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Dear Dr Tamblyn

### **TransGrid Submission on National Transmission Planning Arrangements: Issues Paper**

TransGrid is pleased to make this submission to the Commission in response to its Issues Paper.

The Electricity Network Owners Forum (**ETNOF**), has made a separate detailed submission and TransGrid, as a member of ETNOF, endorses that submission.

In this separate submission TransGrid makes some important additional points on the following matters:

1. **The threshold importance of ensuring the NTP Model is consistent with the COAG Decision:** TransGrid encourages the Commission, in conducting this NTP review, to treat as fundamental that the NTP Model recommended by it is consistent with the April 2007 COAG Decision (**the COAG Decision**).
2. **Assessing the consistency of the Commission's illustrative NTP Models with the COAG Decision:** i.e. assessing the extent to which the 4 "models" proposed by the Commission (in Section 8 of the Issues Paper) and the additional model 5 proposed by ETNOF in its submission, are consistent with the COAG Decision. TransGrid also recommends that this framework for assessment be extended to apply to other models proposed during the course of this review.
3. **The 3 options proposed for consideration by the Commission for amalgamating the two limbs of the current regulatory test** within the new Regulatory Investment Test (**RIT**). Specifically, TransGrid sets out detailed reasons for adopting the Commission's Option 3.
4. **Re-iterating some key points from the ETNOF Submission on the scope and content of the NTNDP:** as TransGrid considers this is particularly important.

Each of the above matters are addressed separately below, with reference to Attachments 1 and 2 to this letter.

#### **1. Threshold importance of ensuring the NTP is consistent with the COAG Decision**

In Chapter 1 of the Issues Paper the Commission states that the tasks set for it by COAG and the Ministerial Council on Energy are to:

- develop a specification of the functions to be undertaken by the NTP; and
- develop a detailed plan to implement that specification (including any changes required by the NEL & the Rules).

It correctly notes that its Terms of Reference (effectively a re-statement of the requirements of the COAG Decision) provide a degree of prescription about the characteristics required for the NTP.

The Commission then goes on to propose that the specification of the NTP's functions be determined against the following criteria:

1. Consistency with the specific wording of, and the broad intent underpinning, the direction provided by the MCE to the Commission in its letter of 3 July 2007 (i.e. meeting the requirements of the COAG Decision);
2. Solutions which promote more efficient outcomes over time, and which are proportionate to the materiality of the problems being addressed;
3. Application of good regulatory practice and design;
4. Application of effective corporate governance and accountability principles; and
5. Minimisation of implementation costs and risks – including costs associated with any duplication of functions.

At face value, this is a fairly reasonable framework against which to proceed in developing a specification for the NTP's functions. However the Commission encouraged to consider:

- (a) The threshold importance of criteria 1 above (i.e. consistency with the COAG Decision), as it provides the limits within which the Commission must proceed. This means that while (as the Commission suggests) there may need to be an element of trading off between the other 4 of the above criteria, there appears to be no real scope to "trade off" against criteria 1 in favour of other criteria.

This is because criteria 1 sets the basis and limits of the Commission's mandate for this Review. If the threshold importance of criteria 1 is not clearly recognised from the outset, a "trade off" against criteria 1 in favour of some of the other criteria might be used as a justification for developing a proposal for the role of the NTP beyond the constraints mandated in the Commission's Terms of Reference.

- (b) The particular importance of criteria 5 above (in terms of reducing risks of duplication, costs and delay in the planning and investment process) given that the COAG Decision clearly mandates that the NTP must recognise:

- (i) the continuing role of Local Jurisdictional Planning; and
- (ii) that TNSPs must remain responsible for investment decisions.

In other words, these appear to be key constraints placed on the NTP under the Commission's Terms of Reference that cannot be "traded off" for perceived benefits under other criteria adopted by the Commission.

## **2. Consistency of the Commission's illustrative NTP Models with the COAG Decision**

The ETNOF Submission included a tabular assessment (with explanatory comments) of the Commission's 4 Illustrative Models (plus ETNOF's own proposed 'fifth' model) against the COAG Decision Requirements. For ease of reference this table is repeated in Attachment 1 to this letter.



TransGrid endorses that assessment and notes in summary that:

- Essentially only the Commission's first Illustrative Model and ETNOF's fifth Model comply with the COAG Decision.

For the reasons set out in the ETNOF Submission, ETNOF's fifth Model more effectively achieves the requirements of the COAG Decision.

**3. The three options proposed for consideration by the Commission for amalgamating the two limbs of the current regulatory test**

This submission addresses in detail each of the options proposed for consideration by the Commission for the amalgamation of the two limbs of the current regulatory test within the new Regulatory Investment Test (RIT).

For the reasons set out in Attachment 1 to this letter, it is clear that Option 3 is clearly the best option against all the Commission's criteria and the one which best achieves the requirements of the COAG Decision. Moreover, Attachment 1 clearly shows that Option 1 as set out by the Commission is generally problematic and *inconsistent* with the requirements of the COAG decision.

**4. Key Points in the ETNOF Submission about the scope and content of the NTNDP**

An NTNDP which is genuinely developed in accordance with the COAG Decision, as outlined in the ETNOF submission, will enhance the value of transmission planning activities within the National Electricity Market (NEM).

In summary, the NTNDP should:

- Provide a description of potentially worthwhile NEM transmission services development options between 5 and 15 years into the future to inform investment decision making by TNSPs and NEM generation businesses which occurs within a more immediate time frame. These development options would be identified for each of a range of thoroughly researched plausible demand growth and generation sourcing backgrounds;
- Focus on developments that have national significance, specifically developments that have material transmission service impacts in more than one NEM jurisdiction and beyond the service area of each major NEM TNSP;
- Reflect likely demand growth and generation sourcing backgrounds associated with different economic, technology development and relevant government policy scenarios. For example, economic transmission options that would support different climate change policy responses could be identified; and
- Incorporate analysis of nationally significant transmission development options at a level appropriate to providing credible strategic guidance to investors and policy makers. This analysis would be expected to identify future development options that may have economic and/or policy merit.

COAG requires that the Inter Regional Planning Committee functions and Annual National Transmission Statement (ANTS) development be managed by the NTP. Accordingly, the NTNDP would also be expected to be informed by these activities and include the information currently published each year in the ANTS.

An important consideration is the relationship between the NTNDP and other regulatory processes including the implementation of the Regulatory Investment Test and the economic regulation of TNSPs by the AER. In essence, and in accordance with COAG requirements, the NTNDP would inform these processes while leaving the ultimate investment decision making, and accountability for transmission service outcomes, with the TNSPs.

To this end:

- The NTP should not carry out the Regulatory Investment Test (RIT) process *per se*. However, development options set out in the NTNDP would form an important reference point for interested parties for the application of the RIT process by TNSPs, particularly where a development option is primarily driven by net (national) market benefits.
- Consistent with COAG requirements the transmission development options identified within (or omitted from) the NTNDP would not bind the TNSPs to implement those options. In addition, TNSPs could pursue options not identified within the NTNDP.
- The NTNDP would also inform the AER's five year revenue cap determinations. However, consistent with COAG's requirements, TNSPs would not be required to invest in all options in the NTNDP. Rather, TNSPs would be free to seek recognition of any proposed investment option as part of the AER's revenue cap regulation process on the basis of current assessment criteria related to whether the investment option is efficient and prudent.

We trust that the above matters will assist the Commission. If more information is required or the Commission wishes to discuss any aspect of our submission please contact TransGrid's General Manager/Network Development and Regulatory Affairs, Mr Peter McIntyre on (02) 9284 3555 or TransGrid's Manager/Regulated Transmission Access, Mr Philip Gall on (02) 9284 3434.

Yours sincerely



Peter McIntyre  
General Manager/Network Development and Regulatory Affairs



## ATTACHMENT 1 – Comparison of Proposed NTNDP Models against COAG's Requirements

Table 1 below summarises the 5 Models for the NTNDP and NTP together with the overall assessment of each Model against the COAG requirements for ease of reference in the subsequent analysis. The **highlighted words** in the table show features which are inconsistent with the COAG requirements. These inconsistencies are also identified in the notes before the table.

**Table 1 – Summary of the Five Models for the Content of the NTNDP**

Feature	Model 1	Model 2	Model 3	Model 4	Model 5
<b>1. CONTENT of PLAN</b>					
<b>a) Duration</b>	20 years	10 years	As Model 2	10 years	A window starting at end of TNSP investment lead time of up to around 5 years noting projects by TNSPs currently planned through to 15 to 20 years
<b>b) Scenarios</b>	Wide – high and low probability scenarios	Narrow – focus on high probability scenarios	As Model 2	Highly focused – such that particular investment solutions can be identified	Wide – covering a range of demand and generation scenarios for each of a number of economic, technology, and policy contexts or themes. NTP scenarios to be published as (non binding) key items of industry information for planning by TNSPs and generators
<b>c) How is 'national' defined</b>	As today – focus on NTFPs	Threshold impact on inter-regional flows	As Model 2	As Model 2	Covers major network development that is sensitive to location of generation and/or affects more than one jurisdiction or TNSP
<b>d) How specific?</b>	Describes network capability and discusses conceptual augmentations identified by TNSPs	Describe network capability. Own modelling and identify possible projects	As Model 2 – plus identify solutions if task delegated to it by TNSP	Describe network capability. Identify options and best augmentation solutions	Sets out potentially economic transmission service developments for each set of demand and generation scenarios. These are identified for each of 5, 10, 15, and, possibly 20, years into the future. Development options are assessed using relatively generic estimates of costs and benefits.

# ATTACHMENT 1 – Comparison of Proposed NTNDP Models against COAG's Requirements

Feature	Model 1	Model 2	Model 3	Model 4	Model 5
<b>e) Range of assets?</b>	Network augmentations	Network augmentations (and substitutes for network augmentations)	Network augmentations (and substitutes). Increase gas network and generation focus	Same as Model 3 plus planning of NCAS	Focus is on those transmission service developments that have material interaction with generation sourcing decisions and that involve more than one jurisdiction or TNSP.
<b>2. NTP in RIT?</b>	No involvement in application of regulatory test. NTP takes over IRPC advisory role on LRPP	NTP identifies and publishes information on national market benefits. NTP ability to exercise LRPP	As Model 2 – plus obligation to run Reg Test if delegated to it by TNSP	Has obligation to run Reg Test in respect of solutions it identifies. LRPP functions disappears	No. However, the NTNDP would provide data, maintained by the NTP, of estimates of non-transmission costs (such as fuel costs and generation development costs) and national benefit components which may inform TNSPs in their application of the RIT.
<b>3. NTP Ancillary functions</b>	Existing IRPC functions. Advice to AER role limited	Existing IRPC functions. Advice to AER role limited	As Model 2 plus developing common planning methodology and coordinates inter-regional investments	As Model 3 plus general advice to MCE and Publication of the SOO	Determine later but incorporate strategic functions and analysis of IRPC and ANTS into NTNDP.
<b>4. Governance</b>	Administrative body within AEMO reporting to (and appointed by) AEMO board	Defined (ring fenced) Board/Panel/Committee within the AEMO with independence	Defined Board/Panel/Committee or Defined Office Holder (ring fenced) within the AEMO with independence	Statutory authority or office holder – appointed through process specified in enabling law	Separate department within AEMO with transparent NTNDP development process and budget set in consultation with interested parties



# ATTACHMENT 1 – Comparison of Proposed NTNDP Models against COAG's Requirements

Feature	Model 1	Model 2	Model 3	Model 4	Model 5
Consistent with COAG decision?	Yes	Somewhat see Note 1 below	No see Note 2 below	No see Note 3 below	Yes

**Note 1 (Model 2):** paragraph 1(d) above would be inconsistent if the identification of possible projects becomes too detailed or prescriptive, as this would run counter to the COAG requirement of TNSPs remaining responsible for transmission investment.

**Note 2 (Model 3):** Item 3 of this model clearly encroaches on the COAG requirement that TNSPs remain responsible for transmission investment: Items 1(d) and 2 would be inconsistent without the caveat that the NTP would only undertake those actions if the TNSP delegated them to the NTP.

Paragraph 1 (e) will be inconsistent with the COAG requirement for a national "transmission" system plan, if it is intended that the plan include planning for the development of gas network & generation alongside planning for transmission development (as opposed to broadly considering any likely future gas and generation developments, as part of scenario forecasting for transmission planning purposes – this is an important distinction).

**Note 3 (Model 4):** Elements 1(b), 1(d), 2 and 3 of this model clearly encroach on the COAG requirement that TNSPs remain responsible for transmission investment.

Paragraph 1(e) will be inconsistent with COAG Requirements, as set in the above comments in Note 2 on Model 3.

Paragraph 4 is inconsistent with the COAG Requirement that the NTP be located within AEMO (section 3 of the COAG Decision) and that AEMOs functions are to encompass national transmission planning (section 2 of the COAG Decision).

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## ATTACHMENT 2 - Explanation of Why the Commission's Option 3 for the Regulatory Investment Test is Required

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### 1. Introduction

This Attachment 2 to the TransGrid submission addresses the issue of the options put forward by the Commission in relation to the amalgamation of the two limbs of the current regulatory test within the new Regulatory Investment Test (RIT).

In its Issues Paper the Commission sets out three options:<sup>1</sup>

1. Option 1: 'Full cost benefit approach' - under which all planning and consultation would be on a full cost-benefit decision criterion, with network reliability benefits being explicitly valued in the analysis;
2. Option 2: 'Least-cost approach' - under which mandatory network reliability standards would be agreed through some form of cost-benefit analysis and individual projects would then be assessed according to whether they were the least-cost response to meeting these criteria; and
3. Option 3: 'Combined criteria approach' - under which the existing least-cost approach to projects intended to meet mandatory network reliability standards would be maintained, but which would allow for the incorporation of additional benefits where an option was likely to provide them.

The Commission notes in its Issues Paper that no submissions supported the implementation of Option 2. As a consequence the Commission's discussion in the Issues Paper focuses on Options 1 and 3.

TransGrid strongly supports the implementation of Option 3 and makes the following observations in this submission:

- Option 1 is inconsistent with a framework under which mandatory reliability standards are determined by a body acting independently of the TNSP;
- Option 1 is inconsistent with the need for TNSPs to undertake joint planning with distributors who base their planning on deterministic reliability criteria;
- Option 1 would significantly increase the complexity of the analysis required for all RIT applications, reduce the transparency of the consultation processes and increase the prospect of disputes, thereby significantly lengthening the time taken to gain regulatory approval for investments driven by reliability concerns. As a result, ***Option 1 is inconsistent with the COAG directives in relation to the review,***
- Option 3 has many features in common with the previous Version 1 of the regulatory test and, as such, there is ample evidence that this option is workable in practice; and
- Under Option 3, differences in reliability would not need to be valued for the majority of RIT assessments, but flexibility could be retained to allow differences in reliability over and above the required standard to be valued in those circumstances where the TNSP can demonstrate that not to do so would lead to a sub-optimal investment decision.

The remainder of this submission discusses each of these points in turn.

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<sup>1</sup> AEMC, *National Transmission Planning Arrangements: Issues Paper*, 9 November 2007, p. 38.



## 2. Interaction between the RIT Framework and the Process for Determining Reliability Standards

A key difference between Option 1 and Option 3, as set out by the Commission, is that under Option 1 the level of reliability delivered by a proposed augmentation and alternatives to that augmentation is *explicitly valued* as part of the cost-benefit analysis. In contrast, under Option 3 the required level of reliability is determined by a separate, prior process and is then *taken as given* when conducting the RIT assessment.

Where an investment is primarily driven by reliability concerns, under Option 3 only those investments that meet (or exceed) the mandatory reliability standard are considered in the RIT assessment. As a general rule, any incremental improvement in reliability over and above the mandated standard would not be taken into account as part of the RIT assessment.<sup>2</sup>

In contrast, under Option 1, the level of reliability provided by alternative options is itself included in the RIT analysis. It follows that under Option 1 the level of reliability delivered by the augmentation need not be equal to the level of reliability determined by the body setting the mandatory reliability standard, and may be either above or below this standard.

From the above description it is clear that the choice between options for amalgamating the current limbs of the regulatory test is necessarily affected by the framework adopted for determining appropriate transmission reliability planning standards. This framework is currently the subject of the Transmission Reliability Standards Review being conducted by the Reliability Panel. There is therefore a critical interaction between these two reviews. This was recognised by the Commission in its earlier Scoping Paper<sup>3</sup> but the implications for the suitability of Option 1 do not appear to have been adequately considered in the Issues Paper.

TransGrid (and ETNOF) support the view that reliability standards should be determined (and periodically reviewed) by each jurisdiction<sup>4</sup> on the basis of redundancy derived from economic considerations. Such an approach provides a robust and effective basis for determining appropriate reliability standards and ensures that those standards are linked to economic considerations. The approach also has the important advantage of ensuring that the reliability standards adopted in each jurisdiction are transparent. This approach is capable of national standardisation, as required by COAG, in both the form of standards, and the processes for setting those standards.

Given the above approach to determining reliability standards in each jurisdiction, it would be wholly inappropriate to adopt Option 1 in amalgamating the limbs of the regulatory test. To do so would override the separate processes for determining the appropriate reliability standard for each jurisdiction.

Option 1 would require a TNSP at the time of each application of the RIT to assess the reliability that would result from a proposed augmentation and to in effect select a reliability standard in relation to each augmentation that the TNSP considers to be explained in terms of a cost benefit analysis, rather than specific measurable outcomes. Option 1 therefore completely undermines transparency in relation to the reliability standard applying in a jurisdiction, thus obfuscating the measurement of TNSP performance for accountability purposes, and would render the process currently being consulted on by the Reliability Panel completely redundant.

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<sup>2</sup> Section 6 discusses circumstances in which it may be appropriate to relax this general rule.

<sup>3</sup> AEMC, *National Transmission Planning Arrangements: Scoping Paper*, August 2007, p. 14: 'Consideration of this issue will need to be closely aligned with the review into transmission reliability standards, to be conducted by the Reliability Panel.'

<sup>4</sup> Or a body appointed by the jurisdiction.



### **3. Joint Planning with DNSPs**

A further key issue is the need to ensure compatibility between the approach taken to the amalgamation of the limbs of the regulatory test and the joint planning undertaken by TNSPs and distribution network service providers (DNSPs).

Currently the majority of intra-regional transmission augmentations developed by TransGrid in NSW are the product of joint planning between TNSPs and DNSPs. The National Electricity Rules (NER) require such joint planning,<sup>5</sup> which ensures that the capacity of the transmission network is sufficient for the purposes of conveying power to the distribution network and, ultimately, to end-use businesses and customers. Since 2003 TransGrid has run 15 New Large Transmission Network Asset consultations, of which 11 were published jointly with a DNSP.

The NSW DNSPs are currently required to plan their networks to meet deterministic planning standards set exogenously, in effect, by the NSW government. In undertaking joint planning, DNSPs require certainty that the level of reliability delivered by the transmission network will be sufficient to enable the DNSPs to meet these mandated reliability standards.

Given this situation, it is clear that Option 1 *is not compatible* with delivering the certainty that DNSPs require regarding the level of reliability delivered by the transmission network. This is because under Option 1 the level of reliability is an uncertain endogenous outworking of the cost benefit analysis, rather than a firm, transparent exogenous standard to which the DNSPs can plan.

In contrast, Option 3 is compatible with the joint planning requirements, because it does provide certainty as to the mandated level of reliability that will be delivered by the transmission network. As discussed above, under Option 3 the reliability standard is taken as an exogenous input into the RIT analysis, rather than being reduced to an outworking of that analysis.

### **4. Option 1 Increases the Complexity of All RIT Applications**

As noted by the Commission a key distinguishing feature between Option 1 and Option 3 is that Option 1 requires the level of reliability resulting from alternative augmentations (or non-network options) to be *explicitly valued* in relation to all RIT applications. In practice this is likely to be achieved through estimating the expected level of unserved energy (USE) associated with an augmentation and then applying a value per MWh to this level of USE.

Estimating the USE expected to result from an augmentation for each and every project assessment is a significant network modelling task, involving the computation of load flows, and other complex technical studies, under a range of different scenarios. Specifically, TransGrid would need to undertake sophisticated modelling to calculate the expected level of USE under a range of alternative scenarios for future load growth and generation investment patterns. Similarly, the value of per MWh for each expected level of unserved energy is highly variable across customer class, time of day, time of year and geography. It would therefore need to be assessed for each connection point, and then updated on a regular basis.

The current regulatory test precludes the calculation of USE in assessments under the reliability limb. As a result, requiring USE to be calculated *for all RIT applications* would, in general, increase the complexity of the modelling involved in the RIT analysis for augmentations primarily driven by reliability concerns compared with current practice under the regulatory test, and compared with the alternative Option 3.

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<sup>5</sup> NER, 5.6.2 (a1)-(c).



The increase in complexity of the analysis under Option 1 for investments primarily driven by reliability consideration is explicitly recognised by the Commission.<sup>6</sup> In addition to the need to explicitly model changes in USE, Option 1 as defined by the Commission does not incorporate a materiality provision, which implies that all costs and benefits would need to be modelled for all RIT assessments, even where some of the benefits were not expected to be material.

The complexity of such an analysis consumes valuable, scarce, resources that are not readily acquired or developed in the short to medium term. In addition, and importantly, the complexity makes the process less transparent, and has implications for the time required for interested parties to fully understand and comment on the results. It is likely that under Option 1 interested parties will demand that the consultation timeframes built into the current regulatory test be extended. Furthermore, given the analytical complexity, extent of data involved, and the range of assumptions that are sometimes required, this process is more open to disputation. Formal disputation arrangements in the Rules imply the addition of six to twelve months to the regulatory test assessment times to resolve disputes.

Taken together, these factors imply that the prospect for delays in the conduct of Regulatory Investment Test consultations using Option 1 is assured in most cases, and could often be material. Such an outcome will clearly impact the overall timing of investment decision making and project delivery. As a consequence, Option 1 is inconsistent with COAG's directive that the new planning processes do not add delays to the current timelines for delivery of required investment.

### **5. Option 3 Provides Practical Flexibility**

The Commission has characterised Option 3 as something less than a 'full cost benefit analysis', in contrast to Option 1.

TransGrid considers Option 3 as being more appropriately characterised as a 'fit for purpose' cost benefit analysis. That is, Option 3 provides the practical flexibility for TNSPs to include or exclude certain elements of benefits, depending on whether those benefits are likely in practical terms to alter the outcome of the assessment.

In contrast to both Option 2 and the AER's current version 3 of the regulatory test, Option 3 allows TNSPs to incorporate benefits that result from the impact of an augmentation on the wider national electricity market (NEM), rather than the assessment being strictly limited to the direct costs of an option. As a result, RIT assessments under Option 3 for augmentations mainly driven by the need to meet a reliability standard could potentially encompass consideration of (amongst other factors):

- the direct capital cost of the augmentation (or non-network option);
- the direct operating costs of the augmentation (or non-network option);
- the impact on network losses;
- the impact on future network development (ie, the potential to defer future network augmentation needed to ensure that the reliability standard is met);
- the impact on generation investment elsewhere in the NEM (ie, potential generation deferral as the result of the augmentation); and
- the impact on generator dispatch costs.

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<sup>6</sup> AEMC, *National Transmission Planning Arrangements: Scoping Paper*, August 2007, p. 14.



However in many cases, where investments are primarily driven by the need to meet a network reliability standard, there may be very few impacts of the augmentation on the wider operation of the NEM, i.e. generation investment, generation dispatch and generation competition. Requiring the TNSP to value all of these benefits in these circumstances as part of each and every RIT assessment (as is implied under Option 1) would result in increased resource costs and the extension of the timeframe required for the assessment, without any consequent change in the outcome of the RIT. Consequently, TransGrid believes that Option 3 has the practical advantage of enabling these benefits to be incorporated only where they are expected to influence the outcome of the RIT.

The Commission has queried how under Option 3 the TNSP would be able to determine that certain aspects of benefits may not be material for a RIT application, without having first assessed the magnitude of the benefits. TransGrid recognises the Commission's concern but believes that there are circumstances in which a 'rule of thumb' assessment could demonstrate that the magnitude of a particular benefit is not material and would not change the ranking of options.

In its applications of version 1 of the regulatory test, TransGrid previously adopted such an approach.<sup>7</sup> For example, in valuing the potential impact on the deferral of generation investment in relation to an intra-regional augmentation, it is often possible to demonstrate that there would be no impact on the generation market from the augmentation. Alternatively, it may be possible to relatively easily calculate the maximum value of such a deferral and to demonstrate that this would not change the rankings, which would then obviate the need to undertake more detailed and time consuming modelling of the actual expected developments in the generation market and the precise impact that may result from an augmentation.<sup>8</sup>

Adopting Option 3 provides the appropriate practical flexibility that is required in relation to RIT assessments, especially given that the amalgamated RIT framework will apply to a wide range of differing augmentations, both those driven by reliability concerns and those related solely to market benefits. The flexibility to adopt a 'fit for purpose' approach is necessary in order to avoid TNSPs spending scarce resources on detailed assessments of non-material benefits for each and every RIT assessment they undertake. As noted above, this would extend the timeframes required for RIT assessments, contrary to the COAG directives for this review.

TransGrid recognises that the onus is on TNSPs under a 'fit for purpose' approach to credibly demonstrate as part of their RIT applications where benefits are not material. Furthermore, TNSPs have an incentive to provide assurance to interested parties in this regard because. Not only can interested parties dispute and delay the outcome of a RIT assessment if they are not convinced of the non-materiality of certain benefits in particular circumstances, but the AER requires convincing on the same issues as part of each TNSP's five yearly revenue cap reviews.

## **6. Valuing Reliability under Option 3**

As section 4 outlined, a key difference between Options 1 and 3 is the explicit valuation of reliability under Option 1 for all RIT applications.

Under Option 3 the reliability standard determined via a separate process forms a transparent input into the TNSP's RIT analysis. The Commission has asked whether under this option reliability would need to be valued as part of the RIT assessment.

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<sup>7</sup> Under Version 1 of the regulatory test consideration of costs and benefits for augmentations (or non-network alternatives) driven primarily by reliability concerns were not limited to direct costs only. As a result, version 1 of the regulatory test has many similarities with the Commission's proposed Option 3.

<sup>8</sup> A practical example of this approach taken from a previous application of the regulatory test by NERA on behalf of TransGrid is included in this submission as Appendix A.



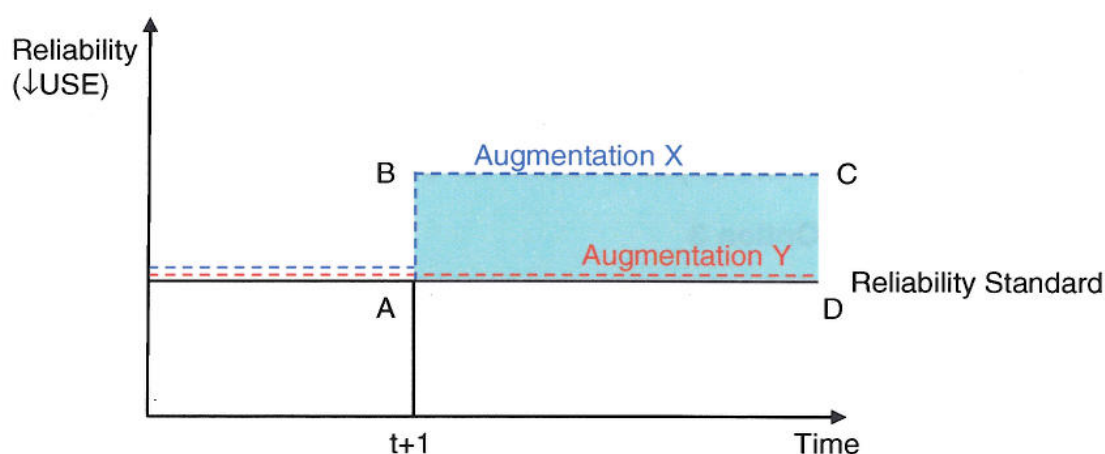
TransGrid believes that for the vast majority of RIT assessments there would be no need to value differences in reliability between the alternative investments being evaluated. This is because the appropriate level of reliability will already have been determined by the separate standard-setting process and it will almost always be inappropriate and unnecessary for the TNSP to revisit this decision. As discussed in section 2, TransGrid supports the establishment (and periodic review) of the jurisdictional reliability standard on the basis of redundancy derived from economic criteria. This process occurs separately to the RIT assessment and then provides a transparent input into the evaluation of individual investments under the RIT.

Figure 6.1 provides an example. There are two alternative augmentations: X and Y. Augmentation Y results in a level of reliability (as measured by the expected level of USE) that just meets mandated reliability standard. Augmentation X results in a level of reliability that exceeds the mandated reliability standard (i.e. the expected level of USE under augmentation X is lower than that implied by the reliability standard).

In this example, in choosing between X and Y the value of the additional reliability achieved under augmentation X (i.e. the amount ABCD) should be *excluded* from the assessment. All other differences between the two alternatives (e.g. differences in capital cost, differences in losses) would be included in the assessment.

A numerical example helps to illustrate the point. Assume that augmentation X is \$10m more expensive than augmentation Y, and results in a lower expected USE compared to augmentation Y (valued at \$2m) and a reduction in losses compared to augmentation Y (valued at \$9m). The RIT assessment would take into account the difference in values between costs and losses, and would conclude that augmentation Y satisfies the regulatory test (i.e. the \$10m higher costs for augmentation X are not outweighed by the \$9m benefit from reduced losses). The differential in USE between the augmentations would not be taken into account in the analysis.

**Figure 6.1**  
**Assessment Under Option 3 - Example 1**



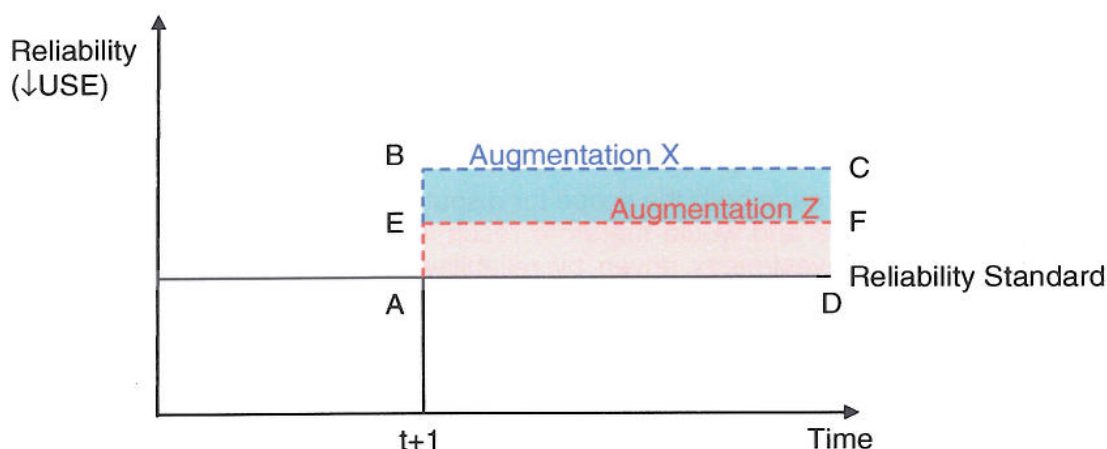
At face value excluding the additional value of USE may appear to result in a sub-optimal investment in this particular example. However, including the TNSP's own valuation of the improvement in reliability (i.e. the \$2m benefit from lower USE in the example given above) would supplant the valuation of the body that has responsibility for setting the reliability standard, which has already determined that the higher level of reliability delivered by augmentation X exceeds the reliability justified on the basis of its own economic assessment. This approach is therefore consistent with the view that one role of an externally determined reliability standard is to avoid inefficient investment by the TNSPs of their networks.



Accordingly, for the majority of RIT assessments TransGrid expects that there would be no need to value the difference in reliability between the augmentations being assessed. However, consistent with the 'fit for purpose' approach, TransGrid believes that the option of including an assessment of differences in reliability should not be precluded outright under the RIT, since there may occasionally be specific circumstances in which the differences in reliability delivered by alternative investments does become important.

For example, Figure 6.2 depicts a situation in which there is no longer the option of an augmentation that just meets the reliability standard, but instead two alternatives that each exceed the standard (augmentations X and Z). Augmentations may necessarily result in levels of reliability that exceed the reliability standard as a result of scale factors and the 'lumpy' nature of transmission investments. In this case the difference in the additional reliability delivered by augmentation X relative to augmentation Z (i.e. the area BCEF) may be a relevant differentiator in evaluating the two options, particularly if the costs of the options and all other benefits were identical or otherwise indecisive.

**Figure 6.2**  
**Assessment Under Option 3 - Example 2**



In circumstances where a TNSP does value the improvement in reliability over and above the mandated standard it should adopt the same approach as applied by the jurisdiction (or body appointed by the jurisdiction) in setting and reviewing the reliability standard, in order to ensure that there is consistency in the approach taken to valuing reliability. In particular, the value applied to USE should be the same between the external body and the TNSP as part of a RIT assessment.

## 7. Conclusion

TransGrid strongly supports Option 3 for the amalgamation of the two limbs of the regulatory test and believes that Option 1 is inconsistent with the COAG directives for this review.

Table 7.1 below presents an assessment the two options against a number of key criteria.

**Table 7.1: Assessment of Options 1 and 3 for Amalgamation of the Regulatory Test**

Criteria	Option 1	Option 3
COAG requirement: Must be no slower than the present time taken to gain regulatory approval	✗	✓✓✓
Economic efficiency	✓✓✓	✓✓
Transparency	✗	✓✓✓
Accountability	✗	✓✓✓

Option 1 would significantly increase both the scope for disputes and the complexity of the analysis required for all RIT applications and would therefore result in a lengthening of the time taken to gain regulatory approval for investments driven by reliability concerns. As a result Option 1 is ***inconsistent with the COAG directives in relation to the review.***

Under Option 1 the costs and benefits of meeting a certain level of reliability would be revisited at the time of each RIT application. This may result in a more theoretically pure approach to assessing economic efficiency in relation to the determination of reliability levels. However, Option 3, combined with reliability standards which are based (and periodically reviewed) on redundancy derived from economic considerations, also results in a high degree of economic efficiency in relation to the level of reliability standard adopted and entails significantly less time and resource costs for TNSPs and stakeholders alike.

Option 3 reflects the transparent application of an externally determined planning standard. Under Option 1 the planning standard adopted is an endogenous outworking of the RIT assessment and does not therefore have the same degree of transparency.

Under Option 3 the TNSP is accountable for meeting the externally determined planning standards. It is not clear what accountability the TNSP would have in relation to meeting planning standards under Option 1, since the level of reliability delivered by the transmission system would depend on the outworking of the RIT assessment. Option 1 is also *inconsistent* with the need for TNSPs to undertake joint planning with distributors who base their planning on deterministic criteria.