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Review of Regulatory Test : Issues Paper

Dear Michael,

Edison Mission Energy (EME) are pleased to be able to comment on the framework for new regulated investment as we see the Networks area as the single largest impediment to the efficient operation of the NEM. Thus far, the focus of Electricity reform has been focused on introducing competition into the energy sector of the National Electricity Market (NEM). Greater emphasis needs to be placed on introducing competition to the transport component (transmission & distribution) sector of the industry.

The NEM transmission network is almost exclusively based on regulated investments which are owned, controlled and operated by Transmission Network Service Providers (TNSP). The regulated status of transmission in the NEM was based largely on two fundamental economic principles:

1. That existing transmission networks would be most efficiently operated as monopolies (considered in fact to be natural monopolies) which would avoid unnecessary and costly duplication.
2. That these natural monopolies would operate for the common good outside the competitive market environment.

Like many open and transparent markets the NEM has clearly highlighted the flaws in the original assumptions in regard to transmission networks. This leads EME to the following observations:

1. The operation of transmission networks is not independent of the competitive energy markets. Rather transmission operation can and does have material

impacts and effects on competitive energy market outcomes.¹

2. Efficient transmission investment can be provided through exposing transmission networks to the competitive electricity market and allowing such investments to trade in and capture the congestion rentals (two such market based investments have already been made with two more being well advanced).
3. Locational pricing signals are being heavily muted by the regulatory regime with the potential for significant losses of efficiency as new investments consequently locate inappropriately.
4. TNSPs have become obsessed with and focused on the regulatory system rather than looking after the common good.
5. The regulated system is leading to costly duplication.²

The following trenchant criticisms of the regulated monopoly model flow from these observations:

1. NEM market participants are regularly affected by the business choices of TNSPs through material impacts on the wholesale energy and ancillary service markets. This ultimately results in significant additional costs for end users.
2. There is currently very limited means to effectively manage the resulting transmission risk. Producers and consumers as a result are regularly engaged in attempting to transfer transmission risk either contractually or physically to each other.
3. Through lack of exposure to the market, TNSP's have consequently become inwardly focused, reactionary and less responsive to the needs of transmission users. Hence the common good is taking a back seat to their own commercial and political agendas.³

¹ As an example a transmission outage in Northern NSW in October 2001 caused a massive increase in spot market ancillary service costs to the market over a five week period (order of \$50 million). If the relevant TNSP had been exposed to and responsible for these costs, the outcome would have been quite different – i.e. the TNSP would either have moved the outage to a more appropriate time, or alternatively would have contracted with ancillary service providers to ensure that the supply shortfall and subsequent price increase did not occur.

² Recently approval was given by NEMMCO to build a link from NSW to South Australia (SNI) which essentially duplicates the transfer capacity that will be provided by Murraylink, currently being built by Transenergie. The relevant link capacity of the SNI component is nominally 200 MW but the net additional transfer that it will provide is only 20 MW because of the duplication (stated in the IRPC reports on this matter published in 2001) with Murraylink. The relevant TNSP was asked to consider undertaking an upgrade project that provided only the beneficial components of the upgrade (at a cost saving in the order of \$60 million) but refused.

³ As an example, TNSP's have an internalised cost based driver which incentivises them to reduce their own operating costs while at the same time potentially causing substantial costs to end users.

4. Regulated investments are crowding out potential entrepreneurial investments in transmission.⁴ Hence the risks associated with the potential for non-performing assets and any subsequent asset stranding are being transferred from willing entrepreneurs to unwitting end users.

It is clear from the above discussion that appropriate changes are needed to the regulatory regime for transmission networks in order to ensure efficient transmission network operation and new investment. This would be best achieved by implementing a cost recovery system that would see TNSP's incentivised by placing a portion of their revenue at risk of market outcomes⁵ and requiring them to auction a minimum percentage of those cash flows to market participants⁶. In particular these incentives should result in effective locational pricing signals to:

- underwrite risk management instruments for transmission, and
- ensure the efficient placement of new load and new generation.

This could result in a move to nodal pricing, as has already been done in a number of pools such as NZ and PJM, in the long term. In the short term the number of pricing regions within the NEM should be increased (for significant projected efficiency gains) in line with the original NECA REIMNS review recommendations. .

EME support the key principles of economic efficiency and competitive neutrality that the ACCC has relied upon in developing the regulatory test and would not support any change to the Regulatory test which was contrary to these principles.

The following are the responses to the questions that have been raised in the ACCC's paper.

Maximising net benefits

Is the current maximising market benefits test a hurdle that is too high?

No, the maximising market net benefits test is not too high. Private investors would not knowingly invest in an option that provides a lower return over one that provided a higher return. The regulatory test should seek to provide outcomes similar to what would be expected in a competitive environment where competition does not exist. Changing the hurdle such that it no longer approximates expected outcomes in a competitive environment is likely to result in substantial distortions to the competitive components of the electricity market.

⁴ A recent public statement by Transenergie in relation to a potential entrepreneurial investment between Victoria and South Australia was quickly followed by a statement of intent by the South Australian based TNSP, Electranet that they intended to apply for regulated status for the same investment.

⁵ As only a portion of the revenues would be at risk (say 25-30%) with the remainder recovered under a regulated structure, the Networks would have no right to reduce the network capability in order to enhance congestion rentals – i.e. the networks would be continued to be offered to the market at Marginal Cost.

⁶ Extension of existing SRA process – more links and firm MW contracts.

Should the test simply refer to a nominated Net Present Value hurdle?

No. The size of the NPV reflects the size of the investment and so a larger project will pass the test more easily and yet it may involve a lot more funds at risk. The test should ensure that those that ultimately pay for the regulated investment should not be unreasonably exposed to the forecast benefits not eventuating, resulting in a significant component of the investment being stranded.

If so, what should the nominated hurdle be?

EME would recommend that the test be set-up (in terms of measuring value) as follows:

1. The proposal should maximise the NPV in terms of costs and benefits associated with the proposal when compared with a robust set of alternatives.
2. The proposal must show a positive NPV (based on a commercial discount rate) for at least 90% for the set of market scenarios studied.
3. The NPV crossover (number of years to payback the investment on a discounted basis – rather than a straight cash payback) should not exceed $(100\%/n\%)$ where $n\%$ is the commercial discount rate to be applied.
4. The proposal must show that under any reasonable scenario studied that the potential loss of benefits (stranded benefits) will not exceed 20% of the initial asset value.

This is consistent with the approach that a prudent entrepreneur would apply in undertaking a commercial investment decision.

If adopted, how should the industry/users be protected from inefficient investment options i.e. high cost/low benefit solutions?

EME do not support the adoption of the simple NPV approach that does not require the proponent to seek to maximise benefits. See our alternative test above.

What other alternatives should be considered?

The proponent should be required to show that it is maximising benefits coupled with our proposed test above.

Does the *regulatory test* need to differentiate between TNSPs and DNSPs?

There should be no need to differentiate between TNSP's and DNSP's as the market based principles should apply to both. At the boundary it is often difficult to determine a clear separation.

If so, should different approaches apply to each?

Different approaches should not be required.

Is the current test dealing with reliability driven augmentations appropriate?

No. The proposed reliability augmentations are highly uncertain and yet are captured as if they would otherwise be committed projects. No reliability augmentations should be allowed beyond five years (to reflect the high degree of uncertainty). In addition where an investment

is justified on the basis of reliability, it should be required to be delayed to the last possible time in order to meet the reliability requirement. This would have the benefits of:

1. delaying the project until reliability benefits are more certain, and
2. ensuring that regulated investments did not crowd out innovative entrepreneurial solutions.

Should reliability driven augmentations be required to follow a similar process to market driven augmentation?

Yes. The test should not distort competitive market outcomes.

Competitive impacts of network investment

Should the test be altered to reflect greater competition in a region from the introduction of network investment?

EME sees some benefits in including competition as part of the test, as it reflects some of the benefits that entrepreneurs would be able to access. However, as issues of wealth transfer do not enhance the economic efficiency of the NEM, but rather forecast winners and losers, any such approach including competition aspects must be undertaken rigorously in order to avoid any arbitrary assessment by proponents. If the analysis is arbitrary proponents would be incentivised to game the outcome in favour of their proposed investments which would likely lead to massive over-investment in networks. In addition as the long term benefits are very uncertain, the test should only capture benefits that are forecast in the first five years.

In order to ensure a rigorous analysis, the test should use the same approach as is to be used for the “beneficiary pays” test as is currently under development by NECA and the industry.

If so, how should the benefits of greater competition be captured by the test?

This can only be carried out through rigorous and detailed pool modelling across a wide range of assumptions with sensitivities on all key inputs with the investment both in and out.

If a proposed network investment is marginal, should a competition test be included that allows the proposal to pass the test?

Competition should either be used or not used. It should not be co-opted in to get a marginal project over the line if it is not normally used.

If so, what form should the competition test take?

In order to ensure a rigorous analysis, the test should use the same approach as is to be used for the “beneficiary pays” test as is currently under development by NECA and the industry. The benefits attributed to competition should be tallied with other benefits and applied to the hurdle proposed by EME above.

Should the benefits associated with additional capacity to meet peak demands in a region be included in the assessment of a new inter-connector?

The deferred capital cost of new generation development to meet peak demands appears to be the major benefit derived by an inter-connector in the tests carried out to date. These benefits are highly uncertain and may be met/or be able to be met by future entrepreneurial

investments in generation, transmission or DSM. Hence deferred capital benefits associated with additional peak capacity should be limited to five years.

Note that the current assumption in the modelling ensures that the NEMMCO end user maximum demand can be met in 9 out of every 10 years (demand that may only occur for a few hours in that year) coupled with major loss of generation – more like a 1 in 100 year event. This probably leads to a massive overstatement of the benefits that would be obtained by an inter-connector. Also note that NEMMCO has not needed to contract for reserve plant to this date and the very high standards for reliability that have been set by the Reliability Panel have been met.

If so, what form should this benefit take and should any limitations apply?

See above.

If a new interconnector results in lower prices in one or more regions (e.g. importing regions), should the benefits of lower prices be included in the test?

This is essentially a repeat of the first question in this section. EME sees some benefits in including lower prices as part of the test as it reflects some of the benefits that entrepreneurs would be able to access. However, as issues of wealth transfer do not enhance the economic efficiency of the NEM, but rather forecast winners and losers, any such approach including lower price aspects must be undertaken rigorously in order to avoid any arbitrary assessment by proponents.

Similarly, if a new interconnector results in higher prices in one or more regions (e.g. exporting regions), should the costs of the higher prices be included in the test?

This is essentially a repeat of the first question in this section. EME sees some benefits in including higher prices as part of the test as it reflects some of the disbenefits that entrepreneurs would face. However, as issues of wealth transfer do not enhance the economic efficiency of the NEM, but rather forecast winners and losers, any such approach including higher price aspects must be undertaken rigorously in order to avoid any arbitrary assessment by proponents.

How will taking into account competition benefits interact with who pays for the augmentation?

In order to ensure a rigorous analysis, the test should use the same approach as is to be used for the “beneficiary pays” test as is currently under development by NECA and the industry.

Should the test ensure an alignment between the beneficiaries of the investment with those who pay for it?

Yes, in order to ensure a rigorous analysis, the test should use the same approach as is to be used for the “beneficiary pays” test as is currently under development by NECA and the industry. This would also prove simpler from an administrative point of view as opponents could be dealt with through the single process of justifying the investment.

If so what approach should be adopted?

See above

Should regulated and unregulated network alternatives be treated in the same way in terms of the benefits (or detriments) associated with them?

Yes. This will ensure competitive neutrality and avoid regulated investments distorting the competitive market.

Network and distributed resources code change package

Should the *regulatory test* be more prescriptive?

The *regulatory test* should be prescriptive in that it should minimise the discretion of proponents and should ensure competitive neutrality.

Should the test define which costs and benefits should be taken into account?

No. These need to be worked through on a case-by-case basis. However the test should set a reasonability limit to be applied to proponent's forecasts to ensure that unlikely benefits are not claimed and that costs are not forecast too optimistically.

If so, what should those costs and benefits be?

See above

Should the test include a glossary of definitions?

Yes, as this would aid in clarifying the process, reduce ambiguity and make the process and assessment more transparent.

If so, which terms should be defined?

All terms that are either inputs or that transform the inputs to the output used in carrying out the test.

Should a market test period, in which unregulated alternatives to network investment are given a specified time to respond to constraints identified by the network, be introduced into the test?

Yes, Market based options should be given the opportunity to work before regulated options are considered. This avoids regulated investments crowding out market based solutions. Regulated solutions should only be allowed to proceed where they produce a positive benefit and any further delay would result in reliability falling below the Reliability Panel's standard.

Timing delays

Have the problems of time delays been sufficiently addressed in the network and distributed resources code change package?

EME does not believe that there has been a problem with time delays. It is EME's view that projects that claim that they have been delayed by the process did not have outstanding benefits that justified them in the first place. The primary driver should be that the test is applied correctly rather than to risk transmission customer funds through making hasty decisions.

If not, how can the test be modified to overcome future delays while still ensuring that only appropriate investment proposals go forward?

No change required.

Other issues for consideration

Should the Commission clarify its optimisation of network investment that has been assessed in accordance with in the *regulatory test*?

Yes. Most participants appear skeptical that investments will actually be subject to optimisation. It should be quite clear as to how the TNSP network will be optimised at every regulatory reset period. This will help in participants understanding of the process and provide faith in the process.

Should the test address the weighting of outcomes? If so, how can this be achieved?

Yes. This should be very prescriptive to ensure that proponents do not simply choose weightings that suit their case.

Is the choice of discount rate, being the rate appropriate for the analysis of a private enterprise investment in the electricity sector, still appropriate?

The regulatory test should seek to provide outcomes similar to what would be expected in a competitive environment where competition does not exist. Changing the hurdle such that it no longer approximates expected outcomes in a competitive environment is likely to result in substantial distortions to the competitive components of the electricity market. Hence, it is EME's view that both regulated and market based investments should be assessed on the same basis. Thus a commercial discount rate should be used. In order to determine the appropriate rate, the ACCC should survey participants and other members of the investment community.

Should there be specific requirements for competitive tendering that could form the basis of a safe harbour provision?

No. Competitive tendering only deals with costs. It does not ensure that the benefits exist with a high degree of certainty. Hence in order for an investment to be approved it must demonstrate benefits and must remain subject to optimisation at each regulatory reset period (based on changes to assessed benefits).

Competitive tendering should be used anyway to ensure that the cost of any project is minimised.

Should you have any further enquiries or wish to discuss these issues further please contact me by email or on the numbers provided below.

Yours faithfully

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