities' to the Victorian transmission sector, not the distribution sector.

In the Somerton case, the (then) ORG decided that the Network Support Agreement could include a payment of up to 100% of the avoided transmission costs (as required by the Code), but only 50% of the avoided distribution costs. The ORG does not fully explain why it allowed only 50% of avoided distribution costs other than saying "*(t)he principal argument in favour of partial pass-through is that full pass-through provides no consequential benefit to customers (although positive externalities may be generated). Direct benefits to customers would be more likely to result if distributors and embedded generators were to contract for partial pass-through."*[19]

A full pass-through may provide no consequential benefit to customers, and ORG's position may have been influenced by concern about the close relationship between the parties. Still, allowing DSR proponents to recover only 50% of the avoided distribution cost acts as a disincentive for DSR developers and 'institutionalises' a form of monopoly rent for distributors.[20]

The outcomes in Victoria, and the (as yet) inconclusive outcomes in NSW simply reinforce the point that further examination of incentives for DSR is warranted in all jurisdictions. But, again, this aspect is not included in the ACCC review of the ***regulatory test***.

2.3. Is the regulatory test important to end-users?

As noted earlier in the Introduction, the ***regulatory test*** can be interpreted to apply to all network investments related to capacity or supply quality, subject to the qualifications specified in the Code and 'clarifications' and definitions specified by the ACCC. It is also important to note that jurisdictional regulators have clarified and reinforced the principles on which the ***regulatory test*** (and Clause 5.6 of the Code) is based. A primary outcome of applying these principles is to establish minimum standards for assessing whether an investment in regulated network assets should proceed or not.

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[18] The Bairnsdale Power Station project was developed initially by under a Joint Venture agreement between Westcoast Energy Pty Ltd and Eastern Energy Ltd (now TXU), with the costs partially offset by a Network Support Agreement between the JV and Eastern. The project was on-sold to Duke Energy Ltd early in the construction phase. The Somerton Power Station involved an agreement between AGL Electricity and AGL Power Generation to recoup part of the costs through a Network Support Agreement. In both cases, a primary incentive for the parties was to benefit by avoiding proposed (in the case of Bairnsdale) and actual (in the case of Somerton) transmission network charges.

[19] See http://www.esc.vic.gov.au/PDF/2001/LettAGLSomertonMar01.pdf

[20] The decision taken by the ORG reflects a prevailing attitude by regulators that consumers who do nothing about DSR should be 'protected' from the costs incurred by those who do something. The same criticism is relevant to the Code provisions that allow passthrough of 100% of variable transmission costs only, but 0% of fixed costs.

This suggests that the ***regulatory test*** is important to end-users, but it is difficult to quantify how important it is. It is also difficult to rate how important the ACCC's proposal might be to end-users.

Electricity networks perform two primary functions for end-users. Both transmission and distribution networks allow energy of acceptable quality to be delivered reliably to end-users. Transmission networks also provide the physical means for effecting inter-regional competition between generators in a market design that is clearly susceptible to exercise of market power. The ***regulatory test*** focuses attention on achieving efficient investment in reliable energy delivery, but (currently) explicitly excludes consideration of the market price or competition impacts of transmission networks.

This suggests that the relative importance to end-users of investment in networks can be quantified by considering a notional improvement in efficiency that the ***regulatory test*** might deliver to investments in energy supply and reliability (ignoring 'competition impacts') and a notional improvement in 'market outcomes' if existing inter-regional transmission constraints were removed.

A basis for estimating the efficiency of investment in reliable energy supply is contained in the diagram below.[21] This diagram shows time series plots of total demand, total regulatory asset value (RAV), total maximum allowed revenue (MAR) and total CAPEX for all transmission and distribution NSPs in the NEM (excluding only ACT distribution). The diagram shows the total value of capital investment (CAPEX) at around $1.8-2 billion/year.[22] Of this amount, only 29% of CAPEX is attributable to TNSP investment.

Regulators in NSW, Queensland and Victoria have also published estimates for various categories of distribution CAPEX that provides a basis for estimating a value for 'growth-related' CAPEX. There is, however, no consistency in these sources. Data is reported sometimes as forecasts in regulatory Determinations, sometimes as actuals in performance reports. There appears to be very little comparable information showing breakdowns of transmission CAPEX. However, the available data shows 'growth-related' CAPEX varies from (approximately) 25% for Victorian distributors, 30% for Queensland distributors and 55% for NSW distributors. This suggests approximately $600-800M per year is being invested by NSPs in augmentation related to 'load growth', although the actual figure may be substantially lower if ETSA Utilities and the major TNSPs invest less than 25-30% of their CAPEX in 'growth-related' assets.

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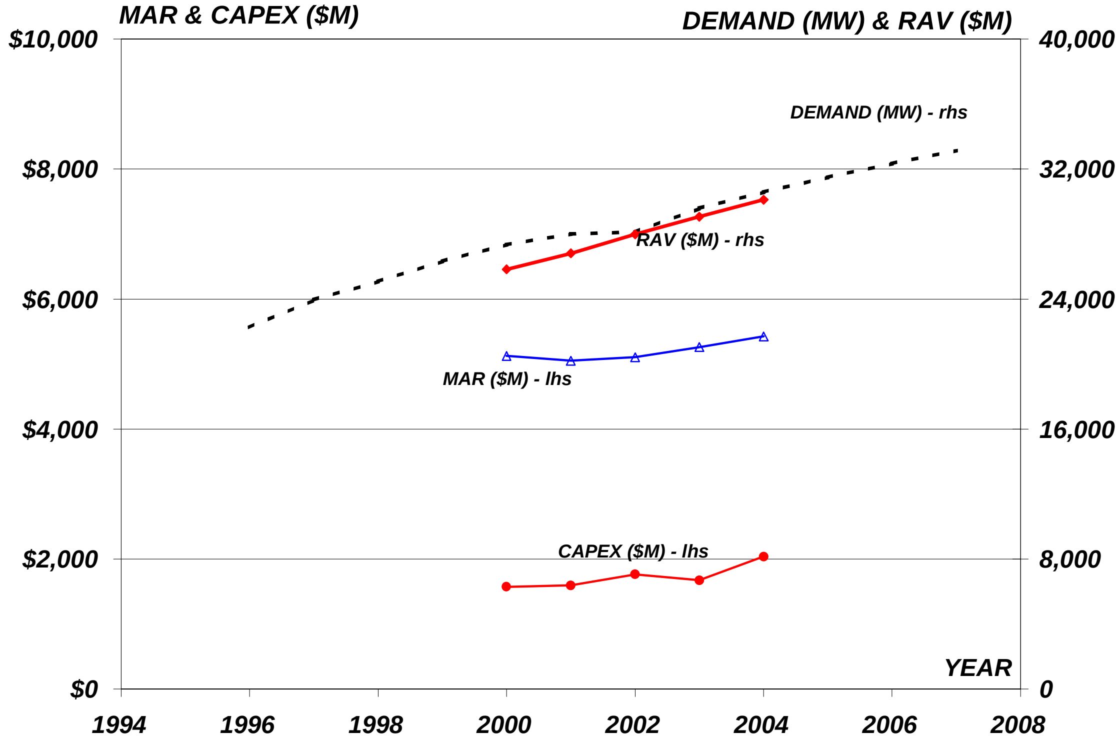
[21] The data has been taken from transmission network service providers' Annual Planning Reports, regulatory Determinations and regulatory performance reports. Data to 2001 is based on reported actuals, data for later years are forecasts.

The data presented in this diagram may not be entirely 'accurate'. The basis on which financial data is reported is not always clear from the reports from which the data was taken. Reported values for the same period are sometimes different in the reports of some jurisdictions from one year to the next, and some figures may be reported in Nominal $ and others Real $, without this being explicitly stated.

[22] IPART's latest performance report confirms that the NSW distributors have undertaken, and are committed to CAPEX programs that exceed allowances forecast in IPART's 1999 distribution pricing determination by $1.06 billion (or 66%) over a 4 year period, most of which is attributed to 'growth-related' expenditure, much of which can, in turn, be attributed to growth in peak demand. However, the IPART report did not provide data in time series. Rather than attempt an arbitrary allocation of the revised forecast total to individual years, this data has been excluded from the above diagram.

Figure 1 Summary Performance Data for all NEM Network Service Providers.



If the ***regulatory test*** was applied literally to all CAPEX for all networks and it was effective in improving investment efficiency by reducing CAPEX by 10%[23], it might deliver a total annual value to end-users of $18 million/year (assuming an average achieved WACC of around 10%). If the ***regulatory test*** was applied to the proportion of CAPEX related to load growth only, it might have a value to end-users of just $6-8 million/year. And if the test was applied literally to the load-growth CAPEX for TNSPs only, it might deliver benefits in the order of just $1.5-2 million/year.

On the other hand, eliminating differences in Regional Reference Price across the NEM by investing in transmission capacity and maximising physical competition between generators would deliver very much greater value to end-users.[24] This can be illustrated (approximately) using data from the following diagram, which shows 12 Monthly Moving Average energy spot price for each of the NEM Regions and the indicative cumulative 'cost' to end-users of the spot price differential between Regions.

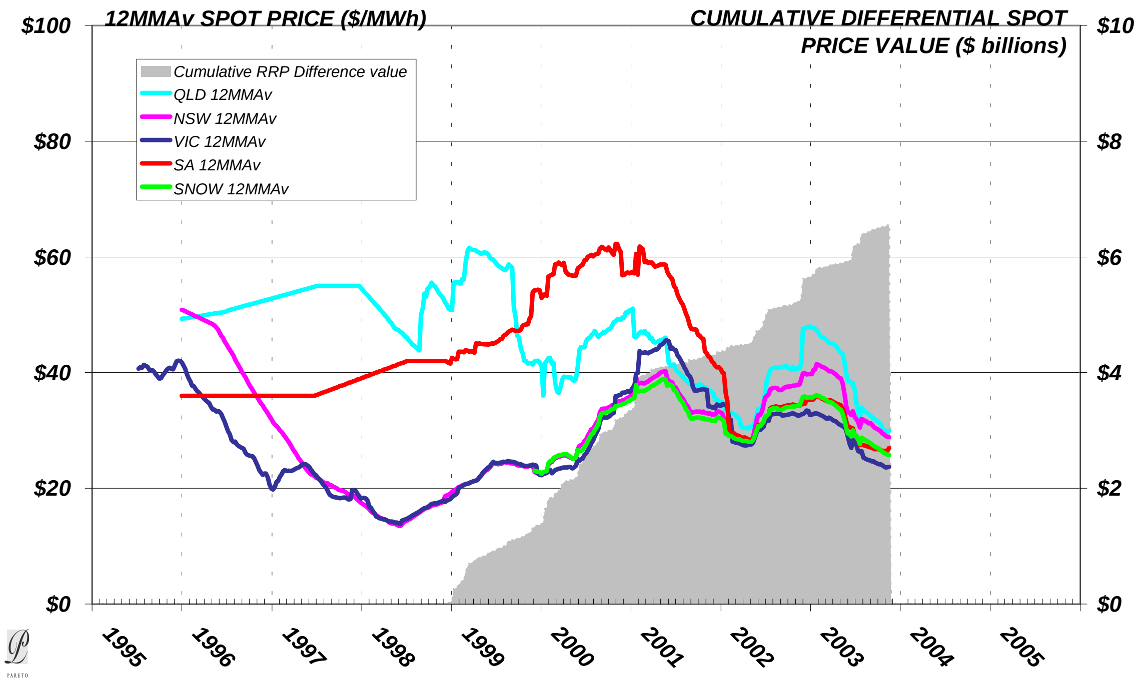
In the first year of NEM operation (1999), prices in QLD and SA were more than double those in NSW and VIC. The price differentials have decreased substantially since then and even reached a period, in the first half of 2002, when the price differential between Regions was less than 10% (around the same order as inter-regional network losses). It is

[23] This is a very robust assumption. It is not at all clear that application of ***the regulatory test*** (and clause 5.6 of the Code) does anything other than impose minimum standards for investment analysis and oblige NSPs to consider non-network options. Other regulatory mechanisms and incentives (to increase profitability by out-performing regulatory cost benchmarks) are more likely to promote efficient investment.

[24] It is acknowledged that a similar outcome could come from investment in generation capacity in Regions with high spot prices – providing this lead to an increase in competition, and that competition was effective. However the two jurisdictions with the least effective competition in the NEM (NSW and QLD) have resisted arguments that they should pursue more aggressive (or progressive) structural reform. This suggests that the economic (and political) cost of achieving more diversity and more competition amongst generators is higher than that required to remove transmission constraints.

particularly noticeable that prices converged after commissioning of the NSW-QLD interconnector (QNI) in early 2001, but diverged after May 2002 as NSW and QLD generators 'learned' how to 'cope' with the QNI constraints. Prices, particularly in the QLD and NSW Regions, have also declined since commissioning of the Millmerran Power Station in early 2003.

Figure 2 12 Monthly Moving Average Spot Prices for all NEM Regions.



Note: The estimate for cumulative value of Regional spot price differential assumes that prices could diverge by up to 10%. This allows for the possibility of a price differential arising from transmission losses between regions.

It is not entirely clear why spot prices reduced in the SA Region from early 2001. This may be because limited retail competition and regulatory decisions provide (relatively) high margins for the dominant retailer (80-100% or more over the pool price), which flow through to generators and reduces incentives to bid higher prices in the spot market. Other factors appear to have been a decision by TXU to use Torrens Island instead of Newport to satisfy peaking needs in Victoria, backing off the heavy loading on the VIC-SA interconnector in 2002 and leading to generally lower loads limiting interconnector constraints.

The volume-weighted market value of these spot price differences shown on the above diagram has been estimated by assuming that the spot price in each Region would converge to the lowest priced Region if there were no transmission constraints in the system. The total volume-weighted value of these spot price differences since the beginning of the NEM in December 1998 is over $6.6 billion (up to 22 November 2003). Nearly $1.4 billion of that value has accrued over the last 12 months. This is an indication of the 'cost' to end-users of constraints in the transmission system (and other related deficiencies such as insufficiently competitive market structures in generation) that allow these price differentials to be maintained. This cost is (approximately) equivalent to paying for $12 billion of new interconnector (or generator) assets.[25] If end-users spent that much on extra TNSP capacity they would get about 3-4 additional QNI's/year. Instead, they have got only one in 5 years.

Of course, removing transmission constraints may not always result in spot prices stabilising around values in the lowest-priced Region. Removal of transmission constraints would tend to stabilise spot prices at higher values across all NEM Regions as the level of spare generating capacity declines. However, a tendency to lower prices is more likely to occur if one or more Regions have under-utilised generation capacity (as is the case in NSW and rapidly approaching in Qld) and the market is workably competitive**.** The fact that spot prices converged following commissioning of QNI and Millmerran suggests that removal of transmission constraints would push down spot prices in the higher-priced Regions.

But even if spot prices converged to higher values, this would provide more uniform and consistent signals for investment in generation (or DSR) capacity across the NEM, or clearer evidence for the ACCC (or government) to do something that would effectively stifle the exercise of market power.

> *The primary point to make from this (preliminary) analysis is that retaining the* **regulatory test** *in its current form is much less likely to create tangible value for end-users than modifying the test so that it assists the realisation of benefits from maximising competition in the NEM.*
>
> *It can even be argued that the* **regulatory test** *is of no value to end-users in its current form simply because other, more effective, incentives already operate to stimulate efficiency in investment. The best the* **regulatory test** *might hope to achieve is to impose a minimum standard on the financial analysis of (non-controversial)* reliability augmentations. *But this is not likely to add much value to end-users because TNSPs are already subject to basic incentives to increase profits by being efficient, and 'beating' cost benchmarks approved by regulators.*
>
> *At worst, the* **regulatory test** *(and related Code obligations) presently causes prolonged delays in investment decisions that would otherwise deliver benefits to end-users.*

[25] Assuming the annual value of $1.4 billion could fund assets through actual WACC of 10% and depreciation at 2% of asset values. This assumption ignores operating and maintenance costs and, accordingly, overstates the likely value of the assets to some degree.

3. The ACCC Proposals

The ACCC's discussion paper identifies) three "Options" for development of the ***regulatory test***. The ACCC says these Options are based on consideration of submissions to an earlier Issues Paper (released on 10 May 2002). The Options comprise:

1. maintain the current test with minor modifications to ensure consistency between the regulatory test and the code following the 'network and distributed resources' (NDR) Code changes (approved by the ACCC in January 2002);
2. define and clarify elements of the regulatory test to ensure a consistent application of the test across the NEM; and
3. outline possible methods for assessing competition benefits.

The ACCC also notes the possibility of combining the Options in a sequence comprising Option 1 alone, Options 1 and 2, Options 1 and 3 or Options 1, 2 and 3.

The ACCC does not state explicitly what it is seeking to achieve from changes to the ***regulatory test***, but the objectives appear to be:[26]

- address wide criticism of the existing arrangements for the planning and approval of regulated network investment;
- streamline and simplify the arrangements, whilst encouraging a nationwide approach to planning and strengthening the transmission network; and
- ensure that (the ***regulatory test***) does not result in a complex and lengthy process that delays the development of regulated investment.

These are useful benchmarks for evaluating the ACCC's proposals on its own terms. However, it is disappointing to note that the ACCC does not refer explicitly to end-user benefits as being an objective for review of the ***regulatory test***. The EUAA and EAG are extremely disappointed by this oversight.

3.1. Option 1 – Ensure consistency between the regulatory test and NDR Code changes

The ACCC's Option 1 involves maintaining the current test with minor modifications to ensure consistency between the ***regulatory test*** and the Code following the NDR Code changes. The ACCC believes this Option appropriately reflects the alignment of responsibilities between the planning and construction of network investments. The ACCC also considers that this Option provides the market with an opportunity to adapt to the new arrangements and determine whether they facilitate efficient network investment or require complementary amendments to the ***regulatory test***.

In essence, Option 1 is an administrative catch-up following the NDR Code changes. That is, Option 1 simply aligns wording and obligations of the ***regulatory test*** with the NDR changes implemented nearly 18 months ago. The ***regulatory test*** would retain its current form with minor amendments made to achieve consistency between the test and the Code.

[26] The ACCC refers to these points in the Introduction to its discussion paper.

The NDR package involved two principal changes to the Code. Firstly, the responsibility for applying the ***regulatory test*** to *inter-regional augmentations* was devolved from NEMMCO to TNSPs (who already had responsibility for applying the test to *reliability augmentations*). Secondly, the amendments removed the distinction between *inter* and *intra-regional* network augmentations and replaced these terms with new *large* and *small* network assets.

From the perspective of end-users, the aspects of the NDR Code changes that the ACCC is seeking to address in the ***regulatory test*** are improvements but not significant changes. The principle improvement from the perspective of end-users is that TNSPs are made more accountable for investment decisions. But this is only a small improvement in so far as it impacts on end-users.

The ACCC justified this approach on the basis that "*most interested parties support the retention of the maximising net benefits test arguing that it is the appropriate test to apply to network investments and is consistent with the principles of ensuring that only efficient and prudent investments are granted regulated status.*"[27]

> *So long as end-users pay all, or even most, of the costs for 'shared' transmission services, they should insist that the ACCC adhere to the 'payer benefits' concept. This leads, inexorably, to the* **regulatory test** *being changed to a financial cost-benefit analysis from the perspective of end-users only.*

The following comments relate to evaluating Option 1 against the ACCC's (apparent) objectives for the review.

- *Does Option 1 address wide criticism of the existing arrangements for the planning and approval of regulated network investment?*

There is nothing in Option 1 that addresses the 'wide' criticism of the existing arrangements. On that basis alone, Option 1 is not sufficient as a stand-alone amendment to the ***regulatory test***.

- *Does Option 1 streamline and simplify the arrangements whilst encouraging a nationwide approach to planning and strengthening the transmission network?*

The answer to this question is not clear. Removing NEMMCo from the decision-making process for *inter-regional augmentations* and focussing incentives for investment efficiency on TNSPs has the potential to reinforce basic incentives in the regulation of transmission. For example, the primary responsibility for investment decisions is more clearly assigned to TNSPs. This concentrates the 'efficiency incentive' on the stakeholder best able to achieve efficient outcomes. However, the regulatory regime has several serious and fundamental flaws that are likely to dilute any benefit that Option 1 might deliver. For example:

- the current regime provides no clear incentives for TNSPs to maximise overall benefits for the end-users who pay for transmission services;
- setting revenue for individual and separate TNSPs at different times confuses planning for *inter-regional augmentation*;

[27] p22, ACCC discussion paper.

  - *inter-regional augmentations* still require 'co-operation' between two (or more) TNSPs, each of whom has a narrow jurisdictional focus without any clear incentive or obligation to optimise outcomes for end-users;
  - Option 1 does nothing to address situations where an augmentation in one TNSP's part of the system might benefit end-users in another Region – say, as an illustration, when augmentation of Transgrid's network north of the SNOWY Region would improve power flows to Victoria; and
  - the ***regulatory test*** and Code still retain the right for 'non-payers' to dispute or appeal financially sensible investment decisions that benefit the end-users who do pay.

- *Does Option 1 ensure that the* **regulatory test** *does not result in a complex and lengthy process that delays the development of regulated investment.*

The answer to this question is, quite clearly, no. Option 1 only marginally affects the administrative procedures imposed by the Code. The process of deciding transmission network augmentations (in particular) will remain complex and lengthy so long as:

- the ***regulatory test*** is based on considering the costs and benefits of stakeholders who do not pay for 'shared' network services; and
- those stakeholders have rights to dispute and appeal against sensible and 'efficient' decisions to augment the transmission network that would benefit the end-users (who do pay for 'shared' network services).

3.2. Option 2 – Ensure a consistent application of the regulatory test across the NEM

The ACCC's Option 2 involves defining and clarifying elements of the ***regulatory test*** that may currently be considered ambiguous and open to interpretation. The ACCC says that adopting Option 2 would ensure a consistent application of the test across the NEM.

Option 2 appears to be based on a concurrence of views between the ACCC and other stakeholders that there may be concerns that multiple parties applying the regulatory test, may see multiple and conflicting interpretations of its application being adopted to suit the individual needs of different TNSPs. This concern arises (supposedly) because the NDR Code changes have transferred greater control over the design and approval of network augmentations to TNSPs. Accordingly, the ACCC is proposing that it take a more rigorous approach to defining the boundaries of the regulatory test.

The ACCC's focus is, in effect, on clarifying a legal interpretation of the definition of the terms listed below, or the legal interpretation of how these terms are applied in the ***regulatory test***: Option 2 is not intended to change the substance of the test.

- Alternative projects

The ACCC proposes that the definition of *alternative projects* be changed to include criteria that an *alternative project* should have a clearly identifiable proponent, or be a *substitute* and be *practicable*. Where –

- a *substitute* proposal should deliver outcomes similar to those delivered by the project (proposed by the NSP) and become operational in a similar time frame to the project; and
- the TNSP proponent (presumably, since this is not made clear) would have to consider a *practicable* proposal to be technically and commercial feasible.

> *The ACCC is proposing that* practicable, substitute *augmentation proposals should deliver* similar outcomes *to network augmentation proposals.*
>
> *A number of Victorian DNSPs make the point in their annual Distribution System Planning Reports that they would consider DSR options only if they provide at least the same minimum capability as an incremental network augmentation. Generally, such an approach is in the interests of end-users. End-users would not necessarily benefit if a practicable, substitute proposal resulted in similar but lower quality of supply or service standards.*
>
> *A clearer interpretation of the* **regulatory test** *would be achieved by requiring 'competing' augmentation options to meet the minimum supply quality and service standards imposed on the NSP. This, in turn, requires service standards and supply quality obligations of NSPs to be clearly and precisely defined, preferably on a nationally consistent basis. There is nothing in the ACCC review that would assist achievement of nationally consistent specification of explicit service standards for NSPs.*[28]

- Market benefits

The ACCC proposes that the following list of market benefits (identified in the ROAM Consulting report to NEMMCo)[29] be included as 'examples' after the definition of 'market benefits' in the ***regulatory test***.

1. benefits of savings in fuel consumption
   a. Differences in dispatch patterns
   b. Differences in fuel costs
2. benefits of reduction in voluntary load curtailment
   a. reduction in demand-side curtailment
3. benefits of reduction in involuntary load shedding
   a. total volume of VoLL generation forecast
   b. equivalent savings in reduction in loss of load
4. benefits in capital deferrals
   a. deferment of market entry plant
   b. deferment of reliability entry plant
   c. differences in capital costs
   d. differences in the operational and maintenance costs
   e. deferment of transmission investments
5. benefits of reduction in transmission losses
6. benefits of reductions in ancillary services.

[28] The ACCC recently finalised its transmission service standards guidelines (n November 2003), which it will further develop through a working group made up of transmission network service providers NECA, NEMMCO, Generators, Retailers and Consumer representatives. The scheme outlined in the guidelines will provide incentives for the transmission companies to improve their service quality, thus providing overall benefit to the electricity consumers. But the guidelines do not address all of the fundamental deficiencies in the way service standards are specified.

[29] *NEM Forecasting, Optimised timing of SNI and SNOVIC Projects*, ROAM Consulting (Report no Nem00008B) to NEMMCo, 4 December 2001

> *It is not clear that adding prescriptive terms to the* **regulatory test** *does anything to 'improve' application of the test.*
>
> *The ACCC's list also does not include benefits that could be achieved by end-users from inter-regional augmentations that increased competition between generators.*

- Costs

The ACCC proposes that the existing definition of *cost* be extended to include costs specifically considered in assessments undertaken by NEMMCo and the IRPC of the SNI and SNOVIC augmentation proposals. The ACCC refers to capital and operating and maintenance costs, costs arising from losses associated with power flows and ancillary service costs.

> *The ACCC notes that there has been little controversy regarding what costs should be included in the assessment of an augmentation under the regulatory test. But again, it is not clear that adding prescriptive terms to the* **regulatory test** *does anything to 'improve' application of the test.*

- Committed project/ anticipated project

The ACCC proposes that the criteria adopted by NEMMCo for a *committed project* in the annual Statement of Opportunities (SOO) be also applied to the ***regulatory test***. In summary, these criteria include –

- purchase of (or legal proceedings to acquire) the land for the construction of the proposed development;
- finalizing and execution of contracts for the supply and construction of the major components of the plant and equipment;
- obtaining all required planning consents, construction approvals and licenses, including completion and acceptance of any necessary environmental impact statement;
- execution of contracts for financing arrangements; and
- commencement of, or a firm commencement date for, construction.

The ACCC is also proposing that criteria for an *anticipated project* require that the proponent be in the process of executing the steps to meet the above criteria for a *committed project*.

> *Seeking alignment between the requirements of different NEM 'institutions' is a useful goal. But the ACCC's proposals go only part way towards achieving such a goal. There is a clear need to extend the goal down to the jurisdictional regulation of DNSPs.*
>
> *The criteria proposed for both anticipated and committed projects may be too stringent for DSR proponents, unless sufficient lead time, and sufficient information, is available to allow a DSR proposal to be developed before a process that applies the* **regulatory test** *begins.*

As a general rule, DSR proponents are totally dependent on information held by NSPs to assess the potential impact and benefits of their proposal.

There has been very little experience to demonstrate whether the disclosure obligations in the Code or jurisdictional documents are sufficient to stimulate DSR developments. Recent experience gained from the EUAA Demand Response Facility Trial suggests that information disclosure and incentives for both DSR providers and NSPs need to be examined and substantially improved. The ACCC discussion paper needs to recognise this.

These matters would, presumably, be included in the proposed review by NECA of Code and **regulatory test** *obligations for DNSPs that came out of the NDR Code change package. But, again, NECA has made no clear commitment to undertake that review.*

As noted earlier, given the dominant role of jurisdictional regulations on DNSPs and DSR, it would be far better for the ACCC and NEMMF/MCE examine the relevant issues than to leave this to a more narrow NECA review.

- Commercial discount rate

The ACCC Discussion Paper creates some confusion about its own recent practices in regard to estimating values for the Weighted Average Cost of Capital (WACC). The discussion paper says - in the context of an appropriate 'commercial discount rate' - that "*(t)he Commission applies a post-tax nominal WACC in its revenue cap decisions … which is as defined by the formula proposed by Officer and stated in the Commission's Draft Statement of Principles for the Regulation of Transmission Revenue*.[30]

In fact, in all recent decisions, the ACCC has followed the lead set by the (then) Office of the Regulator-General in its 2001 electricity distribution price review decision and adopted the version of the Capital Asset Pricing Model (CAPM) that yields a 'Vanilla', post-tax WACC value. This approach produces 'stable' results, is simpler to understand and explain, and avoids complications associated with attempting to account for the effects of taxation within CAPM.[31]

Both the EUAA and EAG have referred previously to analysis by Pareto Associates Pty Ltd that demonstrates Australian regulators have made judgement on WACC that are both more varied (between regulators) and substantially higher than values judged 'efficient' by UK and US regulators.[32] *The ACCC (and other Australian regulators) has been asked repeatedly to explain why its decisions are so different to overseas regulators, and what it is that supports a judgement by regulators that 'financial markets' see Australian utilities as being more costly (and, therefore, less efficient) than their UK and US counterparts. The ACCC has neither acknowledged nor answered these questions.*

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[30] p. 35, Discussion paper.

[31] Using a 'Vanilla', post-tax WACC also eliminates the need to use the traditional conversion method as illustrated in the NEC (Schedule 6.1, 5.5.4) to adjust for taxation and then for inflation, or the Macquarie 'reverse conversion' method, which adjusts for inflation first and then for taxation – both of which provide slightly differing results. Instead, 'Vanilla', post-tax WACC values can be converted from real to nominal (and vice versa) using the much simpler – and entirely stable - Fisher Transformation.

[32] See recent submissions to the ACCC by EUAA (ElectraNet SA and SPI Powernet) and the EUAA/EAG (Transend).

However, end-users would generally endorse the ACCC's view that "(i)n determining whether to use a real, nominal, pre or post tax WACC … the guiding principle in selecting a discount rate is that the discount rate used should be consistent with the cash flows being discounted."

- VoLL

The ACCC proposes that, for the purpose of the regulatory test, the value of VoLL should be as specified in clause 3.9.4 of the Code, that is, $10,000/MWh. The basis for this proposal is that this ensures consistency between the ***regulatory test*** and the Code.

The ACCC proposal to retain the alignment between the **regulatory test** *and the Code (with VoLL at $10,000/MWh) is a 'no change' proposal. However, this does not appear to be based on consideration by the ACCC of:*

- *the differing network planning approaches adopted by NSPs using probabilistic criteria, such as VENCORP and United Energy (for example) and those, such as EnergyAustralia, that adopt a deterministic (or N-1) approach to network planning;*
- *whether use of the VoLL Code value produces different outcomes for NSPs using probabilistic planning approaches and those using deterministic (N-1) planning approaches;*
- *whether these different approaches would impact on the assessment of* inter-regional augmentations *affecting two TNSPs in adjacent Regions (both using different approaches), or on the consideration of DSR proposals by DNSPs in a single Region (using different approaches).*

What is clear is the different approaches will lead to different valuations of 'unserved energy'.

This highlights the inadequacy of the ACCC's proposals and adds another matter to those requiring further consideration by the ACCC.

- Reliability augmentation

The ACCC notes that a number of parties argue that the test dealing with reliability driven augmentation does not place sufficient accountability on the proponent, and the NDR Code changes provide that the IRPC is required to develop and publish guidance for assessing whether or not a proposed new small network asset or a new large network asset is a reliability augmentation (clause 5.6.3(1)).

The ACCC proposes to incorporate into the regulatory test notes on reliability driven augmentation, which would require a NSP to disclose the following information in respect of a reliability driven augmentation:

- cost of the augmentation;
- whether the augmentation meets a code or jurisdictional objectives;
- what the current restriction is on the network and why the proposed augmentation is required;

- implications for the system, or network, if the proposed augmentation does not proceed; and
- the benefits that the augmentation can provide.

The ACCC's proposals are helpful but incomplete for at least two reasons. First, the ACCC acknowledges that the IRPC is reviewing reliability augmentation criteria but makes no commitment to consider this (or place any obligation on NECA or NEMMCo to ensure the IRPC contributes to the ACCC's own review). Second, the ACCC's proposal reinforces the urgent need to align Code (and **regulatory test***) information disclosure obligations and those of jurisdictions.*

For example, it is not sufficient to require NSPs to disclose whether the augmentation meets a code of jurisdiction objective, etc.

DSR proponents cannot be expected to respond to vague and imprecise information. They need to know exactly what an NSP's obligations are, how those obligations are established and what the obligations mean in physical and financial terms. With detailed and quantified information, DSR proponents have some hope of translating these obligations into a proposal that would be considered a committed (or anticipated) practicable substitute to network reliability augmentation. Without clear, precise, quantified (and consistent) information they have no hope of developing such proposals.

Aside from information, there is also the issue of how potential proponents are notified, how much time they are given to respond and other ways in which they are not provided with a 'level playing field'. A vague requirement in the Code or other instrument to assess competing options does not assist prospective DSR proponents in dealing with monopolies with entrenched preferences for network solutions. This comment is based on EUAA experience and that or its members.

The Code and **regulatory test** *are vague in these areas. Jurisdictional regulations are sometimes less vague, but they are distinctly different to the Code requirements and not consistent with each other.*

The following comments relate to evaluating Option 2 against the ACCC's (apparent) objectives for the review.

- *Does Option 2 address wide criticism of the existing arrangements for the planning and approval of regulated network investment?*

There is nothing of substance in Option 2 that refers to the wide criticism of the existing arrangements, and nothing that would address that criticism. On that basis alone, Option 2 is not sufficient as a stand-alone amendment to the ***regulatory test***.

Nor would combining Options 1 and 2 achieve the ACCC's (apparent) objective.

- *Does Option 2 streamline and simplify the arrangements whilst encouraging a nationwide approach to planning and strengthening the transmission network?*

Probably not. As a general observation, the approach implied by Option 2, and the ***regulatory test*** in its entirety, suggests the ACCC has a view that fundamental incentives in the regulatory regimes for NSPs do not work effectively. That is, it appears the ACCC holds a view that it is not sufficient to establish a framework that provides positive (profit) incentives for NSPs to 'do the right thing' and invest efficiently in network augmentations that deliver benefits to end-users. The prescriptive approach inherent in Option 2 (and the ***regulatory***

test generally) shifts the focus of NSPs away from achieving economically efficient outcomes that serve the needs of end-users to a focus on (more and more) detailed rules.

In turn, detailed rules create opportunities for regulated monopolies, and un-regulated ‘market’ competitors, to exercise ‘strategic behaviour’. This is not a desirable outcome for end-users.

- *Does Option 2 ensure that the* ***regulatory test*** *does not result in a complex and lengthy process that delays the development of regulated investment.*

The answer to this question is most likely no. Option 2 extends the ‘dead hand of bureaucracy’ inherent in the Code and seeks primarily to clarify possible areas of argument (and legal challenge). Other parties who responded to the discussion paper have made detailed comments on difficulties with interpreting the ‘meaning’ of some of the terms proposed by the ACCC. For example, NERA has responded on behalf of Transgrid with a detailed critique of the Option 2 proposals and highlighted potential legal obstacles that still need to be addressed. NERA (and other submitters) make the point that it is important that the ACCC clearly and precisely establish what it intends these terms to mean, and how they should be applied. This is the only way to minimise opportunities for dispute, appeal and exercise of ‘strategic behaviour’.[33]

3.3. Option 3 – Introducing a Competition Test

The ACCC’s proposals for Option 3 are a response to one of the biggest criticisms of the regulatory test - that it does not recognise benefits that would accrue to ‘the market’ (but more specifically to end-users) from improved competition. The ACCC says that *competition benefits* arise from increased competition between generators, and the reduction in market power, resulting from free flowing interconnectors. The ACCC suggests that a *competition benefits* test may therefore ensure that all allocative efficiency benefits and dynamic efficiency benefits of network augmentations are captured, where:

- allocative efficiency would see energy market prices at (or approaching) marginal cost; and
- dynamic efficiency would eliminate (or reduce) inefficient generator entry.

The ACCC also says that, at this stage (i.e. in the Issues Paper), it does not have any views on whether the *competition test* should be recognised as a benefit to be measured within the existing regulatory test framework, or to be applied as a separate test.

Option 3 is not a specific action-based proposal. The ACCC has outlined and described a number of analytical methods that seek to quantify a measure of ‘competitiveness’ (or in one case, a qualitative assessment) which could be used as the basis of a ‘competition test’ to be included in, or operate in parallel with, the ***regulatory test*****.**

The analytical approaches summarised by the ACCC are:

- Market Simulations

[33] It is noted that Prof Stephen Littlechild stated in his presentation to the ACCC public forum that the UK regulatory regime had nothing like the ***regulatory test*** and did not require it. This is, presumably, because the UK regime is based on stronger ‘foundations’ than Australia’s that allow NSPs to conduct their affairs in ways that deliver benefits to end-users without the need for the complex, bureaucratic processes enshrined in the test. This strongly reinforces the point that the ACCC should be examining fundamentally different ways in which effective incentives can be created for NSPs to deliver efficient services that end-users value.

The ACCC notes that market simulations model bidding behaviour and pool prices to produce information that may be used to develop an index, which takes the difference between the forecast pool price and both the SRMC and LRMC of generators in the NEM and ascribes the difference to the transmission augmentation.

The ACCC suggests the main advantage of this approach is that, if modelled correctly, it will accurately measure long-term competition benefits that could be captured by an augmentation and could be applied equally within regions as well as between regions. However, the main criticism of this approach is (according to the ACCC) that, as with any modelling, it will be subject to the assumptions, inputs and modelling techniques employed. The ACCC is also concerned that this will potentially result in an application being subject to the appeals process set out in the code.

- Powerlink's Public Benefits Competition test

This is a particular application of a market simulation approach, but is considered by the ACCC to be based on criteria that "*are also highly subjective and are likely to be disputed by interested parties on how to appropriately capture those benefits*."

- Hirschmann-Herfindahl index and adjusted Hirschmann-Herfindahl index

The Hirschmann-Herfindahl index (HHI) is defined as a "*specific measurement of the extent to which a small number of firms account for a large proportion of output."*[34] The discussion offered by the ACCC includes no definitions, but makes reference to the *Lerner Index*[35] and *elasticity of demand*[36] and appears to be an attempt to show how these 'measures' can be combined with the *adjusted HHI* to allow "*for the possibility of market power at even small levels of demand."*

However, the ACCC provides no explanation of how either the HHI, or adjusted HHI, might be used to facilitate consideration of 'competition benefits' within, or in parallel with, the ***regulatory test*.**

- Residual Supply Analysis

The *Residual Supply Index* (RSI)[37] is a measure adopted by the Californian Independent System Operator (CAISO) in a competition-based assessment (undertaken in 2001) on a proposed transmission augmentation linking mid and northern California.[38]

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[34] The HHI measures market concentration by adding the squares of the market shares of all firms in the industry. Where, for example, in a market where five companies each have a market share of 20%, the HHI is 400 + 400 + 400 + 400 + 400 = 2000. The higher the HHI for a specific market, the more output is concentrated within a small number of firms. In general terms, with an HHI below 1000 the market concentration can be characterised as low, between 1000 and 1800 as moderate and above 1800 as high. See European Commission's Directorate-General for Competition http://europa.eu.int/comm/competition/general_info/h_en.html

[35] The Lerner Index is a method that theoretically could be used to determine whether firms possess market power but as discussed in *How Do Courts and Agencies Evaluate Market Power?* (see http://www.ftc.gov/opp/jointvent/classic3.htm), it has proven impractical to apply to transactions.

[36] The (price) elasticity of demand is defined as the % change in quantity demanded divided the % change in price of the quantity. Most studies of demand elasticity for electricity return very low values. That is, demand is not strongly affected by changes in price, although there is a tendency for more response to price over longer periods. One of the major reasons for this is that, generally, end-users have no meaningful (to them) information that links consumption to price (in timeframes that relate to the electricity supply system). Nor do end-users have access to easy or convenient means to respond to price changes. This does not mean end-users would not respond to meaningful price signals. The fact is they have no easy means to do so.

[37] The RSI is a measure of the ratio of the total capacity of all but the largest supplier and the total demand. An RSI of less than 1 signifies that at least some of the output of the largest supplier is essential for meeting the market demand. The assumption is that, in this case, the largest supplier would have significant market power.

[38] CAISO routinely uses a range of 'market power indices' to assess the 'health' of the Caliifornia electricity market and to inform its judgement on any matter that impacts on market power. The RSI is just one of those indices.

The ACCC briefly describes how the CAISO conducted this assessment and how it applied the RSI, but does not mention whether CAISO actually used the results of the assessment in any decision to augment the transmission system.

- Commercial benefits analysis

Commercial benefits analysis is a methodology being considered by the ACCC that would involve using a rolling average of the sum of Inter-Regional Settlements Residues (IRSRs) between two regions, with the rolling average being for either 12 or 24 months prior to an assessment of an interconnector against the ***regulatory test***. The ACCC believes that this approach may be a first step towards the development of Financial Transmission Rights (FTRs) in the NEM, along the lines recommended by the Council of Australian Governments Energy Markets Review.[39]

There is nothing in the ACCC discussion that allows any conclusion to be made about whether IRSRs represent the 'real' value to end-users of existing transmission constraints. However, it is relevant to note that the annual value of IRSRs is very small compared to the volume-weighted total value of Regional spot price differentials. It would appear that IRSRs are not a true indication of the cost to end-users of transmission constraints. It is even possible that the IRSR auction is nothing more than a mechanism to 'iron out a glitch' in the NEM settlement process.

If there were to be a 'commercial benefits analysis', end-users would prefer it be based on the financial impact on them of 'spot price variations between regions', not on a 'first step towards development of FTRs in the NEM'.

- Stanwell Competition Index

The *Stanwell Competition Index* uses qualitative measures of competition benefits rather than quantitative ones, including:

- the number of consumers affected by the network limitation;
- the incremental electricity capacity supplied to the market following augmentation;
- the fuel mix of the incremental electrical capacity (indicating underlying cost structure); and
- the number of independent entities supplying the market following augmentation.

The ACCC (correctly) makes the point that the 'qualitative' nature of these criteria would do nothing to minimise disputation about a decision to augment.

3.4. Overall Comments on Introducing a Competition Test

The ACCC briefly summarises the relative merits and disadvantages of each of the above methods, but does not indicate a clear preference for one over another. Instead, the ACCC invites interested parties to comment on:

- the appropriateness and practicability of the methods for calculating competition benefits as outlined above;

[39] The ACCC summarise the COAG EMR recommendation as "*new regulated intra-regional augmentation proposals to be subject to a "commercial" benefits test which takes into account spot price separation between regions*."

- whether the measures outlined above achieve the Commission's objectives of developing a robust measure across a range of market development scenarios; and
- whether the competition benefits test should be included into the regulatory test or be applied as a separate test.

Interested parties are also invited to submit alternative measures for the ACCC's considerations.

The material presented in section 2.3 of this submission makes it absolutely clear that the benefits from improved competitiveness must be considered in any inter-regional transmission augmentation proposal. Existing constraints in inter-regional transmission create opportunities for generators to exercise market power that lead to higher energy (and ancillary service) costs for end-users.

In general, end-users might accept the ACCC's view that none of the suggested approaches would reduce opportunities or incentives for disputation by parties adversely affected by a decision to pursue augmentation based on the approach.

*The only way to do this, while still retaining a form of **regulatory test**, is to re-focus processes leading to decisions on network augmentation by considering only the costs and benefits of those who bear the cost of the 'shared' network – and excluding opportunities for disputation and appeal by those who do not pay.*[40]

Within the current framework, the solution is to transform the **regulatory test** *from an application of cost-benefit analysis in 'welfare economics' to a more straightforward financial investment analysis undertaken from the point of view of the end-users who pay for network services.*

The following comments relate to evaluating Option 3 against the ACCC's stated objectives for the review.

- *Does Option 3 address wide criticism of the existing arrangements for the planning and approval of regulated network investment?*

Option 3 makes some progress towards addressing criticisms of the ***regulatory test***. The ACCC acknowledges that the ***regulatory test*** is subject to widespread criticism. But the ACCC is seeking 'consultation' with stakeholders who are recognised to have fundamentally different, and most likely irreconcilable, interests.

The fundamental differences between stakeholders means that the issues that need to be addressed must, ultimately, be addressed by the ACCC. The ACCC established the ***regulatory test***, and did so while relying on (at least) two key assumptions that are clearly faulty:

- The first is that it is not appropriate to base the ***regulatory test*** on an application of cost-benefit analysis based on 'welfare economics'. 'The market' does not pay for 'shared' network services. It is end-users who pay the full cost of 'shared' network services in the NEM.

[40] The EUAA and EAG are more inclined to support the direction of transmission reforms proposed in the CoAG Energy Market Review final report. This included a 'commercial regulatory test' using tradeable FTRs to determine the value and timing of inter-regional augmentations. This has the benefit of limiting the extent to which the 'dead hand of bureaucracy' would play in this crucial area. But further detailed analysis is required to determine if that proposal would optimise end-user benefits.

End-users have paid over $22 billion dollars for 'shared' network services since the NEM commenced operation on 13 December 1998. They will continue to pay a further $5 billion each year unless the NEMMF/MCE decides to fundamentally change the basis on which network services are provided, and NECA, or its successor, develops a 'beneficiary pays' mechanism that shifts costs to generators who currently obtain the benefit of transporting their 'product' to market but pay nothing towards the costs.

In addition, the cumulative cost to end-users of Regional spot price differentials has been (approximately) $6.6 billion in the almost 5 years of NEM operation. Around $1.4 billion of this has accrued over the last 12 months.

- The second is that it is not appropriate to assume that there are no 'cross-over' effects between the NEM and other sectors of the economy. The exercise of market power by generators and the cost impacts of transmission constraints increase costs for end-users – and these increased costs impact directly on the competitiveness of Australia's productive industries.

As outlined in the Box in section 1, where only one party (or one group of stakeholders) pays all the costs, cost-benefit analysis can and should be applied in the form of a straightforward business investment analysis undertaken from the perspective of those who make the investment (and pay the cost of the investment). It is unnecessary to consider the impact on any stakeholder who does not contribute to the costs of the activity.

A logical conclusion from considering the basic assumption underpinning the ***regulatory test*** is that end-users (or regulated network service providers on their behalf) should only be concerned that the investment for which they pay delivers overall net benefits to end-users. This is entirely consistent with a 'payer benefits' principle used in other parts of the Code.

The ACCC can address this problem by acknowledging the defects in its assumptions and by changing the test to be a straightforward application of investment options from the point of view of the end-uses who pay. This will not overcome the difficulties of selecting an approach to quantifying a value for 'competition benefits', but in combination with amendments to the Code that remove the rights of 'non-payers' to dispute or appeal any augmentation decision, it would produce a more streamlined and workable process.

This submission therefore recommends that the ACCC amend the **regulatory test** *so that all augmentations are treated in exactly the same way and can be assessed on the basis of the relative benefits delivered to end-users.*

- *Does Option 3 streamline and simplify the arrangements whilst encouraging a nationwide approach to planning and strengthening the transmission network?*

The answer to this question is no. The ACCC has identified several areas where the ***regulatory test*** is not currently aligned with provisions in the Code (as a result of the NDR Code changes implemented 18 months ago), or with terminology used in the NEMMCo Statement of Opportunities. But the ***regulatory test*** and the related clauses in the Code are also intended to deal with distribution system augmentation, and do this very badly. For example, schedule 5.1 (referred to in the ***regulatory test***) does not explicitly relate to any service standard or quality parameter below 66kV. This can be interpreted literally to mean that the service standards specifications in schedule 5.1 do not apply to DNSPs.

NSW and Victoria have moved to clarify obligations for DNSPs that relate to the ***regulatory test*** and clause 5.6 of the Code. SA is consulting on the introduction of similar obligations.

Each of these jurisdictional approaches is slightly, but significantly, different. In addition, different NSPs adopt different approaches to network planning, even in the same sectors or the same jurisdictions. Each of the differences adds to confusion and complicates processes that impact on end-users. In particular, the different approaches to dealing with DSR need further detailed examination by regulators, and the relevant obligations and procedures need to be changed to clarify the incentives for end-users to offer DSR and NSPs to procure DSR.[41]

- *Does Option 3 ensure that the **regulatory test** does not result in a complex and lengthy process that delays the development of regulated investment.*

The answer to this question is no. None of the suggested approaches for assessing or handling 'competition benefits' in Option 3 would reduce opportunities or incentives for disputation by parties adversely affected by a decision to pursue augmentation.

As mentioned above, the only way to do this is to re-focus processes leading to decisions on network augmentation by considering only the costs and benefits of those who bear the cost of the 'shared' network and excluding opportunities for disputation and appeal by those who do not pay.

If a form of ***regulatory test*** is to be maintained, the solution is to transform the test from an application of cost-benefit analysis in 'welfare economics' to a more straightforward financial investment analysis undertaken from the point of view of those who pay for transmission services.

3.5. Other Issues for End-Users – Optimisation and the regulatory test

The ACCC notes[42] that parties who have been involved in the previous ***regulatory test*** processes have suggested the ACCC clarify its policies towards optimisation of network investment where the investment has been assessed in accordance with the ***regulatory test***. The ACCC says:

> *… where the augmentation is not assessed against the regulatory test the Commission will conduct a thorough review of the capital expenditure undertaken by the TNSP and will assess the prudency of the expenditure against a criteria similar to that set out in the regulatory test. Where it finds that the capital expenditure is not efficient the Commission has the ability to optimise the inefficient portion out of a TNSPs asset base. TNSPs who voluntarily assess replacement or refurbishment capital expenditure against the regulatory test are less likely to face this optimisation risk.[43] …*
>
> *The Commission acknowledges the response of interested parties to the issue of optimisation and will consider this issue further in its finalisation of the Statement of Regulatory Principles.*

[41] The MCE has decided to introduce a national approach to distribution regulation by 2006. The EUAA and EAG will support this move if it helps address deficiencies in issues of relevance to end-users, including differing treatment of DSR .

[42] p9, *Op cit*

[43] p27, *Op Cit*

This highlights fundamental differences in approach taken by different regulators on this same issue. The ACCC's position contrasts to 'guarantees' given by the Victorian ESC in its 2002 gas distribution access review decision. In that decision the ESC says:[44]

> *Some of the measures the Commission has accepted or proposed itself to reduce regulatory uncertainty include.*
>
> - *… the Commission has accepted a fixed principle not to seek to identify and remove stranded or partially stranded (redundant) assets, and has accepted (or offered) this protection for 30 years. This commitment not to strand assets is legally binding. The Commission has also invited the distributors to bring forward the recovery of capital if they consider that future developments may reduce their ability to recover their investments through regulated charges;*
> - *… the Commission has not sought to judge the prudence or efficiency of capital or operating expenditure, but rather has inferred that well-designed incentives will deliver this result. That is, it has not exercised the power to disallow capital expenditures, and has put in place a framework of incentive regulation that should obviate the need to consider disallowances in the future;*

This fundamental difference on a crucial area of 'regulatory policy' clearly demonstrates deficiencies in the 'practice' of incentive regulation in Australia. It is not possible that the ESC and the ACCC can both be right on this issue. If the ESC is right, it suggests that the existing regulatory regime administered by the ACCC is fundamentally deficient.

The ACCC should note that the EUAA and EGA strongly disagree with the position taken by the ESC on this issue. If regulation is seeking to emulate competitive market outcomes then stranded assets should have no value. The ESC's decision has reduced one of the fundamental disciplines of 'incentive' regulation by removing any 'downside' for businesses that make inefficient investments. Removing the option of revaluing assets and declining to assess the prudence or efficiency of CAPEX and OPEX substantially reduces incentives for NSPs to achieve efficient outcomes. It also leaves the ESC exposed to criticism in future if one or more of the gas distributors undertake manifestly inefficient investments.

However, there are issues that the ACCC must consider in regard to revaluation of assets and the ***regulatory test***. For example, if the ACCC adopts the recommendations in this submission and changes the ***regulatory test*** to a straightforward application of cost-benefit analysis to a business investment on the part of end-users (who pay), the following circumstance could arise:

- a TNSP could apply the ***regulatory test*** as a financial cost-benefit analysis of an interconnector investment proposal which delivered benefits in terms of lower differentials in Regional spot price outcomes;
- the interconnector investment would physically increases cross-Regional competition between generators which would, inevitably, lead to generators bidding differently in the face of *actual* competition compared to bids in the face of *actual* inter-regional transmission constraints;
- this could change energy flows across interconnectors; and
- the change in inter-regional energy flows could mean that investment in additional transmission interconnector capacity was under-utilised.

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[44] p147-148, *Review of Gas Access Arrangements, Final Decision*, Victorian Essential Services Commission, October 2002.

Under those circumstances, end-users would gain the broader benefits that the increased competition brings to the energy market, which would justify the costs of building the interconnector capacity that delivered that outcome. However, the ACCC's asset optimisation policy could result in the augmented asset value being 'optimised' down (or out of the TNSP's asset base) and the TNSP would have less incentive to pursue the investment in the first place.

4. What the ACCC should do

The proposals contained in the ACCC discussion paper are of limited use to end-users. The ACCC has not acknowledged fundamental problems with assumptions that underpin the ***regulatory test*** and none of the options will address problems created by significant differences between the test, the Code and jurisdictional regulations.

Therefore, the ACCC should:

- acknowledge the basic deficiencies in the assumptions underpinning the ***regulatory test***;
- restructure the ***regulatory test*** so that it can be applied by NSPs in the form of an application of cost-benefit analysis of investment options from the point of view of the end-users who pay for network services;
- require removal from the Code of avenues and rights for dispute and appeal by 'non-payers' of any decisions related to any augmentation of the 'shared' network that is paid for by end-users;
- suggest that the NEMMF/MCE (in lieu of NECA or its successor) undertake a review of application of the ***regulatory test*** (revised as above) and the related Code obligations as they relate to DNSPs to ensure achievement of nationally consistent application of explicitly specified minimum
  - service and supply quality standards;
  - information disclosure obligations; and
  - obligations to consider DSR for all network augmentations.