INCLUSION OF COMPETITION BENEFITS IN THE REGULATORY TEST

A Report for TransGrid

Prepared by NERA

April 2003
Sydney

Project Team:
Tom Hird
Ann Whitfield
Greg Houston

n/e/r/a
National Economic Research Associates
Economic Consultants

Level 6, 50 Bridge Street
Sydney NSW 2000
Australia

Tel: (+61) 2 8272 6500
Fax: (+61) 2 8272 6549
Web: http://www.nera.com

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1. INTRODUCTION

1.1. Scope of This Report

The Australian Competition and Consumer Commission (ACCC) has released a Discussion Paper as part of its review of the regulatory test.[1] The Discussion Paper outlines three potential options for modification to or extension of the regulatory test. We note that these three options have not been proposed as mutually exclusive.

TransGrid has asked NERA to review and comment on the ACCC's Option 3, which relates to possible methods for incorporating 'competition benefits' within the regulatory test. This option is examined in section 3.3 of the ACCC's Discussion Paper.

The remainder of this report is structured as follows:

- Section 2 summarises the alternative measures of 'competition benefit' outlined by the ACCC;
- Section 3 identifies the sources of costs and benefits associated with an increase in competition, and presents two definitions of 'competition benefit' - gross and net;
- Section 4 considers the criteria which need to be met for a project to be considered to have competition benefits;
- Section 5 discusses the most appropriate means of incorporating net competition benefits into the regulatory test, and concludes that this is via extending the market modelling to encompass non-competitive bidding scenarios (where these are considered to reflect actual market bidding);
- Section 6 briefly discusses the implications of defining competition benefits on a gross basis; and
- Section 7 provides a summary of our main conclusions.

[1] ACCC Discussion Paper, ***Review of the Regulatory Test***, 5 February 2003.

2. OPTION 3 PRESENTED IN THE ACCC'S DISCUSSION PAPER

The ACCC notes in its Discussion Paper that it recognises that one of the biggest criticisms of the regulatory test is that it does not incorporate 'competition benefits'. The ACCC comments that such benefits arise from 'increased competition between generators' and 'the reduction in market power' which may occur as the result of network augmentation.

The ACCC goes on to define the competition benefits associated with network augmentations as including:[2]

- allocative efficiency benefits: where lower market prices better reflect market cost; and
- dynamic efficiency benefits: where lower prices eliminate inefficient entry by new generators.

As part of its Option 3, the ACCC sets out what it considers to be alternative approaches to calculating these competition benefits. The ACCC calls for submissions to focus on three aspects:

- the appropriateness and practicability of the methods proposed by the ACCC;
- whether the methods meet the ACCC's objective of developing a robust measure across a range of market development scenarios; and
- whether competition benefits should be included in the regulatory test or applied as a separate test.

The ACCC defines and discusses the following alternative approaches to measuring competition benefits:

Market Simulations - under this approach the impact of any proposed network augmentation on the degree of competition amongst generators would be captured by modelling generator bidding behaviour with and without the augmentation. For example, if it was believed that a new transmission investment (intra- or inter- regional) would cause bidding strategies to approximate short run marginal cost more closely, then this change would be modelled explicitly and would result in different pool price outcomes and different generation investment patterns with or without the augmentation. The ACCC observes that Note 6 of the regulatory test explicitly allows for the modelling of 'approximate actual market bidding' by generators.

[2] ACCC Discussion Paper, p. 38.

Powerlink's Public Benefits Competition Test – under this approach, if certain specified criteria are present (such as evidence of the occurrence of market power) then the regulatory test could be expanded to include a 'public benefits test', which need not be prescriptive but which could incorporate consideration of a range of benefits, including pool price outcomes, strategic bidding scenarios and major load development scenarios.

Hirschmann-Herfindahl Index (HHI) – to the extent that the level of competition in the electricity market is considered to be determined by market structure, the ACCC notes that the HHI may be one way of measuring market power. The ACCC proposes an adjustment to the standard HHI to take account of the fact that some generators may be capacity constrained and therefore that market power may be present even where generators have a low overall market share.

Residual Supply Analysis – the ACCC refers to the approach taken by the Californian Independent System Operator (CAISO) which used the ratio of the total capacity of all but the largest supplier to total demand to measure market power, ie a Residual Supply Index.

Commercial Benefits Analysis – the ACCC raises the possibility that a measure of competition benefits may be derived from the Inter-Regional Settlements Residues (IRSRs). Specifically, the measure being considered would involve using a rolling average of the sum of the IRSRs between two regions for either 12 or 24 months prior to the assessment. The ACCC notes that this approach could not be applied to intra-regional augmentations and would only capture short-term, historic competition benefits.

Stanwell Competition Index – Stanwell Corporation Ltd proposes using qualitative measures of competition benefits rather than quantitative measures, including the number of consumers directly affected by the network limitation, the incremental electricity capacity supplied to the market following augmentation, the fuel mix of the incremental capacity and the number of independent entities supplying the market following augmentation.

3. WHAT ARE 'COMPETITION BENEFITS'?

Before it is possible to consider how 'competition benefits' could be measured and incorporated into the regulatory test, it is important to be clear exactly how such benefits arise. In the first part of this section we therefore identify the different benefits arising from any increase in the competitiveness of the generation market following a network augmentation.

There is also the potential to confuse the net benefit that may be expected to flow to the market from any increase in competition with the gross benefit that may be expected to accrue to end-users (but which would represent a loss of benefit to the generators). Any potential net benefit to the market as a whole is likely to be significantly smaller than the gross benefit accruing solely to end-users. We discuss the difference between the gross and net definitions of competition benefit in the latter part of this section.

It should also be noted that the extent to which any competition benefits accrue will depend fundamentally on whether generators are in fact exercising any market power and are expected to continue doing so, and on whether the exercise of this market power is likely to be affected by the network augmentation. We discuss the conditions necessary for competition benefits to exist in section 4 of this report.

3.1. Who Benefits, Who Loses and How?

In defining competition benefits and discussing how these should be measured and incorporated in the regulatory test, it is helpful to identify the sources of gains and losses that accrue from increased competition between generators.

The first step in any analysis of 'competition benefits' must be to define what is meant by the term 'competition' in this context. In this report we adopt the following definition:

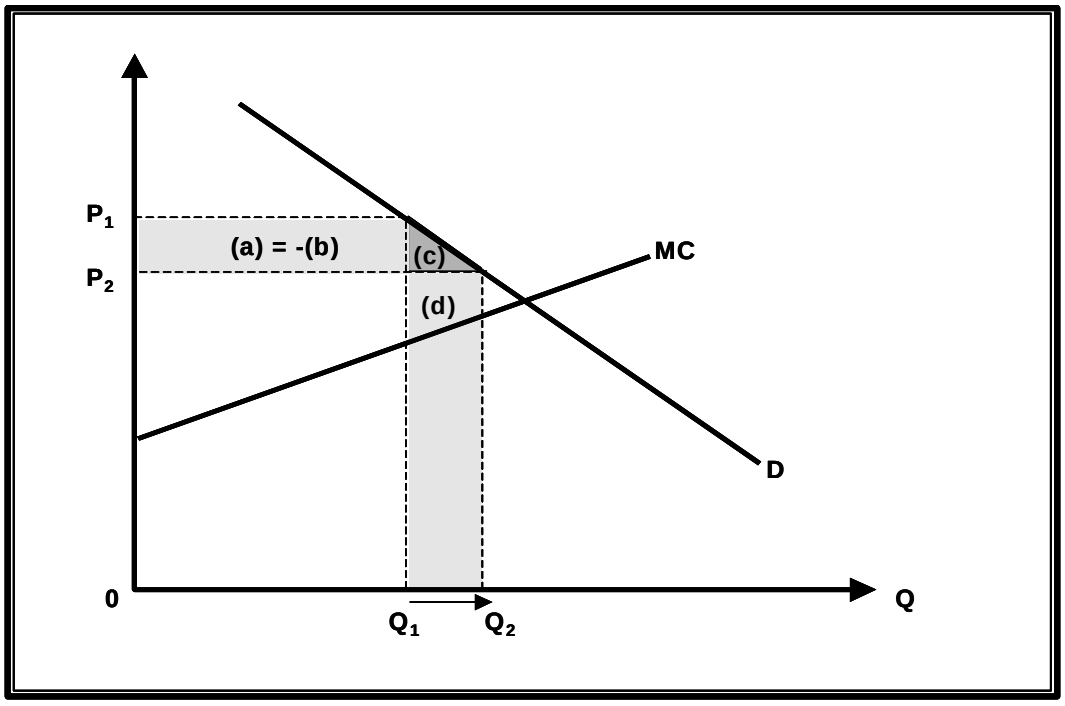
> ***"Increased competition amongst generators exists if, relative to the counterfactual, the bidding strategies of generators in the spot market more closely reflect their underlying marginal costs of production."***

Figure 3.1 illustrates the sources of economic gain and loss which arise from an increase in competition between generators.[3] The marginal cost of electricity following a network augmentation is given by MC. Assume that there is market power which is reduced by the network augmentation, resulting in prices falling from P_1 to P_2 and a consequent increase in output from Q_1 to Q_2. Some degree of market power remains after the augmentation,

[3] We assume, for simplicity, that reductions in spot prices immediately flow through to end-users of electricity.

resulting in prices being above those which would apply in the competitive market, and quantities remaining below the competitive market level.[4]

Figure 3.1: Components of 'Competition Benefit'



The gains and losses from the increase in competition can be divided into the following components (each of which are shown in the above diagram):

(a) end-users gain as a result of lower prices for output (Q_1) that would have been supplied without any increase in the competitiveness of bidding;[5]

(b) generators lose as a result of lower prices for output that would have been supplied without any increase in the competitiveness of bidding;

(c) end-users gain as a result of increased consumption ($Q_2 - Q_1$) induced by lower prices (equal to the difference between their willingness to pay for each additional unit and the price actually paid for that unit); and

(d) generators gain as a result of increased sales of energy induced by lower prices (equal to the difference between the price received for each additional unit and the actual cost of additional sales).

[4] The price and quantity which would result if the market was fully competitive would be those given by the intersection of the demand (D) and supply (MC) curves.

[5] That is, output that would have been consumed / produced in any event.

If the move towards more competitive bidding does not change the ranking of generator bids,[6] the first two gains and losses (ie, (a) and (b)) exactly offset each other, with no ***net benefit*** to the market. That is, for output that would have been produced irrespective of any increase in competition (Q_1), the increase in competition results in a pure transfer from generators to consumers.

Consequently, the ***net benefit*** to the market is equal to the sum of the gains under (c) and (d). This benefit is, in total, equal to the difference between the value end-users place on any additional consumption and the cost to generators of producing that extra consumption.

Where the adoption of more competitive bidding does change the ranking of generator bids, there is also a benefit to the market from the lower cost dispatch pattern which eventuates. This would be represented by a downward shift in the supply curve. This reduction in dispatch costs arising from the reduction in market power would be ***in addition*** to the reduction in dispatch costs resulting from augmentation altering the group of generators which can be dispatched.

The above analysis highlights the source of costs and benefits from a static perspective. Looking forward, the impact of increased competition in the market may also be a reduction in surplus generating capacity, to the extent that generator entry is deferred in response to the decline in prices. This benefit is characterised as a 'dynamic efficiency benefit' in the ACCC's Discussion Paper. However, the nature of the benefit remains the reduction in the cost at which demand can be met (ie, the reduction in the supply curve), albeit that it is the cost of meeting ***future*** demand that is reduced rather than current demand.

3.2. Net Benefits vs Gross Benefits

The regulatory test, as it currently stands, focuses on the ***net benefit*** of any project to the ***market as a whole***. No distinction is made between classes of 'winners' and classes of 'losers'. Rather, projects are evaluated on the basis of their net impact on the market. As described above, gains to customers from lower spot prices (ie, (a)) and the resulting cost to generators from reduced profitability (ie, (b)) offset each other in the analysis.

The ACCC's discussion of competition benefits being those benefits which arise from the elimination of inefficient generator entry and the improvement in allocative efficiency from prices better reflecting marginal cost, appears consistent with considering competition benefits from a net perspective. However, we note that some of the alternative measures of competition benefits proposed under Option 3 appear to relate more to expected changes in price outcomes for consumers (eg, the 'commercial benefits analysis' approach). This would

[6] Changes in generator bidding strategies may or may not affect the pattern of generator dispatch. If bids are reduced by all generators proportionally as a result of increased competition, then the pattern of dispatch will remain constant. Hence the cost of generation will remain constant and the only impact of a change in bidding strategies will be lower spot market prices.

imply consideration of the ***gross benefit*** arising from competition, rather than the net benefit. The gross benefit of competition is made up of (a), (c) and (d) above, and would not consider the cost to generators of lower profitability under (b).

A case could be made for valuing competition benefits on a gross basis, ie, not including the cost to generators of a loss in profit as a result of any loss in market power. Such a choice would however essentially be a distributional policy issue rather than a question of economic theory. Whilst the main focus of this report is on ways to measure the net benefit from competition, we discuss in the final section how the analysis would need to be adapted if the ACCC was to decide to adopt the gross definition of competition benefits.

4. WHEN WILL COMPETITION BENEFITS EXIST?

As well as establishing clearly what competition benefits are, as a precursor to determining how they should be measured, it is also important to consider when such benefits might be expected to accrue. It is not the case that there will be competition benefits associated with every network augmentation.

In order for there to be any net competition benefits there are two necessary conditions that must always be met and a further three conditions of which at least one must hold.

The two necessary conditions are that:

- there must exist non-competitive bidding strategies in at least one of the relevant spot markets (or, to the extent that intra-regional transmission constraints exist, in some subsets of that spot market) which result in prices being above marginal cost for a sustainable period; and

- there must be some change in either the outcome of the non-competitive bidding strategy or in the bidding strategy itself as a result of the project being considered, such that spot market prices fall closer to marginal production costs.

If the above two conditions are fulfilled, then in order for there to be any competition benefits, it is also necessary that one of the following three further conditions are met:

(1) the pattern of generation dispatch must be made more efficient as a result of the impact of the project on bidding strategies (productive efficiency); and/or

(2) there must be some responsiveness of end-users' consumption to spot market prices (ie, demand is not completely inelastic) (allocative efficiency); and/or

(3) there must be some investment[7] that is delayed as a result of the reduction in the spot market price (dynamic efficiency).

The existence and extent of market power amongst generators in the relevant markets is the first factor that must therefore be established, to justify any attempt to measure competition benefit. Equally important is establishing that this market power will be affected by the project being assessed under the regulatory test. Where there is market power, but this is left unaffected by the projects being assessed under the regulatory test, there will be no net competition benefit associated with the project. In short, generators must have the ***ability*** to take advantage of any market power, there must be ***adverse consequence*** of them doing so and this ability or consequence must be ***impacted*** by the alternative being considered.

[7] This investment may be the entry of generators into the market in response to pool price signals, demand-management initiatives or additional network augmentation.

Establishing the existence of market power is a difficult and contentious exercise. Prices may be above marginal cost for periods (particularly when the supply-demand balance is tight) without this necessarily implying market power. Alternative measures exist which can be used as potential indicators of the likely presence or absence of market power. These include market concentration indices such as the HHI and Residual Supply Index, discussed by the ACCC in the context of Option 3.

However, it should be noted that these types of measure are intended to indicate the possible ***existence*** of market power and how that market power is affected by the different projects being considered under the regulatory test. This is a necessary step to determining that there are competition benefits arising in relation to a network augmentation. However, these indices are not measures of the ***extent*** of the competition benefit which arises from the augmentation or the ***value*** of such benefit.

In terms of the second set of criteria, it is necessary in order for there to be ***net*** benefits from competition either for there to be a change in the underlying cost of dispatch as the result of the increased competition in generator bidding,.[8] for customers to choose to consume an alternative quantity of electricity following the price reduction (ie, the elasticity of demand for electricity is non-zero); or for investment in the market to be delayed as a result of the reduction in spot price. These factors each relate to the different sources of competition benefit identified in the previous section.

In order for there to be a ***gross*** benefit from competition, it is only the first set of criteria above which need to be met. That is, the market need to be shown to be non-competitive and the project being assessed needs to be shown to result in an increase in competition. This is because the decrease in the spot price will automatically result in a transfer of benefit from generators to end-users which is considered to be a 'gross benefit.' It is not also necessary for demand to be inelastic, investment to be deferred or the pattern of dispatch to be changed, in order to result in a gross benefit.

[8] This reduction in dispatch costs would be in addition to the reduction in dispatch costs resulting from augmentation altering the group of generators which can be dispatched.

5. CAPTURING NET COMPETITION BENEFITS

5.1. Market Simulations

Section 3 of this report identified the sources of net competition benefits which can arise from a network augmentation. Each of these sources of benefit has the potential to be quantified by extending the market modelling carried out under the regulatory test to encompass non-competitive generator bidding scenarios as well as LRMC and SRMC bidding scenarios.

Market modelling is used under the regulatory test to derive market development scenarios and to determine the dispatch pattern for generation in the national electricity market ('the NEM'). Specifically, market modelling results in:

- projections of future spot prices;
- projections of generator entry resulting from the projections of future spot prices (ie, generators are assumed to enter when the projections of future spot prices indicate that it will be profitable to do so); and
- the projected future dispatch pattern.

The modelling is carried out for each of the alternative projects being assessed under the regulatory test. It therefore enables the impact of a given project on expected future pool price outcomes, future generation patterns and future dispatch patterns to be assessed.

To date the majority of the analysis conducted under the regulatory test has assumed short run marginal cost (SRMC) bidding or long run marginal cost (LRMC) bidding (as a proxy for short run marginal cost bidding over time). However, the regulatory test also allows 'market development scenarios' to include simulations 'that approximate actual market bidding and prices' (under note 6).

If the market modelling is conducted on the basis of non-competitive bidding (where this can be justified on the basis that this approximates 'actual market bidding and prices'), and an explicit assessment is also made of the impact on generators' bidding behaviour of alternative projects, then the modelling will result in:

- projections of future spot prices, and how these change for the alternative projects being considered;
- projections of generator entry, and how this changes for the alternative projects being considered; and
- the projected future dispatch pattern and how this changes for the alternative projects being considered.

This information allows the net competition benefits associated with each alternative project to be quantified directly.

In relation to the benefit from a deferral of generation, this can be quantified on the basis of the extent and type of the deferral indicated by the modelling and the cost of this investment. Any change in the dispatch pattern can also be directly quantified on the basis of the variable cost of the generators included in the dispatch in each case. This quantification is the same as that currently undertaken in the standard analysis under the regulatory test.

The additional areas of 'competition benefits' identified in section 3 relate to the benefits to end-users and producers arising from the responsiveness of final demand for electricity to price changes. The majority of regulatory test assessments to date have not included the additional consumer and producer surplus arising from price elasticity impacts, on the basis that where prices are set at competitive levels this benefit is of a much lower order of magnitude than other elements of the regulatory test analysis, and therefore unlikely to affect the project rankings.

However, where prices are above marginal costs, and where the alternative project is expected to result in prices being set closer to marginal cost, then the increase in consumer and producer surplus will potentially be more significant. The information required to quantify this benefit is an estimate of the own-price elasticity of demand for delivered electricity, an estimate of the proportion of delivered electricity prices that are made up of electricity costs and a projection of the change in spot market prices expected as a result of the alternative project being undertaken (which is provided by the market modelling).

5.1.1. Modelling Non-Competitive Bidding Strategies

The above discussion concludes that if the market modelling conducted under the regulatory test is extended to evaluate the extent to which non-competitive bidding strategies can be sustained under different alternative projects,[9] then it is relatively straightforward to quantify the 'net competition benefits' associated with a particular option, as part of the regulatory test analysis.

However, extending the market modelling to evaluate the sustainability of 'non-competitive' bidding alternatives is unlikely to be a straightforward exercise. The ACCC in its Discussion Paper notes that assumptions of non-competitive behaviour are likely to be controversial and may lead to disputes.

[9] Note that a project being assessed under the regulatory test may affect the type of bidding strategy adopted by generators (eg, a collusive strategy before and a non-collusive strategy afterwards) or it may result in a different outcome under the same bidding strategy (eg, Nash equilibrium strategy being followed both before and after).

Whilst the assumption of non-competitive behaviour will inevitably be controversial, extending the regulatory test analysis to evaluate the potential for and sustainability of non-competitive bidding behaviour represents the only robust approach to incorporating net competition benefits into the regulatory test, in that it preserves the general approach taken to assessing the costs and benefits associated with alternative projects. Mandating the use of SRMC or LRMC bidding assumptions, irrespective of the actual market structure and conduct under examination, is unlikely to be appropriate.

We therefore consider that the most appropriate approach to incorporating net competition benefits is to leave the regulatory test largely as it currently stands and to allow practitioners the freedom to model bidding strategies that are appropriate for the generation markets under consideration. Any assumptions made concerning non-competitive bidding and the impact of alternative projects on bidding strategies would have to be justified in the same way as other assumptions used in the modelling process. In particular, it would need to be demonstrated that such non-competitive bidding did 'approximate actual market bidding'.

One possible approach to modelling non-competitive bidding which has been drawn to our attention is that advocated by Frontier Economics in their paper 'Competition Benefits in the Regulatory Test' March 2003. Frontier Economics proposes a 'game theoretic' approach to such modelling, using the concept of Nash equilibrium. Under Frontier Economics' approach, generator bidding strategies are endogenous to the modelling process. That is, bidding strategies are pre-determined as a function of, amongst other things, the number of other competitors consistent with Nash equilibrium.[10] The impact of an interconnection on bidding strategies is then modelled as the impact of an effective change in the number of competitors on the Nash equilibrium.

This approach has the advantage of making the impact of an alternative project on generator bidding behaviour an intrinsic outcome of the model (where the model incorporates the assumption that each generator will adopt a strategy that achieves its best expected outcome, given the uncertain behaviour of others), rather than it being an exogenous assumption. Nonetheless, an exogenous decision must still be made at some point that generators do behave in a manner consistent with a Nash equilibrium. The appropriateness of this approach is therefore predicated on an ability to demonstrate that the model delivers outcomes which are consistent with actual market behaviour.

5.1.2. When should 'net competition benefits' be modelled?

In light of the above analysis it does not appear appropriate to mandate that particular bidding strategies always be modelled – either competitive or non-competitive. Rather, the application of the regulatory test should be sufficiently flexible to allow for modelling the

[10] In this context a Nash equilibrium is one where no generator can expect to change its bidding strategy in an attempt to increase profits without eliciting a response from other generators which ultimately make it worse off – and forces it back to its equilibrium bidding strategy.

bidding strategy that is most likely to accurately capture current and expected market conditions. There should also be consideration of the extent to which modelling alternative bidding scenarios is expected to have a material impact on the rankings for the projects being assessed. Where any 'competition benefits' are considered (or can be demonstrated) to be of a lesser order of magnitude to the other costs and benefits included in the regulatory test assessment, and will not affect the rankings under the regulatory test, the additional administrative complexity of quantifying these benefits would not appear to be justified.

If it is uncertain that a single bidding strategy is realistic, it would appear reasonable for a regulatory test assessment to include modelling on the basis of both competitive and non-competitive bidding strategies and to weight consideration of the outcomes according to which bidding scenario appears most closely to reflect reality.

5.1.3. Separately Identifying Competition Benefits

Under the approach to calculating 'competition benefits' discussed above, the different components of 'competition benefit' would each be calculated as part of the net present value (NPV) analysis. The overall net market benefit associated with a project is derived by adding up each of the separately identified components of the benefit (eg, reduction in dispatch cost, reduction in unserved energy, deferral of future generation etc).

It would therefore be a straightforward exercise (and one which is likely to be undertaken in any case) to separately identify the level of 'competition benefit' calculated for a particular project and to show the relative contribution of this benefit to the overall net benefit calculated for the project. This would ensure transparency and would also enable market participants to determine whether competition benefits were a critical factor in determining the ranking of projects in a given regulatory test assessment.

5.1.4. Changes to the regulatory test to allow non-competitive bidding strategies to be incorporated

It is not clear that much, if any, change to the regulatory test is required in order to enable the estimation and inclusion of net competition benefits on the basis of non-competitive bidding strategies, as outlined above. As the ACCC Discussion Paper points out, Note 6 of the regulatory test requires that in the development of market-driven market development scenarios:

> "***forecasts of spot price trends should reflect a range of market outcomes, ranging from short run marginal cost bidding behaviour to simulations that approximate actual bidding and prices, with power flows to be those most likely to occur under actual systems and market outcomes.***"

This clearly countenances the use of non-competitive bidding scenarios within the regulatory test, where such bidding is considered to 'approximate actual bidding and prices'.

However, some ambiguity may be introduced by the current drafting of Note 1 part (b) iii, which states that in determining the market benefit reasonable forecasts should be used of:

> ***"The efficient operating costs of competitively supplying energy to meet forecast demand from existing, committed, anticipated and modelled projects including demand side and generation projects."***

This could be read as precluding the ability to model non-competitive bidding strategies to the extent that non-competitive bidding is associated with 'inefficient' rather than 'efficient' operating cost outcomes.[11] Any confusion regarding this point could be clarified by replacing the term 'efficient operating costs' with the term 'expected operating costs'.

5.2. Alternative Measures Canvassed by the ACCC

The ACCC raises the possibility that 'competition benefits' could be included as a separate element, considered in addition to the regulatory test. As discussed in section 2 above, the ACCC outlines various measures in its Discussion Paper, several of which are examples of such a 'separate test' approach, ie, the HHI, Residual Supply Analysis and the 'commercial benefits analysis'.

We noted in the previous section that several of the competition benefit measures being considered by the ACCC appear to relate more to measurements of whether there is market power in a market and (if so) the impact of alternative projects on that market power. Demonstrating the presence of market power and determining that it will be materially affected by a project being assessed under the regulatory test are pre-requisites for concluding that there ***are*** competition benefits associated with a given project. However, such measures (even if they are appropriate for demonstrating the extent of market power) do not provide any direct assessment of the net benefit which accrues to the market from reducing this market power.

In order for a 'separate test' approach to be workable there would need to be a clear 'decision rule' promulgated by the ACCC, which sets out how the outcome of a 'competition benefit test' and the outcome of the regulatory test interact.

For example, where an augmentation was ranked second in applying the regulatory test, but had greater competition benefit than the alternative, then it would not be clear, in the absence of a decision rule, whether the augmentation should proceed or not.

Significant further analysis would be required for practicable decision rules to be developed. Currently, of the measures considered by the ACCC, only the commercial benefits analysis results in a dollar measure being applied to 'competition benefit'. For the other measures, it

[11] That is not to say that non-competitive bidding strategies will always result in inefficient dispatch. For example, collusive bidding may simply result in optimal dispatch at higher than marginal cost prices.

is unclear how the outcome of the measure would be combined with the net market benefit valuation (in dollars) which results from the regulatory test.

The ACCC would also need to consider how the 'ranking' of alternative projects across a range of market development scenarios under the regulatory test then also interacted with a 'competition benefits' measure, since such benefits may also differ across market development scenarios.

In addition, we note that if a separate test was incorporated into the assessment of network augmentations to capture competition benefits, then the Code provisions which relate to the application of the regulatory test would need to be altered for consistency.

5.3. Recommendations

In the light of the above analysis we recommend the adoption of the market modelling approach as the most appropriate manner in which to incorporate net competition benefits as part of the regulatory test assessment. In this regard we recommend that:

(a) the notes to the regulatory test be amended as necessary, to clarify that the regulatory test analysis can include non-competitive bidding, where this is considered to reflect actual market behaviour;

(b) the inclusion of non-competitive bidding should not be mandatory, but could be undertaken by NSPs where it is able to be shown that that actual market behaviour involves non-competitive bidding and that the 'competition impact' of the augmentation will be significant;[12] and

(c) in order to increase transparency, the magnitude of any competition benefits should be explicitly identified as part of the regulatory test assessment, together with their impact on the project rankings.

[12] We note that Powerlink in its earlier submission to the ACCC proposed examples of situations where extending the analysis to include competition benefits may be appropriate.

6. INCORPORATING GROSS COMPETITION BENEFITS

We discussed in section 3 differences between a definition of 'net competition benefits' and a definition of 'gross competition benefits.'

The commentary in the ACCC's Discussion Paper in relation to competition benefits stemming from improvements in allocative and dynamic efficiency appears consistent with a view that it is the 'net benefit' of competition which the ACCC is considering how to incorporate into the regulatory test. However, the nature of the some of the alternative measures considered and the ACCC's contemplation of a 'separate test' for competition benefits appears to be more suited to trying to capture the 'gross' benefits of competition. For example, the 'commercial benefits analysis' proposed as part of Option 3 is a proxy for the expected change in pool price outcomes as a result of the augmentation.

An approach which focused on gross benefits would be consistent with a view that regulation is intended to maximise long-term benefits to end-users. Under this view, additional profits earned by generators through the exercise of market power, over and above the level of profits which are required to cover long-run marginal cost, provide no long-term benefits to end-users, since these profits are not necessary to ensure efficient investment in generation. Consequently, the long-term interests of end-users would not be damaged if such monopoly profits were reduced.

This approach would be consistent with the legislative criteria established in Part XIC of the Trade Practices Act governing the ACCC's approach to telecommunications access regulation. The object of Part XIC is to promote the long-term interests of end-users of carriage services or of services provided by means of carriage services. Adherence to this objective would involve not including the loss of monopoly profits (as opposed to normal profits required to finance efficient investment) as a cost in any cost-benefit analysis.

It should be noted that adopting a 'gross competition benefits' approach may lead to projects which have lower net market benefits being ranked above projects with higher net market benefits. This may be the case if the loss of profits arising through the exercise of any market power by generators under one project is significantly greater than under another project.

To quantify the 'gross competition benefit', would require the removal from the modelled net benefits assessment of the lost profits to generators arising as a result of their receiving lower prices for output that would have in any case been supplied in the absence of the augmentation.[13] All other costs to generators would remain in the assessment. Such an assessment of the 'gross competition benefit' would not involve any greater informational / modelling burden than is implied by the net benefits test.

[13] In terms of diagram presented in section 3, this cost is that identified under (b).

NERA does not propose that the regulatory test analysis should be adapted to incorporate the 'gross competition benefits' associated with a particular project rather than the net competition benefit previously discussed. Such a decision would rely not on economic principles but, rather, on a policy decision that one distribution of benefits was superior to another. However, it is important that the ACCC is clear about whether it wishes to capture net competition benefits or gross competition benefits in extending the regulatory test.

7. SUMMARY

Extending the regulatory test analysis to evaluate the potential for and the sustainability of non-competitive bidding is the only robust approach to incorporating net competition benefits into the regulatory test. Such an approach maintains consistency with the existing framework under which the rest of the analysis is undertaken. The inclusion of non-competitive bidding should not be mandatory, but could be undertaken by NSPs where it is able to be shown that actual market behaviour involves non-competitive bidding and that the 'competition impact' of the augmentation will be significant

If the ACCC were to adopt a separate 'competition benefits' test, then it would also need to promulgate clear decision rules regarding how the outcome of such a test is expected to integrate with the outcome of the regulatory test assessment.

Any move towards a 'gross benefits' assessment of competition benefit (whilst retaining the net benefit framework for the remainder of the regulatory test) would rely not on economics but on whether policy makers consider a transfer of any above normal profits from generators to consumers to be, other things equal, a 'desirable' outcome.