# Revision marked version of the regulatory test

**Preamble**

The Australian Competition and Consumer Commission promulgates this regulatory test in accordance with clause 5.6.5(q)(1) of the National Electricity Code (the Code).

The regulatory test is to be applied ~~to~~:

(a) to *transmission system* or *distribution system* augmentation proposals in accordance with clause 5.6.2 of the Code (*augmentation*);

(b) by NEMMCO and the Inter-regional Planning Committee to augmentation options identified under clause 5.6.5 of the Code other than applications for new interconnectors in accordance with clause 5.6.6 of the Code (*augmentation option*); and

(c) by NEMMCO and the Inter-regional Planning Committee to applications for new interconnectors across regions in accordance with clause 5.6.5 and 5.6.6 of the Code (*new interconnectors*).

In this test, *augmentations, augmentation options* and *new interconnectors* are called *proposed augmentations*.

**~~Draft determination of t~~ The regulatory test**

The Commission has determined ~~come to the preliminary view~~ that the regulatory test is as follows:

A ~~*Proposed augmentation*~~ *new interconnector or an augmentation option* satisfies this test ~~is justified~~ if it maximises the *net present value* of the *market benefit* ~~in terms of its~~ having regard to a number of alternative projects, timings and ~~as regards alternative~~ market development ~~expansion~~ 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 – the *augmentation* minimises the net present value of the *cost* of meeting those standards; or

(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.

For the purposes of the test:

(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 ~~some~~ another ~~equivalent~~ measure that can be demonstrated to produce equivalent ranking of options in most (although not all) credible scenarios~~, such as the minimum competitive cost of the current level of supply~~;

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

(c) the net present value calculations should use a ~~range of~~ discount rate~~s~~ 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* ~~al~~ *augmentation* maximises the *market benefit* if it achieves ~~the~~ a greater ~~st~~ *market benefit* ~~over~~ 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.

~~(d) *augmentation* and *new interconnectors* are called ***proposed augmentation***.~~

**Notes on the ~~application of~~ methodology to be used in the regulatory test to a proposed augmentation**

(1) In determining the *market benefit*, the following information should be considered:

(a) the cost of the *proposed augmentation*;

(b) reasonable forecasts of:

i. electricity demand (modified where appropriate to take into account demand side options, variations in economic growth, variations in weather patterns and reasonable assumptions regarding price elasticity);

ii. the value of energy to electricity consumers as reflected in the level of VoLL;

iii. 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 ~~(consistent with the relevant reliability standards)~~;

iv. the capital costs of *committed*, *anticipated* and *modelled projects* including demand side and generation projects and whether the capital costs are completely or partially avoided or deferred ~~(consistent with the relevant reliability standards)~~;

v. the cost of providing sufficient ancillary services to meet the forecast demand (~~consistent with the relevant security standards)~~; and

vi. the 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.

(c) the proponent's nominated *construction timetable* must include a *start of construction*, *construction time* and *commissioning*, where:

i. *start of construction* means the date at which construction is required to commence in order to meet the *commissioning* date, taking into consideration the *construction time* nominated by the proponent;

ii. *construction time* is the time nominated by the proponent to order equipment and build the project and does not include the time required to obtain environmental, regulatory or planning approval; and

iii. *commissioning* means the date, nominated by the proponent, on which the project is to be placed into commercial operation.

(2) In determining the *market benefit* ~~of the *proposed augmentation*,~~ it should be considered whether the *proposed augmentation* will enable:

(a) a *Transmission Network Service Provider* to provide both *prescribed* and other services~~.~~; or

(b) a Distribution Network Service Provider to provide both *prescribed distribution services* and other services

If it does, the costs and benefits associated with the other services should be disregarded. The allocation of costs between *prescribed* and other services must be

consistent with the *Transmission Ring-Fencing Guidelines*. The allocation of costs between *prescribed distribution services* and other services must be consistent with the relevant *Distribution Ring-Fencing Guidelines*.

(3) The costs identified in determining the *market benefit* should include 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. An environmental tax should be treated as part of a project's cost. An environmental subsidy should be treated as part of a project's benefits or as a negative cost. Any other costs should be disregarded.

(4) In determining the *market benefit*, ~~A~~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. The allocation of costs and benefits between the electricity and other markets must be based on principles consistent with the Transmission Ring-Fencing Guidelines and/or *Distribution Ring-Fencing Guidelines (as appropriate)*. ~~That is, o~~Only direct costs and benefits (associated with a partial equilibrium analysis) should be included and any additional indirect costs or benefits (associated with a general equilibrium analysis) should be excluded from the assessment.

(5) In determining the *market benefit*, ~~T~~the 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. These scenarios may include alternative *construction timetables* as nominated by the proponent. These scenarios should include projects undertaken to ensure that relevant reliability standards are met.

These ~~expansion~~ market development scenarios should include:

(a) projects, the implementation and construction of which have commenced and which have expected commissioning dates within three years (*committed projects*);

(b) projects, the planning for which is at an advanced stage and which have expected commissioning dates within 5 years (*anticipated projects*);

(c) generic generation and other investments (based on projected fuel and technology availability) which are likely to be commissioned in response to growing demand or as substitutes for existing generation plant (*modelled projects*); and

(d) any other projects identified during the consultation process.

(6) Modelled projects should be developed within ~~expansion~~ market development scenarios using two approaches: 'least-cost ~~expansion~~ market development' and 'market-driven ~~expansion~~ market development'.

(a) The least-cost ~~expansion~~ market development approach includes modelled projects based on a least-cost planning approach akin to conventional central planning. The proposals to be included would be those where the net present value of benefits, such as fuel substitution and reliability increases, exceeds the costs.

(b) The market-driven ~~expansion~~ market development approach mimics market processes by modelling spot price trends based on existing generation and demand and includes new generation developed on the same basis as would a private developer (where the net present value of the spot price revenue

exceeds the net present value of generation costs). The forecasts of spot price tends should reflect a range of market outcomes, ranging from short run marginal cost bidding behaviour to simulations that approximate actual market bidding and prices, with power flows to be those most likely to occur under actual systems and market outcomes.

(7) In determining the *market benefit*, ~~T~~the *proposed augmentation* should not pre-empt nor distort potential unregulated developments including ~~both transmission~~ network, generation and demand side developments. ~~If a proposed augmentation project has not commenced within 12 months from the date on which it was initially granted regulated status, then regulated status will cease to apply to that augmentation.~~ To this end:

(a) a *proposed augmentation* must not be determined to satisfy this test more than 12 months before the *start of construction* date;

(b) *proposed augmentation* will cease to satisfy this test if it has not commenced operation by 12 months after the *commissioning* date, unless there has been a delay clearly due to unforeseen circumstances;

(c) unless there are exceptional circumstances, *new interconnectors* must not be determined to satisfy this test if *start of construction* is within 18 months of the project's need being first identified in a network's annual planning review or NEMMCO's statement of opportunities (or in some similar published document in the period prior to 13 December 1998).

(8) The consultation process for determining whether a *proposed augmentation* is justified 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. Specific consultation is required on:

(a) identifying *committed projects* and *anticipated projects*;

(b) setting input assumptions such as fuel costs and load growth;

(c) modelling market behaviour and considering whether the ~~expansion~~ market development scenarios are realistic;

(d) the proponent's *construction timetable*;

(~~d~~e) understanding how benefits will be allocated; and

(~~e~~f) understanding how a 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.